

Hi Paul

Items that still need to be addressed

Items 1 through 3 - dealing with the needed 731 information.

Item 5 ambients. No response has been provided that clarifies the comment. Please note that this is of concern because two of the readings are harmonics of the transmitter. Please note that the 7305MHz signal is the 3<sup>rd</sup> harmonic of the 2435Mhz fundamental. It is therefore suspect if the listed data is actually an ambient or if it is the harmonic. Please also note that the 4870 signal is the 2<sup>nd</sup> harmonic of the 2435MHz fundamental and is also suspect if the listed data is actually an ambient or if it is the harmonic. The same condition is seen on all of the data pages – they all say all signals are ambient. Please note that this is highly unlikely. Please clearly identify if these are actually ambient signals or if they are the harmonics of the fundamental being measured.

Item 6 - peak reading requirements. This has not been addressed. Please note that part 15 devices also have a 20dB over the average limit requirement per 15.35(b).

Item 8 – MPE. Please note that while you have provided antenna information and MPE in the manual, on page 4 of the new manual you state that a minimum separation distance of only 20cm is required. Please note that you list several antennae that have minimum separation distances significantly greater than 20cm. In a situation such as this you will need to provide a more accurate minimum separation distance statement or require the minimum separation distance of the highest gain antenna used (100+cm).

Item 9 – MPE. Not addressed. The power used in the calculations in the manual is 340 mw, however, the measured and recorded power of the device is only 168mw. You must use the measured power to calculate MPE. Please also note that the MPE report MUST be a separate report exhibit and not simply a part of the manual. This is an FCC requirement.

Item 10 – Reduction of power requirements. This has not been addressed. You must show how power is reduced so as to meet the requirements of 15.247(b)(4). This means you must show instructions in the manual for the professional installer on how to set the maximum power delivered to the antenna under the requirements of 15.247(b)(4).

Item 11 - description of device. This has not been addressed.

Item 12 – required FCC statements. This has not been addressed. The manual must contain all of the part 15 required statements including part 15.21 (non-modification) and 15.105.

Item 13 – description of device. Not addressed.

Item 14 – Separate test setup photos This has not been addressed. A separate test setup photo exhibit must be provided per FCC requirements. It is not sufficient to have these photos in the test report.

Item 15 – Internal photos. Not fully addressed. The FCC requires that ALL shielding be removed and photos of the underlying circuitry and components be provided. While the copper tape has been removed, the metal 'cans' over one end of the board has not. It is not known therefore what is underneath these shields. The shield will have to be removed and photos of the underneath circuitry provided.

Thanks  
Dennis

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**From:** Mike Urban [mailto:murban@atcb.com]  
**Sent:** Wednesday, September 15, 2004 6:24 AM  
**To:** psiegerist@fddisystems.com

## Dennis Ward

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**From:** David White [dwhite@fddisystems.com]  
**Sent:** Tuesday, October 12, 2004 12:38 PM  
**To:** dward@americantcb.com  
**Subject:** ROG466837HO553R24\_ATCB001573

Mr. Ward,

I am working on the rewrite for the documentation for our FCC certification. I thank you for your detailed listing of the corrections. It has been very helpful! I have a few questions though.

Item 11 – Description of the transmitter – What type of information is required? More on the physical setup of the transmitter; meaning how the signal leaves the transmit/receive switch and reaches the antenna? Or on how the signal is formed?

Item 12 – Part 15 Statements - I have made sure that Part 15.211 and Part 15.105 statements are included in both the RF Exposure report and the Instructional Manual. Are there any other Part 15 statements that should be included?

Item 13 – Proof of non-802.11 device – These radios are not part of the 802.11 standard. The radios use TDD/TDMA to transmit in a BFSK modulation. Will a simple statement or paragraph stating this fact be sufficient, or is more detailed white paper from Motorola required?

Please contact me at your convenience.

David White

FDDI, Inc

dwhite@fddisystems.com

918-584-2007

Thanks Paul

I received your responses and have reviewed the latest information. Based on the answers received, I have an additional concern.

Please note that in the clarification of the antennae used the question of reducing power on page 15 of the manual simply states "Select Low as the power setting, then click Save Changes on the bottom of the page. To complete the process, reboot the radio. These products come shipped on the low power setting." However, there is no indication of what "low power" setting is. Somewhere in the documentation you must clearly show that this "low power" setting will be sufficient to insure the proper reduction of power delivered to any antenna with a gain in excess of 14dBi (max 36dB before reduction or  $22 + 14 = 36$ ). If the low power setting is the only indication, then it must be set for the highest gain antenna. Otherwise it must be individually set for specific antennae. Please provide some information on what this 'low power' setting is in dBm.

Once this information is provided I can proceed with the granting of the device.

*Dennis Ward*

*ATCB*

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**From:** PaulS [mailto:psiegerist@fddisystems.com]

**Sent:** Tuesday, October 19, 2004 7:39 AM

**To:** dward@americantcb.com

**Subject:** Items 3 & 5

Dennis,

Below is the answer I have received from Elite with regards to the 2 questions. If this is not sufficient, please give Richard King a call and he will furnish you with the documentation you require.

Thanks,

*Paul Siegerist*

*FDDI, Inc.*

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**From Richard King:**

Paul,

Here are the answers to your questions.

1) Please note that the report provided appears to still be in the 'draft' form as it contains editorial

comments etc. Please provide a completed test report or alternately, please explain why the editorial comments are in the report.

Answer: Attached is a copy of the original test report.

2) Please note that the tabular radiated test data on pages 39 through 54 of the test report have amb listed for all readings. Please clarify if all the readings are ambients or if this is an error in the report.

Answer: All readings listed as amb are ambients this is not an error.

3) Please note that the data in the above tables appears to be averaged data compared to the 54dB limit. However, please note that devices such as this in the part 15.247 rules also requires that the peak readings are to meet the 20dB over the average limits (i.e. peak readings must be under 74dB in the restricted bands. Please show evidence that the peak readings for radiated emissions meet this 74dB limit where applicable.

Answer: Since only ambient levels were noted for the harmonics of the transmit frequency of the test item, it was deemed unnecessary to perform peak to average ratio checks.

Richard E. King  
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## Dennis Ward

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**From:** PaulS [psiegerist@fddisystems.com]  
**Sent:** Tuesday, October 19, 2004 12:11 PM  
**To:** dward@americantcb.com  
**Subject:** RE: Item 10

Dennis,

This is all that is provided in the Motorola Manual. Short of getting the actual measurements out of Elite, I'm not sure what else I can do to accommodate this request.

### Power Control

In Release 4.1 and later releases, the operator selects either

☐ **Low** to set the BH timing master to operate at 18 dB less than full power to reduce the possibility of self-interference with a nearby module.

☐ **Normal** to allow the BH timing master to operate at full power.

Selection of **Low** can cause the BH to drop an active RF link to a module that is too far from the low-power BH. If a link is dropped when Power Control is set to **Low**, the link can be re-established by only Ethernet access.

Module Types	Frequency Band Range	Maximum Transmitter Power	Reflector
SM AP BH	ISM 2400-2483.5 MHz	340 mW	Allowed on SM and BH

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