

An Extraordinary AEP Product

Authored by:



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Recently I have had the opportunity to work with VivoSonic on their new two-channel diagnostic Auditory Evoked Potential (AEP) system. I have been using the Integrity Gen 2 device with version 8.3 application software. We performed test trials using the default protocols for Click ABR, Tone Burst ABR, ECoChG and cVEMP testing, and the results were outstanding. In over 40 years of experience with almost every manufacturer and every AEP product ever introduced in the U.S. market, I have honestly never seen performance that compares to this product. Superior digital response (signal) processing, high sampling rates and extraordinary noise immunity is what makes all of the difference.

The new Gen 2 software also has many features, such as a split screen and the ability to analyze and collect responses at the same time, which enhance convenience and ease of use. For example, the ability to collect two waveforms simultaneously during every run saves a lot of time. It virtually eliminates the need to acquire two or more traces in order to insure that the waveforms are repeatable and that a true response is present.

We brought the new Integrity Gen 2 device into environments loaded with electromagnetic interference which is very hostile to AEP testing, and the Gen 2 system was virtually unaffected. I am confident that this instrument can go into places where AEP testing could not otherwise be performed without a very high risk of corruption of patient responses due to electrical noise.

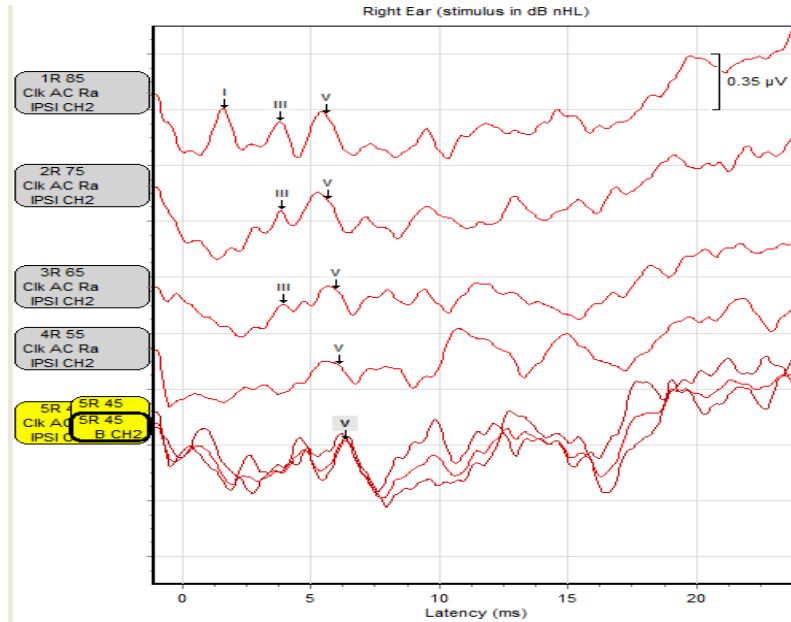
Even in electrically hostile environments, all of the test responses were exceedingly clean. This was even the case when performing ECoChG testing with the high pass filter set to 10 Hz or less and with no 60 Hz notch filter engaged. In fact, these were some of the cleanest ECoChG responses that I have ever been able to obtain with TipTrodes.

We were able to get clear, clean ABR and ECoChG responses with the patient awake, sitting up and occasionally talking, and we obtained all of this in substantially less time than with any other system. In today's world, AEP performance means three things: test speed, response clarity and noise immunity. I am convinced that the Gen 2 system delivers the highest performance of any AEP product on the market today.

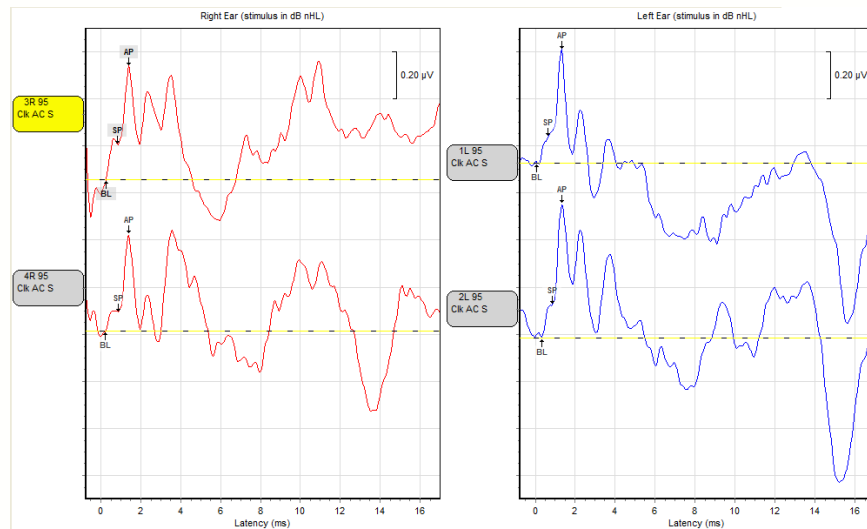


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The following are some typical samples of the data we acquired:

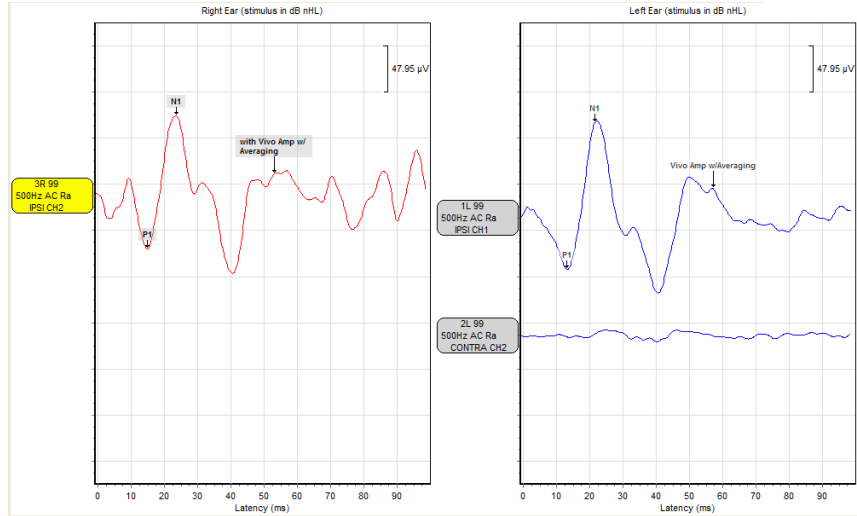


The traces above are a simple click ABR threshold test (latency/intensity function). The entire sequence took us only 10 minutes per ear to acquire.

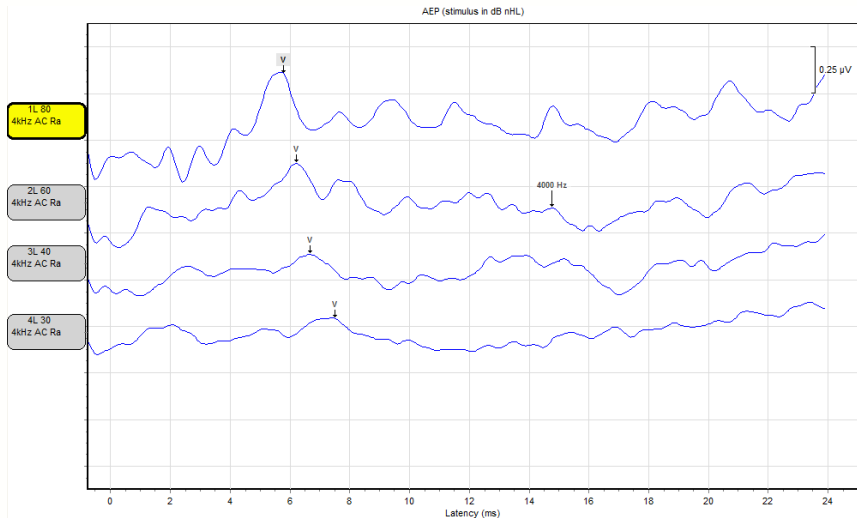


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The ECochG test shown here was acquired with TipTropes on an adult with normal hearing in less than less than 12 minutes.



The cVEMP shown here is solid and repeatable and very easy to record on the Integrity GEN 2 system. We did both ears with repeat runs in about 8 minutes.



Frequency specific tone burst threshold testing (shown above) is often the most difficult protocol used on an AEP system. The Gen 2 system makes this a relatively easy task.

I would not hesitate to recommend the VivoSonic Integrity Gen 2 to any clinic, in any environment, for every application and for all patients from newborns to adults. In short, I am delighted with this product. It's good to see an equipment manufacturer that is focused on AEP and dedicated to the continuing research and development of systems that meet the needs of today's challenging patients and test environments.

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About e3 Diagnostics:

Expertise, Excellence, Everyday: The e3 Difference

e3 Diagnostics is comprised of thirty-six (36) full service offices nationwide - your network of local experienced experts, working in the field of Audiology instrumentation for decades. Our experience allows us to set the standard for the highest level of expertise in the hearing and balance field. The e3 Team makes a commitment to apply our knowledge of the industry to assist our customers from assessment to purchase, installation and training, to calibration, maintenance and repair.

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To find out more about e3, visit www.e3diagnostics.com.

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ADDENDUM 1

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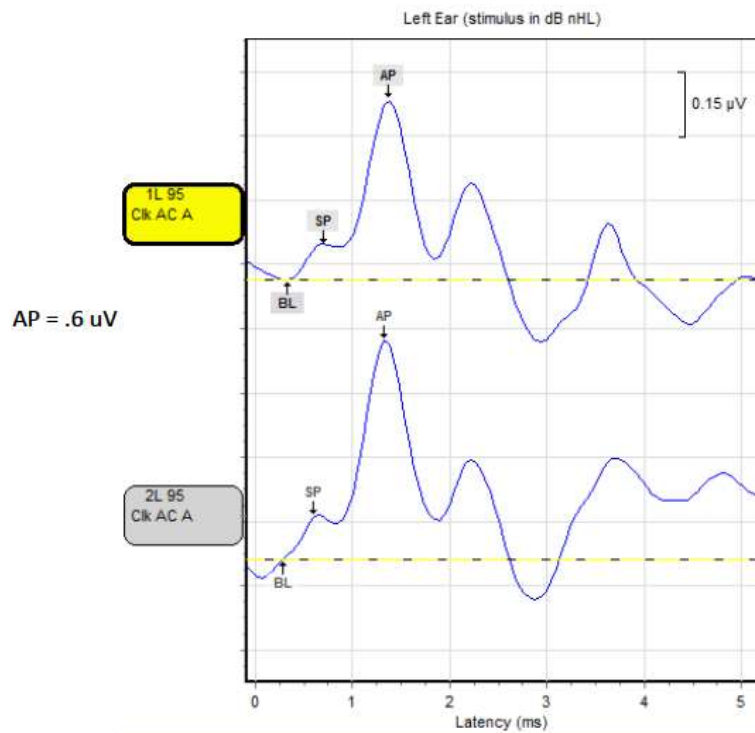
This addendum references a personal communication to Vivosonic Inc from Greg Ollick Sr., author of “An Extraordinary AEP Product” and the Applications Consultant for e3 Med-Acoustics Atlanta.

In an email sent to Mike Schnekenburger (President & CEO, Vivosonic) on January 10, 2017, Greg Ollick Sr. provided additional feedback about the performance of the Integrity V500 (G2) System.

“I have been working with the ECochG, and got the best results that I have ever seen on any AEP equipment with the typical horizontal montage.

I have also worked on the oVemp. Again I recorded the best responses that I have ever been able to obtain on other equipment. Not only that - I got them with no more than 300 stim and only had to do one run on each side. I used the A,B function to prove the replication. So far, so good. See the Attachment for the samples.”

ECochG waveforms obtained from the Integrity V500 (G2) System.



oVEMP waveforms obtained from the Vivosonic Integrity V500 (G2) System.

