pillsbury

RECEIPT

Pillsbury Winthrop Shaw Pittman LLP
1200 Seventeenth Street, NW | Washington, DC 20036 | tel 202.663.8000 | fax 202.663.8007

Christine A. Reilly
tel 202.663.8245
christine.reilly@pillsburylaw.com

May 20, 2015

VIA HAND DELIVERY

Accepted / Filed

MAY 20 2015

Federal Communications Commission
Office of the Secretary

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW, TW-A325
Washington, DC 20554

Re: Transition Radio, LLC, Trustee
Amendment to FCC Form 302-AM
KALI(AM0, West Covina, CA, FAC ID 56779
FCC File No. BL-20150204ADK

Dear Ms. Dortch:

On behalf of Transition Radio, LLC, Trustee, licensee of KALI(AM), West Covina, California, Facility ID 56779, transmitted herewith, is an amendment to the pending application, FCC File No. BL-20150204ADK. This amendment provides additional technical information and a copy of the Diplexing Agreement. As an amendment, this submission is nonfeeable.

Please direct any communications regarding this matter to the undersigned.

Respectfully submitted,

Christine Reilly

Agreement between KALI(AM) and KAHZ(AM) concerning responsibility for the installation and maintenance of diplexing equipment

During the period of August 2013, diplexing equipment was installed pursuant to construction permit BP-20111215ACJ. This agreement delineates responsibility for the installation and maintenance of said equipment.

Physical Description:

The diplexing equipment is contained in several physically separate outdoor enclosures. One cabinet at each tower contains the components associated with KALI(AM), West Covina, California, FAC ID 56779, and is clearly labeled "KALI", while at two of the three towers are cabinets containing is the equipment associated with KAHZ(AM), Pomona, California, FAC ID 61814, and is clearly labeled "KAHZ".

Inside the transmitter building, there is a new wall mounted 900 kHz trap filter network associated with KAHZ, and a new trap filter and cabinet enclosure containing the 1600 kHz filter and transmitter phasing and matching network associated with KALI.

Responsibilities of the Parties:

The installation of the new equipment (both outdoor diplexing cabinets, and the new indoor KALI(AM) equipment), as well as the interconnection of said equipment to the existing towers and the existing KAHZ(AM) indoor equipment and trap filter, and the initial adjustments to permit proper operation of said equipment in compliance with FCC rules and regulations, shall be the sole responsibility of KALI(AM).

Each station shall be responsible for the ongoing maintenance of the equipment associated with their station, specifically the outdoor diplexing cabinets containing the equipment associated with their station, as well as the indoor 900 kHz trap filter and phasing and matching equipment associated with their station.

For Transition Radio, L.L.C., Trustee (licensee of KALI(AM))

Signed: William B. Schutz, Jr., President — Date: 5/19/15

For Multicultural Radio Broadcasting Licensee LLC (licensee of KAHZ(AM))

Signed: Arthur S. Liu, President — Date: 5/19/2015

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)

Transition Radio,LLC Trustee

MAILING ADDRESS (Line 1) (Maximum 35 characters)
117 William Barksdale

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY	STATE OR COUNTRY (if foreign address)	ZIP CODE
Williamsburg	VA	23185

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)
7572688740	KALI	Facility ID 56779

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): Amendment

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
	0001	$	

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	$	

	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.	$	

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT Transition Radio, LLC, Trustee		
MAILING ADDRESS 117 William Barksdale		
CITY Williamsburg	STATE VA	ZIP CODE 23185

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
KALI	West Covina, CA	BP-20111215ACJ	N/A	02/16/2015

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 Proof of performance must be approved for program tests. Operating Per STA

Exhibit No.

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	
William B Schutz, Jr		
Title	Date	Telephone Number
President	5/19/2015	757-258-8740

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
Transition Radio, LLC, Trustee

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
KALI	BP-20111215ACJ	900	Unlimited	0.15 / 0.194	5.0

2. Station location

State	City or Town
CA	West Covina

3. Transmitter location

State	County	City or Town	Street address (or other identification)
CA	San Bernardino	Chino	12251 Mills Ave

4. Main studio location

State	County	City or Town	Street address (or other identification)
CA	Los Angeles	Pasadena	747 E Green Street

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

State	County	City or Town	Street address (or other identification)
CA	Los Angeles	Pasadena	747 E Green Street

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. See Report

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
1.80 / 1.97 * See Report	10.4

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
50	50	0	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	+143 deg	0 (Ref)	0.505	1	N/A	N/A
2	0 deg (Ref)	-87.5	1	0.9	N/A	N/A
3	-65 deg	-177	0.550	0.82	N/A	N/A

Manufacturer and type of antenna monitor: Potomac Instruments Model AM-19 (204)

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.
Vertical Guyed Base Insulated	See Report	See Report	See Report	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	34 °	01 '	48 "	West Longitude	117 °	43 '	35 "

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. N/A

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.

New Transmitter location

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
Edward A. Schober	Edward A. Schober
Address (include ZIP Code)	Date
Radiotechniques Engineering, LLC PO Box 367 Haddon Heights, NJ 08035	29 January 2015
	Telephone No. (Include Area Code) 856-546-8008

☐ Technical Director

☑ Registered Professional Engineer

☐ Chief Operator

☐ Technical Consultant

☐ Other (specify)

RADIOTECHNIQUES
PO Box 367 □ 402 Tenth Avenue □ Haddon Heights, NJ 08035
856-546-8008 □ fax 856-546-1841

Engineering Report – Page 1 (Amended)
License Application
Transition Radio, LLC, Trustee.
KALI, West Covina, CA
May 2015

ABSTRACT

Radiotechniques has been retained by Transition Radio, LLC, Trustee., to prepare this report in support of its application for license of KALI, West Covina, CA. A construction permit was issued for KALI to relocate its transmitter and install a daytime and nighttime directional antennas under file number BP-20111215ACJ, and this application is to license these modified facilities.

This report details the data and information required by FCC rules and regulations for proof of performance of the KALI directional antenna systems in compliance with the terms of the KALI construction permit as modified, and proposed to be modified.

DISCUSSION

Transition Radio, LLC, Trustee., has made the changes to KALI in accord with construction permit BP-20111215ACJ. KALI shares transmitting towers with KAHZ, 1600 kHz, Pomona, CA. The antenna system for KAHZ was restored to proper operation in conformance with the terms of its license.

GROUND SYSTEM

The ground system for both KAHZ and KALI has been repaired, and substantially replaced where disturbed by burying the coaxial cables and where it was degraded by time, vandalism and the elements. The ground system has been extended to be as described in BP–201112115ACJ Exhibit 12 Figure 1. The ground system consists of 120 #10 copper radials extending from the tower base to property boundary or intersecting with radials from another tower. Towers are connected with 10 cm copper strap between bases. 7.5 x 7.5 expanded copper mesh is installed at the base of each tower. The average length of radials on the KALI towers is 51.3 m.

RF Safety

New fencing has been installed as described in BP-20111215ACJ Exhibit 19at sufficient distance from the tower bases to assure that exposure to radiofrequency radiation is within acceptable limits as outlined in FCC bulletin OST-65. In addition, perimeter fencing is installed which restricts the general public to no closer than 45 meters of the tower bases.

RADIO TECHNIQUES
PO Box 367 □ 402 Tenth Avenue □ Haddon Heights, NJ 08035
856-546-8008 □ fax 856-546-1841

Engineering Report – Page 2 (Amended)
License Application
Transition Radio, LLC, Trustee.
KALI, West Covina, CA
May 2015

Operating procedures have been established at the site so that whenever work is required on the towers the licensees of both KAHZ and KALI have agreed to cease operation, operate omnidirectionally from a tower which is not being worked on and will not present a hazard to workers, or reduce power to levels which will not cause a hazard to workers.

At the time of initial filing, the KAHZ antenna system was operating normally. At no time during construction did the antenna or common point impedance vary from the licensed values. The KAHZ directional antenna parameters and monitor points remained within licensed values. **In the interim since the original filing of this application and the present, KAHZ suffered a transmitter and transmission line failure independent of the KALI construction, and has been operating according to the terms of a Special Temporary Authority. This condition may or may not have been corrected at the date of this filing.**

PROGRAM TESTS

KALI has constructed and demonstrated compliance with the terms of its Construction Permit, therefore Program Test Authority. **Program tests are authorized 5000 Watts Day and at 150 Watts night. The station is operating according to the Authority.** It is expected that the license, when granted will specify 5000 Watts day and 194 Watts night as justified below.

DIPLEXING AND INTERMODULATION

In addition to the diplex filters provided in the Phasor and antenna coupling equipment, an additional filter at the transmitter output of KAHZ was added to reject residual 900 kHz signals from returning to the KAHZ transmitter. Field measurements at approximately ½ km from the antenna location were made with both stations operating at full power using a Potomac Instruments FIM-41 field intensity meter.

The desired signals of 900 kHz and 1600 kHz were both in excess of 500 mV/m at the measurement location. An overall band scan was completed and no signals were heard in the AM band. The meter was then adjusted to various theoretical intermodulation products of the two signals. No signals were received from KAHZ nor KALI at the intermodulation frequencies of 700 kHz (adj KSPN), 1100 kHz(adj KDIS), 1400 kHz (KKZZ), 2300 kHz, 2380 kHz, 2500 kHz nor 3900 kHz. The KALI harmonic frequencies of 1800 kHz, 2700 kHz, 3600 kHz and 4500 khz were also checked with no discernible signals greater than 80 db below

RADIO TECHNIQUES
PO Box 367 □ 402 Tenth Avenue □ Haddon Heights, NJ 08035
856-546-8008 □ fax 856-546-1841

carrier. With the auxiliary filter in place, the emissions from the antenna system meet all spurious and harmonic radiation limitations established by the FCC.

Construction permit condition 5 (five) requires an agreement between the licensees of the stations fixing the responsibility of each with regard to the installation and maintenance of such equipment. Transition Radio, LLC, Trustee., licensee of KALI accepts all responsibility for maintenance of its filtering and diplexing equipment and its proper operation. **A formal agreement to this effect is attached to this report.**

SAMPLING

The sampling system consists of Delta Electronics TCT toroidal current transformers which sample the current into the antenna before the diplex filters. There are no shunt components to ground in the diplex filters, so these transformers accurately reflect the magnitude and phase of the current into each tower. **The sample lines consist of three equal lengths of solid outer conductor phase stabilized coaxial transmission lines**, feeding a Potomac Instruments model AM-19 antenna monitor. **The sample transmission lines are buried, with the excess length buried outside the transmitter building.** This sample system meets the requirements of FCC Rules 73.68, and approval of this sample system is requested under the provisions of Section 73.68(b).

PROOF OF PERFORMANCE

A full directional antenna proof of performance was conducted on the new directional antenna system. The antenna system was measured in the non-directional mode at 1,250 Watts using tower 3 of the antenna system. Tower 1 and 2 was detuned through the diplexer for minimum base current at 900 kHz.

The day antenna system was measured at the construction permit power level, and the night antenna system was measured at 540 Watts during daytime hours in accordance with an STA instead of the construction permit power level of 150 Watts, because the radiated field in the nulls would have been too low to measure at the end of the radials. The individual data from 540 Watt operation was then scaled by a factor of and replotted for the authorized 150 Watt night power level.

RADIOTECHNIQUES
PO Box 367 □ 402 Tenth Avenue □ Haddon Heights, NJ 08035
856-546-8008 □ fax 856-546-1841

The 540 Watt power level was chosen to minimize disruption of the KALI service by power reduction during the daytime, and assure steady readable measurements of the field intensity while maintaining all operating values within the rated voltage and current ratings of the antenna components. If the night array were to be operated at only 150 (194) Watts daytime to measure monitor points, dramatic loss of coverage would result for that period.

FIELD MONITORING OF THE NIGHT PATTERN

At 540 Watts, the night directional pattern is substantially contained within the day directional radiation pattern, and the field intensity produced is contained entirely within the field intensity for omnidirectional operation at ¼ of the day power, or 1.25 kW. It is requested that the license issued for KALI specify that night monitor point measurements may be accomplished by operating the night antenna system at 540 Watts during daytime hours for this purpose and use the appropriately scaled monitor point values as the limits, as shown in Figures 6A and 6B of this report.

PROOF OF PERFORMANCE

The proof of performance was conducted on KALI and the results are presented as Figure 4 of this report.

A summary of the analysis of the KALI directional antenna proof of performance is shown below:

Bearing Deg	ND Field mV/m @ 1 km	Standard Field Day mV/m @ 1 km	Measured Field Day mV/m @ 1 km	Night Measured Field 540 watts mV/m @ 1 km	Night Standard Field Night mV/m @ 1km	Night Measured Field 150 Watts (Scaled)	Night Measured Field 194 Watts (Scaled)
37.5	329	28.8	24.9	172	108.3	90.5	101
126.5	327	361	359	20.9	13.5	11.0	12.3
195	390	844	700	196	123.2	103	116
255	360	1178	1042	279	192.4	147	165
305	359	950	882	210	145.2	110.7	124
353.7	350	428	413	151	98	79.6	89.1

Figure 1 is a plot of the Non-Directional field intensity from the above table. The table values were derived from semi-automatic analysis of the measurements data for the appropriate radial, as shown in the attached graphs and data tables.

RADIO TECHNIQUES
PO Box 367 □ 402 Tenth Avenue □ Haddon Heights, NJ 08035
856-546-8008 □ fax 856-546-1841

Figure 2 is a polar plot of the standard pattern field intensity of the KALI daytime antenna, as authorized in BP-20111215ACJ. Plotted thereon are the data from the analysis of the field intensity measurements as shown from the fourth column of the above table. These data are established by arithmetic average of the ratios of the DA and Non-DA measurement values, multiplied by the evaluated ND field from column 1 above. As can be seen, the Measured Field Day is very close to but less than the standard field value for each bearing.

Figure 3A is a polar plot of the standard pattern field intensity of the KALI night antenna, as authorized in BP-20111215ACJ. Plotted thereon are the data from the analysis of the field intensity measurements scaled from the 540 Watt power level to the authorized 150 Watts. These data are established by arithmetic average of the ratios of the DA-N and Non-DA measurement values, multiplied by the evaluated ND field from column 1 above. These values result in column six of the above table.

These values are scaled by the factor $F=0.527=\sqrt{150/540}$ to arrive at the values of column eight, and by $F=.599=\sqrt{(194/540)}$ for column nine.

The measured RMS field is low with respect to the standard pattern field. This is due to several factors:

The standard pattern is artificially expanded for Class D night operations that are not using the daytime pattern. The standard pattern expands the theoretical pattern by 1.05, and then adds a quadrature factor or "Q" which is established by the power of the station, and the RSS of the directional antenna. When the power of the station is reduced below 1000 Watts, the "Q" value remains at a minimum of 10 mV/m. When applied to stations between 1000 and 250 Watts this assures that adequate margin is allowed in the design for the difficulty of measuring lower power stations (due to noise and interference) , so that it can be assured that the proof of performance can actually be accomplished. For precisely this reason, the KALI proof of performance was conducted at 540 Watts, and not at 150 Watts.

Unfortunately, a "Q" factor of 10.0 applied to an array operating at 150 Watts means that the RMS of the standard pattern will be substantially increased, relative to the theoretical pattern, making it impossible to properly "fill" the standard pattern.

Additionally, the RSS/RMS of this array is 1.573, and the antenna system

RADIO TECHNIQUES
PO Box 367 □ 402 Tenth Avenue □ Haddon Heights, NJ 08035
856-546-8008 □ fax 856-546-1841

is constructed from components with low power ratings. As such the losses in the tuning and phasing equipment are higher than if the components were made for higher power, or the array had a lower RSS / RMS ratio.

As such, the Night antenna system develops only 90.0 mV/m at 1 km, as measured by polar planimeter from Figure 3A. 90.0 mV/m at 1 km is only 74.8% of the RMS of the authorized standard pattern of 120.3 mV/m @ 1 km. This fails to comply with §73.151(a) of the FCC rules. **In the FCC Public Notice of October 11 1985, *The Application Process And The Use of Non-Discrete Power Levels For AM Stations* at paragraph 6 specifies a procedure for requesting an increase in transmitter power to compensate for the low efficiency of a newly constructed directional antenna system that fails to meet the 85% of RMS requirement. This procedure permits an adjustment of the transmitter power upward at the time of license application so as to increase the RMS field to 85% of standard pattern, provided that in no direction shall the measured pattern exceed the standard pattern, nor will the power increase greater than the maximum for the station class.**

The measured night RMS is 90 mV/m @ 1 km (at 150W). A power increase of 29% to 194 Watts will increase the RMS to 102.6 mV/m @ 1 km. (85% of Standard Pattern RMS Field Intensity.) It can be seen from Figure 3B that the measured pattern does not exceed the standard pattern in any direction. This license application requests authorization at 194 Watts for night operation.

Figure 3B (added) is a polar plot of the night measured pattern plotted along with the night standard pattern, showing that the measured pattern remains within the unaugmented standard pattern.

Monitor points are established for the 37.5° day radial and for the 126.5° and 353.5° night radials. Photos and information are shown in Figure 5 for the day antenna and Figure 6 A and 6B for the night antenna. Directions and a map to these locations is shown in Figure 7.

CONCLUSIONS

KALI has been fully constructed in accordance with its construction permit, and a complete proof of performance of the directional antenna system is enclosed showing that the antenna system meets the requirements of the construction permit.

The combined KALI / KAHZ antenna has been properly adjusted and constructed

RADIOTECHNIQUES
PO Box 367 □ 402 Tenth Avenue □ Haddon Heights, NJ 08035
856-546-8008 □ fax 856-546-1841

to avoid spurious transmissions. All predicted intermodulation products have been checked, and are either unmeasurably low, and within the limits established by the FCC.

Transition Radio, LLC, Trustee. requests program test authority, at the Construction Permit power levels, and the increased night power of 194 Watts at night when the license is issued.

ENGINEERS STATEMENT

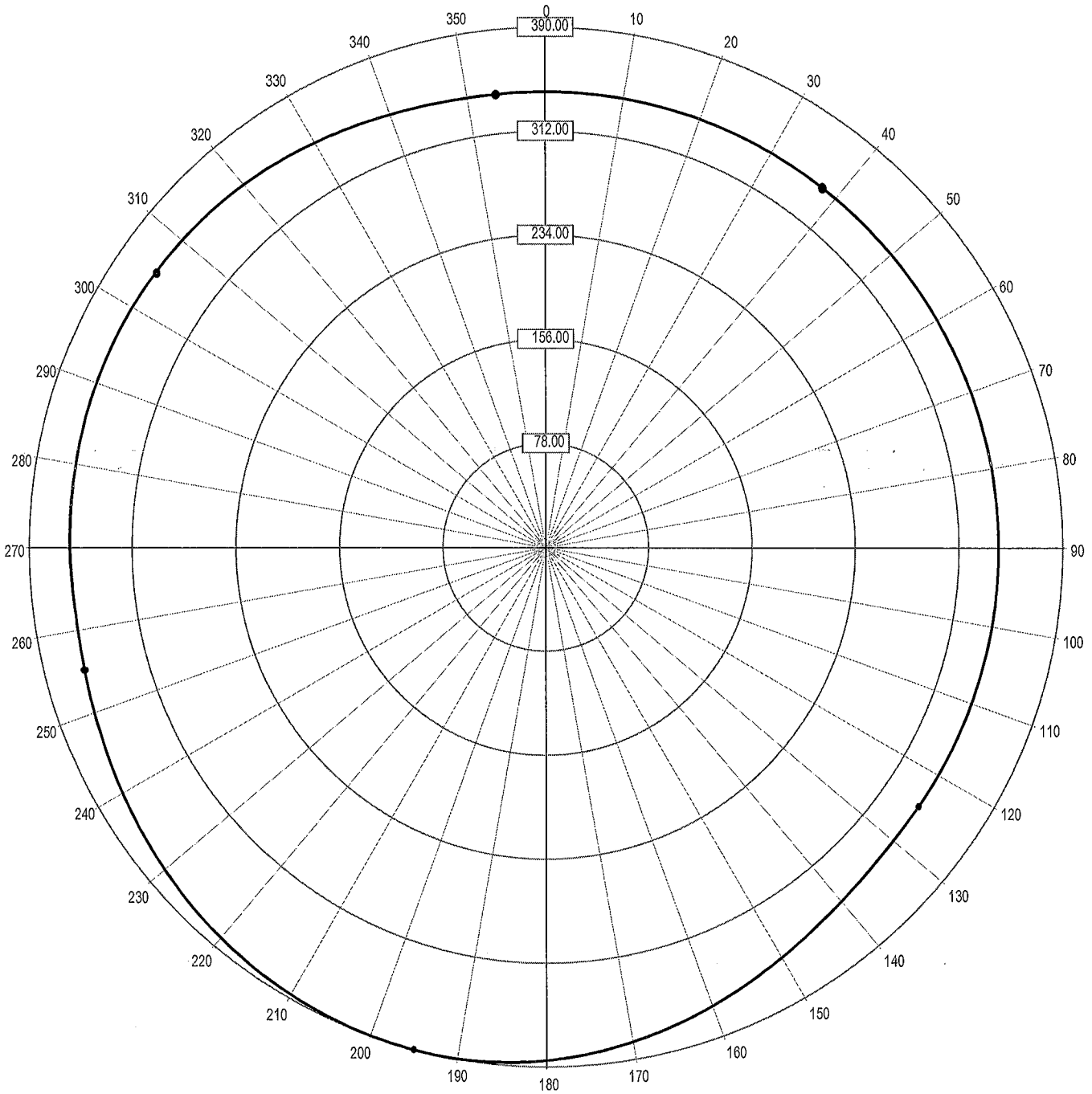
This is to certify that this report has been prepared by myself, and under my direction. It is correct and accurate of my own knowledge, except where stated otherwise, and where this is so, the information is correct to the best of my knowledge and belief.

I further certify that I am a Licensed Professional Engineer in the State of New Jersey, with a BSEE degree from the Newark College of Engineering of NJIT, and that I am regularly engaged in the practice of radio engineering with the firm of Radiotechniques Engineering, LLC, with offices at 402 Tenth Avenue, Haddon Heights, NJ. I am a member of the AFCCE, senior life member of the IEEE, and SBE, and hold a FCC General Radiotelephone Operator License. My qualifications are a matter of record with the FCC.

Edward A Schober

Date: May 18, 2015

Edward A. Schober, PE



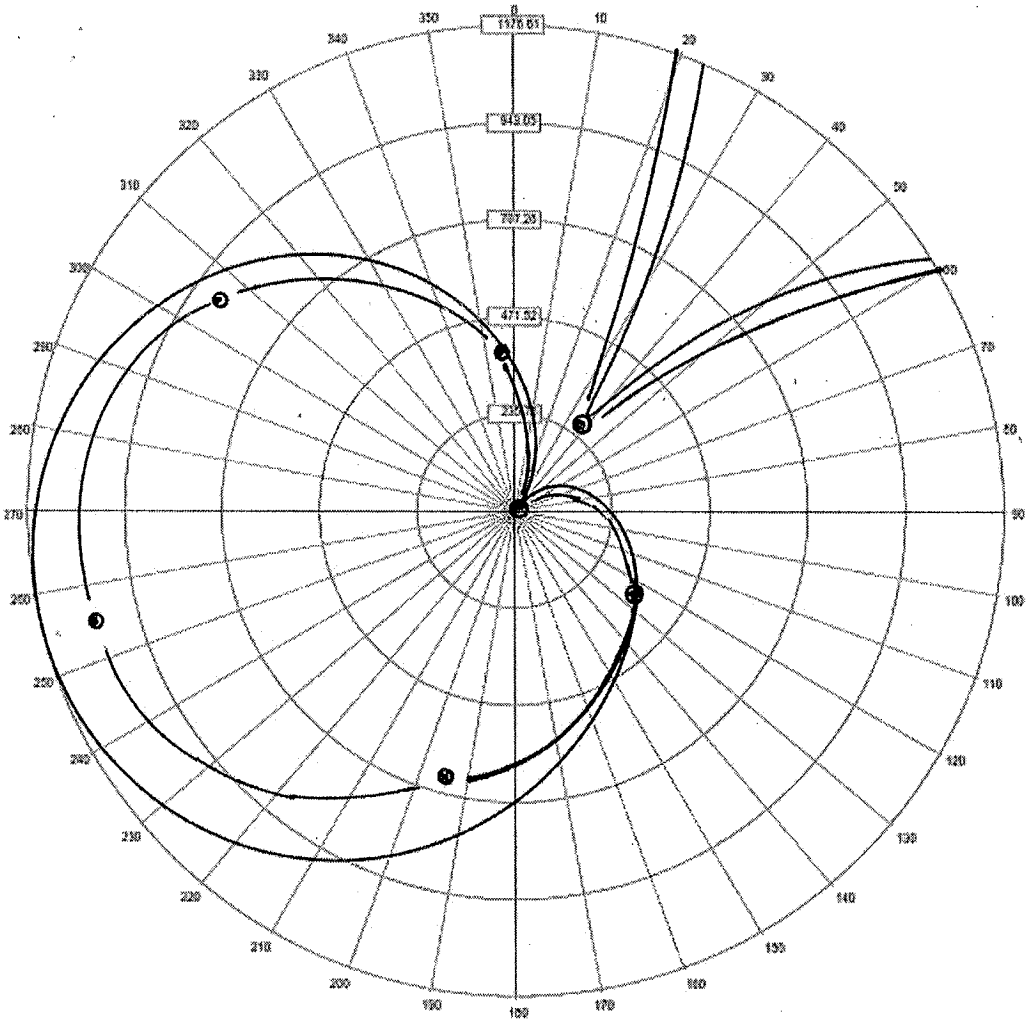
Callsign	:	KALI-ND
Frequency	:	900 kHz
Power	:	1.250 kw
Measured RMS	:	350 mV/m

T#	Field	Phase	Spacing	Orientation	Height	Top L	Tower Ref
3	1.000	0.0	0.0	0.0	67.0		0

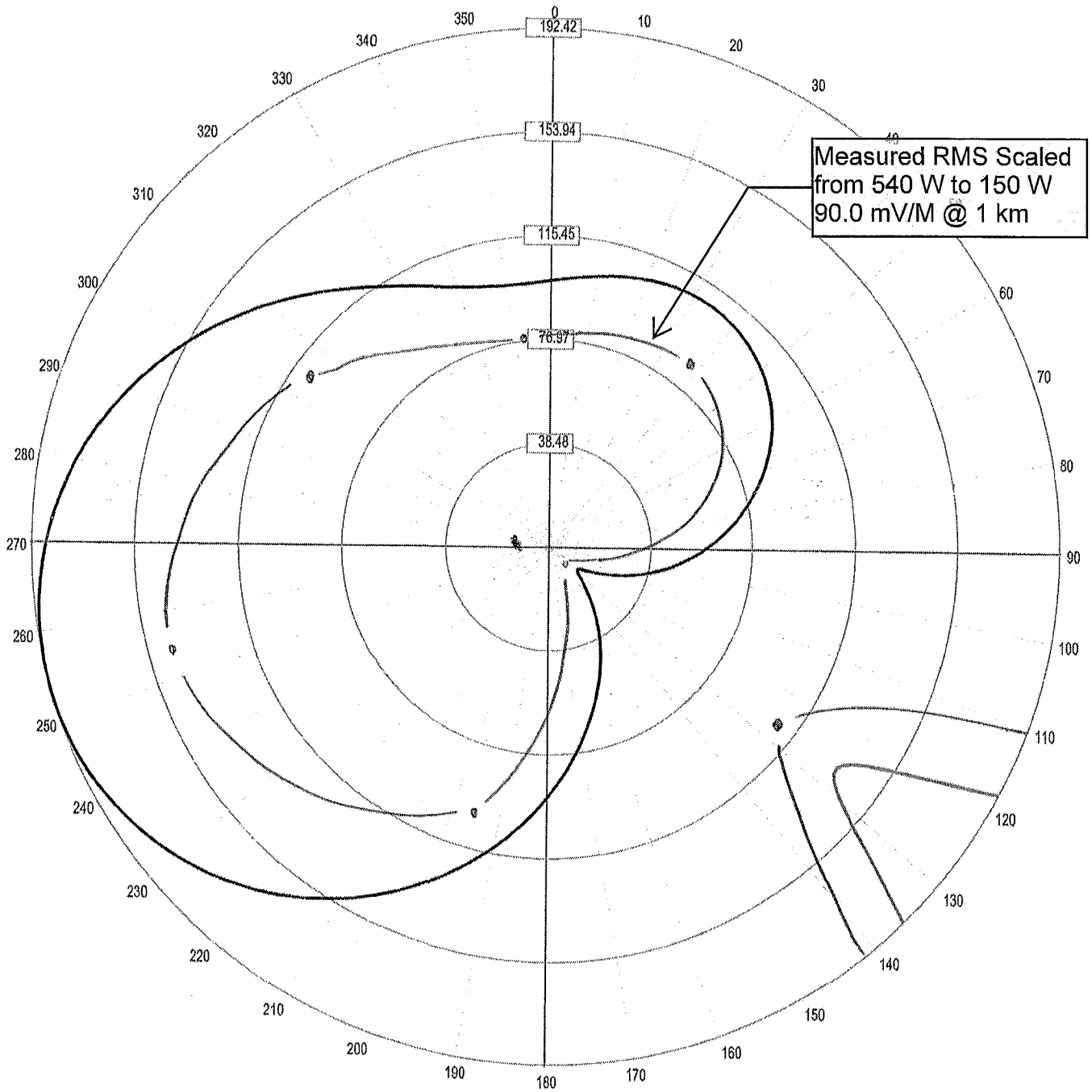
Figure 1 - Non Directional Measured Field Intensity
KALI, West Covina, CA
January 2015
License to Cover BP20111215ACJ

RADIO TECHNIQUES®
402 Tenth Avenue ● PO Box 367 ● Haddon Heights, NJ 08035

Engineering Report
Figure 2
Day Measured Directional Pattern
KALI, West Covina, CA
January 2015



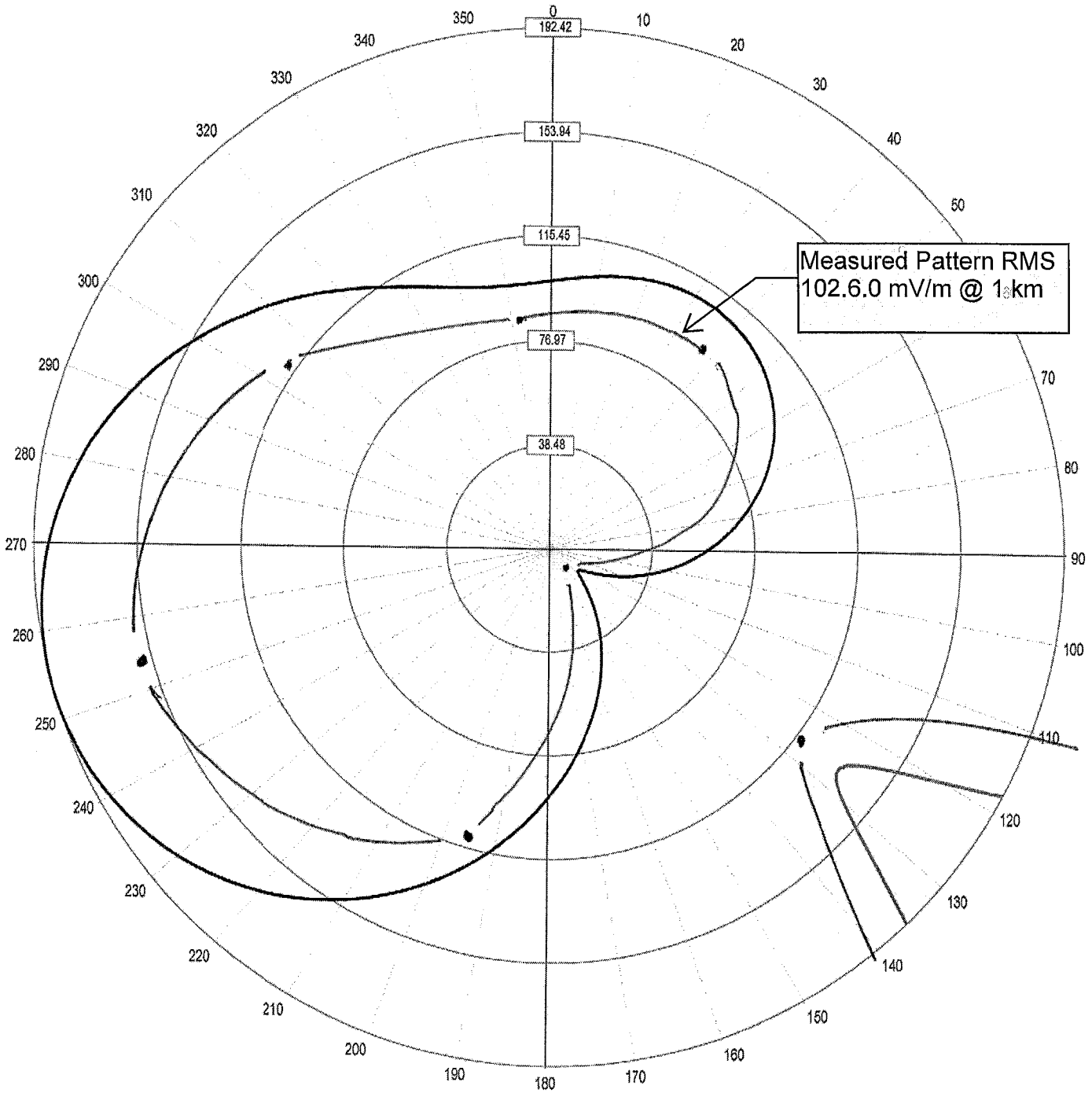
Measured RMS: 592.5 mV/m @ 1 km
Standard RMS: 681.1 mV/m @ 1 km
Measured is 87% of Standard Field



Callsign	:	KALI
Frequency	:	900 kHz
Power	:	0.150 kw
ERSS	:	179.5 mV/m/km
Theoret. Pattern RMS	:	114.1 mV/m/km
Standard Pattern RMS	:	120.3 mV/m/km
Modified Pattern RMS	:	
Latitude	:	34-01-48.0 N
Longitude	:	117-43-35.0 W
Number Augmentations	:	0

T#	Field	Phase	Spacing	Orientation	Height	Top Load	Tower Ref
1	0.970	0.0	0.0	0.0	82.3	0.0	0
2	1.000	223.6	50.7	210.0	52.7	0.0	0
3	0.810	164.0	70.0	270.0	72.4	0.0	0

Figure 3A
Measured Night Field Intensity
Scaled from 540 W to 150 W
KALI, West Covina, CA
January 2015



Callsign	:KALI
Frequency	:900 kHz
Power	:0.150 kw
ERSS	:179.5 mV/m/km
Theoret. Pattern RMS	:114.1 mV/m/km
Standard Pattern RMS	:120.3 mV/m/km
Modified Pattern RMS	:
Latitude	:34-01-48.0 N
Longitude	:117-43-35.0 W
Number Augmentations	:0

T#	Field	Phase	Spacing	Orientation	Height	Top Load	Tower Ref
1	0.970	0.0	0.0	0.0	82.3	0.0	0
2	1.000	223.6	50.7	210.0	52.7	0.0	0
3	0.810	164.0	70.0	270.0	72.4	0.0	0

Figure 3B
KALI, West Covina, CA
Measured Night Directional Pattern
540 W scaled to 194 W
January 2015

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 37.5 E

Call: KALI

Frequency: 900.0 kHz

Power: 1.250 kW

Pattern: ND

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
1	10/9/13	1244	0.47	580.00
2	10/9/13	1241	0.73	380.00
3	10/9/13	1239	1.14	240.00
4	10/19/13	1122	1.68	150.00
5	10/19/13	1128	2.25	105.00
6	10/9/13	1239	2.50	100.00
7	10/19/13	1134	2.74	115.00
8	10/19/13	1015	2.98	92.00
9	10/9/13	1021	3.23	90.00
10	10/19/13	1140	3.34	80.00
11	10/10/13	1025	3.59	90.00
12	10/10/13	1021	4.05	80.00
13	10/19/13	1140	4.43	58.00
14	10/10/13	1025	4.58	65.00
15	10/10/13	1028	5.16	56.00
16	10/19/13	1149	5.84	40.00
17	10/19/13	1153	6.35	42.00
18	10/19/13	1159	7.85	28.00
19	10/19/13	1204	8.56	25.00
20	10/19/13	1209	9.39	19.00
21	10/19/13	1219	10.80	18.50
22	10/19/13	1227	11.50	16.50
23	10/19/13	1235	13.40	12.80

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 37.5 E

Call: KALI Frequency: 900.0 kHz
Power: 5kW Pattern: DAD

Point Number	Time	Distance (km)	Field Strength (mV/m)
1	0902	0.47	********
2	0906	0.73	********
3	0909	1.14	********
4	0912	1.68	19.00
5	0917	2.25	11.50
6	0921	2.50	9.50
7	0924	2.74	12.00
8	0930	2.98	9.50
9	0934	3.23	6.00
10	0938	3.34	3.70
11	0941	3.59	7.00
12	0945	4.05	3.00
13	0949	4.43	1.80
14	0951	4.58	1.70
15	0956	5.16	1.60
16	1004	5.84	3.70
17	1009	6.35	4.80
18	1014	7.85	2.00
19	1019	8.56	1.80
20	1026	9.39	1.10
21	1039	10.80	1.60
22	1047	11.50	1.50
23	1055	13.40	0.900

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 37.5 E

Call: KALI

Frequency: 900.0 kHz

Power: 5.000 kW

Reference Pattern: ND

Measured Pattern: DAD

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio	
4	1.68	150.00	19.00	0.127	
5	2.25	105.00	11.50	0.110	
6	2.50	100.00	9.50	0.095	
7	2.74	115.00	12.00	0.104	
8	2.98	92.00	9.50	0.103	
9	3.23	90.00	6.00	0.067	
10	3.34	80.00	3.70	0.046	
11	3.59	90.00	7.80	0.087	MP
12	4.05	80.00	3.00	0.038	
13	4.43	58.00	1.80	0.031	
14	4.58	65.00	1.70	0.026	
15	5.16	56.00	1.60	0.029	
16	5.84	40.00	3.70	0.093	
17	6.35	42.00	4.80	0.114	
18	7.85	28.00	2.00	0.071	
19	8.56	25.00	1.80	0.072	
20	9.39	19.00	1.10	0.058	
21	10.80	18.50	1.60	0.086	
22	11.50	16.50	1.50	0.091	
23	13.40	12.800	0.900	0.070	

Radial Ratio: 0.076

Reference Inverse Field @1km: 329.00 mV/M

Measured Inverse Field @1km: 24.96 mV/M

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 37.5 E

Call: KALI

Frequency: 900.0 kHz

Power: 0.540 kW

Pattern: DAN

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
4	11/10/14	0916	1.68	72.00
5	11/5/14	0915	2.25	72.00
6	11/5/14	0918	2.50	62.00
7	11/10/14	0919	2.74	55.00
8	11/10/14	0924	2.98	52.00
9	11/10/14	0926	3.23	48.00
10	11/10/14	0931	3.34	42.00
11	11/5/14	0923	3.59	46.00
12	11/10/14	0938	4.05	38.00
13	11/10/14	0942	4.43	32.00
14	11/5/14	0929	4.58	31.00
15	11/5/14	0932	5.16	27.00
16	11/5/14	0935	5.84	19.00
17	11/5/14	0938	6.35	20.00
18	11/10/14	0950	7.85	13.00
19	11/10/14	0953	8.56	12.50
20	11/10/14	0959	9.39	11.00
21	11/10/14	1005	10.80	9.80
22	11/10/14	1009	11.50	8.80
23	11/10/14	1019	13.40	6.40

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

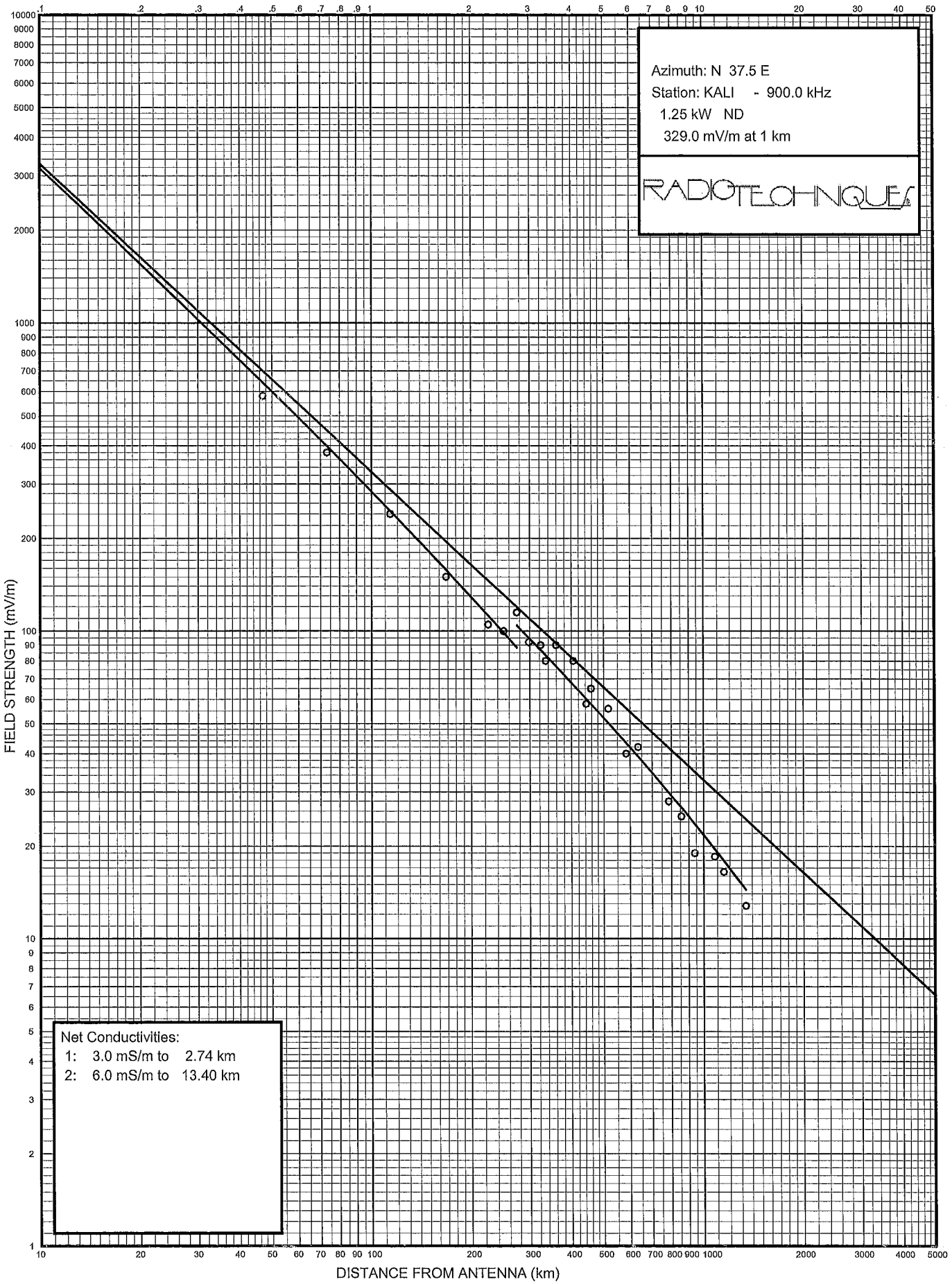
Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

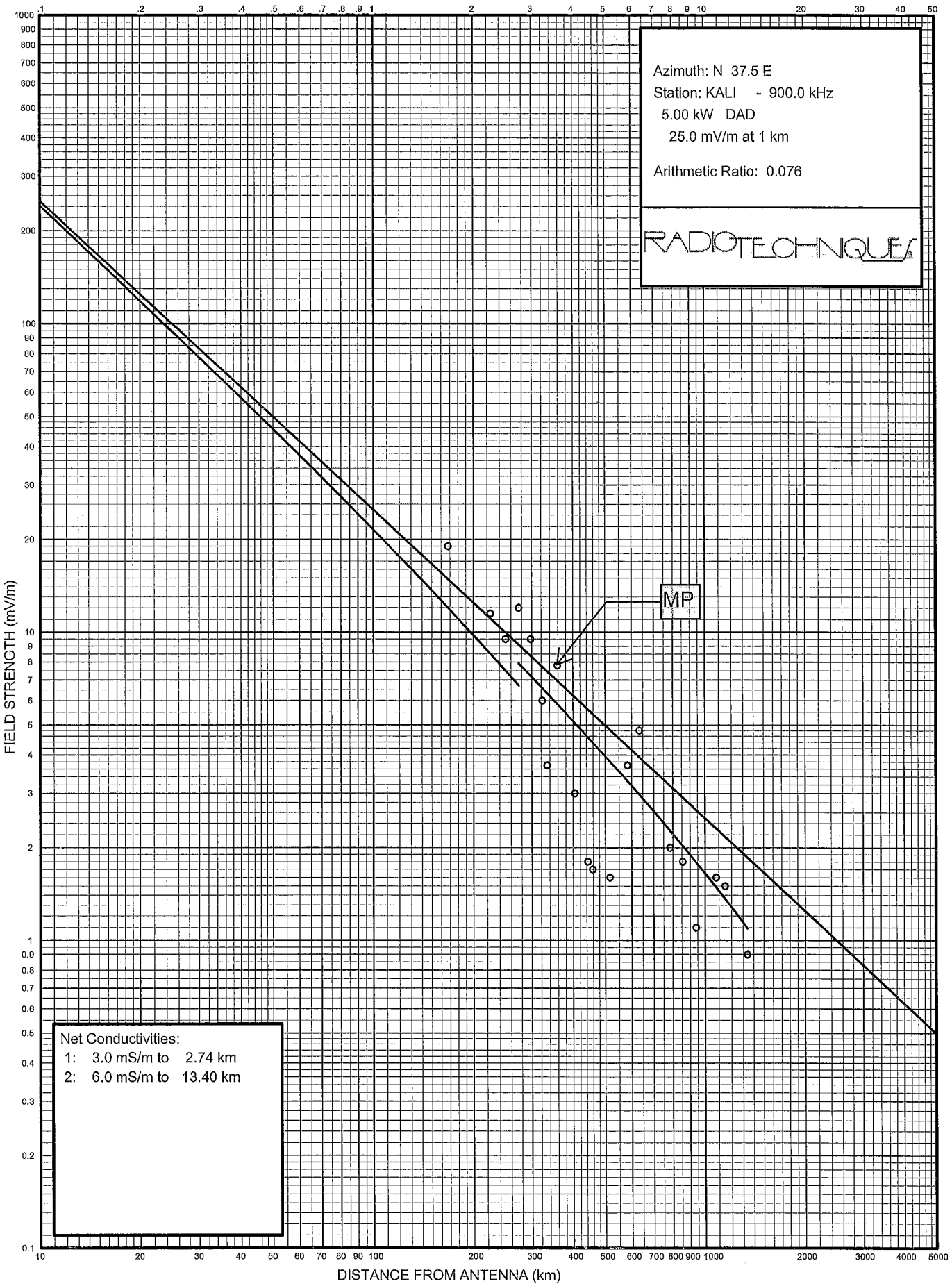
ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 37.5 E

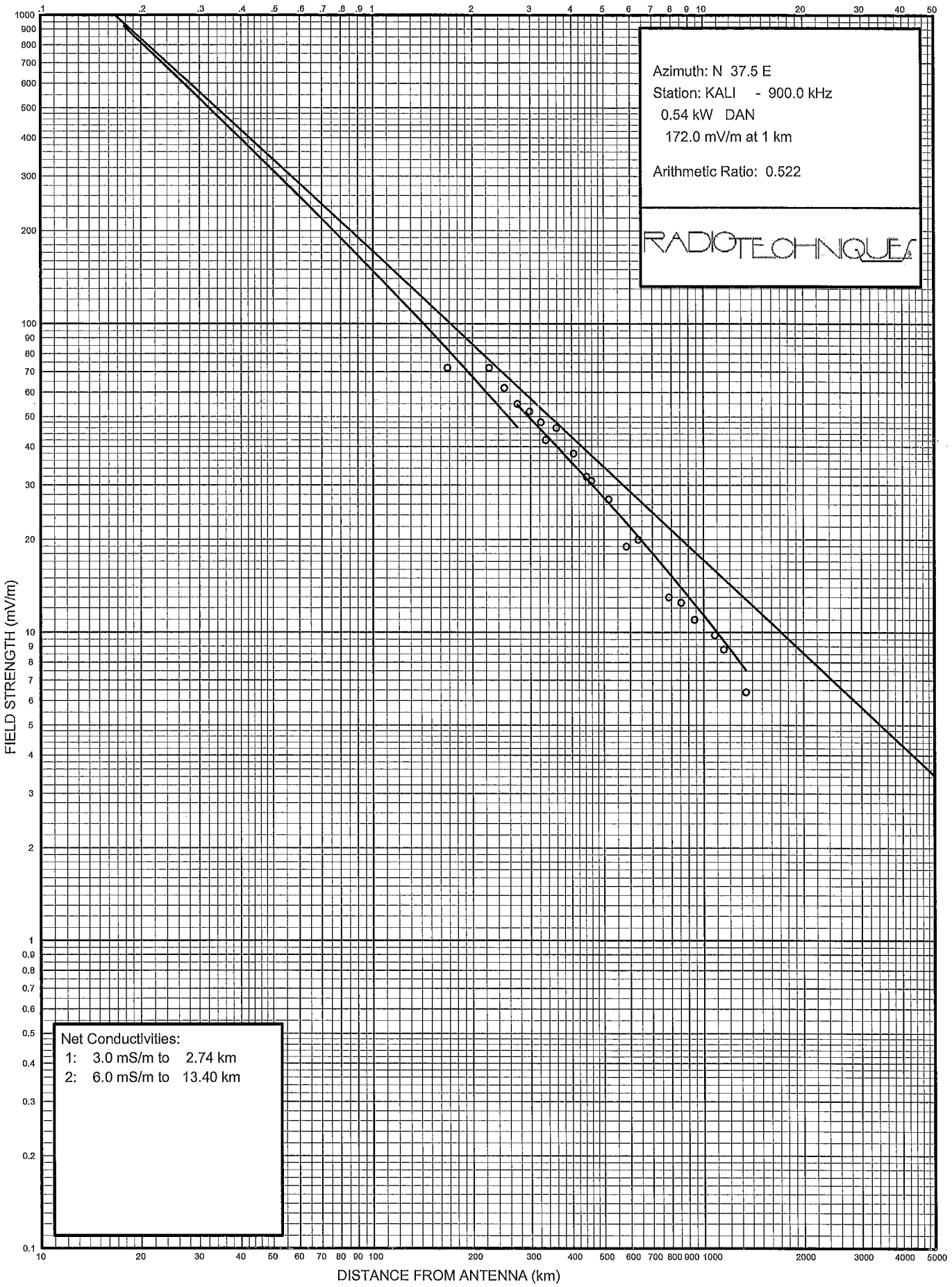
Call: KALI
Frequency: 900.0 kHz
Power: 0.540 kW
Reference Pattern: ND
Measured Pattern: DAN

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
4	1.68	150.00	72.00	0.480
5	2.25	105.00	72.00	0.686
6	2.50	100.00	62.00	0.620
7	2.74	115.00	55.00	0.478
8	2.98	92.00	52.00	0.565
9	3.23	90.00	48.00	0.533
10	3.34	80.00	42.00	0.525
11	3.59	90.00	46.00	0.511
12	4.05	80.00	38.00	0.475
13	4.43	58.00	32.00	0.552
14	4.58	65.00	31.00	0.477
15	5.16	56.00	27.00	0.482
16	5.84	40.00	19.00	0.475
17	6.35	42.00	20.00	0.476
18	7.85	28.00	13.00	0.464
19	8.56	25.00	12.50	0.500
20	9.39	19.00	11.00	0.579
21	10.80	18.50	9.80	0.530
22	11.50	16.50	8.80	0.533
23	13.40	12.80	6.40	0.500

Radial Ratio: 0.522
Reference Inverse Field @1km: 329.00 mV/M
Measured Inverse Field @1km: 171.77 mV/M


Azimuth: N 37.5 E
Station: KALI - 900.0 kHz
1.25 kW ND
329.0 mV/m at 1 km
RADIOTECHNIQUES
Net Conductivities:
1: 3.0 mS/m to 2.74 km
2: 6.0 mS/m to 13.40 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 37.5 E
Station: KALI - 900.0 kHz
5.00 kW DAD
25.0 mV/m at 1 km
Arithmetic Ratio: 0.076
RADIO TECHNIQUES
MP
Net Conductivities:
1: 3.0 mS/m to 2.74 km
2: 6.0 mS/m to 13.40 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 37.5 E
Station: KALI - 900.0 kHz
0.54 kW DAN
172.0 mV/m at 1 km
Arithmetic Ratio: 0.522
RADIOTECHNIQUES
Net Conductivities:
1: 3.0 mS/m to 2.74 km
2: 6.0 mS/m to 13.40 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 126.5 E
Call: KALI Frequency: 900.0 kHz
Power: 1.250 kW Pattern: ND

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
1	10/20/13	1114	0.42	640.00
2	10/20/13	1117	0.52	520.00
3	10/20/13	1122	0.75	350.00
4	10/20/13	1124	0.84	285.00
5	10/20/13	1127	1.00	270.00
6	10/20/13	1130	1.10	255.00
7	10/20/13	1134	1.24	240.00
8	5/10/14	1044	1.32	175.00
9	5/10/14	1046	1.47	170.00
10	5/10/14	1048	1.58	170.00
11	5/10/14	1049	1.69	165.00
12	10/16/13	1219	1.82	160.00
13	10/16/13	1215	2.10	125.00
14	10/16/13	1224	2.33	100.00
15	10/16/13	1228	2.86	96.00
16	5/10/14	1112	3.38	88.00
17	10/16/13	1234	3.78	90.00
18	5/10/14	1119	4.39	66.00
19	5/10/14	1123	4.73	52.00
20	10/16/13	1239	5.39	55.00
21	5/10/14	1132	6.88	41.00
22	5/10/14	1136	7.59	40.00
23	5/10/14	1142	8.76	33.50
24	5/10/14	1149	11.50	32.00
25	5/10/14	1154	13.10	22.00

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 126.5 E

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
26	5/10/14	1200	14.60	21.00
27	5/10/14	1205	15.70	19.00
28	5/10/14	1217	18.20	16.00

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 126.5 E

Call: KALI

Frequency: 900.0 kHz

Power: 5kW

Pattern: DAD

Point Number	Time	Distance (km)	Field Strength (mV/m)
11	1307	1.69	200.00
12	1305	1.82	195.00
13	1257	2.10	140.00
14	1254	2.33	105.00
15	1244	2.86	108.00
16	1240	3.38	85.00
17	1235	3.78	95.00
18	1232	4.39	70.00
19	1228	4.73	60.00
20	1225	5.39	62.00
21	1217	6.88	45.00
22	1212	7.59	39.00
23	1208	8.76	38.50
24	1202	11.50	31.50
25	1152	13.10	24.50
26	1146	14.60	23.00
27	1141	15.70	22.00
28	1128	18.20	18.00

All reading taken by Mark Moceri on May 5, 2014. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 126.5 E

Call: KALI
Frequency: 900.0 kHz
Power: 5.000 kW
Reference Pattern: ND
Measured Pattern: DAD

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
11	1.69	165.00	200.00	1.212
12	1.82	160.00	195.00	1.219
13	2.10	125.00	140.00	1.120
14	2.33	100.00	105.00	1.050
15	2.86	96.00	108.00	1.125
16	3.38	88.00	85.00	0.966
17	3.78	90.00	95.00	1.056
18	4.39	66.00	70.00	1.061
19	4.73	52.00	60.00	1.154
20	5.39	55.00	62.00	1.127
21	6.88	41.00	45.00	1.098
22	7.59	40.00	39.00	0.975
23	8.76	33.50	38.50	1.149
24	11.50	32.00	31.50	0.984
25	13.10	22.00	24.50	1.114
26	14.60	21.00	23.00	1.095
27	15.70	19.00	22.00	1.158
28	18.20	16.00	18.00	1.125

Radial Ratio: 1.099
Reference Inverse Field @1km: 327.00 mV/M
Measured Inverse Field @1km: 359.00 mV/M

FIELD STRENGTH MEASUREMENT DATA

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 126.5 E

Call: KALI

Frequency: 900.0 kHz

Power: 0.540 kW

Pattern: DAN

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)	
11	11/7/14	0914	1.69	9.00	
12	11/7/14	0916	1.82	8.80	MP
13	11/7/14	0922	2.10	7.10	
14	11/7/14	0925	2.33	6.80	
15	11/7/14	0931	2.86	5.60	
16	11/4/14	1244	3.38	5.80	
17	11/7/14	0935	3.78	6.30	
18	11/7/14	0938	4.39	4.90	
19	11/7/14	0942	4.73	3.60	
20	11/4/14	1236	5.39	3.10	
21	11/7/14	0950	6.88	2.80	
22	11/4/14	1228	7.59	2.80	
23	11/4/14	1224	8.76	2.10	
24	11/4/14	1215	11.50	1.80	
25	11/4/14	1209	13.10	1.60	
26	11/7/14	1003	14.60	1.50	
27	11/4/14	1202	15.70	1.20	
28	11/4/14	1150	18.20	0.830	

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

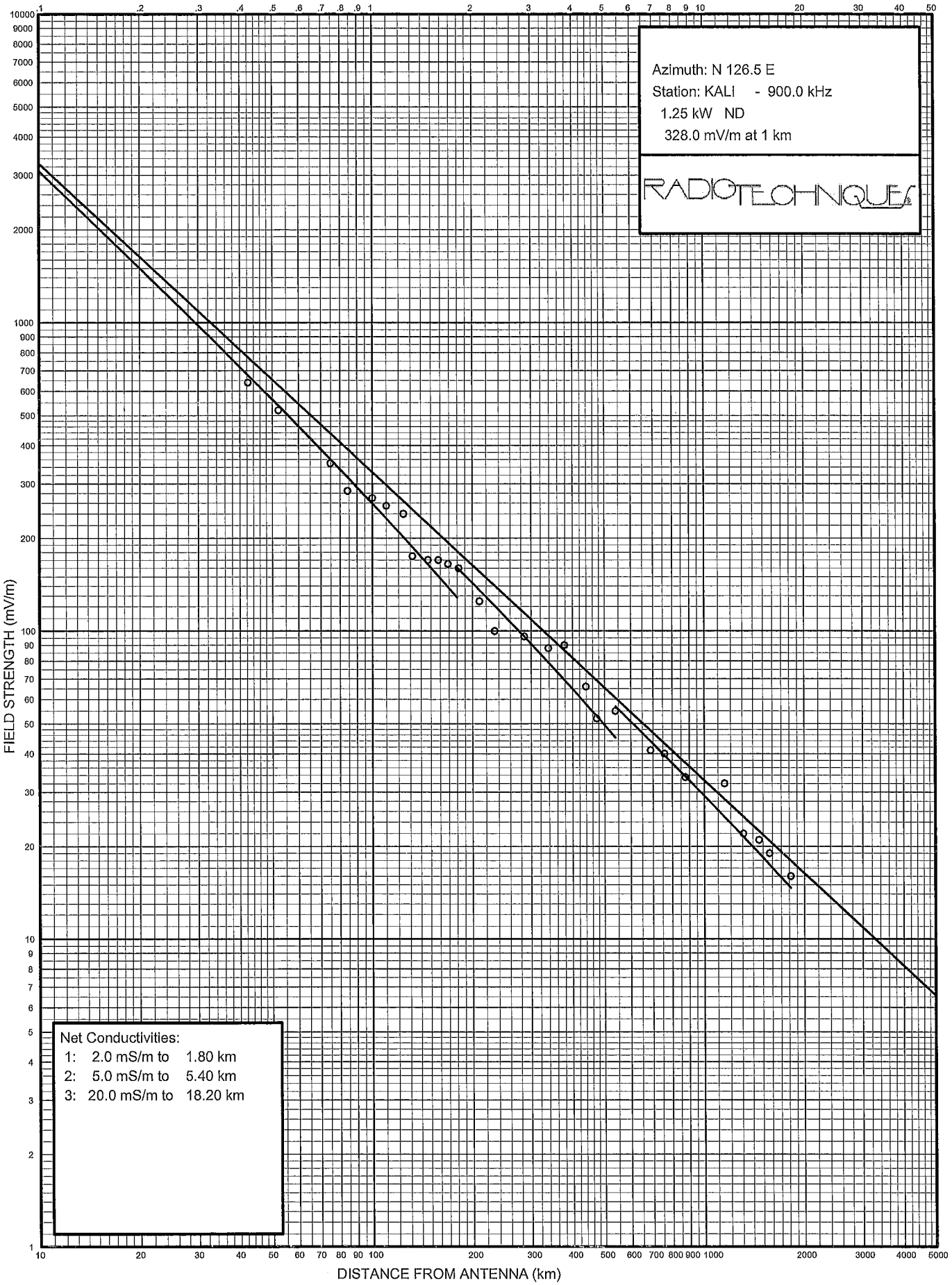
Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

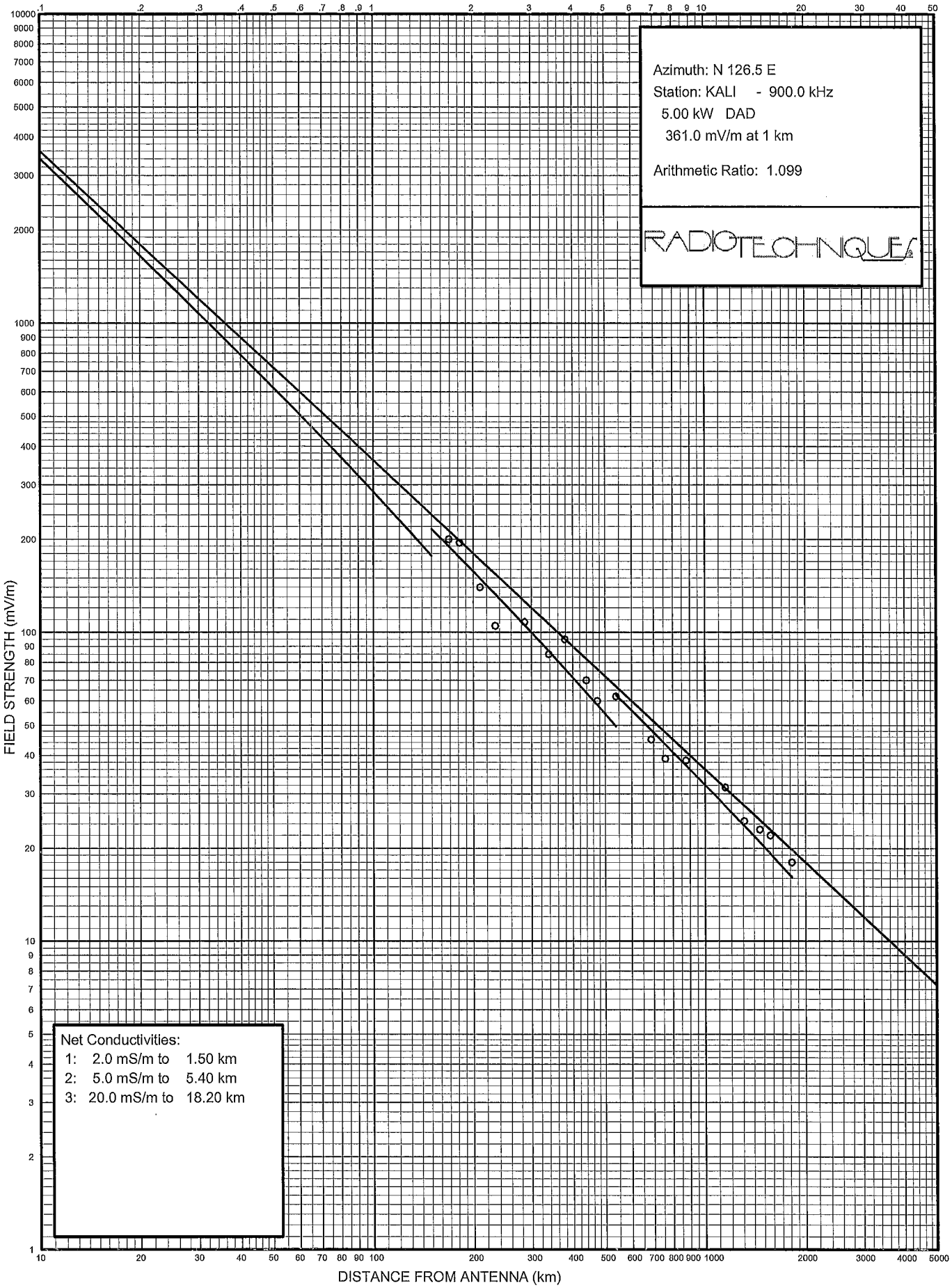
ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 126.5 E

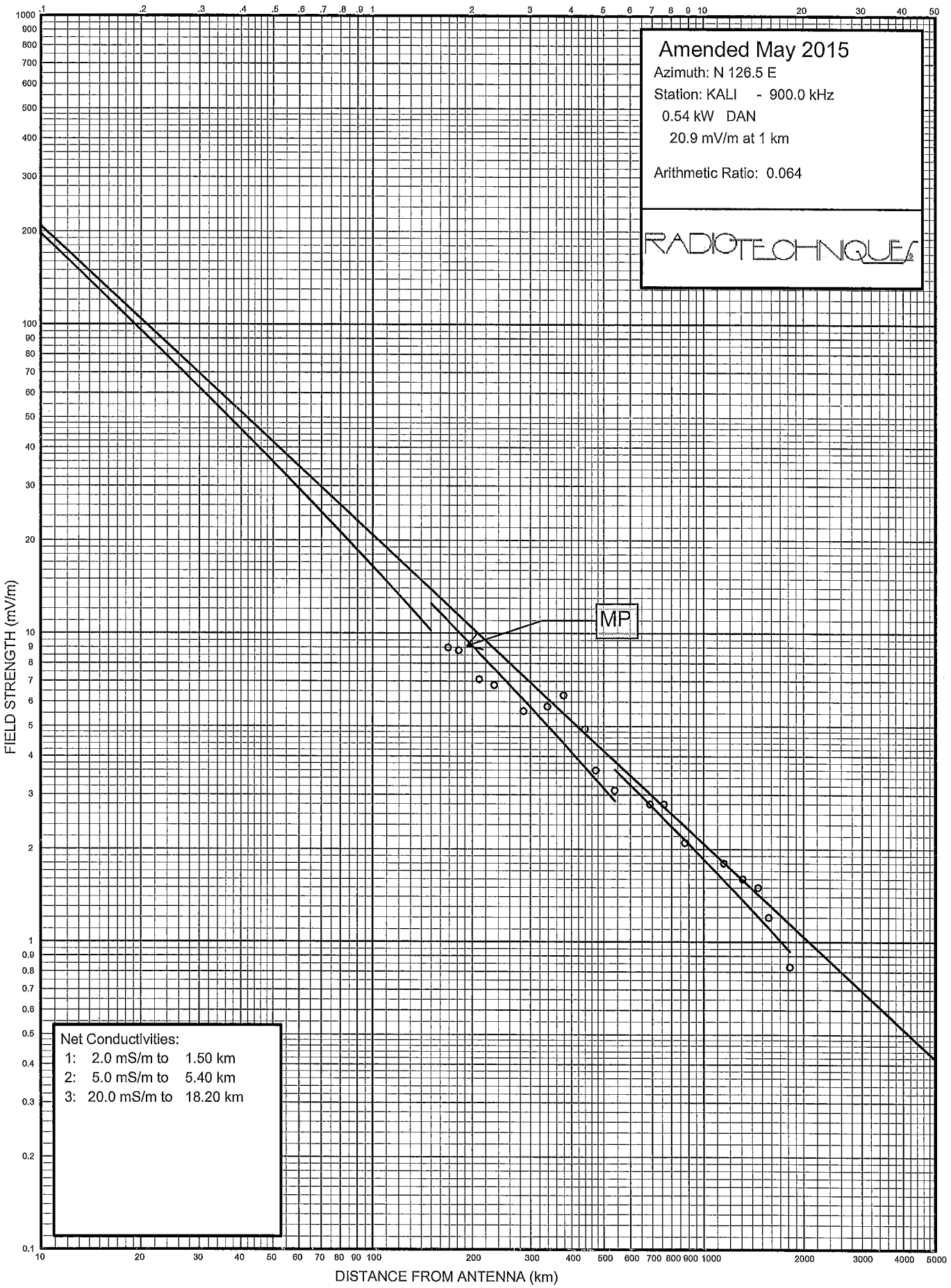
Call: KALI
Frequency: 900.0 kHz
Power: 0.540 kW
Reference Pattern: ND
Measured Pattern: DAN

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio	
11	1.69	165.00	9.00	0.055	
12	1.82	160.00	8.80	0.055	MP
13	2.10	125.00	7.10	0.057	
14	2.33	100.00	6.80	0.068	
15	2.86	96.00	5.60	0.058	
16	3.38	88.00	5.80	0.066	
17	3.78	90.00	6.30	0.070	
18	4.39	66.00	4.90	0.074	
19	4.73	52.00	3.60	0.069	
20	5.39	55.00	3.10	0.056	
21	6.88	41.00	2.80	0.068	
22	7.59	40.00	2.80	0.070	
23	8.76	33.50	2.10	0.063	
24	11.50	32.00	1.80	0.056	
25	13.10	22.00	1.60	0.073	
26	14.60	21.00	1.50	0.071	
27	15.70	19.00	1.20	0.063	
28	18.20	16.000	0.830	0.052	

Radial Ratio: 0.064
Reference Inverse Field @1km: 327.00 mV/M
Measured Inverse Field @1km: 20.9 mV/M


Azimuth: N 126.5 E
Station: KALI - 900.0 kHz
1.25 kW ND
328.0 mV/m at 1 km
RADIO TECHNIQUES
Net Conductivities:
1: 2.0 mS/m to 1.80 km
2: 5.0 mS/m to 5.40 km
3: 20.0 mS/m to 18.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 126.5 E
Station: KALI - 900.0 kHz
5.00 kW DAD
361.0 mV/m at 1 km
Arithmetic Ratio: 1.099
RADIO TECHNIQUES
Net Conductivities:
1: 2.0 mS/m to 1.50 km
2: 5.0 mS/m to 5.40 km
3: 20.0 mS/m to 18.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Amended May 2015
Azimuth: N 126.5 E
Station: KALI - 900.0 kHz
0.54 kW DAN
20.9 mV/m at 1 km
Arithmetic Ratio: 0.064
RADIO TECHNIQUES
MP
Net Conductivities:
1: 2.0 mS/m to 1.50 km
2: 5.0 mS/m to 5.40 km
3: 20.0 mS/m to 18.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 195.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 1.250 kW
Pattern: ND

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
1	10/20/13	0946	0.31	900.00
2	10/20/13	0951	0.46	650.00
3	10/20/13	0940	0.66	480.00
4	10/20/13	0936	0.96	330.00
5	10/20/13	0925	1.29	195.00
6	10/20/13	0928	1.58	235.00
7	10/17/13	1020	2.06	180.00
8	10/17/13	1027	2.36	168.00
9	10/17/13	1029	2.56	160.00
10	10/17/13	1032	2.71	148.00
11	10/20/13	0917	2.84	115.00
12	10/20/13	0915	2.94	140.00
13	10/20/13	0913	3.00	112.00
14	10/20/13	0908	3.24	135.00
15	10/20/13	0906	3.31	108.00
16	10/20/13	0904	3.40	130.00
17	10/20/13	0857	3.95	90.00
18	10/20/13	0851	5.08	68.00
19	10/20/13	0847	5.35	64.00
20	10/20/13	0845	6.03	54.00
21	10/26/13	0836	7.02	60.00
22	10/26/13	1123	7.72	58.00
23	10/26/13	1056	14.00	10.50

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
24	10/26/13	1052	14.80	13.50
25	10/26/13	1047	16.00	13.50
26	10/26/13	1043	17.00	14.50
27	10/26/13	1039	17.90	10.50
28	10/26/13	1033	18.80	9.40
29	10/26/13	1022	20.30	10.50
30	10/26/13	0956	21.20	10.00
31	10/26/13	0951	23.30	8.00
32	10/26/13	0944	25.50	5.60
33	10/26/13	0937	26.80	5.40
34	10/26/13	0927	29.20	5.30
35	10/26/13	0917	32.20	4.30

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 195.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 5.000 kW
Pattern: DAD

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
7	11/17/13	1112	2.06	340.00
8	11/17/13	1117	2.36	300.00
9	11/17/13	1119	2.56	290.00
10	11/17/13	1123	2.71	260.00
11	11/18/13	1117	2.84	220.00
12	11/18/13	1120	2.94	245.00
13	11/18/13	1123	3.00	220.00
14	11/18/13	1127	3.24	255.00
15	11/18/13	1130	3.31	190.00
16	11/18/13	1135	3.40	245.00
17	11/18/13	1140	3.95	180.00
18	11/18/13	1146	5.08	142.00
19	11/18/13	1154	5.35	118.00
20	11/18/13	1200	6.03	90.00
21	7/14/13	0819	7.02	100.00
22	7/14/14	0852	7.72	105.00
23	7/14/14	0917	14.00	16.00
24	7/14/14/	0922	14.80	23.50
25	7/14/14	0929	16.00	26.50
26	7/14/14	0935	17.00	26.50

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 195.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 5.000 kW
Reference Pattern: ND
Measured Pattern: DAD

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
7	2.06	180.00	340.00	1.889
8	2.36	168.00	300.00	1.786
9	2.56	160.00	290.00	1.813
10	2.71	148.00	260.00	1.757
11	2.84	115.00	220.00	1.913
12	2.94	140.00	245.00	1.750
13	3.00	112.00	220.00	1.964
14	3.24	135.00	255.00	1.889
15	3.31	108.00	190.00	1.759
16	3.40	130.00	245.00	1.885
17	3.95	90.00	180.00	2.000
18	5.08	68.00	142.00	2.088
19	5.35	64.00	118.00	1.844
20	6.03	54.00	90.00	1.667
21	7.02	60.00	100.00	1.667
22	7.72	58.00	105.00	1.810
23	14.00	10.50	16.00	1.524
24	14.80	13.50	23.50	1.741
25	16.00	13.50	26.50	1.963
26	17.00	14.50	26.50	1.828
27	17.90	10.50	18.50	1.762
28	18.80	9.40	15.50	1.649

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
29	20.30	10.50	17.00	1.619
30	21.20	10.00	18.00	1.800
31	23.30	8.00	15.00	1.875
32	25.50	5.60	9.20	1.643
33	26.80	5.40	9.00	1.667
34	29.20	5.30	9.00	1.698
35	32.20	4.30	7.80	1.814

Radial Ratio: 1.795

Reference Inverse Field @1km: 390.00 mV/M

Measured Inverse Field @1km: 700.13 mV/M

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 195.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 0.540 kW
Pattern: DAN

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
7	11/6/14	1043	2.06	92.00
8	11/18/14	1024	2.36	89.00
9	11/18/14	1026	2.56	78.00
10	11/18/14	1028	2.71	71.00
11	11/18/14	1030	2.84	60.00
12	11/18/14	1033	2.94	67.00
13	11/18/14	1035	3.00	53.00
14	11/18/14	1038	3.24	66.00
15	11/18/14	1041	3.31	52.00
16	11/18/14	1043	3.40	65.00
17	11/6/14	1058	3.95	42.00
18	11/6/14	1107	5.08	32.00
19	11/6/14	1116	5.35	31.50
20	11/16/14	1128	6.03	26.00
21	11/17/14	0929	7.02	30.00
22	11/16/14	1122	7.72	30.00
23	11/16/14	1101	14.00	5.10
24	11/16/14	1057	14.80	6.80
25	11/16/14	1053	16.00	7.30
26	11/16/14	1050	17.00	7.80
27	11/16/14	1047	17.90	5.10
28	11/16/14	1043	18.80	4.70
29	11/9/14	0844	20.30	5.50

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
30	11/9/14	0838	21.20	5.30
31	11/9/14	0833	23.30	4.20
32	11/9/14	0828	25.50	2.80
33	11/9/14	0823	26.80	2.70
34	11/9/14	0816	29.20	2.80
35	11/9/14	0807	32.20	2.20

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 195.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 0.540 kW
Reference Pattern: ND
Measured Pattern: DAN

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
7	2.06	180.00	92.00	0.511
8	2.36	168.00	89.00	0.530
9	2.56	160.00	78.00	0.488
10	2.71	148.00	71.00	0.480
11	2.84	115.00	60.00	0.522
12	2.94	140.00	67.00	0.479
13	3.00	112.00	53.00	0.473
14	3.24	135.00	66.00	0.489
15	3.31	108.00	52.00	0.481
16	3.40	130.00	65.00	0.500
17	3.95	90.00	42.00	0.467
18	5.08	68.00	32.00	0.471
19	5.35	64.00	31.50	0.492
20	6.03	54.00	26.00	0.481
21	7.02	60.00	30.00	0.500
22	7.72	58.00	30.00	0.517
23	14.00	10.50	5.10	0.486
24	14.80	13.50	6.80	0.504
25	16.00	13.50	7.30	0.541
26	17.00	14.50	7.80	0.538
27	17.90	10.50	5.10	0.486
28	18.80	9.40	4.70	0.500

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

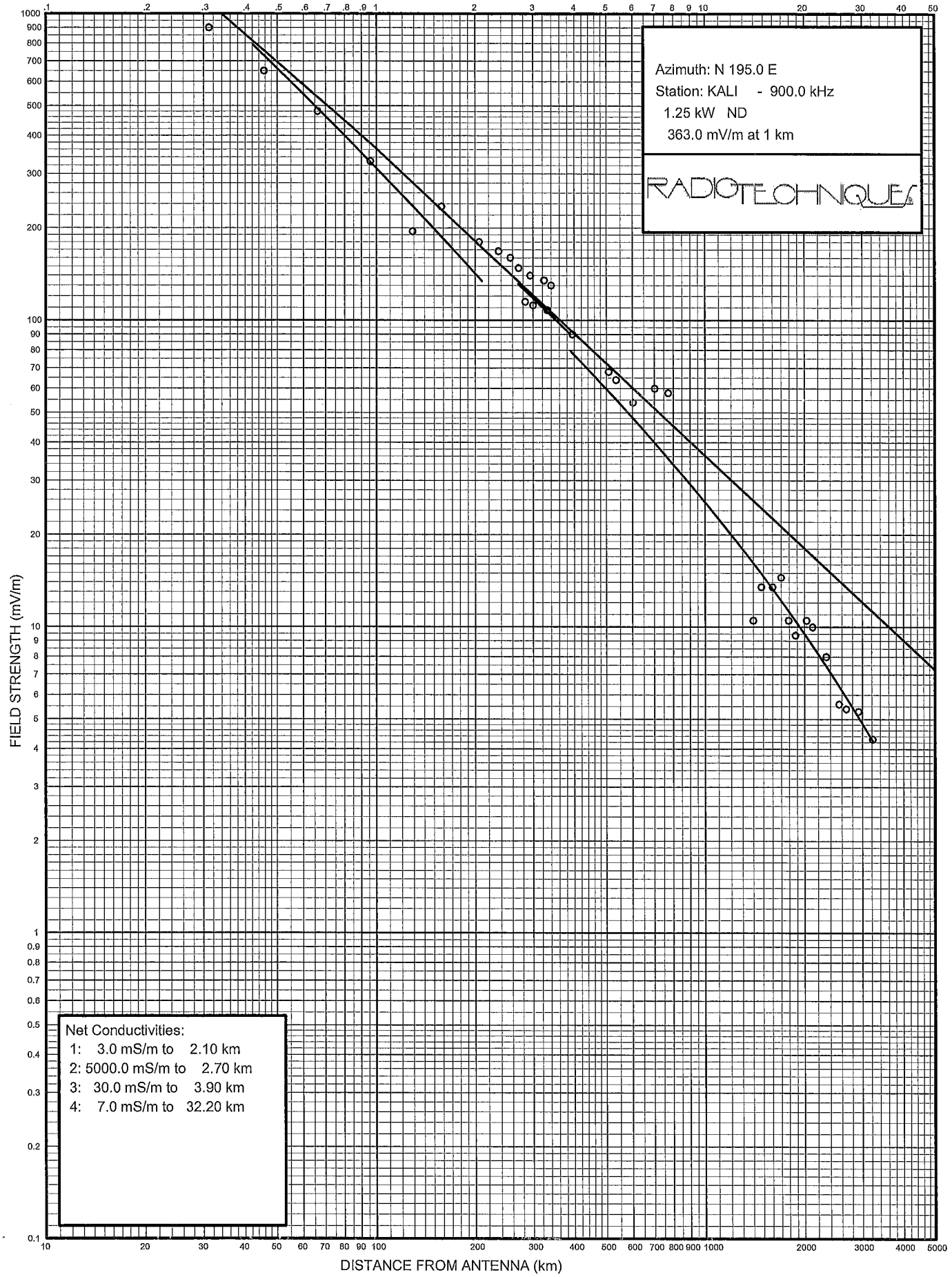
Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

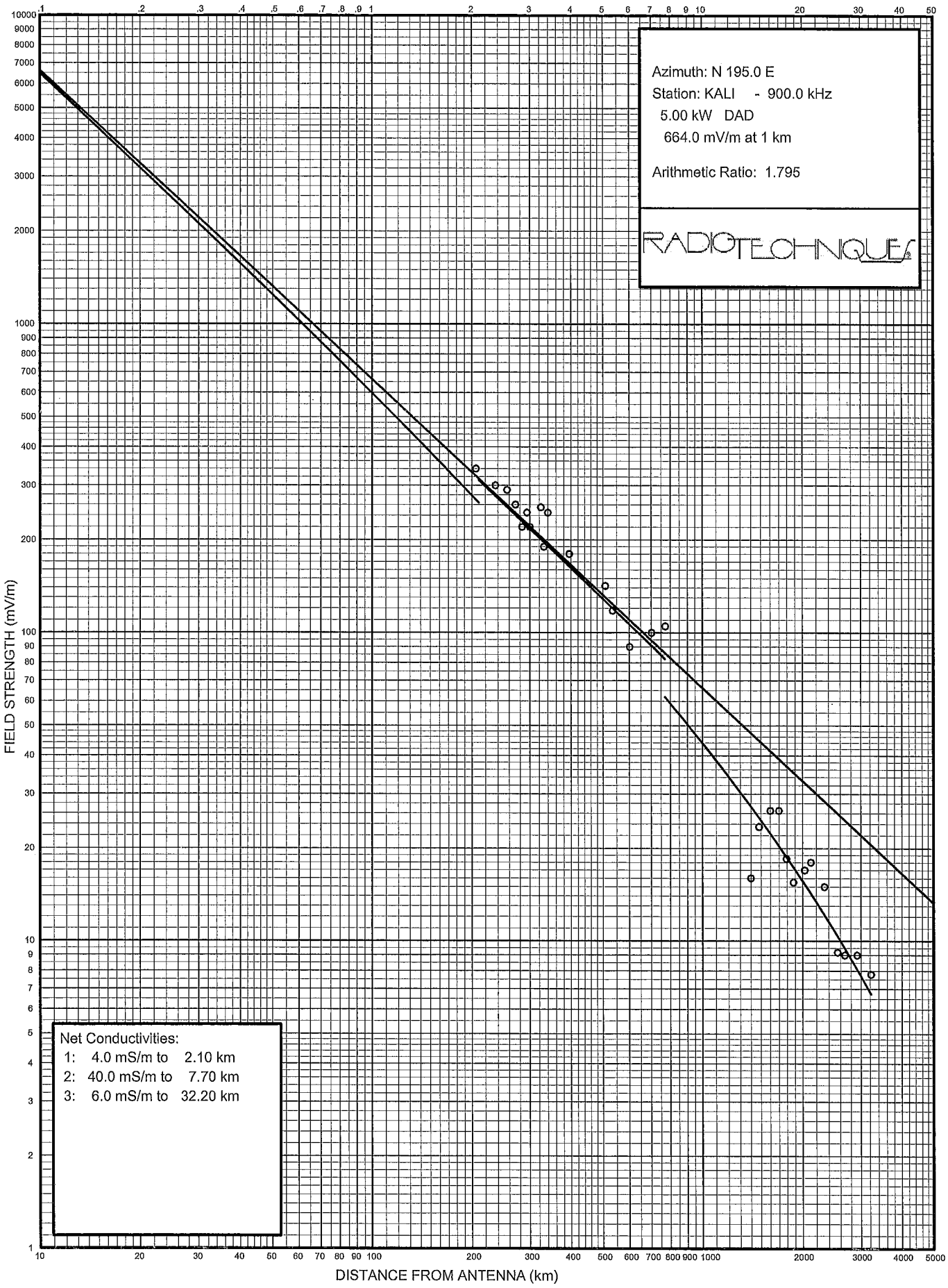
Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
29	20.30	10.50	5.50	0.524
30	21.20	10.00	5.30	0.530
31	23.30	8.00	4.20	0.525
32	25.50	5.60	2.80	0.500
33	26.80	5.40	2.70	0.500
34	29.20	5.30	2.80	0.528
35	32.20	4.30	2.20	0.512

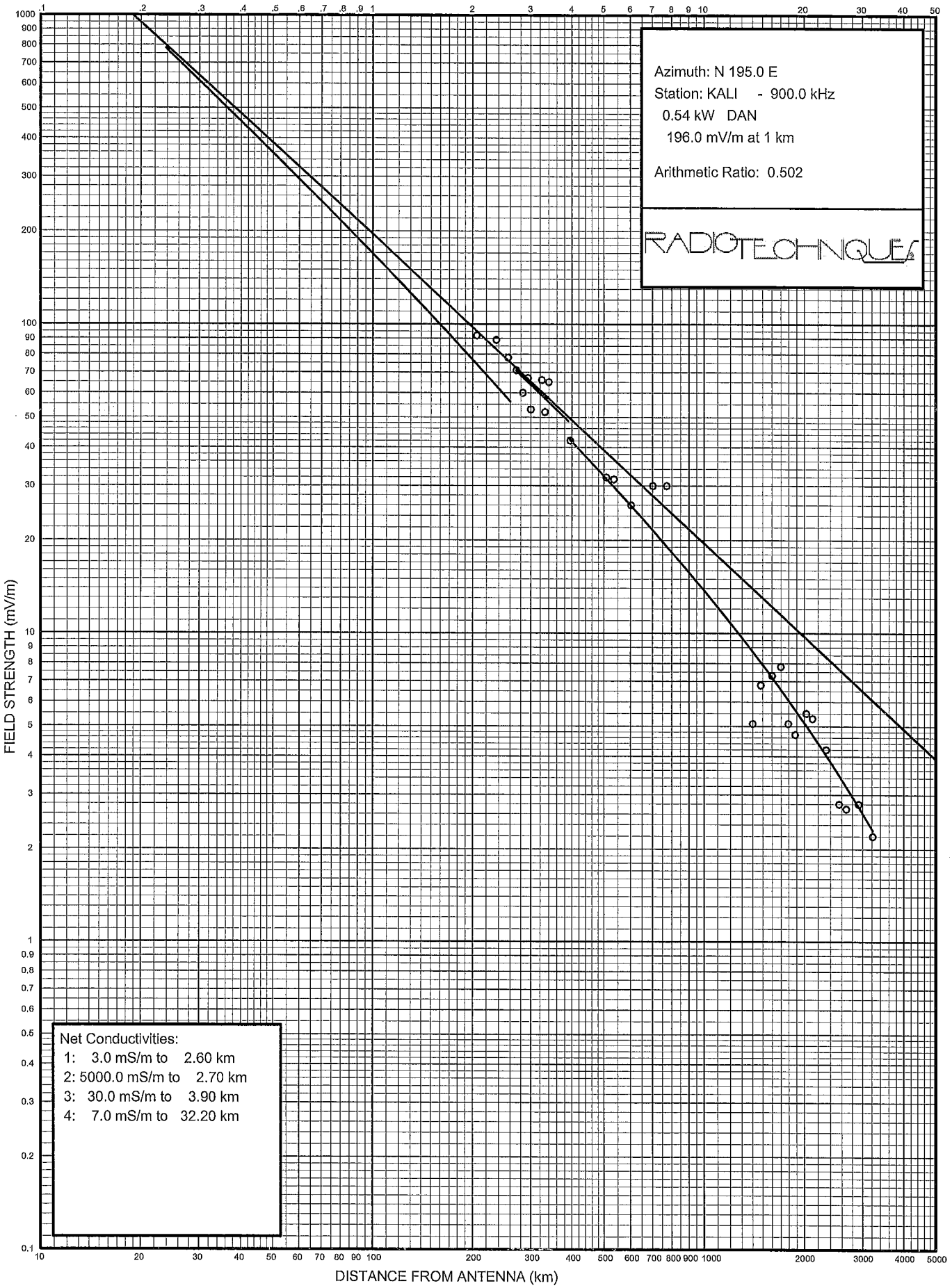
Radial Ratio: 0.502

Reference Inverse Field @1km: 390.00 mV/M

Measured Inverse Field @1km: 195.71 mV/M


Azimuth: N 195.0 E
Station: KALI - 900.0 kHz
1.25 kW ND
363.0 mV/m at 1 km
RADIOTECHNIQUES
Net Conductivities:
1: 3.0 mS/m to 2.10 km
2: 5000.0 mS/m to 2.70 km
3: 30.0 mS/m to 3.90 km
4: 7.0 mS/m to 32.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 195.0 E
Station: KALI - 900.0 kHz
5.00 kW DAD
664.0 mV/m at 1 km
Arithmetic Ratio: 1.795
RADIO TECHNIQUES
Net Conductivities:
1: 4.0 mS/m to 2.10 km
2: 40.0 mS/m to 7.70 km
3: 6.0 mS/m to 32.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 195.0 E
Station: KALI - 900.0 kHz
0.54 kW DAN
196.0 mV/m at 1 km
Arithmetic Ratio: 0.502
RADIO TECHNIQUES
Net Conductivities:
1: 3.0 mS/m to 2.60 km
2: 5000.0 mS/m to 2.70 km
3: 30.0 mS/m to 3.90 km
4: 7.0 mS/m to 32.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 255.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 1.250 kW
Pattern: ND

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
1	10/20/13	0956	0.42	820.00
2	10/20/13	0959	0.62	520.00
3	10/20/13	1002	0.92	385.00
4	10/20/13	1004	1.08	320.00
5	10/20/13	1007	1.24	260.00
6	10/20/13	1008	1.40	240.00
7	10/20/13	1011	1.49	210.00
8	10/17/13	1052	1.68	185.00
9	10/17/13	1050	1.84	175.00
10	10/17/13	1047	2.06	170.00
11	7/16/14	1310	3.74	92.00
12	10/17/13	1042	4.24	95.00
13	10/20/13	1031	5.95	52.00
14	7/16/14	1255	6.18	48.00
15	7/16/14	1250	6.52	45.00
16	7/16/14	1247	6.81	52.00
17	10/20/13	1022	7.65	31.50
18	7/16/14	1239	8.38	30.50
19	7/16/14	1236	9.13	28.50
20	7/16/14	1227	11.00	27.00
21	7/16/14	1222	12.20	23.00
22	7/16/14	1219	12.80	18.50
23	7/16/14	1213	13.70	18.00

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
24	7/16/14	1208	15.00	19.00
25	7/16/14	1200	16.00	17.50
26	7/16/14	1153	16.90	15.00
27	7/16/14	1145	17.90	14.50

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 255.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 5 kW
Pattern: DAD

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
8	10/17/13	1142	1.68	530.00
9	10/17/13	1140	1.84	490.00
10	10/17/13	1138	2.06	480.00
11	10/16/13	1102	3.74	260.00
12	10/17/13	1131	4.24	270.00
13	10/16/13	1345	5.95	155.00
14	10/17/13	1349	6.18	140.00
15	5/8/14	1133	6.52	130.00
16	5/8/14	1130	6.81	145.00
17	10/17/13	1050	7.65	90.00
18	5/8/14	1122	8.38	90.00
19	5/8/14	1118	9.13	84.00
20	5/8/14	1007	11.00	80.00
21	5/8/14	1059	12.20	66.00
22	5/8/14	1055	12.80	56.00
23	5/8/14	1050	13.70	52.00
24	5/8/14	1044	15.00	55.00
25	5/8/14	1037	16.00	50.00
26	5/8/14	1030	16.90	43.00
27	5/8/14	1022	17.90	44.00

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 255.0 E

Call: KALI

Frequency: 900.0 kHz

Power: 5.000 kW

Reference Pattern: ND

Measured Pattern: DAD

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
8	1.68	185.00	530.00	2.865
9	1.84	175.00	490.00	2.800
10	2.06	170.00	480.00	2.824
11	3.74	92.00	260.00	2.826
12	4.24	95.00	270.00	2.842
13	5.95	52.00	155.00	2.981
14	6.18	48.00	140.00	2.917
15	6.52	45.00	130.00	2.889
16	6.81	52.00	145.00	2.788
17	7.65	31.50	90.00	2.857
18	8.38	30.50	90.00	2.951
19	9.13	28.50	84.00	2.947
20	11.00	27.00	80.00	2.963
21	12.20	23.00	66.00	2.870
22	12.80	18.50	56.00	3.027
23	13.70	18.00	52.00	2.889
24	15.00	19.00	55.00	2.895
25	16.00	17.50	50.00	2.857
26	16.90	15.00	43.00	2.867
27	17.90	14.50	44.00	3.034

Radial Ratio: 2.894

Reference Inverse Field @1km: 360.00 mV/M

Measured Inverse Field @1km: 1041.84 mV/M

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 255.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 0.540 kW
Pattern: DAN

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
8	11/5/14	1136	1.68	138.00
9	11/514	1133	1.84	132.00
10	11/5/14	1131	2.06	125.00
11	11/14/14	1115	3.74	72.00
12	11/14/14	1120	4.24	75.00
13	11/14/14	1131	5.95	38.00
14	11/14/14	1133	6.18	37.00
15	11/14/14	1136	6.52	35.00
16	11/14/14	1138	6.81	40.00
17	11/14/14	1143	7.65	24.00
18	11/14/14	1149	8.38	23.00
19	11/14/14	1152	9.13	22.00
20	11/14/14	1159	11.00	21.50
21	11/14/14	1204	12.20	17.50
22	11/14/14	1206	12.80	15.20
23	11/14/14	1211	13.70	14.50
24	11/14/14	1215	15.00	16.20
25	11/16/14	0832	16.00	13.50
26	11/14/14	0835	16.90	11.50
27	11/14/14	0840	17.90	11.50

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

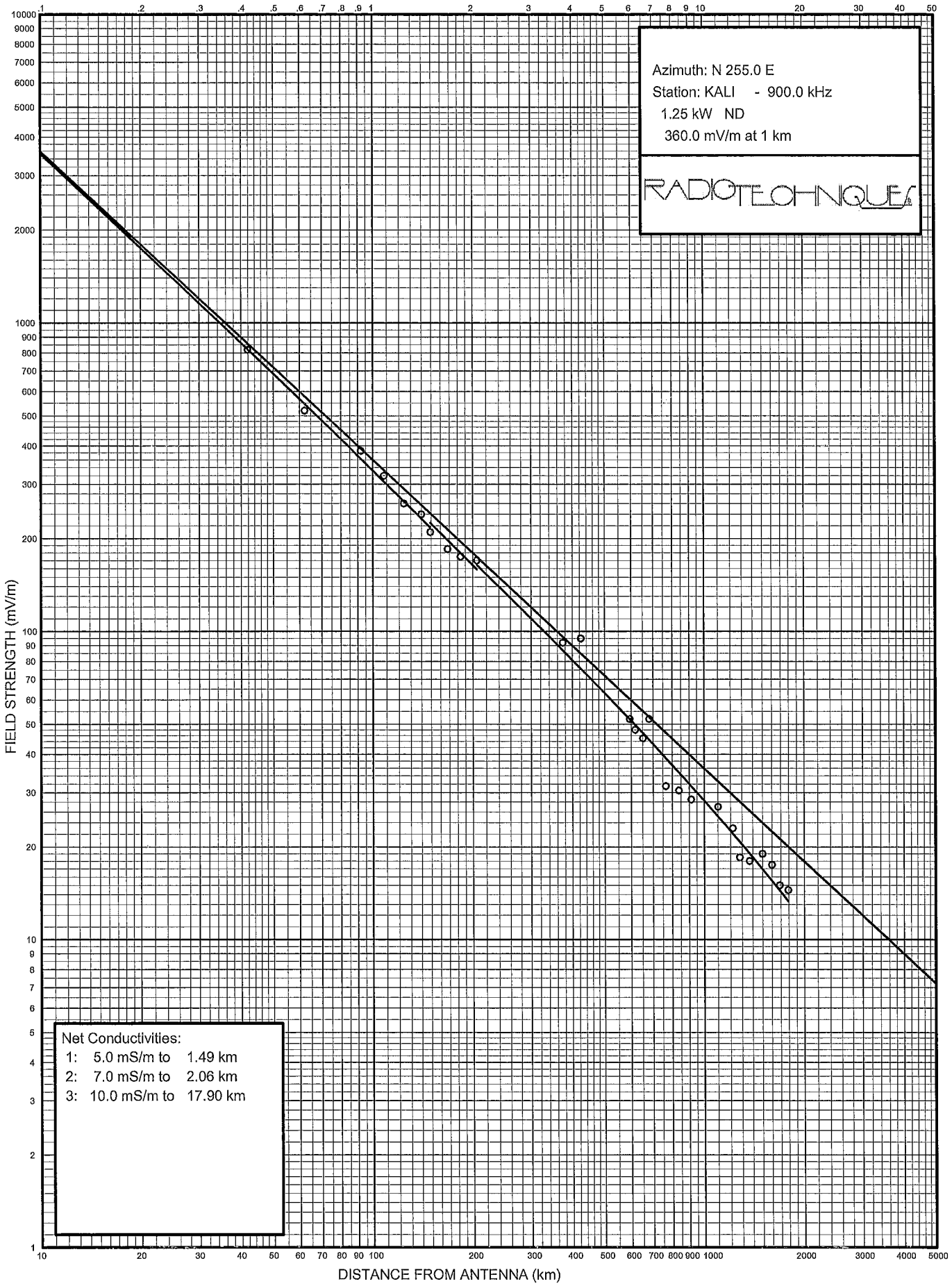
Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

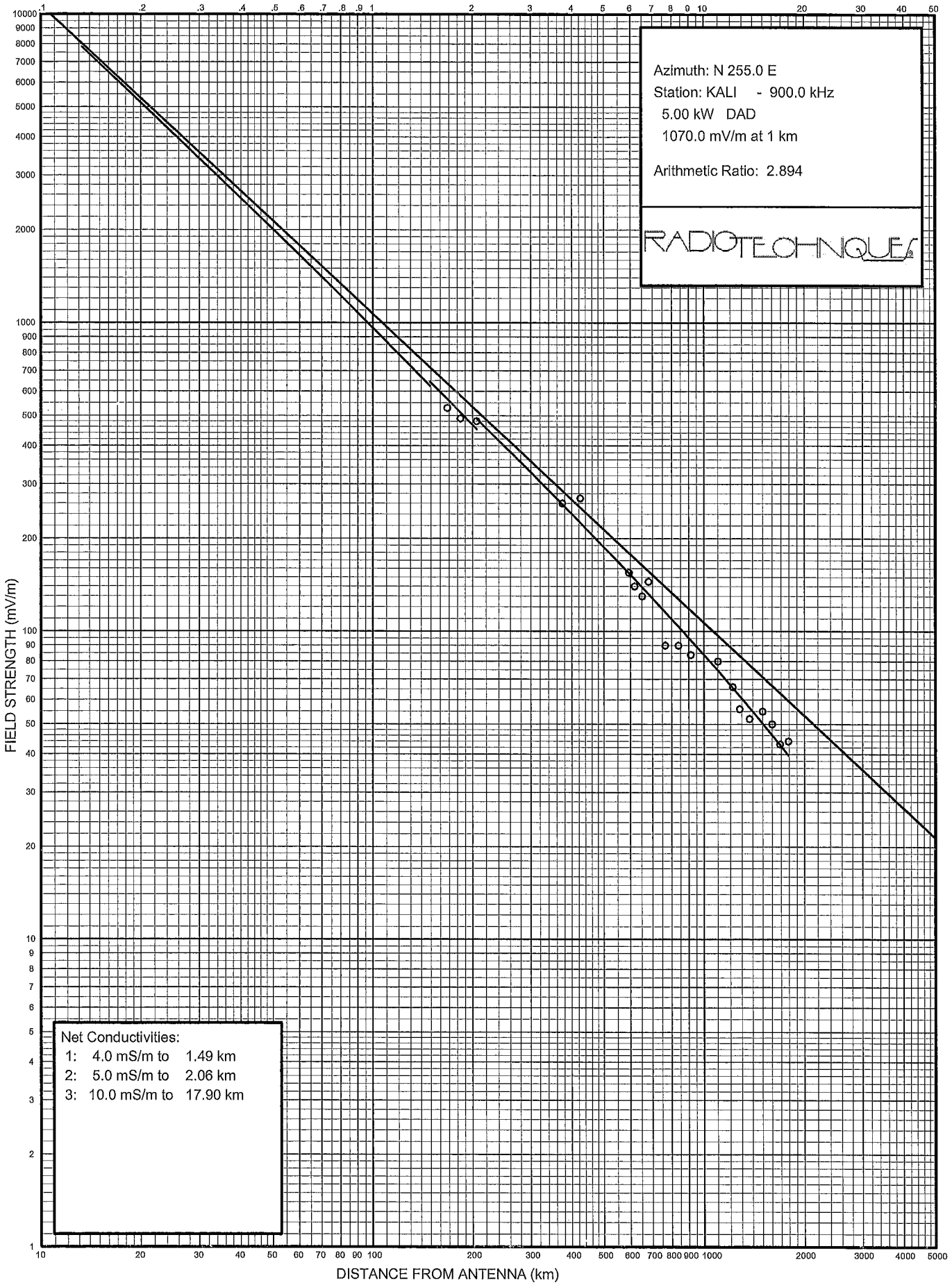
ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 255.0 E

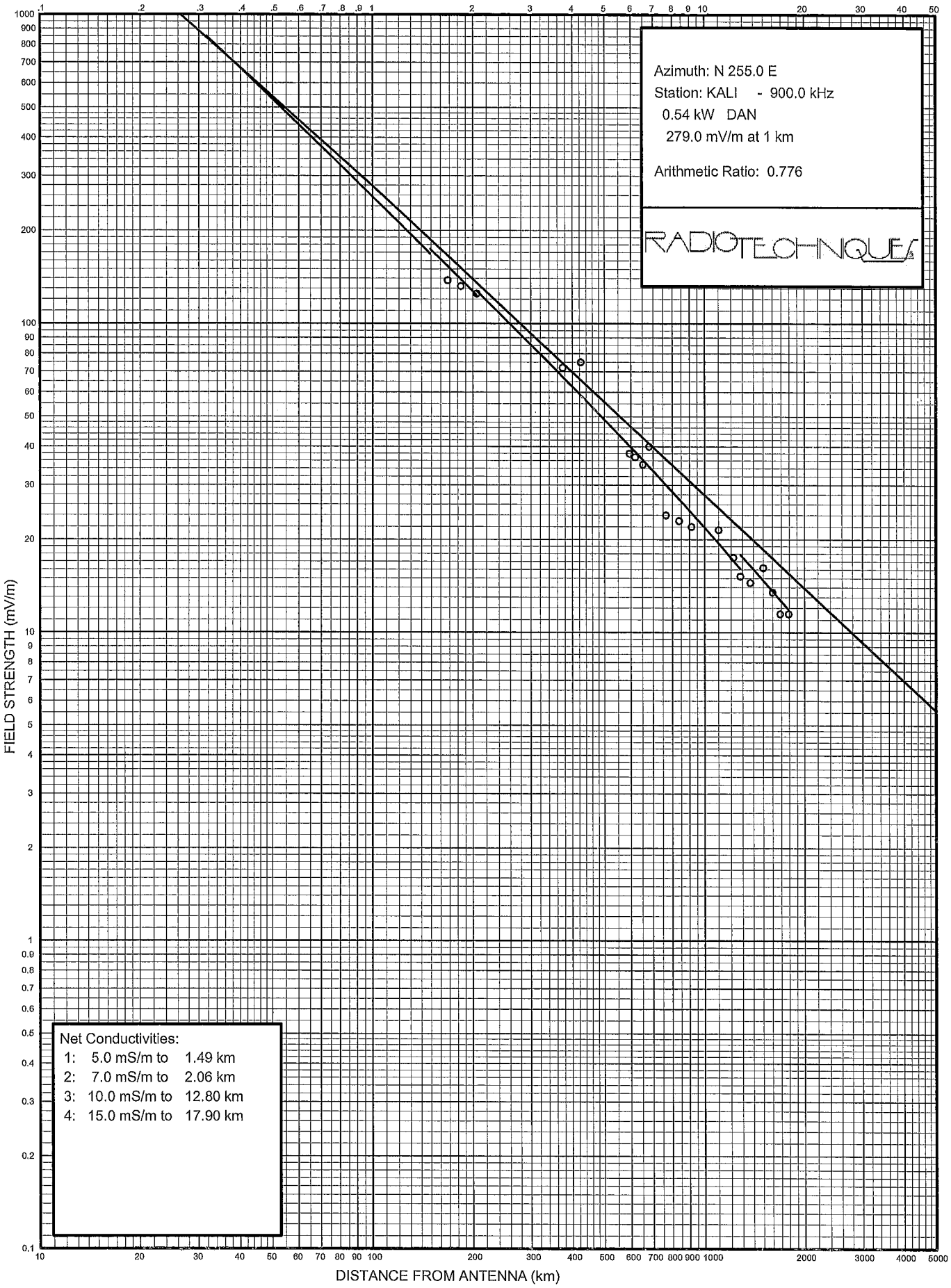
Call: KALI
Frequency: 900.0 kHz
Power: 0.540 kW
Reference Pattern: ND
Measured Pattern: DAN

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
8	1.68	185.00	138.00	0.746
9	1.84	175.00	132.00	0.754
10	2.06	170.00	125.00	0.735
11	3.74	92.00	72.00	0.783
12	4.24	95.00	75.00	0.789
13	5.95	52.00	38.00	0.731
14	6.18	48.00	37.00	0.771
15	6.52	45.00	35.00	0.778
16	6.81	52.00	40.00	0.769
17	7.65	31.50	24.00	0.762
18	8.38	30.50	23.00	0.754
19	9.13	28.50	22.00	0.772
20	11.00	27.00	21.50	0.796
21	12.20	23.00	17.50	0.761
22	12.80	18.50	15.20	0.822
23	13.70	18.00	14.50	0.806
24	15.00	19.00	16.20	0.853
25	16.00	17.50	13.50	0.771
26	16.90	15.00	11.50	0.767
27	17.90	14.50	11.50	0.793

Radial Ratio: 0.776
Reference Inverse Field @1km: 360.00 mV/M
Measured Inverse Field @1km: 279.22 mV/M


Azimuth: N 255.0 E
Station: KALI - 900.0 kHz
1.25 kW ND
360.0 mV/m at 1 km
RADIO TECHNIQUES
Net Conductivities:
1: 5.0 mS/m to 1.49 km
2: 7.0 mS/m to 2.06 km
3: 10.0 mS/m to 17.90 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 255.0 E
Station: KALI - 900.0 kHz
5.00 kW DAD
1070.0 mV/m at 1 km
Arithmetic Ratio: 2.894
RADIO TECHNIQUES
Net Conductivities:
1: 4.0 mS/m to 1.49 km
2: 5.0 mS/m to 2.06 km
3: 10.0 mS/m to 17.90 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 255.0 E
Station: KALI - 900.0 kHz
0.54 kW DAN
279.0 mV/m at 1 km
Arithmetic Ratio: 0.776
RADIO TECHNIQUES
Net Conductivities:
1: 5.0 mS/m to 1.49 km
2: 7.0 mS/m to 2.06 km
3: 10.0 mS/m to 12.80 km
4: 15.0 mS/m to 17.90 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 305.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 1.250 kW
Pattern: ND

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
1	10/20/13	1109	0.52	600.00
2	10/20/13	1107	0.70	500.00
3	10/20/13	1104	0.78	420.00
4	10/20/13	1102	0.89	360.00
5	10/20/13	1100	1.01	340.00
6	10/20/13	1058	1.23	265.00
7	10/20/13	1054	1.38	215.00
8	10/20/13	1053	1.50	210.00
9	10/20/13	1049	1.65	190.00
10	5/11/14	0909	1.77	180.00
11	5/11/14	0911	1.91	195.00
12	5/11/14	0913	2.04	140.00
13	10/16/13	1254	2.14	145.00
14	5/11/14	0916	2.39	140.00
15	10/16/13	1259	2.76	100.00
16	5/11/14	0920	3.05	68.00
17	10/16/13	1302	3.34	86.00
18	10/16/13	1307	4.02	66.00
19	10/16/13	1311	4.76	56.00
20	5/11/14	0928	5.81	43.00
21	5/11/14	0934	7.05	44.00
22	7/15/14	1207	9.45	25.50

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
23	7/15/14	1201	10.90	21.50
24	7/15/14	1149	12.10	21.50
25	7/15/14	1145	13.10	18.50
26	7/15/14	1138	14.00	15.50
27	7/15/14	1126	14.90	14.50
28	7/15/14	1121	16.00	13.00
29	7/15/14	1114	17.30	11.00
30	7/15/14	1105	20.20	8.40

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

Azimuth: N 305.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 5.000 kW
Pattern: DAD

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
10	7/15/14	0948	1.77	420.00
11	5/7/14	1019	1.91	460.00
12	5/7/14	1022	2.04	350.00
13	5/7/14	1026	2.14	350.00
14	10/16/13	1113	2.39	325.00
15	5/7/14	1030	2.76	235.00
16	10/16/13	1118	3.05	195.00
17	5/7/14	1035	3.34	210.00
18	10/16/13	1123	4.02	170.00
19	10/16/13	1127	4.76	140.00
20	10/16/13	1132	5.81	115.00
21	5/7/14	1047	7.05	100.00
22	5/7/14	1052	9.45	62.00
23	5/7/14	1101	10.90	54.00
24	5/7/14	1113	12.10	47.00
25	5/8/14	0845	13.10	45.00
26	5/7/14	1125	14.00	40.00
27	5/7/14	1132	14.90	36.00
28	5/7/14	1147	16.00	32.00
29	5/7/14	1153	17.30	26.00
30	5/7/14	1206	20.20	21.50

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 305.0 E

Call: KALI

Frequency: 900.0 kHz

Power: 5.000 kW

Reference Pattern: ND

Measured Pattern: DAD

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
10	1.77	180.00	420.00	2.333
11	1.91	195.00	460.00	2.359
12	2.04	140.00	350.00	2.500
13	2.14	145.00	350.00	2.414
14	2.39	140.00	325.00	2.321
15	2.76	100.00	235.00	2.350
16	3.05	68.00	195.00	2.868
17	3.34	86.00	210.00	2.442
18	4.02	66.00	170.00	2.576
19	4.76	56.00	140.00	2.500
20	5.81	43.00	115.00	2.674
21	7.05	44.00	100.00	2.273
22	9.45	25.50	62.00	2.431
23	10.90	21.50	54.00	2.512
24	12.10	21.50	47.00	2.186
25	13.10	18.50	45.00	2.432
26	14.00	15.50	40.00	2.581
27	14.90	14.50	36.00	2.483
28	16.00	13.00	32.00	2.462
29	17.30	11.00	26.00	2.364
30	20.20	8.40	21.50	2.560

Radial Ratio: 2.458

Reference Inverse Field @1km: 359.00 mV/M

Measured Inverse Field @1km: 882.41 mV/M

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 305.0 E

Call: KALI
Frequency: 900.0 kHz
Power: 0.540 kW
Pattern: DAN

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
9	11/6/14	1142	1.65	105.00
10	11/17/14	1016	1.77	108.00
11	11/17/14	1018	1.91	102.00
12	11/17/14	1021	2.04	88.00
13	11/16/14	1013	2.14	82.00
14	11/6/14	1148	2.39	82.00
15	11/6/14	1152	2.76	64.00
16	11/6/14	1155	3.05	46.00
17	11/6/14	1158	3.34	52.00
18	11/16/14	1007	4.02	38.50
19	11/16/14	1004	4.76	34.00
20	11/16/14	0958	5.81	26.00
21	11/16/14	0953	7.05	24.00
22	11/16/14	0945	9.45	15.20
23	11/16/14	0941	10.90	12.20
24	11/16/14	0932	12.10	11.80
25	11/16/14	0928	13.10	10.00
26	11/16/14	0924	14.00	8.60
27	11/16/14	0921	14.90	8.40
28	11/16/14	0917	16.00	7.80
29	11/16/14	0911	17.30	6.20
30	11/16/14	0904	20.20	5.30

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 305.0 E

Call: KALI

Frequency: 900.0 kHz Power: 0.540 kW

Reference Pattern: ND

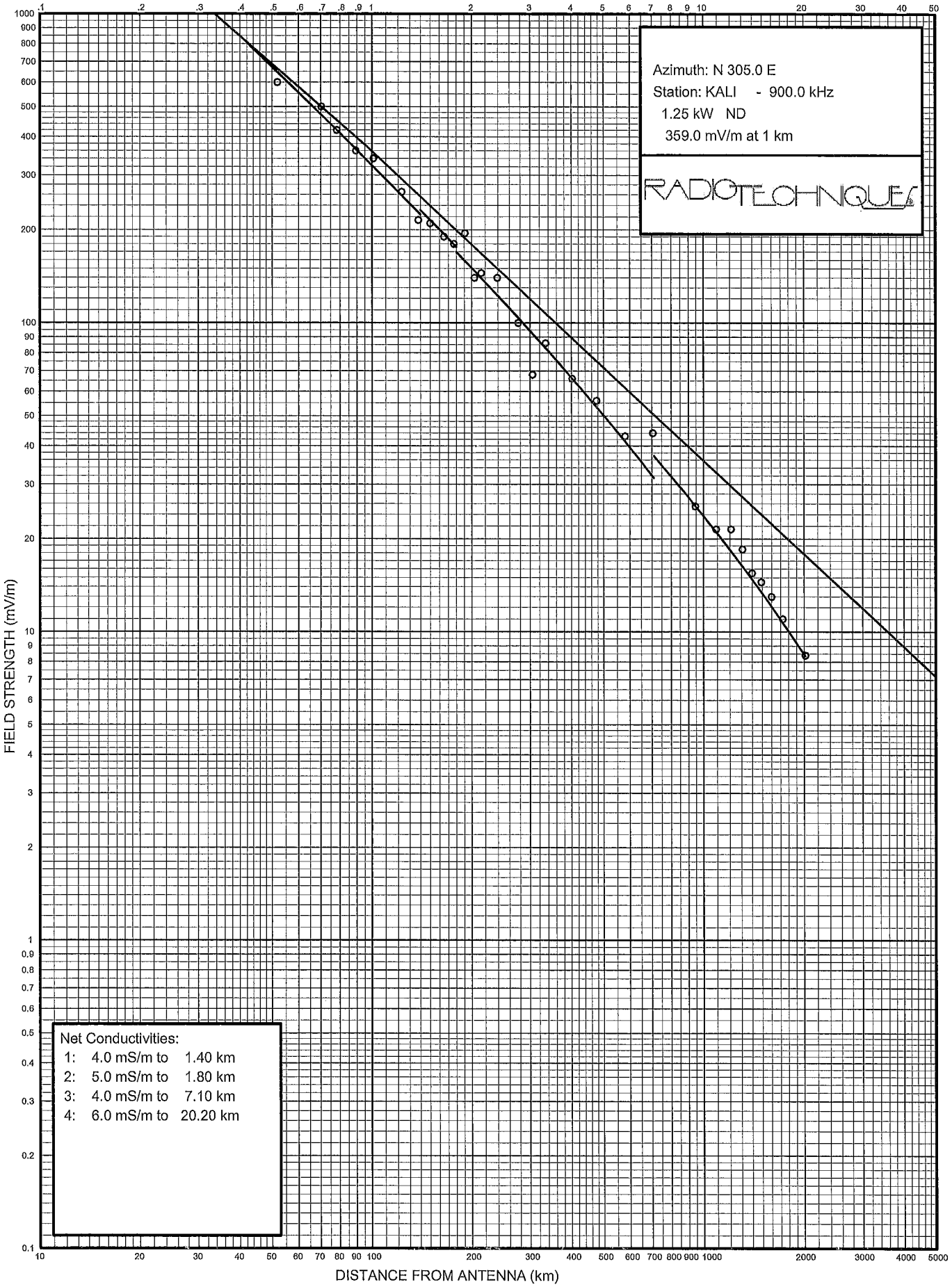
Measured Pattern: DAN

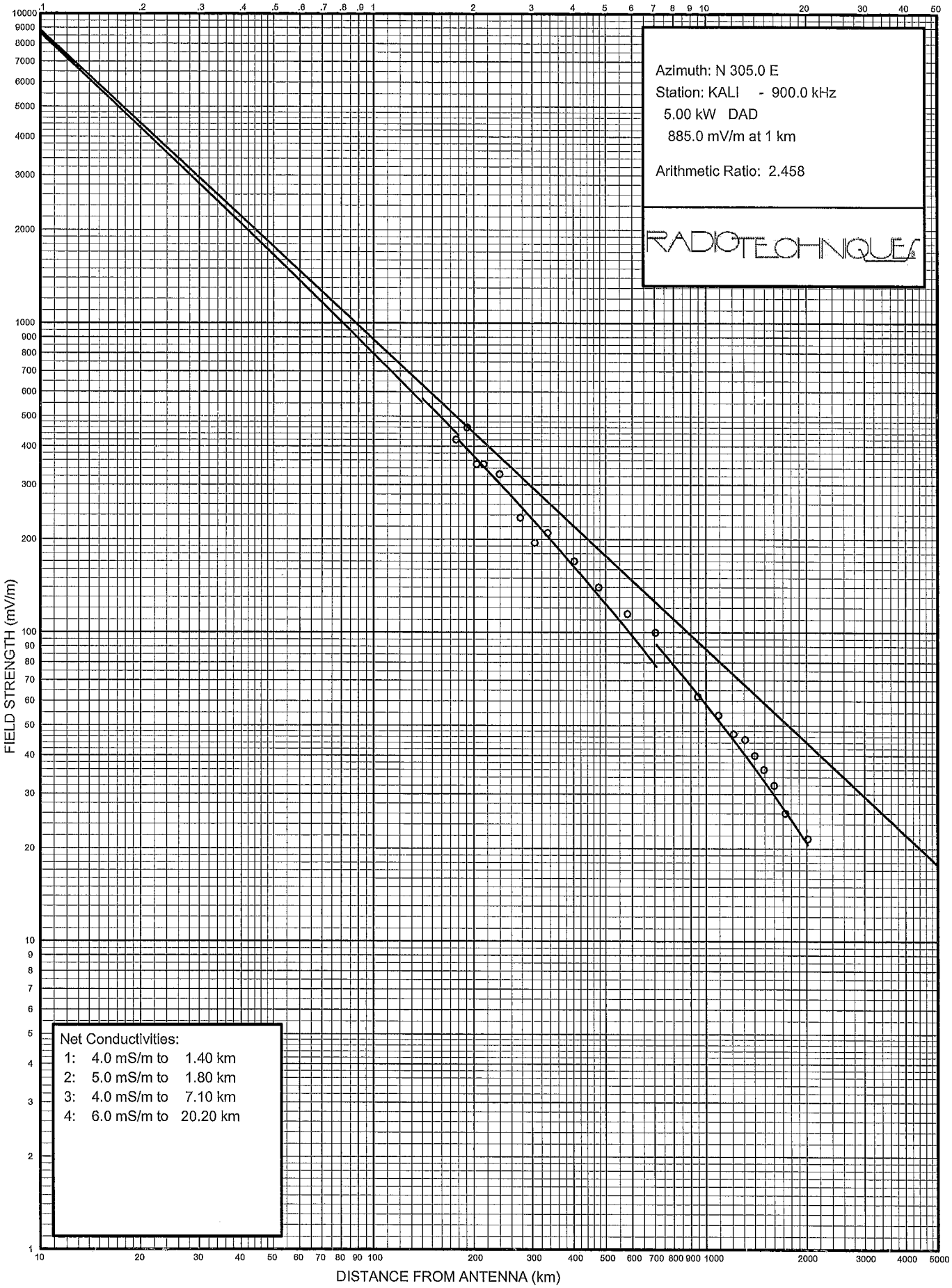
Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
9	1.65	190.00	105.00	0.553
10	1.77	180.00	108.00	0.600
11	1.91	195.00	102.00	0.523
12	2.04	140.00	88.00	0.629
13	2.14	145.00	82.00	0.566
14	2.39	140.00	82.00	0.586
15	2.76	100.00	64.00	0.640
16	3.05	68.00	46.00	0.676
17	3.34	86.00	52.00	0.605
18	4.02	66.00	38.50	0.583
19	4.76	56.00	34.00	0.607
20	5.81	43.00	26.00	0.605
21	7.05	44.00	24.00	0.545
22	9.45	25.50	15.20	0.596
23	10.90	21.50	12.20	0.567
24	12.10	21.50	11.80	0.549
25	13.10	18.50	10.00	0.541
26	14.00	15.50	8.60	0.555
27	14.90	14.50	8.40	0.579
28	16.00	13.00	7.80	0.600
29	17.30	11.00	6.20	0.564
30	20.20	8.40	5.30	0.631

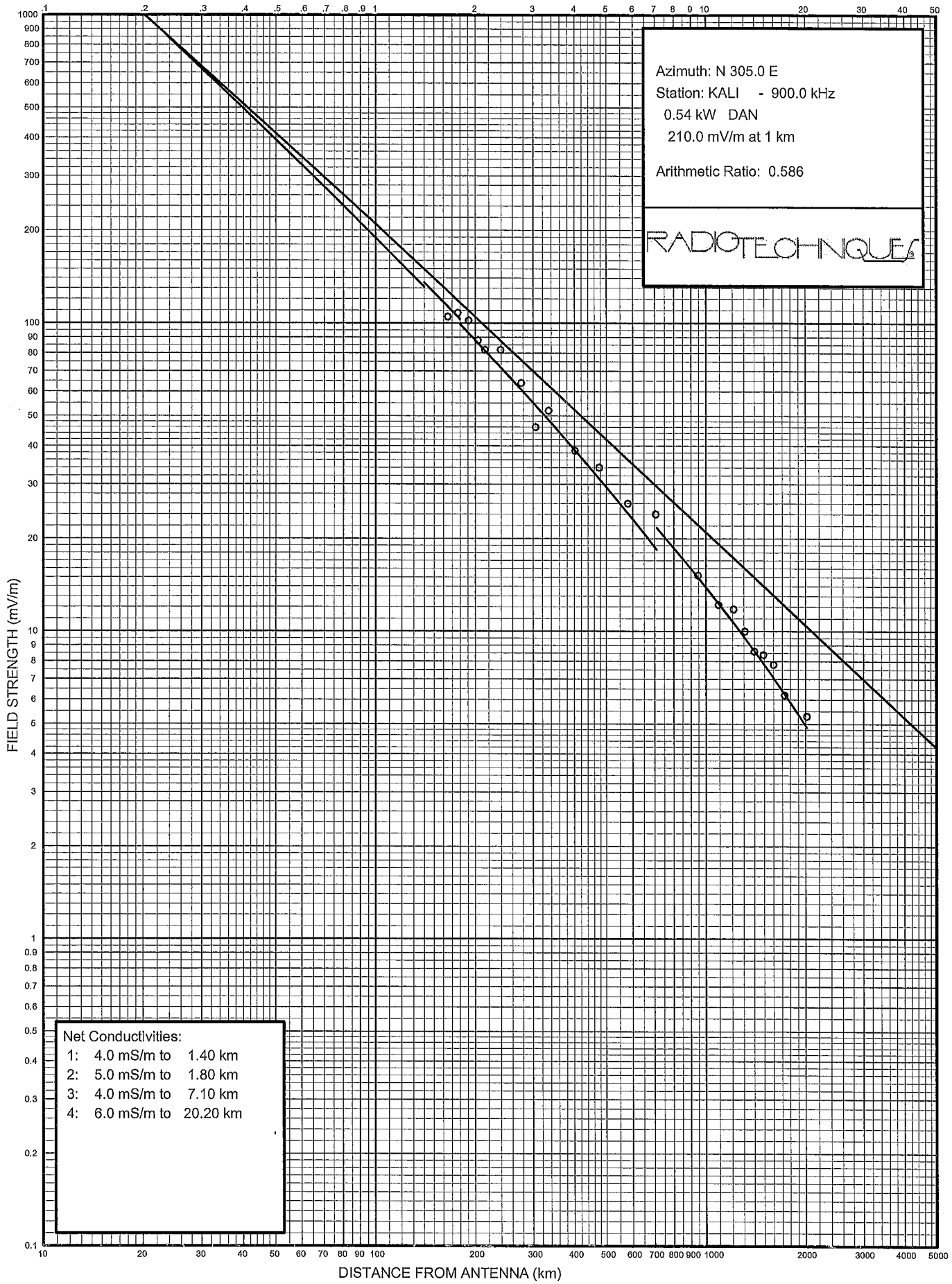
Radial Ratio: 0.586

Reference Inverse Field @1km: 359.00 mV/M

Measured Inverse Field @1km: 210.49 mV/M


Azimuth: N 305.0 E
Station: KALI - 900.0 kHz
1.25 kW ND
359.0 mV/m at 1 km
RADIO TECHNIQUES
Net Conductivities:
1: 4.0 mS/m to 1.40 km
2: 5.0 mS/m to 1.80 km
3: 4.0 mS/m to 7.10 km
4: 6.0 mS/m to 20.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 305.0 E
Station: KALI - 900.0 kHz
5.00 kW DAD
885.0 mV/m at 1 km
Arithmetic Ratio: 2.458
RADIO TECHNIQUES
Net Conductivities:
1: 4.0 mS/m to 1.40 km
2: 5.0 mS/m to 1.80 km
3: 4.0 mS/m to 7.10 km
4: 6.0 mS/m to 20.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 305.0 E
Station: KALI - 900.0 kHz
0.54 kW DAN
210.0 mV/m at 1 km
Arithmetic Ratio: 0.586
RADIO TECHNIQUES
Net Conductivities:
1: 4.0 mS/m to 1.40 km
2: 5.0 mS/m to 1.80 km
3: 4.0 mS/m to 7.10 km
4: 6.0 mS/m to 20.20 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 353.5 E

Call: KALI
Frequency: 900.0 kHz
Power: 1.250 kW
Pattern: ND

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
1	10/9/13	1211	0.36	900.00
2	10/9/13	1215	0.83	410.00
3	10/9/13	1218	1.23	270.00
4	10/9/13	1221	1.64	162.00
5	10/9/13	1224	2.04	130.00
6	10/9/13	1226	2.45	100.00
7	10/9/13	1229	2.85	150.00
8	7/15/14	1017	3.37	80.00
9	5/11/14	0615	3.69	90.00
10	7/15/14	1023	4.09	60.00
11	5/11/14	0620	4.49	60.00
12	7/15/14	1028	4.94	54.00
13	5/11/14	0627	5.32	64.00
14	5/11/14	0631	6.02	48.00
15	5/11/14	0634	6.34	45.00
16	7/15/14	1035	6.76	35.00
17	5/11/14	0638	7.02	37.00
18	5/11/14	0640	7.40	33.00
19	5/11/14	0644	7.88	32.00
20	5/11/14	0647	8.17	33.00
21	5/11/14	0650	8.46	33.00
22	7/15/14	1040	8.66	27.00

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
23	5/11/14	0654	9.09	29.00
24	5/11/14	0656	9.50	26.00
25	5/11/14	0701	9.91	28.00
26	7/15/14	1046	10.40	16.00
27	5/11/14	0716	13.60	12.00

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 353.5 E

Call: KALI Frequency: 900.0 kHz
Power: 5kW Pattern: DAD

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)
4	10/16/13	1153	1.64	190.00
5	10/16/13	1149	2.04	155.00
6	10/16/13	1143	2.45	115.00
7	10/16/13	1138	2.85	195.00
8	7/15/14	0939	3.37	88.00
9	5/7/14	0947	3.69	92.00
10	7/15/14	0933	4.09	70.00
11	5/7/14	0941	4.49	74.00
12	7/15/14	0928	4.94	64.00
13	5/7/14	0933	5.32	70.00
14	5/7/14	0925	6.02	55.00
15	5/7/14	0922	6.34	46.00
16	7/15/14	0919	6.76	39.00
17	5/7/14	0914	7.02	45.00
18	5/7/14	0909	7.40	41.00
19	5/7/14	0906	7.88	42.00
20	5/7/14	0859	8.17	40.00
21	5/7/14	0856	8.46	36.00
22	7/15/14	0913	8.66	32.50
23	5/7/14	0851	9.09	37.00
24	5/7/14	0846	9.50	33.00
25	5/7/14	0842	9.91	34.00
26	7/15/14	0907	10.40	19.00
27	5/8/14	0824	13.60	14.50

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 353.5 E

Call: KALI
Frequency: 900.0 kHz
Power: 5.000 kW
Reference Pattern: ND
Measured Pattern: DAD

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
4	1.64	162.00	190.00	1.173
5	2.04	130.00	155.00	1.192
6	2.45	100.00	115.00	1.150
7	2.85	150.00	195.00	1.300
8	3.37	80.00	88.00	1.100
9	3.69	90.00	92.00	1.022
10	4.09	60.00	70.00	1.167
11	4.49	60.00	74.00	1.233
12	4.94	54.00	64.00	1.185
13	5.32	64.00	70.00	1.094
14	6.02	48.00	55.00	1.146
15	6.34	45.00	46.00	1.022
16	6.76	35.00	39.00	1.114
17	7.02	37.00	45.00	1.216
18	7.40	33.00	41.00	1.242
19	7.88	32.00	42.00	1.313
20	8.17	33.00	40.00	1.212
21	8.46	33.00	36.00	1.091
22	8.66	27.00	32.50	1.204
23	9.09	29.00	37.00	1.276
24	9.50	26.00	33.00	1.269
25	9.91	28.00	34.00	1.214

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
26	10.40	16.00	19.00	1.188
27	13.60	12.00	14.50	1.208

Radial Ratio: 1.180
Reference Inverse Field @1km: 350.00 mV/M
Measured Inverse Field @1km: 413.17 mV/M

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

FIELD STRENGTH MEASUREMENT DATA Azimuth: N 353.5 E

Call: KALI Frequency: 900.0 kHz
Power: 0.540 kW Pattern: DAN

Point Number	Date	Time	Distance (km)	Field Strength (mV/m)	
4	11/8/14	0909	1.64	70.00	
5	11/8/14	0912	2.04	62.00	
6	11/8/14	0914	2.45	40.00	**MP**
7	11/8/14	0917	2.85	46.00	
8	11/8/14	0921	3.37	42.00	
9	11/4/14	1040	3.69	26.00	
10	11/4/14	1043	4.09	31.50	
11	11/8/14	0926	4.49	26.50	
12	11/4/14	1049	4.94	26.50	
13	11/8/14	0930	5.32	22.50	
14	11/8/14	0934	6.02	19.50	
15	11/4/14	1054	6.34	17.00	
16	11/8/14	0938	6.76	19.00	
17	11/8/14	0941	7.02	16.00	
18	11/4/14	1057	7.40	16.00	
19	11/8/14	0945	7.88	14.50	
20	11/8/14	0949	8.17	16.50	
21	11/8/14	0952	8.46	12.50	
22	11/4/14	1102	8.66	14.00	
23	11/8/14	0955	9.09	12.50	
24	11/8/14	0958	9.50	10.00	
25	11/4/14	1008	9.91	5.00	
26	11/8/14	1003	10.40	7.00	
27	11/8/14	1015	13.60	7.00	

All reading taken by Mark Moceri. Meter - FIM 42 S/N 576

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

ARITHMETIC RATIO MEASUREMENT ANALYSIS Azimuth: N 353.5 E

Call: KALI
Frequency: 900.0 kHz
Power: 0.540 kW
Reference Pattern: ND
Measured Pattern: DAN

Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio	
4	1.64	162.00	70.00	0.432	
5	2.04	130.00	62.00	0.477	
6	2.45	100.00	40.00	0.400	MP
7	2.85	150.00	46.00	0.307	
8	3.37	80.00	42.00	0.525	
9	3.69	90.00	26.00	0.289	
10	4.09	60.00	31.50	0.525	
11	4.49	60.00	26.50	0.442	
12	4.94	54.00	26.50	0.491	
13	5.32	64.00	22.50	0.352	
14	6.02	48.00	19.50	0.406	
15	6.34	45.00	17.00	0.378	
16	6.76	35.00	19.00	0.543	
17	7.02	37.00	16.00	0.432	
18	7.40	33.00	16.00	0.485	
19	7.88	32.00	14.50	0.453	
20	8.17	33.00	16.50	0.500	
21	8.46	33.00	12.50	0.379	
22	8.66	27.00	14.00	0.519	
23	9.09	29.00	12.50	0.431	
24	9.50	26.00	10.00	0.385	
25	9.91	28.00	5.00	0.179	

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

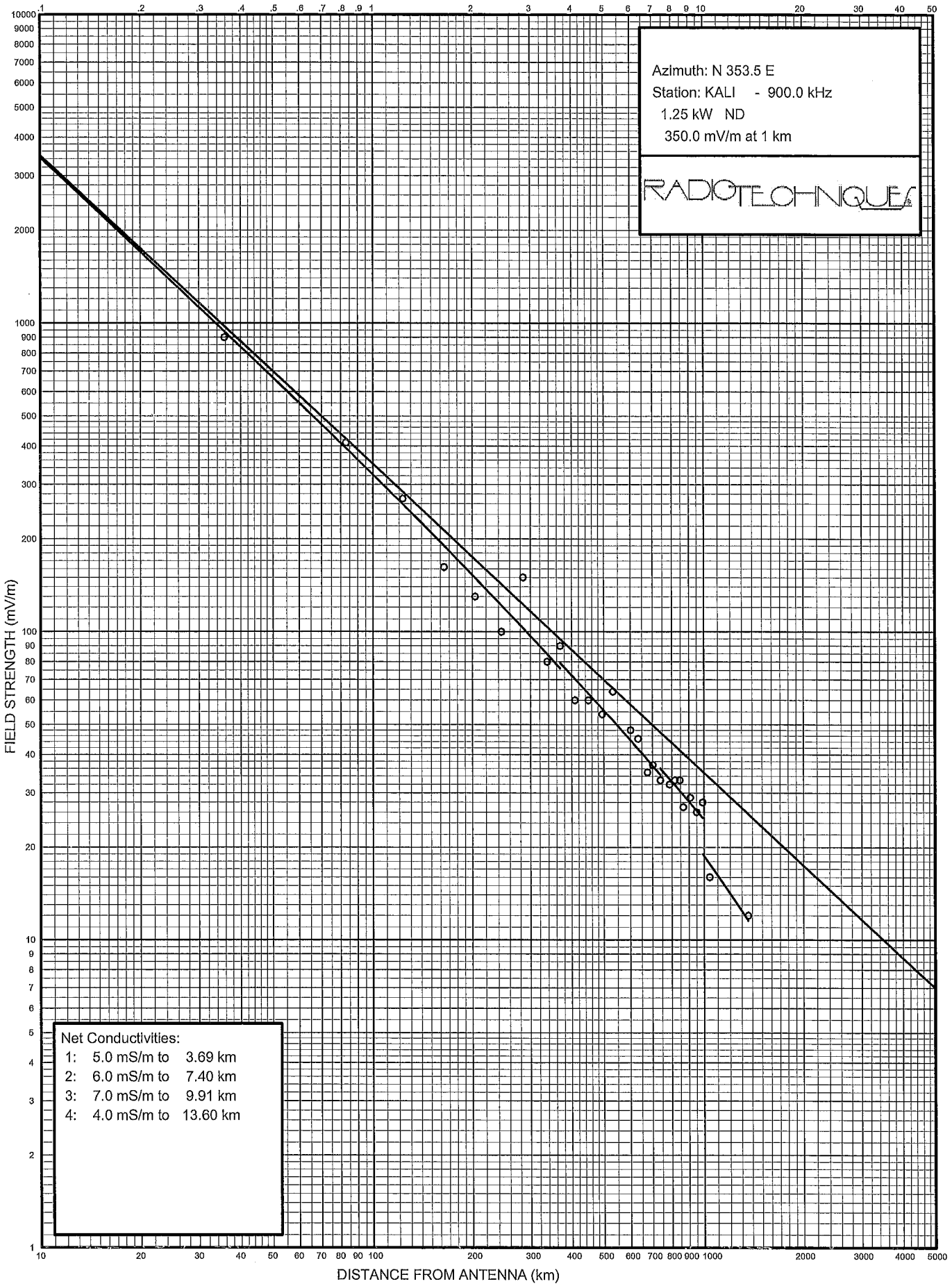
Engineering Report
Figure 4
Antenna Proof of Performance
KALI, West Covina, CA
Transition Radio
January 2015

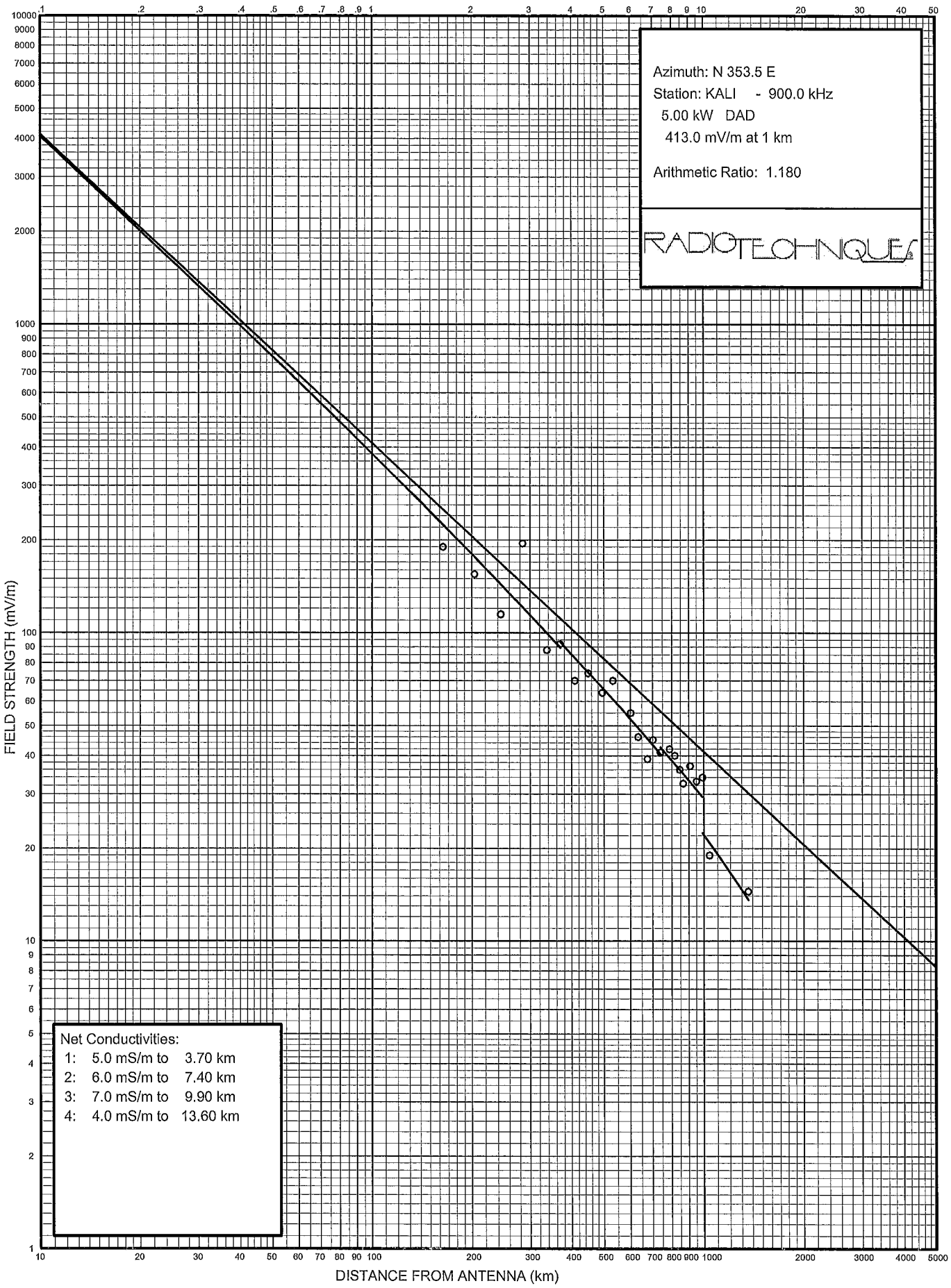
Point	Distance (km)	Ref mV/M	Measured mV/M	Ratio
26	10.40	16.00	7.00	0.437
27	13.60	12.00	7.00	0.583

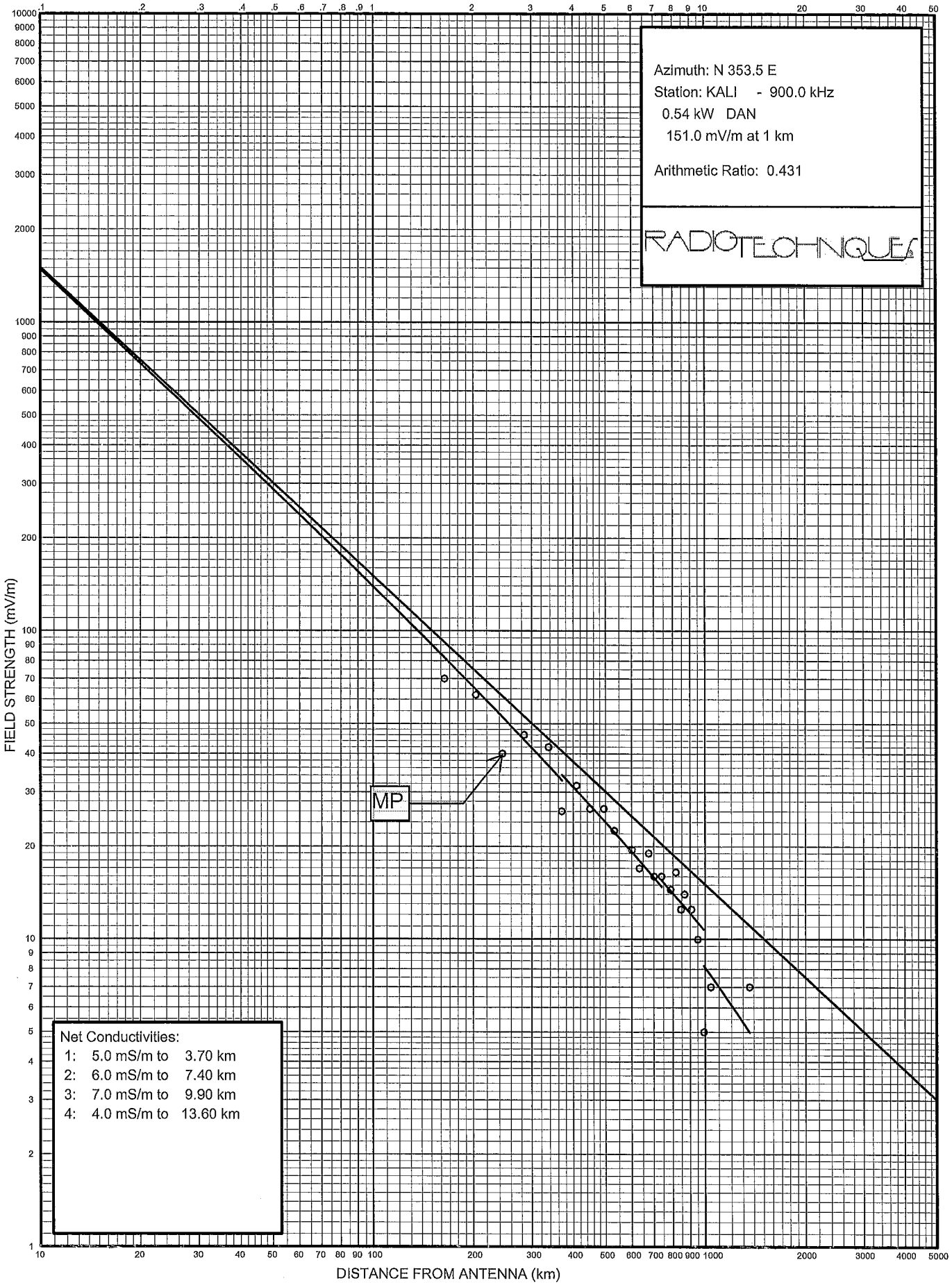
Radial Ratio: 0.432

Reference Inverse Field @1km: 350.00 mV/M

Measured Inverse Field @1km: 151.20 mV/M


Azimuth: N 353.5 E
Station: KALI - 900.0 kHz
1.25 kW ND
350.0 mV/m at 1 km
RADIO TECHNIQUES
Net Conductivities:
1: 5.0 mS/m to 3.69 km
2: 6.0 mS/m to 7.40 km
3: 7.0 mS/m to 9.91 km
4: 4.0 mS/m to 13.60 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)

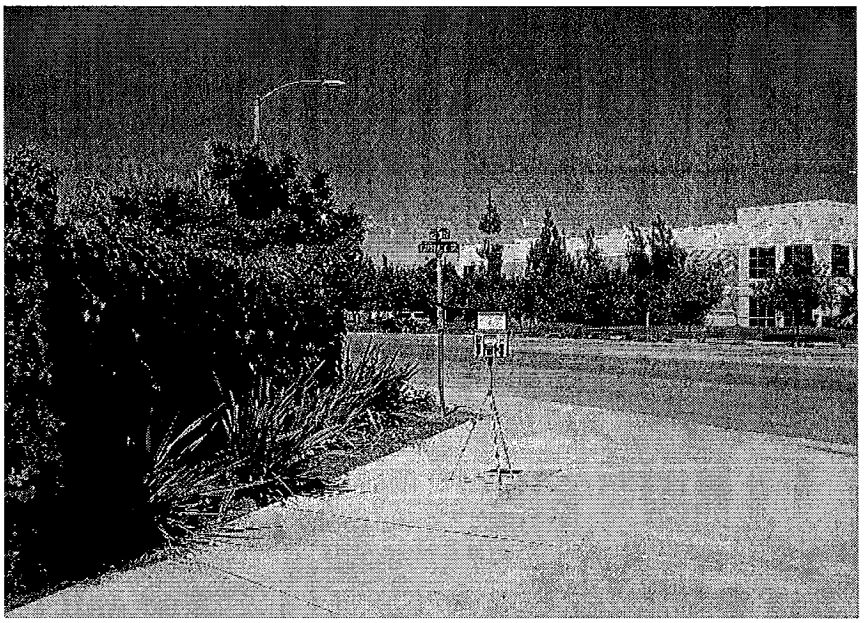

Azimuth: N 353.5 E
Station: KALI - 900.0 kHz
5.00 kW DAD
413.0 mV/m at 1 km
Arithmetic Ratio: 1.180
RADIO TECHNIQUES
Net Conductivities:
1: 5.0 mS/m to 3.70 km
2: 6.0 mS/m to 7.40 km
3: 7.0 mS/m to 9.90 km
4: 4.0 mS/m to 13.60 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)


Azimuth: N 353.5 E
Station: KALI - 900.0 kHz
0.54 kW DAN
151.0 mV/m at 1 km
Arithmetic Ratio: 0.431
RADIO TECHNIQUES
MP
Net Conductivities:
1: 5.0 mS/m to 3.70 km
2: 6.0 mS/m to 7.40 km
3: 7.0 mS/m to 9.90 km
4: 4.0 mS/m to 13.60 km
FIELD STRENGTH (mV/m)
DISTANCE FROM ANTENNA (km)

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Figure 5
Day Monitor Point
KALI- West Covina, CA
January 2015

37.5 degree Day Monitor Point



Photograph of 37.5° Day Monitor Point
See attached Figure 7 for directions and map

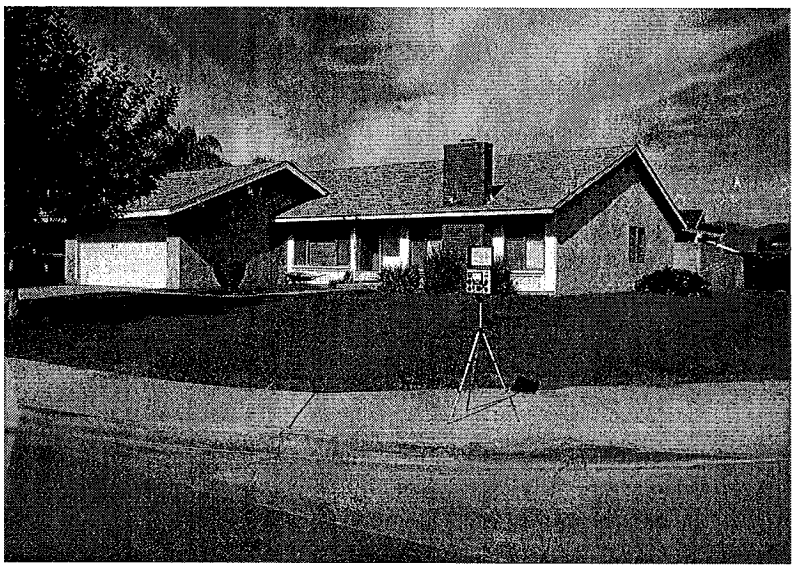
Standard Pattern Field Intensity	28.8 mV/m @ 1 km
Measured Inverse Field	25.0 mV/m @ 1 km
Measured Field Intensity at Monitor Point	7.8 mV/m
Recommended Field Intensity Limit	9.0 mV/m

Monitor point is at southwest corner of Mission Blvd and Carriage Avenue
3.59 km from transmitter

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Figure 6
Night Monitor Point
KALI- West Covina, CA
January 2015

126.5 degree Night Monitor Point



Photograph of 126.5° Night Monitor Point
See attached Figure 7 for directions and map

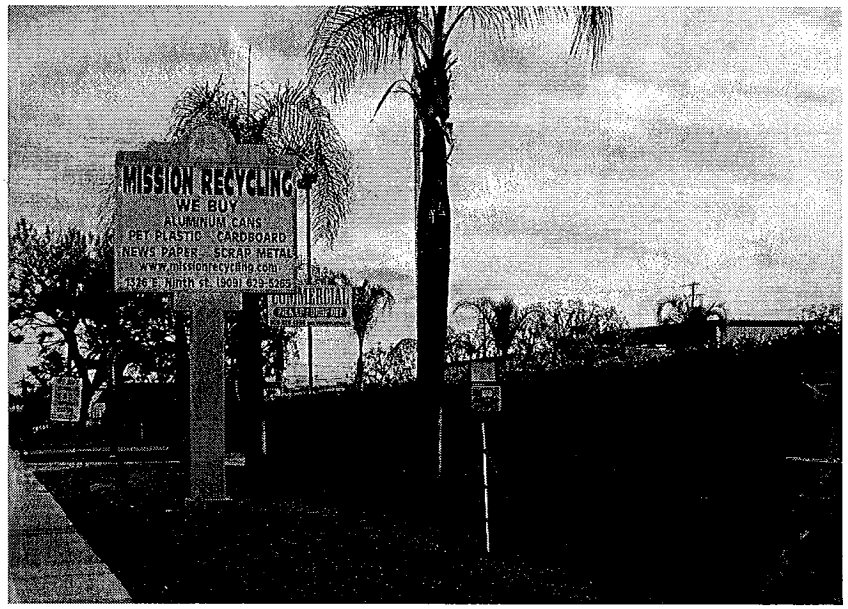
Standard Pattern Field Intensity	13.5 mV/m @ 1 km
Measured Inverse Field @ 540 W	20.7 mV/m @ 1 km
Measured Inverse Field @ 194 W (scaled)	12.4 mV/m @ 1 km
Measured Field at Mon Pt at 540W	8.8 mV/m
Measured Field Scaled to 150 W	4.63 mV/m
Measured Field Scaled to 194 W	5.27 mV/m
Recommended Field Intensity Limit at 150/194 W	5.8 mV/m
Recommended Field Intensity Limit at 540 W Test	11.0 mV/m

Monitor point is at Witherspoon Rd and Norton Ave at 12803 Witherspoon Rd
1.82 km from transmitter

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Figure 7
Night Monitor Point
KALI- West Covina, CA
January 2015

353.5 degree Night Monitor Point



Photograph of 353.5° Night Monitor Point
See attached Figure 7 for directions and map

Standard Pattern Field Intensity	98 mV/m @ 1 km
Measured Inverse Field @ 540 W	151.2 mV/m @ 1 km
Measured Inverse Field @ 194 W (scaled)	90.6 mV/m @ 1 km
Measured Field at Mon Pt at 540W	40.0 mV/m
Measured Field Scaled to 150 W	21.1 mV/m
Measured Field Scaled to 194 W	24.0 mV/m
Recommended Field Intensity Limit at 150/194 W	25.9 mV/m
Recommended Field Intensity Limit at 540 W Test	43.3 mV/m

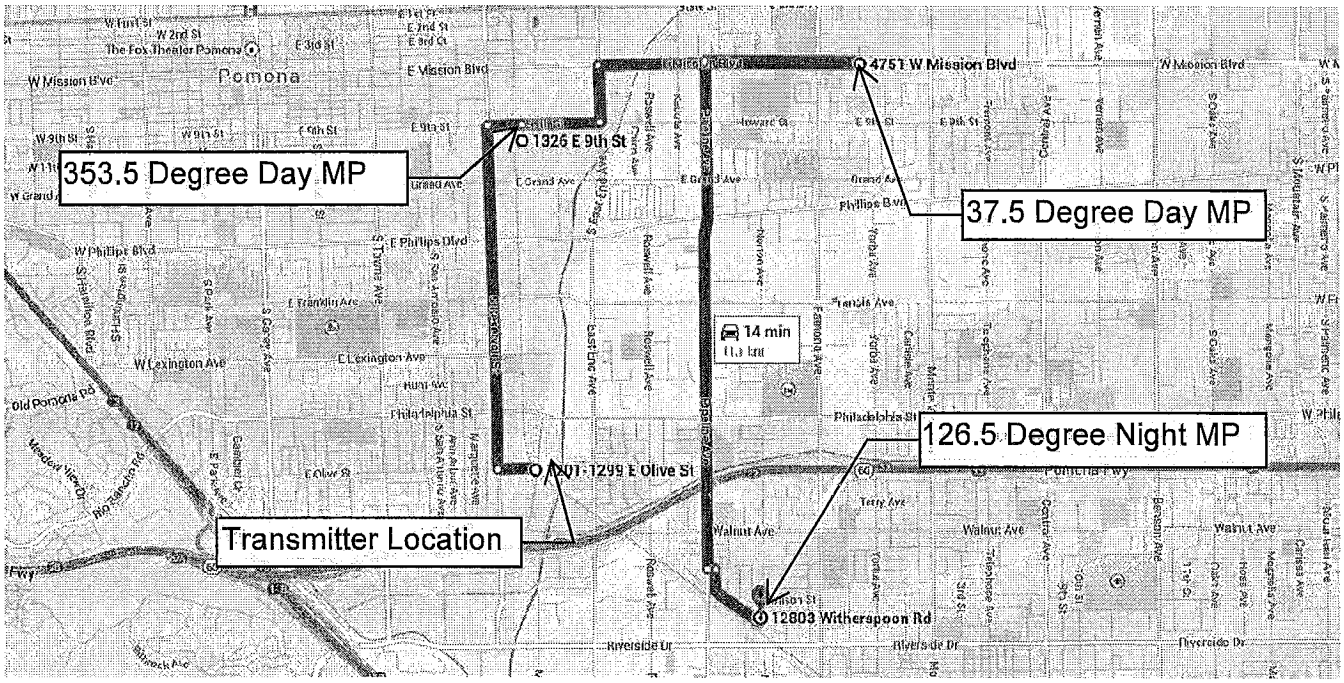
Monitor point is at 10 paces west of 1326 E Ninth Business Sign
2.45 km from transmitter

Figure 7 - Directions and Map to Monitor Points
KALI, West Covina, CA
January 2015

Google

Drive 11.1 km, 14 min

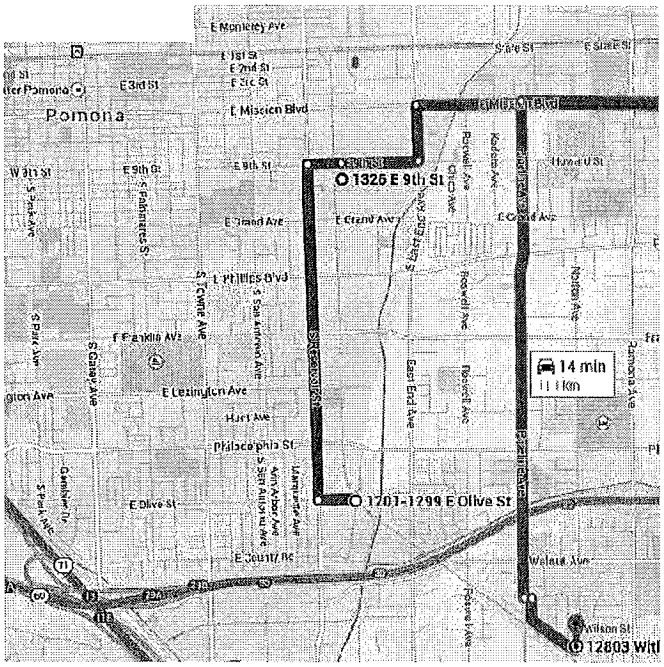
Directions from 1201-1299 E Olive St to 12803 Witherspoon Rd



1201-1299 E Olive St — Transmitter Site - Joins Mills Ave
Pomona, CA 91766

1. Head **southwest** toward E Olive St
   ..... 7 m
2. Turn **right** onto E Olive St
   ..... 280 m
3. Take the 1st **right** onto S Reservoir St
   ..... 2.4 km
4. Turn **right** onto E 9th St
   Destination will be on the right
   ..... 240 m

3.0 km / 4 min



1326 E 9th St
Pomona, CA 91766

5. Head **east** on E 9th St toward S East End Ave
   ..... 550 m

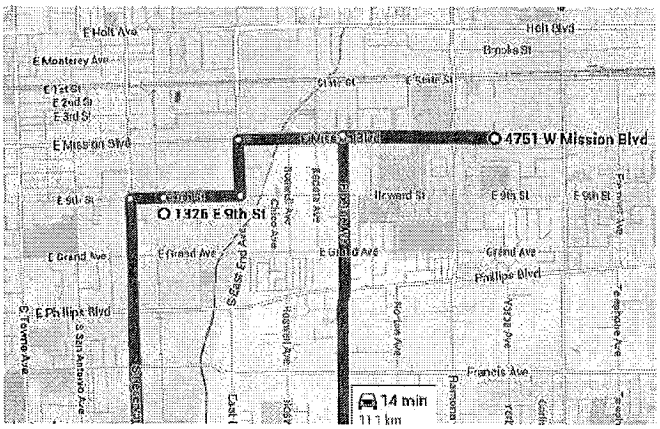
6. Take the 1st left onto S East End Ave

400 m

7. Take the 2nd right onto E Mission Blvd

1.9 km

2.8 km / 3 min



4751 W Mission Blvd

Montclair, CA 91763

37.5 Degree Day Monitor Point

8. Head north on W Mission Blvd toward W Mission Blvd

1.1 km

9. Turn left onto Pipeline Ave

3.6 km

10. Turn left onto Van Buren St

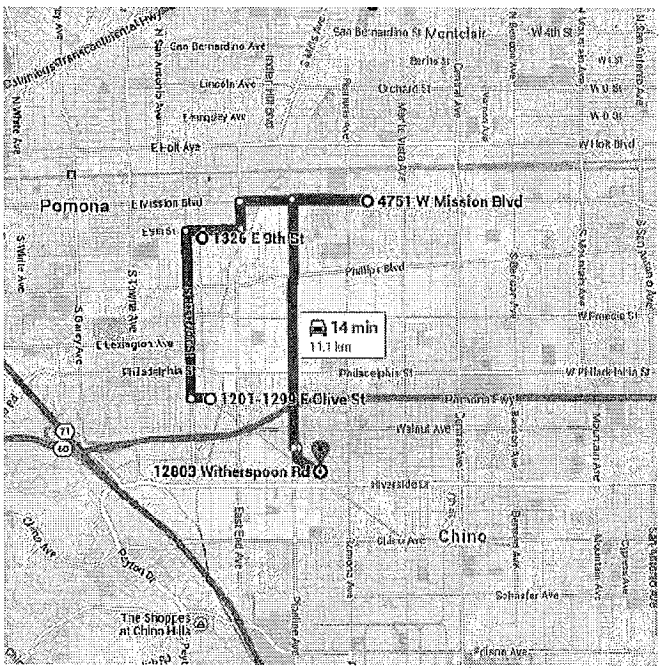
57 m

11. Take the 1st right onto Witherspoon Rd

Destination will be on the left

550 m

5.3 km / 7 min



12803 Witherspoon Rd

Chino, CA 91710

126.5 Degree Night Monitor Point

These directions are for planning purposes only. You may find that events may cause conditions to differ from the map results, and yo must obey all signs or notices regarding your route.

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 8 Page 1
KWKU Partial Proof
on behalf of Transition Radio, Trustee
January 2015

Condition 3 of Construction Permit BP-20111215ACJ for KALI, West Covina, CA to relocate its transmitter and construct a new tower is to notify KWKU of the construction, and make other measures to assure that the station maintains its operating perameters within permitted values, or obtain a special temporary authority to operate with parameters at variance.

The operating parameters of KWKU and monitoring points remained within allowable tolerances during the course of construction of the KALI additional tower, and the common point remained at its licensed value during that period. As such no special temporary authority was required.

A "Before and After" partial proof of performance was conducted on the KWKU antenna. The results of this follows in the further pages of this report. Measurements were made on all monitor point radials.

An evaluation of the measurements shows that the field intensity on the radials remains well within the seasonal variations for the station, and that the array is not adversely effected by the construction of the additional tower of the KALI.

This is a simultaneous submission of the proof data on as required by Condition 3 of the Construction Permit.

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 8 Page 2
KWKU Partial Proof
on behalf of Transition Radio, Trustee
January 2015

KWKU
Partial Proof
RADIAL 75

Date Code	Date	Operator
A	03/15/12	Mark Moceri
B	03/19/12	Mark Moceri
C	11/02/14	Mark Moceri

Point #	Distance mi	Distance km	Before mV/m	Date	Time	After mV/m	Date	Time	Ratio
13	1.85	2.98	7.20	A	1102	6.00	C	0845	0.833
14	2.19	3.52	5.20	B	1131	5.4	C	0850	1.038
15	2.5	4.02	5.00	A	1108	4.1	C	0853	0.820
16	2.75	4.42	3.60	B	1124	4.1	C	0856	1.139
18	3.3	5.31	4.30	B	1117	3.5	C	0902	0.814
20	3.8	6.11	2.10	B	1110	2.3	C	0906	1.095
21	4.1	6.60	2.20	A	1117	2.1	C	0911	0.955
22	4.6	7.40	2.15	B	1102	2.00	C	0916	0.930
23	5.1	8.21	1.65	B	1056	1.55	C	0920	0.939
24	5.61	9.03	1.70	B	1052	1.45	C	0926	0.853
25	6.11	9.83	1.80	B	1048	1.25	C	0930	0.694
26	6.65	10.70	1.10	B	1044	1.1	C	0934	1.000
27	7.05	11.34	1.15	B	1038	1.2	C	0940	1.043
28	7.42	11.94	1.32	B	1033	1.15	C	0944	0.871
29	9.5	15.29	0.52	B	1025	0.48	C	0953	0.923
30	10.5	16.89	0.58	B	1018	0.56	C	1000	0.966

Average 0.934

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 8 Page 3
KWKU Partial Proof
on behalf of Transition Radio, Trustee
January 2015

KWKU

RADIAL 137

Date Code	Date
A	03/15/12
B	03/16/12
C	11/02/14

Point #	Distance mi	Distance km	Before mV/m	Date	Time	After mV/m	Date	Time	Ratio
MP	1.65	2.65	6.7	A	1132	6.6	C	1108	0.985
9	2.12	3.41	2.9	B	1148	3.4	C	1112	1.172
10	2.43	3.91	3.05	B	1144	2.8	C	1115	0.918
11	2.71	4.36	2.8	B	1141	2.5	C	1123	0.893
12	4.75	7.64	1.6	B	1131	1.15	C	1132	0.719
13	5.68	9.14	1.5	B	1125	1.2	C	1137	0.800
14	6.15	9.90	1.85	B	1120	1.3	C	1141	0.703
16	7.11	11.44	0.88	B	1115	0.74	C	1150	0.841
17	8.35	13.44	0.63	B	1107	0.44	C	1202	0.698
18	8.9	14.32	0.66	B	1102	0.54	C	1206	0.818
19	9.9	15.93	0.68	B	1054	0.5	C	1215	0.735

Average 0.844

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 8 Page 4
KWKU Partial Proof
on behalf of Transition Radio, Trustee
January 2015

KWKU
Partial Proof
RADIAL 167

Date Code	Date	Operator
A	03/16/12	Mark Moceri
B	03/19/12	Mark Moceri
C	11/03/14	Mark Moceri

Point #	Distance mi	Distance km	Before mV/m	Date	Time	After mV/m	Date	Time	Ratio
MP	0.96	1.54	6.40	B	1138	6.80	C	0857	1.063
8	1.09	1.75	4.40	A	1155	4.80	C	0903	1.091
9	1.59	2.56	4.40	A	1159	4.35	C	0906	0.989
10	2.10	3.38	5.80	A	1207	4.50	C	0912	0.776
11	2.60	4.18	4.10	A	1220	3.15	C	0916	0.768
12	2.74	4.41	4.10	A	1227	3.30	C	0920	0.805
13	3.00	4.83	2.90	A	1234	2.10	C	0930	0.724
14	3.27	5.26	2.40	A	1243	1.50	C	0933	0.625
15	3.62	5.82	2.50	A	1248	1.80	C	0937	0.800
16	3.80	6.11	2.25	A	1252	1.65	C	0940	8.049
17	10.65	17.14	0.21	A	1318	0.19	C	1206	0.927

Average 1.511

RADIO TECHNIQUES®
402 Tenth Avenue • PO Box 367 • Haddon Heights, NJ 08035

Engineering Report
Figure 8 Page 5
KWKU Partial Proof
on behalf of Transition Radio, Trustee
January 2015

KWKU
Partial Proof
RADIAL 167

Date Code	Date	Operator
A	03/16/12	Mark Moceri
B	03/19/12	Mark Moceri
C	11/03/14	Mark Moceri

Point #	Distance mi	Distance km	Before mV/m	Date	Time	After mV/m	Date	Time	Ratio
MP	0.96	1.54	6.40	B	1138	6.80	C	0857	1.063
8	1.09	1.75	4.40	A	1155	4.80	C	0903	1.091
9	1.59	2.56	4.40	A	1159	4.35	C	0906	0.989
10	2.10	3.38	5.80	A	1207	4.50	C	0912	0.776
11	2.60	4.18	4.10	A	1220	3.15	C	0916	0.768
12	2.74	4.41	4.10	A	1227	3.30	C	0920	0.805
13	3.00	4.83	2.90	A	1234	2.10	C	0930	0.724
14	3.27	5.26	2.40	A	1243	1.50	C	0933	0.625
15	3.62	5.82	2.50	A	1248	1.80	C	0937	0.720
16	3.80	6.11	2.25	A	1252	1.65	C	0940	0.733
17	10.65	17.14	0.21	A	1318	0.19	C	1206	0.927

Average 0.838