



29th March 2002

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

Re: Form 731 Confirmation Number: EA490937 with FCC ID: AZ489FT4853.

Dear Mr. Leimer;

Motorola Inc., 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322, herein submits its response to the 13th March 2002 request for information in Correspondence Number 22302.

Q1) In the EMC report there is no details of how they measure ERP. Was this done with the substitution method? The SAR report mentions maximum conducted values for the FRS and GMRS modes that can go quite a bit higher than the values reported in the EMC report. Additionally the users manual states a maximum of 1 W. What power is to go on the Grant? The additional power might have to be explained in the Grant condition. Please comment.

R1a) Even though the method of measurement was not explained in Exhibit 6, ERP was measured using the substitution method as noted in Exhibit 7, Radiated RF Power Output, Method of Measurement.

The SAR report lists the maximum conducted output powers possible under worst-case conditions for both GMRS and FRS modes. These were also the test conditions for the SAR testing to demonstrate compliance under those worst-case conditions. For both SAR and EMC testing, units were used that were tuned in the factory to the maximum conducted output power limit allowed by the tune/test procedures. These units were tested and have demonstrated compliance to both SAR and EMC guidelines with fully charged batteries (both NiMH and Alkaline) while exhibiting the maximum performance ratings. The EMC report at 6-A, however, indicates conducted and radiated output power under nominal operating conditions. For this purpose, the conducted power was measured with the unit powered by an external power supply, as would be the case during the tune/test procedure in manufacturing. As the SAR report shows, with new fully charged batteries, the temporary output power can slightly exceed the levels shown at Exhibit 6A, but even in this case the unit still meets the emissions and the SAR limits and still complies with other requirements such as not exceeding 500 mW (26.989 dBm) ERP in the FRS mode.

To avoid confusion, both the nominal ERP and conducted power should be shown on the grant. The power to be listed on the Grant should be as follows: GMRS mode = 1.56 Watts ERP and FRS mode = 0.40 watts ERP and for reference the Conducted Power should be listed in the Grant Notes as GMRS mode = 2.13 Watts and FRS mode = 0.58 Watts. R1b) The reference to "0.5 watts to 1.0 watt" operation listed on page 7 in the preliminary manual (Exhibit 08) has been corrected and is enclosed with this correspondence. This is the final draft that was used to create the T7200 user's manual.

Q2. Before and after conducted power measurements for each test. If not available please provide a plot of conducted Power versus time (at least 30 minutes) for each battery configuration. Also, please provide a statement of what power the units were tested at.

R2. The Power versus time characteristic curve is attached herein.

Variations in output power are expected based on the battery chemistries used with the radio. With the NiMH battery in GMRS mode the initial output power measured was 2.43 watts. With the AA Alkaline battery in GMRS mode the initial output power measured was 2.33 watts. In FRS mode, the initial output power measured with a NiMH battery is 0.671 watts and was 0.668 watts with an AA Alkaline battery. These power levels are presented in section 7.1 of the S.A.R. report under the "Initial power" column. In the attached power versus time curve, peak power in the FRS mode occurs about two to six minutes after the initial power. This is a characteristic of this product and the SAR testing reflects this characteristic and indicates compliance.

Q3a. Revised RF safety statement in the manual. The statement "always place the radio in a Motorola supplied " can be easily misunderstood. Please refer only to specific accessories that were tested.

Two- Way Radio Operation

When using your radio as a traditional two- way radio, hold the radio in a vertical position with the microphone two to three inches (5. 0 to 7.5 c away from the lips.

Body- Worn Operation

To maintain compliance with FCC/ Health Canada RF exposure guidelines, if you wear a radio on your body when transmitting, always place the radio in a Motorola supplied or approved clip, holder, holster, case, or body harness for this product. Use of non- Motorola-approved accessories may exceed FCC RF exposure guidelines. If you do not use a body-worn accessory, ensure the radio and its antenna is at least two inches (5 cm) from your body when transmitting.

R3a) There is a section on Page 3 in the user's manual near the verbiage cited that is entitled **Approved Accessories**. That section was provided to assure that, consistent with your concern, information obtained by an interested party is product specific. This is evident by accessing the Motorola web site (www.mot.com) stated in that section. Once at the Website, select **Products and Services** from the top menu and on the next page select **Accessories**, and then **Two-Way Radios**. A pop down menu allowing you to **select your Two-way by name** will be available to allow you to search for approved accessories by model. Information specific to the T7200 has not yet been released on the website. The attached Exhibit 8.1 presents an example of the accessory information provided for Motorola's TalkAboutT6400 product. This reflects the information you can expect to find at the website for the T7200 once it is released. In addition on page 39 of the user's manual, the **Using Accessories** sections refers the reader to a Motorola website for accessories. We trust this clarification obviates the need to change the manual information submitted.

Q3b) Additional SAR plots. All plots are preferred. Provide at least the plot for the highest SAR point for each battery for head and body tests.

R3b) The scans for the highest S.A.R. performance at the head and body using the AA Alkaline battery is attached herein. The scans for the highest S.A.R. performance at the face and the body were included in Appendix A of the submitted report.

Q4) Data and background information of how the target SAR value for system verification was developed. Provide any manufacturer support data.

R4) Currently SPEAG has not made available dipoles for system verification at 450 MHz. Motorola's Corporate EME Laboratory has developed dipoles for system validation at frequencies at or below 450Mhz. The Motorola dipoles are validated once a year and those targets are used for daily system verification. Section 4.1 of the S.A.R. report presents incorrect target values for head and body due to a typographical error. The corrected system performance results are presented below. In addition, attached herein are Motorola Dipole validation certificates and support information for head and body.

Revised system performance check data:

Date	Probe S/N	Tissue	Probe Cal Date	Dipole S/N	Sys. Performance Normalized to 1W	Target Normalized to 1W	% Delta from Target
12/7/2001	1418	Body	5/23/2001	450-001	4.26	4.4	- 3.2
12/10/2001	1418	Body	5/23/2001	450-001	4.18	4.4	- 5.0
12/11/2001	1418	Head	5/23/2001	450-001	4.22	4.3	- 1.9

Contact me at (954) 723-5793 if you require any additional information.

Sincerely,

/s/ Mike Ramnath

FCC Liaison

Email: mike.ramnath@motorola.com