

July 26, 2006

Supplement to HAC Test Report for Motorola portable cellular phone (FCC: IHDT56GL1)

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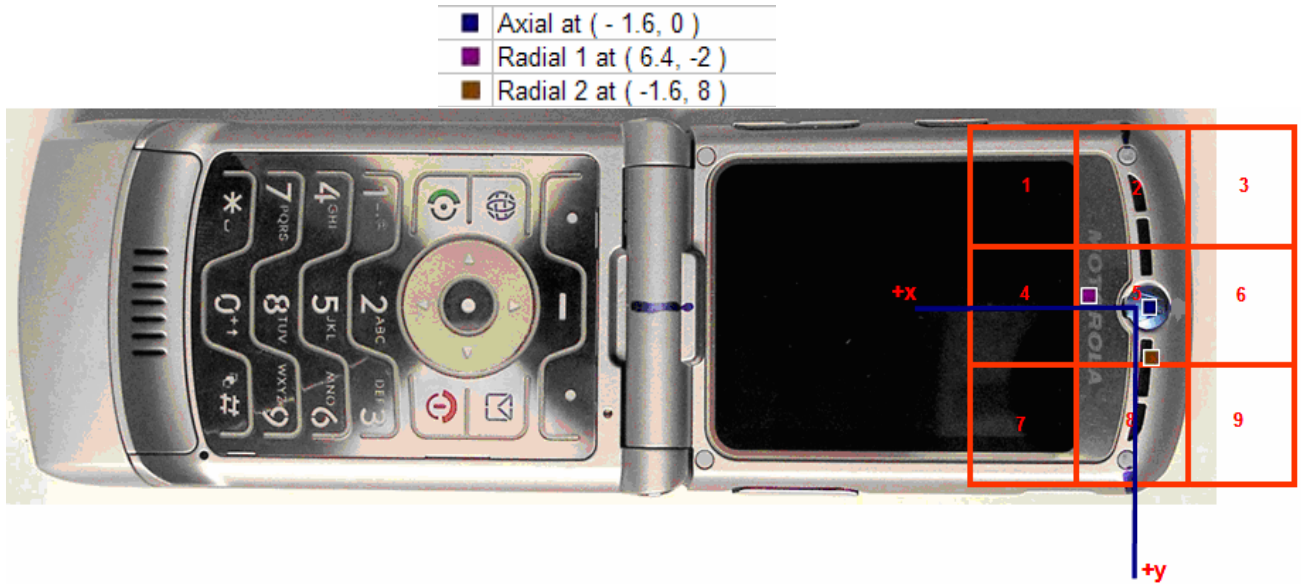
There was a request for additional information regarding Motorola's HAC Test Reports for Motorola portable cellular phone (FCC ID: IHDT56GL1). The requested information is addressed below in the same numbering sequence received.

**For T-coil testing**

1)

Please show the measurement locations overlaid on a graphic of the phone. Please note the reference point on the grid.

**RESPONSE:**



The reference coordinate axis and the highest measured points for axial, radial1 and radial2 are shown above.

For these three points, the contour plots are provided in Appendix 1 of "HAC Test Report for T-coil IHDT56GL1 REV2" from July 13, 2006. These contour plots are too small to overlay on the graphics of the phone.

2)

Please justify the choice of RF frequency for testing.  
Retest as necessary.

On page 61 of "Hearing Aid Compatibility TCB Review Guidance" from July 18, 2006, it states that  
**"Choice of RF channel should also be justified. Use of an ABM2 like investigation is expected"**

We have carried out ABM2 (phone noise) investigation to determine the highest channel / frequency for ABM2. To achieve this, ABM2 is measured at the location of the T-coil source. For each band, the channel with the highest ABM2 measurement is highlighted in **bold**.

**ABM2 measurements across the frequency band  
for the portable cellular telephone at highest possible output power.**

ABM2 Measurements (dB A/m)		
GSM 850	Ch 128	- 41.83
	<b>Ch 190</b>	<b>- 41.37</b>
	Ch 251	- 41.99
GSM 1900	<b>Ch 512</b>	<b>- 41.16</b>
	Ch 661	- 42.17
	Ch 810	- 41.21

For GSM 850 band, the highest ABM2 measurement has occurred on Ch 190. For GSM 1900 band, the highest ABM2 measurement has occurred on Ch 512. SNR measurements for Ch 190 are already provided in Table 4 of "HAC Test Report for T-coil IHDT56GL1 REV2" from July 13, 2006. The SNR measurements for Ch 512 are provided below.

**T-coil SNR measurement results for GSM 1900, Ch 512  
for the portable cellular telephone at highest possible output power.**

Probe Position	Frequency Band (MHz)	Channel	Conducted Output Power (dBm)	Measured Point Location (x mm, y mm)	ABM2 Ambient Noise (dB A/m)	ABM2 (dB A/m)	ABM2 – Ambient Noise (dB)	ABM1 (dB A/m)	SNR (dB)	T-coil SNR Rating
Axial	GSM 1900	512	29.88	-2.8, -0.6	-56.40	-41.25	15.15	-1.74	39.51	T4
Radial 1	GSM 1900	512	29.88	5.2, -2.6	-58.12	-39.34	18.78	-10.6	28.75	T4
Radial 2	GSM 1900	512	29.88	-2.8, -6.6	-58.26	-40.66	17.6	-11.02	29.64	T4

**3)**

Please provide final ambient noise levels for ABM1 (1/3 octave at 1 KHz) and ABM2 in addition to the frequency plots.

**1<sup>st</sup> RESPONSE:** The Ambient noise, ABM2 and ABM1 are all given in Table 4. Please clarify if additional information is required.

Please update the title in the appropriate column to mention ABM2 ambient noise.

**2<sup>nd</sup> RESPONSE:** Table 4 has been updated below.

**Table 4: T-coil SNR measurement results  
for the portable cellular telephone at highest possible output power.**

Probe Position	Frequency Band (MHz)	Channel	Conducted Output Power (dBm)	Measured Point Location (x mm, y mm)	ABM2 Ambient Noise (dB A/m)	ABM2 (dB A/m)	ABM2 – Ambient Noise (dB)	ABM1 (dB A/m)	SNR (dB)	T-coil SNR Rating
Axial	GSM 850	190	33.11	-1.6, 0	<b>-58.29</b>	-40.06	18.23	-1.655	<b>38.41</b>	T4
	GSM 1900	661	29.88	-3.6, 0	-58.55	-44.88	13.67	-3.014	41.86	T4
Radial 1	GSM 850	190	33.11	6.4, -2	-58.31	-37.26	21.05	-10.68	<b>26.58</b>	T4
	GSM 1900	661	29.88	6.4, -2	<b>-58.24</b>	-40.05	18.19	-10.93	29.12	T4
Radial 2	GSM 850	190	33.11	-1.6, 8	-58.19	-39.88	18.31	-9.896	<b>29.99</b>	T4
	GSM 1900	661	29.88	-3.6, 8	<b>-57.96</b>	-43.34	14.62	-10.63	32.72	T4

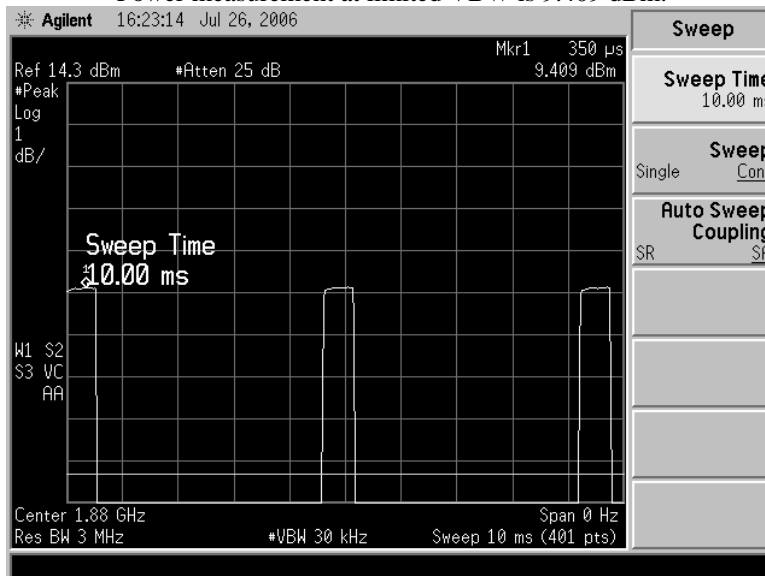
**For RF emissions testing**

4)

Please provide validation for use of 30 KHz VBW. One method would be to demonstrate accurate average power measurement with a very low VBW i.e. 10 Hz.

We measured GSM signal at both full and limited VBW. The power measurements agreed. This means that limited VBW would produce the same result as full VBW for GSM.

Power measurement at limited VBW is 9.409 dBm.



Power measurement at full VBW is 9.416 dBm.

