NEBRASKA CENTER FOR EXCELLENCE IN ELECTRONICS
4740 Discovery Drive
Lincoln, NE 68521
402-472-5880

22 April 2004

RE: Telex Communications
FCC ID: B5D-AP200MW

Mr Ward:
This letter is in response to your letters dated 13 and 20 April 2004, below your comments you will find a response in italics.

13 April letter:
1. Please note that the block diagram is to show the clock and data paths of the transmitter. Please note that the block diagram provided does not contain any clock frequency or data rate information for the WLAN transmitter. Please provide a block diagram in accordance with 2.1033 of cfr47.

It is my understanding that the documentation was sent directly to ATCB.

2. Please note that all applications must stand on their own merit. While Telex may not have control over the schematics of the WLAN transmitter, none the less the schematics must be provided. Please arrange to have the original manufacturer of the WLAN transmitter either provide you with the schematics or provide ATCB with the schematics. Please note that certification is not possible without the schematics for the WLAN transmitter.

It is my understanding that the documentation was sent directly to ATCB.

3. Please provide internal photos of the top and bottom of all circuit boards. Please also provide internal photos of the WLAN transmitter. This is also used to verify that the device stated is the device used.

Additional internal photos have been uploaded to the ATCB server.

4. Please note that the FCC has stated that any device within 2.5 cm to 20cm of the body and over 50mw requires SAR evaluation. Since you have classified this device as useable at less than 20cm (i.e. 17.8cm as stated on page 3 of the manual and page 1 of the MPE report) the device automatically subject to SAR evaluation. Please either provide SAR data or please correct the manual and other documentation (i.e. manual and MPE report) to state a minimum 20cm separation distance must be maintained.

A revised manual has been uploaded to address item 4.

5. Please provide a test report for this application.

The report has been uploaded to the ATCB website.

6. Please provide an operational description or a theory of operation for the device (primarily describing the transmitter operation).

The documentation has been uploaded to the ATCB website.

20 April letter:

1. Please note that the plotted radiated data shown in red in appendix B does not specify if it is a QP or an averaged reading. As there are both QP and average limits involved (depending on the frequency) please clearly identify what the reading are (i.e. QP or Average).

This is discussed in Section 4.4 of the report, the red '+' is the quasi-peak or average measurement while the blue '+' in Figures 5 through 26 show the peak values.

2. Please note that in the radiated emissions table for the transmitter you show readings for frequencies outside the restricted bands as over the limit. Please note that the readings outside the restricted bands only need to be 20dB below the fundamental. Please compare the readings to the correct limits.

The report has been modified to show the correct comparisons.

3. Please note that the table on page 62 of the report is listed as being the "calculated restricted band values of the antenna and the coax cable combinations listed In appendix G." What does this mean? It appears as if you have calculated compliance of the restricted bands by subtracting the gain of the EUT antenna. Please note that this not allowed. Restricted band compliance for part 15 devices is strictly a radiated field strength measurement as stated in 15.209a and 15.247c. Please explain the chart on page 62 of the report.

The restricted band values are based on the radiated measured values for a given antenna and in comparison with the measured conducted values. The report has been amended to help clarify this.

4. Please note that you do not appear to have provided a proper peak conducted or EIRP power for this device. Please note that it is stated to be a 200mw conducted power device. Please note that page 6 states the device is only 109mw (20.4dBm) while the 731 states 178mW. Page 6 of the report states that you derived power measurements from plots in appendix F. Please note that none of the plots show the proper resolution or video bandwidths for peak power measurements required by 15.247. Please note that for power measurements using an analyzer the res BW must be wider than the band width of the device or a bandwidth correction factor must be applied. The video BW must be greater than the Res BW. Alternately a peak power meter can be used. Please note that you do not appear to have used the correct resolution and video bandwidths nor does it appear that you have included a resolution bandwidth correction factor in the peak power measurements. The resolution bandwidth correction factor is 10log(EUT 6dBBW/res BW). Please re-measure the peak conducted power of this device using the proper resolution bandwidth (including any bandwidth correction factor as needed) and the proper video bandwidth (which would be greater than the resolution bandwidth).

In re-measuring the peak power of this device using 1MHz RBW and 3MHz VBW and then applying a correction factor based on the 6dB bandwidth of the device the following table represents the peak power.

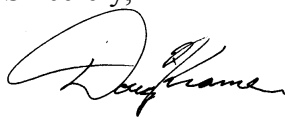
Conducted Power Measurements

	Channel		
	1	5	11
Measured Power (dBm)	19.9	20.4	20.1
6dB Bandwidth (MHz)	9.9	9.9	9.9
RBW=1MHz VBW=3MHz Peak (dBm)	12.19	12.16	12.13
Correction Factor 10log(6dBBW/RBW)	9.96	9.96	9.96
Calculated Power (dBm)	22.15	22.12	22.09

Note the increase in power from the value originally reported to 164mW. The present RF exposure statement with 178mW (22.5dBm) listed as the peak power will not be modified.

If there are any further comments please let us know.

Sincerely,



Doug Kramer
Lab Manager
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