

15 November, 1999

Mr. Frank Coperich
FCC Application Processing Branch

Re: Questions from the FCC

FCC ID: N5WNP16PSBDMHJKH2
Correspondence Reference Number: 10181
731 Confirmation Number EA95150
Date of Original E-Mail: 10/14/1999

Dear Mr. Coperich:

Pursuant to your e-mail to our Mr. Jay Sarkar I am forwarding to you our responses and a bit of additional support information. The relevant portions of the FCC's e-mail follow with our responses inserted in the appropriate place:

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>-----Original Message-----  
>From: oetech@fccsun07w.fcc.gov [mailto:oetech@fccsun07w.fcc.gov]  
>Sent: Thursday, October 14, 1999 2:06 PM  
>  
>To: Jay Sarkar, j.sarkar@aprel.com  
>From: Frank Coperich, fcoperic@fcc.gov  
> FCC Application Processing Branch  
>  
>Re: FCC ID N5WNP16PSBDMHJKH2  
>Applicant: NeoPoint Inc.  
>Correspondence Reference Number: 10181  
>731 Confirmation Number: EA95150  
>Date of Original E-Mail: 10/14/1999  
>  
>1. The users manual describes ear/headset and leather case. These  
>accessories may be used for body-worn operations. Please clarify and  
>provide SAR data to support body-worn use. If such accessories are  
>not intended for body-worn use, it needs to be stated clearly in the  
>manuals with appropriate warning statements. For body-worn  
>operations, it should be indicated to users that body-worn operations  
>using accessories (third-party) that have not been SAR tested may not  
>comply with FCC RF exposure limits and should not be used.
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Additional testing has been performed to support body-worn operations (see Item 2 below about the handsets used). APREL Laboratories' report NEOB-NP1600-3315 has been uploaded to the FCC detailing these measurements. The conclusion is that the SAR limit is not exceeded if the separation between the handset and the body exceeds 11mm. The leather case with its belt clip (with a metal spring) provides a separation of 21mm.

The manufacturer has made suitable changes to the user's manual to caution the user about third party hands-free accessories. The NeoPoint 1600 User's Guide version 0.02 now includes the following paragraph, located on page iii (FCC & Industry Canada Regulatory Compliance):

NOTE: You should only use the manufacturer specified hands-free kit with the NeoPoint phone away from your body (not in your pocket); or use it with the handset in the manufacturer specified leather case. For body worn operations, third party hands-free accessories that have not been SAR tested may not comply with FCC RF exposure limits and should not be used.

>2. The device has 2 battery options, slim and extended. Please
>indicate which battery was used in the SAR tests and clarify if there
>is any difference in device performance from using these batteries
>which may affect SAR. If body-worn conditions are allowed, the worst
>case exposure configurations with the appropriate battery option
>should be considered for body-worn testing.

The original testing was performed with only the slim battery. A second set of handsets was tested in September with both the slim and extended batteries. The only difference between these handsets was that the shielding on the inside surfaces of the plastic case was applied professionally instead of being hand painted on. This professional process is the same one that will be used for the production versions of this handset. The initial testing showed that the improved shielding also reduced the measured SAR. This allowed the manufacturer to increase the RF power from 26dBm to 27dBm in AMPS mode and from 23 to 25dBm in CDMA mode. The measurement reported in APREL Laboratories' report NEOB-NP1600-3291 (head) and NEOB-NP1600-3315 (body – see Item 1 above) detail the measurements with this improved performance (additional testing to comply with FCC Rules & Regulations Parts 2 and 22 are detailed in APREL Laboratories' report NEOB-NEOPOINT-1600-3299). The worst case exposure for both head or body-worn use occurs with the slim battery. In the case of body-worn exposure the worst case is with the battery towards the body.

>3. If higher SAR (than those indicated in the report) may be expected
>due to either battery options that could reduce the current SAR
>margin, additional SAR results based on other head models, such as
>those previously used by APREL, may be needed to supplement the Uni-
>Head results. Existing results indicate 1.38 W/kg for maximum SAR,
>with 15.2% measurement uncertainty. Without additional supporting
>data to supplement Uni-Head results, approximately 15% margin should
>be allowed to cover possible SAR variations due to head model
>differences until a cumulative database is available for making
>reasonable decisions with reduced margins.

The worst case conditions found during the UniHead testing were used during the Left and Right "typical head model" verification. The maximum 1g SAR obtained on the three phantoms is (note that the maximum 1g SAR for the second set of head tests was 1.40 W/kg versus 1.38 for the original set):

Phantom Type	UniHead	Left "typical" head	Right "typical" head
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Maximum 1g SAR (W/kg)	1.40	1.53	1.18
D wrt UniHead	-	+8.9%	-16.1%

The highest “typical” head value is well within the specified overall margin of uncertainty for the UniHead (+8.9% higher vs $\pm 16.1\%$ [15.2% in the original report]). Figures 4 and 5 show the “typical” phantoms used.



Figure 4. Left hand “realistic” phantom used for verification measurements.



Figure 5. Right hand “realistic” phantom used for verification measurements.