

## Chris Harvey

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**From:** aven.zhou [aven.zhou@cn.ccsemc.com]  
**Sent:** Wednesday, May 21, 2008 11:57 PM  
**To:** charvey-tcb@ccsemc.com  
**Cc:** charvey-tcb@ccsemc.com; lucy.tsai@ccsemc.com; tillying@gmail.com  
**Subject:** Re:Uni-Art Precise Products Ltd, FCC ID: MVADHP390-001R, Assessment NO.: AN08T7825, Notice#2  
**Attachments:** SZ080111B01 -RP\_RX\_\_0521.pdf; Operational description tx+rx.pdf

Dear Charvey,  
Good day!

The attached is revised report and operation description.

In addition, for the second question last E-mail we shall make up the below reply again.

2. The SAR plots show z-axis plots that look erratic, which implies that there are troubles with the measurements. The z-axis plot on Pages 18 and 26 look like they could be valid, but the other z-axis plots look invalid. Please explain the other z-axis plots and re-test as needed.



We can see the surface of the EUT indicated the left and right ear, and the transmit module and antenna was fixed in the left ear side of the EUT, which means the radio power only comes from the left ear side of the EUT.

So we can only get the SAR value when we testing the left head position, and when we testing the right head position, the SAR value is so small that we can hardly read it from the z-axis plots, that's why the z-axis plots of right head seems erratic.

You can check the set up photo, when we testing the right side, the left side (which has the transmit module and antenna inside) is far from the surface of the phantom. So the SAR test system can hardly get the value.

We had tested the right head position couple times, the z-axis plots is just the same.

If there is any question, please contact me without hesitation!

Thanks & Best regards!

Aven.zhou (Miss) / □ □ □

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2008-05-12 16:18

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Re: Uni-Art Precise Products Ltd, FCC ID: MVADHP390-001R, Assessment NO.: AN08T7825, Notice#2 [□□](#)

Dear Charvey,

Please kindly find the [revised report, operational description](#) .

If there is any question, please contact me without hesitation!

Thanks & Best regards!

Aven.zhou (Miss) / □ □ □

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2008-04-30 20:45

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Uni-Art Precise Products Ltd, FCC ID: MVADHP390-001R, Assessment NO.: AN08T7825, Notice#2

Dear Aven Zhou,

I have received your response to Notice#1 and continue to need the following item(s) before the review can be continued:

5/23/2008

1. You have indicated that this device is classified as a Frequency Hopping Spread Spectrum (equipment Class DSS) device. The application must include test and operational descriptions for all requirements for FHSS devices. The operational description submitted does not provide enough technical detail about the operation to determine if this device operates in accordance with all the requirements for FHSS devices. The operational description should clearly describe every mode of operation of this device. Please be sure that the operational description and test report document compliance with every FHSS requirement of FCC 15.247 (copied here for your reference):

15.247(a)(1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

15.247 (a)(1)(iii) Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

15.247(b) The maximum peak conducted output power of the intentional radiator shall not exceed the following:  
(1) For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

15.247(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions

which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see 15.205(c)).

15.247(g) Frequency hopping spread spectrum systems are not required to employ

all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

15.247(h) The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hopsets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

2. The SAR plots show z-axis plots that look erratic, which implies that there are troubles with the measurements. The z-axis plot on Pages 18 and 26 look like they could be valid, but the other z-axis plots look invalid. Please explain the other z-axis plots and re-test as needed.

3. The SAR test report indicates on page 23 that the Crest Factor information is a DASY parameter. The test report does not document that the DASY system was used for this SAR test. Please explain and correct as needed.

4. The SAR test report documents that the crest factor is 100%. Please confirm that this is correct for this FHSS device.

5. The SAR report indicates that the SAM Phantom is fiberglass on a wooden table. The photographs of the phantom shows a black table which appears not to be made of wood. Please confirm the material of the wooden table.

6. The SAR compliance plots, report and probe calibration exhibits do not seem to show the ConvF Probe Factor for the SAR measurements. Please either explain where these factors are listed (including on the plots) or update the SAR exhibits to include this information.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

Best regards,

Chris Harvey  
charvey-tcb@ccsemc.com