

10-23-01

To: Bruno Clavier, Rhein Tech Laboratories Inc.
From: Martin Perrine
mperrine@fcc.gov
FCC Application Processing Branch
Re: FCC ID O7KPL150
Applicant: Topaz3, L.L.C.
Correspondence Reference Number: 21028
731 Confirmation Number: EA102136

EMC:

In regards to your recent application referenced above we kindly request that you provide the following additional information.

1) Final amplifier stage DC voltage and current information, and description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power, per CFR 47 Section 2.1033 (c).

[The final amplifier stage DC voltage and current were measured and found to be 7.17 VDC and 0.59 Amps and have been included in the report. The description of circuitry devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power, can be found in the supporting documentation under product description.](#)

2) Confirmation that frequency stability measurement data was taken at all three test frequencies, test report section 10.

[Statement has been added that the three test frequencies use the same circuitry and that this channel is representative of those.](#)

3) Clarification of battery end-point voltage. Page 24 of the test report states two battery end points, 3.3 V and 5.5 V.

[The correct value is 5.5VDC the 3.3V was inadvertently left from the previous correction and has been changed.](#)

4) Updated test report revision 2 showing dates for any new test data. Currently all tests are dated and signed May 31 2001.

[Dates have been changed to show test dates and updates.](#)

5) Description of how channels frequencies are programmed, per 90.203 (g).

[ACC-905 Programming Manual.pdf uploaded for information on how channel frequencies are programmed.](#)

6) Statement that the EUT confirms to spectral efficiency requirements, per 90.203(j3).

[This radio meets the spectral efficiency requirements of 1 voice channel per 12.5 kHz of channel bandwidths for 25 kHz channel spacing.](#)

7) Confirmation that the EUT can only be used with the antenna that was used during testing. The user manual (Section I page 2) suggests that other antennas might be available from MAZUM, LEGACY, and TRUTALK for purchase.

[References to other antenna types has been deleted from the user manual.](#)

8) Strong and specific justification for certification under CFR 22 (Subpart F).

In addition, please be advised that certification for this EUT is not possible under CFR 74 subpart H. It appears that the unit in question exceeds the maximum authorized power of 1 W at the antenna terminals, per Section 74.861 (d1).

[Application is only made for part 90.](#)

10-23-01

SAR :

The FCC has standardized on Supplement C of OET Bulletins 65 which was recently updated. This standard contains both test procedures and reporting recommendations. There are numerous changes that testing companies will need to address to fulfill this standard. This application as been evaluated to the extent possible in accordance with Supplement C.

In regards to your recent application referenced above we kindly request that you provide the following additional information.

- 1) Temperatures of the tissue liquid during the various tests. Per Supplement C Appendix B part II 5.
- 2) Depth of tissue liquid used during the tests.
- 4) Sketches showing positioning of the EUT in reference to the phantom reference points.
- 5) Probe calibration date.
- 6) Date of validation test on page 6 of the test report.
- 7) Pre and post power measurements as referenced on page 5 Section 5.0 of the test report. Per Supplement C Appendix D "Test Device Operating Conditions"/"Output Power".
- 4) Sample calculations for the extrapolation between 2 mm and 3.2 mm phantom thickness mentioned in Appendix B of the SAR report. Please include any similar calculations made to obtain SAR data for the EUT.
- 5) Discussion of the extrapolation used in the probe calibration to obtain the 450 MHz point as stated on page 2 of 8 of the SPEAG document titled Probe ET3DV6. Discussion of how the calibration data was further manipulated for measurements at 150 MHz. Please include a discussion of both frequency and tissue parameter variation and their corresponding effect on the SAR result.

For your future use (FYI):

- 1) Supplement C Appendix C published new tissue dielectric parameters. Future tests should use material within 5% of these values. Calibration of the probe with the correct material and frequency (within 100 MHz) is also required. It was noted that the probe was calibrated at 900 MHz in liquid simulating brain tissue.
- 2) For systems with an operating frequency range greater than 10 MHz three frequency test points are required. Per Supplement C Appendix D.
- 3) Validation test should be done at a frequency within 100 MHz of the actual test frequency. Per Supplement C Appendix D. Your test report suggested that validation was performed at 835 or 900 MHz.