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

December 10, 2003

RE: Hafele America Co.

FCC ID: PW3112

I have a few comments on the above referenced Application.

EMC Report

1) The device's ports (RS485, power output port, output extender ports, etc.) should have been filled for testing according to ANSI C63.4 6.1.3 & 6.1.4 for a worse case configuration. The final configuration should have included these port filled, or at least the device scanned with and without these ports to determine the effect on the emissions (both digital device and TX emissions). Note that even the DC output cable can create radiation concerns due to differences in filtering (i.e., no ferrite, missing capacitors, etc.) Many of the automotive device you submit are not required to be populated as such since they fall under the exemption of 15.103(a). Given the closest of the margin for the external antenna model which has an additional cable, there may be concern once the missing additional ports are populated.
2) Additionally, it appears that even the models tested do not include some of the optional connections shown in the component placement diagram. It does not appear that worse case samples have been tested. Please explain.
3) Please provide internal photographs underneath the shields of the device.
4) Please confirm the nominal operating frequency. The test report/731 state 136 kHz, however the block diagram from the manufacturer shows an antenna frequency of 134.2 kHz.
5) The limits in table 5.1a and 5.1c are correct for measurements up through 408.9 kHz. However, the limits above this frequency are actually shown in uV/m instead of dBuV/m and therefore affects the results. Please correct.
6) The table at the bottom of page 7 & 9 states digital device emissions are > 20 dB below the limit, however results on the next few pages show otherwise. Please correct.
7) Compliance has been shown to the QP limits for conducted emissions. However several points exceed the average limits. Note that the device must meet with both the peak and average limits. There is QP data that meets the QP limit but exceeds the average limit. Therefore additional average measurements should have also been shown.

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Examining Engineer

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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.