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February 22, 2011

ANNE GOODWIN CRUMP, ESQ.
(703) 812-0426
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BY FEDEX
Federal Communications Commission
Media Bureau
P.O. Box 979089
St. Louis, MO 63197-9000

Re: Application for License to Cover Construction Permit
KCLE(AM), Facility ID No. 59263
Burleson, Texas

Dear Sir or Madam:

Transmitted herewith in triplicate, on behalf of M&M Broadcasters, Ltd., licensee of KCLE(AM), is its application for license to cover construction permit (File No. BP-20090716ACD) for modification of licensed facilities, together with FCC Form 159 reflecting a credit card payment to the Federal Communications Commission in the amount of $1,320.00 to cover the filing fees for the above-referenced license application.

Furthermore, the applicant hereby requests program test authority with the parameters specified in the license application.

FILE: M&M BROADCASTERS - BURLESON #3AM (06160-01)
W:\DOCS\Clients\06160\06160-01\00259595.DOCX

Please date-stamp the attached confirmation copy and return it to the courier. Should any questions arise concerning this matter, please communicate with this office.

Very truly yours,

Anne Goodwin Crump

Anne Goodwin Crump
Counsel for M&M Broadcasters, Ltd.

Enclosures

bcc: Mr. Gary L. Moss (with enclosure & copy of Form 159)*

*Please place a copy in the public inspection file.

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. BMML-20110223ACM

SECTION I - APPLICANT FEE INFORMATION

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

M&M Broadcasters, Ltd.

MAILING ADDRESS (Line 1) (Maximum 35 characters)
P. O. Box 1629

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY	STATE OR COUNTRY (if foreign address)	ZIP CODE
Cleburne	TX	76033

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)

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:

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
MMR	0001	$ 615.00	

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
MOR	0001	$ 705.00	

	TOTAL AMOUNT REMITTED WITH THIS APPLICATION	FOR FCC USE ONLY
ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	$ 1,320	

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT M&M Broadcasters, LTD		
MAILING ADDRESS P. O. Box 1629		
CITY Cleburne	STATE Texas	ZIP CODE 76033-1629

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
KCLE	Burleson	BP20090716ACD	n/a	05-06-2013

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.

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.

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.

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	
Gary L. Moss		
Title: President of the General Partner	Date: 01/28/11	Telephone Number: 817-645-6643

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.

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).

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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	
Gary L. Moss	Gary L. Moss	
Title	Date	Telephone Number
President of the General Partner	01/28/2011	817 645 6643

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ORIGINAL

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February 9, 2011

ANNE GOODWIN CRUMP, ESQ.
(703) 812-0426
CRIMP@FHHLAW.COM

BY FEDEX
Federal Communications Commission
Media Bureau
P.O. Box 979089
St. Louis, MO 63197-9000

Re: Application for License to Cover Construction Permit
KCLE(AM), Facility ID No. 59263
Burleson, Texas

Dear Sir or Madam:

Transmitted herewith in triplicate, on behalf of M&M Broadcasters, Ltd., licensee of KCLE(AM), is its application for license to cover construction permit (File No. BP-20090716ACD) for modification of licensed facilities, together with FCC Form 159 reflecting a credit card payment to the Federal Communications Commission in the amount of $1,320.00 to cover the filing fees for the above-referenced license application.

Furthermore, the applicant hereby requests program test authority with the parameters specified in the license application.

Please date-stamp the attached confirmation copy and return it to the courier. Should any questions arise concerning this matter, please communicate with this office.

Very truly yours,

Anne Goodwin Crump

Anne Goodwin Crump
Counsel for M&M Broadcasters, Ltd.

Enclosures

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant
M&M Broadcasters, LTD

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
KCLE		1460	Unlimited	.7	11

2. Station location

State	City or Town
Texas	Burleson

3. Transmitter location

State	County	City or Town	Street address (or other identification)
TX	Tarrant	Rendon	FM1187

4. Main studio location

State	County	City or Town	Street address (or other identification)
TX	Johnson	Cleburne	919 N Main

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

State	County	City or Town	Street address (or other identification)
TX	Johnson	Cleburne	919 N Main

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
3.88	15.22
Measured antenna or common point resistance (in ohms) at operating frequency	**Measured antenna or common point reactance (in ohms) at operating frequency**
Night: 50 Day: 50	Night: 0 Day: 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
1	0	66.2	1	.447		
2	-18.8	74.6	.581	.144		
3		0		1		

Manufacturer and type of antenna monitor: Potomac Instruments AM 1901-3 SN 506

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 guyed tower	T1,T2 59.9 m, T3 48.8 m	T1,T2 60.9 m, T3 49.8 m	No lighting used or required	Exhibit No. n/a

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
32 ° 34 ' 43 "	97 ° 16 ' 50 "

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. See Technical Exhibit

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, See exhibit

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

n/a

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)
Charles W. Staples	
Address (include ZIP Code) 4424 Glenwick Lane University Park, TX 75205-1037	Date 01/25/2011
	Telephone No. (Include Area Code) 214 526 6200

☐ Technical Director

☐ Registered Professional Engineer

☐ Chief Operator

☑ Technical Consultant

☐ Other (specify)

Engineering Exhibit
Application For License
BP-20090716ACD
M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
11 kW DA-Day, .7 kW DA-Night
Facility ID 59263
Burleson, Texas

Background and Purpose of Application

M&M Broadcasters, LTD ("M&M") the licensee of KCLE has constructed the facility authorized by BP-20090716ACD and herby submits the application to license the facility. M&M has chosen to use the method of moments proof authorized under 47 CFR 73.151(c). The construction consisted of adding one tower to an existing two tower array, replacing phasing equipment, adding or replacing transmission line, sample line, ATUs, and ground system. The constructed site is as described in the above referenced construction permit. The towers utilized are three identical cross section twenty three inch face, (.5842 m) uniform guyed triangular towers. The original existing towers have a 59.9 meter radiator height. The tower 3, utilized for day only, is a 48.8 meter height radiator. Tower 3 is not used in the night array and is detuned with a 490.09 Ohm reactance. Tower 1 has a grid dish mounted at approximately 56 meters. The transmission line is bonded to the tower every twenty feet and crosses the base insulator with an Audio Lab ICR950 NF isocoupler.

Methodology

Self impedances were measured at each tower, directly at the location where the feed is attached to the tower; with all other towers floated by disconnecting the feeds from the other towers. There were no other components shunted across the bases of the other towers with the exception of an isocoupler at tower 1. Towers in the array were modeled using Mininec Broadcast Professional Expert Version 23. Twenty segments were used to represent each of the three towers using the geometry of the array specified in the above

referenced construction permit. Each individual tower base impedance was calculated as a driven source with all other towers floating to obtain a modeled self-impedance at the tower base. The modeled values of the tower self impedance were then calculated to include the base components, such as stray capacitance of the Austin A4197L base insulator, and in the case of Tower 1, the isocoupler. All modeled values of were found to be equivalent to measured values within ±2 ohms and ±4 percent for both resistance and reactance of the measured self impedances. See the following the Verification of Modeling Exhibit for details and verification of the modeling procedure. Impedance measurements of the tower base self-impedances were measured using a Delta OIB-3 Bridge driven with approximately 200 Watts from the KCLE transmitter. Inductance of each tower feed was measured with this same equipment with the base of the tower under test shorted to obtain a measured value of feed inductance for each individual tower for use in base corrections of the directional towers.

After verification of the modeling procedure, the above mentioned computer program was use to create a method of moments model of the array for calculation of directional antenna system complex voltage values at ground level under each tower using the theoretical parameters of the day and night parameters in the above referenced construction permit. Using these voltage sources, current magnitudes and phases for each element of the array were derived for the day night arrays. Using the drive impedances from the array synthesis, the base and feed components were taken into consideration to calculate corrections for parameters at location of the current transformers in the ATU, using ECA, a computer nodal analysis program. The base components include the feed inductance, base capacitance, and static drain choke reactance. The static drain chokes utilized are extremely high reactance and in this case are slightly capacitive (-j8100 ohms at 1460 kHz) according to manufacturer's specifications. See Exhibit 2 for details of these calculations. These values of current and phase were normalized to the reference tower and corrected with the factors calculated above for antenna monitor parameters. See Exhibit 3 for

details of the calculations for values at the sampling point using this program and the final antenna monitor parameters specified on the Form 302AM.

Impedance measurements made of the sampling system were made with an Array Solutions AIM4170C network analyzer in a calibrated measurement system. Measurements were made at the antenna monitor end of the sample lines connected to the sampling transformers at the tower bases while under open circuit conditions. Additionally measurements were made at the antenna monitor end of the sample lines without the sample lines connected to the sampling transformers. Frequencies above and below carrier frequency where resonance occurred were determined with the sample lines disconnected from the transformers. As the length of a distortionless transmission line is 180 electrical degrees at the difference frequency between adjacent frequencies of resonance, and frequencies of resonance occur at odd multliples of 90 degrees electrical length, the sample line length at resonant frequency below or above carrier frequency (closest one to carrier frequency in terms of the ratio of frequencies) was found to be 90 degrees. The resonant frequency closer to the carrier frequency above carrier frequency at approximately 814 KHz was found to be 90 degrees. The lengths were calculated by the ratio of the frequencies. To determine characteristic impedance values of the lines, open circuit measurements were made with frequencies offset to produce $\pm$ 45 degrees of electrical line length at the resonant frequency (approximately 407 KHz and 1220 KHz). The characteristic impedance was calculated (using the equation $Z_0=(R^2_1+X_1^2)^{1/2} X (R_2^2+X_2^2))^{1/2})^{1/2}$) the electrical lengths of the sample lines was determined to be within .3° of each other. The characteristic impedance of the sample lines was within 2 ohms of the characteristic manufacturer's stated impedance of the line. The new sample transformers utilized were three Phasetek P600-202 .5V/A. They were removed from the new antenna tuning units, and tested utilizing a HP 8752A Network Analyzer and determined to be within .33% ratio and .35° accuracy. See Exhibit 4 for details of sample system measurements, antenna monitor sample transformer verification.

The site utilized two existing towers of the original KCLE towers, with a third tower added for day operation. See Exhibit 5 for a certified survey of the tower site that shows all towers are within .5 meter or less of the design location of the array of towers. The worst case error is less than 1 degree at 1.46 MHz.

See Exhibit 6 for reference measurements of both day and night patterns.

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

Verification of Modeling

All towers are 23" (.58419 m) face width. This is equivalent to a radius of .2789 m. The minimum radius allowed to be used in the model, per 73.151(c) is .2231m. The .2231m radius was used for all three towers and is in compliance with the rule. Tower one is 105 electrical degrees and was modeled with 20 segments to be 110.7 degrees tall. Tower two is 105 electrical degrees and was modeled with 20 segments to be 109.5 electrical degrees. Tower three is 85.5 electrical degrees, was modeled with 20 segments to be 90.6 electrical degrees. All are in compliance with 73.151 (c).

Tower One

The tower one self impedance was measured at the point where the feed attaches to the tower. The tower one measured self impedance equaled 100 + j150.3. The tower one modeled self impedance was 97.3 + j140. Tower one modeled self impedance was calculated including 20 pf of base insulator capacitance, and 10 pf of the isocoupler capacitance (total of –j3633.7) was = (97.3 +j140) (-j3633.7) / (97.3-j3493.7) = 105.2 +j142.7. The tolerance is (±2 ohms and ±4 percent per 73.151 (c)) is 6 ohms for resistance and 8 ohms for reactance and is in compliance with this rule.

Tower Two

Tower two self Impedance was measured at the point where the feed attaches to the tower. The tower two measured self impedance equaled 96.5 +J138.6. The tower two modeled self impedance was 92.7 + j132. Tower two modeled self impedance calculated to include 20 pf of the base insulator capacitance (-j5450) was = (92.7+j132)(-j5450) / 92.7-j5318 = 97.3+j133.6. The tolerance is (±2 ohms and ±4 percent per 73.151 (c)) 5.86 ohms for resistance and 7.5 ohms for reactance and is in compliance with this rule.

Tower Three

Tower three self impedance was measured at the point where the feed attaches to the tower. It equaled 36 +j26. The tower three modeled self impedance was 97.3+j25.4. Tower three modeled self impedance was calculated to include the 20 pf of the base insulator capacitance (-j5450) was = (97.3 +j25.4)(-j5450) / 37.3-j5424.6 = 37.6 +j25.3. The tolerance is (±2 ohms and ±4 percent per

73.151 (c)) 3.44 ohms for resistance and 3 ohms for reactance and is in compliance with this rule.

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE Tower One Self Impedance

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	110.7		
2	none	198.	238.	0	.2231	20
		198.	238.	109.5		
3	none	99.	238.	0	.2231	20
		99.	238.	90.6		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	1	5.535	3	4.53
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.0125833	.015375

Sources

source	node	sector	magnitude	phase	type
1	1	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	0	0	0	0
2	21	0	-5,450.	0	0	0
3	41	0	-5,450.	0	0	0

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR dB	S11 dB	S12 dB
source = 1; node 1, sector 1							
1.46	97.253	139.96	170.43	55.21	6.3296	-2.7677	-11.281

CURRENT rms

Frequency = 1.46 MHz
Input power = .00167406 watts
Efficiency = 100. %

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	4.15E-03	-55.21	2.37E-03	-3.41E-03
2	0	0	5.535	4.51E-03	-58.46	2.36E-03	-3.85E-03
3	0	0	11.07	4.72E-03	-60.31	2.34E-03	-4.1E-03
4	0	0	16.605	4.86E-03	-61.73	2.3E-03	-4.28E-03
5	0	0	22.14	4.94E-03	-62.9	2.25E-03	-4.4E-03
6	0	0	27.675	4.97E-03	-63.89	2.19E-03	-4.46E-03
7	0	0	33.21	4.94E-03	-64.75	2.11E-03	-4.47E-03
8	0	0	38.745	4.87E-03	-65.51	2.02E-03	-4.43E-03
9	0	0	44.28	4.74E-03	-66.2	1.91E-03	-4.34E-03
10	0	0	49.815	4.57E-03	-66.82	1.8E-03	-4.2E-03
11	0	0	55.35	4.35E-03	-67.38	1.67E-03	-4.02E-03
12	0	0	60.885	4.1E-03	-67.91	1.54E-03	-3.79E-03
13	0	0	66.42	3.8E-03	-68.39	1.4E-03	-3.53E-03
14	0	0	71.955	3.46E-03	-68.85	1.25E-03	-3.22E-03
15	0	0	77.49	3.08E-03	-69.28	1.09E-03	-2.88E-03
16	0	0	83.025	2.67E-03	-69.68	9.27E-04	-2.5E-03
17	0	0	88.56	2.23E-03	-70.07	7.59E-04	-2.09E-03
18	0	0	94.095	1.75E-03	-70.44	5.86E-04	-1.65E-03
19	0	0	99.63	1.24E-03	-70.8	4.08E-04	-1.17E-03
20	0	0	105.165	6.89E-04	-71.15	2.22E-04	-6.52E-04
END	0	0	110.7	0	0	0	0
GND	-104.924	-167.914	0	3.25E-05	60.03	1.63E-05	2.82E-05
22	-104.924	-167.914	5.475	1.48E-04	60.01	7.41E-05	1.28E-04
23	-104.924	-167.914	10.95	2.19E-04	59.96	1.1E-04	1.9E-04
24	-104.924	-167.914	16.425	2.76E-04	59.9	1.38E-04	2.39E-04
25	-104.924	-167.914	21.9	3.23E-04	59.83	1.62E-04	2.79E-04
26	-104.924	-167.914	27.375	3.6E-04	59.76	1.81E-04	3.11E-04
27	-104.924	-167.914	32.85	3.9E-04	59.69	1.97E-04	3.36E-04
28	-104.924	-167.914	38.325	4.11E-04	59.6	2.08E-04	3.54E-04
29	-104.924	-167.914	43.8	4.24E-04	59.51	2.15E-04	3.65E-04
30	-104.924	-167.914	49.275	4.29E-04	59.42	2.18E-04	3.7E-04
31	-104.924	-167.914	54.75	4.27E-04	59.32	2.18E-04	3.67E-04
32	-104.924	-167.914	60.225	4.17E-04	59.22	2.14E-04	3.59E-04
33	-104.924	-167.914	65.7	4.E-04	59.11	2.06E-04	3.44E-04
34	-104.924	-167.914	71.175	3.76E-04	59.	1.94E-04	3.22E-04
35	-104.924	-167.914	76.65	3.45E-04	58.88	1.78E-04	2.95E-04
36	-104.924	-167.914	82.125	3.07E-04	58.76	1.59E-04	2.62E-04
37	-104.924	-167.914	87.6	2.62E-04	58.63	1.37E-04	2.24E-04
38	-104.924	-167.914	93.075	2.11E-04	58.49	1.1E-04	1.8E-04
39	-104.924	-167.914	98.55	1.53E-04	58.34	8.04E-05	1.3E-04
40	-104.924	-167.914	104.025	8.69E-05	58.19	4.58E-05	7.38E-05
END	-104.924	-167.914	109.5	0	0	0	0
GND	-52.462	-83.9568	0	3.02E-05	162.46	-2.88E-05	9.09E-06
42	-52.462	-83.9568	4.53	1.27E-04	162.45	-1.21E-04	3.82E-05
43	-52.462	-83.9568	9.06	1.83E-04	162.45	-1.74E-04	5.52E-05
44	-52.462	-83.9568	13.59	2.28E-04	162.44	-2.17E-04	6.87E-05
45	-52.462	-83.9568	18.12	2.64E-04	162.43	-2.52E-04	7.97E-05
46	-52.462	-83.9568	22.65	2.93E-04	162.43	-2.79E-04	8.85E-05
47	-52.462	-83.9568	27.18	3.15E-04	162.42	-3.01E-04	9.52E-05
48	-52.462	-83.9568	31.71	3.31E-04	162.41	-3.16E-04	1.E-04
49	-52.462	-83.9568	36.24	3.41E-04	162.4	-3.25E-04	1.03E-04
50	-52.462	-83.9568	40.77	3.44E-04	162.4	-3.28E-04	1.04E-04

51	-52.462	-83.9568	45.3	3.42E-04	162.39	-3.26E-04	1.03E-04
52	-52.462	-83.9568	49.83	3.34E-04	162.38	-3.18E-04	1.01E-04
53	-52.462	-83.9568	54.36	3.2E-04	162.38	-3.05E-04	9.69E-05
54	-52.462	-83.9568	58.89	3.01E-04	162.38	-2.87E-04	9.12E-05
55	-52.462	-83.9568	63.42	2.77E-04	162.38	-2.64E-04	8.37E-05
56	-52.462	-83.9568	67.95	2.47E-04	162.38	-2.35E-04	7.47E-05
57	-52.462	-83.9568	72.48	2.11E-04	162.38	-2.02E-04	6.4E-05
58	-52.462	-83.9568	77.01	1.71E-04	162.38	-1.63E-04	5.18E-05
59	-52.462	-83.9568	81.54	1.25E-04	162.38	-1.19E-04	3.77E-05
60	-52.462	-83.9568	86.07	7.16E-05	162.38	-6.82E-05	2.17E-05
END	-52.462	-83.9568	90.6	0	0	0	0

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE Tower Two Self Impedance

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	110.7		
2	none	198.	238.	0	.2231	20
		198.	238.	109.5		
3	none	99.	238.	0	.2231	20
		99.	238.	90.6		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	1	5.535	3	4.53
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.0125833	.015375

Sources

source	node	sector	magnitude	phase	type
1	21	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	-3,633.7	0	0	0
2	21	0	0	0	0	0
3	41	0	-5,450.	0	0	0

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR dB	S11 dB	S12 dB
source = 1; node 21, sector 1							
1.46	92.675	131.99	161.28	54.93	5.9858	-2.9296	-10.864

CURRENT rms
Frequency = 1.46 MHz
Input power = .00178147 watts
Efficiency = 100. %

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	5.23E-05	59.71	2.64E-05	4.52E-05
2	0	0	5.535	1.77E-04	59.68	8.94E-05	1.53E-04
3	0	0	11.07	2.54E-04	59.64	1.28E-04	2.19E-04
4	0	0	16.605	3.15E-04	59.58	1.59E-04	2.72E-04
5	0	0	22.14	3.65E-04	59.52	1.85E-04	3.15E-04
6	0	0	27.675	4.06E-04	59.45	2.06E-04	3.49E-04
7	0	0	33.21	4.37E-04	59.37	2.22E-04	3.76E-04
8	0	0	38.745	4.59E-04	59.29	2.34E-04	3.95E-04
9	0	0	44.28	4.72E-04	59.2	2.42E-04	4.06E-04
10	0	0	49.815	4.77E-04	59.11	2.45E-04	4.1E-04
11	0	0	55.35	4.74E-04	59.02	2.44E-04	4.07E-04
12	0	0	60.885	4.63E-04	58.92	2.39E-04	3.96E-04
13	0	0	66.42	4.43E-04	58.81	2.29E-04	3.79E-04
14	0	0	71.955	4.16E-04	58.7	2.16E-04	3.55E-04
15	0	0	77.49	3.81E-04	58.58	1.99E-04	3.25E-04
16	0	0	83.025	3.39E-04	58.46	1.77E-04	2.89E-04
17	0	0	88.56	2.89E-04	58.33	1.52E-04	2.46E-04
18	0	0	94.095	2.32E-04	58.2	1.22E-04	1.98E-04
19	0	0	99.63	1.68E-04	58.05	8.9E-05	1.43E-04
20	0	0	105.165	9.54E-05	57.9	5.07E-05	8.08E-05
END	0	0	110.7	0	0	0	0
GND	-104.924	-167.914	0	4.38E-03	-54.93	2.52E-03	-3.59E-03
22	-104.924	-167.914	5.475	4.74E-03	-58.02	2.51E-03	-4.02E-03
23	-104.924	-167.914	10.95	4.95E-03	-59.8	2.49E-03	-4.27E-03
24	-104.924	-167.914	16.425	5.08E-03	-61.17	2.45E-03	-4.45E-03
25	-104.924	-167.914	21.9	5.15E-03	-62.29	2.4E-03	-4.56E-03
26	-104.924	-167.914	27.375	5.17E-03	-63.25	2.33E-03	-4.62E-03
27	-104.924	-167.914	32.85	5.14E-03	-64.09	2.24E-03	-4.62E-03
28	-104.924	-167.914	38.325	5.05E-03	-64.83	2.15E-03	-4.57E-03
29	-104.924	-167.914	43.8	4.92E-03	-65.5	2.04E-03	-4.47E-03
30	-104.924	-167.914	49.275	4.74E-03	-66.1	1.92E-03	-4.33E-03
31	-104.924	-167.914	54.75	4.51E-03	-66.66	1.79E-03	-4.14E-03
32	-104.924	-167.914	60.225	4.24E-03	-67.17	1.64E-03	-3.9E-03
33	-104.924	-167.914	65.7	3.92E-03	-67.65	1.49E-03	-3.63E-03
34	-104.924	-167.914	71.175	3.57E-03	-68.1	1.33E-03	-3.31E-03
35	-104.924	-167.914	76.65	3.18E-03	-68.52	1.16E-03	-2.96E-03
36	-104.924	-167.914	82.125	2.76E-03	-68.92	9.91E-04	-2.57E-03
37	-104.924	-167.914	87.6	2.3E-03	-69.3	8.12E-04	-2.15E-03
38	-104.924	-167.914	93.075	1.81E-03	-69.67	6.27E-04	-1.69E-03
39	-104.924	-167.914	98.55	1.28E-03	-70.03	4.37E-04	-1.2E-03
40	-104.924	-167.914	104.025	7.11E-04	-70.38	2.39E-04	-6.69E-04
END	-104.924	-167.914	109.5	0	0	0	0
GND	-52.462	-83.9568	0	3.1E-05	163.51	-2.98E-05	8.81E-06
42	-52.462	-83.9568	4.53	1.3E-04	163.51	-1.25E-04	3.69E-05
43	-52.462	-83.9568	9.06	1.88E-04	163.51	-1.8E-04	5.34E-05
44	-52.462	-83.9568	13.59	2.34E-04	163.5	-2.25E-04	6.65E-05
45	-52.462	-83.9568	18.12	2.72E-04	163.5	-2.6E-04	7.71E-05
46	-52.462	-83.9568	22.65	3.01E-04	163.5	-2.89E-04	8.56E-05
47	-52.462	-83.9568	27.18	3.24E-04	163.49	-3.11E-04	9.21E-05

48	-52.462	-83.9568	31.71	3.4E-04	163.49	-3.26E-04	9.67E-05
49	-52.462	-83.9568	36.24	3.5E-04	163.49	-3.36E-04	9.95E-05
50	-52.462	-83.9568	40.77	3.54E-04	163.49	-3.39E-04	1.01E-04
51	-52.462	-83.9568	45.3	3.52E-04	163.49	-3.37E-04	9.99E-05
52	-52.462	-83.9568	49.83	3.43E-04	163.49	-3.29E-04	9.76E-05
53	-52.462	-83.9568	54.36	3.29E-04	163.49	-3.16E-04	9.35E-05
54	-52.462	-83.9568	58.89	3.09E-04	163.49	-2.97E-04	8.79E-05
55	-52.462	-83.9568	63.42	2.84E-04	163.5	-2.72E-04	8.07E-05
56	-52.462	-83.9568	67.95	2.53E-04	163.5	-2.43E-04	7.2E-05
57	-52.462	-83.9568	72.48	2.17E-04	163.51	-2.08E-04	6.17E-05
58	-52.462	-83.9568	77.01	1.76E-04	163.51	-1.68E-04	4.98E-05
59	-52.462	-83.9568	81.54	1.28E-04	163.52	-1.23E-04	3.63E-05
60	-52.462	-83.9568	86.07	7.35E-05	163.53	-7.05E-05	2.08E-05
END	-52.462	-83.9568	90.6	0	0	0	0

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE Tower Three Self Impedance

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	110.7		
2	none	198.	238.	0	.2231	20
		198.	238.	109.5		
3	none	99.	238.	0	.2231	20
		99.	238.	90.6		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	1	5.535	3	4.53
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.0125833	.015375

Sources

source	node	sector	magnitude	phase	type
1	41	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	-3,633.7	0	0	0
2	21	0	-5,450.	0	0	0
3	41	0	0	0	0	0

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR dB	S11 dB	S12 dB
source = 1; node 41, sector 1							
1.46	37.287	25.354	45.091	34.21	1.9071	-10.116	-3.2487

CURRENT rms
Frequency = 1.46 MHz

Input power = .00916965 watts
Efficiency = 100. %

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	1.77E-04	-177.82	-1.77E-04	-6.73E-06
2	0	0	5.535	6.E-04	-177.81	-6.E-04	-2.3E-05
3	0	0	11.07	8.57E-04	-177.77	-8.57E-04	-3.33E-05
4	0	0	16.605	1.06E-03	-177.73	-1.06E-03	-4.21E-05
5	0	0	22.14	1.23E-03	-177.69	-1.23E-03	-4.96E-05
6	0	0	27.675	1.36E-03	-177.64	-1.36E-03	-5.62E-05
7	0	0	33.21	1.46E-03	-177.58	-1.46E-03	-6.17E-05
8	0	0	38.745	1.53E-03	-177.53	-1.53E-03	-6.62E-05
9	0	0	44.28	1.57E-03	-177.47	-1.57E-03	-6.96E-05
10	0	0	49.815	1.59E-03	-177.41	-1.59E-03	-7.18E-05
11	0	0	55.35	1.57E-03	-177.34	-1.57E-03	-7.28E-05
12	0	0	60.885	1.53E-03	-177.28	-1.53E-03	-7.24E-05
13	0	0	66.42	1.46E-03	-177.22	-1.46E-03	-7.07E-05
14	0	0	71.955	1.36E-03	-177.16	-1.36E-03	-6.76E-05
15	0	0	77.49	1.25E-03	-177.1	-1.24E-03	-6.3E-05
16	0	0	83.025	1.1E-03	-177.05	-1.1E-03	-5.68E-05
17	0	0	88.56	9.39E-04	-177.	-9.38E-04	-4.92E-05
18	0	0	94.095	7.52E-04	-176.95	-7.51E-04	-4.E-05
19	0	0	99.63	5.43E-04	-176.91	-5.42E-04	-2.92E-05
20	0	0	105.165	3.07E-04	-176.88	-3.06E-04	-1.67E-05
END	0	0	110.7	0	0	0	0
GND	-104.924	-167.914	0	1.13E-04	-176.45	-1.13E-04	-7.03E-06
22	-104.924	-167.914	5.475	5.16E-04	-176.43	-5.15E-04	-3.22E-05
23	-104.924	-167.914	10.95	7.61E-04	-176.39	-7.6E-04	-4.8E-05
24	-104.924	-167.914	16.425	9.58E-04	-176.34	-9.56E-04	-6.11E-05
25	-104.924	-167.914	21.9	1.12E-03	-176.29	-1.12E-03	-7.23E-05
26	-104.924	-167.914	27.375	1.24E-03	-176.24	-1.24E-03	-8.17E-05
27	-104.924	-167.914	32.85	1.34E-03	-176.18	-1.34E-03	-8.95E-05
28	-104.924	-167.914	38.325	1.41E-03	-176.11	-1.41E-03	-9.56E-05
29	-104.924	-167.914	43.8	1.45E-03	-176.05	-1.45E-03	-1.E-04
30	-104.924	-167.914	49.275	1.47E-03	-175.98	-1.46E-03	-1.03E-04
31	-104.924	-167.914	54.75	1.45E-03	-175.91	-1.45E-03	-1.04E-04
32	-104.924	-167.914	60.225	1.42E-03	-175.84	-1.41E-03	-1.03E-04
33	-104.924	-167.914	65.7	1.35E-03	-175.77	-1.35E-03	-9.98E-05
34	-104.924	-167.914	71.175	1.27E-03	-175.71	-1.26E-03	-9.49E-05
35	-104.924	-167.914	76.65	1.16E-03	-175.64	-1.16E-03	-8.81E-05
36	-104.924	-167.914	82.125	1.03E-03	-175.58	-1.03E-03	-7.93E-05
37	-104.924	-167.914	87.6	8.76E-04	-175.52	-8.73E-04	-6.84E-05
38	-104.924	-167.914	93.075	7.03E-04	-175.47	-7.E-04	-5.55E-05
39	-104.924	-167.914	98.55	5.07E-04	-175.42	-5.06E-04	-4.05E-05
40	-104.924	-167.914	104.025	2.87E-04	-175.38	-2.86E-04	-2.31E-05
END	-104.924	-167.914	109.5	0	0	0	0
GND	-52.462	-83.9568	0	.0156818	-34.21	.0129678	-8.82E-03
42	-52.462	-83.9568	4.53	.0158646	-35.4	.0129313	-9.19E-03
43	-52.462	-83.9568	9.06	.0158761	-36.14	.0128219	-9.36E-03
44	-52.462	-83.9568	13.59	.0157728	-36.74	.0126401	-9.43E-03
45	-52.462	-83.9568	18.12	.0155631	-37.26	.0123869	-9.42E-03
46	-52.462	-83.9568	22.65	.0152512	-37.72	.0120635	-9.33E-03
47	-52.462	-83.9568	27.18	.0148403	-38.14	.0116717	-9.17E-03
48	-52.462	-83.9568	31.71	.0143335	-38.53	.0112134	-8.93E-03
49	-52.462	-83.9568	36.24	.0137337	-38.88	.0106907	-8.62E-03
50	-52.462	-83.9568	40.77	.0130442	-39.21	.0101064	-8.25E-03
51	-52.462	-83.9568	45.3	.0122683	-39.53	9.46E-03	-7.81E-03

52	-52.462	-83.9568	49.83	.0114098	-39.82	8.76E-03	-7.31E-03
53	-52.462	-83.9568	54.36	.0104725	-40.1	8.01E-03	-6.75E-03
54	-52.462	-83.9568	58.89	9.46E-03	-40.37	7.21E-03	-6.13E-03
55	-52.462	-83.9568	63.42	8.38E-03	-40.62	6.36E-03	-5.45E-03
56	-52.462	-83.9568	67.95	7.22E-03	-40.86	5.46E-03	-4.73E-03
57	-52.462	-83.9568	72.48	6.E-03	-41.1	4.52E-03	-3.95E-03
58	-52.462	-83.9568	77.01	4.71E-03	-41.33	3.54E-03	-3.11E-03
59	-52.462	-83.9568	81.54	3.34E-03	-41.56	2.5E-03	-2.22E-03
60	-52.462	-83.9568	86.07	1.87E-03	-41.78	1.39E-03	-1.24E-03
END	-52.462	-83.9568	90.6	0	0	0	0

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE Day Geometry

GEOMETRY

Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	110.7		
2	none	198.	238.	0	.2231	20
		198.	238.	109.5		
3	none	99.	238.	0	.2231	20
		99.	238.	90.6		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	3	4.53	1	5.535
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.0125833	.015375

Sources

source	node	sector	magnitude	phase	type
1	1	1	601.042	123.1	voltage
2	21	1	633.723	291.8	voltage
3	41	1	1,250.02	34.6	voltage

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 1, sector 1							
1.46	46.164	55.497	72.187	50.2	3.0083	-6.0027	-1.2554
source = 2; node 21, sector 1							
1.46	-225.67	-108.03	250.19	205.6	****	****	****
source = 3; node 41, sector 1							
1.46	60.269	31.918	68.199	27.9	1.8252	-10.69	-.38726

CURRENT rms
Frequency = 1.46 MHz
Input power = 11,000. watts
Efficiency = 100. %
coordinates in degrees

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	5.88747	72.9	1.73402	5.62632
2	0	0	5.535	6.08674	71.2	1.96292	5.76154
3	0	0	11.07	6.1687	70.2	2.09155	5.8033
4	0	0	16.605	6.19063	69.4	2.18289	5.79301
5	0	0	22.14	6.15887	68.6	2.24372	5.73563
6	0	0	27.675	6.07655	68.	2.27692	5.63383
7	0	0	33.21	5.94569	67.4	2.28395	5.48952
8	0	0	38.745	5.76808	66.9	2.26572	5.30445
9	0	0	44.28	5.54547	66.4	2.22292	5.08044
10	0	0	49.815	5.27982	65.9	2.15626	4.81944
11	0	0	55.35	4.9732	65.4	2.06643	4.52355
12	0	0	60.885	4.62788	65.	1.9542	4.19504
13	0	0	66.42	4.24628	64.6	1.82042	3.83627
14	0	0	71.955	3.83091	64.2	1.66598	3.44969
15	0	0	77.49	3.3843	63.8	1.49182	3.03776
16	0	0	83.025	2.90881	63.5	1.29885	2.60272
17	0	0	88.56	2.40636	63.1	1.08781	2.14646
18	0	0	94.095	1.87781	62.8	.85895	1.66985
19	0	0	99.63	1.32134	62.4	.611324	1.17142
20	0	0	105.165	.728318	62.1	.340737	.643696
END	0	0	110.7	0	0	0	0
GND	-104.924	-167.914	0	1.79107	86.2	.117154	1.78723
22	-104.924	-167.914	5.475	1.68023	95.3	-.154537	1.67311
23	-104.924	-167.914	10.95	1.62262	101.4	-.321192	1.59051
24	-104.924	-167.914	16.425	1.57755	106.8	-.456261	1.51013
25	-104.924	-167.914	21.9	1.53761	111.7	-.567526	1.42904
26	-104.924	-167.914	27.375	1.49849	116.1	-.658227	1.34619
27	-104.924	-167.914	32.85	1.45727	120.1	-.729861	1.26132
28	-104.924	-167.914	38.325	1.41171	123.7	-.783268	1.17448
29	-104.924	-167.914	43.8	1.36013	127.	-.818998	1.08591
30	-104.924	-167.914	49.275	1.30128	130.1	-.837525	.995937
31	-104.924	-167.914	54.75	1.23422	132.8	-.839278	.90494
32	-104.924	-167.914	60.225	1.15831	135.4	-.824719	.813334
33	-104.924	-167.914	65.7	1.07314	137.8	-.794363	.721538
34	-104.924	-167.914	71.175	.978494	139.9	-.748719	.629976
35	-104.924	-167.914	76.65	.87429	141.9	-.688353	.539029
36	-104.924	-167.914	82.125	.760498	143.8	-.613775	.44904
37	-104.924	-167.914	87.6	.637053	145.6	-.525402	.360262
38	-104.924	-167.914	93.075	.503647	147.2	-.423381	.27278
39	-104.924	-167.914	98.55	.359256	148.8	-.307171	.186309
40	-104.924	-167.914	104.025	.200935	150.3	-.174468	.0996793
END	-104.924	-167.914	109.5	0	0	0	0
GND	-52.462	-83.9568	0	12.9606	6.7	12.873	1.50436
42	-52.462	-83.9568	4.53	13.1748	4.7	13.131	1.07305
43	-52.462	-83.9568	9.06	13.2199	3.5	13.1951	.809679
44	-52.462	-83.9568	13.59	13.1663	2.6	13.1532	.587569
45	-52.462	-83.9568	18.12	13.0206	1.7	13.0146	.394463
46	-52.462	-83.9568	22.65	12.7866	1.	12.7846	.224938
47	-52.462	-83.9568	27.18	12.4669	.4	12.4666	.076535

48	-52.462	-83.9568	31.71	12.0637	359.8	12.0636	-.0519965
49	-52.462	-83.9568	36.24	11.5795	359.2	11.5784	-.161329
50	-52.462	-83.9568	40.77	11.0168	358.7	11.014	-.251841
51	-52.462	-83.9568	45.3	10.3785	358.2	10.3735	-.323763
52	-52.462	-83.9568	49.83	9.66742	357.8	9.66006	-.377253
53	-52.462	-83.9568	54.36	8.88665	357.3	8.87708	-.412437
54	-52.462	-83.9568	58.89	8.03925	356.9	8.02777	-.429425
55	-52.462	-83.9568	63.42	7.12799	356.6	7.11511	-.428311
56	-52.462	-83.9568	67.95	6.15503	356.2	6.14142	-.409142
57	-52.462	-83.9568	72.48	5.12145	355.8	5.10794	-.37186
58	-52.462	-83.9568	77.01	4.02556	355.5	4.01312	-.316151
59	-52.462	-83.9568	81.54	2.85931	355.2	2.84913	-.24105
60	-52.462	-83.9568	86.07	1.59988	354.8	1.59338	-.144047
END	-52.462	-83.9568	90.6	0	0	0	0

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE Day

MEDIUM WAVE ARRAY SYNTHESIS FROM FIELD RATIOS

Frequency = 1.46 MHz

tower	field ratio magnitude	phase (deg)
1	.578	67.
2	.14	122.
3	1.	0

VOLTAGES AND CURRENTS - rms

source node	voltage magnitude	phase (deg)	current magnitude	phase (deg)
1	425.001	123.1	5.88748	72.9
21	448.11	291.8	1.79106	86.2
41	883.897	34.6	12.9606	6.7

Sum of square of source currents = 411.695
Total power = 11,000. watts

TOWER ADMITTANCE MATRIX

admittance	real (mhos)	imaginary (mhos)
Y(1, 1)	.00292853	-.00388837
Y(1, 2)	-.000183942	-.000268827
Y(1, 3)	.00343483	.00264704
Y(2, 1)	-.000183944	-.000268827
Y(2, 2)	.00309096	-.00410342
Y(2, 3)	.00350417	.0027511
Y(3, 1)	.00343465	.00264744
Y(3, 2)	.003504	.0027515
Y(3, 3)	.0132198	-.00650545

TOWER IMPEDANCE MATRIX

impedance	real (ohms)	imaginary (ohms)
Z(1, 1)	97.7738	140.264
Z(1, 2)	-37.2639	-18.4907
Z(1, 3)	24.1964	-31.4587
Z(2, 1)	-37.264	-18.4907
Z(2, 2)	93.004	132.397
Z(2, 3)	23.8633	-30.4403
Z(3, 1)	24.1927	-31.4604
Z(3, 2)	23.8598	-30.4418
Z(3, 3)	38.0249	25.1436

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE Night Geometry

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	110.7		
2	none	198.	238.	0	.2231	20
		198.	238.	109.5		
3	none	99.	238.	0	.2231	20
		99.	238.	90.6		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	3	4.53	1	5.535
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.0125833	.015375

Sources

source	node	sector	magnitude	phase	type
1	1	1	604.041	68.	voltage
2	21	1	205.491	49.8	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	41	0	490.9	0	0	0

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IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 1, sector 1							
1.46	79.028	135.4	156.78	59.7	6.7038	-2.6108	-3.4503
source = 2; node 21, sector 1							
1.46	48.204	81.264	94.485	59.3	4.52	-3.9079	-2.2668

CURRENT rms
Frequency = 1.46 MHz
Input power = 700. watts
Efficiency = 100. %
coordinates in degrees

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	2.72328	8.3	2.69473	.393286
2	0	0	5.535	2.96055	5.6	2.94659	.287119
3	0	0	11.07	3.08921	4.1	3.08144	.219024
4	0	0	16.605	3.17351	2.9	3.16943	.160808
5	0	0	22.14	3.22013	1.9	3.21826	.109536
6	0	0	27.675	3.23202	1.1	3.23139	.0640496
7	0	0	33.21	3.21079	.4	3.2107	.0238868
8	0	0	38.745	3.15757	359.8	3.15756	-.0111404
9	0	0	44.28	3.07342	359.2	3.07315	-.0410963
10	0	0	49.815	2.95938	358.7	2.95864	-.065992
11	0	0	55.35	2.81661	358.3	2.81531	-.0858205
12	0	0	60.885	2.64639	357.8	2.64448	-.100575
13	0	0	66.42	2.45005	357.4	2.44757	-.110262
14	0	0	71.955	2.22906	357.	2.2261	-.1149
15	0	0	77.49	1.98486	356.7	1.98156	-.114525
16	0	0	83.025	1.71886	356.4	1.71539	-.109179
17	0	0	88.56	1.43218	356.	1.42876	-.0988959
18	0	0	94.095	1.12531	355.7	1.12219	-.0836668
19	0	0	99.63	.797118	355.4	.794598	-.0633378
20	0	0	105.165	.442258	355.2	.440677	-.0373632
END	0	0	110.7	0	0	0	0
GND	-104.924	-167.914	0	1.53722	350.5	1.51625	-.253088
22	-104.924	-167.914	5.475	1.61479	348.8	1.58408	-.313417
23	-104.924	-167.914	10.95	1.65174	347.8	1.61457	-.348422
24	-104.924	-167.914	16.425	1.66998	347.	1.62741	-.374654
25	-104.924	-167.914	21.9	1.6719	346.4	1.62484	-.393893
26	-104.924	-167.914	27.375	1.65862	345.8	1.60793	-.406904
27	-104.924	-167.914	32.85	1.63081	345.3	1.57736	-.414073
28	-104.924	-167.914	38.325	1.58901	344.8	1.53369	-.415642
29	-104.924	-167.914	43.8	1.53376	344.4	1.47744	-.411805
30	-104.924	-167.914	49.275	1.46561	344.1	1.40918	-.402739
31	-104.924	-167.914	54.75	1.38513	343.7	1.32949	-.388624
32	-104.924	-167.914	60.225	1.29298	343.4	1.23901	-.369657
33	-104.924	-167.914	65.7	1.18985	343.1	1.13842	-.346045
34	-104.924	-167.914	71.175	1.07643	342.8	1.02839	-.31801
35	-104.924	-167.914	76.65	.953455	342.6	.909619	-.285779
36	-104.924	-167.914	82.125	.821582	342.3	.782759	-.24957
37	-104.924	-167.914	87.6	.681348	342.1	.648319	-.209566
38	-104.924	-167.914	93.075	.53299	341.9	.506528	-.165856
39	-104.924	-167.914	98.55	.375971	341.7	.356879	-.118285
40	-104.924	-167.914	104.025	.207797	341.5	.197014	-.0660671
END	-104.924	-167.914	109.5	0	0	0	0
GND	-52.462	-83.9568	0	.32043	44.	.230583	.222502
42	-52.462	-83.9568	4.53	.227246	44.	.163524	.157799
43	-52.462	-83.9568	9.06	.170414	44.	.122619	.118345
44	-52.462	-83.9568	13.59	.12256	44.	.0881699	.0851299
45	-52.462	-83.9568	18.12	.0810311	44.	.0582689	.0563096
46	-52.462	-83.9568	22.65	.0446505	44.1	.0320713	.0310661
47	-52.462	-83.9568	27.18	.0128828	44.5	9.19E-03	9.02E-03
48	-52.462	-83.9568	31.71	.0145501	223.5	-.0105614	-.0100081

49	-52.462	-83.9568	36.24	.0377975	223.8	-.0273009	-.0261403
50	-52.462	-83.9568	40.77	.0569515	223.8	-.0410887	-.0394359
51	-52.462	-83.9568	45.3	.0720711	223.9	-.0519665	-.0499373
52	-52.462	-83.9568	49.83	.0832014	223.9	-.0599664	-.0576759
53	-52.462	-83.9568	54.36	.0903815	223.9	-.0651171	-.0626785
54	-52.462	-83.9568	58.89	.0936485	223.9	-.0674464	-.0649694
55	-52.462	-83.9568	63.42	.0930366	224.	-.0669811	-.0645704
56	-52.462	-83.9568	67.95	.0885718	224.	-.0637426	-.0614967
57	-52.462	-83.9568	72.48	.0802579	224.	-.0577369	-.0557475
58	-52.462	-83.9568	77.01	.068045	224.	-.0489317	-.0472843
59	-52.462	-83.9568	81.54	.0517456	224.	-.037196	-.0359732
60	-52.462	-83.9568	86.07	.0308436	224.1	-.0221624	-.0214512
END	-52.462	-83.9568	90.6	0	0	0	0

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE Night Array Synthesis

MEDIUMIUM WAVE ARRAY SYNTHESIS FROM FIELD RATIOS

Frequency = 1.46 MHz

tower	field ratio magnitude	phase (deg)
1	1.	0
2	.5	-15.

VOLTAGES AND CURRENTS - rms

source node	voltage magnitude	phase (deg)	current magnitude	phase (deg)
1	426.843	68.	2.72309	8.3
21	145.488	49.9	1.53857	350.5

Sum of square of source currents = 19.5648
Total power = 700. watts

TOWER ADMITTANCE MATRIX

admittance	real (mhos)	imaginary (mhos)
Y(1, 1)	.00330001	-.00502392
Y(1, 2)	.000208176	-.00143196
Y(2, 1)	.00020818	-.00143196
Y(2, 2)	.00350453	-.00529468

TOWER IMPEDANCE MATRIX

impedance	real (ohms)	imaginary (ohms)
Z(1, 1)	100.765	139.701
Z(1, 2)	-34.3437	-19.0126
Z(2, 1)	-34.3438	-19.0125
Z(2, 2)	95.855	131.915

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE Day Tower Base Correction Calculations

Tower 1
Tower feed inductance was measured as +j38 or 4.14uH

branch	label	nodes	value	function	tolerance	condition
1	V1	0 0	100.			
2	R1	1 0	100.K			
3	R2	1 2	0.1			
4	C1	2 0	13.46p			
5	L1	2 3	4.14u			
6	C2	3 0	30.p			
7	R3	3 0	46.164	J 55.497		

-->ac 1.46m

freq	probe	value	dB	phase	phase delay
1.46M	V:1	0.106339	-19.466	62.632	-119.163n
1.46M	V:2	0.106293	-19.470	62.680	-119.255n
1.46M	V:3	0.0741217	-22.601	49.111	-93.4387n
1.46M	I:R2	999.512u	-60.004	-0.054	102.996p
1.46M	I:R3	0.00102679	-59.770	-1.134	2.1575n

Base - Feed Correction Ratio = R2/R3 = .969 Phase = + 1.08°

Tower 2
Tower feed inductance was measured at +j49.6 or 5.41uH
Negative Tower Correction
First Impedance "seen" by ATU with feed was calculated using modeled value of tower impedance, R3

branch	label	nodes	value	function	tolerance	condition
1	V1	0 0	100.			
2	R1	1 0	100.K			
3	R2	1 2	0.1			
4	C1	2 0	13.46p			
5	L1	2 3	5.41u			
6	C2	3 0	20.p			
7	R3	3 0	225.67	J-108.03		

freq	probe	value	dB	phase	phase delay

1.46M	V:1	0.223931	-12.998	-18.197	34.6223n
1.46M	V:2	0.223836	-13.001	-18.205	34.6375n
1.46M	V:3	0.242573	-12.303	-29.385	55.9084n
1.46M	Z:R1	223.931	23.501	-18.197	34.6223n
1.46M	I:R2	997.873u	-60.018	0.040	-76.3957p
1.46M	I:R3	969.537u	-60.269	-3.805	7.23872n

Corrected from Polar Coordinates, Z:R1 = 212.732 –J69.93
For calculation of negative tower, reverse direction for current flow, using conjugate of Z:R1 = 212.732 +J69.93

branch	label	nodes		value	function	tolerance	condition
1	V1	0	0	100.			
2	R1	1	0	100.K			
3	R2	1	2	0.1			
4	C1	2	0	20.p			
5	L1	2	3	5.41u			
6	C2	3	0	13.46p			
7	R3	3	0	212.732	J 69.93		

-->ac 1.46m

freq	probe	value	dB	phase	phase delay
1.46M	V:1	0.249279	-12.066	25.489	-48.4945n
1.46M	V:2	0.249189	-12.069	25.499	-48.5133n
1.46M	V:3	0.229937	-12.768	14.296	-27.2n
1.46M	Z:R1	249.279	23.967	25.489	-48.4945n
1.46M	I:R2	997.75u	-60.020	-0.062	117.202p
1.46M	I:R3	0.00102682	-59.770	-3.901	7.42124n

Base-Feed Correction Ratio R3/R2 = 1.029 Phase = -3.839°

Tower 3 Day
Tower feed inductance was measured at +j45.3 or 4.94 uH

branch	label	nodes		value	function	tolerance	condition
1	V1	0	0	100.			
2	R1	1	0	100.K			
3	R2	1	2	0.1			
4	C1	2	0	13.46p			
5	L1	2	3	4.94u			
6	C2	3	0	20.p			
7	R3	3	0	60.27	J 31.9		

-->ac 1.46m

freq	probe	value	dB	phase	phase delay
1.46M	V:1	0.0989398	-20.093	51.001	-97.0346n
1.46M	V:2	0.098877	-20.098	51.046	-97.1203n
1.46M	V:3	0.0691996	-23.198	26.775	-50.9413n

1.46M	I:R2	999.378u	-60.005	-0.044	83.8725p
1.46M	I:R3	0.00101478	-59.873	-1.117	2.12486n

Base - Feed Correction Ratio = R2/R3 = .9848 Phase = + 1.073°

M&M Broadcasters, LTD
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

KCLE NIGHT BASE CORRECTION CALCULATIONS

KCLE T1

branch	label	nodes	value	function	tolerance	condition
1	V1	0 0	100.			
2	R1	1 0	100.K			
3	R2	1 2	0.1			
4	C1	2 0	13.46p			
5	L1	2 3	4.14u			
6	C2	3 0	30.p			
7	R3	3 0	79.028	J 135.4		

-->ac 1.46m

freq	probe	value	dB	phase	phase delay
1.46M	V:1	0.2004	-13.962	63.507	-120.827n
1.46M	V:2	0.200356	-13.964	63.533	-120.876n
1.46M	V:3	0.166275	-15.583	57.716	-109.81n
1.46M	I:R2	999.108u	-60.008	-0.103	195.691p
1.46M	I:R3	0.00106059	-59.489	-2.013	3.83048n

Feed Correction R2/R3 =.942 Ratio, Phase = +1.91°

KCLE T2 Night

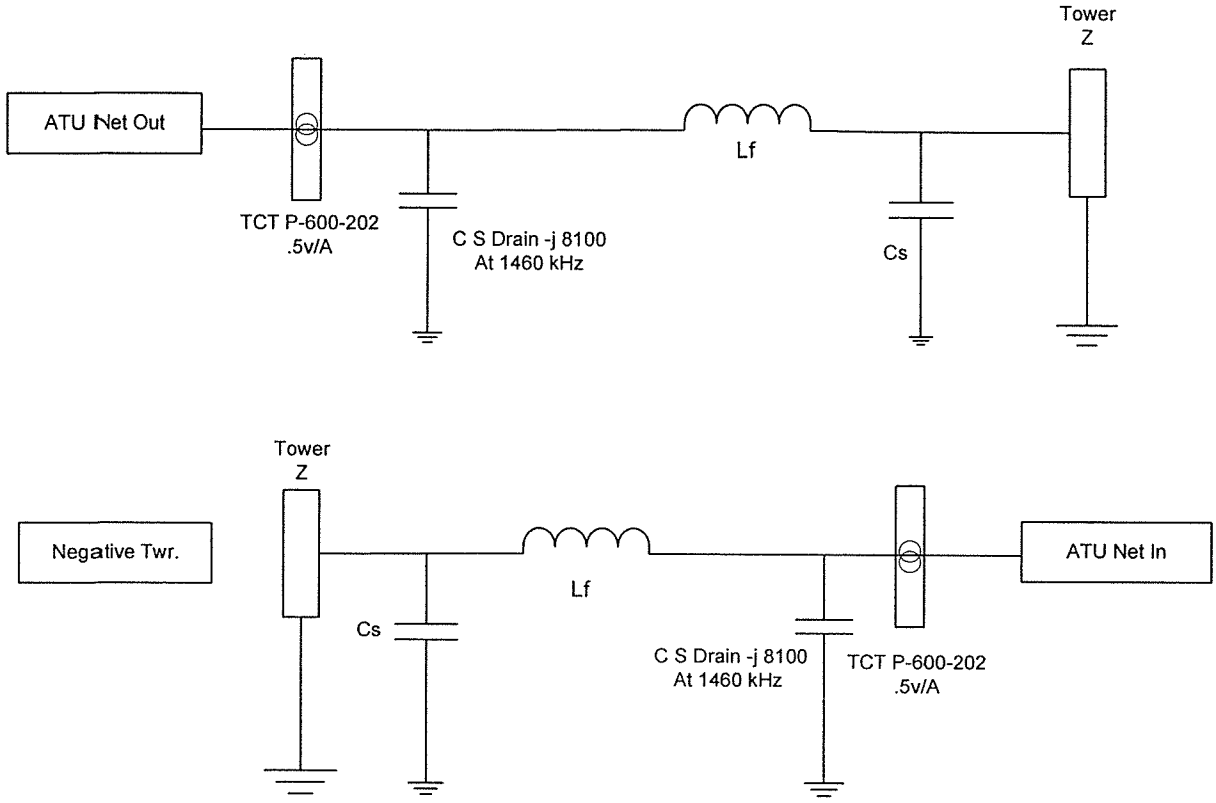
branch	label	nodes	value	function	tolerance	condition
1	V1	0 0	100.			
2	R1	1 0	100.K			
3	R2	1 2	0.1			
4	C1	2 0	13.46p			
5	L1	2 3	5.41u			
6	C2	3 0	20.p			
7	R3	3 0	48.2	J 81.264		

-->ac 1.46m

freq	probe	value	dB	phase	phase delay
1.46M	V:1	0.143017	-16.892	68.863	-131.019n
1.46M	V:2	0.142981	-16.894	68.901	-131.09n
1.46M	V:3	0.0974424	-20.225	58.379	-111.07n
1.46M	I:R2	999.485u	-60.004	-0.076	145.49p
1.46M	I:R3	0.00103132	-59.732	-0.948	1.8036n

Feed Correction R2/R3 = .9691 Phase = +.872°

KCLE Base Network



KCLE ANTENNA MONITOR PARAMETERS

KCLE DAY

T1 MOM CURRENT	T1 MOM PHASE	T2 MOM CURRENT	T2 MOM PHASE	T3 MOM CURRENT	T3 MOM PHASE
5.88747	72.9	1.79107	86.2	12.9606	6.7
T1 Base Ratio Correction	**T1 Base Ph Correction**	**T2 Base Ratio Correction**	**T2 Base Ph Correction**	**T3 Base Ratio Corection**	**T3 Base Ph Correction**
0.969	1.08	1.029	-3.84	0.9848	1.073
T1 Normalized Ratio	**T1 Normalized Phase**	**T2 Normalized Ratio**	**T2 Normalized Phase**	**T3 Normalized Ratio**	**T3 Normalized Phase**
0.447	66.2	0.144	74.59	1	0

KCLE NIGHT

T1 MOM CURRENT	T1 MOM PHASE	T2 MOM CURRENT	T2 MOM PHASE
2.72328	8.3	1.53722	-9.5
T1 Base Ratio Correction	**T1 Base Ph Correction**	**T2 Base Ratio Correction**	**T2 Base Ph Correction**
0.942	1.91	0.9691	0.872
T1 Normalized Ratio	**T1 Normalized Phase**	**T2 Normalized Ratio**	**T2 Normalized Phase**
1	0	0.581	-18.8

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KCLE Sample Antenna Monitoring System

The KCLE sampling system consists of three electrically equal length LDF 4-50 Heliax coaxial cables. The lines are connected to new Phasetek P-600-202 .5v/Amp sampling transformers. The transformers are installed in the ATU at the output to the antenna feed. At the time of the adjustment of the system, the transformers were were disconnected and measured with a common signal from a HP 8752A Network Analyzer (SN. 2901A00339). The signal was a CW signal from the reflection test port (RF Out) at 1.46 MHz. The output port of each transformer was fed to the transmission test port (RF In) of the analyzer and compared against the reference transformer for phase and magnitude.

Tower	Magnitude	Phase (Deg)
1	1.000	0
2	.9966	-.290
3	.9988	-0.35

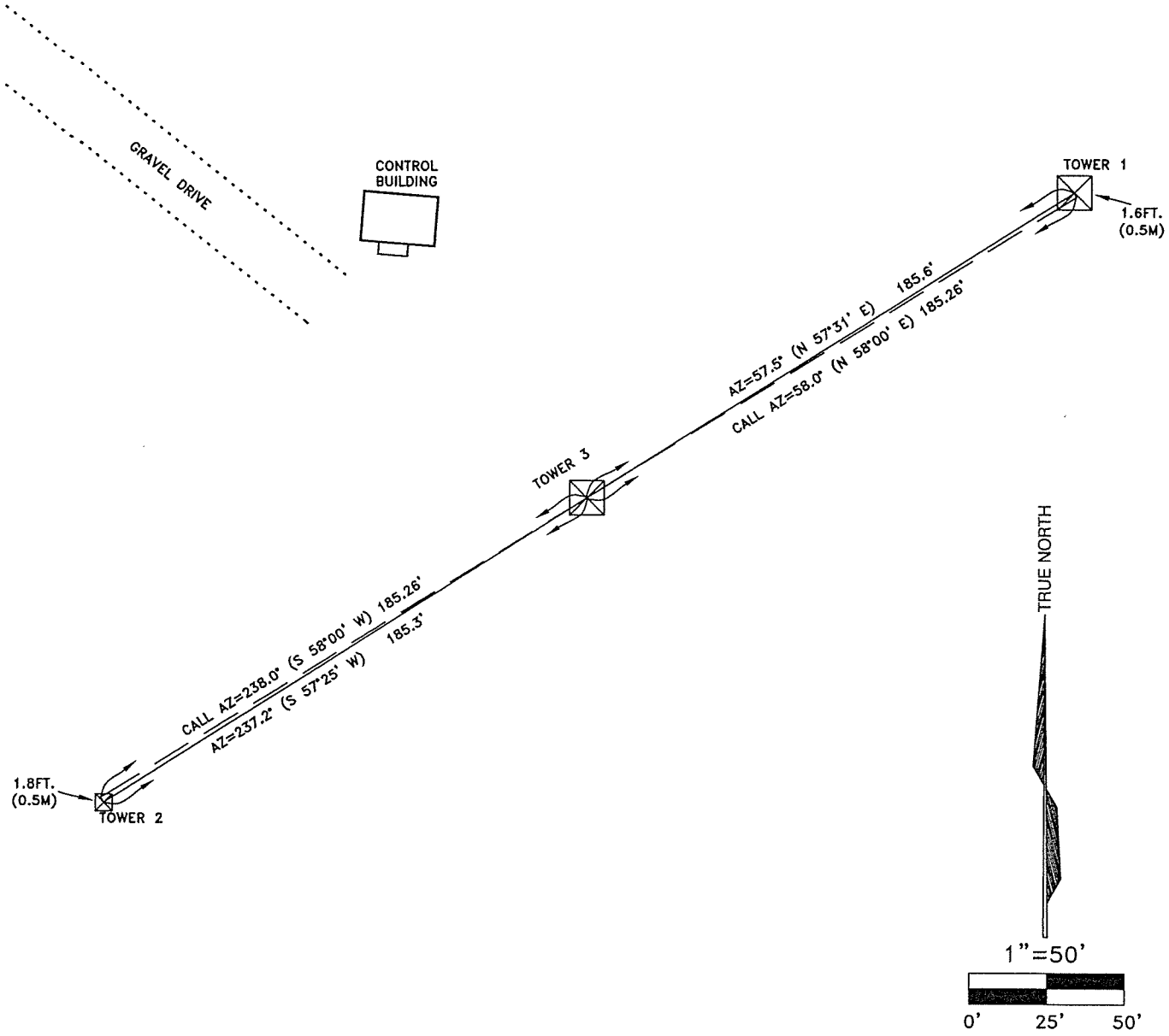
The antenna monitor utilized is a Potomac Instruments AM-1900-3, serial number 506. The monitor was operated and calibrated according to the manufacturer's specifications. The accuracy of the device was verified by driving all ports with a common signal from a Potomac SD31 generator. The antenna monitor was found to be well within manufacturer's specifications.

Sample lines were measured using an Array SolutionsAIM470C Network Analyzer. The line lengths were determined using the technique described in the methodology section of this exhibit. The results of the measurements and calculations are listed below.

	Resonance Below 1460 Khz	**Resonance Above 1460Khz**	**Calculated Electrical Length**	**Measured Impedance Into TCT**
Tower 1	813.4	2437.90	161.5	49.55+j.07
Tower 2	815	2440.7	161.2	49.71+j.5
Tower 3	813.9	2438.9	161.4	49.57+j.35

	+45 Degree Offset Frequency (KHz)	+45 Degree Measured Impedance (Ohms)	-45 Degree Offset Frequency (KHz)	-45 Degree Measured Impedance (Ohms)	Calculated Characteristic Impedance (Ohms)
Tower 1	1220.1	2.88 +53.72	406.7	.41-j49.62	51.67
Tower 2	1222.5	2.89+j53.75	407.5	.41-j49.38	51.56
Tower 3	1220.9	2.92+j53.88	407	.42-49.66	51.77

Maximum impedance = 51.77 ohms
Minimum impedance = 51.56 ohms



AZIMUTHS AND BEARINGS SHOWN HEREON ARE BASED ON TRUE NORTH
DISTANCES SHOWN ARE SURFACE MEASUREMENTS

KCLE RADIO TOWER LOCATION EXHIBIT

H. LITTLE SURVEY A-930

BURLESON, TARRANT CO, TX

JN: 09-1606 DRAWN BY: MGD

DATE: 07-23-10 CHECKED BY: WMC

Coleman & Associates Land Surveying
P. O. BOX 686 · DENTON, TEXAS 76202
PH(940)565-8215,FAX (940)565-9800,
WWW.COLEMANSURVEYING.COM

KCLE 1460 kHz Reference Readings
Measured by: Mitch Rice using FIM 41 S.N. 497

Day Reference Readings

58 Deg.	Distance	Reading	Time	Date	Location Description
	3.74	95	1248	8/17/2010	32 35 46.9 97 14 48.5 Mitchell Saxon Rd
	6.97	54	1302	"	32 36 42.7 97 13 03 4809 Nancy
	9.66	27.5	1315	"	32 37 28.7 97 11 34.6 7424 Mansfield Cardinal
	13.23	14	1326	"	32 38 29.74 97 09 39.2 3307 Redstone
207 Deg	4.45	237	1213	8/19/2010	32 32 34.9 97 18 07 109 S Hurst
	7.6	100	1231	"	32 31 03.9 97 19 02.7 CR 803 & &15
	14.17	35	1249	"	32 27 53.4 97 20 58 6408 CR803
238 Deg	3.75	320	1154	"	32 33 38.6 97 18 52.8 300 Boone Rd
	7.04	175	1137	"	32 33 42.2 97 20 39.7 724 Bryan Dr
	10.34	120	1123	"	32 31 45.3 97 22 26.9 CR 920
	13.7	75	1114	"	32 30 47.9 97 24 17.6 1517 CR 914
269 Deg	2.98	420	1021	8/17/2010	32 34 41.6 97 18 44.9 FM 1187
	6.36	160	1032	"	32 34 41.7 97 20 54.7 PVt Rd EMain & Thompson
	9.28	100	1044	"	32 34 37.6 97 22 46.5 Lot Crowley Eagles field house
	12.14	76	1054	"	32 34 36.4 97 24 36.2 CR 919

Night Reference Readings

24.5 Deg	3.28	24	1503	8/19/2010	32 36 19 97 15 57.7 Rendon Rd past Village Creek
	10.27	7	1522	"	32 39 45.4 97 14 29.5 Gilman Rd
	13.4	4.5	1534	"	32 41 17.9 97 13 16.3 7107 Lake Powell
91.5 Deg	3.66	21	1658	"	32 34 39.5 97 14 29.5 12260 Rendon
	7.05	7.3	1611	"	32 34 37.3 97 12 19.3 118 Willow Creek
	13.66	4.5	1641	"	32 34 30.8 97 08 2.8 Pleasant Ridge Rd near church
152 Deg	3.33	100	1145	8/20/2010	32 33 08.1 97 15 49.7 202 Hillside Dr E
	6.86	36	1202	"	32 34 28.22 97 16 47.8 920 Pecan &CR529
	9.91	30	1222	"	32 29 59.3 97 13 51.41 CR523 .1 mi past 605
	12.53	12.5	1233	"	32 28 45.1 97 13 04.2 8952 &FM917
228 Deg	4.07	44	1307	"	32 33 14.2 97 18 46.3 across from Spinks on Stone
	6.18	21.3	1436	"	32 32 15.8 97 20 03.7 Capt Ds on Market St
	10.1	14.9	1420	"	32 31 02.9 97 21 38.5 CR920
	14.48	8.8	1410	"	32 29 28.37 97 19 06 920 1021
248 Deg	3.82	47	1450	"	32 33 56.5 97 19 06 Front of Cracker Barrel
	7.69	18.9	1322	"	32 33 09.6 97 21 28.3 1252 Catherine
	11.25	8.4	1335	"	32 32 26.2 97 23 31.5 2100 CR920