

File # SAT-STA-20061114-00138

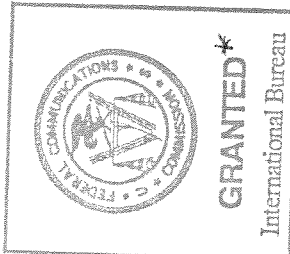
Call Sign \_\_\_\_\_ Grant Date 02/07/07  
(or other identifier)

Term Dates  
From 02/07/07 To: + 180 days

Approved by OMB  
3060-0678

Approved: [Signature]

Robert G. Nelson  
Chief, Satellite Division



International Bureau  
subject to attached  
conditions

Date & Time Filed: Nov 14 2006 2:42:42:026PM  
File Number: SAT-STA-20061114-00138 \*  
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:  
STA Request to Operate Lower Power Repeater at PGA Tour Events

1. Applicant

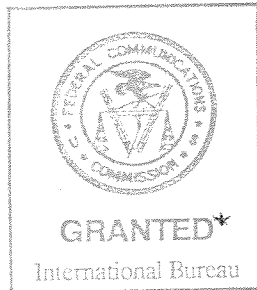
<b>Name:</b>	XM Radio Inc.	<b>Phone Number:</b>	202-380-4000
<b>DBA Name:</b>		<b>Fax Number:</b>	202-380-4500
<b>Street:</b>	1500 Eckington Place, NE	<b>E-Mail:</b>	james.blitz@xmradio.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20002 -
<b>Attention:</b>	James Blitz,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

**Application of XM Radio Inc. for Special Temporary Authority  
IBFS File No. SAT-STA-20061114-00138**

Special temporary authority (STA) IS GRANTED to XM Radio Inc. (XM) to operate one terrestrial repeater with a power level less than 2 kW EIRP at weekly PGA Tour events occurring at various locations from February to July 2007 as set forth in Exhibit A to its application, pursuant to the technical parameters specified in 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 commences on February 7, 2006, and will expire 180 days thereafter, or on the date on which permanent rules governing repeater operations become effective, whichever occurs first.
9. 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.

10. 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 # SAT- STA- 20061114-00138

Call Sign \_\_\_\_\_ Grant Date 02/07/07  
(or other identifier)

Term Dates  
From 02/07/07 To: +180 days

Approved: [Signature]

Robert G. Nelson  
Chief, Satellite Division

\* subject to  
conditions above

2. Contact	
<b>Name:</b> Bruce Jacobs	<b>Phone Number:</b> 202-663-8000
<b>Company:</b> Pillsbury Winthrop Shaw Pittman LLP	<b>Fax Number:</b> 202-663-8007
<b>Street:</b> 2300 N Street NW	<b>E-Mail:</b> bruce.jacobs@pillsburylaw.com
<b>City:</b> Washington	<b>State:</b> DC
<b>Country:</b> USA	<b>Zipcode:</b> 20037 -1128
<b>Attention:</b>	<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 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 Special Temporary Authority (STA) to operate one lower power terrestrial repeater (less than 2 kW EIRP) at the weekly PGA Tour events occurring at the locations and during the dates listed in Exhibit A and pursuant to the technical parameters listed in Exhibit B attached hereto.

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: XM 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).

**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 [jboley@fcc.gov](mailto:jboley@fcc.gov). PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

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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.**



November 14, 2006

**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 Special Temporary Authority to Operate a Low Power  
Terrestrial Repeater at PGA Tour Events**

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)(2) of the Commission's rules, 47 C.F.R. § 25.120, hereby requests Special Temporary Authority ("STA") to operate one low power terrestrial repeater at the weekly Professional Golfers' Association ("PGA") Tour event occurring at the locations and during the dates listed in Exhibit A and pursuant to the technical parameters listed in Exhibit B hereto.<sup>1</sup> The Commission's International Bureau (the "Bureau") has previously granted XM four similar STA's for coverage of PGA events, the latest of which it granted on June 19, 2006, and which will expire on December 17, 2006.<sup>2</sup> The low power repeater authorized under this STA will transmit at a maximum Effective Isotropically Radiated Power ("EIRP") of 2 kW, a power level which adjacent band licensees have stated does not present an interference concern. Because this repeater will transmit at a maximum EIRP of 2 kW and will be limited to coverage of a golf course for a limited duration, there will be no risk of harmful interference to other communications services.

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<sup>1</sup> To the extent a particular tournament involves play at more than one course, XM intends to operate a low power repeater at each course.

<sup>2</sup> See *XM Radio Inc.*, File No. SAT-STA-20050418-00086 (DA 05-1642) (granted June 9, 2005); File No. SAT-STA-20051108-00213 (granted January 4, 2006); File No. SAT-STA-20051109-00214 (granted January 4, 2006); and File No. SAT-STA-20060421-00046 (June 9, 2006).

**Background.** The Commission has recognized that terrestrial repeaters are critical to satellite radio to overcome the effects of signal blockage and multipath interference.<sup>3</sup> Consistent with this policy, in September 2001, the Bureau granted XM an STA to operate terrestrial repeaters while the Commission concludes its rulemaking proceeding regarding final technical rules.<sup>4</sup> In granting this STA, the Bureau noted that XM “needs to employ terrestrial repeaters to provide adequate service.” See *XM Radio STA Order* ¶ 7. Soon after grant of this STA, XM began commercial service. Since that time, satellite radio in general and XM in particular have proven to be a highly attractive service to American consumers, confirming the Commission’s vision in establishing the satellite radio service. As of August 2006, XM has over 7 million subscribers.

In March 2005, XM announced the addition of a PGA Tour Network channel to its channel line-up, to provide coverage of the weekly PGA Tour event along with daily programs designed for golf enthusiasts. Moreover, at the weekly PGA Tour event, XM offers portable, hand-held satellite radios for sale or rental to spectators. By tuning to the XM PGA Tour Network channel, spectators are able to keep track of the leader board and real-time action around the course. The portable radios also inform spectators of impending severe weather.

**Request for STA.** XM requests an STA to operate one terrestrial repeater at the weekly PGA Tour event at the locations and during the dates listed in Exhibit A. XM requests this STA for a period of 180 days after grant<sup>5</sup> or until the date on which permanent rules become effective for the operation of terrestrial repeaters, whichever occurs first. Grant of this STA will serve the public interest by ensuring that spectators at the weekly PGA Tour event receive adequate satellite radio service. While many areas on a golf course, such as fairways and greens, provide an unobstructed view of XM’s satellites, there are many other areas on a golf course where the view may be obstructed, particularly by trees and foliage. It is in these obstructed areas where spectators at a golf tournament are located so as to avoid interfering with the golfers. By operating one low power repeater, XM will be able to mitigate the potential blockage of its satellite signal by trees and foliage, thereby providing spectators with adequate satellite radio service.

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<sup>3</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 Further Notice of Proposed Rulemaking*, 12 FCC Rcd 5754 (1997).

<sup>4</sup> *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 ¶ 18 (rel. September 17, 2001) (“*XM Radio STA Order*”).

<sup>5</sup> XM requests authority to operate a low power repeater only at those events listed in Exhibit A that occur within 180 days after grant of this request. XM intends to file a new STA request prior to the expiration of this request for authority to operate a low power repeater at those PGA Tour events that occur following 180 days after grant of this request.



Operation of one low power repeater at each weekly PGA Tour event will not cause harmful interference to adjacent-band Wireless Communications Service ("WCS") licensees or any other communications service.<sup>6</sup> First, the repeater will be deployed in a manner intended to allow for coverage primarily of the golf course. Most of the WCS applications that have been contemplated to date are for fixed services to homes and businesses. Although no WCS facilities are in operation today, even if there were, under current rules, it is extremely unlikely that WCS equipment would be used on a golf course. Second, the potential for interference is further minimized by the fact that the EIRP of the repeater will never exceed 2 kW EIRP. The adjacent-band WCS licensees are permitted to operate base stations at a power level of 2 kW EIRP and therefore must be able to withstand potential interference from such operations. 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>7</sup>

Attached as Exhibit B is the following technical information for the low power repeater XM seeks to operate pursuant to this STA: (1) maximum EIRP; (2) maximum antenna height; (3) possible antenna types; (4) range of antenna beamwidth; and (5) range of orientation. XM has also attached as Exhibit C the specification sheets for each of the possible antenna types listed. Because the terrain and foliage of each golf course will vary, XM is unable to specify precisely the type of antenna, antenna beamwidth, or antenna orientation it will deploy at each golf course.<sup>8</sup> XM accordingly requests the flexibility to operate one low power repeater at the events listed in Exhibit A within the range of technical parameters listed in Exhibit B.

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<sup>6</sup> XM previously notified Sirius Satellite Radio Inc. of a similar request, and it did not object.

<sup>7</sup> *XM Radio 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.").

<sup>8</sup> For this reason, to the extent necessary, XM requests a waiver of Section 25.120(a) of the Commission's rules which requires an STA request to include the "full particulars of the proposed operation." 47 C.F.R. § 25.120(a). The good cause for this waiver is that requiring XM to file for and receive an STA for each individual PGA Tour event will require both the Commission and XM to expend significant resources with no concomitant benefit. This is especially the case because the Bureau has acknowledged that the interference concerns of adjacent-band WCS licensees are limited to repeaters operating with an EIRP greater than 2 kW. *XM STA Order* ¶ 12. Such a waiver is also consistent with precedent. In granting XM's original repeater STA, the Bureau said that XM was not required to provide the full particulars of operation for the repeaters it proposed to operate with an EIRP of 2 kW or less because these repeaters would not impact adjacent-band WCS licensees. *Id.* ¶ 9.

XM certifies that its operation of the low power repeater will comply with the same conditions the Bureau imposed on XM in granting its current STA to operate a low power repeater at PGA Tour events. *See XM Radio PGA STA Order*. Specifically, XM Radio certifies the following:

- a) Any actions taken as a result of this STA are solely at XM's own risk. This STA will not prejudice the outcome of the final rules adopted by the Commission in GEN Docket 95-91.
- b) Operation of the low power repeater authorized pursuant to this STA is on a non-interference basis with respect to all permanently authorized radiocommunication facilities. XM will provide the information and follow the process set forth in paragraphs 14 and 17 in 16 FCC Rcd 16781 (Int'l Bur. 2001) as modified by 16 FCC Rcd 18484 (Int'l Bur. 2001).
- c) The low power repeater is restricted to the simultaneous retransmission of the complete programming, and only that programming, transmitted by the satellite directly to SDARS receivers.
- d) Where applicable, coordination of the low power repeater shall be completed with all affected Administrations prior to operation, in accordance with all applicable international agreements including those with Canada and Mexico.
- e) The low power repeater will comply with Part 17 of the Commission's Rules regarding antenna structures.
- f) The low power repeater 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.
- g) The out-of-band emissions of the low power repeater will be limited to 75+log (EIRP) dB less than the transmitter EIRP.

One of the conditions imposed in the original STA grant was the requirement that XM pre-coordinate with WCS licensees any repeater affecting an operational WCS base station. *See XM Radio STA Order* ¶ 14. XM is willing to comply with this requirement, but XM is not aware of any operational WCS base station in any of the locations listed in Exhibit A.<sup>9</sup>

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<sup>9</sup> In the *XM Radio 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 Radio STA Order* ¶ 14. To date, XM has not received information from any WCS licensee regarding their plans for WCS deployment.


Ms. Marlene H. Dortch  
November 14, 2006  
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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 will provide payment to the Federal Communications Commission for the sum of Seven Hundred Ninety Dollars (\$790.00). This filing fee amount is applicable to requests for STAs for geostationary ("GSO") satellites. *See International and Satellite Services Fee Filing Guide (September 2006).*

Please direct any questions regarding this matter to the undersigned.

Very truly yours,



James S. Blitz  
Vice President, Regulatory Counsel

cc: Stephen Duall, FCC

### Exhibit A

XM requests Special Temporary Authority to operate one low power repeater with a maximum EIRP of 2 kW at the locations and during the dates listed below.<sup>1</sup>

<b>Event</b>	<b>Course</b>	<b>Location</b>	<b>Dates (All are 2007)</b>
Mercedes Championships	Plantation Course at Kapalua	Kapalua, HI	Jan. 1-7
Sony Open in Hawaii	Waialae Country Club	Honolulu, HI	Jan. 8-14
Bob Hope Chrysler Classic	The Classic, PGA West-Palmer Private, LaQuinta, Bermuda Dunes	Palm Desert, CA	Jan. 15-21
Buick Invitational	Torrey Pines	San Diego, CA	Jan. 22-28
FBR Open	TPC Scottsdale	Scottsdale, AZ	Jan. 29-Feb. 4
AT&T Pebble Beach National Pro-Am	Pebble Beach Golf Links, Spyglass Hill, Poppy Hill	Pebble Beach, CA	Feb. 5-11
Nissan Open	Riviera Country Club	Pacific Palisades, CA	Feb. 12-18
WGC – Accenture Match Play Championship	The Gallery at Dove Mountain	Tucson, AZ	Feb. 19-25
The Honda Classic	PGA National	Palm Beach Gardens, FL	Feb. 26-Mar. 4
Tampa Bay Championship	Westin Innisbrook Resort	Tampa Bay, FL	Mar. 5-11
Arnold Palmer Invitational	Bay Hill Golf Club and Lodge	Orlando, FL	Mar. 12-18
WGC-CA Championship	Doral Golf Resort and Spa	Doral, FL	Mar. 19-25
Shell Houston Open	Redstone Gold Club	Houston, TX	Mar. 26-Apr. 1
The Masters	Augusta National Golf Club	Augusta, GA	Apr. 2-8
Verizon Heritage	Harbour Town Golf Links	Hilton Head Island, SC	Apr. 9-15
Zurich Classic of New Orleans	TPC Louisiana	New Orleans, LA	Apr. 16-22

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<sup>1</sup> To the extent a particular tournament involves play at more than one course, XM intends to operate the low power repeater at each course.

<b>Event</b>	<b>Course</b>	<b>Location</b>	<b>Dates (All are 2007)</b>
EDS Byron Nelson Championship	TP Four Seasons Resort, Cottonwood Valley	Irving, TX	Apr. 23-29
Wachovia Championship	Quail Hollow Club	Charlotte, NC	Apr. 30-May 6
The Players Championship	TPC Sawgrass	Ponte Vedra Beach, FL	May 7-13
BellSouth Classic	TPC Sugarloaf	Duluth, GA	May 14-20
The Colonial Invitational	Colonial Country Club	Fort Worth, TX	May 21-27
The Memorial Tournament Presented by Morgan Stanley	Muirfield Village Golf Club	Dublin, OH	May 28-Jun 3
Stanford St. Jude Championship	TPC Southwind	Memphis, TN	Jun 4-10
U.S. Open	Oakmont Country Club	Oakmont, PA	Jun 11-17
Travelers Championship	TPC River Highlands	Cromwell, CT	Jun 18-24
Buick Open	Warwick Hills Golf and Country Club	Grand Blanc, MI	Jun 25-Jul 1

## **Exhibit B**

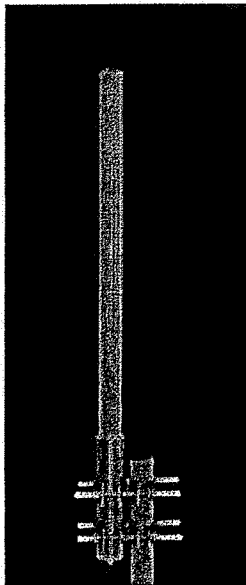
<b>Maximum EIRP:</b>	2 kW
<b>Maximum antenna height:</b>	25 meters
<b>Possible antenna types:</b>	Omni (DAB-2350) or Panel (DAB-2304)
<b>Range of antenna beamwidth:</b>	360, 160, 120, 90, 60, or 45
<b>Range of orientation:</b>	any point from 0 to 359

## **Appendix C**

### **Antenna Specification Sheets**



## TA-2350-DAB 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 corporately fed broadband dipole array which is configured to provide electrical beam downtilt and null fill. The antenna elements are at DC ground to aid in lightning protection.

### Electrical Specifications

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

Typical Mid band values. (For details, contact factory)

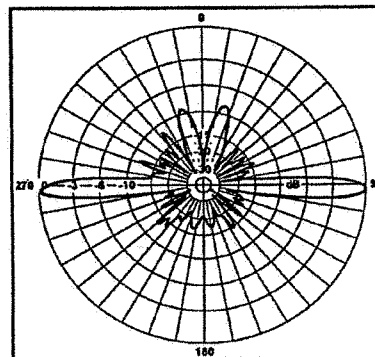
### Mechanical Specifications

**Length:** 70 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  
**Base:** Irridited Aluminum  
**Clamps:** HDG steel

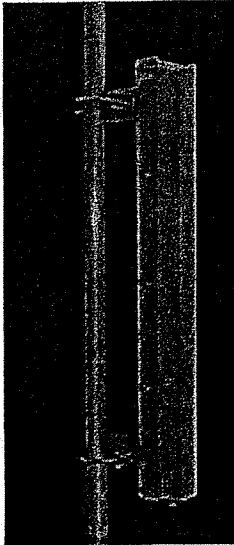
E-Plane







## TA-2304-2-DAB Adjustable Sector 2330 - 2345 MHz



The TA-2304-2-DAB is a medium power vertically polarized Sectoral antenna specifically designed for Digital Audio Broadcast transmission. The antenna is designed to provide field adjustable azimuth beamwidths of 45, 60, 90, 120 or 160 degrees by use of side panels. The antenna elements are at DC ground to aid in lightning protection.

### Electrical Specifications

**Frequency Range:** 2330-2345 MHz  
**Gain: (dBi)** 18 @ 45° 17 @ 60° 15 @ 90°  
                   14 @ 120° 13 @ 160°  
**VSWR:** 1.3:1 max.  
**Front/Back Ratio:** 15 dB @ 180° ± 35°  
**Polarization:** Linear Vertical  
**Power Rating:** 200 Watts average, 800 Watts peak  
**H-Plane Beamwidth (-3 dBd):**  
 Field Adjustable 45, 60, 90, 120, 160 degrees  
**E-Plane Beamwidth (-3 dBd):** 7.5 degrees  
**Cross Pol. Discrimination:** 15 dB  
**Impedance:** 50 ohms nominal  
**Termination:** 7/16 DIN female

Typical Mid band values. (For details, contact factory)

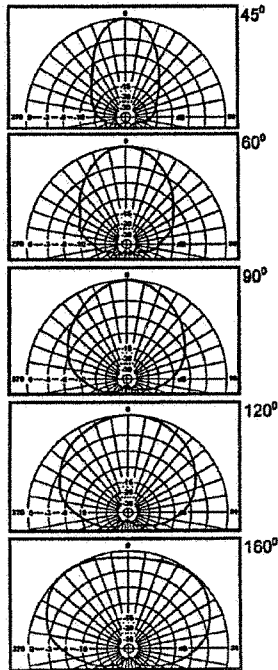
### Mechanical Specifications

**Length:** 40 in. (1016 mm)  
**Width:** 6.5 in. (165 mm)  
**Depth:** 3.5 in. (89 mm)  
**Weight (Incl. Clamps):** 10 lb. (4.5 kg)  
**Rated Wind Velocity:** 125 mph (200 km/h)  
**Hor. Thrust at rated wind:** 150 lb. (68 kg)  
**Mounting Pipe:** 0.75 - 3.0 in. (19 - 76 mm)

### Materials

**Radiating Elements:** Tin plated copper on PCB  
**Reflector:** Irridited aluminum  
**Radome:** Gray UV stabilized ASA  
**Clamps:** HDG steel

H-Plane



E-Plane

