



**HYPER CORP**

**“Wireless that Works”<sup>SM</sup>**

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# **Radiated Report Attestation**

**Product Name: Wilcoxon Bluetooth Radio Module**

**FCC ID: QAQMAYMAN**

**Issued Date: March 13, 2002**

Applicant:

Wilcoxon Research  
21 Firstfield Road  
Gathersburg, MD 20878  
United States

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## 1. General Information

### Identification of the EUT

Manufacturer: Wilcoxon

Model No.: C1BV56

Hardware Version: V6

Software Version: VER 443 BC02X\_HCI\_(V)\_15.3\_56

FCC ID: QAQMAYMAN

Frequency Range: 2402 MHz ~ 2480 MHz

Channel Number: 79

Frequency of Each Channel:  $2402 + k$  (MHz),  $k=0\sim78$

Type of Modulation: GFSK

Manufacturer Specified Max. Power Output: +6 dBm

Sample Received Date: December 15, 2002

Test Dates: January 14, 2003

Test Facility: Hyper Corporation

1279 Quarry Lane, Suite B  
Pleasanton, CA 94566, USA

### Antenna Description

Antenna(e):

1) 1 Wavelength PCB Patch Antenna

Peak Gain = 2.43 dBi

2) Half Wavelength Center-Feed Balanced Dipole

Peak Gain = 2.20 dBi

## **Purpose**

The purpose of this letter of attestation is to address and clarify certain items brought up by the TCB pre-Reviewer in the initial evaluation of the FCC radiated report issued by UL for the Wilcoxon Bluetooth Radio Module – FCC ID: QAQMAYMAN.

### **Attestation:**

- 1) Page 11 of the UL report says the operating frequency of the device is 2.402 to 2.487 GHz. Shouldn't this be 2.402 to 2.480 GHz?

RESPONSE – Yes. This device is a Bluetooth device and the highest operational channel in the device is 2.480 GHz. This appears to be a typo.

- 2) Page 16 and 17 of the UL report says the highest channel is 2.482GHz. Shouldn't this be 2.480 GHz?

RESPONSE – Yes. This device is a Bluetooth device and the highest operational channel in the device is 2.480 GHz. Again, this appears to be a typo.

- 3) On page 21 of the UL report the table shows an "A" limit. Please note, there is not such thing as a "A" limit for intentional radiators. There is just a limit by reduction from the fundamental or 15.209. You should explain what "A" stands for in the table.

RESPONSE – This is a misnomer and is not used in evaluating compliance to the limits for intentional radiators. Hyper instructs UL to test all emissions to compliance for 15.209. If any emissions fail, then we evaluate whether or not they are in the restricted bands. Since the 15.209 limits are equal to the Class B limits, UL uses their automated test software for unintentional radiators to capture and calculate the spurious emissions. Their system is not set up to do only 15.209 or unintentional radiator Class B only as of yet, so we are stuck with the “extra info”. Hyper and UL understands that the Class A limits in these tables do not apply in evaluating and do not consider the data when determining compliance to the 15.209 requirements. We only evaluate the “Class B” data which is equal to 15.209.

- 4) In the table on page 17 of the UL report you state that the closest margin is -3.9dB for peak at 1726.86MHz. However your table of data on page 21 shows that at 4802.98MHz you have an averaged reading that is -3.2dB. On page 23 you show an averaged reading of -1.2 margin at 2459.02 MHz compared to the restricted band limits. On page 23 you also show an averaged reading of -1.2 limit at 2469.3 MHz. You need to correct this.

RESPONSE – This is correct. It appears that the report writer was only considering peak values. Please accept the table below as the amended worst case emissions.

<u>Frequency</u>	<u>Corr'd dBuV/m</u>	<u>Limit</u>	<u>Margin</u>	<u>Notes</u>
1470.51	48.6 PK	54	-5.4	Vertical
1726.86	50.1 PK	54	-3.9	Vertical
1798.88	48.7 PK	54	-5.3	Vertical
1550.88	50.4 PK	54	-3.6	Vertical
2146.12	49.8 PK	54	-4.2	Vertical
2178.13	50.1 PK	54	-3.9	Vertical
2469.30	52.4 AV	54	-1.6	Vertical
2274.00	49.9 PK	54	-4.1	Vertical
2335.00	49.0 PK	54	-5.0	Vertical
2459.02	52.3 AV	54	-1.7	Vertical
4803.98	50.8 AV	54	-3.2	Vertical
7440.14	52.2 PK	54	-1.8	Vertical

Sincerely,

William Elliott  
Staff Engineer – Wireless Testing  
Hyper Corporation