

# AMENDMENT TEST REPORT

**Amendment to Original Report Numbers: 30332141 and 30332142**

**Date of Original Reports: October 14, 2002**

**Amendment Number: 30332143**

**Project Number: 3033214**

**Report Date: November 25, 2002**

**Date of Test: November 11, 2002**

Testing performed on the

**Model: AirMAX 580/5800**

**FCC ID: QGQ-AM581**

to

**FCC Part 15.207 Line Conducted Emissions**

for

**Malibu Networks**

**Test Performed by:**

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**Test Authorized by:**

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**Date:** \_\_\_\_\_

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## 1.0 Introduction

This is an amendment to report numbers 30332141 and 30332142 issued by ITS, dated October 14, 2002. The original line conducted emission test was performed with a ferrite installed on the DC power cable from the AC Adapter. The AC adapter used in the original test has been changed. A new AC adapter was tested and passed without a ferrite installed on the DC power cable. This amendment includes test data for line conducted emissions performed on the new AC adapter. The radiated emissions from the system with the new AC adapter was checked and the result was not worse than the original test result.

## 2.0 Summary of Tests

MODEL: AirMAX 580/5800  
FCC ID: QGQ-AM581

| TEST                       | REFERENCE | RESULTS  |
|----------------------------|-----------|----------|
| AC Line-conducted Emission | 15.207    | Complies |

### 2.1 Test Methodology

Line-conducted emissions measurements were performed according to the procedures in ANSI C63.4 (1992).

### 2.2 Test Facility

The conducted measurement facility used to collect the radiated data is site 1. This test facility and site measurement data have been fully placed on file with the FCC and NVLAP accredited.

### 3.0 System Test Configuration

#### 3.1 System Support Equipment

Table 1.3-1 contains the details of the support equipment associated with the Equipment Under Test.

Table 1.3-1: System Support Equipment

| Item # | Description | Model No. | Serial No. |
|--------|-------------|-----------|------------|
| 1      | IBM Laptop  | T21       | 75-0FX2F   |

#### Cables associated with EUT

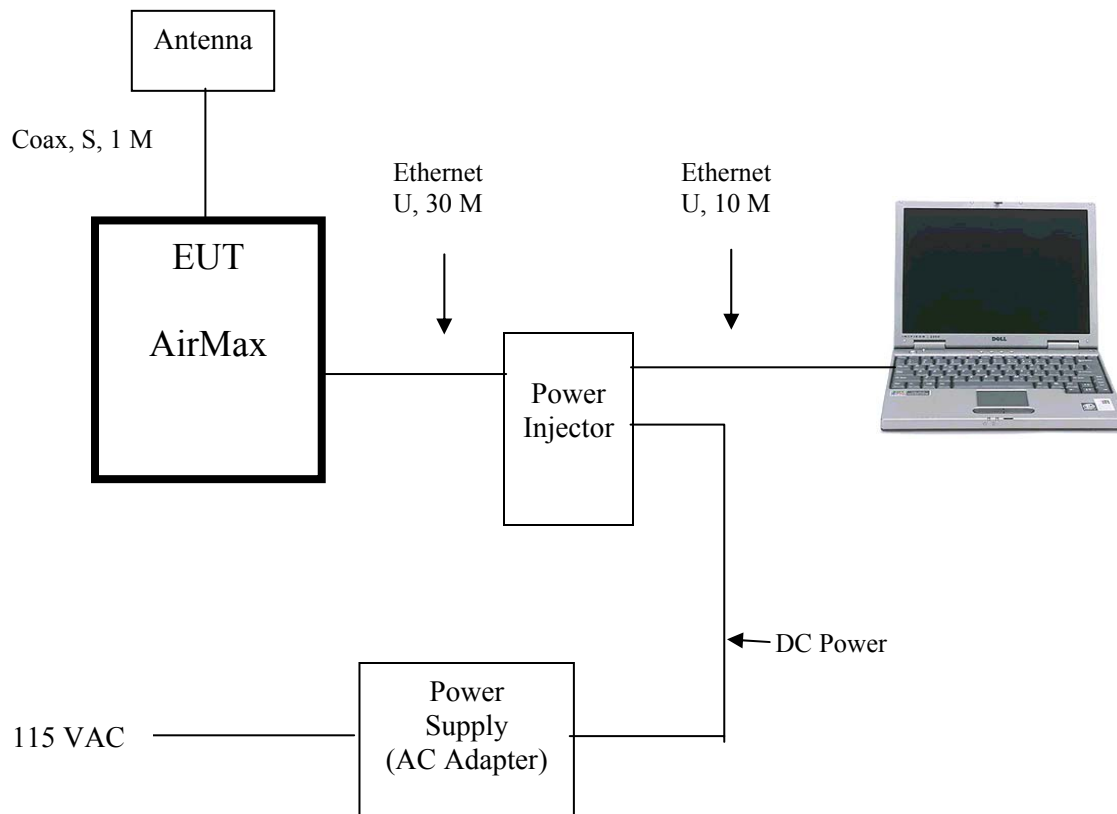
Table 1.3-2 contains the details of the cables associated with the EUT.

Table 1.3-2: Interconnecting cables associated with the EUT

| Cables         |           |           |          |                |                |
|----------------|-----------|-----------|----------|----------------|----------------|
| Description    | Length    | Shielding | Ferrites | Connection     |                |
|                |           |           |          | From           | To             |
| Coaxial cable  | 1 meter   | Yes       | No       | AirMax         | Antenna        |
| Ethernet cable | 30 meters | No        | No       | AirMax         | Power Injector |
| Ethernet cable | 10 meters | No        | No       | Power Injector | Computer       |
| DC power cable | 1.5 meter | No        | No       | Power Injector | Power Adaptor  |
| AC power cable | 1.5 meter | No        | No       | Power Adaptor  | AC Line        |

### 3.2 Block Diagram of Test Setup

The diagram shown below details the interconnection of the EUT and support equipment. For specific layout, refer to the test configuration photograph in the relevant section of this report.



**S** = Shielded  
**U** = Unshielded

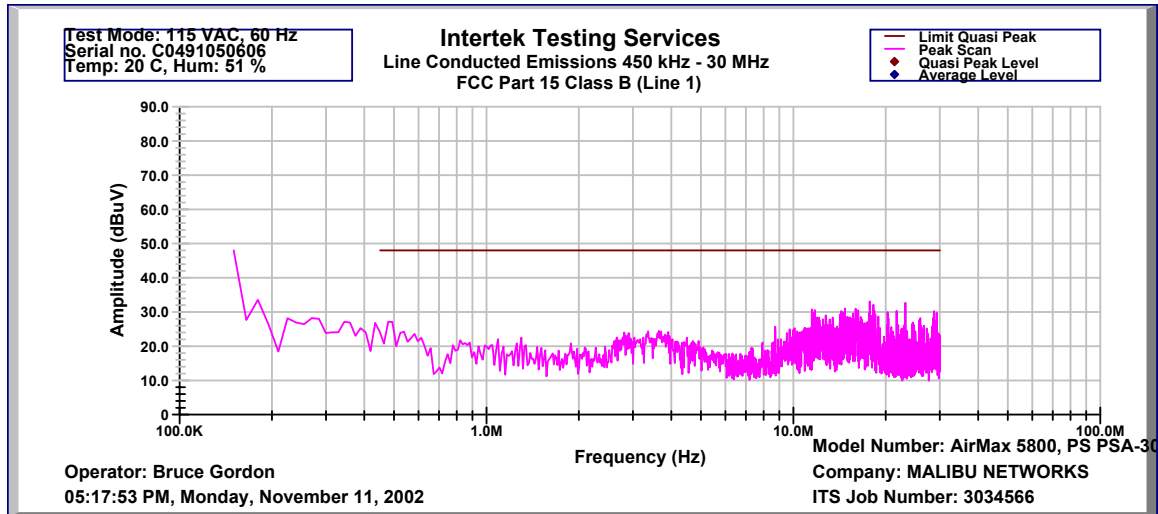
**F** = With Ferrite  
**M** = Length in Meter

#### **4.0 Measurement Results**

##### **4.1 AC Line Conducted Emission FCC 15.207**

AC line conducted emission test was performed according the ANSI C63.4 standard. The EUT was connected to a power adapter which was connected to AC Line through the LISNs.

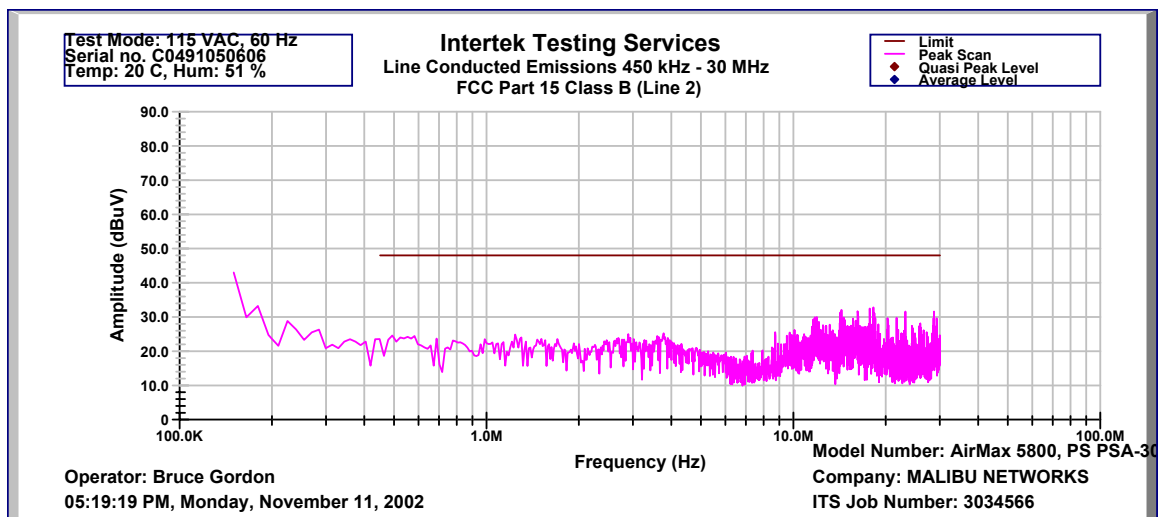
For the test result, see attached plots.  
EUT passed by 14.9 dB.



Intertek Testing Services  
Line Conducted Emissions 450 kHz - 30 MHz  
FCC Part 15 Class B (Line 1)  
Operator: Bruce Gordon Model Number: AirMax 5800, PS PSA-30U-240  
ITS Job Number: 3034566  
Mon Nov 25 10:40:02 2002  
Company: MALIBU NETWORKS

| Frequency<br>Hz | Pk Level<br>(dBuV) | Limit<br>(dBuV) | Pk Margin<br>(dBuV) |
|-----------------|--------------------|-----------------|---------------------|
| 1.15E+07        | 30.7               | 48.0            | -17.3               |
| 1.16E+07        | 29.7               | 48.0            | -18.3               |
| 1.17E+07        | 30.5               | 48.0            | -17.5               |
| 1.43E+07        | 29.7               | 48.0            | -18.3               |
| 1.43E+07        | 30.2               | 48.0            | -17.8               |
| 1.46E+07        | 29.9               | 48.0            | -18.1               |
| 1.47E+07        | 30.9               | 48.0            | -17.1               |
| 1.59E+07        | 30.9               | 48.0            | -17.1               |
| 1.62E+07        | 30.3               | 48.0            | -17.7               |
| 1.63E+07        | 30.5               | 48.0            | -17.5               |
| 1.76E+07        | 29.6               | 48.0            | -18.4               |
| 1.77E+07        | 33.1               | 48.0            | -14.9               |
| 1.82E+07        | 32.1               | 48.0            | -15.9               |
| 1.83E+07        | 30.0               | 48.0            | -18.0               |
| 1.83E+07        | 30.4               | 48.0            | -17.6               |
| 2.03E+07        | 30.0               | 48.0            | -18.0               |
| 2.17E+07        | 30.3               | 48.0            | -17.7               |
| 2.31E+07        | 32.7               | 48.0            | -15.3               |
| 2.87E+07        | 30.2               | 48.0            | -17.8               |
| 2.93E+07        | 29.8               | 48.0            | -18.2               |

Test Mode: 115 VAC, 60 Hz  
Serial no. C0491050606  
Temp: 20 C, Hum: 51 %



Intertek Testing Services  
Line Conducted Emissions 450 kHz - 30 MHz  
FCC Part 15 Class B (Line 2)  
Operator: Bruce Gordon Model Number: AirMax 5800, PS PSA-30U-240  
ITS Job Number: 3034566  
Mon Nov 25 10:41:03 2002  
Company: MALIBU NETWORKS

| Frequency<br>Hz | Pk Level<br>(dBUV) | Limit<br>(dBUV) | Pk Margin<br>(dBUV) |
|-----------------|--------------------|-----------------|---------------------|
| 1.17E+07        | 29.9               | 48.0            | -18.1               |
| 1.19E+07        | 30.0               | 48.0            | -18.0               |
| 1.42E+07        | 31.3               | 48.0            | -16.7               |
| 1.43E+07        | 30.4               | 48.0            | -17.6               |
| 1.43E+07        | 32.1               | 48.0            | -15.9               |
| 1.46E+07        | 29.8               | 48.0            | -18.2               |
| 1.56E+07        | 29.5               | 48.0            | -18.5               |
| 1.62E+07        | 31.7               | 48.0            | -16.3               |
| 1.62E+07        | 30.2               | 48.0            | -17.8               |
| 1.77E+07        | 32.4               | 48.0            | -15.6               |
| 1.82E+07        | 32.8               | 48.0            | -15.2               |
| 1.83E+07        | 30.2               | 48.0            | -17.8               |
| 1.83E+07        | 31.1               | 48.0            | -16.9               |
| 1.85E+07        | 29.6               | 48.0            | -18.4               |
| 2.03E+07        | 29.7               | 48.0            | -18.3               |
| 2.17E+07        | 29.7               | 48.0            | -18.3               |
| 2.31E+07        | 31.6               | 48.0            | -16.4               |
| 2.86E+07        | 29.7               | 48.0            | -18.3               |
| 2.87E+07        | 31.6               | 48.0            | -16.4               |
| 2.93E+07        | 29.6               | 48              | -18.4               |

Test Mode: 115 VAC, 60 Hz  
Serial no. C0491050606  
Temp: 20 C, Hum: 51 %

5.0 List of test Equipment

| Equipment         | Manufacturer    | Model/Type         | Serial #   | Cal Int | Cal Due |
|-------------------|-----------------|--------------------|------------|---------|---------|
| RF Filter Section | Hewlett Packard | 85460A             | 3448A00267 | 12      | 7/16/03 |
| EMI Receiver      | Hewlett Packard | 8546A              | 3710A00373 | 12      | 7/16/03 |
| LISN              | FCC             | FCC-LISN-50-50-M-H | 2011       | 12      | 1/02/03 |

**6.0 Document History**

| <b>Revision/<br/>Job Number</b> | <b>Writer<br/>Initials</b> | <b>Date</b>       | <b>Change</b>     |
|---------------------------------|----------------------------|-------------------|-------------------|
| 1.0 / 30332143                  | SS                         | November 25, 2002 | Original document |
|                                 |                            |                   |                   |
|                                 |                            |                   |                   |