

Taken from:

<http://headphone.guru/vioelectric-hpa-v281-balanced-headphone-amp-dac/>

Vioelectric HPA V281 Balanced Headphone Amp + DAC



Konstanz is located at the western part of Lake Constance in Germany. The area is better known as University City. It is here where a company has been designing high-end audio products since 1986 and releasing them under the brand names: Lake People and Vioelectric.

Fried Reim began Lake People by designing products for the pro audio market. Lake People products are used in television studios, recording studios, and even airports. Fried attributed much of the success and survival of Lake People due to manufacturing headphone amplifiers. My first experience with Vioelectric started in 2010 with the V200 headphone amplifier. The V200 is a single ended class AB design that uses two operational amplifiers in the signal path and designed with discrete transistors. The design is quite popular in the headphone community today and remains in the current product lineup. The retail price for the V200 is \$1000 USD.

The V200 is a quiet sounding amplifier. Perhaps the most silent design I have ever encountered in a solid-state amplifier. The V200 is a warm sounding amplifier and reminiscent of many tube designs. The amplifier also has enough power to drive practically any headphone. There are not many amplifiers available in its price category that can compete with the V200. The only minor quibble I had during my time with the V200 was that the soundstage felt restricted, as if it could use more depth and was lacking in air and space. The amplifier was musical and had super tonality but the soundstage was constricting and needed to be improved upon for large-scale recordings.

Being a tube amplifier aficionado, the V200 put a smile on my face with the tonality and warmish (colored) sound signature but was always musical and never fatiguing as I had found with many other

analytical designs. The V200 had excellent detail retrieval and was so quiet you could hear explosive recordings with startling clarity.

Fried Reim is an avid listener and is directly involved within the headphone community. Many people were asking for a true balanced design and for over two years Fried went to work on designing one. The challenge was to design an amplifier to have a more extended soundstage while maintaining the same black background that V200 was so well known for. The challenge was also to produce an amplifier that could be powerful and dynamic. The amplifier would also have to be fully balanced with its inputs and outputs and have upgraded protection circuitry. After two years of research and development the V281 was born.



Design:

The main design principal Violectric employed in the V281 was low internal gain. According to Fried, the amplifier needed to operate under stable conditions without unwanted oscillation. Gain reduces the dynamic range of an amplifier and adds noise. The V281, with low gain of 8db, is a stable design. The results are a black background of pure silence and free from any noise or grain.

Pre-Gain settings on the rear of the amplifier are as follows: -12 / -6 / 0 / +6 / +12 dB (factor $\frac{1}{4}$ / $\frac{1}{2}$ / 1 / 2 / 4). The settings are user adjustable and can be changed by adjusting the switches in the rear of the unit. The pre-gain setting will allow users to tune their headphones to their liking (the amplifier must be turned off to make these adjustments). The stock setting is referred to as %unity Gain+and the setting I actually preferred most.

The V200 employs a 25-Watt toroidal transformer. The V281 has a high supply voltage and offers more than 40 Veff (RMS) into a 600 ohm load (making it a world record, according to Fried). Inside the chassis of the V281 you will find two Violectric V200 amplifiers, thus, a true balanced design.

HPA V281 Features:

- Balanced inputs with gold-plated Neutrik XLR connectors
- Unbalanced inputs with gold-plated RCA connectors
- Balanced line outputs with gold plated XLR connectors
- Unbalanced line outputs with gold plated RCA connectors
- Line outputs assignable to be with fixed or variable level
- 6 optional digital audio inputs 24 Bit / 96 or 192 kHz
- 3 switchable inputs with dedicated buttons on the front
- **PRE-GAIN** = switchable input gain in five steps
- Independent channel design
- ALPS RK27 High-Grade motorized volume control
- ALPS RK27 High Grade balance control
- High-Quality op-amps in the signal path
- High-quality MKP capacitors in the signal path
- 0.1 and 1% metal film resistors throughout the unit
- **Discrete-design power amp with 8 transistors per channel**
- **4 amplifiers (channels) for true balanced headphone output**
- 2 silver-plated Neutrik headphone outputs
- 1 gold plated Neutrik 4-pin XLR output
- Relay-based headphone output cut- off with delayed switch-on
- output management with dedicated buttons on the front:
line outputs active, headphone outputs active, both active, both off (Mute)
- 2 x Large toroidal transformer (15 + 25 W)
- Large filtering capacitors in the power supply (36.000 uF)
- Switchable ground lift
- Rugged aluminum case with Nextel coating
- Solid, laser-engraved front panel

For more technical information and complete specifications, check out this link:

<http://www.violectric.de/home.html>. The V281 has two XLR and one single ended RCA input jacks located on the front. The V281 can also be used as a high quality pre-amplifier in a home system. The base price is \$2300 USD. There are three different DAC options available using the PCM 1798 chip and adds \$249 USD to the base price of the amplifier. You have a choice of optical, USB or coaxial for the DAC. You can add a remote control (handy for two-channel systems) for an additional \$289 USD.

The unit that was sent for review had the remote control and USB DAC option. There is also a stepped volume control option available for additional cost.

Sound:

I have found that the HD800 paired with the Nordost Heimdall balanced cable to be incredibly revealing. The V281 used at the factory default gain setting was extremely neutral as there was no tipped presence in either the midrange or treble. The V281 actually has a similar sound signature to the V200. The character of the amplifier was smooth and the background was silent. There was definitely no unwanted noise or grunge coming from the V281.

Copland's *Fanfare for the Common Man* on the Reference Recording label is a revealing test for any amplifier. The first thing I noticed was a wide and deep soundstage that had the Minnesota Orchestra

spread out and layered in a well focused stage. The explosive start and stop of this recording was very special on the V281. The transparency of the recording was very notable. Clarity of the instruments with space and air were admirable.

Lang Lang's excellent *The Mozart Album* highlighted the inner detail of the V281. The sound was detailed with the sweet and yet delicate sound of Lang Lang striking the piano keys. The HD800 let me hear deep into the recording and the V281 did not mask any of the delicacy or beauty of this recording. I could hear the orchestra layered and each section of this wonderful recording was so romantic but never fatiguing. The piano came to life and stood out in front of the orchestra slightly to the left in its own space with air and pinpoint imaging.



Both the Audeze LCD X and XC both like power. When I moved the gain setting to +12db the X and XC both felt like they had an infusion of power. The additional setting was noise free and made large scale recording felt as if they had more headroom with additional speed and dynamics. Listening to Chrissie Hynde's excellent *Stockholm Album* with either the LCD x or XC revealed more of the same. The sound was always very open and on tracks like *You or No One* Hynde's vocal was articulate yet still had her trademark clarity. The V281 had terrific dynamics while still being delicate and made her voice come to life.

Comparing the same recording on the Viva Egoista (\$10K) increased the transparency and added a wider and more focused soundstage with more air and space in the recording. The 15W amp really was explosive in dynamics. Surprisingly the V281 kept pace with the big Egoista and was never embarrassed. The treble extension on the V281 was exceptional. There was never any tinny sound on drum cymbals. The shimmer and delicacy of the cymbals was portrayed in a realistic non-electronic way. There never was any harshness in the recording and the drums were excellent on *Dark Sunglasses*.

The Alpha Dog closed headphone by Mr Speakers is harder to drive than many other headphones and once again the V281 was up to the task. The MrSpeakers headphone is also very revealing. *Hotel California* from the Eagles *Hell Freezes Over*, is a reference disc for bass. The track opens with guitar and when the kick drum comes in it is explosive. When properly reproduced it can be felt and at times rattle your head when listening with headphones. The V281 and the Alpha Dog came through with a

big bite. The sound was very detailed. I could hear the guitar strings snapping and the bongos in the rear and that head banging kick drum. The V281 was very convincing and transported me to the concert. I could hear the shimmer in the treble and was never disappointed with the bass performance using the V281. Henley's vocal was transparent and the vocal was crystal clear and not disappointing. The track sounded as it should, live and believable. Breathtaking was the word that kept coming to my mind while listening to the track and the performance. The Eagles never sounded better than on this recording. The combination of the V281 and the Alpha Dog kept me listening late into the evening.



When using single ended headphones it was reminiscent of times when I had used the V200. The soundstage was neither as wide nor as deep in dimension as the balanced section of the V281. The Hifiman HE560 on *Take It Easy+* (The Eagles) was enjoyable. The volume control was pushed higher than it was when using balanced headphones, but while it was still fun, the V281 clearly performed better with balanced headphones.

Using my two of my custom in ear monitor, the Roxanne's by JH Audio and the Ultimate Ears UE18 was great. Both IEM's were quiet and had no hiss or identifiable noise on any of the tracks I heard while using CDs or recordings off my computer library. The black background of the V281 is apparent. Often, I would get startled at hearing the dead silence and then the start of dynamics in a recording would make me come to life and sometimes make me jump from the realism. Switching to the internal DAC in the stock unit was a different sound than I had heard while using the ESS Sabre DACs in the Oppo. The transparency and dynamics were considerably improved.

Most of the magic I had been hearing prior with the Oppo was missing. The DAC had less detail and was not as lively. The V281 stellar amplifier section was so transparent and switching back to the Oppo BDP 105 brought all the magic back. Considering that the DAC option is \$249 some people may want to use this internal DAC until they could afford a better external one. The reference quality V281 amplifier deserves the best source you can afford to give it.



Conclusion:

When listening to amplifiers I usually look for a product that I can listen to for long hours that has dynamics and is non-fatiguing. Cold solid state and overly analytical amplifiers lose my interest quickly. Tube amplifiers are my preference as they typically deliver more of what I hear in live performances. The V281 is not an amplifier that creates any issues for me though. The amplifier section of this balanced beauty is transparent. It is dynamic, musical and one of the quietest amplifiers I have experienced, regardless of price. The musicality and delivery of music with V281 never disappointed me. I listened extensively to all types of music during some long listening sessions. During those sessions I was never tempted to turn the amplifier off. I always felt and enjoyed the music. More importantly the amplifier had me totally involved and focused.

There was never anything in the performance of this amplifier that called attention. The battleship build quality and features of the product are special. Attention to detail with the V281 is easily noticed from the quality jacks to the laser engraved faceplates. The sturdy chassis is designed for years of use. Violectric obviously addressed the shortcoming of the V200. Gone is the smaller soundstage for a wider and deeper soundstage with more air and space between instruments.

The V281 performed much better using external DACs, which is a testament to the transparency of the amplifier. Using the best source you could afford with the V281 will pay big dividends in musicality. The Violectric V281 has everything I look for in a reference product. If you're looking for a high-end solid state all-in-one unit, the V281 could be exactly what you're looking for.