FCC PART 15, SUBPART C
TEST METHOD: ANSI C63.4-1992

for

INFINITY START SYSTEM
WIRELESS MICROPHONE

Model: INF-MIC

Prepared for

COLORADO TIME SYSTEMS, INC.
1551 EAST 11TH STREET
LOVELAND, COLORADO 80537-5056

Prepared by:_____

KYLE FUJIMOTO

Approved by:_____

SCOTT McCUTCHAN

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114 OLINDA DRIVE
BREA, CALIFORNIA 92823
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DATE: JANUARY 2, 1999

	REPORT	APPENDICES				TOTAL
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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:	Infinity Start System Wireless Microphone Model: INF-MIC S/N: 32/98-0001
Product Description:	The EUT is a wireless microphone used for public address and to activate a horn for swimming meets.
Modifications:	The EUT was not modified during the testing.
Manufacturer:	Colorado Time Systems, Inc. 1551 East 11th Street Loveland, Colorado 80537-5056
Test Dates:	December 29 and 30, 1998
Test Specifications:	EMI requirements FCC 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	This test was not performed because the EUT runs off a nine volt battery only and cannot be powered by any device that runs off of the AC public mains.
2	Radiated RF Emissions, 10 kHz - 9300 MHz	Complies with the of FCC 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 Infinity Start System Wireless Microphone Model: INF-MIC. 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 FCC 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

Colorado Time Systems, Inc.

Amy Wright	Engineer
Paul von der Lippe	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 December 29, 1998

2.5 Disposition of the Test Sample

The test sample was returned to Colorado Time Systems, Inc. on December 31, 1998.

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
FCC Title 47, Subpart C.	FCC Rules - Radio frequency devices (including digital 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 Infinity Start System Wireless Microphone Model: INF-MIC (EUT) was tested as a stand alone unit in three different orthogonal axis. The EUT was continuously transmitting during the test. The antenna connector on the PCB has a reverse SMA connector. During the initial investigation, the emissions were investigated with just the yellow push-to-talk thumb switch held down (for public address purposes) and with both the yellow push-to-talk thumb switch and red Start button held down at the same time (to activate the horn indicating the Start of the race). The emissions were at their highest level when just the yellow push-to-talk thumb switch was held down.

Note: The EUT will not activate when only the red start button is held down.

Final radiated data was taken in the mode above.

4.1.1 Cable Construction and Termination

There were no cables attached 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
INFINITY START SYSTEM WIRELESS MICROPHONE (EUT)	COLORADO TIME SYSTEMS, INC.	INF-MIC	32/98-0001	JQR0002

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Spectrum Analyzer	Hewlett Packard	8566B	3638A08784	Nov. 16, 1998	May 16, 1999
Preamplifier	Com Power	PA-102	1017	Feb. 16, 1998	Feb. 16, 1999
Quasi-Peak Adapter	Hewlett Packard	85650A	3303A01688	June 23, 1998	June 23, 1999
RF Attenuator	Com-Power	A-410	1602	Nov. 25, 1998	Nov. 25, 1999
LISN	Com Power	LI-200	1764	Jan. 3, 1998	Jan. 3, 1999
LISN	Com Power	LI-200	1771	Jan. 3, 1998	Jan. 3, 1999
LISN	Com Power	LI-200	1775	Jan. 3, 1998	Jan. 3, 1999
LISN	Com Power	LI-200	1780	Jan. 3, 1998	Jan. 3, 1999
Biconical Antenna	Com Power	AB-100	1548	Oct. 15, 1998	Oct. 15, 1999
Log Periodic Antenna	Com Power	AL-100	1117	Oct. 15, 1998	Oct. 15, 1999
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	2925S33268	N/A	N/A
Plotter	Hewlett Packard	7440A	8726K38417	N/A	N/A
Microwave Amplifier	Com-Power	PA-122	25321	Oct. 13, 1998	Oct. 13, 1999
Horn Antenna	Antenna Research	DRG-118/A	1053	Dec. 8, 1995	N/A
Loop Antenna	Com-Power	AL-130	25309	Feb. 5, 1998	Feb. 5, 1999

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 Amplifier 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. The quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets. The frequencies above 1 GHz were averaged manually by narrowing the video filter down to 1 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
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 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.

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.

8. CONCLUSIONS

The Infinity Start System Wireless Microphone Model: INF-MIC meets all of the specification limits defined in FCC 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 15.231 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.

Modifications:

No modifications were made to the EUT.

APPENDIX B

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

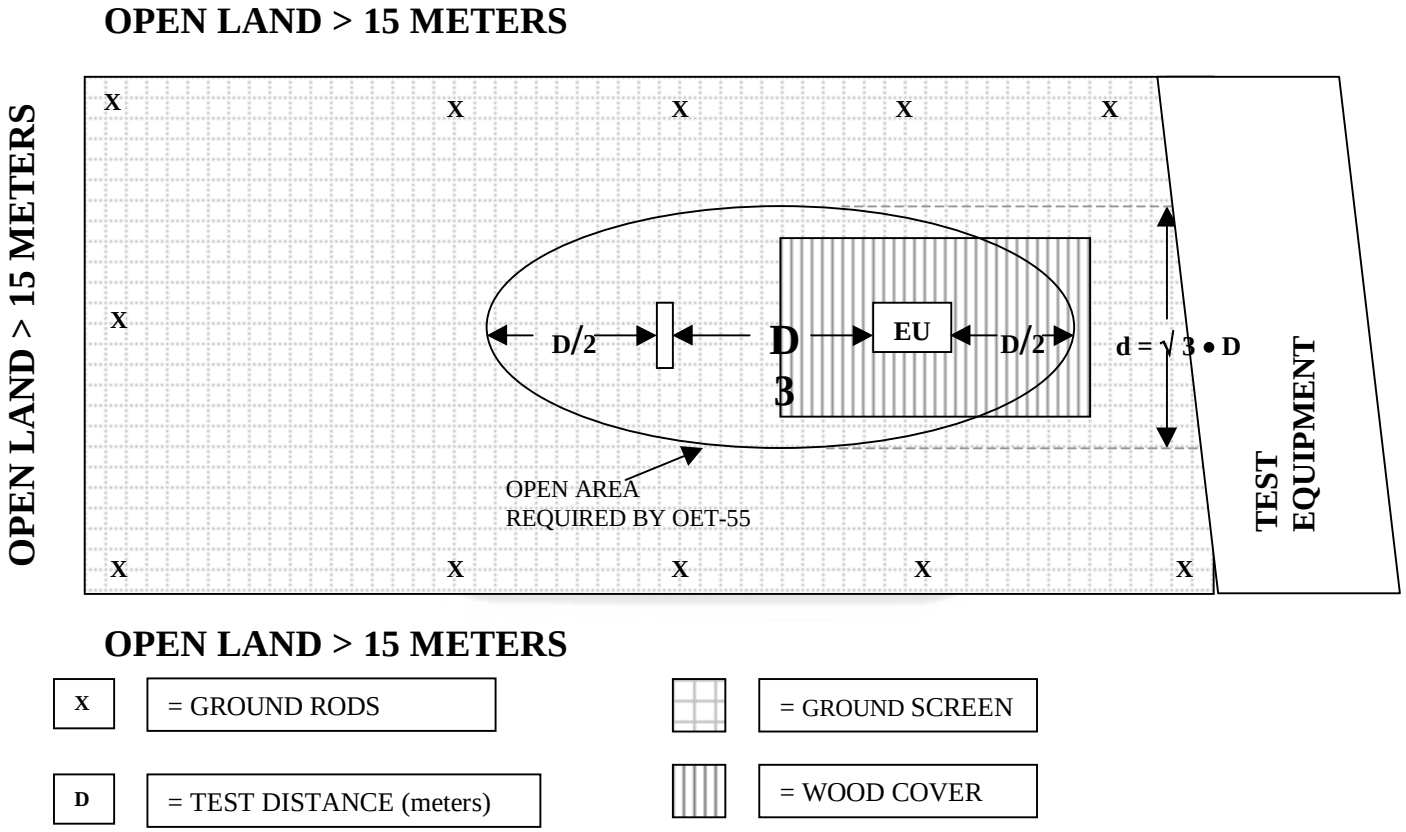
USED FOR THE PRIMARY TEST	Infinity Start System Wireless Microphone Model: INF-MIC S/N: N/A

There were no additional models covered under this report.

APPENDIX C

DIAGRAMS, CHARTS AND PHOTOS

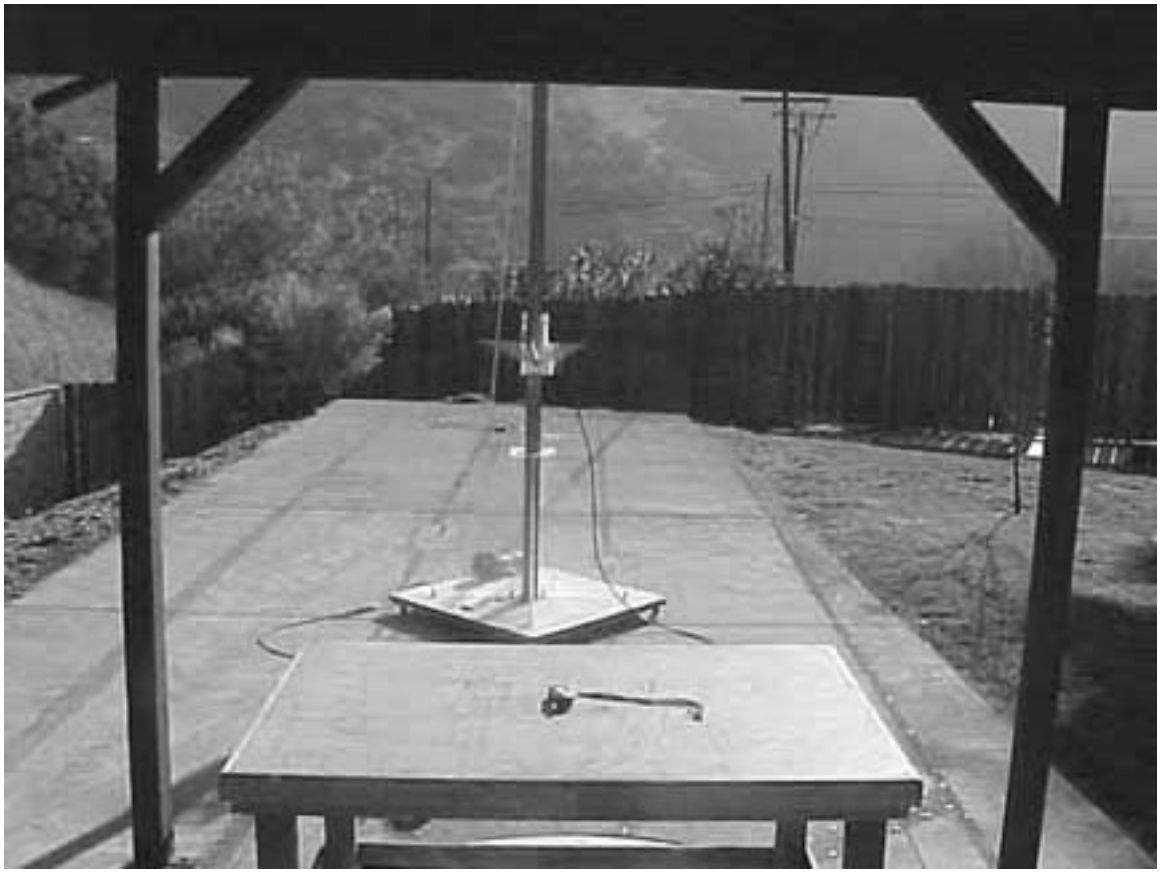
FIGURE 1: PLOT MAP AND LAYOUT OF RADIATED SITE



FRONT VIEW

COLORADO TIME SYSTEMS, INC.
INFINITY START SYSTEM WIRELESS MICROPHONE
Model: INF-MIC
FCC SUBPART C - RADIATED EMISSIONS – 12-29-98 and 12-30-98

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



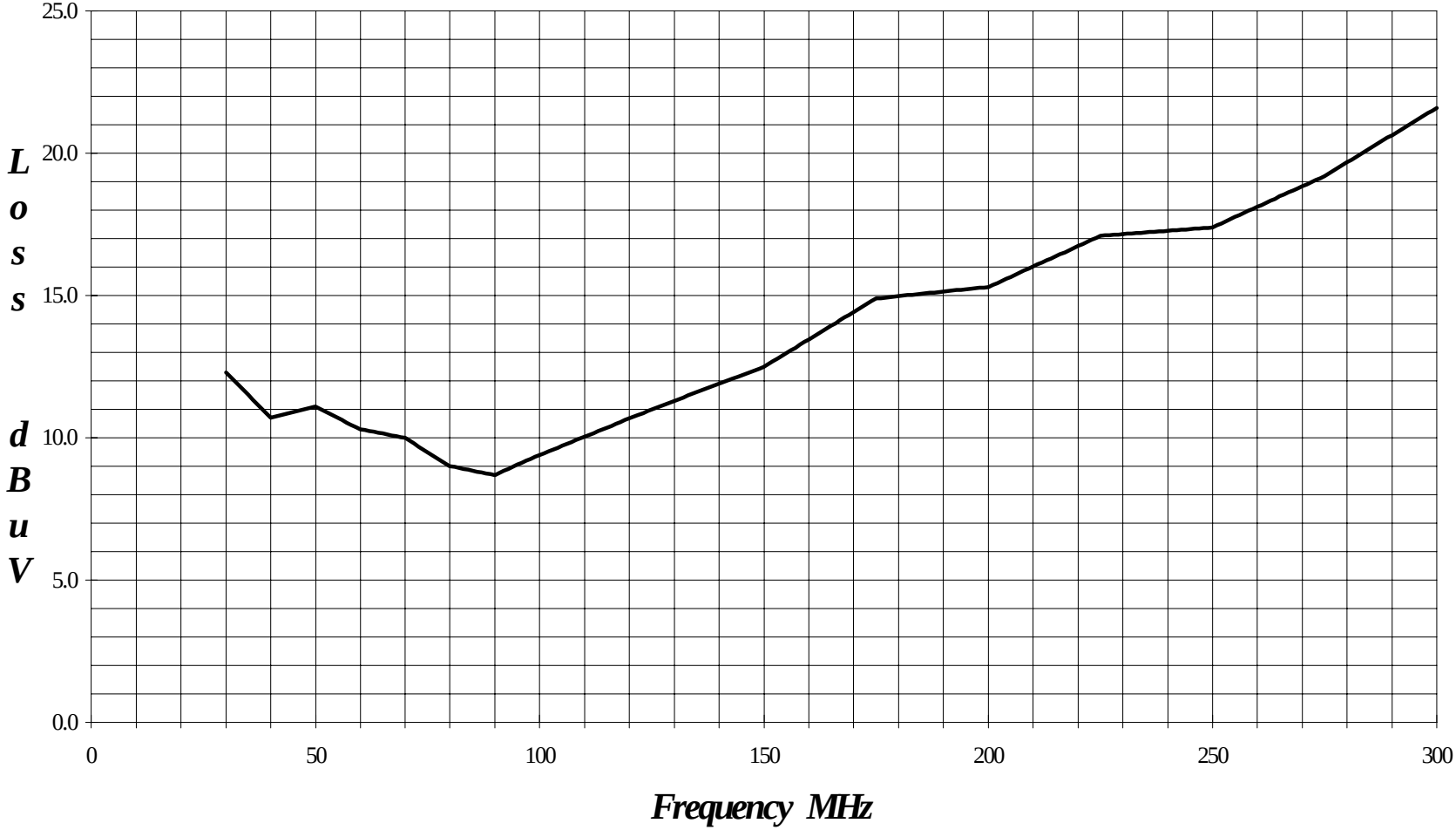
REAR VIEW

COLORADO TIME SYSTEMS, INC.
INFINITY START SYSTEM WIRELESS MICROPHONE
Model: INF-MIC
FCC SUBPART C - RADIATED EMISSIONS – 12-29-98 and 12-30-98

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

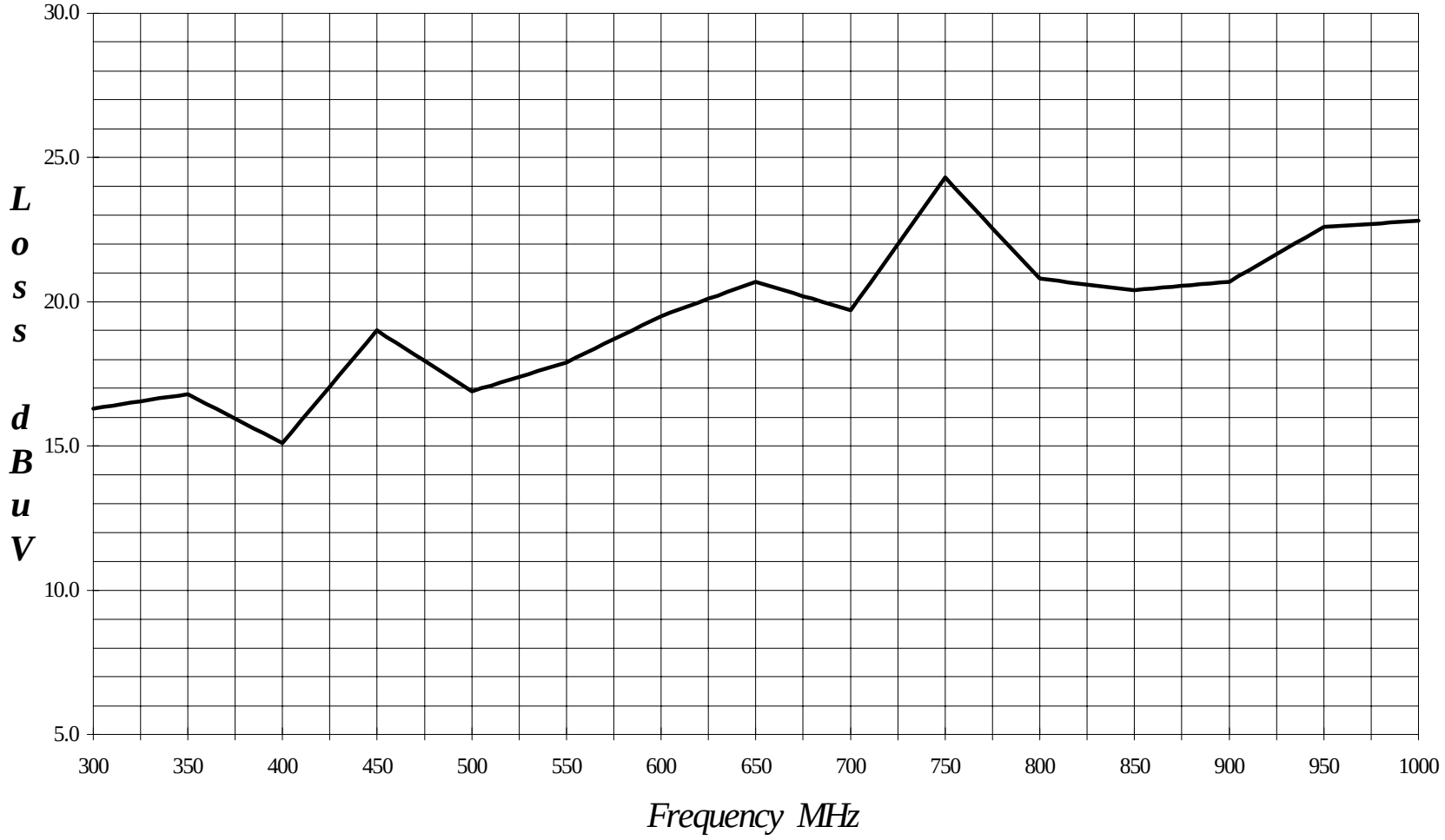
***Cal*: 10/15/98**

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



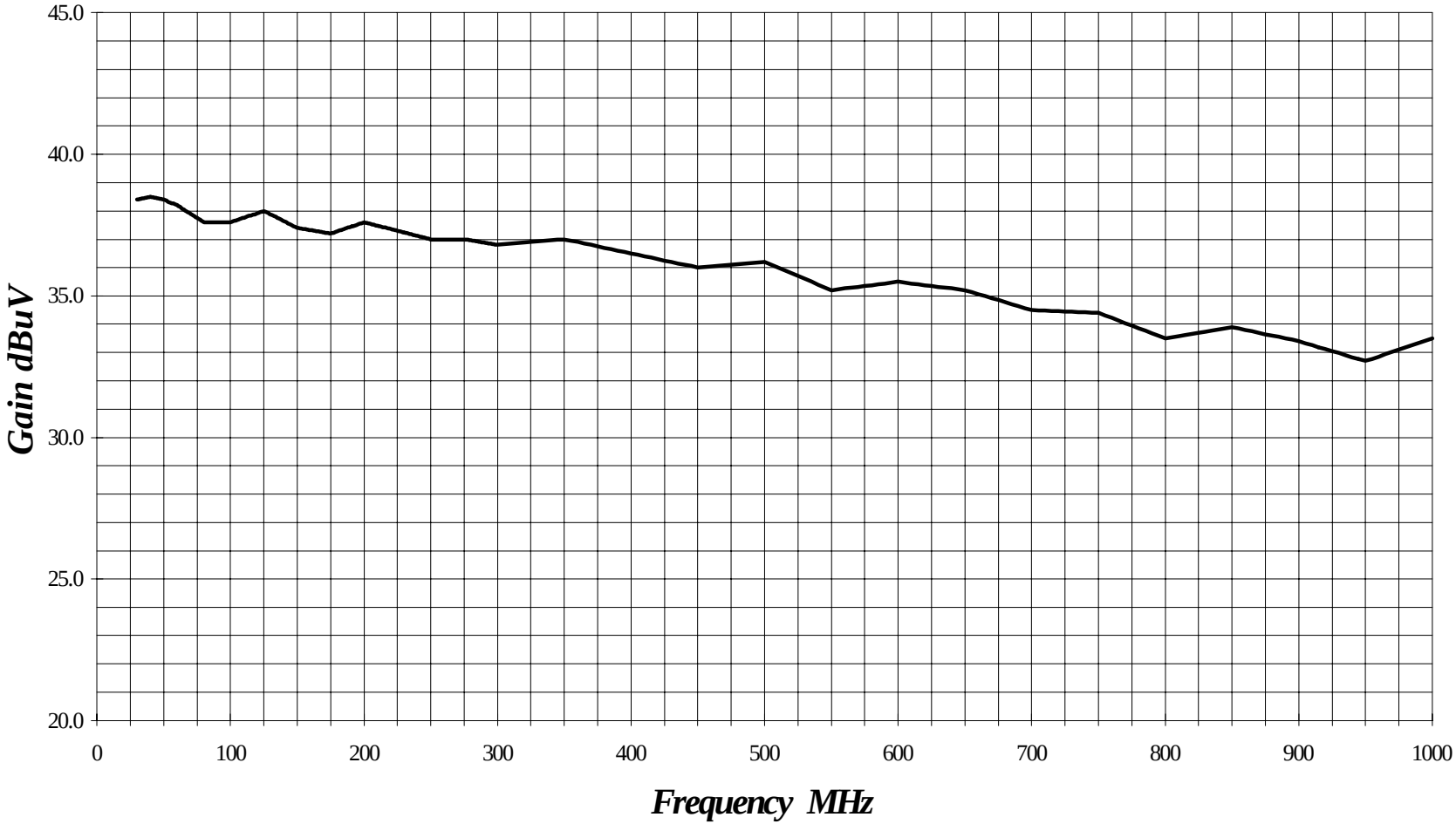
***Cal*: 10/15/98**

LAB "D" LOG PERIODIC ANTENNA AL-100 S/N 01117



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: 25132

CALIBRATION DATE: OCTOBER 13, 1998

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	33.7	8.0	32.9
1.1	33.5	8.5	32.7
1.2	33.5	9.0	33.2
1.3	33.6	9.5	33.7
1.4	33.5	10.0	34.6
1.5	33.0	10.5	32.7
1.6	33.4	11.0	30.8
1.7	33.5	11.5	32.1
1.8	33.6	12.0	31.7
1.9	33.5	12.5	32.9
2.0	33.9	13.0	27.8
2.5	33.9	13.5	30.7
3.0	33.6	14.0	30.4
3.5	33.5	14.5	31.7
4.0	33.4	15.0	32.2
4.5	32.9	15.5	34.0
5.0	32.4	16.0	31.6
5.5	32.7	16.5	32.7
6.0	33.6	17.0	31.7
6.5	32.5	17.5	31.2
7.0	33.0	18.0	30.2
7.5	33.7		

ANTENNA RESEARCH ASSOCIATES, INC.
11317 Frederick Avenue, Beltsville, MD 20705

E-FIELD ANTENNA FACTOR CALIBRATION

E(dB V/m) = Vo(dB V) + AFE(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

(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

APPENDIX D

DATA SHEETS

RADIATED EMISSIONS (FCC SUBPART C, SECTION 15.249)

COMPANY	**COLORADO TIME SYTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**LOG PERIODIC**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MIDDLE, AND HIGH CHANNELS**	**LAB**	**D**

Frequency MHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
903.41	93.8	93.7	1.0	180	0.0	20.8	4.1	37.5	81.1	-12.9	94.0	**Low Channel / Y Axis**
903.41	86.4	86.3	1.0	90	0.0	20.8	4.1	37.5	73.7	-20.3	94.0	**Low Channel / X Axis**
903.41	87.8	87.7	1.0	270	0.0	20.8	4.1	37.5	75.1	-18.9	94.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
903.41	86.4	86.3	1.5	0	0.0	20.8	4.1	37.5	73.7	-20.3	94.0	**Low Channel / Y Axis**
903.41	94.2	94.1	1.0	270	0.0	20.8	4.1	37.5	81.5	-12.5	94.0	**Low Channel / X Axis**
903.41	93.6	93.0	1.0	90	0.0	20.8	4.1	37.5	80.4	-13.6	94.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
912.43	93.5	93.4	2.0	90	0.0	21.5	4.2	37.3	81.8	-12.2	94.0	**Mid Channel / Y Axis**
912.43	86.9	86.8	1.5	0	0.0	21.5	4.2	37.3	75.2	-18.8	94.0	**Mid Channel / X Axis**
912.43	87.2	87.1	1.0	90	0.0	21.5	4.2	37.3	75.5	-18.5	94.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
912.43	83.6	83.5	1.0	90	0.0	21.5	4.2	37.3	71.9	-22.1	94.0	**Mid Channel / Y Axis**
912.43	92.7	92.6	1.0	90	0.0	21.5	4.2	37.3	81.0	-13.0	94.0	**Mid Channel / X Axis**
912.43	91.2	91.1	2.0	90	0.0	21.5	4.2	37.3	79.5	-14.5	94.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
921.46	94.6	94.5	1.0	0	0.0	21.5	4.2	37.3	82.9	-11.1	94.0	**High Channel / Y Axis**
921.46	86.5	86.3	1.5	0	0.0	21.5	4.2	37.3	74.7	-19.3	94.0	**High Channel / X Axis**
921.46	87.2	87.0	1.5	0	0.0	21.5	4.2	37.3	75.4	-18.6	94.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
921.46	83.9	83.8	1.5	0	0.0	21.5	4.2	37.3	72.2	-21.8	94.0	**High Channel / Y Axis**
921.46	93.5	93.4	2.0	270	0.0	21.5	4.2	37.3	81.8	-12.2	94.0	**High Channel / X Axis**
921.46	95.3	95.2	1.5	90	0.0	21.5	4.2	37.3	83.6	-10.4	94.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED. ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

RADIATED EMISSIONS

COMPANY	**COLORADO TIME SYTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MIDDLE, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
1.81	44.6	38.8	1.5	90	0.0	24.5	5.9	33.6	35.6	-18.4	54.0	**Low Channel / Y Axis**
1.81	44.2	36.5	1.0	90	0.0	24.5	5.9	33.6	33.3	-20.7	54.0	**Low Channel / X Axis**
1.81	47.7	43.8	1.0	90	0.0	24.5	5.9	33.6	40.6	-13.4	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
1.81	44.5	36.6	1.0	90	0.0	24.5	5.9	33.6	33.4	-20.6	54.0	**Low Channel / Y Axis**
1.81	42.1	31.2	2.0	90	0.0	24.5	5.9	33.6	28.0	-26.0	54.0	**Low Channel / X Axis**
1.81	47.5	42.9	1.0	90	0.0	24.5	5.9	33.6	39.7	-14.3	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
1.82	44.6	37.6	3.0	90	0.0	24.5	5.9	33.6	34.4	-19.6	54.0	**Mid Channel / Y Axis**
1.82	42.9	35.1	2.0	90	0.0	24.5	5.9	33.6	31.9	-22.1	54.0	**Mid Channel / X Axis**
1.82	47.4	42.0	2.0	90	0.0	24.5	5.9	33.6	38.8	-15.2	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
1.82	45.8	40.2	2.5	90	0.0	24.5	5.9	33.6	37.0	-17.0	54.0	**Mid Channel / Y Axis**
1.82	44.6	36.5	2.0	90	0.0	24.5	5.9	33.6	33.3	-20.7	54.0	**Mid Channel / X Axis**
1.82	43.8	35.2	2.5	90	0.0	24.5	5.9	33.6	32.0	-22.0	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
1.84	43.4	33.3	1.5	180	0.0	21.5	4.2	37.3	21.7	-32.3	54.0	**High Channel / Y Axis**
1.84	41.2	32.9	1.5	90	0.0	21.5	4.2	37.3	21.3	-32.7	54.0	**High Channel / X Axis**
1.84	42.0	30.8	1.5	180	0.0	21.5	4.2	37.3	19.2	-34.8	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
1.84	43.7	34.3	1.0	90	0.0	24.5	5.9	33.6	31.1	-22.9	54.0	**High Channel / Y Axis**
1.84	42.7	31.3	2.0	90	0.0	24.5	5.9	33.6	28.1	-25.9	54.0	**High Channel / X Axis**
1.84	41.5	33.5	3.0	90	0.0	24.5	5.9	33.6	30.3	-23.7	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED, ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

RADIATED EMISSIONS

COMPANY	**COLORADO TIME SYTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MIDDLE, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
2.71	42.5	34.1	1.5	270	0.0	28.2	5.5	33.9	33.9	-20.1	54.0	**Low Channel / Y Axis**
2.71	41.9	33.3	2.0	90	0.0	28.2	5.5	33.9	33.1	-20.9	54.0	**Low Channel / X Axis**
2.71	46.3	41.2	1.0	90	0.0	28.2	5.5	33.9	41.0	-13.0	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
2.71	45.1	36.9	1.0	90	0.0	28.2	5.5	33.9	36.7	-17.3	54.0	**Low Channel / Y Axis**
2.71	39.2	30.8	1.0	0	0.0	28.2	5.5	33.9	30.6	-23.4	54.0	**Low Channel / X Axis**
2.71	45.0	39.1	1.0	90	0.0	28.2	5.5	33.9	38.9	-15.1	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
2.74	43.7	34.4	2.0	0	0.0	28.2	5.5	33.9	34.2	-19.8	54.0	**Mid Channel / Y Axis**
2.74	43.3	33.6	2.0	90	0.0	28.2	5.5	33.9	33.4	-20.6	54.0	**Mid Channel / X Axis**
2.74	44.8	36.5	2.0	90	0.0	28.2	5.5	33.9	36.3	-17.7	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
2.74	45.9	40.1	2.5	180	0.0	28.2	5.5	33.9	39.9	-14.1	54.0	**Mid Channel / Y Axis**
2.74	42.8	31.1	1.0	90	0.0	28.2	5.5	33.9	30.9	-23.1	54.0	**Mid Channel / X Axis**
2.74	40.3	31.4	2.0	90	0.0	28.2	5.5	33.9	31.2	-22.8	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
2.76	41.6	34.3	1.5	180	0.0	29.7	6.4	33.6	36.8	-17.2	54.0	**High Channel / Y Axis**
2.76	42.8	31.7	1.0	90	0.0	29.7	6.4	33.6	34.2	-19.8	54.0	**High Channel / X Axis**
2.76	43.2	33.4	3.0	270	0.0	29.7	6.4	33.6	35.9	-18.1	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
2.76	44.4	36.1	3.0	0	0.0	29.7	6.4	33.6	38.6	-15.4	54.0	**High Channel / Y Axis**
2.76	39.5	31.3	3.0	90	0.0	29.7	6.4	33.6	33.8	-20.2	54.0	**High Channel / X Axis**
2.76	44.1	33.3	3.0	90	0.0	29.7	6.4	33.6	35.8	-18.2	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED, ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

RADIATED EMISSIONS

COMPANY	**COLORADO TIME SYTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MIDDLE, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
3.61	40.5	29.5	1.0	90	0.0	29.6	6.9	33.5	32.5	-21.5	54.0	**Low Channel / Y Axis**
3.61	35.8	28.6	1.5	90	0.0	29.6	6.9	33.5	31.6	-22.4	54.0	**Low Channel / X Axis**
3.61	41.8	33.2	1.5	90	0.0	29.6	6.9	33.5	36.2	-17.8	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
3.61	36.5	29.4	1.0	90	0.0	29.6	6.9	33.5	32.4	-21.6	54.0	**Low Channel / Y Axis**
3.61	38.2	28.6	1.0	90	0.0	29.6	6.9	33.5	31.6	-22.4	54.0	**Low Channel / X Axis**
3.61	39.0	30.1	1.0	90	0.0	29.6	6.9	33.5	33.1	-20.9	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
3.65	43.5	35.8	2.0	0	0.0	29.6	6.9	33.5	38.8	-15.2	54.0	**Mid Channel / Y Axis**
3.65	41.0	31.5	1.5	90	0.0	29.6	6.9	33.5	34.5	-19.5	54.0	**Mid Channel / X Axis**
3.65	41.4	32.6	3.0	0	0.0	29.6	6.9	33.5	35.6	-18.4	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
3.65	44.0	37.5	2.5	90	0.0	29.6	6.9	33.5	40.5	-13.5	54.0	**Mid Channel / Y Axis**
3.65	40.4	30.0	2.0	180	0.0	29.6	6.9	33.5	33.0	-21.0	54.0	**Mid Channel / X Axis**
3.65	40.7	30.4	1.0	90	0.0	29.6	6.9	33.5	33.4	-20.6	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
3.69	42.5	34.0	1.0	90	0.0	29.6	6.9	33.5	37.0	-17.0	54.0	**High Channel / Y Axis**
3.69	42.1	34.5	3.0	180	0.0	29.6	6.9	33.5	37.5	-16.5	54.0	**High Channel / X Axis**
3.69	41.8	33.5	3.0	90	0.0	29.6	6.9	33.5	36.5	-17.5	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
3.69	43.2	35.7	3.0	90	0.0	29.6	6.9	33.5	38.7	-15.3	54.0	**High Channel / Y Axis**
3.69	39.4	31.2	2.5	90	0.0	29.6	6.9	33.5	34.2	-19.8	54.0	**High Channel / X Axis**
3.69	37.6	29.3	3.0	90	0.0	29.6	6.9	33.5	32.3	-21.7	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED, ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

RADIATED EMISSIONS

COMPANY	**COLORADO TIME SYTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MIDDLE, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
4.52	43.3	34.8	1.5	0	0.0	30.9	8.6	32.9	41.4	-12.6	54.0	**Low Channel / Y Axis**
4.52	39.6	30.5	1.0	0	0.0	30.9	8.6	32.9	37.1	-16.9	54.0	**Low Channel / X Axis**
4.52	40.4	31.3	1.5	270	0.0	30.9	8.6	32.9	37.9	-16.1	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
4.52	37.4	28.9	1.0	90	0.0	30.9	8.6	32.9	35.5	-18.5	54.0	**Low Channel / Y Axis**
4.52	36.3	28.9	1.0	90	0.0	30.9	8.6	32.9	35.5	-18.5	54.0	**Low Channel / X Axis**
4.52	40.5	31.4	1.0	90	0.0	30.9	8.6	32.9	38.0	-16.0	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
4.56	36.9	29.6	1.0	90	0.0	30.9	8.6	32.9	36.2	-17.8	54.0	**Mid Channel / Y Axis**
4.56	39.5	30.3	1.0	90	0.0	30.9	8.6	32.9	36.9	-17.1	54.0	**Mid Channel / X Axis**
4.56	41.3	29.3	1.0	90	0.0	30.9	8.6	32.9	35.9	-18.1	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
4.56	41.3	31.0	1.0	90	0.0	30.9	8.6	32.9	37.6	-16.4	54.0	**Mid Channel / Y Axis**
4.56	37.3	29.1	1.0	180	0.0	30.9	8.6	32.9	35.7	-18.3	54.0	**Mid Channel / X Axis**
4.56	41.2	30.8	2.0	90	0.0	30.9	8.6	32.9	37.4	-16.6	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
4.60	40.6	31.6	1.5	180	0.0	30.9	8.6	32.9	38.2	-15.8	54.0	**High Channel / Y Axis**
4.60	39.1	28.9	1.0	90	0.0	30.9	8.6	32.9	35.5	-18.5	54.0	**High Channel / X Axis**
4.60	38.3	31.0	3.0	90	0.0	30.9	8.6	32.9	37.6	-16.4	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
4.60	37.7	28.9	1.0	90	0.0	30.9	8.6	32.9	35.5	-18.5	54.0	**High Channel / Y Axis**
4.60	38.7	29.1	1.0	90	0.0	30.9	8.6	32.9	35.7	-18.3	54.0	**High Channel / X Axis**
4.60	40.2	29.7	2.0	90	0.0	30.9	8.6	32.9	36.3	-17.7	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED, ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

RADIATED EMISSIONS (FCC SUBPART C, SECTION 15.249)

COMPANY	**COLORADO TIME SYSTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MEDIUM, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
5.42	38.1	31.4	1.0	90	0.0	32.4	9.2	32.7	40.3	-13.7	54.0	**Low Channel / Y Axis**
5.42	35.7	29.2	1.0	0	0.0	32.4	9.2	32.7	38.1	-15.9	54.0	**Low Channel / X Axis**
5.42	42.5	32.9	1.0	90	0.0	32.4	9.2	32.7	41.8	-12.2	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
5.42	39.1	29.0	1.5	0	0.0	32.4	9.2	32.7	37.9	-16.1	54.0	**Low Channel / Y Axis**
5.42	38.1	29.0	1.5	90	0.0	32.4	9.2	32.7	37.9	-16.1	54.0	**Low Channel / X Axis**
5.42	39.9	30.0	1.5	90	0.0	32.4	9.2	32.7	38.9	-15.1	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
5.47	37.5	28.0	1.5	0	0.0	32.4	9.2	32.7	36.9	-17.1	54.0	**Mid Channel / Y Axis**
5.47	37.3	27.8	1.0	90	0.0	32.4	9.2	32.7	36.7	-17.3	54.0	**Mid Channel / X Axis**
5.47	34.8	27.3	2.0	90	0.0	32.4	9.2	32.7	36.2	-17.8	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
5.47	35.9	29.5	1.0	180	0.0	32.4	9.2	32.7	38.4	-15.6	54.0	**Mid Channel / Y Axis**
5.47	37.0	27.2	1.0	90	0.0	32.4	9.2	32.7	36.1	-17.9	54.0	**Mid Channel / X Axis**
5.47	36.1	27.5	2.0	90	0.0	32.4	9.2	32.7	36.4	-17.6	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
5.52	38.3	27.2	1.0	0	0.0	32.4	9.2	32.7	36.1	-17.9	54.0	**High Channel / Y Axis**
5.52	36.9	27.3	1.0	90	0.0	32.4	9.2	32.7	36.2	-17.8	54.0	**High Channel / X Axis**
5.52	35.1	28.1	2.0	90	0.0	32.4	9.2	32.7	37.0	-17.0	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
5.52	38.3	27.6	1.0	0	0.0	32.4	9.2	32.7	36.5	-17.5	54.0	**High Channel / Y Axis**
5.52	36.3	27.5	1.0	90	0.0	32.4	9.2	32.7	36.4	-17.6	54.0	**High Channel / X Axis**
5.52	36.9	27.4	1.0	90	0.0	32.4	9.2	32.7	36.3	-17.7	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED, ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

RADIATED EMISSIONS

COMPANY	**COLORADO TIME SYSTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MEDIUM, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
6.32	44.3	35.6	1.5	0	0.0	34.3	10.3	32.5	47.7	-6.3	54.0	**Low Channel / Y Axis**
6.32	44.6	36.6	1.5	90	0.0	34.3	10.3	32.5	48.7	-5.3	54.0	**Low Channel / X Axis**
6.32	45.4	38.3	1.5	90	0.0	34.3	10.3	32.5	50.4	-3.6	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
6.32	46.0	40.4	2.0	90	42.3	34.3	10.3	32.5	52.5	-1.5	54.0	**Low Channel / Y Axis**
6.32	40.9	32.0	2.0	0	0.0	34.3	10.3	32.5	44.1	-9.9	54.0	**Low Channel / X Axis**
6.32	45.1	36.5	1.5	180	0.0	34.3	10.3	32.5	48.6	-5.4	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
6.39	42.8	33.9	3.0	0	0.0	34.3	10.3	32.5	46.0	-8.0	54.0	**Mid Channel / Y Axis**
6.39	44.6	36.7	3.0	90	0.0	34.3	10.3	32.5	48.8	-5.2	54.0	**Mid Channel / X Axis**
6.39	45.3	39.0	3.0	90	0.0	34.3	10.3	32.5	51.1	-2.9	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
6.39	46.7	40.5	1.0	90	0.0	34.3	10.3	32.5	52.6	-1.4	54.0	**Mid Channel / Y Axis**
6.39	41.1	31.2	2.0	90	0.0	34.3	10.3	32.5	43.3	-10.7	54.0	**Mid Channel / X Axis**
6.39	43.1	34.5	2.0	90	0.0	34.3	10.3	32.5	46.6	-7.4	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
6.45	43.2	34.5	1.5	0	0.0	34.3	10.3	32.5	46.6	-7.4	54.0	**High Channel / Y Axis**
6.45	43.9	35.3	2.5	90	0.0	34.3	10.3	32.5	47.4	-6.6	54.0	**High Channel / X Axis**
6.45	43.8	36.3	2.0	90	0.0	34.3	10.3	32.5	48.4	-5.6	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
6.45	44.6	37.6	1.0	90	0.0	34.3	10.3	32.5	49.7	-4.3	54.0	**High Channel / Y Axis**
6.45	38.4	30.4	2.0	90	0.0	34.3	10.3	32.5	42.5	-11.5	54.0	**High Channel / X Axis**
6.45	43.2	33.7	2.0	90	0.0	34.3	10.3	32.5	45.8	-8.2	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED, ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

RADIATED EMISSIONS (FCC SUBPART C, SECTION 15.249)

COMPANY	**COLORADO TIME SYSTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MEDIUM, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
7.23	38.4	30.9	1.5	270	0.0	36.1	10.6	33.0	44.6	-9.4	54.0	**Low Channel / Y Axis**
7.23	38.7	30.4	2.0	90	0.0	36.1	10.6	33.0	44.1	-9.9	54.0	**Low Channel / X Axis**
7.23	42.8	35.7	1.0	90	0.0	36.1	10.6	33.0	49.4	-4.6	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
7.23	42.3	32.2	1.0	0	0.0	36.1	10.6	33.0	45.9	-8.1	54.0	**Low Channel / Y Axis**
7.23	39.0	29.3	1.0	90	0.0	36.1	10.6	33.0	43.0	-11.0	54.0	**Low Channel / X Axis**
7.23	39.8	29.6	1.0	90	0.0	36.1	10.6	33.0	43.3	-10.7	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
7.30	40.3	30.9	3.0	0	0.0	36.8	11.4	33.7	45.4	-8.6	54.0	**Mid Channel / Y Axis**
7.30	36.6	30.7	3.0	180	0.0	36.8	11.4	33.7	45.2	-8.8	54.0	**Mid Channel / X Axis**
7.30	37.1	30.4	3.0	90	0.0	36.8	11.4	33.7	44.9	-9.1	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
7.30	39.3	31.8	1.0	180	0.0	36.8	11.4	33.7	46.3	-7.7	54.0	**Mid Channel / Y Axis**
7.30	40.8	30.5	1.0	90	0.0	36.8	11.4	33.7	45.0	-9.0	54.0	**Mid Channel / X Axis**
7.30	38.8	30.9	2.0	90	0.0	36.8	11.4	33.7	45.4	-8.6	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
7.37	38.3	31.0	1.5	180	0.0	36.8	11.4	33.7	45.5	-8.5	54.0	**High Channel / Y Axis**
7.37	39.0	31.1	2.0	180	0.0	36.8	11.4	33.7	45.6	-8.4	54.0	**High Channel / X Axis**
7.37	40.5	31.1	2.0	90	0.0	36.8	11.4	33.7	45.6	-8.4	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
7.37	39.8	31.0	3.0	90	0.0	36.8	11.4	33.7	45.5	-8.5	54.0	**High Channel / Y Axis**
7.37	40.7	30.9	1.0	90	0.0	36.8	11.4	33.7	45.4	-8.6	54.0	**High Channel / X Axis**
7.37	40.7	31.1	2.0	90	0.0	36.8	11.4	33.7	45.6	-8.4	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED. ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

RADIATED EMISSIONS

COMPANY	**COLORADO TIME SYSTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MEDIUM, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
8.13	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Low Channel / Y Axis**
8.13	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Low Channel / X Axis**
8.13	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
8.13	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Low Channel / Y Axis**
8.13	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Low Channel / X Axis**
8.13	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
8.21	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Mid Channel / Y Axis**
8.21	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Mid Channel / X Axis**
8.21	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
8.21	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Mid Channel / Y Axis**
8.21	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Mid Channel / X Axis**
8.21	"--"	"--"	"--"	"--"	0.0	37.4	13.1	32.9	"--"	"--"	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
8.29	"--"	"--"	"--"	"--"	0.0	37.1	12.5	32.7	"--"	"--"	54.0	**High Channel / Y Axis**
8.29	"--"	"--"	"--"	"--"	0.0	37.1	12.5	32.7	"--"	"--"	54.0	**High Channel / X Axis**
8.29	"--"	"--"	"--"	"--"	0.0	37.1	12.5	32.7	"--"	"--"	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
8.29	"--"	"--"	"--"	"--"	0.0	37.1	12.5	32.7	"--"	"--"	54.0	**High Channel / Y Axis**
8.29	"--"	"--"	"--"	"--"	0.0	37.1	12.5	32.7	"--"	"--"	54.0	**High Channel / X Axis**
8.29	"--"	"--"	"--"	"--"	0.0	37.1	12.5	32.7	"--"	"--"	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz, QUASI-PEAK MEASUREMENT IS EMPLOYEED, ABOVE 1 GHz, AVERAGE MEASUREMENT IS EMPLOYED

"--" NO HARMONIC FOUND FOR THIS PARTICULAR READING

RADIATED EMISSIONS

COMPANY	**COLORADO TIME SYSTEMS, INC.**	**DATE**	**12/29/98**
EUT	**INFINITY START SYSTEM WIRELESS MIC.**	**ANTENNAS**	**HORN**
MODEL	**INF-MIC**	**POLARIZATION**	**SEE BELOW**
S/N	**32/98-0001**	**TEST DISTANCE**	**3 METERS**
EUT MODE	**LOW, MEDIUM, AND HIGH CHANNELS**	**LAB**	**D**

Frequency GHz	Peak Reading (dBuV)	Average or Quasi-Peak (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Distance Factor (dB)	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
VERTICAL ANTENNA POLARIZATION												
9.03	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Low Channel / Y Axis**
9.03	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Low Channel / X Axis**
9.03	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Low Channel / Z Axis**
HORIZONTAL POLARIZATION												
9.03	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Low Channel / Y Axis**
9.03	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Low Channel / X Axis**
9.03	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Low Channel / Z Axis**
VERTICAL ANTENNA POLARIZATION												
9.12	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Mid Channel / Y Axis**
9.12	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Mid Channel / X Axis**
9.12	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Mid Channel / Z Axis**
HORIZONTAL POLARIZATION												
9.12	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Mid Channel / Y Axis**
9.12	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Mid Channel / X Axis**
9.12	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**Mid Channel / Z Axis**
VERTICAL POLARIZATION												
9.21	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**High Channel / Y Axis**
9.21	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**High Channel / X Axis**
9.21	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**High Channel / Z Axis**
HORIZONTAL POLARIZATION												
9.21	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**High Channel / Y Axis**
9.21	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**High Channel / X Axis**
9.21	"--"	"--"	"--"	"--"	0.0	36.8	12.4	33.2	"--"	"--"	54.0	**High Channel / Z Axis**

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

** DELTA = SPEC LIMIT - CORRECTED READING

*** BELOW 1 GHz. QUASI-PEAK MEASUREMENT IS EMPLOYEED. ABOVE 1 GHz. AVERAGE MEASUREMENT IS EMPLOYED

"--" NO HARMONIC FOUND FOR THIS PARTICULAR READING

COMPATIBLE ELECTRONICS

RADIATED EMISSIONS

COMPANY NAME: Colorado Time Systems, Inc. **DATE:** 12-30-98

EUT: Infinity Start System Wireless Microphone **EUT S/N:** 32198-0001

EUT MODEL: INF-MIC **LOCATION:** ■ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC Subpart C **CLASS:** _____ **TEST DISTANCE:** 3M **LAB:** D

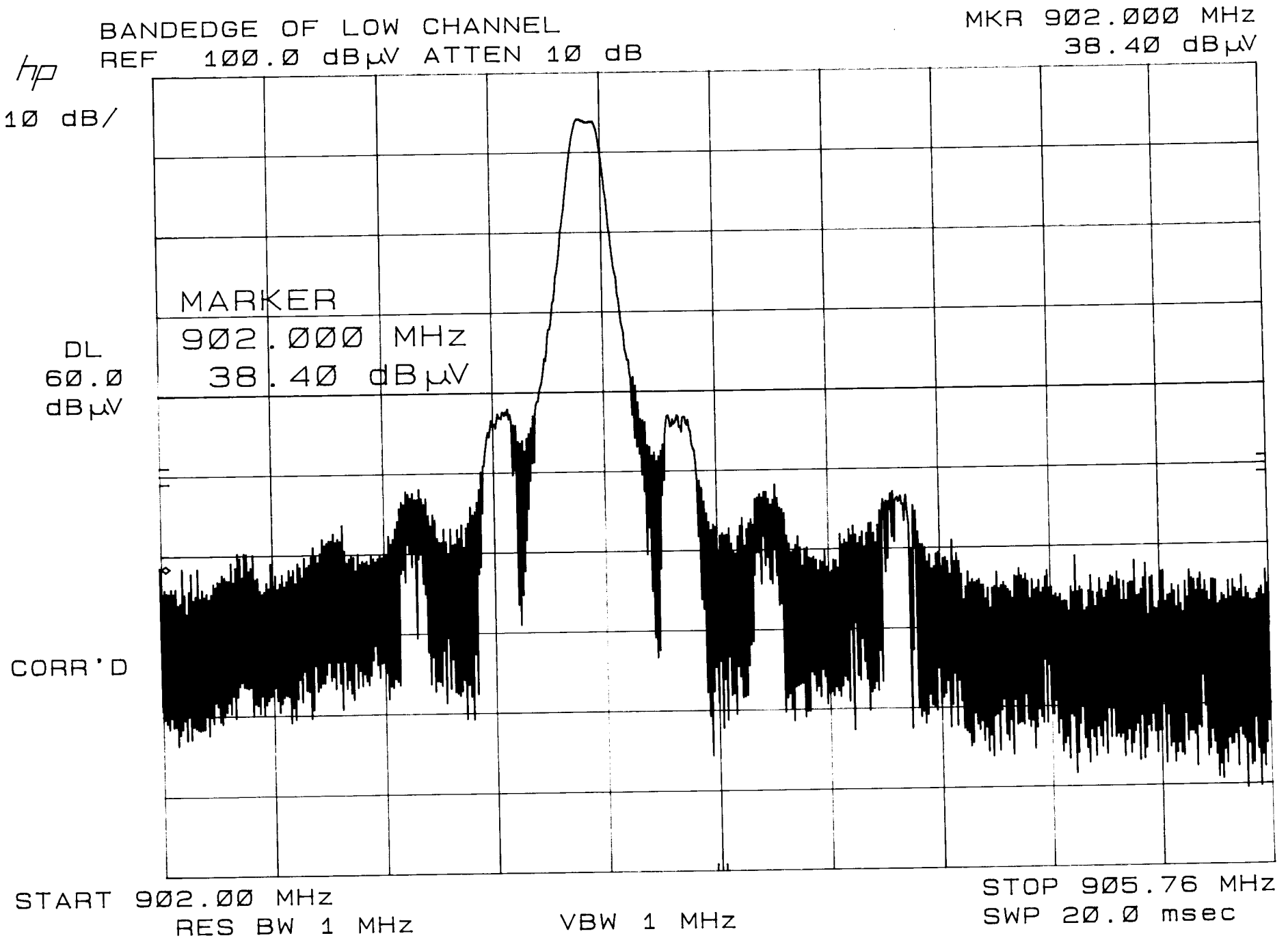
ANTENNA: ■ LOOP ■ BICONICAL ■ LOG ■ HORN **POLARIZATION:** ■ VERT ■ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT **ENGINEER:** Kyle F.

NOTES: SPURIOUS EMISSIONS

Frequency (GHz)	Peak Reading (dBuV)	Average Reading (dBuV)	Antenna Height (meters)	Azimuth (degrees)	Delta * (dB)	Corrected Limit (dBuV)	Comments
		NO	EMISSIONS	FOUND			
		FOR	SPURIOUS	FROM	10KHZ-		
		9.3 GHZ	IN	EITHER	POLARIZATION		

* DELTA = METER READING - CORRECTED LIMIT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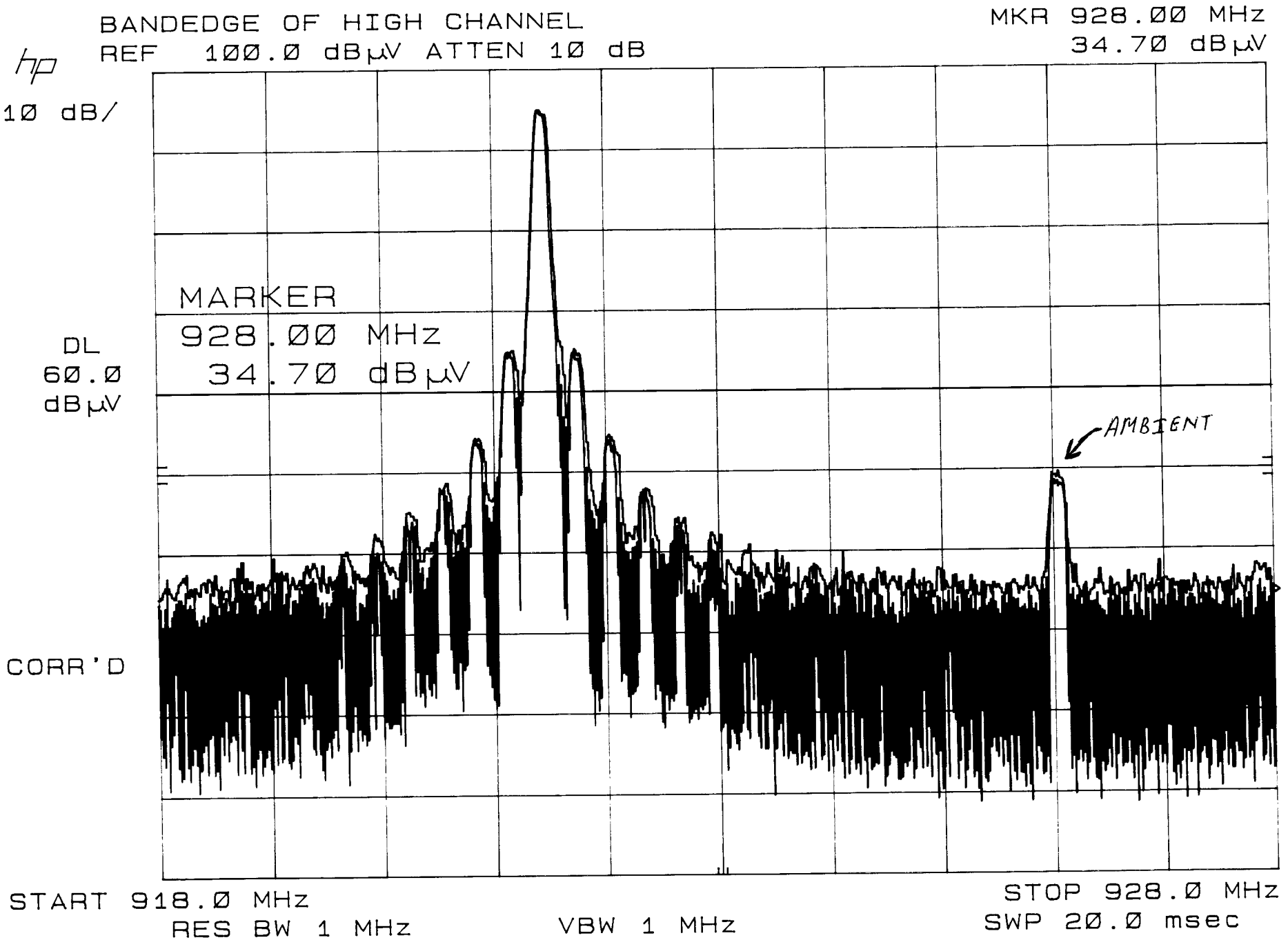
38.40 dBµV
10 dB/
MARKER
902.000 MHz
38.40 dBµV
DL
60.0
dBµV
CORR'D
START 902.00 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 905.76 MHz
SWP 20.0 msec


BANDEDGE OF HIGH CHANNEL
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34.70 dBµV
10 dB/
MARKER
928.00 MHz
34.70 dBµV
DL
60.0
dBµV
AMBIENT
CORR'D
START 918.0 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 928.0 MHz
SWP 20.0 msec