



Dec.15, 2000

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
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USA

Attention: Mr. Frank Coperich,

**Ref.: FCC ID: AFJIC-F40-2, 731 Confirmation Number: EA98142,
Correspondence Number: 17346**

Applicant: ICOM Incorporated

Dear Mr. Coperich,

This concerns your questions on the correspondence number: 17346.

▪ **Answers for your questions 1 to 5:**

Please see attached revised manual in the users manual folder and the information in RF Exposure Info folder for RF Exposure Training .

An additional Label for occupational use

▪ **Answer to your question # 6:**

W represents for Wide Bandwidth signal.
N represents for Narrow Bandwidth signal.

Because the different signal bandwidth settings might affect the SAR compliance, the SAR measurements were performed with both bandwidth settings to ensure they both comply.

- **Answer to your question # 7:** The SAR tests were pre-scanned with different antenna orientation and different belt-clips to determine the worst test configuration as follows:
- (1) Different orientations of the EUT (antenna parallel to the phantom and the tip of the antenna in contact with the phantom) and
 - (2) different belt clips, normal belt clip (MN:MB-68) and alligator belt clip (MN:MB-74)

There were 4 test configurations that were performed as listed below::

- (a) The EUT parallel to the phantom and with the normal belt clip (MN:MB-68)
- (b) The EUT parallel to the phantom and with the alligator belt clip (MN:MB-74)
- (c) The tip of the antenna in contact with the phantom and with the normal belt clip
- (d) The tip of the antenna in contact with the phantom and with the alligator belt clip

In comparison between the above test configurations (a) and (b), it was evident that the gap between the EUT and the phantom in the test configuration (b) was wider than that in the test configuration (a), because the alligator belt clip was larger in depth, which ensured the test configuration (a) was the worse test configuration.

The test configurations (a), (c) and (d) were prescans for the worst case test configuration , and the test configuration (a) was found to be the worst case of RF Exposure to human body.

The worst case test configuration (a) were chosen for final SAR measurements for compliance with occupational SAR limit.

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Answer to your question # 8:

There could be two reasons for the misalignment:

- (1) When the EUT was positioned under the body phantom, it was very hard to observe the EUT from the top since the simulated tissue was not very transparent. In this case, the EUT was positioned so that it could be observed from the side. This caused some misalignment of the reference point ((0, 0) point in the graph and the base of the antenna in the EUT), and the shift of the hot spot by 5 mm ~ 10 mm as well. The graph was generated manually according to the reference point and it was intended to give an idea where the hot spot is located in the EUT approximately. The misalignment in the graph did affect the peak spatial SAR value obtained because the positioning robot of the SAR system explored the surface of the phantom to find out the hot spot for every individual scan.
- (2) The surface of our phantom was not flat, it was curved to simulate a real human's body. Being so that the hot spot could be shifted depending on the shape of the surface and the non-uniform EUT to the phantom surface distance.

Answer to your question # 9:

We will use the tissue conductivity in accordance with IEEE SC34 in the future.

- a) We used the tissue specified in "the Tissue Dielectric Properties CGI software, based on the 4-Cole-Cole Analysis in - Compilation of the Dielectric Properties of Body Tissues at RF and Microwave Frequencies by Camelia Gabriel" listed in the FCC's web site (<http://www.fcc.gov/fcc-bin/dielec.sh>) because the IEEE SC34 Draft (Nov. 20000) was not available at the time we conducted the tests. Now we have a copy and it will be referenced to this reference standard.

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