ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C REQUIREMENT

TEST REPORT
FOR
900MHz Digital Cordless Phone

FCC ID: HOLCL915

MODEL NO: CL915

PROJECT NO: 01U0792

ISSUE DATE: June 6, 2001

Prepared for
CIDCO COMMUNICATIONS
105 COCHRANE CIRCLE
MORGAN HILL, CA 95035

Prepared by
COMPLIANCE CERTIFICATION SERVICES, INC.
561F MONTEREY ROAD
MORGAN HILL, CA 95037 U.S.A.
TEL: (408) 463-0885
FAX: (408) 463-0888

LAB CODE:200065-0

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1. VERIFICATION OF COMPLIANCE

COMPANY NAME: CIDCO COMMUNICATIONS
105 COCHRANE CIRCLE
MORGAN HILL, CA 95035 USA

CONTACT PERSON : CLIFF DENCHFIELD / COMPLIANCE MANAGER

TELEPHONE NO : (408) 782-8200

EUT DESCRIPTION : 900MHZ DIGITAL CORDLESS PHONE

MODEL NAME : CL915

DATE TESTED : MAY 04, 2001

LIMITS APPLY TO: FCC PART 15 SECTION 15.249	
TECHNICAL LIMITS	**TEST RESULT**
Radiated Emission of fundamental Frequency	Complies
Radiated Emission of Harmonic Frequency	Complies
Radiated Emission Outside the Band	Complies
LIMITS APPLY TO: FCC PART 15 SECTION 15.209	
Radiated Emission Digital Device	Complies
LIMITS APPLY TO: FCC PART 15 SECTION 15.207	
AC Line Conducted Emission	Complies
RULES APPLY TO 15.214 (d), (d)(1) & (d)(2)	
Digital Security Codes	Complies

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in CFR 47 PART 15 SUBPART C. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

Warning: This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

Released For CCS By: ***Test By:***

STEVE CHENG
EMC ENGINEERING MANAGER

PETE KREBILL
EMC ASSOCIATE ENGINEER

2. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

The EUT is a 900MHz digital cordless phone.

CHASSIS TYPE	PLASTIC
RF Frequency	Base TX: 902.15MHz to 904.95MHz Base RX: 925.05MHz to 927.85ZMHz Hand Unit TX: 925.05MHz to 927.85MHz Hand Unit RX: 902.15MHz to 904.95MHz
Antenna Requirement	Permanently Attached
Power Requirement	9Vdc, 300mAmps

3. TEST LOCATION

All emissions tests were performed at:
Compliance Consulting Services
561F Monterey Road
Morgan Hill, CA 95037

CCS has site descriptions on file with the FCC for 10 and 3 meter site configurations. CCS is a NVLAP accredited facility.

4. EQUIPMENT MODIFICATIONS

Not applicable

5. TEST EQUIPMENT

	TEST EQUIPMENTS LIST			
Name of Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Due Date**
Spectrum Analyzer	**HP100Hz - 22GHz**	**8566B**	**2140A01296**	**5/4/02**
Spectrum Display	**HP**	**85662A**	**2152A03066**	**5/4/02**
Quasi-Peak Detector	**HP9K - 1GHz**	**85650A**	**2811A01155**	**5/4/02**
Pre-Amplifier, 25 dB	**HP 0.1 - 1300MHz**	**8447D (P_1M)**	**2944A06833**	**11/21/01**
Antenna, BiLog	**Chase EMC Ltd.**	**CBL6112**	**2049**	**12/11/01**
Horn Antenna(1 - 18GHz)	**EMCO**	**3115**	**2238**	**1/25/02**
Pre-Amplifier	**HP**	**8449**	**3008A00369**	**5/30/02**
EMI Test Receiver	**Rohde & Schwarz**	**ESHS 20**	**827129/006**	**4/2/02**
LISN	**Fischer 9k - 100MHz**	**FCC-LISN-50/250-25-2**	**114**	**7/5/01**
Line Filter	**Lindgren 10k-10GHz**	**LMF-3489**	**497**	**NCR**

5. TEST RESULT SUMMARY

Radiated Emissions

Test Requirement: 15.249(A)(B)

TEST SETUP FOR MEASUREMENT OF FUNDAMENTAL FREQUENCY

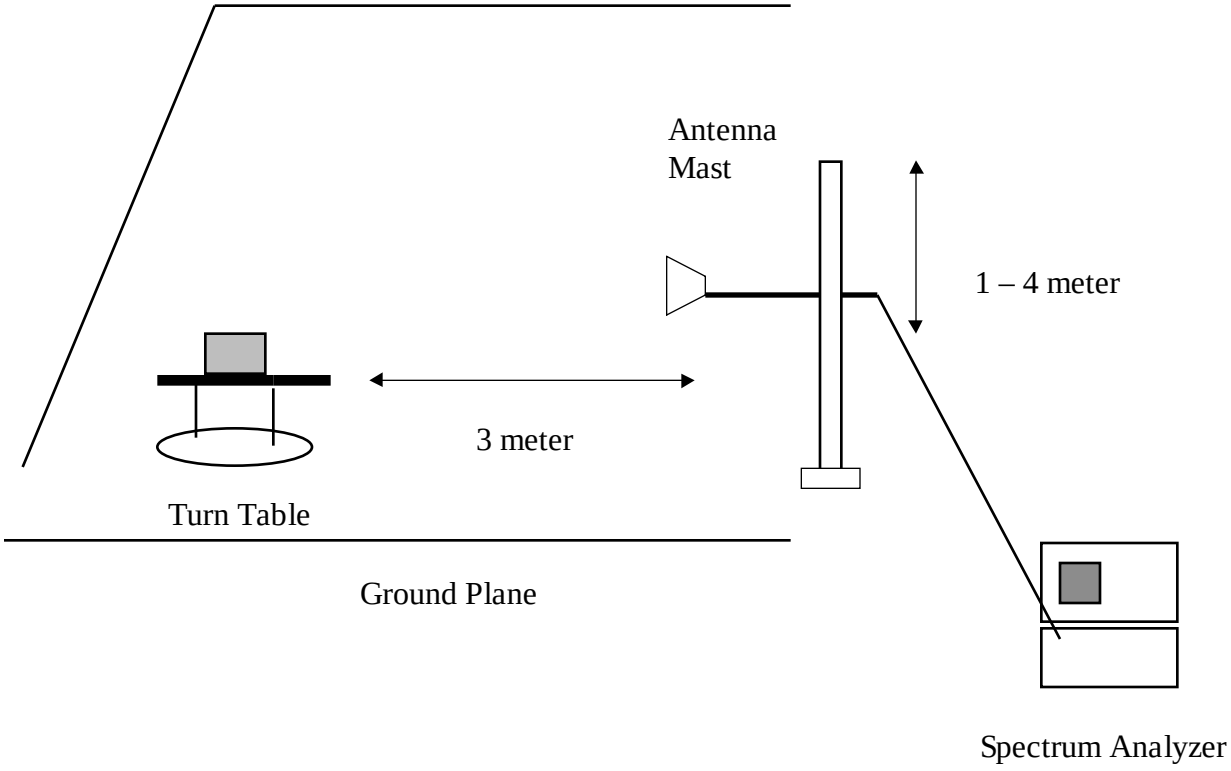


Fig. 1a

Test Procedures

1) Place the EUT on the turntable as shown on figure 1a. The EUT was placed as close as possible to the center of the turntable with the axis of rotation going through the EUT antenna when in vertical or horizontal polarization. Activated Eut to transmit.

2) The search antenna was placed at a distance of 3 meters. The antenna was raised and lowered and the EUT rotated on the turntable to produce maximum emission levels on the spectrum analyzer.

3) The EUT was placed standing-up and tested for LOW and HIGH channels. Step (1) and (2) were repeated for each orientation. The EUT handset standing up was verified as worst case. Handset emissions are reported for that orientation.

Test Results:
Please refer to attached spreadsheet. (EMISSIONS 15.249)

Radiated Emissions

Test Requirement: 15.249(A)(B)

TEST SETUP FOR MEASUREMENT OF HARMONICS ABOVE 1GHz

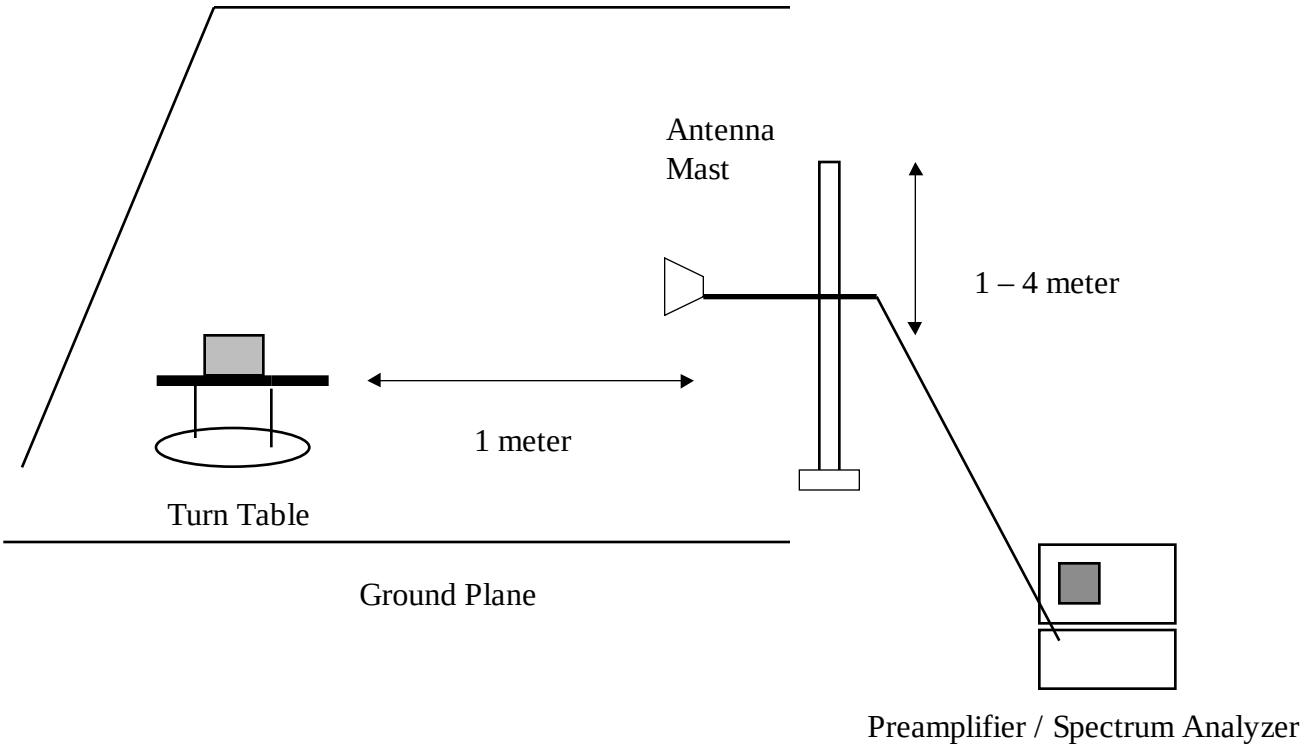


Fig.1b

Test Procedures

1. The EUT was placed on a wooden turntable as shown on figure 1b. The search antenna was placed at 1 meter from the EUT.

2. The turntable was slowly rotated to locate the direction of maximum emission. Once maximum direction was determined, the search antenna was raised and lowered in both vertical and horizontal polarizations.

3. The EUT was placed standing-up and tested for LOW and HIGH channels. Step (1) and (2) were repeated for each orientation.

Test result:

Please refer to attached spreadsheets. (EMISSIONS 15.249)

Radiated Emissions

Test Requirement: 15.209

TEST SETUP FOR MEASUREMENT OF DIGITAL DEVICE

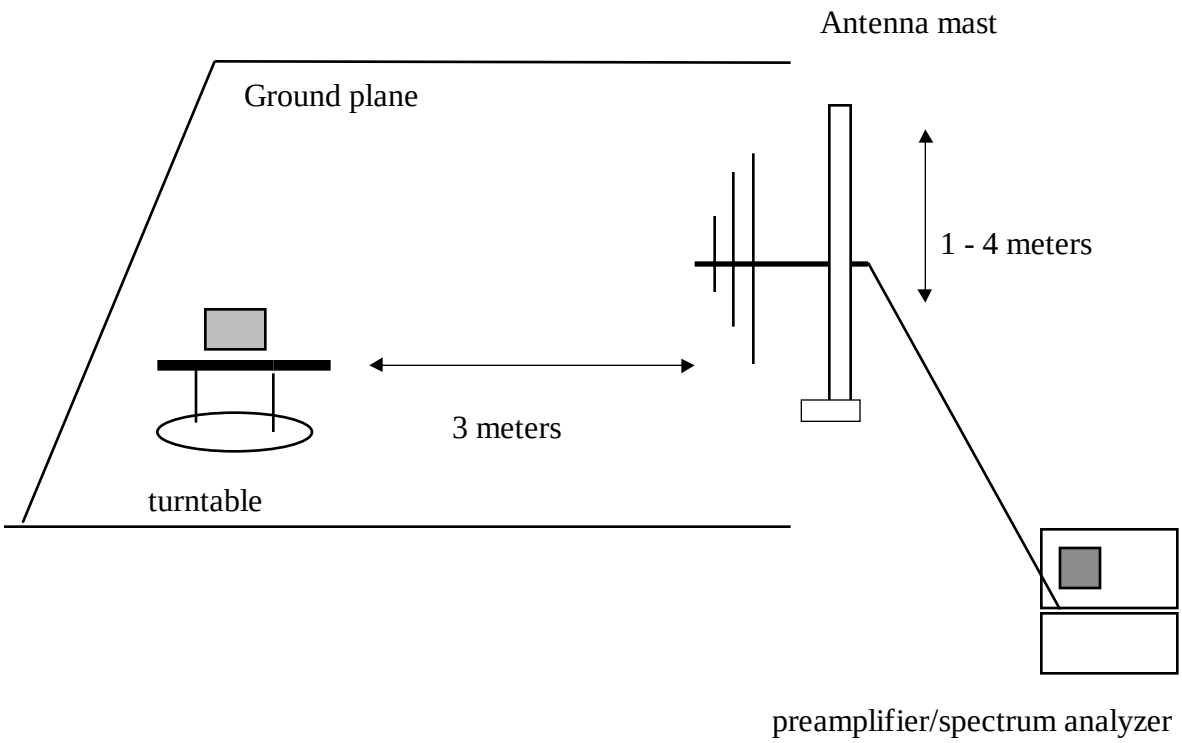


Fig. 2

Test Procedures

1) Place the EUT on the turntable as shown. The EUT was placed as close as possible to the center of the turntable with the axis of rotation going through the EUT antenna when in vertical or horizontal polarization. Activated Eut to transmit.

2) The Bilog search antenna was place at a distance of 3 meters. The antenna was raised and lowered and the EUT rotated on the turntable to produce maximum emission levels on the spectrum analyzer.

3) The EUT was placed standing-up and tested for LOW and HIGH channels. Step (1) and (2) were repeated for each orientation.

Test Results:
Please refer to attached data. (DIGITAL EMISSIONS)

AC Line Conducted Emissions

Test Requirement: 15.207

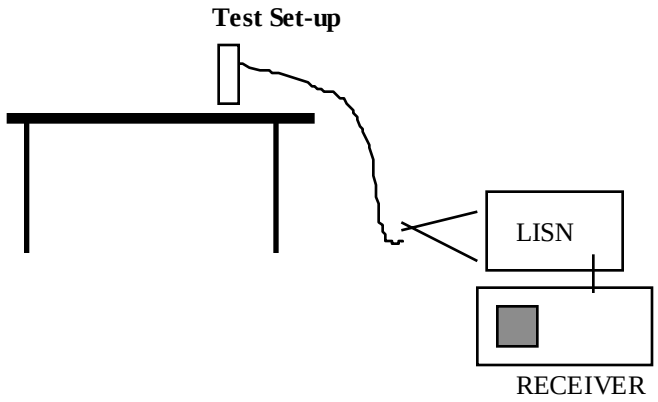


Fig. 3

Test Procedure

1. The DC is supplied by a AC adapter. The EUT was placed on a wooden table 40 cm from a vertical ground plane and approximately 80 cm above the horizontal ground plane on the floor. The EUT was set to transmit in a normal tone and charge the battery at the same time.

2. Line conducted data was recorded for both NEUTRAL and HOT lines.

Test Results

See below and refer to attached graph. (LINE CONDUCTION)

CONDUCTED EMISSIONS DATA (115VAC 60Hz)

Freq.	Reading			Closs	Limit FCC B		Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
25.15	19.27	--	--	0.00	48.00	--	-28.73	--	L1
25.68	19.26	--	--	0.00	48.00	--	-28.74	--	L1
26.12	17.26	--	--	0.00	48.00	--	-30.74	--	L1
26.12	16.39	--	--	0.00	48.00	--	-31.61	--	L2
25.68	16.76	--	--	0.00	48.00	--	-31.24	--	L2
26.67	15.38	--	--	0.00	48.00	--	-32.62	--	L2
6 Worst Data									

6. FCC 15.214 CORDLESS TELEPHONE INFORMATION

15.214 (d): Complies. See: *DESCRIPTION OF CIRCUIT OPERATION* sections: 1) BASE UNIT & 2) HANDSET.

15.214 (d)(1) & (2): Complies. See: *DESCRIPTION OF CIRCUIT OPERATION* sections: 1) BASE UNIT, 2) HANDSET & *OPERATION MANUAL* sections: B. 15. SECURITY CODE SETTING DURING THE CHARGE & D. 3. AUTOMATIC DIGITAL SECURITY.

Sheet4

COMPLIANCE ENGINEERING SERVICES, INC.															
Emissions											5/4/01				
15.249											Pete Krabill				
											Anite (1.0 Meter)				
Cidco															
900MHz Cordless Phone															
M/N: CL915															
F(MHz)	READING		AF	CL	AMP	DIST	HPF	TOTAL		LIMIT		MARGIN			
	(dBuV)		(dB)	(dB)	(dB)	(dB)	(dB)	(dBuV/m)		(dBuV/m)		(dB)			
	Pk	Avg						Pk	Avg			Pk	Avg		
Base Station Channel 8															
903.58	69.28		21.92	2.2	0	0	0	93.4		94		-10.6			
1807	61.18		26.8	3.23	-35.5	-10.5	0	45.21		54		-8.79			
2710	58.1		31	3.4	-35.5	-10.5	0	46.5		54		-7.5			
3614	51.06		33.3	4.25	-35.5	-10.5	0	42.61		54		-11.4			
4519	50		32.4	5.1	-35.5	-10.5	0	41.5		54		-12.5			
5421NF	43.8		34.8	5.44	-35.5	-10.5	0	38.04		54		-16			
6325NF	42.9		35.3	6.12	-35.5	-10.5	0	38.32		54		-15.7			
7228NF	43.6		36.4	6.46	-35.5	-10.5	0	40.46		54		-13.5			
8132NF	44.9		37.2	6.8	-35.5	-10.5	0	42.9		54		-11.1			
9035NF	44.9		38.3	7.31	-35.5	-10.5	0	44.51		54		-9.49			
Base Station Channel 1															
902.17	58.6		21.92	2.2	0	0	0	82.72		94		-11.3			
1804.3	61.32		26.8	3.23	-35.5	-10.5	0	45.35		54		-8.65			
2706	59.9		31	3.4	-35.5	-10.5	0	48.3		54		-5.7			
3609	49.77		33.3	4.25	-35.5	-10.5	0	41.32		54		-12.7			
4510	47.6		32.4	5.1	-35.5	-10.5	0	39.1		54		-14.9			
Handset Channel 1															
925	82		21.92	2.2	0	0	0	86.12		94		-7.88			
1850	67.08		26.8	3.23	-35.5	-10.5	0	51.11		54		-2.89			
2775	63.74		31	3.4	-35.5	-10.5	0	52.14		54		-1.86			
3700	82		33.3	4.25	-35.5	-10.5	0	53.55		54		-0.45			
4625	48.94		32.4	5.1	-35.5	-10.5	0	38.44		54		-15.6			
Handset Channel 8															
928.5	83.03		21.92	2.2	0	0	0	87.15		94		-6.85			
1863	64.7		26.8	3.23	-35.5	-10.5	0	48.73		54		-5.27			
2779	60.13		31	3.4	-35.5	-10.5	0	48.53		54		-5.47			
3706	60.7		33.3	4.25	-35.5	-10.5	0	52.25		54		-1.75			
4632	47.76		32.4	5.1	-35.5	-10.5	0	39.26		54		-14.7			
READINGS ABOVE THE 5TH HARMONIC WERE ALL NOISE FLOOR.															
NOTE: ALL READINGS MEASURED AT 1 METER.															
DIST: Correction to extrapolate reading to 3m specification distance															
NF: Noise Floor												ANALYZER SETTINGS			
AF: Antenna Factor									PEAK(Pk):			Res. bw		Avg. bw	
AMP: Pre-amp gain									Below 1GHz			100KHz		100KHz	
CL: Cable loss									Above1GHz			1MHz		1MHz	
HPF: High pass filter Insertion loss															

COMPLIANCE Certification Services
FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP

561F MONTEREY ROAD, SAN JOSE, CA 95037-9001
PHONE: (408) 463-0885 FAX: (408) 463-0888

Project #:	01U0792
Report #:	010504A1
Date& Time:	05/04/01 9:45 AM
Test Engr:	PETE KREBILL

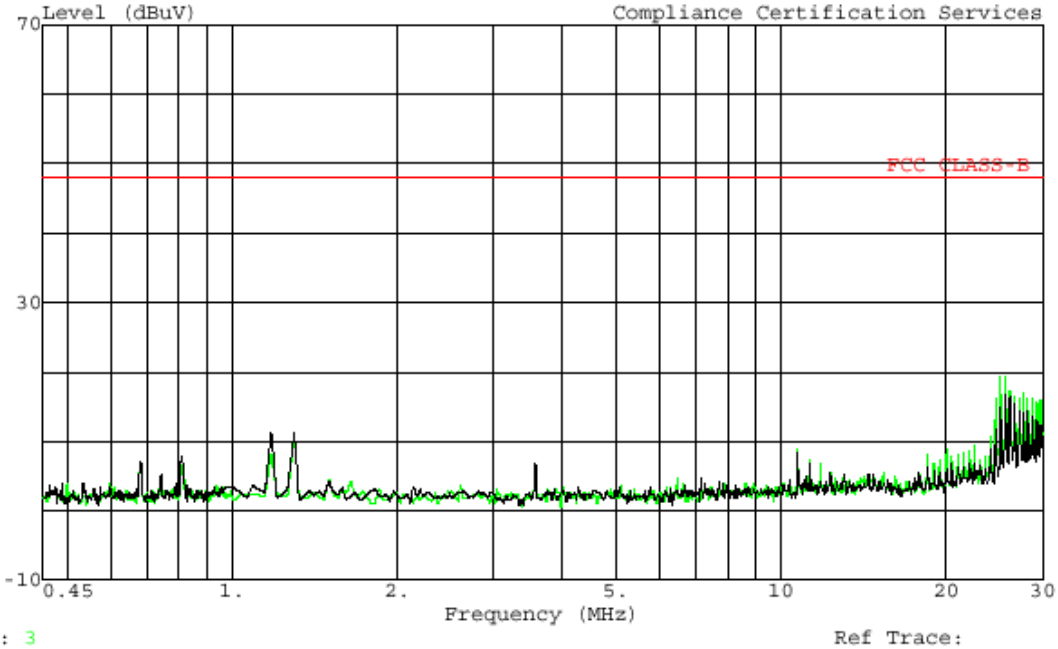
Company:	CIDCO COMMUNICATIONS
EUT Description:	900MHZ DIGITALCORDLESS PHONE M/N:CL915
Test Configuration :	EUT ONLY
Type of Test:	FCC 15.209
Mode of Operation:	PLACING A CALL

(•) A-Site ( ) B-Site ( ) C-Site ( ) F-Site [6 Worst Data] [Descending]

Freq. (MHz)	Reading (dBuV)	AF (dB)	Closs (dB)	Pre-amp (dB)	Level (dBuV/m)	Limit FCC_B	Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)	Mark (P/Q/A)
NO EMISSIONS DETECTED. BELOW NOISE FLOOR.											
34.50	37.50	21.53	0.82	27.83	32.02	40.00	-7.98	3mV	0.00	1.00	P
46.00	35.50	14.02	0.89	27.84	22.57	40.00	-17.43	3mV	0.00	1.00	P
57.50	37.10	9.10	1.00	27.83	19.37	40.00	-20.63	3mV	0.00	1.00	P
69.00	42.00	7.20	1.07	27.80	22.47	40.00	-17.53	3mV	0.00	1.00	P
80.50	46.80	8.33	1.18	27.84	28.47	40.00	-11.53	3mV	0.00	1.00	P
126.50	42.30	13.11	1.54	27.69	29.26	43.50	-14.24	3mV	0.00	1.00	P
Total data #: 6											
V.2a											

561 F Monterey Road, Route 2
Morgan Hill, CA 95037-9001 USA
Tel: (408) 463-0885
Fax: (408) 463-0888

Data#: 7 File#: 010504LC.EMI Date: 05-04-2001 Time: 15:12:43



Trace: 3 Ref Trace:

Project No.	: 01U0792
Report No.	: 010504LC
Test Engr	: Pete Krebill
Company	: CLIFFORD TECHNOLOGIES
EUT Description	: 900MHz Digital Cordless Phone
Model	: CL915
EUT Config.	: EUT ONLY
Type of Test	: FCC B
Mode of Operation	: Call Connected
	: PEAK : L1(GREEN), L2(BLACK)
	: 115Vac, 60Hz