

FCC PART 15, SUBPART C
TEST REPORT
for
REMOTE TRANSMITTER
Model: OL900

Prepared for

C.E. ELECTRONICS, INC.
614 EAST EDGERTON STREET
BRYAN, OHIO 43506

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KYLE FUJIMOTO

Approved by: Scott McCutchan

SCOTT McCUTCHAN

COMPATIBLE ELECTRONICS INC.
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BREA, CALIFORNIA 92823
(714) 579-0500

DATE: JULY 24, 2000

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	16	2	2	9	13	2	44

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TABLE OF CONTENTS

Section / Title	PAGE
GENERAL REPORT SUMMARY	4
SUMMARY OF TEST RESULTS	4
1. PURPOSE	5
2. ADMINISTRATIVE DATA	6
2.1 Location of Testing	6
2.2 Traceability Statement	6
2.3 Cognizant Personnel	6
2.4 Date Test Sample was Received	6
2.5 Disposition of the Test Sample	6
2.6 Abbreviations and Acronyms	6
3. APPLICABLE DOCUMENTS	7
4. Description of Test Configuration	8
4.1 Description of Test Configuration - EMI	8
4.1.1 Cable Construction and Termination	9
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT	10
5.1 EUT and Accessory List	10
5.2 EMI Test Equipment	11
6. TEST SITE DESCRIPTION	12
6.1 Test Facility Description	12
6.2 EUT Mounting, Bonding and Grounding	12
7. Test Procedures	13
7.1 Radiated Emissions (Spurious and Harmonics) Test	13
7.2 Band Edge Plots of the Low and High Channels	15
8. CONCLUSIONS	16



LIST OF APPENDICES

APPENDIX	TITLE
A	Modifications to the EUT
B	Additional Models Covered Under This Report
C	Diagrams, Charts and Photos • Test Setup Diagrams • Radiated Emissions Photos • Antenna and Effective Gain Factors
D	Data Sheets
E	Lab Recognitions

LIST OF FIGURES

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



GENERAL REPORT SUMMARY

This electromagnetic emission 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 with the written permission of Compatible Electronics.

This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Device Tested: Remote Transmitter
Model: OL900
P/N: OL900-2

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Manufacturer: C.E. Electronics, Inc.
614 East Edgerton Street
Bryan, Ohio 43506

Test Date: July 24, 2000

Test Specifications: EMI requirements
CFR Title 47, Part 15 Subpart C, Sections 15.205 and 15.249

Test Procedure: ANSI C63.4: 1992

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

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 450 kHz - 30 MHz	The EUT runs off a battery only and cannot be plugged into the AC public mains. Therefore, this test was not performed.
2	Radiated RF Emissions, 10 kHz - 9300 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.249



1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Remote Transmitter Model: OL900. 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 equipment under test, referred to as EUT hereafter, are within the specification limits defined by CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.249.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

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

C.E. Electronics, Inc.

Garry L. Courtney	President
Tony Casterline	Engineer

Compatible Electronics Inc.

Kyle Fujimoto	Test Engineer
Scott McCutchan	Lab Manager

2.4 Date Test Sample was Received

The test sample was received on July 20, 2000.

2.5 Disposition of the Test Sample

The test sample has not been returned to C.E. Electronics, Inc. as of July 24, 2000.

2.6 Abbreviations and Acronyms

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

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



3. APPLICABLE DOCUMENTS

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

SPEC	TITLE
CFR Title 47, Subpart C.	FCC Rules – Radio frequency devices – Intentional Radiators
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

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

The Remote Transmitter Model: OL900 (EUT) was tested as a stand alone unit. The EUT was transmitting on a continuous basis. The antenna connector on the EUT has a reverse polarity SMA connector.

Note: The EUT is usually mounted vertically to either a wall or the side of the lift structure. Therefore, the EUT was tested in its Y axis. The EUT is NOT a hand held device.

The final radiated data was taken in the mode above. Please see Appendix D for the data sheets.



4.1.1 Cable Construction and Termination

There are no external cables connected to the EUT.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
REMOTE TRANSMITTER (EUT)	C.E. ELECTRONICS, INC.	OL900	P/N: OL900-2	O4O-OL900-2



5.2 EMI Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Spectrum Analyzer	Hewlett Packard	8566B	3701A22262	June 24, 2000	June 24, 2001
Preamplifier	Com Power	PA-102	1017	Jan. 11, 2000	Jan. 11, 2001
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	June 24, 2000	June 24, 2001
RF Attenuator	Sertek	412-10	N/A	Nov. 22, 1999	Nov. 22, 2000
LISN	Com Power	LI-215	12075	Nov. 13, 1999	Nov. 13, 2000
LISN	Com Power	LI-215	12078	Nov. 13, 1999	Nov. 13, 2000
Biconical Antenna	Com Power	AB-100	1548	Oct. 14, 1999	Oct. 14, 2000
Log Periodic Antenna	Com Power	AL-100	16039	Oct. 14, 1999	Oct. 14, 2000
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	D5251A 888	US74458128	N/A	N/A
Microwave Preamplifier	Com-Power	PA-122	25195	Jan. 13, 2000	Jan. 13, 2001
Horn Antenna	Antenna Research	DRG-118/A	1053	Dec. 8, 1995	N/A
Loop Antenna	Com-Power	AL-130	25309	May 25, 2000	May 25, 2001



6. TEST SITE DESCRIPTION

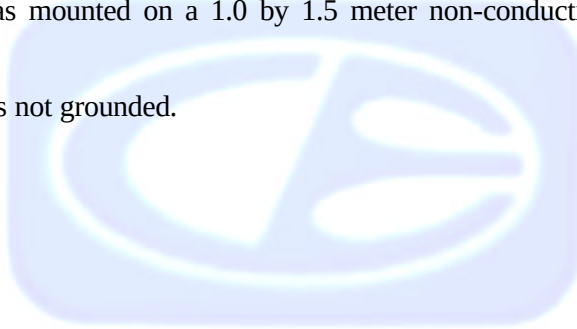
6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above 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 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 from 30 MHz to 1 GHz, and the Com-Power Microwave Preamplifier Model: PA-122 was used for frequencies above 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.

For the peak readings below 1000 MHz that were within 3 dB of the spec limit or higher, the quasi-peak adapter was used.

For the peak readings above 1000 MHz that were within 3dB of the spec limit or higher, the readings were averaged manually by narrowing the video filter down to 10 Hz and slowing the sweep time to keep the amplitude reading calibrated.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 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 9.3 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.



Radiated Emissions (Spurious and Harmonics) Test (con't)

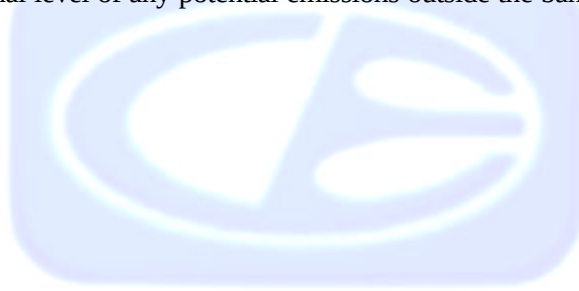
The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from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



7.2 Band Edge Plots of the Low and High Channels

Spectral plots of both the low and high channels were taken of the EUT to show that the emissions at the band edges (902 and 928 MHz) were attenuated by at least 50 dB below the level of the fundamental or to the general radiated emissions limits in FCC Title 47, Subpart C, section 15.209, whichever is the lesser attenuation. Please see Appendix D for the spectral plots and data sheets.

The spectral plots were taken at a distance of 3 meters, using the PA-102 Preamplifier to boost the signal level of any potential emissions outside the band edges.



8. CONCLUSIONS

The Remote Transmitter Model: OL900 meets all of the specification limits defined in CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.249.



APPENDIX A

MODIFICATIONS TO THE EUT



MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.



APPENDIX B

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***



ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Remote Transmitter

Model: OL900

P/N: OL900-2

There were no additional models covered under this report.



APPENDIX C

DIAGRAMS, CHARTS AND PHOTOS



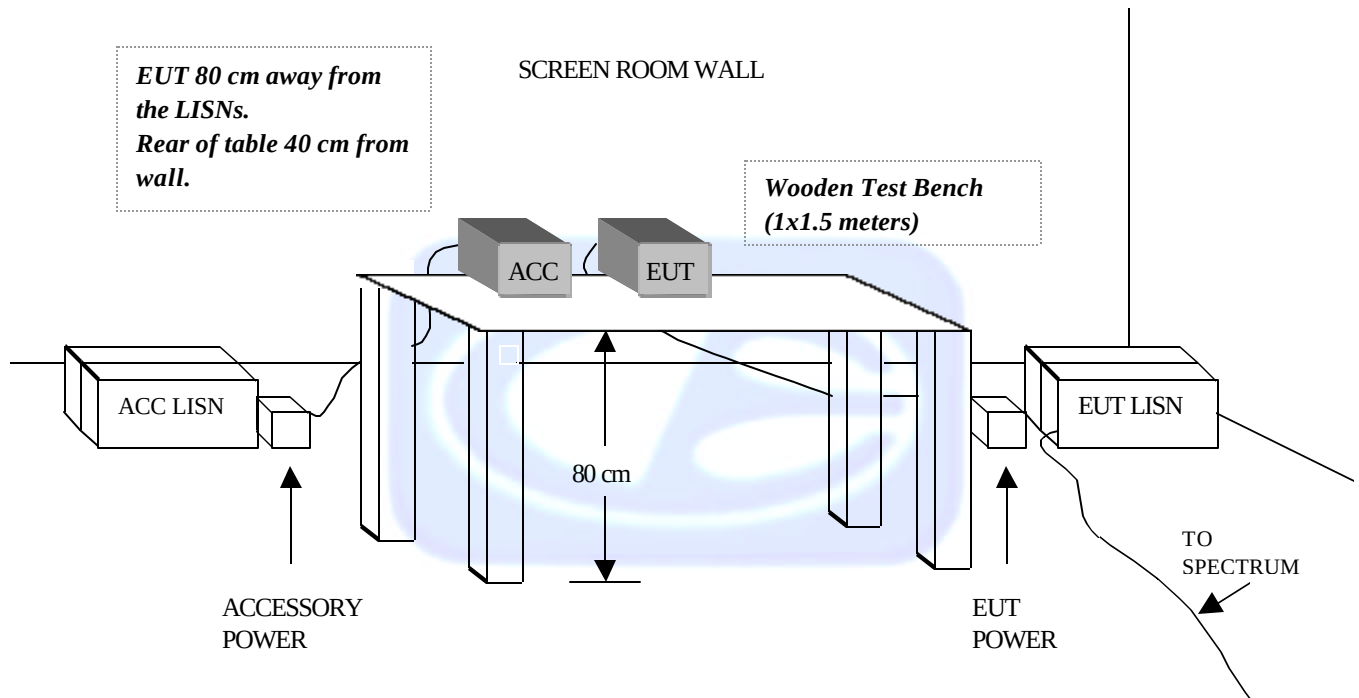
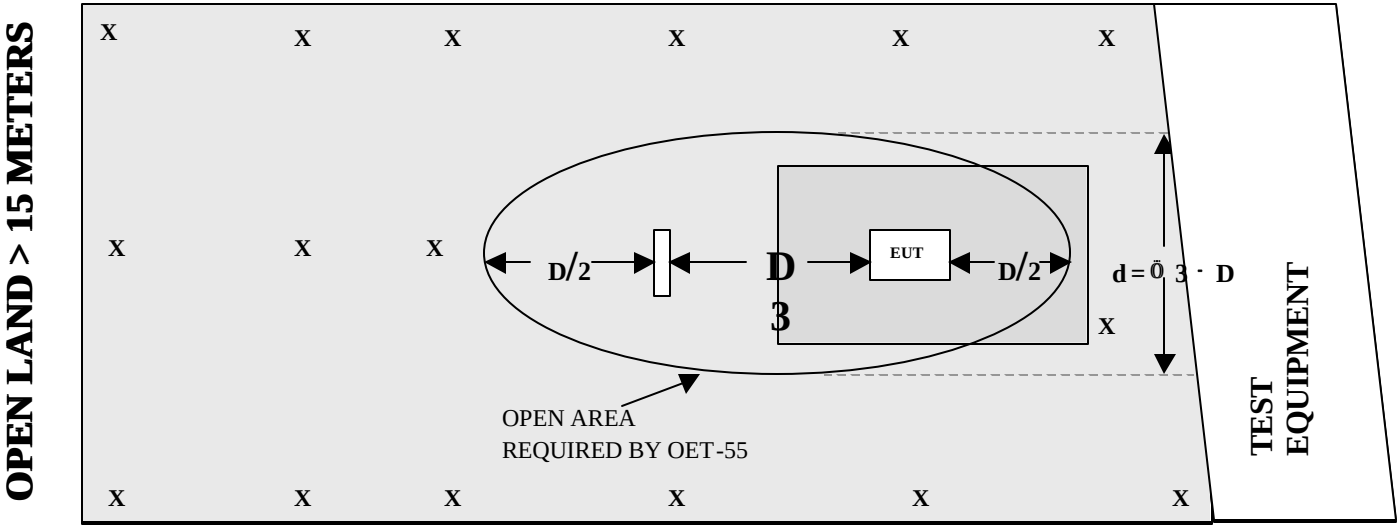
FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE

OPEN LAND > 15 METERS



OPEN LAND ≥ 15 METERS

X	= GROUND RODS		= GROUND SCREEN
D	= TEST DISTANCE (meters)		= WOOD COVER





FRONT VIEW

C.E. ELECTRONICS, INC.

REMOTE TRANSMITTER

MODEL: OL900

FCC SUBPART C - RADIATED EMISSIONS – 7-24-00

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**





REAR VIEW

C.E. ELECTRONICS, INC.

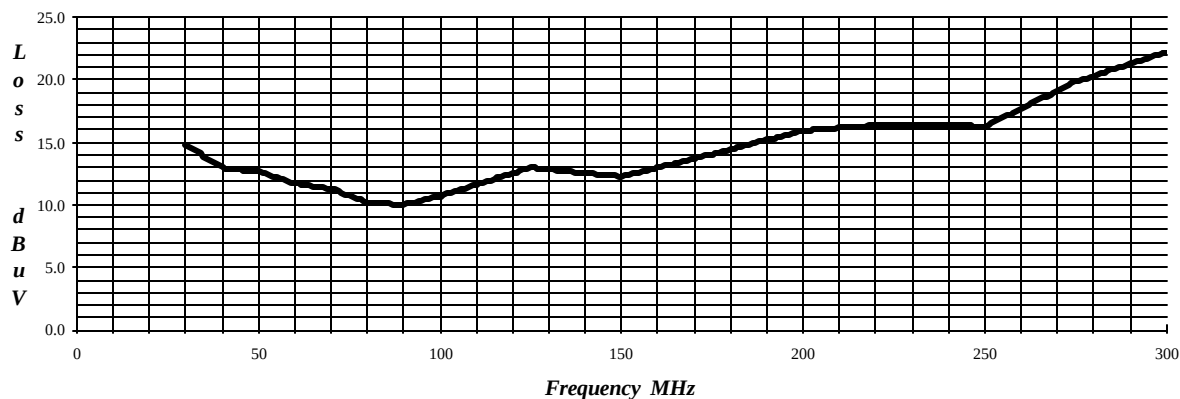
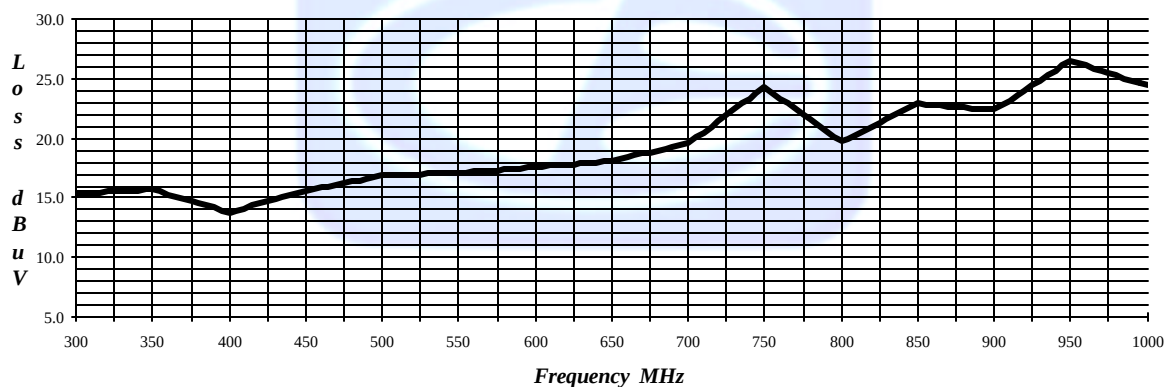
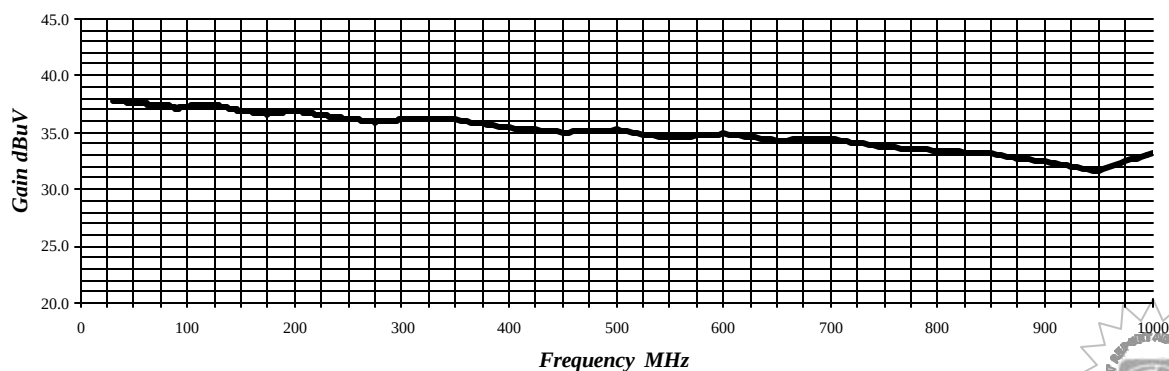
REMOTE TRANSMITTER

MODEL: OL900

FCC SUBPART C - RADIATED EMISSIONS – 7-24-00

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



LAB "D" BICONICAL ANTENNA AB-100 S/N 01548 Cal: 10-14-99**LAB "D" LOG PERIODIC ANTENNA AL-100 S/N 16039 Cal: 10-14-99****PREAMPLIFIER EFFECTIVE GAIN AT 3 METERS PA-102 S/N: 1017 Lab "D"**
Effective 1-16-99

COM-POWER PA-122

MICROWAVE PREAMPLIFIER

S/N: 25195

CALIBRATION DATE: JANUARY 13, 2000

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	34.4	9.0	30.7
1.1	34.1	9.5	31.5
1.2	34.2	10.0	31.0
1.3	34.1	10.5	31.4
1.4	33.9	11.0	30.7
1.5	33.8	11.5	29.5
1.6	33.0	12.0	27.8
1.7	33.3	12.5	31.4
1.8	33.3	13.0	31.0
1.9	31.9	13.5	31.0
2.0	32.7	14.0	31.5
2.5	31.8	14.5	30.2
3.0	31.7	15.0	29.2
3.5	31.9	15.5	30.1
4.0	31.0	16.0	29.0
4.5	31.4	16.5	27.8
5.0	31.1	17.0	30.8
5.5	31.0	17.5	31.5
6.0	32.0	18.0	30.8
6.5	31.6		
7.0	32.3		
7.5	32.9		
8.0	32.1		
8.5	31.6		



E-FIELD ANTENNA FACTOR CALIBRATION

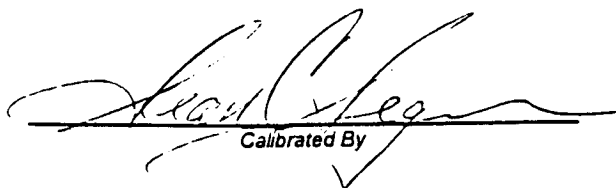
$$E(\text{dB V/m}) = V_o(\text{dB V}) + AFE(\text{dB/m})$$

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

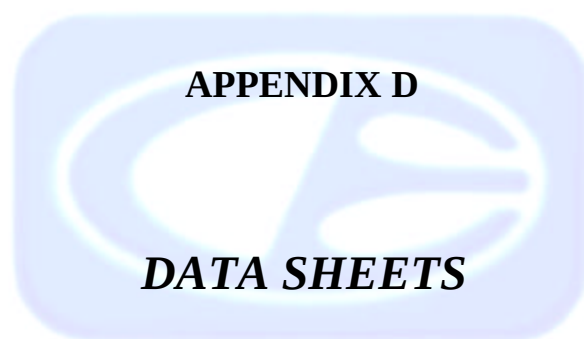

Calibrated By

Com-Power Corporation

(949) 587-9800

Antenna Calibration

Antenna Type:		Loop Antenna
Model:		AL-130
Serial Number:		25309
Calibration Date:		05/25/00
Frequency MHz	Magnetic (dB/m)	Electric dB/m
0.009	-41.0	10.5
0.01	-41.0	10.5
0.02	-41.9	9.6
0.05	-41.9	9.6
0.075	-41.8	9.7
0.1	-42.2	9.3
0.15	-42.2	9.3
0.25	-40.7	10.8
0.5	-42.1	9.4
0.75	-40.9	10.6
1	-41.3	10.2
2	-40.8	10.7
3	-41.1	10.4
4	-41.2	10.3
5	-40.7	10.8
10	-40.6	10.9
15	-42.0	9.5
20	-42.0	9.5
25	-42.9	8.6
30	-42.3	9.2
Trans. Antenna Height		2 meter
Receiving Antenna Height		2 meter



RADIATED EMISSIONS
DATA SHEETS



RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)



COMPATIBLE
ELECTRONICS

COMPANY	C.E. ELECTRONICS, INC.	DATE	7/24/00
EUT	REMOTE TRANSMITTER	DUTY CYCLE	0.00 %
MODEL	OL900	PEAK TO AVG	0 dB
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
903.3000	51.8	51.7 QP	H	1.0	180	Y	LOW	22.7	4.6	0.0	79.0	-15.0	94.0	
903.3000	64.0	63.9 QP	V	1.0	270	Y	LOW	22.7	4.6	0.0	91.2	-2.8	94.0	
912.3000	53.1	53.0 QP	H	1.0	90	Y	MID	23.4	4.6	0.0	81.0	-13.0	94.0	
912.3000	65.3	65.2 QP	V	1.0	90	Y	MID	23.4	4.6	0.0	93.2	-0.8	94.0	
921.3000	54.8	54.7 QP	H	1.0	180	Y	HIGH	24.2	4.6	0.0	83.5	-10.5	94.0	
921.3000	63.4	63.3 QP	V	1.0	225	Y	HIGH	24.2	4.6	0.0	92.1	-1.9	94.0	

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

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)

COMPANY	C.E. ELECTRONICS, INC.	DATE	7/24/00
EUT	REMOTE TRANSMITTER	DUTY CYCLE	0.00 %
MODEL	OL900	PEAK TO AVG	0 dB
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
1806.6000	43.4	A	H	1.0	0	Y	LOW	24.5	3.5	33.3	38.1	-15.9	54.0	
1806.6000	47.0	A	V	1.0	0	Y	LOW	24.5	3.5	33.3	41.7	-12.3	54.0	
1824.6000	41.9	A	H	2.0	270	Y	MID	24.5	3.5	33.3	36.6	-17.4	54.0	
1824.6000	47.5	A	V	1.0	90	Y	MID	24.5	3.5	33.3	42.2	-11.8	54.0	
1842.6000	37.5	A	H	1.0	0	Y	HIGH	24.5	3.5	33.3	32.2	-21.8	54.0	
1842.6000	54.6	A	V	1.0	270	Y	HIGH	24.5	3.5	33.3	49.3	-4.7	54.0	

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

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RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)

COMPANY	C.E. ELECTRONICS, INC.	DATE	7/24/00
EUT	REMOTE TRANSMITTER	DUTY CYCLE	0.00 %
MODEL	OL900	PEAK TO AVG	0 dB
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2709.9000	44.2	A	H	1.0	0	Y	LOW	28.2	4.5	31.8	45.1	-8.9	54.0	
2709.9000	47.7	A	V	1.0	0	Y	LOW	28.2	4.5	31.8	48.6	-5.4	54.0	
2736.9000	41.2	A	H	1.0	180	Y	MID	28.2	4.5	31.8	42.1	-11.9	54.0	
2736.9000	51.3	50.2 A	V	1.0	0	Y	MID	28.2	4.5	31.8	51.1	-2.9	54.0	
2763.9000	40.8	A	H	1.0	0	Y	HIGH	29.7	4.6	31.7	43.4	-10.6	54.0	
2763.9000	40.5	A	V	1.0	0	Y	HIGH	29.7	4.6	31.7	43.1	-10.9	54.0	

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

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)

COMPANY	C.E. ELECTRONICS, INC.	DATE	7/24/00
EUT	REMOTE TRANSMITTER	DUTY CYCLE	0.00 %
MODEL	OL900	PEAK TO AVG	0 dB
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
3613.2000	37.5	A	H	1.0	90	Y	LOW	29.6	5.0	31.9	40.2	-13.8	54.0	
3613.2000	36.8	A	V	1.0	180	Y	LOW	29.6	5.0	31.9	39.5	-14.5	54.0	
3649.2000	38.6	A	H	1.0	90	Y	MID	29.6	5.0	31.9	41.3	-12.7	54.0	
3649.2000	40.7	A	V	1.0	0	Y	MID	29.6	5.0	31.9	43.4	-10.6	54.0	
3685.2000	36.9	A	H	1.0	90	Y	HIGH	29.6	6.0	42.9	29.6	-24.4	54.0	
3685.2000	41.0	A	V	1.0	0	Y	HIGH	29.6	6.0	42.9	33.7	-20.3	54.0	

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

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)



COMPATIBLE
ELECTRONICS

COMPANY	C.E. ELECTRONICS, INC.	DATE	7/24/00
EUT	REMOTE TRANSMITTER	DUTY CYCLE	0.00 %
MODEL	OL900	PEAK TO AVG	0 dB
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
4516.5000	38.9	A	H	1.0	270	Y	LOW	30.9	5.6	31.4	44.0	-10.0	54.0	
4516.5000	39.7	A	V	1.0	90	Y	LOW	30.9	5.6	31.4	44.8	-9.2	54.0	
4561.5000	38.5	A	H	1.0	90	Y	MID	30.9	5.6	31.4	43.6	-10.4	54.0	
4561.5000	41.3	A	V	1.0	0	Y	MID	30.9	5.6	31.4	46.4	-7.6	54.0	
4606.5000	40.0	A	H	1.0	90	Y	HIGH	30.9	5.6	31.4	45.1	-8.9	54.0	
4606.5000	40.2	A	V	1.0	0	Y	HIGH	30.9	5.6	31.4	45.3	-8.7	54.0	

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

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)



COMPATIBLE
ELECTRONICS

COMPANY	C.E. ELECTRONICS, INC.	DATE	7/24/00
EUT	REMOTE TRANSMITTER	DUTY CYCLE	0.00 %
MODEL	OL900	PEAK TO AVG	0 dB
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
5419.8000	38.3	A	H	1.0	90	Y	LOW	32.4	6.0	31.0	45.7	-8.3	54.0	
5419.8000	38.5	A	V	1.0	0	Y	LOW	32.4	6.0	31.0	45.9	-8.1	54.0	
5473.8000	40.0	A	H	1.0	90	Y	MID	32.4	6.0	31.0	47.4	-6.6	54.0	
5473.8000	40.2	A	V	1.0	180	Y	MID	32.4	6.0	31.0	47.6	-6.4	54.0	
5527.8000	35.8	A	H	1.0	180	Y	HIGH	32.4	6.0	31.0	43.2	-10.8	54.0	
5527.8000	40.5	A	V	1.0	0	Y	HIGH	32.4	6.0	31.0	47.9	-6.1	54.0	

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

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)



COMPATIBLE
ELECTRONICS

COMPANY	C.E. ELECTRONICS, INC.	DATE	7/24/00
EUT	REMOTE TRANSMITTER	DUTY CYCLE	0.00 %
MODEL	OL900	PEAK TO AVG	0 dB
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
6323.1000	38.7	A	H	1.0	180	Y	LOW	34.3	6.9	31.6	48.3	-5.7	54.0	
6323.1000	40.4	A	V	1.0	90	Y	LOW	34.3	6.9	31.6	50.0	-4.0	54.0	
6386.1000	38.0	A	H	1.0	0	Y	MID	34.3	6.9	31.6	47.6	-6.4	54.0	
6386.1000	40.0	A	V	1.0	180	Y	MID	34.3	6.9	31.6	49.6	-4.4	54.0	
6449.1000	37.5	A	H	1.0	90	Y	HIGH	34.3	6.9	31.6	47.1	-6.9	54.0	
6449.1000	40.1	A	V	1.0	0	Y	HIGH	34.3	6.9	31.6	49.7	-4.3	54.0	

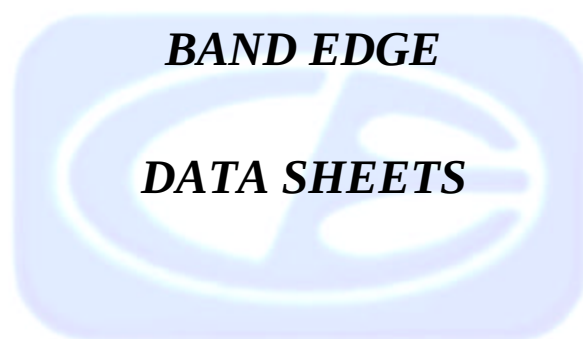
* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
 ** DELTA = SPEC LIMIT - CORRECTED READING

No Harmonics Nor Emissions found
 After the 7th Harmonic for all channels



Test location: Compatible Electronics
Customer : C.E. ELECTRONICS, INC.
Manufacturer : C.E. ELECTRONICS, INC.
EUT name : REMOTE TRANSMITTER
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
TEMPERATURE 77 DEGREES F.
RELATIVE HUMIDITY 45%
TESTED BY: Kyle Fujimoto
KYLE FUJIMOTO

NO SPURIOUS EMISSIONS FOUND FOR THE EUT
FROM 10 kHz TO 9300 MHz IN EITHER POLARIZATION



BAND EDGE OF LOW CHANNEL
REF 110.0 dBμV ATTN 20 dB

MKR 902.01 MHz
43.10 dBμV

hp

10 dB/

DL
101.0
dBμV

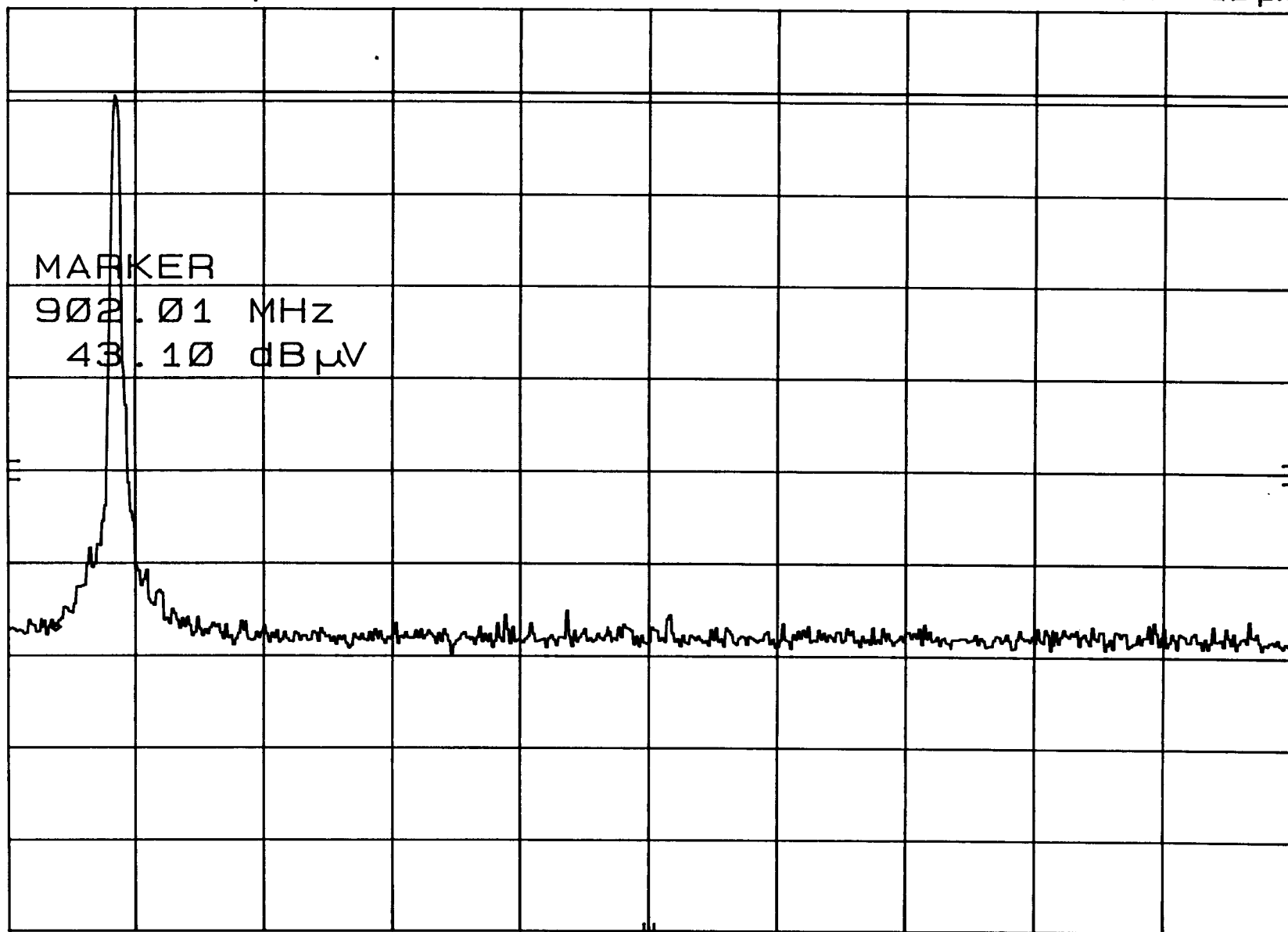
MARKER
902.01 MHz
43.10 dBμV

CORR'D

START 901.0 MHz
RES BW 1 MHz

VBW 1 MHz

STOP 929.0 MHz
SWP 20.0 msec



BAND EDGE OF HIGH CHANNEL
REF 110.0 dB μ V ATTN 20 dB

MKR 921.33 MHz
101.00 dB μ V

hp
10 dB/

DL
101.0
dB μ V

MARKER
921.33 MHz
101.00 dB μ V

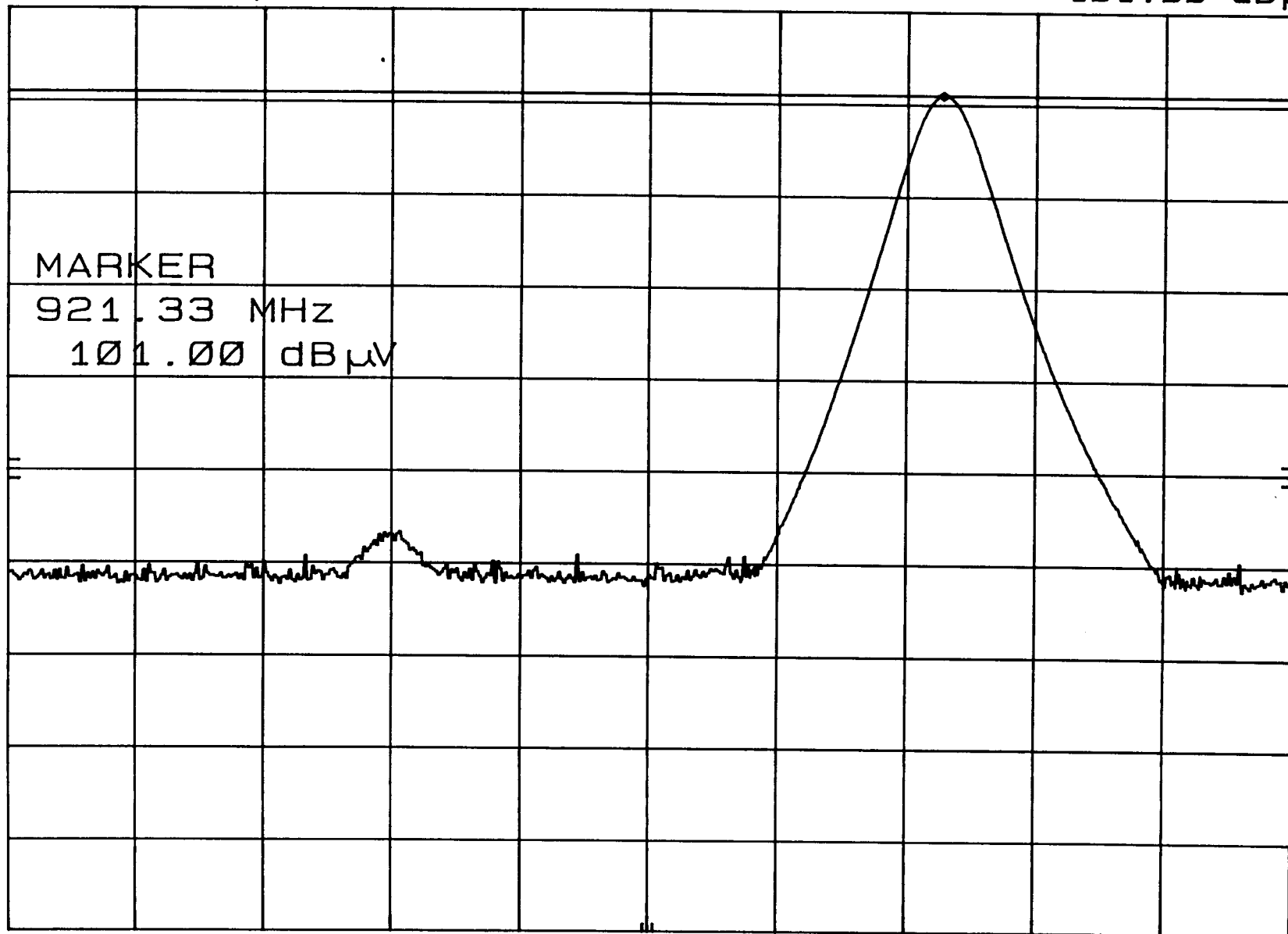
CORR'D

START 901.0 MHz

RES BW 1 MHz

VBW 1 MHz

STOP 929.0 MHz
SWP 20.0 msec





LAB RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200063-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

Technology International (Europe) Ltd.

