Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0627
Expires 01/31/98

FOR FCC USE ONLY

FCC 302-AM
APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.)

FOR COMMISSION USE ONLY

FILE NO.

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)

Jacobs Media Corporation

MAILING ADDRESS (Line 1) (Maximum 35 characters)

P.O. Box 10

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY	STATE OR COUNTRY (if foreign address)	ZIP CODE
Gainesville	GA	30503

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)
770-531-6508	WGGA(AM)	32977

2. A. Is a fee submitted with this application? ☐ Yes ☑ No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section

☐ Governmental Entity ☐ Noncommercial educational licensee ☑ Other (Please explain):

C. If Yes, provide the following information:

Direct Measurement of Power

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
	0001	$ N/A	

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)	(B)	(C)	FOR FCC USE ONLY
	0001	$ N/A	

ADD ALL AMOUNTS SHOWN IN COLUMN C,
AND ENTER THE TOTAL HERE.
THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.

TOTAL AMOUNT REMITTED WITH THIS APPLICATION	FOR FCC USE ONLY
$ N/A	

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT Jacobs Media Corporation		
MAILING ADDRESS P.O. Box 10		
CITY Gainesville	STATE GA	ZIP CODE 30503

2. This application is for:

☑ Commercial ☐ Noncommercial

☐ AM Directional ☑ AM Non-Directional

Call letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit
WGGA	Gainesville, GA	N/A	N/A	N/A

3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620?

☐ Yes ☐ No

If No, explain in an Exhibit.

Exhibit No. N/A

4. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?

☐ Yes ☐ No

If No, state exceptions in an Exhibit.

Exhibit No. N/A

5. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect?

☐ Yes ☑ No

If Yes, explain in an Exhibit.

Exhibit No. N/A

6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?

☐ Yes ☐ No

☑ Does not apply

If No, explain in an Exhibit.

Exhibit No.

7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?

☐ Yes ☑ No

If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter.

Exhibit No.

8. Does the applicant, or any party to the application, have a petition on file to migrate to the expanded band (1605-1705 kHz) or a permit or license either in the existing band or expanded band that is held in combination (pursuant to the 5 year holding period allowed) with the AM facility proposed to be modified herein?

☐ Yes ☑ No

If Yes, provide particulars as an Exhibit.

Exhibit No.

The APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because use of the same, whether by license or otherwise, and requests and authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended).

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations and that all the exhibits are a material part hereof and are incorporated herein as set out in full in

CERTIFICATION

1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☑ Yes ☐ No

2. I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Name	Signature	
John W. Jacobs, III	/s/ John W. Jacobs, III	
Title	Date	Telephone Number
CEO	4/26/2021	770-532-9921

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant
Jacobs Media Corporation

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☐ Station License ☑ Direct Measurement of Power

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
				Night	Day
WGGA		1240	Unlimited	1.0	1.0

2. Station location

State	City or Town
GA	Gainesville

3. Transmitter location

State	County	City or Town	Street address (or other identification)
GA	Hall	Gainesville	1102 Thompson Bridge Rd.

4. Main studio location

State	County	City or Town	Street address (or other identification)
GA	Hall	Gainesville	1102 Thompson Bridge Rd.

5. Remote control point location (specify only if authorized directional antenna)

State	County	City or Town	Street address (or other identification)

6. Has type-approved stereo generating equipment been installed? ☐ Yes ☑ No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68? ☐ Yes ☐ No ☑ Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed. Exhibit No.

8. Operating constants:

RF common point or antenna current (in amperes) without modulation for night system	RF common point or antenna current (in amperes) without modulation for day system
3.66	3.66

Measured antenna or common point resistance (in ohms) at operating frequency		Measured antenna or common point reactance (in ohms) at operating frequency	
Night	Day	Night	Day
74.7	74.7	-231.0	-231.0

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day

Manufacturer and type of antenna monitor:

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
Uniform Cross-section Guyed Tower	120.7	121.0	121.9	Exhibit No.

Excitation ☑ Series ☐ Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	West Longitude
34 ° 19 ' 01 "	083 ° 49 ' 46 "

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Exhibit No. EE-1

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system. Exhibit No.

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

None

11. Give reasons for the change in antenna or common point resistance.

AT&T installed tower mounted cellular radios, along with additional isolation chokes and cabling for supplying DC power to the radios.

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type)	Signature (check appropriate box below)
Daniel L. Davis	
Address (include ZIP Code) P.O. Box 48 Madison, GA 30650	Date April 16, 2021 Telephone No. (Include Area Code) 706-342-4474

☐ Technical Director ☐ Registered Professional Engineer

☐ Chief Operator ☑ Technical Consultant

☐ Other (specify)

D Squared Broadcast Technologies, Inc.
P.O. Box 48
Madison, GA 30650

WGGA
Gainesville, GA

FCC Form 302 AM
Exhibit EE-1

April 16, 2021

Voice: 706-342-4474 E-Mail: dldavis@dsquaredbroadcast.com

D Squared Broadcast Technologies, Inc.
P.O. Box 48
Madison, GA 30650

ANTENNA RESISTANCE MEASUREMENT

WGGA-AM

Gainesville, GA
April 16, 2021

D Squared Broadcast Technologies, Inc.
P.O. Box 48
Madison, GA 30650

Qualifications

WGGA-AM

Gainesville, GA
April 16, 2021

Daniel L. Davis deposes and says:

That he prepared the attached exhibit and that all work contained in that exhibit is true of his knowledge and belief, and as to such statements made on belief, they are believed to be true.

That he currently holds a F.C.C. General Class Radiotelephone License and had held a FCC First Class Radiotelephone License for ten years prior to receiving the General Class License in 1985. He also holds Professional Broadcast Engineer certification through the Society of Broadcast Engineers, and has been a member of the SBE since 1983.

That he received the degree of Master of Education from the University of Georgia in 1978, and that his undergraduate program of study was strong in Mathematics and Physics.

That he has been involved in the technical aspects of broadcasting since 1975, and has performed design, installation, project management, troubleshooting, and maintenance, along with tests and measurements, including compliance measurements on broadcast facilities.

Member: IEEE

SBE. CERTIFIED

_____

Daniel L. Davis, CPBE 04/16/2021
FCC Lic. No. PG-6-14509
SBE CPBE No. 50651
GA Lic. No. LVU-003485

D Squared Broadcast Technologies, Inc.
P.O. Box 48
Madison, GA 30650

Narative Statement

WGGA-AM

Gainesville, GA
April 16, 2021

AT&T replaced some cellular telephone radio equipment on the tower. The new AT&T system utilizes fiber optic cabling to deliver data to the tower mounted radios. In order to supply power to the tower mounted equipment, a six circuit Kintronics Isolation unit was installed near the tower base, in addition to the existing twelve circuit isolation unit. The isolation unit was adjusted to minimize its effect on the AM tower impedance. Then new antenna resistance measurements were made. The new impedance was determined with a vector impedance analyzer, using the following procedure, as specified in §73.54 of the FCC Rules and Regulations. Care was taken to establish a low impedance ground path between the analzer and the antenna coupling unit ground. Then the ACU output J-Plug was disconnected. The test port of the analyzer was connected to the tower side of the ATU test jack, and a series of resistance and reactance measurements was made at discrete frequencies. This data was plotted on a graph using the software supplied with the analyzer, and the station operating impedance was determined geometrically from the graph.

The new station operating impedance is 74.7 - j231.0 ohms.

The antenna current for 1.0 kilowatts of antenna input power is 3.658 Amperes.

D Squared Broadcast Technologies, Inc.
P.O. Box 48
Madison, GA 30650

Tabulation of Data

WGGA-AM

Gainesville, GA
April 16, 2021

	Antenna	Antenna
Frequency MHz	Resistance - Ohms	Reactance—Ohms
1.210	115.424	-304.535
1.211	112.582	-301.724
1.212	111.286	-299.375
1.213	108.735	-296.101
1.214	106.329	-294.378
1.215	105.332	-290.728
1.216	103.898	-287.627
1.217	102.164	-284.656
1.218	99.731	-282.788
1.219	98.254	-279.400
1.220	97.412	-277.212
1.221	95.196	-274.304
1.222	93.986	-271.490
1.223	92.405	-269.389
1.224	91.214	-266.815
1.225	90.281	-265.074
1.226	88.353	-261.616
1.227	87.788	-259.395
1.228	85.832	-256.737
1.229	84.291	-254.914
1.230	84.204	-250.998

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Tabulation of Data

WGGA-AM

Gainesville, GA
April 16, 2021

	Antenna	Antenna
Frequency MHz	Resistance - Ohms	Reactance—Ohms
1.231	82.902	-249.600
1.232	81.477	-247.287
1.233	80.325	-245.015
1.234	80.223	-244.160
1.235	78.961	-240.460
1.236	77.473	-238.289
1.237	76.007	-236.365
1.238	75.710	-234.097
1.239	74.644	-232.228
1.240	75.259	-230.105
1.241	73.670	-228.907
1.242	74.009	-226.346
1.243	72.827	-225.411
1.244	72.465	-222.798
1.245	71.992	-221.920
1.246	71.431	-220.069
1.247	70.703	-219.076
1.248	70.300	-218.113
1.249	68.974	-216.718
1.250	68.090	-215.500

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Tabulation of Data

WGGA-AM

Gainesville, GA
April 16, 2021

	Antenna	Antenna
Frequency MHz	Resistance - Ohms	Reactance—Ohms
1.251	67.213	-214.069
1.252	66.263	-212.444
1.253	64.744	-210.664
1.254	62.965	-209.239
1.255	63.017	-208.807
1.256	62.602	-206.900
1.257	61.067	-203.720
1.258	60.201	-203.481
1.259	59.451	-201.828
1.260	59.417	-199.590
1.261	58.099	-198.501
1.262	56.849	-197.625
1.263	56.299	-195.585
1.264	55.834	-194.445
1.265	54.817	-193.262
1.266	54.315	-191.535
1.267	54.205	-189.479
1.268	52.507	-188.826
1.269	51.972	-187.273
1.270	53.348	-185.735

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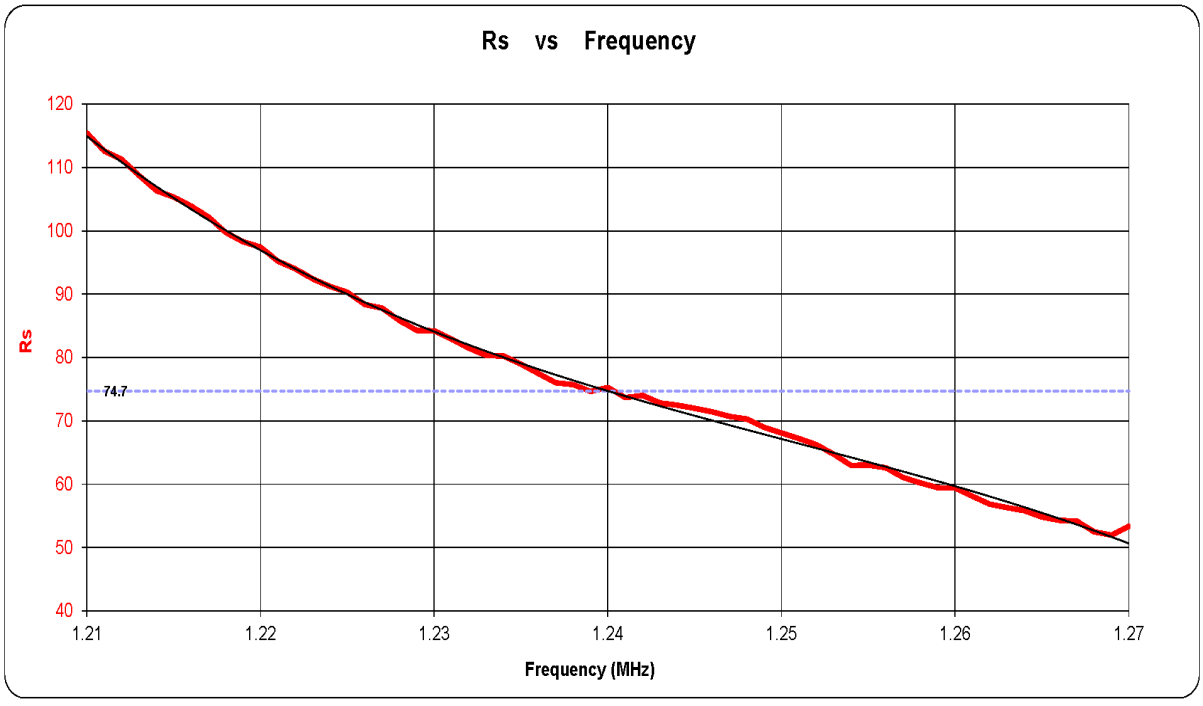
Antenna Resistance Graph

WGGA-AM

Gainesville, GA
April 16, 2021

File: WGGA-AntZ-04132021.csv



Zplots by AC6LA 4/16/2021 1:32 PM http://ac6la.com/

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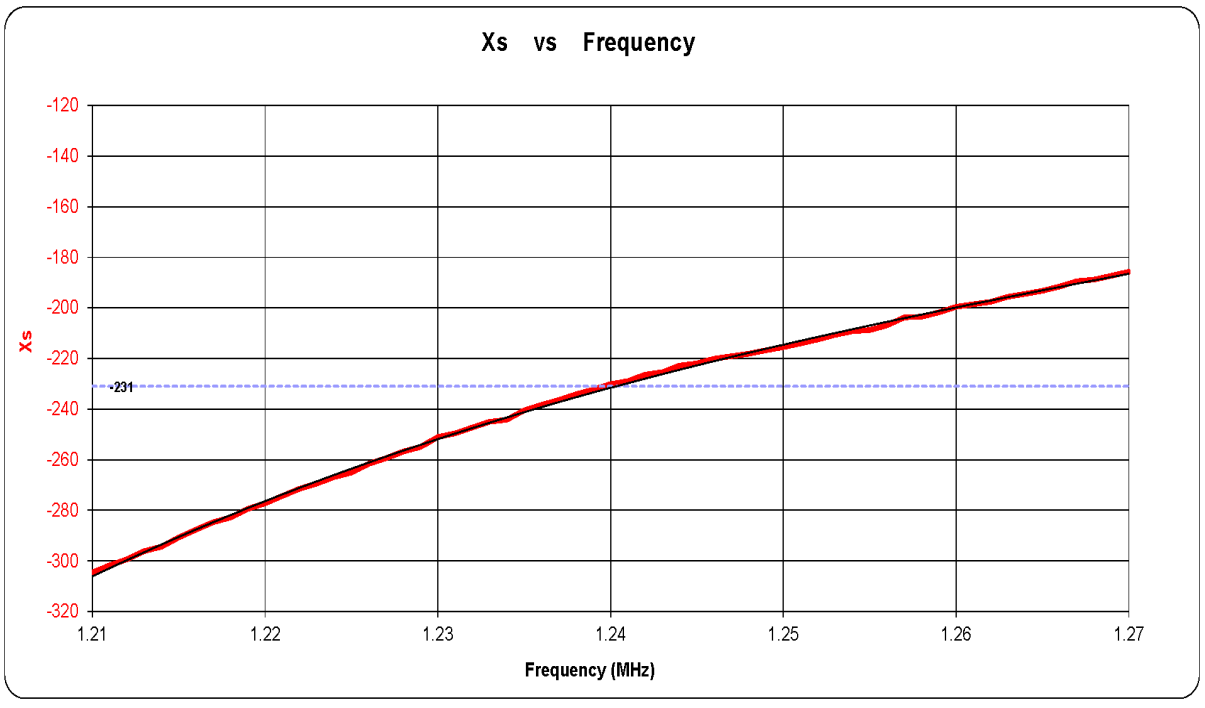
Madison, GA 30650

Antenna Reactance Graph

WGGA-AM

Gainesville, GA
April 16, 2021

File: WGGA-AntZ-04132021.csv



Zplots by AC6LA 4/16/2021 1:34 PM http://ac6la.com/

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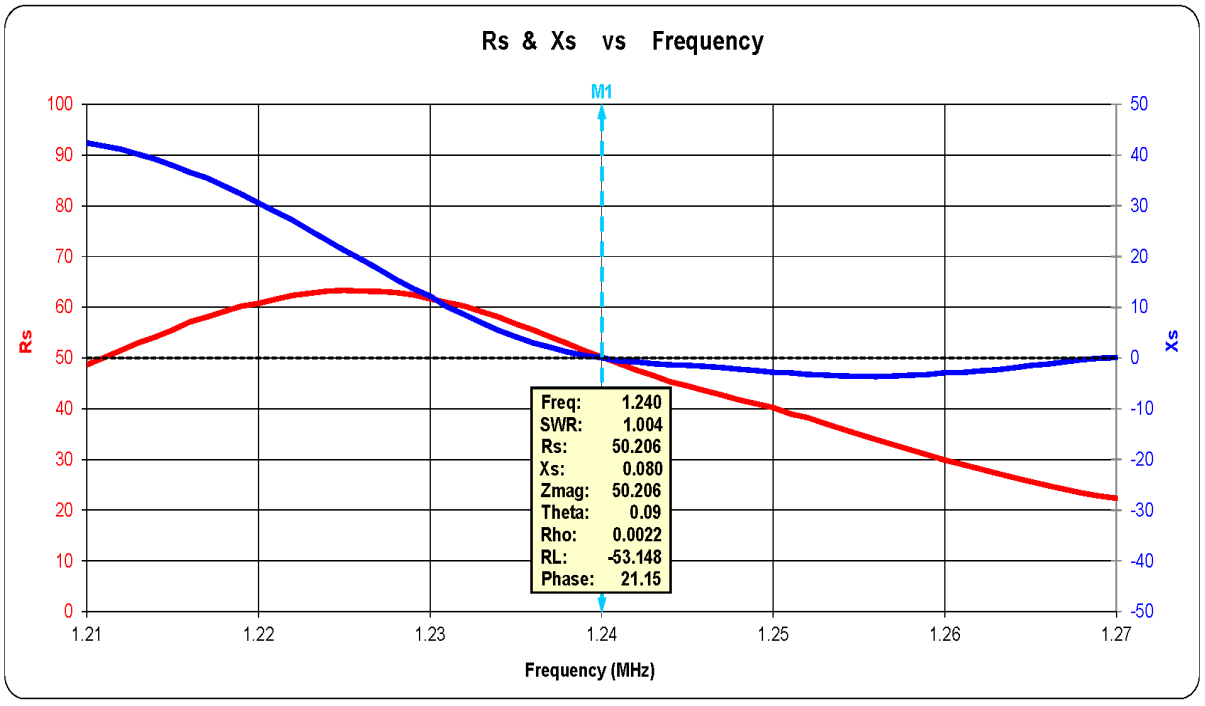
Antenna Coupling Unit Input Impedance

WGGA-AM

Gainesville, GA
April 16, 2021

File: WGGA-ACU-04132021.csv



Zplots by AC6LA 4/16/2021 1:49 PM http://ac6la.com/

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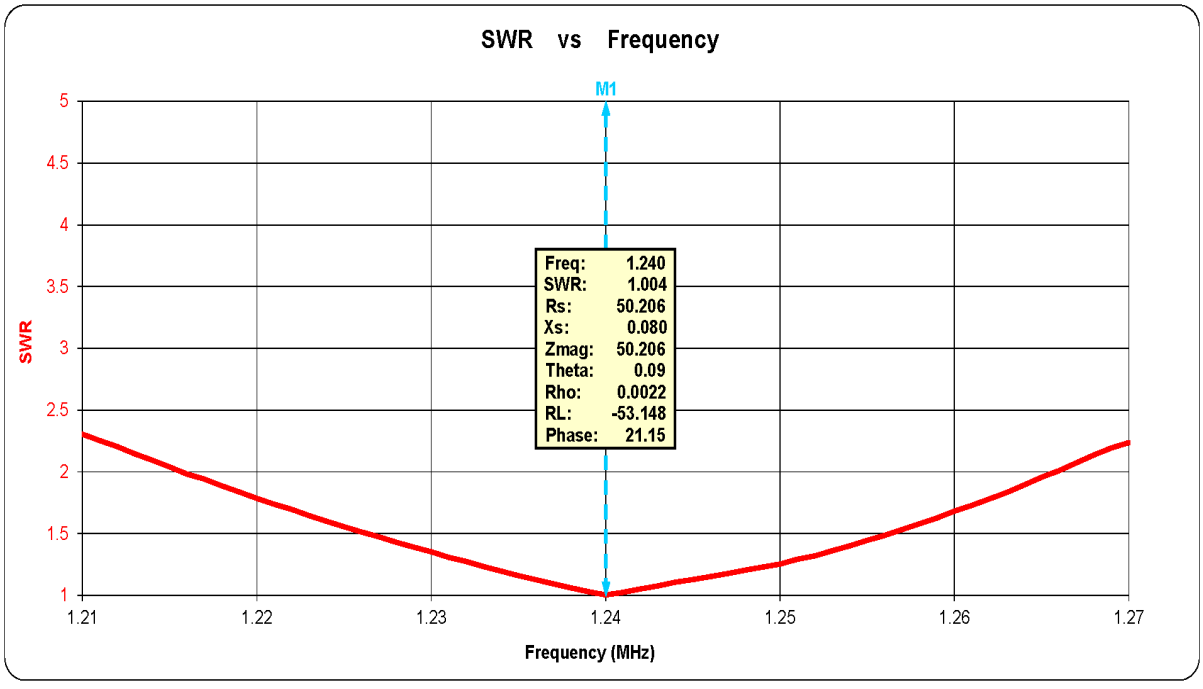
Antenna Coupling Unit Input SWR

WGGA-AM

Gainesville, GA
April 16, 2021

File: WGGA-ACU-04132021.csv



Zplots by AC6LA 4/16/2021 1:51 PM http://ac6la.com/

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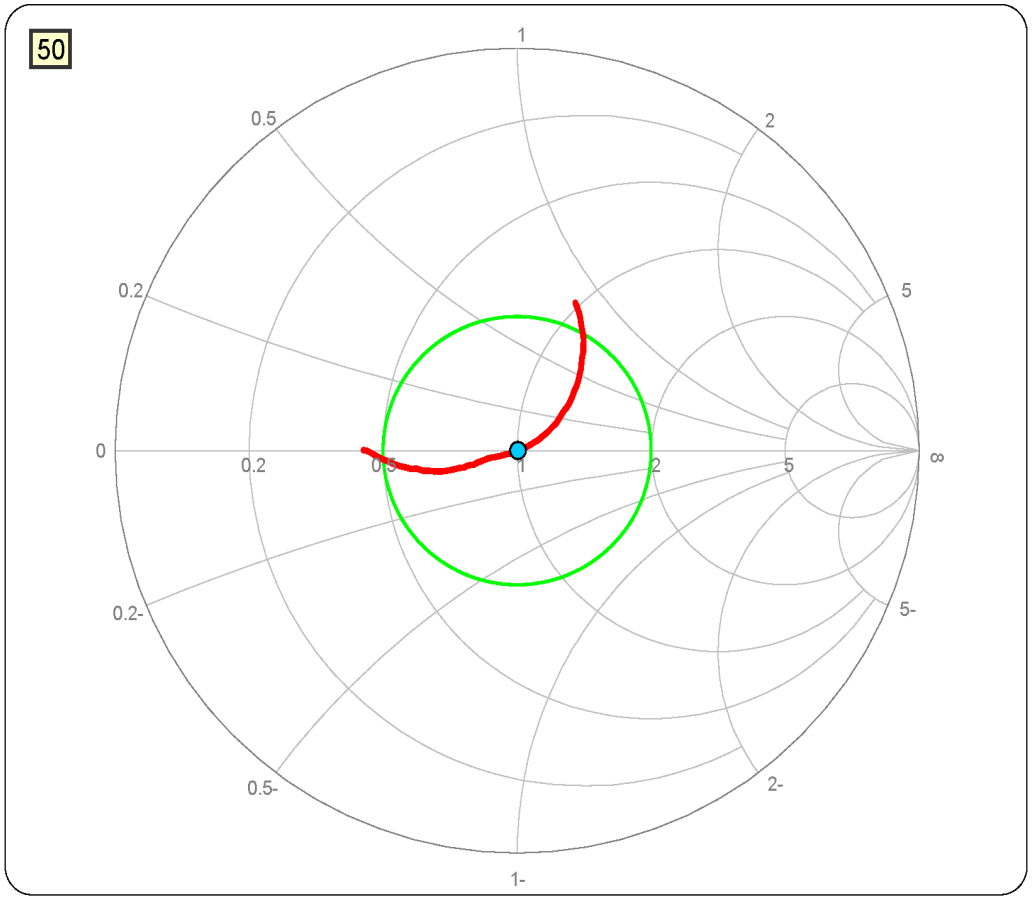
Antenna Coupling Unit Input Smith Chart

WGGA-AM

Gainesville, GA
April 16, 2021

File: WGGA-ACU-04132021.csv



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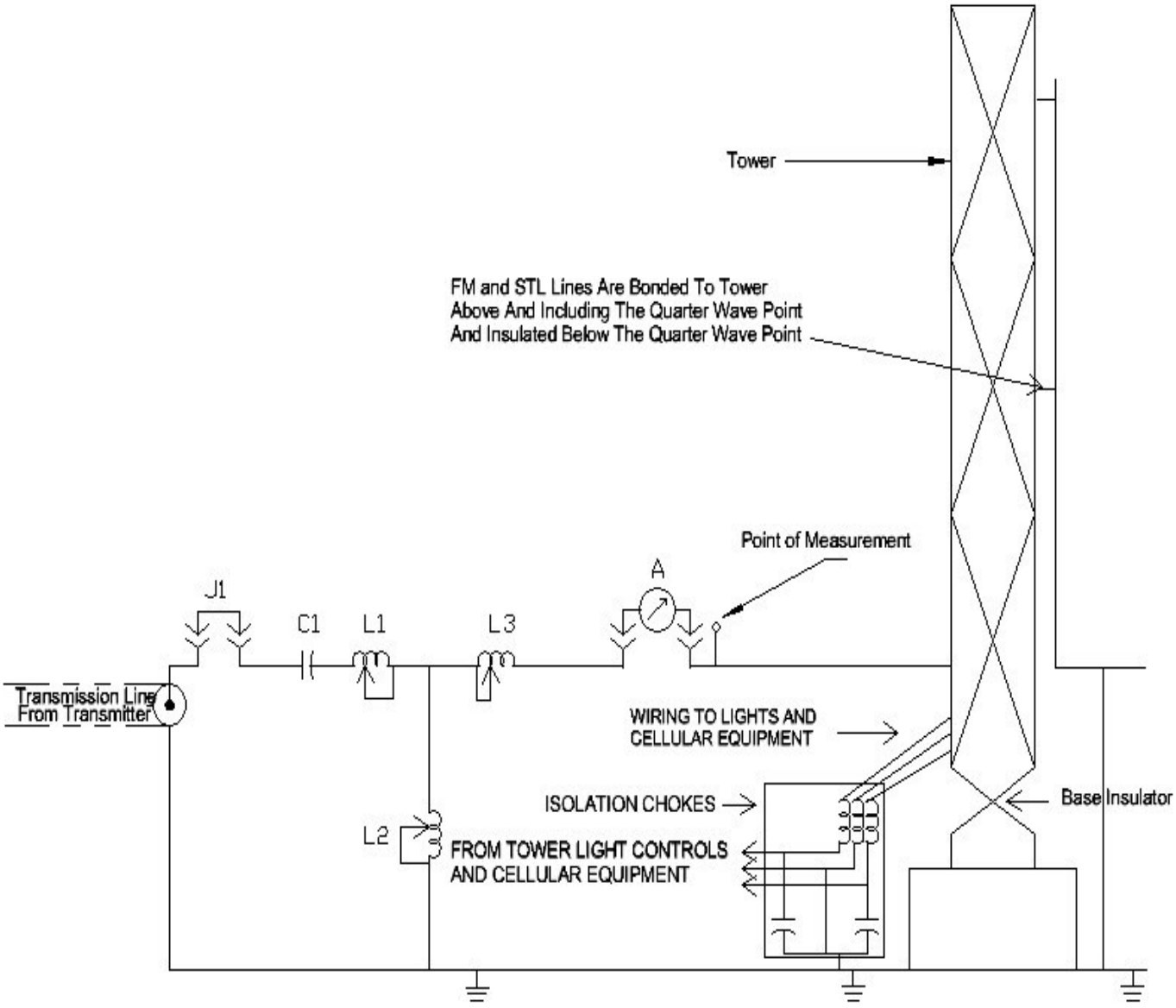
Antenna System Schematic

WGGA-AM

Gainesville, GA
April 16, 2021



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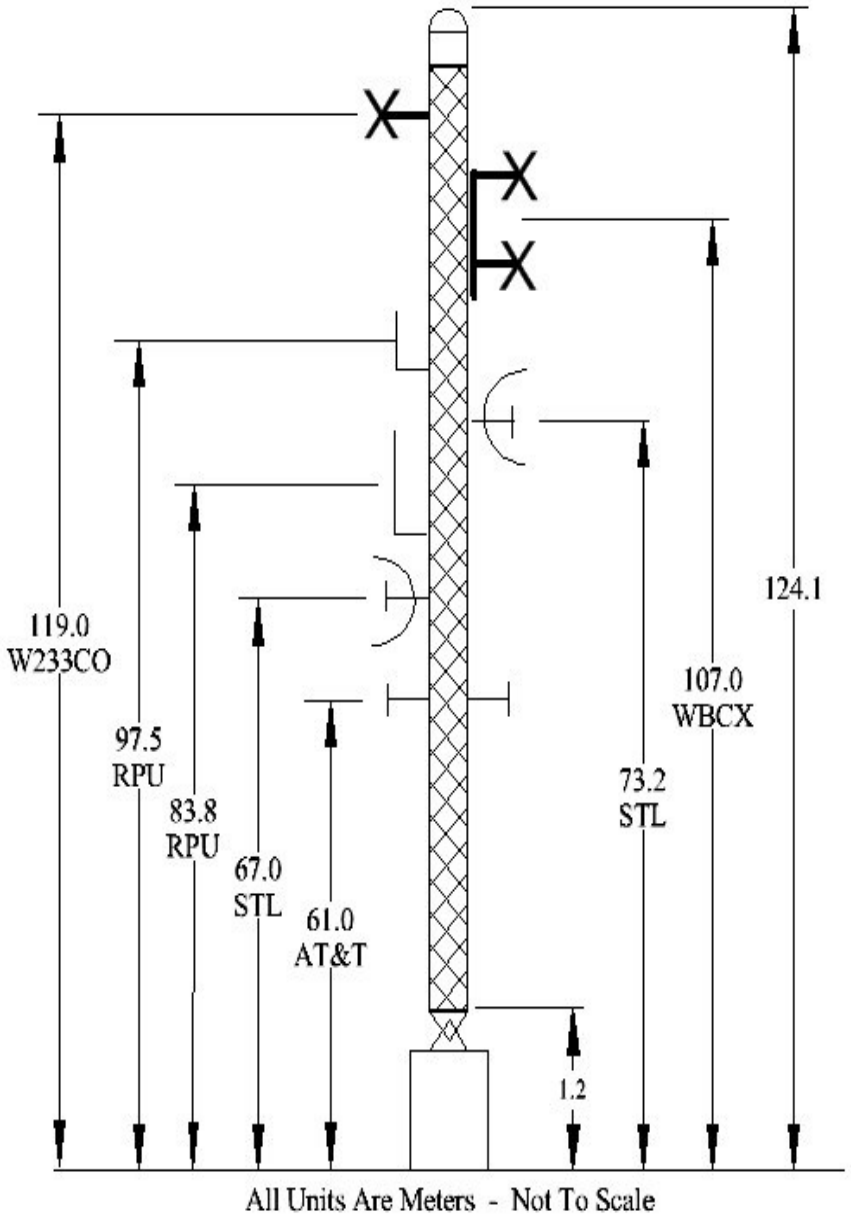
Tower Sketch

WGGA-AM

Gainesville, GA
April 16, 2021



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Equipment Used

WGGA-AM
Gainesville, GA
April 16, 2021

TYPE	MAKE	MODEL	SERIAL	CAL.
Vector Impedance Analyzer	Array Solutions	Power Aim 120	1071	04/13/2021

The analyzer was calibrated using NIST traceable Short, Open, and 50 ohm standards at the end of 18 inch test leads. The same test leads were used for conducting the antenna resistance measurements.