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File Number: SAT-STA-20070117-00011
Callsign:

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY

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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Request for 30-day Special Temporary Authority (STA) to operate very low power (less than 0.5kW EIRP) terrestrial repeaters and very low power (less than 0.0001W) signal boosters for thirty days at trade show events

I. Applicant

Name:	XM Radio Inc.	Phone Number:	202-380-4000
DBA Name:		Fax Number:	202-380-4500
Street:	1500 Eckington Place, NE	E-Mail:	james.blitz@xmradio.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20002
Attention:	James S Blitz		

File # SAT-STA-20070117-00011
Grant Date 1/19/07
Team Dates 1/19/07 +30 days
Chief, Satellite Policy Branch


with conditions

**Application of XM Radio Inc. for Special Temporary Authority
IBFS File No. SAT-STA-20070117-00011**

Special temporary authority (STA) IS GRANTED to XM Radio Inc. (XM) to operate terrestrial repeaters with an Effective Isotropically Radiated Power (EIRP) of up to 0.5 watts and 0.0001 watts at the events, and with the technical parameters, specified in the above-captioned application for a period of 30 days, commencing on January 19, 2007, subject to the following conditions:

1. Any actions taken as a result of this STA are solely at the applicant's own risk. This STA shall not prejudice the outcome of the final rules adopted by the Commission in IB Docket No. 95-91.
2. Operation of all SDARS repeaters authorized pursuant to this STA is on a non-interference basis with respect to all permanently authorized radiocommunication facilities. XM shall provide the information and follow the process set forth in paragraphs 14 and 17 in 16 FCC Rcd 16773 (Int'l Bur. 2001) and 16 FCC Rcd 16781 (Int'l Bur. 2001), as modified by 16 FCC Rcd 18481 (Int'l Bur. 2001) and 16 FCC Rcd 18484 (Int'l Bur. 2001).
3. SDARS repeaters are restricted to the simultaneous retransmission of the complete programming, and only that programming, transmitted by the satellite directly to SDARS subscriber's receivers.
4. Coordination of SDARS repeater operations shall be completed with all affected Administrations prior to operation, in accordance with all applicable international agreements including those with Canada and Mexico.
5. SDARS repeaters shall comply with Part 17 of the Commission's rules – Construction, Marking, and Lighting of Antenna Structures.
6. SDARS repeaters shall comply with Part 1 of the Commission's rules, Subpart I – Procedures Implementing the National Environmental Policy Act of 1969, including the guidelines for human exposure to radio frequency electromagnetic fields as defined in Sections 1.1307(b) and 1.1310 of the Commission's rules.
7. SDARS repeater out-of-band emissions shall be limited to $75 + \log(\text{EIRP})$ dB less than the transmitter EIRP.
8. XM will maintain full ownership and operational control of each repeater.
9. XM will immediately shut down any repeater upon a complaint of interference, upon direction from the Commission, or upon finding that a repeater has not been properly installed.

10. This STA commences on January 19, 2007, and will expire 30 days thereafter, or on the date on which permanent rules governing repeater operations become effective, whichever occurs first.
11. XM is granted 30 days from the date of the release of this authorization to decline the authorization as conditioned. Failure to respond within that period will constitute formal acceptance of the authorization as conditioned.
12. 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 Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.

	File # <u>SAT-STA-20070117-00011</u>
	Call Sign _____ Grant Date <u>1/19/07</u>
	(or other identifier)
	Term Dates From: <u>1/19/07</u> To: <u>+ 30 days</u>
	<u><i>Arthur Hill</i></u> Chief, Satellite Policy Branch

with conditions

2. Contact	
Name: James S. Blitz	Phone Number: 202-380-4000
Company: XM Satellite Radio, Inc.	Fax Number: 202-380-4500
Street: 1500 Eckington Place NE	E-Mail: james.blitz@xmradio.com
City: Washington	State: DC
Country: USA	Zipcode: 20002
Attention:	Relationship: Same
(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?	
<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 CRY – Space Station (Geostationary)	
5. Type Request	
<input type="radio"/> Change Station Location	<input type="radio"/> Extend Expiration Date
	<input checked="" type="radio"/> Other
6. Temporary Orbit Location	
	7. Requested Extended Expiration Date

8. 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.)

XM Radio Inc. (XM) requests 30-day Special Temporary Authority (STA) to operate very low power (less than 0.5kW EIRP) terrestrial repeaters and very low power (less than 0.0001W) signal boosters for thirty days at the trade show events listed in Exhibit A and pursuant to the technical parameters listed in Exhibit B.

9. 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.

Yes No

10. Name of Person Signing James S. Blitz	11. Title of Person Signing Vice President, Regulatory Counsel
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12. Please supply any need attachments.

Attachment 1: STA Request	Attachment 2:	Attachment 3:
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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).



January 17, 2007

Via IBFS
Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: XM Radio Inc.
Request for 30-Day Special Temporary Authority to Operate
Very Low Power Repeaters and Signal Boosters at Trade Shows**

Dear Ms. Dortch:

XM Radio Inc. ("XM"), one of the two Satellite Digital Audio Radio Service ("SDARS" or "satellite radio") licensees in the United States, pursuant to Section 25.120(b)(4) of the Commission's rules,¹ hereby requests Special Temporary Authority ("STA") to operate in its licensed frequency band (2332.5-2345 MHz) (i) very low power terrestrial repeaters with an Effective Isotropically Radiated Power ("EIRP") of up to 0.5 watts; and (ii) signal boosters with an EIRP of 0.0001 watts that have previously been approved for use in retail stores.² These very low power repeaters and signal boosters will be used at the trade shows during the dates listed on Exhibit A between January 21, 2007 and February 18, 2007. XM intends to operate these very low power repeaters and signal boosters independently – *i.e.*, XM will not operate them in conjunction with Sirius Satellite Radio Inc., the other SDARS licensee.

¹ 47 C.F.R. § 25.120(b)(4).

² Because XM is requesting STA for only 30 days, the Commission can grant this application without placing it on Public Notice. 47 C.F.R. § 25.120(b)(4). On December 7, 2006, XM filed an application for a 180-day STA to operate very low power repeaters and signal boosters at trade shows from January 21, 2007 to April 15, 2007, including the trade shows listed on Exhibit A of this STA request. *See* XM Radio Inc., File No. SAT-STA-20061211-00147 (filed December 11, 2006). The 180-day STA request was placed on Public Notice on December 22, 2006. *See* Report No. SAT-00407 (December 22, 2006). The 30-day comment cycle on this STA request ends on January 22, 2007. Accordingly, this 30-day STA request is necessary because the Bureau will be unable to act on the 180-day STA request before January 21, 2007.

Technical Information for Trade Show Boosters. Attached as Exhibit C are the technical parameters for the signal boosters, which are identical to the parameters previously approved by the Bureau for use in retail stores.⁵ Specifically, XM has included the following information for these trade show boosters: (1) antenna type; (2) antenna beamwidth; (3) total EIRP; and (4) approximate maximum height AGL.

Interference Considerations. The very low power repeaters and signal boosters will not cause harmful interference to other radio services. Because XM has exclusive use of its licensed frequency band,⁶ there is no potential for in-band interference. In addition, the very low power repeaters will operate at a maximum of 0.5 watts, well below the threshold EIRP of 2000 watts identified by the WCS licensees as a potential interference concern.⁷ The adjacent-band WCS licensees are permitted to operate base stations at a power level of 2000 watts EIRP and therefore must be able to withstand potential interference from such operations. With respect to the trade show boosters, XM has previously demonstrated that the same boosters will not cause adjacent band interference to WCS operations.⁸ In addition, the very low power repeaters and boosters will be operated for at most twelve days at any individual event, further eliminating any opportunity for interference. Accordingly, XM does not anticipate that these very low power repeaters and boosters will cause interference to any WCS receivers.

Ownership and Control of Repeaters. XM will own each very low power repeater and booster installed at a given venue and will retain full operational control of these very low power repeaters and boosters. XM will also be responsible for installation of each very low power repeater and booster.

⁵ XM Radio Inc., Request for Special Temporary Authority, File No. SAT-STA-20030409-00076 (filed April 9, 2003; granted June 23, 2003) ("*XM Booster STA*"). In the 2003 application, XM provided an interference analysis for the signal boosters that are the subject of this application. *See id.*, Exhibit C. XM incorporates this interference analysis by reference. On June 5, 2003, XM further supplemented the application with a sample link budget for the signal boosters. *See* Letter from Lon C. Levin, XM, to Marlene H. Dortch, Secretary, FCC, File No. SAT-STA-20030409-00076 (filed June 5, 2003). The link budget is also incorporated by reference herein.

⁶ 47 C.F.R. § 25.202(a)(6).

⁷ *See supra* note 4; *see also* XM Radio, Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complimentary Terrestrial Repeaters, Order and Authorization, DA 01-2172, at ¶ 12 (rel. September 17, 2001) ("*XM Radio STA Order*") ("The comments from WCS licensees express concern about blanketing interference from DARS repeaters that operate with an Equivalent Isotropically Radiated Power (EIRP) above 2 kW").

⁸ *XM Booster STA* at Exhibit C.

(4) Where applicable, coordination of the very low power repeaters and trade show signal boosters will be completed with all affected Administrations prior to operation, in accordance with all applicable international agreements including those with Canada and Mexico;

(5) The very low power repeaters and trade show signal boosters will comply with Part 17 of the Commission's rules – Construction, Marking, and Lighting of Antenna Structures;

(6) The very low power repeaters and trade show signal boosters will comply with Part 1 of the Commission's rules, Subpart I - Procedures Implementing the National Environmental Policy Act of 1969, including the guidelines for human exposure to radio frequency electromagnetic fields as defined in Sections 1.1307(b) and 1.1310 of the Commission's rules;

(7) The out-of-band emissions of the very low power repeaters and trade show signal boosters will be limited to $75 + \log(\text{EIRP})$ dB less than the transmitter EIRP;

(8) XM will operate the very low power repeaters and trade show signal boosters according to the technical parameters provided in this application;

(9) XM will maintain full ownership and operational control of each very low power repeater and trade show signal booster; and

(10) XM will immediately shut down any very low power repeater and any trade show signal booster upon a complaint of interference, upon direction from the Commission, or upon finding that a very low power repeater or trade show signal booster has not been properly installed.

XM hereby certifies that no party to this application is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 853(a).

XM is submitting payment to the Federal Communications Commission in the amount of Seven Hundred Ninety Dollars (\$790.00). This filing fee amount is applicable to requests for STAs for geostationary satellites. *See* International and Satellite Services Fee Filing Guide (October 2006).

Exhibit A

Dates and Locations of Trade Shows

Event	City	Address	Dates
Washington, DC Auto Show	Washington DC	Washington DC Convention Center 900 9th St. N.W. Washington DC 20001	1/21/07 - 1/28/07
Houston Auto Show	Houston	Reliant Park 8400 Kirby Dr. Houston, TX 77054	1/25/07 - 2/4/07
Philadelphia Auto Show	Philadelphia	Pennsylvania Convention Center 1101 Arch Street Philadelphia, PA 19107	2/1/07 - 2/11/07
Chicago Auto Show	Chicago	McCormick Place 2301 S. Lake Shore Drive Chicago, IL 60616	2/6/07 - 2/18/07
Ft. Worth Auto Show	Ft. Worth	Fort Worth/Tarrant County Convention Center 1111 Houston Street Fort Worth, TX 76102	2/14/07 - 2/18/07

Exhibit C

Technical Parameters for Trade Show Boosters

Below is the following information for the trade show signal boosters.

- (1) antenna type;
- (2) antenna beamwidth;
- (3) total EIRP; and
- (4) approximate height Above Ground Level (AGL)

Antenna Type	Antenna Beamwidth	EIRP Total in Watts	Height AGL
Antenna Specialists XMSSR923WR	75 degrees	.0001	< 50 feet

The transmitted carriers have a center frequency and frequency stability identical to the received SDARS satellite or terrestrial carriers. Frequency accuracy is controlled by the satellite or terrestrial repeater and not by the booster.