



American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

September 1, 2003

RE: FCC ID: QNL-RCU-41

Attention: Mike Royer / Michelle Cantrell

I have a few comments on this Application.

1. Please note that part 15 devices may only have certain items held confidential. These items include block diagrams, schematics, technical theory or operation, parts lists (not required). Other items such as internal photos, external photos, manuals, reports, installation procedures etc. cannot be held confidential. Please note that your request for confidentiality is ambiguous. Please provide a request for confidentiality specifically listing those items from above that can be held confidential. Please make sure that the list only includes those items allowed to be confidential for part 15 devices. **ok**
2. Please provide a block diagram in accordance to the requirements of 2.1033. Such block diagram must contain the frequencies of any crystal and their paths. **ok**
3. Please note that the bottom view of the PCB is unreadable due to glare in the photo. Please provide a photo of the bottom of the PCB that clearly shows the components and that minimizes glare. **ok**
4. Please remove the shield from the rf board and provide a photo of the board underneath. **ok**
5. Please note that the FCC ID label must be on the outside of the unit. Please note that this device does not appear to meet the modular approval requirements (i.e. not tested in stand alone, and none of the 8 requirements have been verified). Please provide a label location drawing showing the label in the proper place (i.e. on the outside of the box). Please note that an actual label or the drawing of the actual label with FCC ID number on it must be provided. Also please note that since this label is to be on the outside of the box the 2 condition statement must also be provided on the label or as a separate label. **ok**
6. Please provide test setup photos. **ok**
7. Please note that the schematic says the antenna connector on the rf board to be an SMA.. The report states that the antenna is permanently attached. The internal photos appear to show an SMA connector. Please note that SMA connectors are standard connectors. Because the box must be opened in order to attach the connecting wires etc at the time of installation, this then places the antenna and its connector within the control of the installer. Because of this, the antenna conditions would dictate the device must be professionally installed. Please explain why this device is not shown as professionally installed. Alternately, please provide the professional installation manual for this device that clearly states "professional installation required". **ok**
8. Please note that the manual does not contain any of the required FCC statements. Please provide a manual/installation guide that contains the required FCC statements (i.e. non modification statement etc). **ok**
9. 15.247 states, "The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies." The report states the device complies with this rule, but no evidence has been provided to support this claim. Please provide evidence that this device meets this requirement (i.e. a psuedo-random frequency hopping list) **ok**
10. Please verify that the receiver for this transmitter has sufficient input bandwidth as specified in 15.247. **ok**
11. Please verify that the HP436 used a peak power head sensor for power measurements. Also, please note that the power meter and sensor do not appear to be in the calibration list for equipment used. Please provide the calibration dates of this piece of test equipment. **ok**
12. Please note that emissions greater than 2 bandwidths away from the fundamental are to use the normal analyzer setup for Res BW and Vid BW. This would mean that the plots of this range should have a video bw equal to or greater than the res bw. While the device appears to be compliant to the -20dB rule, please verify that the averaging taking place in the analyzer setup used did not adversely affect the readings. **ok**

13. Please note that while 15.247 devices may not fall under 15.209 for radiated emissions requirements, they do fall under 15.205 restricted band emissions. requirements This means that 15.209 radiated emissions must be performed within the 15.205 restricted bands. This cannot be done via conducted antenna terminal measurements. Please provide the required radiated emissions data showing compliance to the restricted bands. ok
14. Please provide the required MPE report for this device. ok



Dennis Ward
<mailto:dward@AmericanTCB.com>

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.