

Approved by OMB  
3060-0678

Date & Time Filed: Jun 28 2007 4:17:49:760PM  
File Number: SAT-STA-20070628-00091  
Callsign:

FEDERAL COMMUNICATIONS COMMISSION  
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY  
FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:

Request for Special Temporary Authority to Operate a Substitute Low Power Terrestrial Repeater for 180 Days in Miami

1. Applicant

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

1



File # SAT-STA-20070628-00091

Call Sign \_\_\_\_\_ Grant Date 09/14/07  
(or other identifier)

From \_\_\_\_\_ Term Dates  
To: \_\_\_\_\_  
for a period of 180 days

Approved: [Signature]

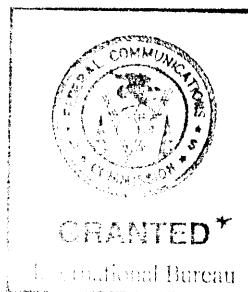
\* subject to conditions

Policy Branch Chief

**Application of XM Radio Inc. for Special Temporary Authority**  
**IBFS File No. SAT-STA-20070628-00091**

Special temporary authority (STA) IS GRANTED to XM Radio Inc. (XM) to operate one terrestrial repeater with a power level of 1462 watts EIRP in Miami, FL, for a period of 180 days pursuant to the technical parameters specified in Exhibit A to its application and 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. The issue concerning EIRP raised by the WCS Coalition will be addressed in that proceeding. Operations prior to such action will be subject to condition 2 below.
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. This STA will expire in 180 days, or on the date on which permanent rules governing repeater operations become effective, whichever occurs first.



\* subject to conditions

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Call Sign \_\_\_\_\_ Grant Date 09/14/07  
(or other identifier)

Term Dates  
From \_\_\_\_\_ for a period of 180 days  
To: \_\_\_\_\_

Approved: [Signature]

Policy Branch Chief

2. Contact

<b>Name:</b>	James S. Blitz	<b>Phone Number:</b>	202-380-4000
<b>Company:</b>	XM Satellite Radio Inc.	<b>Fax Number:</b>	202-380-4500
<b>Street:</b>	1500 Eckington Place NE	<b>E-Mail:</b>	james.blitz@xmradio.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20002 -
<b>Attention:</b>		<b>Relationship:</b>	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    CRY – Space Station (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.)

XM Radio Inc. (XM) requests special temporary authority (STA) to operate a substitute low power terrestrial repeater (less than 2 kW EIRP) for one hundred (180) days in Miami, Florida pursuant to the technical parameters listed in Exhibit A.

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

12. Please supply any need attachments.

Attachment 1: STA Request

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.**

((S))

June 28, 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 180-Day Special Temporary Authority to Operate  
A Substitute Low Power Repeater in Miami, Florida**

Dear Ms. Dortch:

Pursuant to Section 25.120(b)(2) of the Commission's rules,<sup>1</sup> XM Radio Inc. ("XM"), a Satellite Digital Audio Radio Service ("SDARS") licensee, hereby requests 180-Day Special Temporary Authority ("STA") to operate in its licensed frequency band (2332.5-2345 MHz) a substitute low-power (1462 watts average EIRP) repeater in Miami, FL, pursuant to the technical parameters listed in Exhibit A.<sup>2</sup>

XM seeks to operate this substitute low-power repeater in place of another repeater (MIA002E) that XM was required to remove from atop a building that was slated for demolition. Grant of the STA will serve the public interest by ensuring seamless repeater coverage for residents of Miami, thereby ensuring that they continue to receive high quality satellite radio service. On May 25, 2007, the International Bureau ("Bureau") granted a similar STA request filed by XM to operate a low power repeater in place of the repeater formerly atop the Stardust Hotel.<sup>3</sup>

The Commission has recognized that SDARS operators require terrestrial repeaters to provide high-quality service nationwide.<sup>4</sup> Consistent with this policy, in September 2001, the Bureau

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<sup>1</sup> 47 C.F.R. § 25.120(b)(2).

<sup>2</sup> At the same time it is filing this request, XM is also filing a request to operate the same repeater under a 30-Day Special Temporary Authority pursuant to Section 25.120(b)(4) of the Commission's rules.

<sup>3</sup> See XM Radio Inc., File No. SAT-STA-20070330-00059 (filed March 30, 2007; granted May 25, 2007); *Public Notice*, Report No. SAT-00447 (June 1, 2007).

<sup>4</sup> See *Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, Report and Order, Memorandum Opinion and Order, and*  
Footnote continued on next page

granted XM an STA to operate a nationwide network of terrestrial repeaters, including the Miami repeater that XM was forced to remove (MIA002E).<sup>5</sup> In the years since, the Bureau has granted XM additional STAs to operate its terrestrial repeaters, pending issuance of final rules governing the deployment and use of repeaters.<sup>6</sup>

Extraordinary circumstances – in particular the removal of the repeater from its former site due to the building’s demolition – justify this STA request.<sup>7</sup> As the Bureau recognized when it granted the original XM STA in 2001, XM’s terrestrial repeater network enables XM to provide “high quality radio signals to listeners in areas that have limited radio service,” continuous high-quality radio coverage for individuals on long-distance trips, and “[d]iverse program formats, including educational, ethnic and religious programming.”<sup>8</sup> In this case, grant of the STA will serve the public interest by restoring seamless service to residents of Miami, thereby ensuring that they continue to receive the diverse, high-quality service they have come to expect.

*Technical Information for Substitute Low Power Repeater.* Attached as Exhibit A is the following technical information pertaining to the substitute low-power repeater: (1) antenna type; (2) antenna orientation; (3) average EIRP; (4) height above ground level (“AGL”); (5) antenna downtilt; and (6) antenna specification sheets. The specification sheet for the antenna is attached as Exhibit B.

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Footnote continued from previous page

*Further Notice of Proposed Rulemaking*, 12 FCC Rcd 5754, 5770 ¶ 37 (1997) (“*DARS Order and FNPRM*”).

<sup>5</sup> See *XM Radio, Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complimentary Terrestrial Repeaters, Order and Authorization*, 16 FCC Rcd. 16781 ¶ 18 (2001) (“*XM STA Order*”).

<sup>6</sup> See, e.g., *XM Radio, Inc.; Request for Special Temporary Authority to Operate Additional Satellite Digital Audio Radio Service Terrestrial Repeaters, Order and Authorization*, 19 FCC Rcd. 18140 (2004) (granting XM an STA in File No. SAT-STA-20031112-00371, effective Sept. 15, 2004); *Public Notice*, 2002 FCC Lexis 5670 (rel. Oct. 30, 2002) (granting XM an STA in File No. SAT-STA-20020815-00153, effective Sept. 30, 2002); *Public Notice*, 2003 FCC Lexis 4803 (rel. Aug. 29, 2002) (granting XM an STA in File No. SAT-STA-20030409-00076, effective June 26, 2003). XM has filed applications to renew its STAs, and those renewal applications are pending before the Commission.

<sup>7</sup> See 47 U.S.C. § 309(f); 47 C.F.R. § 25.120(b)(1).

<sup>8</sup> *XM STA Order*, 16 FCC Rcd at 16784 ¶ 9.

*Interference Considerations.* The substitute low power repeater will operate at only 1462 watts average EIRP. Because XM did not receive any complaints of interference pertaining to its operation of the repeater being replaced, it is unlikely that the substitute low-power repeater will create interference to other licensees. While XM's original 2001 STA requires it to coordinate with affected Wireless Communications Services ("WCS") licensees prior to operating any repeater,<sup>9</sup> XM is not aware of any operational WCS facilities in the Miami area.<sup>10</sup> Moreover, as the Bureau acknowledged in granting XM's original repeater STA request, the WCS licensees have confirmed that operation of terrestrial repeaters at an EIRP of 2 kW or less is not an interference concern.<sup>11</sup> However, if prohibited interference does occur, XM will cease operation of the substitute repeater until such interference can be eliminated.

To the extent the Commission finds it necessary, however, XM requests a waiver of the coordination requirement on the grounds that (i) it has received no interference complaints about the recently deconstructed repeater; (ii) the substitute repeater will operate at low-power, meaning that it does not have significant interference potential; and (iii) a waiver allows for continuous service.

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<sup>9</sup> See *XM STA Order* ¶ 14.

<sup>10</sup> In the *XM STA Order*, the Bureau stated that it expects "WCS licensees to provide a schedule or as much advance notice as possible of when their stations are to be placed in operation." *XM STA Order* ¶ 14. XM has not received information directly from any WCS licensee regarding their plans for WCS deployment. While one WCS licensee (Horizon Wi-Com, LLC) has notified the Commission that it is operating WCS base stations in certain locations, these locations do not include Miami. Moreover, it is not clear from the Horizon Wi-Com notification filed whether its base stations are receiving transmissions from CPE or whether they are engaged in transmit-only operations. If only the latter, potential interference to the Horizon Wi-Com base stations is not an issue.

<sup>11</sup> *XM STA Order* ¶ 12 ("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."). The WCS Coalition has said that it will defer from objecting to STA requests that propose operations of no more than 2,000 watts EIRP, even if they do not specify peak or average EIRP, provided that grant of the STA (i) is conditioned on operation on a non-interference basis; and (ii) is subject to the condition that the issue of peak versus average EIRP will be addressed in the pending DARS rulemaking (IB Docket No. 95-91). See Letter from Paul J. Sinderbrand, Counsel to the WCS Coalition, to Ms. Helen Domenici, FCC, File No. SAT-STA-20061207-00145 (filed March 19, 2007). XM agrees to these conditions.



Ms. Marlene H. Dortch  
June 28, 2007  
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*Ownership and Control of Repeaters.* XM will own the substitute low-power repeater, and it will be responsible for its installation and operation.

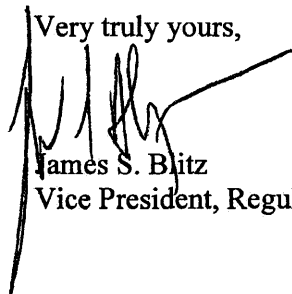
*Certifications.* XM certifies that it will operate this substitute low-power repeater subject to the conditions and certifications set forth in the *XM Radio STA Order* granting XM's September 2001 request for STA to operate terrestrial repeaters. Granting this request will not alter XM's obligation to protect authorized radiocommunications facilities from interference, and it will not prejudice the outcome of the Commission's ongoing rulemaking pertaining to the deployment and operation of terrestrial repeaters.

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) -- the filing fee applicable to requests for STAs for geostationary ("GSO") satellites.<sup>12</sup>

Please direct any questions regarding this matter to the undersigned.

Very truly yours,



James S. Blitz  
Vice President, Regulatory Counsel

cc: Stephen Duall, FCC

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<sup>12</sup> See International and Satellite Services Fee Filing Guide (October 2006).

**Exhibit A**

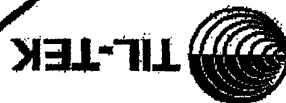
CITY	CITY ABBR.	SITE NO.	ANTENNA NUMBER	SITE LATITUDE (N)	SITE LONGITUDE (W)	ANTENNA TYPE	ANTENNA ORIENTATION (DEG AZ)	ANT HEIGHT (FEET AGL)	ANTENNA DOWNTILT (DEG)	TOTAL AVERAGE ERP (W)
Miami	MIA	002F	Tx1	25-53-13	80-07-54	TA-2350-DAB-T6	0	60	0	1462

**Site Address:** 1135 Kane Concourse  
 Bay Harbor Islands, FL 33154

**Antenna Specification Sheet**

**Exhibit B**

**TA-2350-DAB**  
**Medium Power Omnidirectional**  
**2330-2345 MHz**



The TA-2350-DAB is a medium power vertically polarized omnidirectional antenna specifically designed for Digital Audio Broadcast transmission. The antenna consists of a phased coplanar fed broadband dipole array which is configured to provide electrical beam downfill and null fill. The antenna elements are at DC ground to aid in lightning protection.

**Electrical Specifications**

- Frequency Range: 2330-2345 MHz
- Gain: 10 dBi
- VSWR: 1.4:1 max
- Polarization: Vertical
- Power Rating: 200 W avg, 800 W peak
- H-Plane Beamwidth: 360 degrees
- E-Plane Beamwidth: 8 degrees
- Electrical Downfill: 2, 4, 6 degrees
- Cross Pol. Discrimination: 20 dB min.
- Null Fill: -20 dB (1st Null)
- Impedance: 50 ohms nominal
- Termination: 7/16 DIN female

(Typical mid band values, for details, contact factory)

**Mechanical Specifications**

- Length: 79 in. (1778 mm)
  - Diameter: 2.25 in. (57 mm)
  - Weight (incl. Clamps): 15 lb. (6.8 kg)
  - Rated Wind Velocity: 125 mph (200 km/h)
  - Hor. Thrust at rated wind: 31 lb. (14 kg)
  - Mounting Pipe: 1.75 - 4.0 in. (44.5 - 102 mm)
- Materials**
- Radiating Elements: Nickel plated copper array
  - Radome: Gray UV stabilized fiberglass
  - Clamps: HDG steel

E-Plane

