Date: 15th May 2006

Mr. Martin Perrine
Authorization & Evaluation Division
Federal Communications Commission Laboratory
7435 Oakland Mills Road
Columbia, MD 21046

Re: Response to Correspondence 30715 for FCC ID: AZ489FT5848 with Confirmation Number EA461977.

Dear Mr. Perrine,

Motorola Inc., 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322, herein submits its response to the 19th April 2006 Request for Information on FCC ID: AZ489FT5848, EA461977 via Correspondence Number 30715.

Q1. Please justify choice of RF frequency for testing.

Response:

There is no call processing equipment available that supports the two Vocoders relevant to this product, so the T-coil measurements were taken with the transceiver in a call on a live system. This approach also ensures that any audio shaping or compression that would actually occur on a real system would be accurately represented in the HAC data. Further, because it was a live system, it was not possible to choose active channels, but rather the measurements had to be performed on channel resources as assigned by the network. The transmitter frequencies at which measurements made were 817.3875 and 900.06875 MHz. The worst-case E and H-field performance for this product occurred in the 800 MHz band, which is shown below (excerpted from *FCC HAC rpt_i580_Rev O_060301SR3525*, previously filed with the FCC):

iDEN 800MHz Band

Freq. (MHz)	Battery	Rated Max Power (W)	E/H Field	Measured Field (V/m or A/m)	Appendix B Data (pg)	Excluded Cells	M-Rating
813.5125	SNN5744A	0.640	E	72.4	21	1,2,4	M-3
813.5125	SNN5765A	0.640	E	71.4	23	1,2,4	M-3
806.0125	SNN5744A	0.640	E	70.7	24	1,2,4	M-3
824.9875	SNN5744A	0.640	E	67.3	25	1,2,4	M-3
813.5125	SNN5744A	0.640	H	0.136	26	1,4,7	M-4
813.5125	SNN5765A	0.640	H	0.136	27	1,4,7	M-4
806.0125	SNN5765A	0.640	H	0.148	28	1,4,7	M-4
824.9875	SNN5765A	0.640	H	0.140	30	1,4,7	M-4

Note that the E-field strength at the 813 MHz test frequency (that closest to the 817.3875 T-coil test frequency) was the maximum measured, and the 824 MHz field strength was down by only 7%. Similarly, the H-field strength at 824 MHz is only 5.4% less than the maximum measured. Given that the Desired-to-Undesired ABM Signal Ratios measured exceeded the limits for a T4 rating by more than 10 dB, the slightly higher field strengths at 806 MHz would not result in a category change for this product. Further, the T-coil rating claimed for this product was already limited to T3, due to the RF Interference rating.

Q2. Please provide full details of the probe calibration mentioned in the report section 6.1. Please include a demonstration that the probe complies with the frequency and linearity response in Annex C.5. Please detail what the limit lines represent in figures 5, 6, and 7 and how they related to the 0.5 dB recommendation of Annex C.5.

Response:

The attached report has been amended to include these additional details. Note that the limit lines have been removed, and compliance to the 0.5 dB requirement is demonstrated in Table 4 of the report.

Q3. <No question>

Response:

None.

Q4. Please provide full details about the user controllable frequency response as mentioned. Please include a description of how the user will access the control. Please confirm that this mode was used for all testing.

Response:

The phone's user has the ability to enable Hearing Aid mode via the Settings menu, which is described in the attached User Manual (page 58). Testing performed and reported for this model was performed with the Telecoil Hearing Aid mode enabled.

Q5. <No question>

Response:

None.

Q6. Please demonstrate that the noise level criterion from 6.2.1 was met for all three orientations for ABM2 measurements. Ambient noise may be orientation dependent.

Response:

The attached report has been updated to show compliance in all three orientations.

Q7. Please rescale the frequency response curves to reference 0 dB at 1 kHz.

Response:

The response curves in the attached report have been updated accordingly.

Q8. Please provide full details of the P50 input signal including a spectral plot. Also, include additional details of how the signal was input to the network and how the level was set. Please demonstrate that this signal is limited to a single 1/3 octave band to use 6.3 procedures. 6.4 procedures apply for broad band signals. Please update as necessary.

Response:

The input signal was set by calculating the active speech level of the P50 source, and creating a 1 kHz tone at that level. The 1 kHz tone is then measured at the input point of the network and adjusted to achieve the desired -18 dBm0 level.

Below is a waveform plot of the P50 wave file used in the testing, along with the associated frequency response plot.

Q9. Please provide full details of all math used and probe correction/factors applied for ABM1 and ABM2 measurements. Please demonstrate that they are implemented correctly.

Response:

There are two post processing steps performed on the measured AMB1 data after it has been taken. The first is a correction for the P50 response. This is the inverse of the P50 response, which will give the true frequency response. The second is the probe frequency response correction, which is also the inverse of the probe response. Both of these are done to get the actual response of the unit.

For AMB2 there are two corrections made to the measured data. First, the probe frequency response correction is performed, which is the inverse of the probe response. This is the same procedure as for the AMB1. The second is applying A-weighting to the noise response as required.

The Correction Factors are shown in the tables below:

FREQ (Hz)	Axial Probe Correction	Radial Probe Correction
100	-18.60	-18.73
125	-17.22	-17.21
160	-15.10	-15.79
200	-13.13	-12.15
250	-11.43	-11.52
315	-9.50	-9.85
400	-7.67	-7.76
500	-5.87	-5.95
630	-4.08	-4.14
800	-2.03	-2.04
1000	0.00	0.00
1250	1.98	2.03
1600	4.14	4.28
2000	5.93	6.12
2500	7.98	8.26
3150	10.36	10.77
4000	12.41	13.05
5000	14.24	15.20

FREQ (Hz)	P50 Correction	FREQ (Hz)	P50 Correction
97.2	-1.43	729	1.23
103	-1.5	772	1.5
109	-1.55	818	1.81
115	-1.59	866	2.12
122	-1.63	917	2.46
130	-1.67	972	2.81
137	-1.69	1030	3.19
145	-1.7	1090	3.57
154	-1.71	1150	4.03
163	-1.72	1220	4.45
173	-1.72	1300	4.94
183	-1.7	1370	5.46
194	-1.68	1450	5.99
205	-1.66	1540	6.56
218	-1.62	1630	7.16
230	-1.58	1730	7.79
244	-1.53	1830	8.5
259	-1.47	1940	9.2
274	-1.41	2050	9.98
290	-1.33	2180	10.8
307	-1.25	2300	11.64
325	-1.17	2440	12.56
345	-1.07	2590	13.52
365	-0.96	2740	14.54
387	-0.84	2900	15.6
410	-0.71	3070	16.77
434	-0.58	3250	17.97
460	-0.42	3450	19.23
487	-0.26	3650	20.6
516	-0.09	3870	22.04
546	0.1	4100	23.55
579	0.29	4340	25.15
613	0.49	4600	26.82
649	0.72	4870	28.59
688	0.99	5160	30.49

Q10. Please state which battery was used to provide the final result mentioned in 9.2 and 9.4.

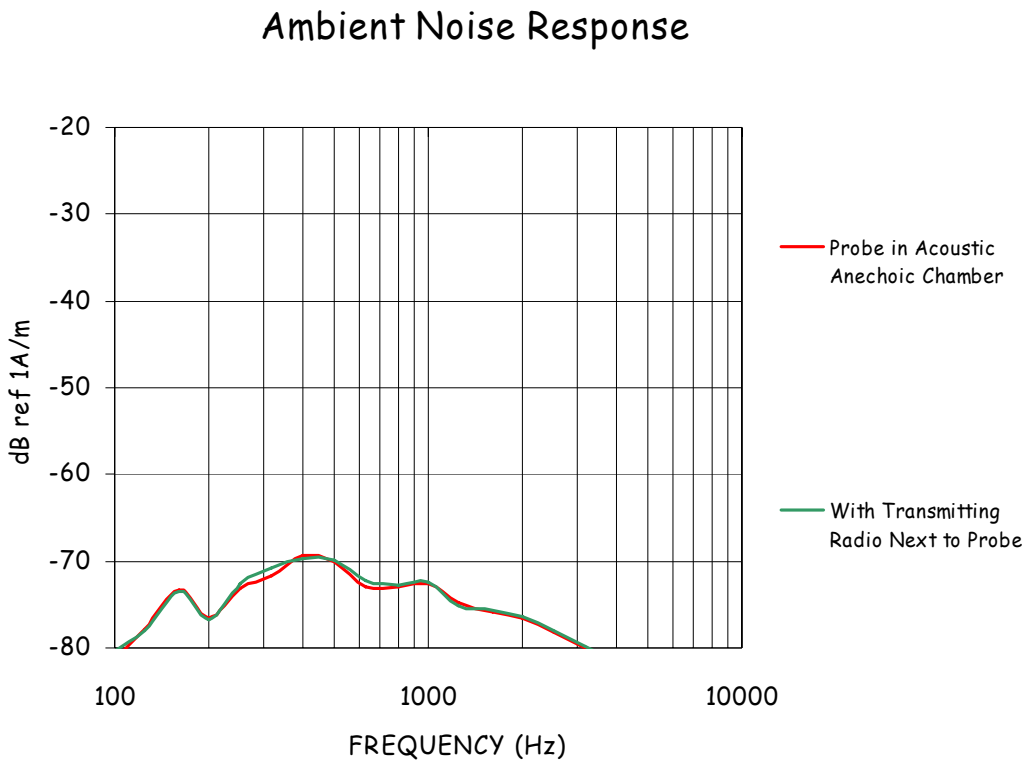
Response:

Telecoil performance was evaluated with both battery kits available for this product (i.e. SNN5765A and SNN5744A). The data presented were the worst-case results, which corresponded to the SNN5765A battery pack.

Q11. Please demonstrate that RF emissions from the phone do not effect the T-coil measurements.

Response:

The graph below shows two ambient noise level responses. The baseline is the probe in the anechoic chamber by itself, and then a phone in a call placed next to the probe. The results show that there is negligible interference reflected in the measurement system with respect to the presence of the RF emissions, and as such the T-coil data were unaffected.



Q12. Please discuss how the numerous signal BW's/line items on form 731 were accounted for in this measurement.

Response:

Only the 18K3D7W emission is used for telephone communications, and so this was the only signal bandwidth used for Hearing Aid Compatibility testing. The other signals shown are intended for data mode operations exclusively.

If you have any questions, please contact me at 954-723-5793.

Sincerely,
/s/Mike Ramnath (signed)
Manager, Regulatory Compliance
Email: Mike.Ramnath@Motorola.com