



EXHIBIT 5
TECHNICAL TEST REPORT

*FCC SUBPART C
TEST REPORT*

for

900 MHZ CORDLESS PHONE

Model: TC-925

Prepared for:

CASIO PHONEMATE, INC.
P.O. BOX 2914
TORRANCE, CALIFORNIA 90509-2914

Prepared by:

Kyle Fujimoto

KYLE FUJIMOTO

Approved by:

Scott McCutchan

SCOTT McCUTCHAN

COMPATIBLE ELECTRONICS INC.
114 OLINDA DRIVE
BREA, CALIFORNIA 92823
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DATE: JUNE 30, 1998

	REPORT BODY	APPENDICES		TOTAL
		<i>A</i>	<i>B</i>	
PAGES	42	9	7	58

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TABLE OF CONTENTS

SECTION	TITLE	PAGE
	GENERAL REPORT SUMMARY	04
	SUMMARY OF TEST RESULTS	05
1.	PURPOSE	06
2.	ADMINISTRATIVE DATA	07
2.1	Location of Testing	07
2.2	Traceability Statement	07
2.3	Cognizant Personnel	07
2.4	Date Test Sample was Received	07
2.5	Disposition of the Test Sample	07
2.6	Abbreviations and Acronyms	07
3.	APPLICABLE DOCUMENTS	08
4.	DESCRIPTION OF TEST CONFIGURATIONS	09
4.1	Description of Test Configuration – EMI	09
4.1.1	Cable Construction and Termination	10
5.	LIST OF EUT, ACCESSORIES AND TEST EQUIPMENT	11
5.1	EUT and Accessory List	11
5.2	Test Equipment	12
6.	TEST SITE DESCRIPTION	13
6.1	Test Facility Description	13
6.2	EUT Mounting, Bonding and Grounding	13
7.	TEST PROCEDURES	14
7.1	Emissions Tests	14
7.1.1	Conducted Emissions Test	14
7.1.1.1	Conducted Emissions Data Sheets for the Base	15
7.1.2	Radiated Emissions (Spurious and Harmonics) Test	16
7.1.2.1	Radiated Emissions (Spurious and Harmonics) For the Handset	17
7.1.2.2	Radiated Emissions (Spurious and Harmonics) For the Base	18
15.	CONCLUSIONS	19

**LIST OF APPENDICES**

APPENDIX	TITLE
A	Test Setup Diagrams and Photos
B	Antenna and Effective Gain Factors

LIST OF FIGURES

FIGURE	TITLE
1	Conducted Emissions Test Setup
2	Plot Map And Layout of Test Site

GENERAL REPORT SUMMARY

This electromagnetic emission and immunity test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full.

The immunity data included in this report are not covered by NVLAP accreditation. This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Device Tested: 900 MHz Cordless Phone
Model: TC-925
S/N: N/A

Modifications: The EUT was not modified in order to meet the specifications.

Manufacturer: Casio Phonemate, Inc.
P.O. Box 2914
Torrance, California 90509-2914

Test Dates: June 7 and 8, 1998

Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Radiated RF Emissions, 10 kHz - 10000 MHz.	Complies with the limits of sections 15.205, 15.209 and 15.249 of FCC Title 47, Part 15, Subpart C
2	Radiated RF Emissions, 30 MHz - 1000 MHz	Complies with the limits of section 15.205 FCC Title 47, Part 15, Subpart C
3	Conducted RF emissions, 450 kHz - 30 MHz	Complies with the limits of section 15.207 of FCC Title 47, Part 15, Subpart C.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the 900 MHz Cordless Phone Model: TC-925. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 1992. The tests were performed in order to determine whether the electromagnetic emissions from the 900 MHz Cordless Phone, referred to as EUT hereafter, are within the specification limits defined by FCC Title 47, Part 15, Subpart C, sections 15.205, 15.207, and 15.249.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI/EMC tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Casio Phonemate, Inc.

Lananh T. Tran Casio Phonemate, Inc.

Compatible Electronics, Inc.

Brian Voegele	Test Engineer
Kirit Ramani	Test Engineer
Kyle Fujimoto	Test Engineer
Scott McCutchan	Lab Manager

2.4 Date Test Sample was Received

The test sample was received on June 7, 1998.

2.5 Disposition of the Test Sample

The test sample has not yet been returned to Casio Phonemate, Inc.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

HP	Hewlett Packard	RF	Radio Frequency
P/N	Part Number	EMI	Electromagnetic Interference
LISN	Line Impedance Stabilization Network	S/N	Serial Number
ITE	Information Technology Equipment	EUT	Equipment Under Test

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
FCC Title 47, Part 15 1997	FCC Rules - Radio frequency devices (including digital devices).
ANSI C63.4 1992	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz.



4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - EMI

The components of the EUT were tested separately.

Specifics of the EUT and Peripherals Tested

Handset being tested: The 900 MHz Cordless Phone -- Handset Model: TC-925 (EUT) was placed on the wooden table and tested in three orthogonal axis. The low (channel 1), medium (channel 10), and high (channel 20) channels were tested. The handset was transmitting to and receiving from the 900 MHz Cordless Phone -- Base. The EUT was investigated for emissions while off hook. The radiated data was taken in this mode of operation. All initial investigations were performed with the EMI receiver in manual mode scanning the frequency range continuously. The cables were bundled and routed as shown in the photographs in Appendix A.

Base being tested: The 900 MHz Cordless Phone -- Base Model: TC-925 (EUT) was placed on the wooden table. The low (channel 1), medium (channel 10), and high (channel 20) channels were tested. The base was connected to a line simulator and AC adapter via its RJ-11 and power ports, respectively. The line simulator was connected to the Comdial telephone. The base was transmitting and receiving from the 900 MHz Cordless Phone -- Handset. The 900 MHz Cordless Phone -- Handset was also used to dial out a number on the simulator that caused the Comdial telephone to ring. The conducted as well as radiated data was taken in this mode of operation. All initial investigations were performed with the EMI receiver in manual mode scanning the frequency range continuously. The cables were bundled and routed as shown in the photographs in Appendix A.

**4.1.1 Cable Construction and Termination****HANDSET BEING TESTED**

There are no cables when the handset is being tested

BASE BEING TESTED**Cable 1**

This is a 5 foot unshielded cable connecting the base to the line simulator. It has an RJ-11 connector at the line simulator end and is hard wired into the base. The cable was bundled to a length of 1 meter.

Cable 2

This is a 5 foot unshielded cable connecting the telephone to the line simulator. It has an RJ-11 connector at the line simulator end and is hard wired into the telephone. The cable was bundled to a length of 1 meter.

Cable 3

This is a 6 foot unshielded round cable connecting the base to the AC adapter. It has a 1/8" power jack at the base end and is hard wired into the AC adapter.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
900 MHz Cordless Phone – Base (EUT)	CASIO PHONEMATE, INC.	TC-925	N/A	AAL-TC-925
CLASS 2 TRANSFORMER	CASIO PHONEMATE, INC.	TC-925	N/A	N/A
LINE SIMULATOR	TELTONE	TLS-3	N/A	N/A
PHONE	COMDIAL	M/N-80	N/A	N/A
900 MHz Cordless Phone – Handset (EUT)	CASIO PHONEMATE, INC.	TC-925	N/A	AAL-TC-925

5.2 Test Equipment

EQUIPMENT TYPE	MANU- FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
Spectrum Analyzer	Hewlett Packard	8566B	2729A04566	July 2, 1997	1 Year
Preamplifier	Com Power	PA-102	1017	February 16, 1998	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2521A00924	June 16, 1997	1 Year
RF Attenuator	Com-Power	A-410	1602	November 25, 1997	1 Year
LISN	Com Power	LI-200	1764	January 3, 1998	1 Year
LISN	Com Power	LI-200	1771	January 3, 1998	1 Year
LISN	Com Power	LI-200	1775	January 3, 1998	1 Year
LISN	Com Power	LI-200	1780	January 3, 1998	1 Year
Biconical Antenna	Com Power	AB-100	1548	March 24, 1998	1 Year
Log Periodic Antenna	Com Power	AL-100	1012	February 13, 1998	1 Year
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
Turntable	Com Power	TT-100	N/A	N/A	N/A
Computer	Hewlett Packard	HP98561A	2522A05178	N/A	N/A
Printer	Hewlett Packard	2225A	2723500869	N/A	N/A
Plotter	Hewlett Packard	7440A	8726K38417	N/A	N/A
Microwave Amplifier	Com-Power	PA-122	001	March 31, 1998	N/A
Horn Antenna	Antenna Research	DRG-118/A	1053	December 8, 1995	N/A



6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

For all tests, the EUT was mounted on a 1.0 by 1.5 by 0.8 meter high non-conductive table, which was placed on the ground plane.

The EUT was not grounded.



7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 Emissions Tests

7.1.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak detector was used only where indicated in the data sheets. A 10 dB attenuation pad was used for the protection of the spectrum analyzer input stage, and the spectrum analyzer offset was adjusted accordingly to read the actual data measured. The LISN output was read by the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for the conducted emissions test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4: 1992. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The initial test data was taken in manual mode while scanning the frequency ranges of 150 kHz to 30 MHz. The conducted emissions from the EUT were maximized for operating mode as well as cable placement. Once a predominant frequency (within 12 dB of the limit) was found, it was more closely examined with the spectrum analyzer span adjusted to 1 MHz.

The final data was collected under program control by the HP 93153B computer in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave.



SECTION 7.1.1.1

***CONDUCTED EMISSIONS
DATA SHEETS FOR THE BASE***

FCC ID: AAL-TC-925

MEASUREMENT NOTES:

CASIO PHONEMATE, INC.
CORDLESS TELEPHONE (BASE)
M/N: TC-925
FCC-B 110VAC BLACK LEAD 7 Jun 1998 14:02:48

15 highest Peaks above -50 dB of Limit Line #2
peak criteria = 2 dB

PEAK#	FREQ (MHz)	(dBuV)	DELTA
1	.4873	41.6	-6.4
2	.5278	41.5	-6.5
3	.4732	41.4	-6.6
4	.5180	41	-7.0
5	.4977	40.8	-7.2
6	.5458	40.2	-7.8
7	.5911	39.6	-9.4
8	.607	38.4	-9.6
9	.6216	38.3	-9.7
10	.7731	37.8	-10.2
11	.776	37.5	-10.5
12	.8100	36.7	-11.1
13	.8209	36.5	-11.5
14	.9400	36	-12.0
15	1.006	36	-12.0

MEASUREMENT DATE: 6/7/98

TESTER: *Kiril Remev*
KIRIL REMEV

COMPATIBLE ELECTRONICS INC.
EMISSION LEVEL [dBuV] PEAK

7 Jun 1998 14:02:48

hp₁₀₀

FCC PT 15 CLASS A & B CONDUCTED
CASIO PHONEMATE, INC.
CORDLESS TELEPHONE (BASE)
M/N: TC-925
FCC-B 110VAC BLACK LEAD

80

CLASS A

60

CLASS B

40



20

.45

1

10

30

FREQUENCY [MHz]

FCC ID: AAL-TC-925

MEASUREMENTS:

DATE: 10/10/2012

COMPLIANCE: FCC PART 15.107

W/N: 10/125

FCC ID: AAL-TC-925

15 High A/B

15 High A/B

PEAK#	FREQ (MHz)	AMP (dBm)	DELTA
1	2.933	35.3	-12.7
2	16.12	35.3	-12.7
3	29.41	35.1	-12.9
4	1.643	31	-13.1
5	1.314	30	-13.0
6	1.506	31	-13.0
7	3.141	31	-13.1
8	1.757	34.9	-13.1
9	2.012	34.9	-13.1
10	2.839	34.9	-13.1
11	3.59	34.9	-13.1
12	1.5077	34.9	-13.1
13		34.8	-13.2

MEASUREMENTS:

TEST ENGINEER:

Kirit Ramani

KIRIT RAMANI

COMPATIBLE ELECTRONICS INC.
EMISSION LEVEL [dBuV] PEAK

7 Jun 1998 14:20:35

hp₁₀₀

FCC PT 15 CLASS A & B CONDUCTED
CASIO PHONEMATE, INC.
CORDLESS TELEPHONE (BASE)
M/N: TC-925
FCC-B 110VAC WHITE LEAD

80

CLASS A

60

CLASS B

40

20

110VAC WHITE LEAD

.45

1

10

30

FREQUENCY [MHz]

7.1.2**Radiated Emissions (Spurious and Harmonics) Test**

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-102 was used for frequencies below 1 GHz, and the Com Power Microwave Amplifier Model: PA-122 was used for frequencies from 30 MHz to 1 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps. The quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets. The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 10 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 1992. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain final test data.



SECTION 7.1.2.1

***RADIATED EMISSIONS DATA (SPURIOUS AND
HARMONICS) FOR THE HANDSET***

FCC ID: AAL-TC-925

Page: 1 of 4

Test location: Compatible Electronics
 Customer : CASIO PHONEMATE, INC. Date : 6/8/1998
 Manufacturer : SAME Time : 18.45
 EUT name : CORDLESS TELEPHONE ANSWERING SYSTEM
 Model : TC-925
 Specification: Fcc_B Test distance: 3.0 mtrs Lab : D
 Distance correction factor($20 \cdot \log(\text{test}/\text{spec})$) : 0.00
 Test Mode : SPURIOUS EMISSIONS TEST - HANDSET UNIT
 30 MHz TO 300 MHz - BICONICAL ANTENNA - VERITCAL

Tested By


 BRIAN VOEGELE

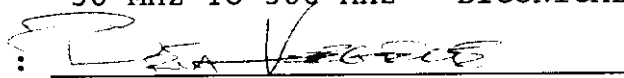
Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	limit = L dBuV/m	Delta R-L dB
1V	64.80	46.60	0.70	10.27	38.76	18.81	40.00	-21.19
2V	108.80	42.20	0.94	10.23	38.68	14.69	43.50	-28.81
3V	120.80	42.30	0.98	10.95	38.92	15.32	43.50	-28.18
4V	156.79	40.30	1.25	14.02	38.60	16.97	43.50	-26.53
5V	194.81	37.10	1.40	15.55	38.92	15.13	43.50	-28.37
6V	268.78	35.30	1.68	18.75	38.68	17.05	46.00	-28.95

FCC ID: AAL-TC-925

Page: 2 of 4

Test location: Compatible Electronics
 Customer : CASIO PHONEMATE, INC. Date : 6/8/1998
 Manufacturer : SAME Time : 19.25
 EUT name : CORDLESS TELEPHONE ANSWERING SYSTEM
 Model : TC-925
 Specification: Fcc_B Test distance: 3.0 mtrs Lab : D
 Distance correction factor($20 \cdot \log(\text{test}/\text{spec})$) : 0.00
 Test Mode : SPURIOUS EMISSIONS TEST - HANDSET UNIT
 30 MHz TO 300 MHz - BICONICAL ANTENNA - HORIZONTAL

Tested By


 BRIAN VOEGELE

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	limit = L dBuV/m	Delta R-L dB
1H	64.80	42.80	0.70	10.27	38.76	15.01	40.00	-24.99
2H	108.80	39.40	0.94	10.23	38.68	11.89	43.50	-31.61
3H	120.80	45.20	0.98	10.95	38.92	18.22	43.50	-25.28
4H	156.80	37.90	1.25	14.02	38.60	14.57	43.50	-28.93
5H	194.81	37.50	1.40	15.55	38.92	15.53	43.50	-27.97
6H	268.81	35.70	1.68	18.76	38.68	17.46	46.00	-28.54

FCC ID: AAL-TC-925

Page: 3 of 4

Test location: Compatible Electronics
 Customer : CASIO PHONEMATE, INC. Date : 6/8/1998
 Manufacturer : SAME Time : 20.03
 EUT name : CORDLESS TELEPHONE ANSWERING SYSTEM
 Model : TC-925
 Specification: Fcc_B Test distance: 3.0 mtrs Lab : D
 Distance correction factor($20 \cdot \log(\text{test}/\text{spec})$) : 0.00
 Test Mode : SPURIOUS EMISSIONS TEST - HANDSET UNIT
 300 MHz TO 1000 MHz - LOG PERIODIC ANTENNA - VERTICAL

Tested By


 BRIAN VOEGELE

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	limit = L dBuV/m	Delta R-L dB
1V	363.02	48.70	1.93	15.68	38.74	27.57	46.00	-18.43
2V	445.84	62.30	2.18	15.77	38.22	42.03	46.00	-3.97
3V	463.19	60.40	2.28	15.72	38.33	40.06	46.00	-5.94

FCC ID: AAL-TC-925

Page: 4 of 4

Test location: Compatible Electronics
 Customer : CASIO PHONEMATE, INC. Date : 6/8/1998
 Manufacturer : SAME Time : 20.37
 EUT name : CORDLESS TELEPHONE ANSWERING SYSTEM
 Model : TC-925
 Specification: Fcc_B Test distance: 3.0 mtrs Lab : D
 Distance correction factor($20 \cdot \log(\text{test}/\text{spec})$) : 0.00
 Test Mode : SPURIOUS EMISSIONS TEST - HANDSET UNIT
 300 MHz TO 1000 MHz - LOG PERIODIC ANTENNA - HORIZONTAL
 Tested By : Brian Voegelé
 BRIAN VOEGELE

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	limit = L dBuV/m	Delta R-L dB
1H	363.03	49.00	1.93	15.69	38.74	27.87	46.00	-18.13
2H	445.84	46.40	2.18	15.77	38.22	26.13	46.00	-19.87
3H	463.24	46.30	2.28	15.72	38.33	25.96	46.00	-20.04

**COMPATIBLE
ELECTRONICS**

FCC ID: AAL-TC-925

RADIATED EMISSIONS

COMPANY NAME: CASIO THOMEMATE, INC. DATE: 6-8-78

EUT: COULTER TELEPHONE ANSWERING SYSTEM EUT S/N: _____

EUT MODEL: TC-925 LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC CLASS: TEST DISTANCE: 3M LAB: D

ANTENNA: ☒ LOOP ☐ BICONICAL ☐ LOG ☐ HORN POLARIZATION: ☐ VERT ☐ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ☐ ENGINEER: DAVEGELE

NOTES: TEST FREQ RANGE = 9 kHz to 30 MHz.

HANSET UNIT

[illegible]

* CORRECTED READING = METER READING - DISTANCE FACTOR - ANTENNA GAIN

**** DELTA = CORRECTED READING - SPECIFICATION LIMIT**

BREA (714) 579-0500

SILVERADO (714) 589-0700

AGOURA (818) 597-0600

RADIATED EMISSIONS

COMPANY NAME: CASIO DATE: 6/7/98

EUT: CORDLESS TELEPHONE EUT S/N:

EUT MODEL: 7C-925 **LOCATION:** ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC **CLASS:** B **TEST DISTANCE:** 3m **LAB:** D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☒ VERT ☐ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: Kyrit Reynolds

NOTES: Chemr. #1 Hand set

[illegible]

* **CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN**

**** DELTA = CORRECTED READING - SPECIFICATION LIMIT**

BREA (714) 579-0500

SILVERADO (714) 589-0700

AGOURA (818) 597-0600

RADIATED EMISSIONS

COMPANY NAME: CASIO

DATE: 6/7/98

EUT: CORDESS

EUT S/N:

EUT MODEL: 7C-925

LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC

CLASS: B

TEST DISTANCE: 3m LAB: D

LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☐ HORN

POLARIZATION: ☐ VERT ☒ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT

ENGINEER: Robert K. Green

NOTES: Channel #1 Handset

[illegible]

*** CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN**

**** DELTA = CORRECTED READING - SPECIFICATION LIMIT**

BREA (714) 579-0500

SILVERADO (714) 589-0700

AGOURA (818) 597-0600



5- 111

DATE: 6/7/98

LEUT S/N:

LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURA

LAB: D

POLARIZATION: ☒ VERT ☐ HORIZ

ENGINEER: W. J. Kern

NOTES: Channel #15 Hand set

[illegible]

**** DELTA = CORRECTED READING - SPECIFICATION LIMIT**

AGOURA (818) 597-0600

RADIATED EMISSIONS

COMPANY NAME: CASCO DATE: 6/7/78

EUT: CORDLESS TELEPHONE **EUT S/N:** _____

EUT MODEL: 10-975 **LOCATION:** ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: 700 **CLASS:** B **TEST DISTANCE:** 3m **LAB:** D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN **POLARIZATION:** ☐ VERT ☒ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: MSA / Reserve

NOTES: channel #15 Hamel set

[illegible]

* **CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN**

**** DELTA = CORRECTED READING - SPECIFICATION LIMIT**

BREA (714) 579-0500

SILVERADO (714) 589-0700

AGOURA (818) 597-0600

**RADIATED EMISSIONS**COMPANY NAME: CP 520 DATE: 6/7/98EUT: CORDLESS TELEPHONE EUT S/N: _____EUT MODEL: TC-925 LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURASPECIFICATION: FCC CLASS: B TEST DISTANCE: 3m LAB: DANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☒ VERT ☐ HORIZ☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: K. M. RamirezNOTES: Channel #30 Handset

Frequency (GHz)	Peak Reading (dBuV)	Average Reading (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	* Corrected Reading (dBuV)	Delta ** (dB)	Spec Limit (dBuV)
927.57 M	92.1		1.0	180	23.2		33.1	82.2	-11.8	94.0
1.855	49.4		1.5	90	24.5	5.7	29.1	50.5	-3.5	54.0

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

BREA (714) 579-0500

SILVERADO (714) 589-0700

AGOURA (818) 597-0600



Page 17k

NOTES: Channel #30 Hand set

[illegible]

* **CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN**

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

BREA (714) 579-0500

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AGOURA (818) 597-0600



SECTION 7.1.2.2

***RADIATED EMISSIONS DATA (SPURIOUS AND
HARMONICS) FOR THE BASE***

Page: 1 of 1

Test location: Compatible Electronics

Customer : CASIO PHONEMATE, INC.

Date : 6/ 7/1998

Manufacturer : CASIO PHONEMATE, INC.

Time : 13.37

EUT name : CORDLESS TELEPHONE (BASE)

Model: TC-925

Specification: Fcc_B Test distance: 3.0 mtrs

Lab: D

Distance correction factor(20*log(test/spec)) : 0.00

Test Mode : SPURIOUS EMISSIONS TEST - BASE

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	limit = L dBuV/m	Delta R-L dB
1V	53.81	46.70	0.64	11.20	38.96	19.57	40.00	-20.43
2V	56.46	51.90	0.66	10.98	38.94	24.61	40.00	-15.39
3V	58.25	52.70	0.68	10.84	38.92	25.30	40.00	-14.70
4V	60.06	54.10	0.70	10.69	38.90	26.60	40.00	-13.40
5V	60.95	54.50	0.70	10.61	38.87	26.94	40.00	-13.06
6V	61.83	52.50	0.70	10.54	38.85	24.89	40.00	-15.11
7V	68.08	52.10	0.70	9.97	38.66	24.12	40.00	-15.88
8V	82.02	55.90	0.72	8.76	38.32	27.06	40.00	-12.94
9V	131.13	54.70	1.05	11.84	38.90	28.69	43.50	-14.81
10V	163.91	52.80	1.31	14.24	38.60	29.76	43.50	-13.74
11H	60.05	51.60	0.70	10.70	38.90	24.10	40.00	-15.90
12H	73.81	50.10	0.70	9.42	38.49	21.73	40.00	-18.27
13H	114.75	53.10	0.96	10.58	38.79	25.85	43.50	-17.65
14H	131.13	55.60	1.05	11.84	38.90	29.58	43.50	-13.92
15H	163.92	51.50	1.31	14.25	38.60	28.46	43.50	-15.04
16H	245.81	56.90	1.57	16.98	38.62	36.83	46.00	-9.17
17H	262.20	55.40	1.65	18.17	38.65	36.57	46.00	-9.43
18H	294.98	48.10	1.78	20.90	38.62	32.16	46.00	-13.84
19V	327.74	48.80	1.86	14.11	38.77	26.00	46.00	-20.00
20V	589.88	49.30	2.98	18.15	38.42	32.01	46.00	-13.99
21H	327.74	56.00	1.86	14.11	38.77	33.20	46.00	-12.80
22H	344.12	55.30	1.89	14.18	38.86	32.50	46.00	-13.50
23H	360.51	55.00	1.92	15.40	38.77	33.55	46.00	-12.45
24H	451.71	54.40	2.21	15.44	38.22	33.83	46.00	-12.17

**COMPATIBLE
ELECTRONICS**

RADIATED EMISSIONS

COMPANY NAME: CASIO PHONEMATE, INC. DATE: 6-8-98

EUT: CORPUS TELEPHONE ANSWERING SYSTEM EUT S/N:

EUT MODEL: TC-925 LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC CLASS: _____ TEST DISTANCE: 3M LAB: D

ANTENNA: ☒ LOOP ☐ BICONICAL ☐ LOG ☐ HORN POLARIZATION: ☐ VERT ☐ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ☐ ENGINEER: Dea Voelt

NOTES: TEST FREQ. RANGE = 9 kHz to 30 MHz.

— BASE UNIT —

[illegible]

* CORRECTED READING = METER READING - DISTANCE FACTOR - ANTENNA GAIN

**** DELTA = CORRECTED READING - SPECIFICATION LIMIT**

BREA (714) 579-0500

SILVERADO (714) 589-0700

AGOURA (818) 597-0600



COMPANY NAME: CASIL **DATE:** 6/7/98

EUT: CORDLESS TELEPHONE **EUT S/N:** _____

EUT MODEL: IC - 925 **LOCATION:** ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: ICC **CLASS:** B **TEST DISTANCE:** 3m **LAB:** D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☒ VERT ☐ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT **ENGINEER:** Robert K. Brown

NOTES: Channel #1 Base

[illegible]

**** DELTA = CORRECTED READING - SPECIFICATION LIMIT**

AGOURA (818) 597-0600

RADIATED EMISSIONS

COMPANY NAME: C P S I O **DATE:** 6/7/98

EUT: CORDLESS TELEPHONE EUT S/N:

EUT MODEL: 7C 925 **LOCATION:** ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC CLASS: B TEST DISTANCE: 3m LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☒ VERT ☐ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT **ENGINEER:** *Robert Peterson*

NOTES: Channel #15 Bayse

[illegible]

*** CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN**

**** DELTA = CORRECTED READING - SPECIFICATION LIMIT**

BREA (714) 579-0500

SILVERADO (714) 589-0700

AGOURA (818) 597-0600



8. CONCLUSIONS

The 900 MHz Cordless Phone Model: TC-925 meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.205, 15.207, 15.209 and 15.249 specification limits defined in FCC Title 47, Part 15, Subpart B.



APPENDIX A

TEST SETUP DIAGRAMS AND PHOTOS

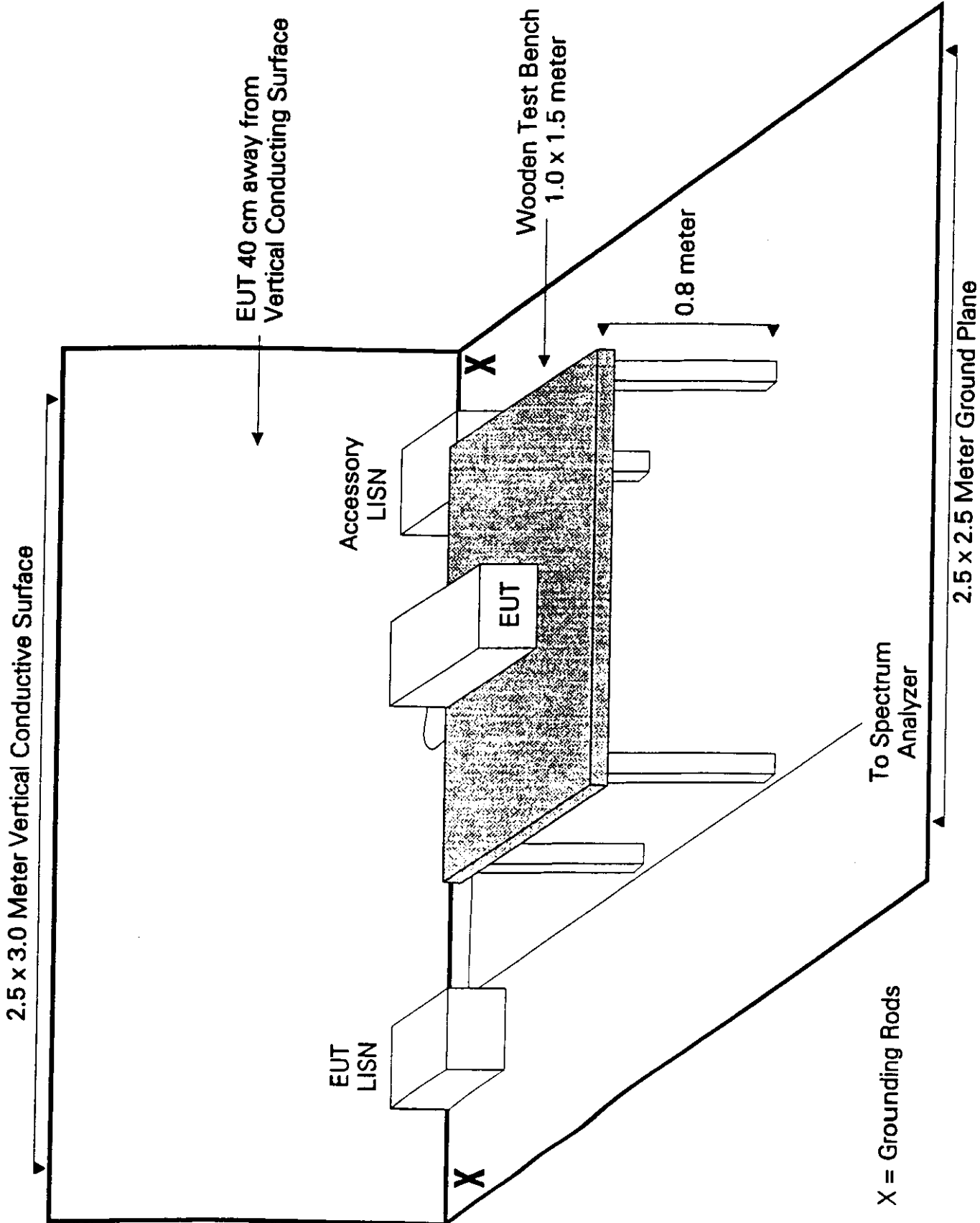


FIGURE 1 - CONDUCTED EMISSIONS TEST SETUP SITE D

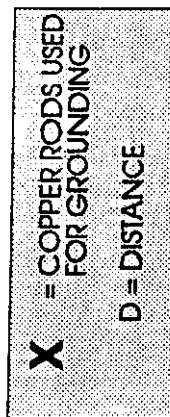


Figure 2: Plot Map and Layout of Test Site "D"



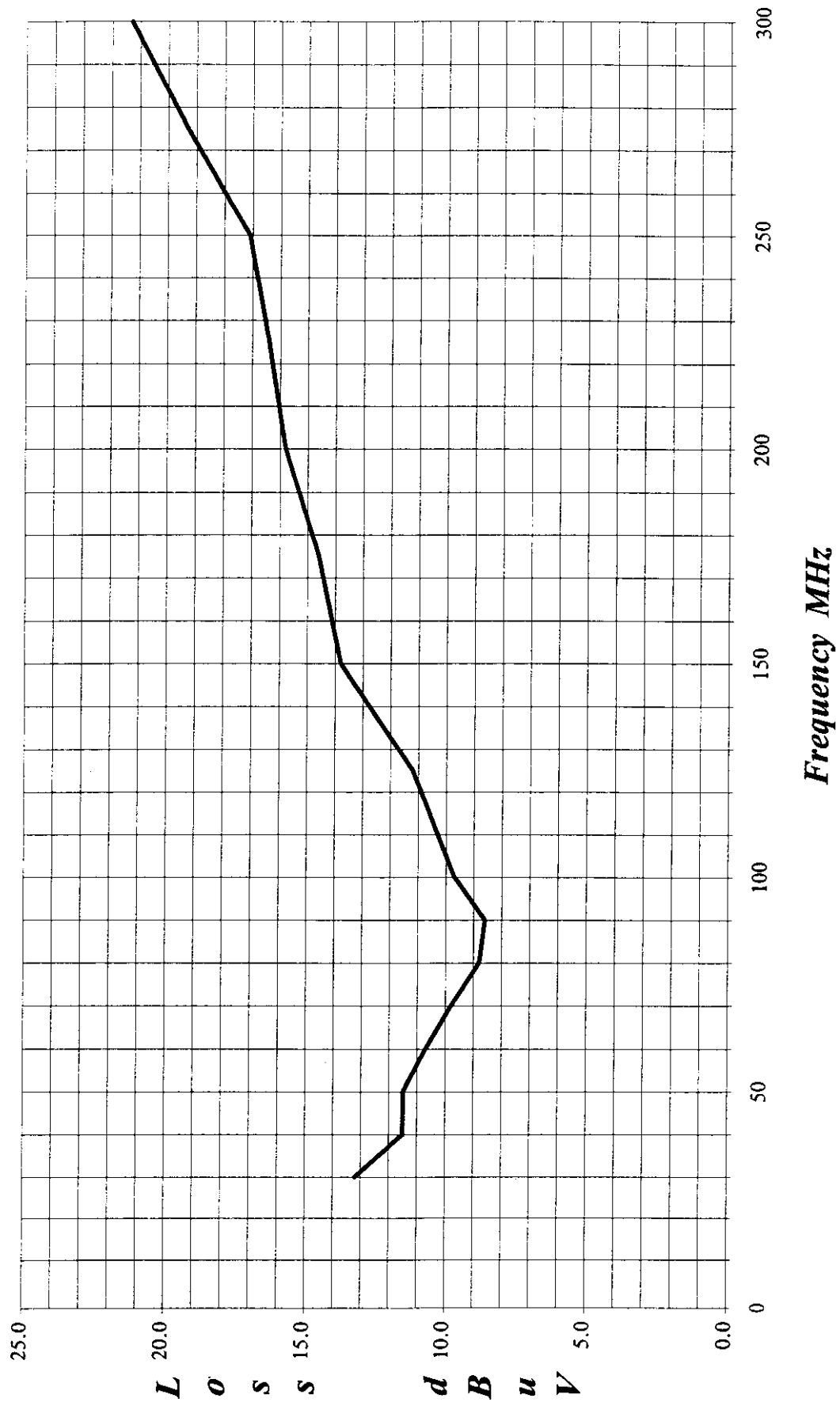
APPENDIX B

ANTENNA FACTORS AND EFFECTIVE GAIN FACTORS



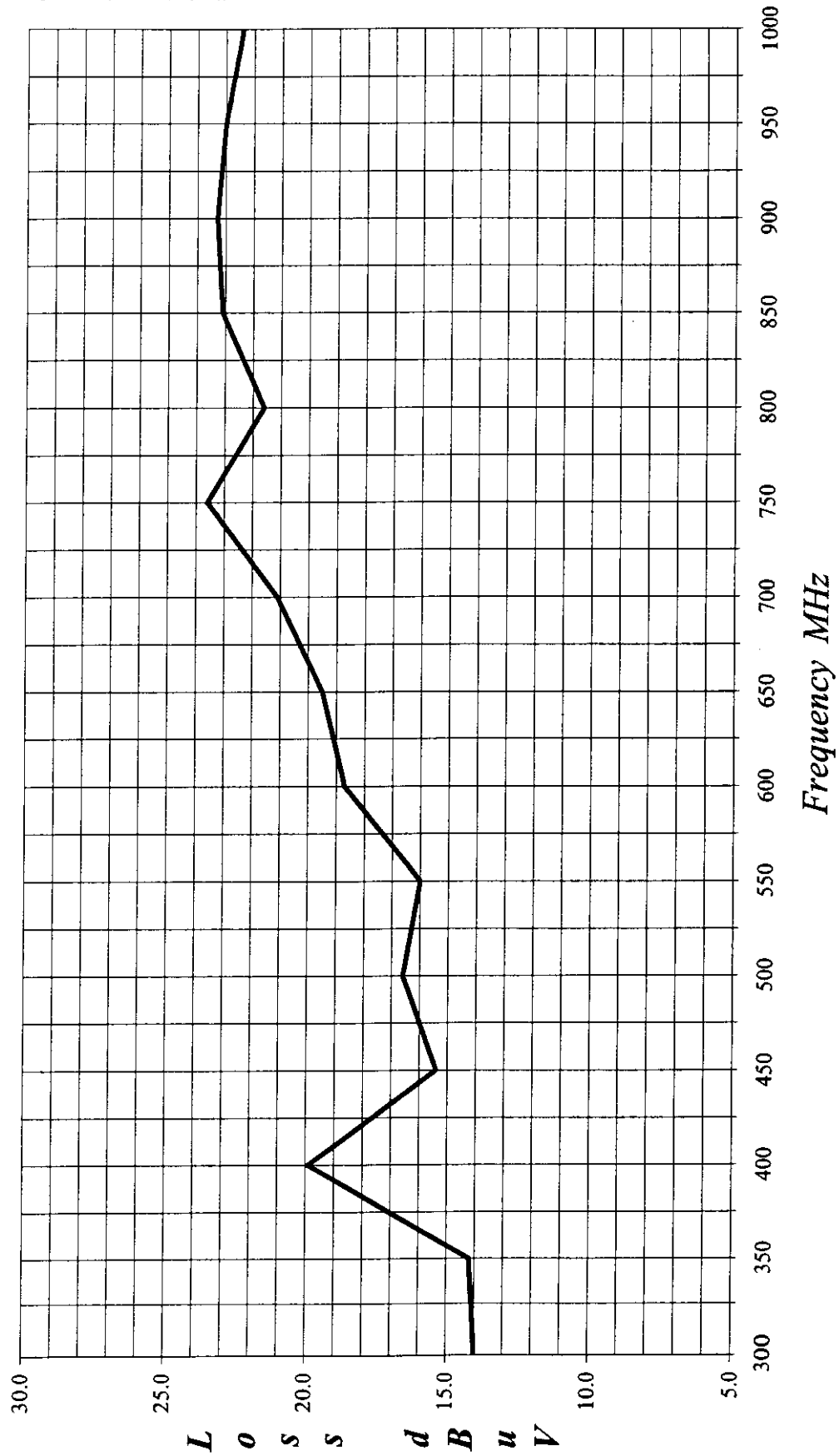
Cal: 3/24/98

LAB "D" BICONICAL ANTENNA AB-100 S/N 01548





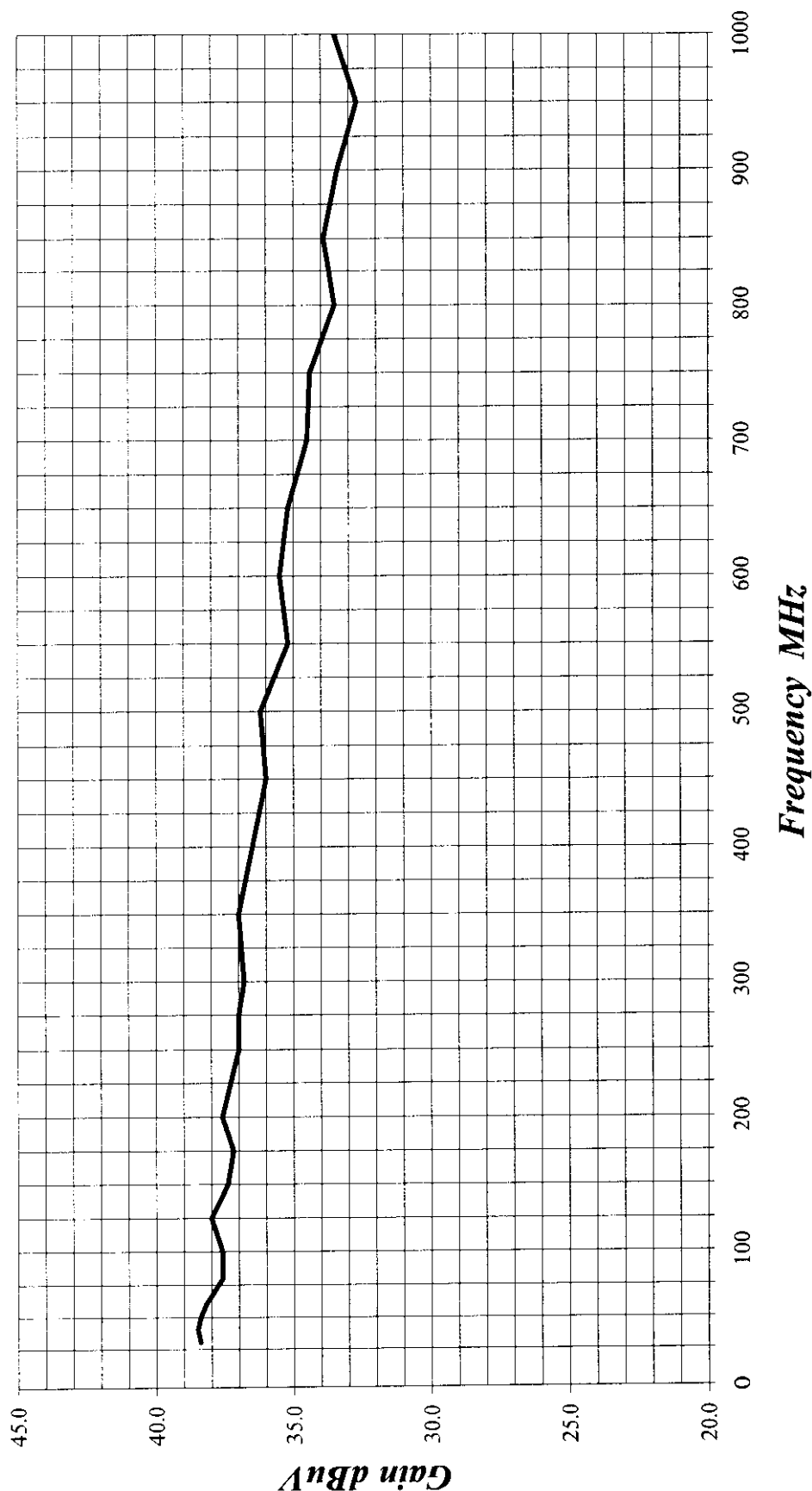
LAB "D" LOG PERIODIC ANTENNA AL-100 S/N 01012





Lab "D" Effective: 2/16/98 Effective Gain = Preamplifier Gain - Cable Loss

**PREAMPLIFIER EFFECTIVE GAIN AT 3 METERS PA-102 S/N:
1017**



COM-POWER PA-122
MICROWAVE PREAMPLIFIER

S/N: 001

CALIBRATION DATE: MARCH 31, 1998

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	33.0	8.0	31.4
1.1	33.0	8.5	30.5
1.2	32.9	9.0	31.4
1.3	32.9	9.5	32.6
1.4	32.8	10.0	33.1
1.5	32.7	10.5	32.1
1.6	33.0	11.0	31.0
1.7	33.0	11.5	31.0
1.8	33.1	12.0	30.9
1.9	32.9	12.5	30.9
2.0	33.1	13.0	30.4
2.5	32.7	13.5	31.0
3.0	32.4	14.0	29.3
3.5	32.1	14.5	28.5
4.0	31.8	15.0	27.6
4.5	31.5	15.5	27.6
5.0	31.6	16.0	27.3
5.5	32.0	16.5	29.3
6.0	31.6	17.0	30.4
6.5	32.0	17.5	31.1
7.0	31.4	18.0	29.7
7.5	32.0	18.5	29.3

Com-Power Corporation		
	(714) 587-9800	
	Antenna Calibration	
Antenna Type:	Loop Antenna	
Model:	AL-130	
Serial Number:	25309	
Calibration Date:	2/5/98	
Frequency MHz	Magnetic (dB/m)	Electric dB/m
0.01	-40.5	11.0
0.02	-41.6	9.9
0.03	-40.0	11.5
0.04	-40.3	11.2
0.05	-41.6	9.9
0.06	-41.1	10.4
0.07	-41.3	10.2
0.08	-41.6	9.9
0.09	-41.7	9.8
0.1	-41.8	9.7
0.2	-44.0	7.5
0.3	-41.6	9.9
0.4	-41.7	9.8
0.5	-41.7	9.8
0.6	-41.5	10.0
0.7	-41.5	10.0
0.8	-41.6	9.9
0.9	-41.6	9.9
1	-41.1	10.4
2	-40.7	10.8
3	-40.7	10.8
4	-40.9	10.6
5	-40.1	11.4
6	-40.0	11.5
7	-40.3	11.2
8	-39.8	11.7
9	-38.8	12.7
10	-40.8	10.7
12	-41.4	10.1
14	-41.4	10.1
15	-40.9	10.6
16	-40.8	10.7
18	-41.5	10.0
20	-41.5	10.0
25	-41.2	10.3
30	-41.4	10.1
Trans. Antenna Height	2 meter	
Receiving Antenna Height	2 meter	



11317 Frederick Avenue, Beltsville, MD 20705

FCC ID: AAL-TC-925

E-FIELD ANTENNA FACTOR CALIBRATION

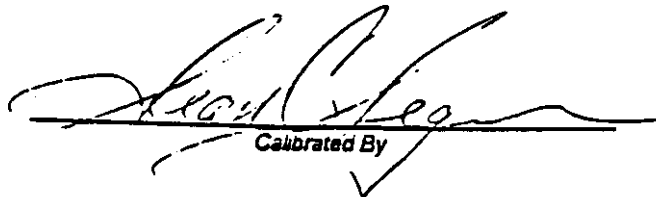
$$E(\text{dB V/m}) = V_o(\text{dB V}) + AFE(\text{dB/m})$$

Model number : DRG-118/A

Frequency GHz	AFE dB/m	Gain dBi
1	22.3	8.0
2	26.7	9.5
3	29.7	10.1
4	29.5	12.8
5	32.3	12.0
6	32.4	13.4
7	36.1	11.0
8	37.4	10.9
9	36.8	12.5
10	39.5	10.7
11	39.6	11.5
12	39.8	12.0
13	39.7	12.8
14	41.8	11.3
15	41.9	11.9
16	38.1	16.3
17	41.0	13.9
18	46.5	8.9

Serial number : 1053
Job number : 96-092
Remarks : 3 meter calibration
Standards : LPD-118/A, TE-1000

Temperature : 72° F
Humidity : 56 %
Traceability : A01887
Date : December 08, 1995


Calibrated By