

## **Technical Report W224AZ.CP Minor Modification**

This technical report is submitted for a minor modification to W224AZ.CP at Chattanooga, TN, FCC file no. BPFT-20101105AHM. Changes in tower site, antenna, and ERP are requested for the facility to serve as a fill-in to rebroadcast the primary WPLZ(FM) 237C3 HD3 signal at Ooltewah, TN, FCC facility I.D. 66956.

The following exhibits are provided for the FCC form 349 application:

- E-1 W224AZ.CP Mod. Overlap Study
- E-2 60 dBu Plot Within WPLZ(FM) and Overlap to W224AZ.CP and Lic.
- E-3 ASR 1043736

### **W224AZ.CP Modification Analysis:**

Exhibit E-1 shows the W224AZ.CP modification will be located within the second adjacent protected contour of WDEF-FM 222C0 at Chattanooga, TN, facility I.D. 57827. As a result, the interference ratio is utilized to determine the interference contour, in accordance with FCC-02-244, paragraph 12.

The W224AZ modification is actually to be co-located on the same tower with WDEF-FM 220C0. The WDEF-FM contour at a conservative 10 meter distance is 166.92 dBu. Therefore, a +40 interfering F(50-10) dBu contour of 206.92 was calculated to be 0.0 km. Both contours were calculated using the FCC Curves program from the Commission's web site. Clearly, the interfering contour will not reach the ground or any building or major highway from its mounting height of 98 meters AGL.

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## **Antenna System:**

W224AZ will be located at an existing tower, ASR no.1043736, and operate at 0.250 kW ERP at a COR AGL of 98 meters using a Shively 6813 single bay nondirectional antenna. The 60 dBu F(50-50) contour is completely contained within the primary WPLZ(FM) primary contour and overlaps the current W224AZ licensed and CP facilities, shown in exhibit E-2.

## **RF Exposure Calculation:**

The RF contribution of the 0.250 kW facility was calculated using the Commission's FMMODEL program. The resulting RF is  $0.39 \mu\text{W}/\text{cm}^2$  at a distance of 99 meters from the base of the tower, which is well below 5% of the  $200 \mu\text{W}/\text{cm}^2$  permissible for general public exposure, allowing its exclusion from consideration.

## **Conclusion:**

It is concluded that the modification of W224AZ.CP complies with all Commission rules and policies.



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# E-1 W224AZ Overlap Study

REFERENCE		CH# 224D - 92.7 MHz, Pwr= 0.25 kW, HAAT= 301.0 M, COR= 680 M								DISPLAY DATES	
35 08 06.0 N.		Average Protected F(50-50)= 22.59 km								DATA 02-12-11	
85 19 25.0 W.		Omni-directional								SEARCH 02-14-11	
CH CITY	CALL	TYPE STATE	ANT AZI ---	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*	
224D Chattanooga	W224AZ	LIC_V_TN	84.2 264.3	28.8 BLFT20101015ABW	35 09 39.0 85 00 34.0	0.100	52.1 451	16.0 Edgewater Broadcasting Inc	-50.8*	-69.4	
224D Chattanooga	W224AZ	CP_C_TN	84.2 264.3	28.8 BPFT201011105AHM	35 09 39.0 85 00 34.0	0.010	31.9 481	9.6 Edgewater Broadcasting Inc	-30.6*	-63.1	
222C0 Chattanooga	WDEF-FM	LIC_C_TN	0.0 0.0	0.0 BMLH20050831ADG	35 08 06.0 85 19 25.0	100.000 360	8.0 743	62.7 Jackson Telecasters, Inc.	-22.3*	-63.8*	
224A Harri man	WI JV	LIC_ZC_TN	44.5 225.0	114.7 BLH20080428ABW	35 52 04.0 84 25 56.0	2.650 153	88.1 450	31.8 Progressive Media Inc.	-0.4	2.0	
226A Benton	WSAA	LIC_CX_TN	85.4 265.7	43.0 BLH20080828AAD	35 09 54.0 84 51 13.0	3.500 133	2.5 390	26.3 Wsaa Lic	13.1	15.6	
224A Arab	WAFN-FM	LIC_NC_AL	229.8 49.2	134.3 BLH20040227ABH	34 21 04.0 86 26 27.0	1.450 190	79.7 457	27.5 Fun Media Group, Inc.	31.9	38.4	
225C1 Atlanta	WZGC	LIC_NC_GA	148.3 328.8	172.8 BMLH20080226ABQ	33 48 26.0 84 20 21.8	66.000 340	102.1 612	70.2 Cbs Radio Inc. Of Atlanta	43.3	59.9	
225C Nashville	WJXA	LIC_CY_TN	306.9 125.9	184.8 BLH19861204KB	36 07 14.0 86 58 07.0	100.000 321	103.7 507	71.2 South Central Communicatio	63.7	87.7	
223D Bl uhm town	W223BE	LIC_C_TN	324.2 143.8	100.3 BLFT20070726AAQ	35 51 56.0 85 58 30.0	0.010	14.2 641	10.1 Middle Tennessee State Uni	72.0	68.9	
227C2 New Market	WWFF-FM	LIC_ZCX_AL	252.7 72.0	125.3 BLH20071228ABT	34 47 37.0 86 37 51.0	14.500 279	5.5 512	52.3 Cumulus Li censi ng Lic	96.7	71.9	
224A Munford	WTDR	CP_NCX_AL	193.8 13.5	188.4 BPH20081120AGV	33 29 06.0 85 48 32.0	0.250 481	88.4 783	30.3 Jacobs Broadcast Group, In	72.5	75.7	
225D Huntsville	W225AH	LIC_DC_AL	248.8 68.1	118.7 BLFT20100223AEK	34 44 36.0 86 31 56.0	0.030	9.2 507	6.1 Way-fm Media Group, Inc.	85.3	76.2	
224A Tall adega	WTDR	LIC_C_AL	198.6 18.2	192.8 BLH20010116ABQ	33 29 12.0 85 59 15.0	2.600 154	87.2 380	31.2 Jacobs Broadcast Group, In	77.7	78.2	
223C Greenville	WESC-FM	LIC_CY_SC	89.1 270.7	247.4 BLH19800811AB	35 08 16.0 82 36 31.0	100.000 610	120.8 1274	81.4 Clear Channel Broadcasting	99.2	123.5	
223A Tri nity	WVNN-FM	LIC_NCN_AL	254.1 73.1	167.4 BLH19921019KD	34 42 36.0 87 04 54.0	3.100 129	40.8 315	26.8 Cumulus Li censi ng Lic	104.2	107.1	
226A Gl encoe	WGMZ	LIC_NCN_AL	200.7 20.4	139.9 BLH19931027KA	33 57 16.0 85 51 40.0	1.650 189	2.4 382	29.4 Capstar Tx Lic	110.0	109.4	
278A New Hope	WHWT	LIC_ZCX_AL	243.2 62.6	121.9 BLH20071101AAC	34 38 11.0 86 30 42.0	0.290 449	31.6 674	29.1 Stroh Comm, Lic	9.5R	112.4M	
224A Mi ddl esboro	WMI K-FM	APP_CX_KY	39.9 220.8	212.8 BPH20110126AAZ	36 35 39.0 83 47 42.0	0.350 410	71.9 941	24.3 Gateway Broadcasting, Inc.	115.9	113.4	
224A Russel l Springs	WHVE	LIC_ZCX_KY	3.5 183.6	216.0 BMLH20040615ABR	37 04 40.0 85 10 28.0	6.000 100	87.4 376	28.9 Shoreline Communi cations,	113.6	137.2	
224A Mi ddl esboro	WMI K-FM	LIC_CN_KY	39.8 220.7	212.9 BLH19791220AP	36 35 50.0 83 47 49.0	0.130 439	62.3 966	19.9 Gateway Broadcasting, Inc.	125.6	118.1	
226A Karns	WCYQ	LIC_CN_TN	51.6 232.3	149.5 BLH19901218KA	35 57 46.0 84 01 23.0	2.400 156	2.5 450	28.6 Journal Broadcast Corporat	120.0	119.8	

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
Contour distances are on direct line to and from reference station. Reference zone= East Zone, Co to 3rd adjacent.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
"\*\*\*"affixed to 'IN' or 'OUT' values = site inside protected contour.

## E-2 W224AZ Mod. 60 dBu Contour Plots

### W224AZ Mod.

Latitude: 35-08-06 N  
Longitude: 085-19-25 W  
ERP: 0.25 kW  
Channel: 224  
Frequency: 92.7 MHz  
AMSL Height: 680.0 m  
Elevation: 582.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

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WPLZ(FM) 237C3  
60 dBu F(50-50) Contour

W224AZ Mod.  
60 dBu F(50-50) Contour

W224AZ.Lic  
60 dBu F(50-50) Contour

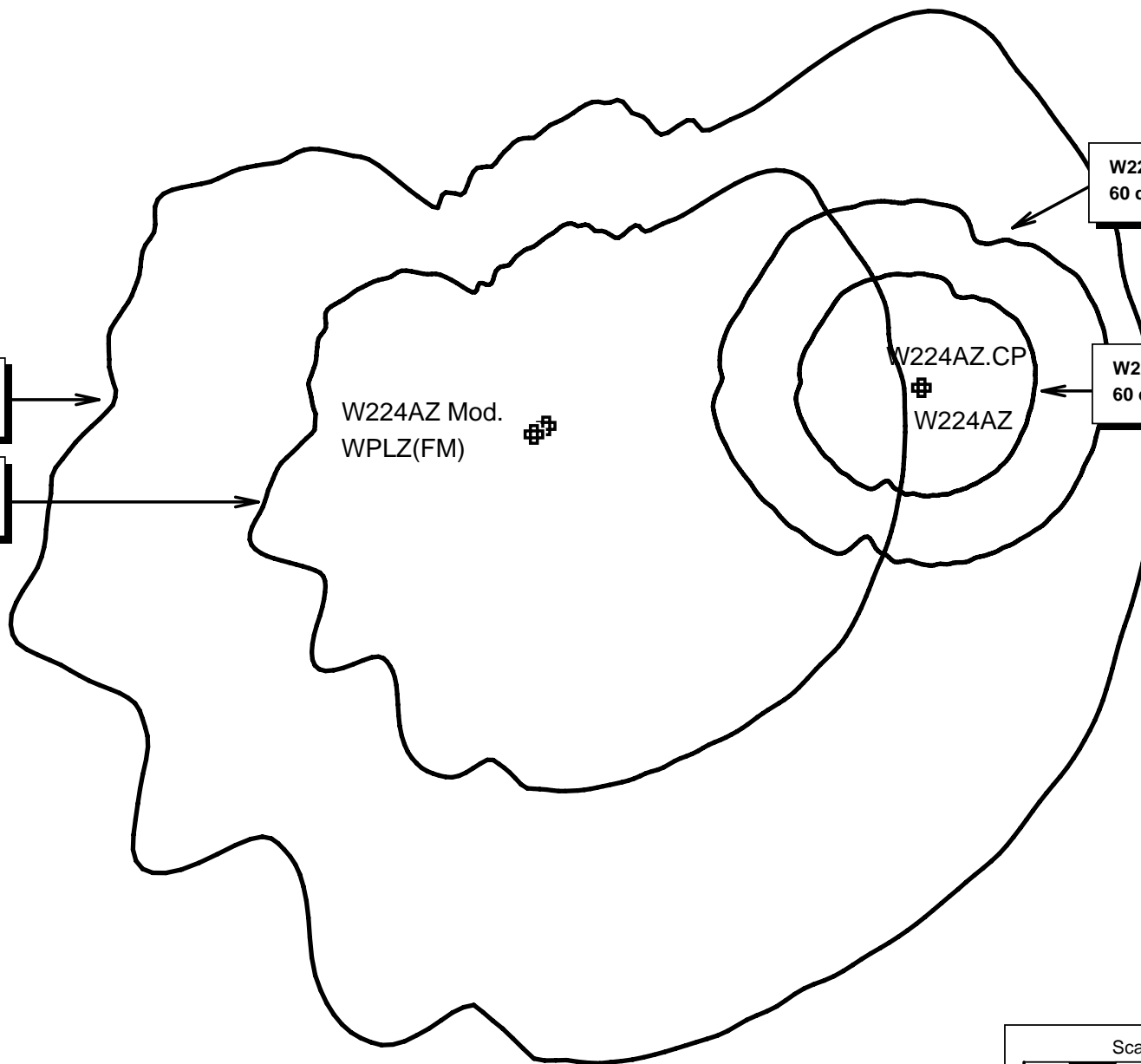
W224AZ.CP  
60 dBu F(50-50) Contour

W224AZ Mod.  
WPLZ(FM)

W224AZ.CP  
W224AZ

Scale 1:500,000

0 7 14 21 km



## E-3 W224AZ ASR

ASR Registration Search

### Registration 1043736

 [Map Registration](#)

#### Registration Detail

Reg Number	1043736	Status	Constructed
File Number	A0520621	Constructed	01/01/1966
FAA Study	SO-OE-65-177	EMI	No
FAA Issue Date	10/13/1966	NEPA	No

#### Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Communications Purposes

**Location** (in NAD83 Coordinates)

Lat/Long 35-08-06.0 N 085-19-25.0 W 220 HAMPTON RD SIGNAL MOUNTAIN  
City, State CHATTANOOGA , TN  
Center of  
AM Array

#### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
581.5	195.0
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
776.5	174.0

#### Painting and Lighting Specifications

FCC Paragraphs 1, 3, 5, 14, 21

#### Owner & Contact Information

FRN	0015347529	Licensee ID	L01181384
Assignor FRN	0015030620	Assignor ID	L01154801

#### Owner

WDEF-TV, Inc.  
Attention To: Jeffrey R. Samuels  
27 Abercorn Street  
Savannah , GA 31401

P: (912)233-1281  
E: jsamuels@morrismultimedia.com

#### Contact

Curtis , Vincent J Jr.  
1300 N. 17th Street - Eleventh Floop  
Arlington , VA 22209

P: (703)812-0400  
E: curtis@fhhlaw.com

#### Last Action Status

Status	Constructed	Received	10/18/2006
Purpose	Change Owner	Entered	10/18/2006
Mode	Interactive		