

SAT-STA-20080530-00117
Sirius XM Radio Inc.

IB2008001272

Approved by OMB
3060-0678

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File Number: SAT-STA-20080530-00117
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:

Sirius Satellite Radio Request for 180 day STA to operate SDARS repeaters and signal boosters at trade shows

1. Applicant

Name:	Sirius Satellite Radio Inc.	Phone Number:	212-584-5100
DBA Name:		Fax Number:	212-584-5353
Street:	1221 Avenue of the Americas 36th Floor	E-Mail:	
City:	New York	State:	NY
Country:	USA	Zipcode:	10020 -
Attention:	Mr Patrick L. Donnelly		



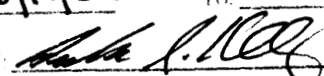
File # SAT-STA-20080530-00117
Call Sign _____ Grant Date 8/13/08
(or other identifier)
Term Dates
From 8/19/08 To: +180 days
Approved: [Signature]

Attachment to Grant
IBFS File No. SAT-STA-20080530-00117
August 13, 2008

Sirius Satellite Radio Inc. (Sirius) is granted special temporary authority for a period of 180 days to operate an indoor terrestrial repeater with an effective isotropically radiated power (EIRP) of up to 200 watts (average) and up to five indoor terrestrial repeaters with an EIRP of 0.0001 watts (average) at various trade shows listed in Exhibit A to the application. Such authorization is subject to the Commission's rules, the technical parameters specified in the application, and 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 the terrestrial repeaters authorized pursuant to this STA is on a non-interference basis with respect to all permanently authorized radiocommunication facilities. Sirius 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. The terrestrial repeaters are restricted to the simultaneous retransmission of the complete programming, and only that programming, transmitted by the satellite directly to SDARS receivers;
4. The terrestrial 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;
5. The out-of-band emissions of the terrestrial repeaters shall be limited to $75 + \log(\text{EIRP})$ dB less than the transmitter EIRP;
6. Sirius will maintain full ownership and operational control of the terrestrial repeaters;
7. Sirius will immediately shut down the terrestrial repeaters upon a complaint of interference, upon direction from the Commission, or upon finding that the repeaters have not been properly installed;
8. This authorization is not one relating to an "activity of a continuing nature" for purposes of Section 1.62 of the Commission's rules and Section 558(c) of the Administrative Procedure Act. Continuation of operations beyond the term of this authorization will require prior affirmative authorization by the FCC.

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 w/conditions	Full Name _____ Grant Date <u>8/13/08</u> (or other identifier) _____ Term Dates From <u>8/14/08</u> To <u>+ 180 days</u> Approved:  Policy Branch Chief
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2. Contact	
Name: Mr. Patrick L. Donnelly Company: Sirius Satellite Radio Inc. Street: 1221 Avenue of the Americas 36th Floor City: New York Country: USA Attention:	Phone Number: 212-584-5100 Fax Number: 212-584-5353 E-Mail: State: NY Zipcode: 10020 - 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? ☒ 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 CXW – Space Station (Non-Geostationary)	
5. Type Request ☐ Change Station Location ☐ Extend Expiration Date ☒ 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.)		
Sirius Satellite Radio requests Special Temporary Authority for 180 days to operate terrestrial repeaters and signal boosters at trade shows between August 19, 2008 and January 25, 2009.		
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 Patrick L. Donnelly	11. Title of Person Signing Exec. VP, GC, and Sec'y	
12. Please supply any need attachments.		
Attachment 1: Attachment	Attachment 2:	Attachment 3:
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.

Attachment

Sirius Satellite Radio Inc. ("Sirius"), pursuant to 47 C.F.R. § 25.120,¹ hereby requests Special Temporary Authority ("STA") for 180 days to operate in its licensed frequency band (2320-2332.5 MHz) (1) low-power satellite DARS repeaters with an Effective Isotropically Radiated Power ("EIRP") of 200 watts or less; and (2) signal boosters with an EIRP of 0.0001 watts that have previously been approved for use in retail stores. These low-power repeaters and signal boosters will be utilized at various trade shows on various dates between and including August 19, 2008 and January 25, 2009. Sirius intends to operate the repeaters and signal boosters independently – *i.e.*, Sirius will *not* operate them in conjunction with XM Radio, Inc., the other satellite DARS licensee.

The repeaters and boosters will be used by Sirius to carry out equipment and service demonstrations at trade shows across the United States for periods not to exceed seventeen days (including two days prior to the official start of each trade show for set-up and testing activities). Due to blockage from walls and ceilings, it is often difficult to provide quality reception of SDARS satellite and even terrestrial signals inside of trade show venues, which often do not have line-of-sight views to receive Sirius' signal. These difficulties with providing coverage inside the venues require radios to be displayed with hard wire connections, which limits the locations within a trade show venue that Sirius can set up its displays, creating difficulties for trade show organizers and Sirius. Because trade show venues typically consist of a large, often multi-level space, Sirius anticipates that, with one exception,² the use of both a repeater and one or more (but fewer than five) strategically placed boosters will be necessary to ensure full coverage of each trade show. Accordingly, grant of the requested STA to use these repeaters for these limited periods will serve the public interest.

Technical Information. In Exhibit A, Sirius provides a list of technical parameters, locations, and dates for the trade show repeaters it seeks to operate pursuant to this STA. Sirius has included the following information: (1) event; (2) event date; (3) event location (specifying the center longitude and latitude of each trade show venue); (4) market; (5) antenna type; (6) antenna beamwidth; (7) total EIRP; and (8) approximate maximum height Above Ground Level (AGL). Sirius will operate its signal booster(s) at the same events, dates, locations, and markets specified in Exhibit A. Exhibit B lists the technical parameters for the signal boosters, which are identical to those previously approved by the Commission for use in retail stores.³ Specifically, Sirius has

¹ To the extent this application is opposed, Sirius hereby requests that this proceeding be designated "permit-but-disclose" for purposes of the Commission's rules governing ex parte communications. 47 C.F.R. §§ 1.1200(a) and 1.1206.

² Sirius anticipates that only signal boosters will be necessary to ensure full coverage at the Sirius National Sales meeting. Therefore, STA is only requested for the operation of signal boosters at this event.

³ See *Sirius Satellite Radio Inc. Request for Special Temporary Authority to Operate In-Store Signal Boosters in the Satellite Digital Audio Radio Service*, File No. SAT-STA-20030411-00075 (grant stamp with conditions issued June 26, 2003) ("2003 In-Store Booster Application"). In the 2003 application, Sirius also provided an interference analysis for the

included the following information: (1) antenna type; (2) antenna beamwidth; (3) total EIRP; and (4) approximate maximum height Above Ground Level ("AGL"). Exhibits C-N provide RF exposure analyses for each individual trade show, and demonstrates that any human radiofrequency exposure that might occur is well below acceptable limits.

Interference Considerations. Sirius does not anticipate that the repeaters and boosters at these trade shows will cause harmful interference to other radio services. Because Sirius has exclusive use of its licensed frequency band,⁴ there is no potential for in-band interference. Moreover, the repeaters will operate at 200 watts or less, well below the threshold EIRP of 2000 watts that Wireless Communications Service ("WCS") licensees have identified as acceptable to avoid any interference with their services. Sirius has also previously demonstrated that the proposed boosters will not cause adjacent band interference to WCS operations.⁵ In addition, the repeaters and boosters will only be used for a limited time, further eliminating any opportunity for interference. Therefore, Sirius does not anticipate that these repeaters and boosters will cause blanketing interference to any WCS receivers.

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

Public Interest Considerations. Prompt grant of this STA will promote the continued success of satellite radio and thereby serve the public interest. The demand for SDARS radios by the public has continued to increase over time. Accordingly, Sirius has begun attending trade shows and conventions where it provides demonstrations of its equipment to consumers. Without repeaters and boosters to overcome signal blockage within the venues, however, Sirius cannot undertake real-time demonstrations of its equipment, especially demonstrations of the full mobility of SDARS service. These repeaters and boosters will provide clear signal reception within these venues for these demonstrations, and will eliminate any need for a hard wire connection.

Sirius understands that its operation of these repeaters and boosters under STA is on a secondary, non-interference basis. While Sirius does not anticipate any interference, should interference

(Continued . . .)

signal boosters that are the subject of this application. *See id.*, Exhibit C. That interference analysis is incorporated by reference herein, as permitted by 47 C.F.R. § 1.10009(c)(2). On June 5, 2003, Sirius further supplemented the application with a sample link budget for the signal boosters. *See* Letter from Robert D. Briskman to Marlene H. Dortch, Secretary, FCC, Re: Sirius Satellite Radio Inc. Request for STA to Operate In-Store SDARS Signal Boosters, File No. SAT-STA-20030411-00075 (filed June 5, 2003). The link budget is also incorporated by reference herein.

⁴ 47 C.F.R. § 25.202(a)(6) (stating the 2320-2345 MHz band is allocated exclusively for SDARS).

⁵ 2003 In-Store Booster Application at 4 and Exhibit C.

occur, it will cease operation of the interfering repeater and/or booster until such interference can be eliminated.

Certifications. Sirius acknowledges that the conditions imposed in the 2001 Order granting Sirius' request for STA to operate terrestrial repeaters⁶ will continue to apply to any repeaters authorized as a result of this application. Sirius further certifies that its operation of signal boosters at trade shows will comply, as applicable, with the "Micro-Repeater STA Conditions" that the Commission imposed on Sirius in granting the June 26, 2003 STA to operate 5,000 in-store signal boosters. Specifically, Sirius certifies the following:

- (1) Sirius will operate the repeaters and trade show signal boosters at its own risk, and such operation shall not prejudice the outcome of the final rules adopted by the Commission in GEN Docket 95-91;
- (2) Sirius will operate the repeaters and trade show signal boosters on a non-interference basis with respect to all permanently authorized radiocommunication facilities;
- (3) The repeaters and trade show signal boosters will be restricted to the simultaneous retransmission of the complete programming, and only that programming, transmitted by the satellite directly to SDARS receivers;
- (4) Where applicable, coordination of the 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 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 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 repeaters and trade show signal boosters will be limited to 75+log (EIRP) dB less than the transmitter EIRP;
- (8) Sirius will operate the repeaters and trade show signal boosters according to the technical parameters provided in this application;
- (9) Sirius will maintain full ownership and operational control of each repeater and trade show signal booster; and

⁶ *Sirius Satellite Radio Inc. Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters, Order and Authorization, File No. SAT-STA-20010724-00064, DA 01-2171 (Sept. 17, 2001).*

Ms. Marlene H. Dortch

May 1, 2008

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

EXHIBIT A

Exhibit A

Sirius Trade Shows / Events

Event	Event Dates	Market	Location	No Of Setors	Antenna Type	Sector 1				Coordinates		Antenna Height (feet)
						Antenna Beamwidth	Orientation	Downtilt	EIRP (Watts)	Longitude (W)	Latitude (N)	
Great American Trucking Show (GATS)	August 21 - 23, 2008	Dallas, TX	Dallas Convention Center	1	Mobile Mark OD12-2400	Omni	0	0	200	96-47-58.84	32-46-28.09	50
CEDIA	September 3 - 7, 2008	Denver, CO	Colorado Convention Center	1	Mobile Mark OD12-2400	Omni	0	0	200	104-59-45.62	39-44-33.61	90
Radio Shack Summit	September 17 - 21, 2008	Fl. Worth, TX	Fort Worth Convention Center	1	Mobile Mark OD12-2400	Omni	0	0	200	97-19-40.00	32-44-59.10	50
IBEX	October 6 - 8, 2008	Miami Beach, FL	Miami Beach Convention Center	1	Mobile Mark OD12-2400	Omni	0	0	200	80-07-59.90	25-47-41.10	60
SEMA	November 4 - 7, 2008	Las Vegas, NV	Las Vegas Convention Center Central Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	115-09-01.83	36-07-53.80	95
SEMA	November 4 - 7, 2008	Las Vegas, NV	Las Vegas Convention Center North Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	115-09-09.9	36-07-58.7	95
SEMA	November 4 - 7, 2008	Las Vegas, NV	Las Vegas Convention Center South Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	115-09-02.00	36-07-43.50	95
South Florida International Auto Show	November 7 - 19, 2008	Miami Beach, FL	Miami Beach Convention Center	1	Mobile Mark OD12-2400	Omni	0	0	200	80-07-59.90	25-47-41.10	60
RVIA	December 2 - 4, 2008	Louisville, KY	Kentucky Expo Center Freedom Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	85-44-31.72	38-12-01.47	50
RVIA	December 2 - 4, 2008	Louisville, KY	Kentucky Expo Center South Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	85-44-21.30	38-11-53.51	50
Los Angeles Auto Show	November 19 - 30, 2008	Los Angeles, CA	Los Angeles Convention Center West Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	118-16-10.64	34-02-34.81	75
Los Angeles Auto Show	November 19 - 30, 2008	Los Angeles, CA	Los Angeles Convention Center South Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	118-16-12.88	34-02-25.45	75
New York Boat Show	December 27, 2008 - January 4, 2009	New York, NY	Jacob Javits Convention Center	1	Mobile Mark OD12-2400	Omni	0	0	200	74-00-08.27	40-45-26.99	90
CES	January 8 - 11, 2009	Las Vegas, NV	Las Vegas Convention Center Central Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	115-09-01.83	36-07-53.80	95
CES	January 8 - 11, 2009	Las Vegas, NV	Las Vegas Convention Center North Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	115-09-09.9	36-07-58.7	95
CES	January 8 - 11, 2009	Las Vegas, NV	Las Vegas Convention Center South Hall	1	Mobile Mark OD12-2400	Omni	0	0	200	115-09-02.00	36-07-43.50	95
CES - Sirius Private Event	January 8 - 11, 2009	Las Vegas, NV	Bellagio Convention Area	1	Mobile Mark OD12-2400	Omni	0	0	10	115-10-44.00	36-06-41.72	45
CES - Yamaha Dealer Event	January 8 - 11, 2009	Las Vegas, NV	Rio Convention Area	1	Mobile Mark OD12-2400	Omni	0	0	200	115-11-13.1	36-07-04.9	45
Detroit / NAIAS Auto Show	January 11 - 25, 2009	Detroit, MI	Cobo Convention Center	1	Mobile Mark OD12-2400	Omni	0	0	200	83-02-54.43	42-19-36.40	90

Sirius Trade Shows / Events with Signal Boosters only

Event	Event Dates	Market	Location	Antenna Type	Antenna Beamwidth	EIRP (Watts)	Coordinates		Antenna Height (feet)
							Longitude (W)	Latitude (N)	
Sirius National Sales Meeting	September 16 - 18, 2008	Plainsboro, NJ	Lakeside Conference Center	Antenna Specialists XMSSR923WR	75	0.0001	74-36-10.60	40-20-19.20	30

EXHIBIT B

EXHIBIT B

Attached is the following information for the signal booster Sirius seeks to operate pursuant to this STA.

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

City	Antenna Type	Antenna Beamwidth	EIRP Total in Watts	Height AGL
Various	Antenna Specialists XMSSR923WR	75 degrees	0.0001	< 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.