FCC CFR47 PART 15 SUBPART C
CLASS II PERMISSIVE CHANGE
TEST REPORT

FOR

BLUETOOTH ACCESS POINT

MODEL NAME: PWA-07-01

FCC ID: QYPPWA0701

REPORT NUMBER: 04U2559-1

ISSUE DATE: APRIL 5, 2004

Prepared For
POLYMAP WIRELESS.
310 S. WILLIAMS BLVD. SUITE. 346
TUCSON, AZ 85711

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

TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION 3

2. EUT DESCRIPTION 4

3. TEST METHODOLOGY 5

4. FACILITIES AND ACCREDITATION 5

5. CALIBRATION AND UNCERTAINTY 6

5.1. MEASURING INSTRUMENT CALIBRATION 6

5.2. MEASUREMENT UNCERTAINTY 6

5.3. TEST AND MEASUREMENT EQUIPMENT 7

6. SETUP OF EQUIPMENT UNDER TEST 8

7. APPLICABLE LIMITS AND TEST RESULTS 10

7.1. POWERLINE CONDUCTED EMISSIONS 10

8. SETUP PHOTOS 14

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1. TEST RESULT CERTIFICATION

COMPANY NAME: POLYMAP WIRELESS
310 S. Williams Blvd. Suite. 346
Tucson, AZ 85711

EUT DESCRIPTION: BLUETOOTH ACCESS POINT

MODEL: PWA-07-01

DATE TESTED: MARCH 04, 2004

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15 SUBPART C	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: 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.

Approved & Released For CCS By:

MIKE HECKROTTE
CHIEF ENGINEER
COMPLIANCE CERTIFICATION SERVICES

Tested By:

THANH NGUYEN
EMC TECHNICIAN
COMPLIANCE CERTIFICATION SERVICES

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2. EUT DESCRIPTION

The Polymap Wireless Model PWA-07-01 is a BlueTooth transmission card, wich is designed to allow data to be transferred from a medical device to a modem via a wireless link.

Description of changes:

A new AC/DC adapter is PDP050040-P5P-SZ, 120VAC to 5VDC, 400mA.
The old AC/DC adapter was PDP060020-P5-SZ, 120VAC to 6VDC, 200mA.

A new voltage regulator is Linear Technology LT1963EST-3.3, rated output 3.3 V, 1.5 A.
The old voltage regulator was Linear Technology LT1521CST-3.3, rated output 3.3 V, 0.3 A.

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3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4/2001 and FCC CFR 47 Part 15.

4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

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5. CALIBRATION AND UNCERTAINTY

5.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

5.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

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5.3. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**Cal Due**
Line Filter	**Lindgren**	**LMF-3489**	**5/11/01**	**CNR**
LISN, 10 kHz ~ 30 MHz	**Solar**	**8012-50-R-24-BNC**	**8379443**	**10/13/04**
LISN, 10 kHz ~ 30 MHz	**FCC**	**LISN-50/250-25-2**	**2023**	**10/13/04**
EMI Test Receiver	**R & S**	**ESHS 20**	**827129/006**	**7/17/04**
AC Power Source, 10KVA	**ACS**	**AFC-10K-AFC-2**	**J1568**	**CNR**

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6. SETUP OF EQUIPMENT UNDER TEST

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Telephone Set	WINTONE	HA178(IV) P/DT	D064489	N/A
Simulator	Teletone	TLS3	CCS00993	N/A
LapTop	Fujitshu	Lifebook C353	641580	DoC
Level Shifter	Redwood Space	PWA-LS-1	N/A	N/A
	Control Inc.			

I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical	Connector Type	Cable Type	Cable Length	Remarks
1	DC	1	DC	Unshielded	1.5m	No
2	Line	1	RJ11	Unshielded	1.5m	No
3	Serial	1	DB9	Unshielded	1m	Yes
4	Line	1	RJ11	Unshielded	5m	Yes
5	in/out put	1	Paralell	Ribbon	.5m	Yes

TEST SETUP

The EUT is standalone card, connected to the level shifter board by the ribbon cable, and through the remote Laptop via serial Com2 port. Test software exercised the EUT. The laptop and telephone simulator were located remotely.

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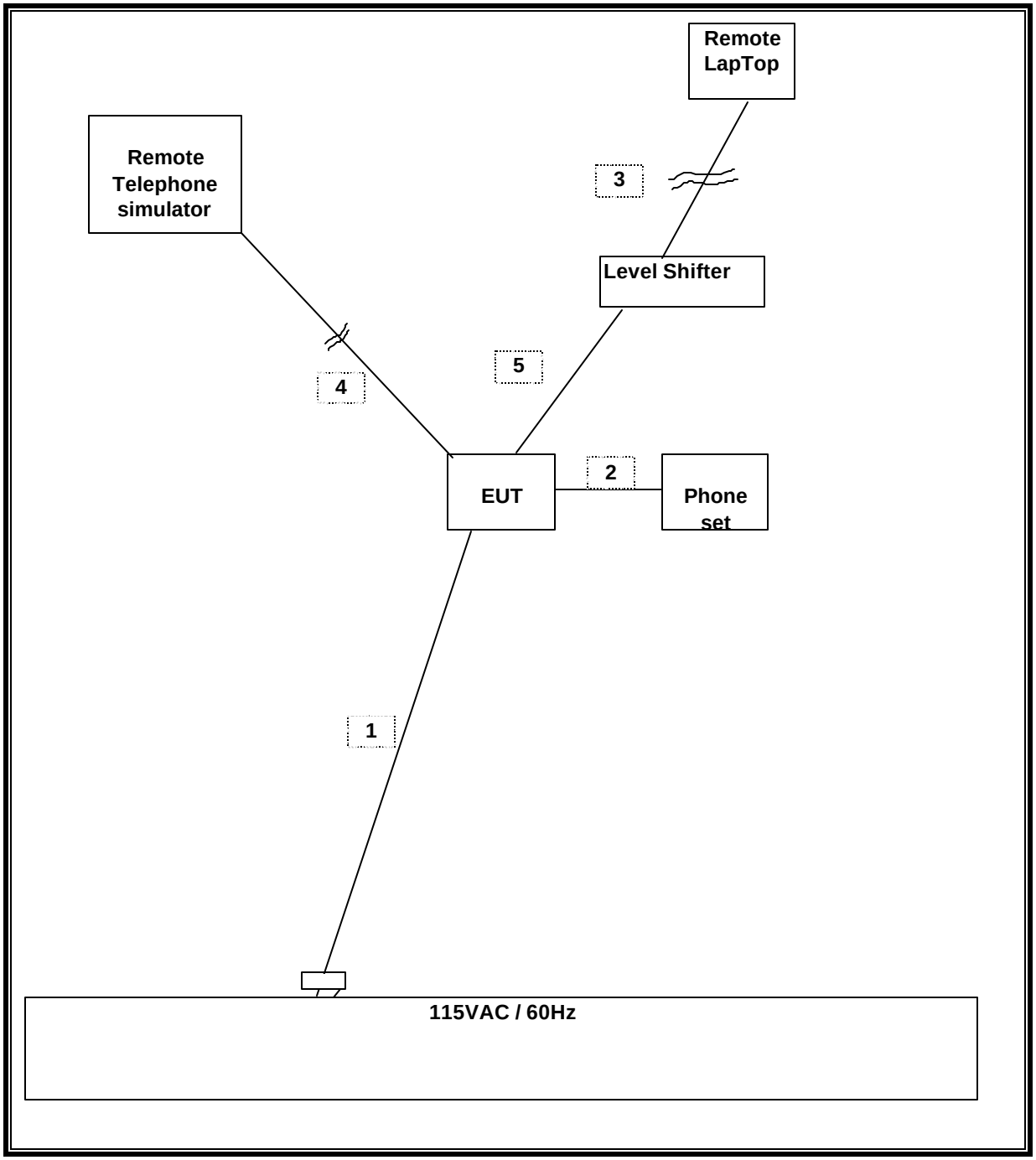
SETUP DIAGRAM FOR TESTS



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7. APPLICABLE LIMITS AND TEST RESULTS

7.1. POWERLINE CONDUCTED EMISSIONS

LIMIT

§15.207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

The lower limit applies at the boundary between the frequency ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The resolution bandwidth is set to 9 kHz for both peak detection and quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

No non-compliance noted:

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6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.99	29.66	20.78	16.11	0.00	56.00	46.00	-35.22	-29.89	L1
0.57	28.74	20.56	5.84	0.00	56.00	46.00	-35.44	-40.16	L1
0.21	33.98	26.48	19.71	0.00	64.23	54.23	-37.75	-34.52	L1
0.50	29.22	23.62	20.60	0.00	56.09	46.09	-32.47	-25.49	L2
0.21	34.26	29.16	23.98	0.00	64.23	54.23	-35.07	-30.25	L2
0.99	27.54	20.30	18.10	0.00	56.00	46.00	-35.70	-27.90	L2
6 Worst Data									

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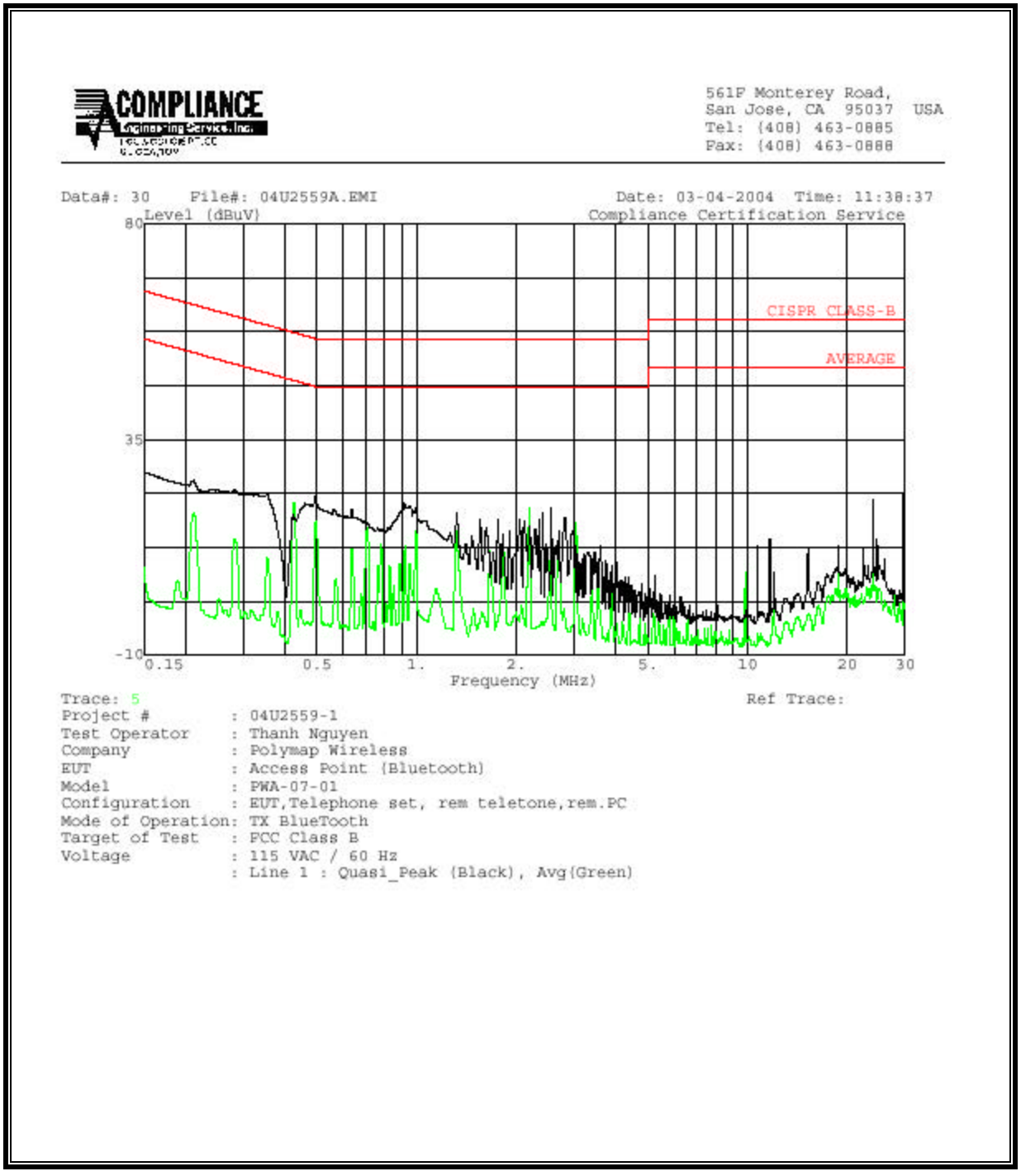
LINE 1 RESULTS



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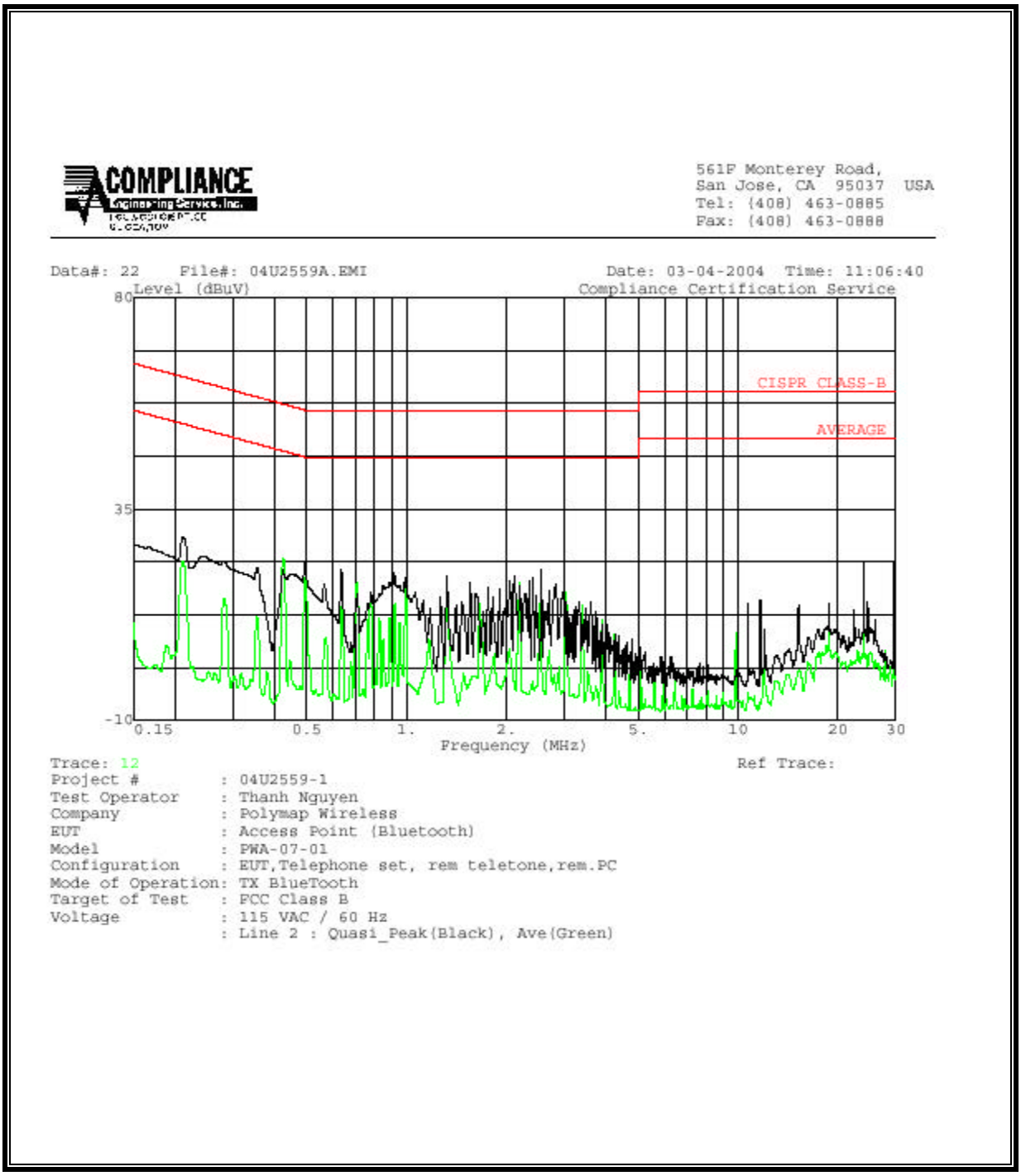
LINE 2 RESULTS



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8. SETUP PHOTOS

POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP

LINE CONDUCTED FRONT PHOTO

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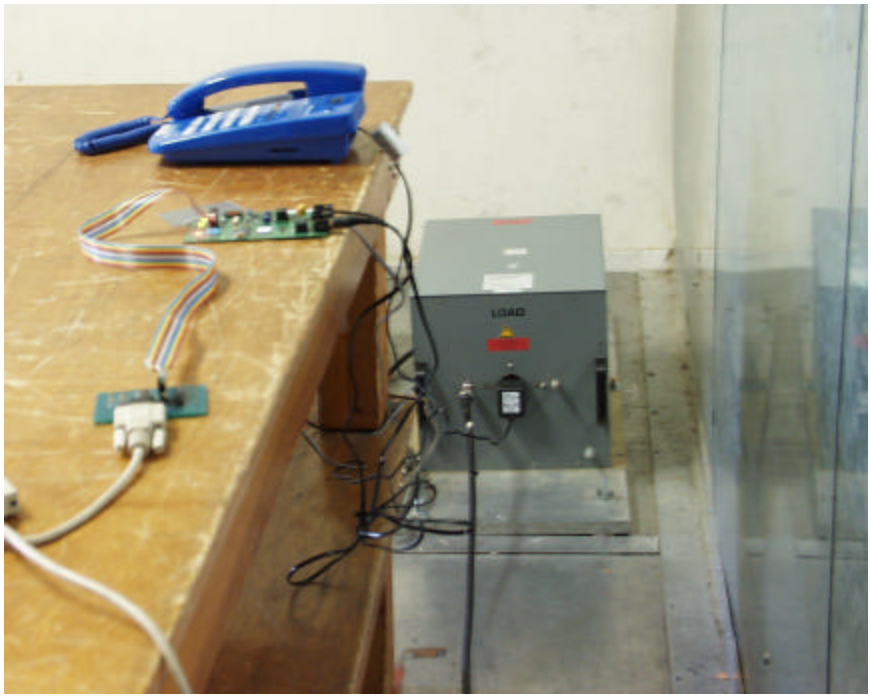
LINE CONDUCTED BACK PHOTO



END OF REPORT

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