



5th May 2010

Andrew Leimer
Authorization & Evaluation Division
Federal Communications Commission Laboratory
7435 Oakland Mills Road
Columbia, MD 21046

Re: Form 731 Confirmation Number: EA496374 with FCC ID: AZ489FT4893

Dear Mr. Leimer;

Motorola Inc., 8000 West Sunrise Boulevard, Fort Lauderdale, Florida, herein submits its response to the 23rd April 2010 for information in Correspondence Number 38789.

Q1) "Ex 1 FCC Label" has the following text: "Application References -- Pursuant 2.1061 Reference is made to the following Motorola "Application References"

1. Portable Products and their application
2. Portable Products Transmitter Modulations Methods
3. Plantation, Florida Antenna Range

" FYI 2.1061 was deleted from FCC rules some time ago, therefore to avoid possible misunderstandings about records that should not be listed in modern applications if those three "References" contain info relevant for documenting compliance, please incorporate details within this application (and future filings) accordingly

R1) Rule Part 2.1061 was removed from Exhibit 1.

Q2) "Ex 1 FCC Label" has the following text: "FCC Federal Regulations Part 47 Sec. 2.1033 – 2.1055" note also per 2.1033(c)(14) relevant data requirements are 2.1046 to 2.1057 - for this and future filings please revise to clarify

R2) Replaced Rule Part "2.1033 – 2.1055" with "2.1046 to 2.1057" in Exhibit 1.

Q3) EMC / radio report mentions 2.1047 for "Frequency Stability" - however modern 47 CFR has "Modulation characteristics" at 2.1047, and "Frequency stability" at 2.1055 - please revise document (and future filings) to cite 2.1055 not 2.1047 where appropriate AND check / update ALL rule section cites to ensure proper rule is listed with corresponding data

R3) Exhibit 6 was corrected to reflect the applicable Rule Parts.

- Exhibit 6F: Pursuant 47 CFR 2.1047 had changed to Pursuant 47 CFR 2.1053
- Exhibit 6G: Pursuant 47 CFR 2.1047 had changed to Pursuant 47 CFR 2.1055
- Exhibit 6H: Pursuant 47 CFR 2.1047 had changed to Pursuant 47 CFR 2.1051

Q4) op. desc. indicates four different model versions - two are dual-band, one single-band for 450-520MHz only, and one single-band for 136-174MHz only - please explain whether both single-band versions contain identical component population as dual-band versions - if not identical hardware and component-population / BOMs etc across all four versions, if not in filing already separate test data is likely needed for different versions

R4) The transmitter for all the models is the same (electrically identical) and only differences are for non-transmitter related items, regardless of frequency band configurations.

Q5) concerning further two single-band versions under same FCC ID as dual-band versions, and noting also that user manual does list this FCC ID as "UHF2/VHF", what are means if any in end-use / field-use to ascertain by inspection what bands are in each device?

R5) Authorized Service Personnel could determine the frequency bands programmed in the each device through CPS (Customer Programming Software) which has capability to retrieve the frequency bands available for that particular device. Please note these radios are mainly Public Safety Radios.

Q6) user manual mentions "FCC type acceptance labeling" - FCC rules were changed some years ago to rename from "type acceptance" to "certification" - please revise this and/or future filings to include reflect modern FCC rule provisions

R6) Modification completed.

Q7) cover page of SAR mentions model tested: H97TGD9PW1AN + QA00570AA + QA00576AA op. desc. exhibit includes one more "component", i.e. "... + QA00576AA + QA00 ..." please explain whether / what are differences if any

R7) The differences between these options is on single/dual bands combination as per above explanation are how these bands are configured. In term of hardware, there are no differences among these options as noted in Response 4. Exhibit 12 was amended and attached.

Option:

- (a) H97TGD9PW1AN + QA00572AA + QA00574AA: **UHF2 Only (Single band)**
- (b) H97TGD9PW1AN + QA00570AA + QA00576AA: **VHF Only (Single band)**
- (c) H97TGD9PW1AN + QA00572AA + QA00574AA + QA00579: **UHF2 [primary band]; VHF [secondary band] (Dual band enable)**
- (d) H97TGD9PW1AN + QA00570AA + QA00576AA + QA00579: **VHF [primary band]; UHF2 [secondary band] (Dual band enable)**

Q8) SAR pg 6 has "If P_int > P_max" - this seems confusing, i.e. said condition seems to indicate that incorrect value is being used for P_max (whereas higher power is indeed capable) - please adjust text in report to further explain as appropriate

R8) Typically, the device is tuned at the nominal power. For SAR testing purposes, the radio is manually tuned to as close as possible to the max power indicated for each band. The tuning capability of the software does not allow for exact tuning due to it is limited to step-sizes, and when the power is tuned for one channel it is typically affects the adjacent channels. Therefore, the initial conducted power measurements, in some cases, are slightly above the stated maximum power but not to exceed that by more than 5%. This is the condition indicated "P_int > P_max".

Q9) SAR report table 2 has 26-75mm as distance range for PMAE4065A w/ carry-acc.; the SAR setup photos do agree with 26mm as minimum spacing, but we did not 75mm max. spacing - please explain and/or revise where appropriate

R9) The following table includes separation distances for the antenna PMAE4065A and PMAT4001A when tested with each of the offered batteries (NNTN7038A or NNTN7034A) and body-worn accessories (NTN8266B or HLN6875A).

TABLE R9:

Antenna	Battery	Carry Accessory	Separation distances between DUT antenna and phantom surface (mm)	
			@ Antenna's base	@ Antenna's tip
PMAE4065A	NNTN7038A	NTN8266B	26	35
PMAE4065A	NNTN7034A	NTN8266B	26	35
PMAE4065A	NNTN7038A	HLN6875A	43	75
PMAE4065A	NNTN7034A	HLN6875A	43	63
PMAT4001A	NNTN7038A	NTN8266B	26	36
PMAT4001A	NNTN7034A	NTN8266B	26	36
PMAT4001A	NNTN7038A	HLN6875A	42	84
PMAT4001A	NNTN7034A	HLN6875A	42	76

The separation distances indicated in table 2 of the SAR report represented the closest separation distance at the antenna base and the maximum separation distance at the tip of antenna. Therefore, the separation distances between DUT's antenna and the phantom surface for antenna PMAE4065A test configurations are 26 – 75mm.

As for section 1.1 of the Ex 7B, the distances indicated in this section are the separation distances of the highest SAR test configuration at the body (PMAE4065A antenna, NNTN7034A battery, and NTN8266B carry case), which are 26mm at the base of antenna and 35mm at the tip of antenna.

Q10) SAR table 3 mentions battery "Height" however, photos / descriptions at hand seem unclear what this signifies - please revise to clarify what parameters relevant to SAR setup change / vary with battery "height"

R10) The battery's height affected the changes in the separation distances at the tip of the antenna when tested with the body-worn HLN6875A. The separation distances for each of the batteries when tested with each of the offered antennas and body-worn accessories are indicated in the table R9.

Q11) SAR table 4 and with * note refers to antenna base and tip spacings for the two body-mount acc. and does not mention specific antenna; however we expect the two antenna options herein would give different ranges, as well as the two battery "height" options would give different ranges as we understand - a basic principle is that report must provide enough details for test position to be repeatable, AND report is requested to provide sufficient details about spacings and relative differences for any portions of device which can influence SAR distributions - device features if any that establish specific tilt angle in testing which also occurs in end use (e.g. contact at three points) should be identified; alternatively an approach should be taken and justified such as device-case is positioned parallel to phantom when testing without body-mount acc. - please revise filing as appropriate

R11) The separation distances for each of the body-worn accessories when tested with each of the offered antennas and batteries are indicated in table R9. Please noted that when tested with the body-worn, the device is positioned in normal use configuration with the offered body-worn accessory placed against the phantom as referenced in section 12.3.1 of the SAR report.

Q12) SAR sec. 8.3 indicates 450MHz and 300MHz - please revise to also explain and give rationale what is used in 150MHz-band ---

R12) The 150MHz and 300MHz simulated tissue mixture was made based on the Simulated Tissue Composition indicated in section 8.3 for 300 MHz. This mixture was used to measure the dielectric parameters (conductivity and di-electric constant) at the 300MHz as well as 155MHz and 168MHz to ensure that the Di-electric parameters of this mixture at these frequencies are within the tolerance of tissue specifications. The simulated tissue measurements were done for each test day, prior to system performance check and product testing, and the tissue measurement results are indicated in table R9 of the SAR report.

Sincerely,
/s/ Mike Ramnath (signed)
Manager, Regulatory Compliance
954-723-5793
Email: Mike.Ramnath@motorola.com