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VIOLECTRIC

FOR THE AUDIOPHILE HOME USER

Since 2009, LAKE PEOPLE also builds special devices for hifi applications under the name VIOLECTRIC. With this brand, music enthusiasts with high expectations regarding sound performance and design can also enjoy the high-end circuitry of LAKE PEOPLE. Fried Reim, the mastermind behind both brands, makes a point of having all VIOLECTRIC products justify their existence by their electronic design alone and not by relying on dubious esoteric claims:





"We develop, manufacture and distribute products in the professional range, for broadcast, television, airports, exhibition halls, festival venues, theatres, large-scale installations, private studios and more. In the private sector as well, LAKE PEOPLE products become increasingly popular due to their outstanding quality. The VIOLECTRIC trademark and product line is specially intended to supply the Hi-Fi and High-End market with its specific requirements. We cater to pragmatics who ask for audiophile solutions which are comprehensible in technology and physics. This approach is mirrored in the simple, yet exquisite presentation of VIOLECTRIC devices.

We focus on our commitment to quality not through our circuit design alone, but also through the actual manufacturing. That is why not only the development is housed in the Lake Constance headquarters, but assembly of the selected components takes place there as well. In doing so, our team of developers can draw on over 30 years of experience and countless products for the pro-audio domain. Among others, the first German-made 20 bit A/D and D/A converters were developed by LAKE PEOPLE in the early nineties of the past century.

A large part of the suppliers produces in Germany, too – a lot of them even in the direct vicinity of the LAKE PEOPLE offices in Constance. When buying a product from LAKE PEOPLE or VIOLECTRIC, you can always be sure that only chosen components are assembled by well-trained workers to the highest quality standards."



HEADPHONE AMPLIFIERS



VIOLECTRIC's headphone amplifiers were developed with the target to enable ultimate transmission quality for low-, medium- and high-impedance headphones. Because of their specific, variable, low-noise and low-distortion circuit design especially optimized for dynamic headphones, the HPA series fulfil even highest demands.

- Low-noise because of low internal gain.
 Therefore the self-generated noise from the amplifier is not audible.
- High output voltage through 60 Volt internal operating voltage. Therefore best suited for high impedance headphones. Over 90% of all headphone amplifiers in the market offer not half that voltage!

- High output power because of powerful amplifiers able to deliver much more current a headphone needs. Therefore best suited for low impedance headphones and even magnetostatic cans.
- High damping factor through lowest output impedance. Therefore best suited for full control even over critical headphones with the guarantee to have flattest possible response.

Due to this consistent audiophile design, VIOLECTRIC's headphone amplifiers are multiple test devices. All case and back panel are made of aluminium and are Nextel coated. The 8 mm aluminium front panel is milled, sand blasted and black anodized or silver brushed. The labelling is laser engraved.

TECHNICAL DATA

MODEL	HPA V200 AE	HPA V220	HPA V280	HPA V281
Unbalanced inputs	(2)	2	(2)	2
Balanced inputs	2	2	2	2
Input impedance	10 kΩ	10 kΩ	10 kΩ	10 kΩ
Unbalanced outputs	(2)	2	(2)	2
Balanced outputs	0	2	0	2
Headphone out bal./unbal.	0/2	0/2	1/2	1/2
Gain	+8 dB	+8 dB	+8 dB	+8 dB (unbal.) +14 dB (bal.)
PRE-GAIN	5-switchable	5-switchable	5-switchable	5-switchable
Frequency range (-0.5 dB)	5 Hz to 60 kHz	5 Hz to 70 kHz	5 Hz to 60 kHz	5 Hz to 70 kHz
Damping factor @ 50Ω	600	600	300	300
Output impedance	0.085Ω	0.085Ω	0.165 Ω	0.165Ω
Dynamic range	128 dB	129 dB	129 dB	128 dB
Noise (A-weight.)	-100 dB	-101 dB	-97dB	-94 dB (bal.)
THD+N @ 10 V / 100 Ω (1 W)	-110 dB	-102 dB	-102 dB	-102 dB
THD+N @ 4V/32Ω (0.5W)	-103dB	-100 dB	-99dB	-99 dB
Crosstalk @ 1kHz	-110 dB	-115 dB	-115 dB	-105 dB
Crosstalk @ 15 kHz	-95 dB	-95 dB	-105 dB	-100 dB
Output voltage @ 600Ω	19 V	20 V	32.9 V	40.2V
Output power @ 600 Ω	600 mW	670 mW	1800 mW	2700 mV
Output voltage @ 300Ω	17.1 V	18.8 V	28.2V	29.5V
Output power @ 300 Ω	980 mW	1250 mW	2650 mW	2900 mW
Output voltage @ 100 Ω	15.3 V	17.5 V	23.0 V	23.7V
Output power @100Ω	2300 mW	3050 mW	5300 mW	5600 mW
Output voltage @ 50 Ω	11.5 V	11.6 V	12.4 V	14.5 V
Output power @ 50 Ω	2600 mW	2700 mW	3100 mW	4200 mW
Output voltage @ 32Ω	7.9 V	9.5 V	9.1V	9.5 V
Output power @ 32Ω	1950 mW	2800 mW	2600 mW	2800 mW
Output voltage @ 16Ω	4.2 V	4.9 V	4.9 V	4.9 V
Output power @ 16 Ω	1120 mW	1500 mW	1500 mV	1500 mW
Power supply	230V / 115VAC	230V / 115VAC	230 V / 115 VAC	230 V / 115 VAC
Max. power consumption	10 VA	25VA	30 VA	40VA
Dimensions WxHxD (mm)	170×49×225	170×112×320	170×49×320	170×112×320
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HPA V200 AE

10TH ANNIVERSARY EDITION OF THE LEGENDARY HEADPHONE AMPLIFIER





The HPA V200-AE (10th Anniversary Edition) is a special edition to celebrate the HPA V200 which is in production since 2009 – praised by the users and multiple winner of reviews.

The amplifiers of the V200 AE are complexly constructed with 8 transistors per channel.

This amp may be equipped with one of six different digital inputs: Coaxial, optical or USB with either 24/96 kHz or 24/192 kHz

"[...] the GS 1000 has never given as lively a performance as with the HPA V200. This headphone amplifier outperforms anything I have ever connected my Grado to – tube or transistor [...] the VIOLECTRIC drove the Grado with maximum transparency"

HiFi Statement

- Balanced and unbalanced gold plated connectors
- Optional one out of six digital input (coaxial, optical or USB), 24/96 or 24/192
- PRE-GAIN = switchable input gain in five steps
- · Independent channel design
- · DC-coupled (switchable)
- ALPS RK27 High-Grade volume control
- · High-Quality op-amps in the signal path
- · High-quality MKP capacitors in the signal path
- Discrete design power amp with 8 transistors per channel
- · 2 silver-plated Neutrik headphone outputs
- · Relay-based delayed headphone on/off
- Oversized toroidal transformer
- Large filtering capacitors in the power supply
- · Black anodized case with laser-engraved label

HPA V220

2-CHANNEL HEADPHONE AMPLIFIER WITH SWITCHABEL I/O MANAGEMENT





The V220 incorporates the award winning famous 8-transistor (per channel) amps from V200 for a smooth and relaxed sound stage.

The HPA V220 offers selectable inputs and an output management. The output management enables the amp to act as your personal preamp when desired. Feel free to activate the headphones outputs or the line outputs independently from each other with dedicated buttons on the front panel.

This amp may be additionally equipped with one of six different digital inputs: Coaxial, optical or USB with either 24/96 kHz or 24/192 kHz

"[...] I will simply say that the V220
– as an amp – sounds quite good.
If you are looking for a V200 with
preamp capability, balance control
and selectable PRE-GAIN, give the
HPA V220 a spin. It might be just
what you're looking for. [...]"

Headphone Guru 01/2015

- 3 selectable inputs: balanced, unbalanced (digital option)
- Balanced and unbalanced line outputs, with or without volume control
- PRE-GAIN = switchable input gain in five steps
- · Independent channel design
- · DC-coupled (switchable)
- 3 volume control options: manual, motorized, 128-step relay control
- · High-Quality op-amps in the signal path
- · High-quality MKP capacitors in the signal path
- Discrete design power amp with 8 transistors per channel
- · 2 silver-plated Neutrik headphone outputs
- · Relay-based delayed headphone on/off
- Oversized toroidal transformer
- · Large filtering capacitors in the power supply
- · Black and silver finish availible

HPA V280

2-CHANNEL HEADPHONE AMPLIFIER WITH BALANCED HEADPHONE OUTPUT





Like his "bigger brother" HPA V281 also HPA V280 uses our famous V200 amp technology to enable the typical uncolored but smooth sound signature.

The inputs and outputs are situated on the rear panel, they are equipped with electronically balanced gold plated XLR connectors and unbalanced gold plated RCA connectors. Volume control is provided with a high-grade ALPS RK27 pot with a large full metal rotary knob. The four built-in amplifiers provide balanced operation of headphones. Connection is made via 4-pin Neutrik XLR connectors. Two "standard" headphones may be connected via 1/4" jacks on the front panel.

This amp may be equipped with one of six different digital inputs: Coaxial, Optical or USB with either 24/96 kHz or 24/192 kHz

- Balanced and unbalanced gold plated connectors
- Optional one out of six digital input (coaxial, optical or USB), 24/96 or 24/192
- PRE-GAIN = switchable input gain in five steps
- · Independent channel design
- · DC-coupled (switchable)
- · ALPS RK27 High-Grade volume control
- · High-Quality op-amps in the signal path
- · High-quality MKP capacitors in the signal path
- Discrete design power amp with 16 transistors per channel
- 1 balanced, 2 unbalanced headphone outputs
- Relay-based delayed headphone on/off
- Oversized toroidal transformer
- Large filtering capacitors in the power supply
- · Black and silver finish availible

HPA V281

2-CHANNEL HIGH-END HEADPHONE AMPLIFIER WITH MANY EXTRAS





The four amplifiers in the HPAV281 allow the balanced operation of headphones and are identical to those of the multiple award winner HPA V200. Headphones are connected via 4-pin Neutrik XLR as well as 6.3 mm stereo jacks for unbalanced operation.

The HPA V281 offers selectable inputs and an outputs. The output management enables the amp to act as your personal preamp when desired. Feel free to activate the headphones outputs or the line outputs independently from each other with dedicated buttons on the front panel. The Balanced and unbalanced line outputs on the rear panel can be set to have fixed output level (mirrored from the input) or variable output level from the volume control.

This amp may be additionally equipped with one of six different digital inputs: Coaxial, optical or USB with either 24/96 kHz or 24/192 kHz.

"I...! the V281 is smoother, more dynamic, with a greater sense of musical ease. That said, I never feel that I'm missing any details when running V281 fully balanced. It's like the top end strikes an ideal balance between extension and control."

Inner Fidelity 01/2015

- 3 selectable inputs: balanced, unbalanced (digital option)
- Balanced and unbalanced line outputs, with or without volume control
- PRE-GAIN = switchable input gain in five steps
- · Independent channel design
- · DC-coupled (switchable)
- 3 volume control options: manual, motorized, 128-step relay control
- · High-Quality op-amps in the signal path
- · High-quality MKP capacitors in the signal path
- Discrete design power amp with 16 transistors per channel
- 1 balanced, 2 unbalanced headphone outputs
- · Relay-based delayed headphone on/off
- Oversized toroidal transformer
- · Large filtering capacitors in the power supply
- · Black and silver finish availible



D/A CONVERTER

When developing the D/A converters VIOLECTRIC not only focused on an accurate and jitter-free conversion but also on a low-noise and low-distortion circuit design with a maximum dynamc range.

Due to this consistent audiophile design, VIOLECTRIC's D/A converters are multiple test winners which feature:

- High-end Delta-sigma DAC with outstanding 120 dB dynamic range and -112 dB THD
- Perfect analog output stages to not affect this maximum dynamic and minimum THD-N
- · Switchable digital inputs
- · LED displays for Active Input and Lock

- · Switchable Mute
- Resampling / upsampling with selectable modes: x1, x2, x4 and "BEST"
- Analog output level adjustable in the digital domain
- Additionally the max. analog level is internally adjustable in 5 steps
- · Oversized toroidal transformer
- · Extensive internal power conditioning

All case and back panel are made of aluminium and are Nextel coated. The 8 mm aluminium front panel is milled, sand blasted and black anodized or silver brushed. The labelling is laser engraved.

"The V850 is a higher-end DAC and [...]
I have enjoyed every bit of the V850 and I feel
this DAC has a more than correct price.

In exchange you get a very good, musical sound with a good level of detail and depth with a presentation that is hard not to like."

Headfonia 03/2016

DAC V850

HIGH-END D/A CONVERTER WITH 32 BIT DUAL-MONO CONVERTER AND RESAMPLING





FEATURES

- · 4 digital inputs switchable
- · Coaxial digital output
- LED displays for Active Input and Lock
- Resampling/upsampling with selectable modes: x1, x2, x4 and "BEST"
- · 2 32 bit delta-sigma converters per channel
- · Ultra-low-jitter clock generator
- Perfect analog output stages for max. dynamic range and min. THD-N
- Analog output level adjustable in the digital domain
- Additionally the analog level is internally adjustable in 5 steps
- Balanced and unbalanced outputs, simultaneously useable
- Complex smoothing, filtering and adjusting of the internal voltages
- · Black and silver finish availible

TECHNICAL DATA

Digital inputs:

- 1 XLR female (AES 3/11), 110 Ω Transformer bal. 24/192
- 1 Cinch (S/P-DIF, AES-3id), $75\,\Omega$ Coaxial 24/192
- 1 TOSLINK, Optical 24/192
- 1 USB Type-B (USB 2.0), USB 24/192

Digital input format: AES/EBU, S/P-DIF, PCM

Input sensitivity: < 200 mV

Sample-rate: up to 210 kHz

asynchronous mode supported

Bit depth: 32 bit

Number D/A converters: 4 (2 per channel)

Frequency range (-0.5 dB): >4 Hz to 53 kHz

THD: -112 dBu

Dynamic range (A-weight.): > 120 dB

Crosstalk (1kHz/15kHz): -125dB/-110dB

Analog outputs:

- · 2 XLR male (bal.)
- 2 Cinch (unbal.)

Max. output level (switchable):

+24/+18/+15/+12/+6dBu

Output CMRR (@ 15 kHz): > 60 dB

Output impedance: $< 1\Omega$

Power supply: 230 / 115 VAC, 10 VA

Dimensions: W:170 mm, H:49 mm, D:225 mm



PREAMPLIFIERS

The VIOLECTRIC preamplifiers were developed with the purpose of achieving the highest possible transmission quality for moving coil and moving magnet systems as well as unbalanced line levels. They feature balanced XLR and unbalanced RCA inputs.

The housings are made of aluminium and are Nextel coated. The 8mm aluminium front is black anodized or silver brushed, the lettering is engraved with laser.





TECHNICAL DATA

unbal)
)/-6/-3/0/+3/+6/+9dB t-6/0/+6dB
kHz (-0.5 dB)
(unbal.)/<-107dBu (bal.) (A-weight) u (unbal.)/<-104dBu (bal.) (RMS)
D1dB (unbal/bal) @ +6dBu/1kHz D2dB (unbal/bal) @ +15dBu/1kHz
l1dB @ 1/15kHz OdB @ 1/15kHz @ 60dB Gain
nbal.) pal.)
) nbal.)
aL)
5VAC, 10VA
n, H:49 mm, D:225 mm

PPA V600

HIGH-END PHONO-PREAMPLIFIER WITH (UN)BALANCED INS AND OUTS





The PPA V600 was developed with the target to enable highest transmission quality for movingcoil and moving-magnet phono cartridges. For this reason the PPA V600 offers balanced inputs via 5-pin XLR together with unbalanced inputs via cinch. Gain may be set with the aid of a rotary switch on the front panel in steps of 6 dB from +30 dB to +60 dB. The exact level balance is maintained by a potentiometer, also on the front, with centre detent. This enables a fine adjustment of even unusual cartridges to the subsequent equipment. The gain cell itself is a very fast and noiseless balanced instrumentation amplifier which is normally used for microphone preamplifiers. Because of the balanced wiring to the phono cartridge maximum hum immunity and minimum noise can be achieved.

8 adjustment points inside the unit as well as high-precision and low-tolerance components are granting the RIAA-equalization to be at least 0.05 dB accurate. The complete signal path is DC coupled, all filter stages are passive by design. Of coarse only selected "musical" components had been used for the filter design. Balanced and unbalanced outputs with a maximum level of +28 dBu (unbal. +22 dBu) enable stressless interconnection with the following equipment. A built-in special wide range (90 V ... 260 V AC) low noise switch mode supply enables hum-free operation.

Case and back panel are made from aluminium, Nextel coated. The 8 mm aluminium front panel is black anodized or silver brushed. The labelling is laser engraved.

- Balanced and unbalanced inputs
- · 9 different input impedances selectable
- · 16 different input capacities selectable
- · 4 equalizers selectable: RIAA, NAB, BBC, Flat
- · Passive filters with 0.05 dB accuracy
- · Gain selectable on the front from +30 to +60 dB
- · Balance adjustable on the front
- · Extreme noiseless and fast gain cell
- THD: < 0.001%/<-100 dB
- · Independent channel design
- · Oversized built-in and hum-free power supply
- Complex smoothing, filtering and adjusting of the internal voltages
- Max. output level +28 dBu bal., +22 dBu unbal.

PRE V630

HIGH-END PRE-AMPLIFIER, BALANCED AND UNBALANCED OUTPUTS, REMOTE CONTROL





The PRE V630 was developed with the target to enable ultimate transmission quality. For this reason it offers three unbalanced cinch inputs which are activated by a relay-circuit. Volume control is provided with a high-grade ALPS RK27 pot which offers optimized channel balance and lowest crosstalk. The output of the PRE V630 is not only a unbalanced cinch connection but also a balanced XLR connection and has a switch-on delay via a relay-circuit. Both outputs can be used simultaneously. A built-in power supply with a toroidal transformer and large smoothing capacitors guarantee noise- and hum-free operation.

Because of its double outputs and the optional remote control, V630 is best suited to be the ideal link between your analog sources and your power amp respectively your active speakers.

The case and back panel are made from aluminium, Nextel coated. The 8 mm aluminium front panel is black anodized or silver brushed. The labelling is laser engraved.

- · All input and output connectors gold plated
- 3 unbalanced inputs to be activated via relay
- · Mute switchable
- Unbalanced output to be with fixed or variable level
- · Overall gain internally adjustable in many ways
- Volume control with Alps RK27 potentiometer
- Optional remote control for Input select, mute and volume
- Balanced outputs up to +28 dBu
- · Unbalanced outputs up to +22 dBu
- · Oversized toroidal transformer
- Complex smoothing, filtering and adjusting of the internal voltages

ACCES SORIES

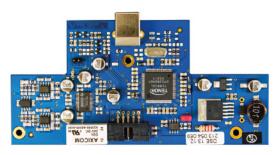
USB OPTIONS

FOR HEADPHONE AMPS AND D/A CONVERTER

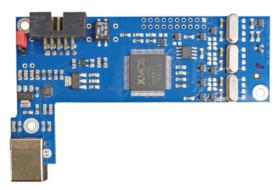
With the VIOLECTRIC USB options it is possible to retrofit VIOLECTRIC headphone amplifiers and D/A converter with a USB input with 24 bit and up to 192 kHz. The USB type-B input can be used to connect a computer, tablet or mobile phone.

The circuit is designed around an USB receiver which supports the so called "asynchronous" mode with a separate 24 bit D/A converter. This offers impressive 115 dB dynamic range with -103 dB THD+N and is implemented in an audiophile analog circuit. The USB receiver is powered by the external device and is handling over the digital audio data by means of a transformer to the input circuitry of the following circuitry.

This means that the external device and D/A converter are completely galvanically isolated to avoid any hum or noise issues from the external device.



Picture shows VIOLECTRIC USB-T 192 for headphone amps.



Picture shows VIOLECTRIC USB-X 192 for D/A converter

VIOLECTRIC USB-T 96

for headphone amps

- · 24/96 USB input (Tenor chip-set)
- The 96 kHz option requires no audio driver.

VIOLECTRIC USB-T 192

for headphone amps

- · 24/192 USB input (Tenor chip-set)
- The 192 kHz Tenor chip-set is recommended for:
 - Windows XP, Vista, 7, 8, 10 (driver required)

VIOLECTRIC USB-X 192

for headphone amps

- · 24/192 USB input (X-Mos chip-set)
- The 192 kHz X-Mos chip-set is recommended for:
 - Mac (no driver required)
 - · Windows 7, 8, 10 (driver required)

VIOLECTRIC USB-T 96

for D/A converter

- · 24/96 USB input (Tenor chip-set)
- The 96 kHz option requires no audio driver.

VIOLECTRIC USB-X 192

for D/A converter

- · 24/192 USB input (X-Mos chip-set)
- The 192kHz X-Mos chip-set is recommended for:
 - Mac (no driver required)
 - · Windows 7, 8, 10 (driver required)

DIGITAL OPTIONS

FOR HEADPHONE AMPLIFIER

With the VIOLECTRIC TOSLINK and Coax options it is possible to connect digital equipment with TOSLINK or S/PDIF outputs, like CD players or computers, with VIOLECTRIC headphone amps.

The optical TOSLINK and coaxial S/PDIF input accept PCM data with 24 bit and up to 192 kHz. The options include an excellent 24 bit D/A converter with 115 dB dynamic range and 10 dB THD+N which is implemented in an audiophile analog circuit.



Picture shows VIOLECTRIC optical (TOSLINK) input.

VIOLECTRIC OPTICAL (TOSLINK) INPUT

with 24 bit / 192 kHz

VIOLECTRIC DIGITAL COAX INPUT

with 24 bit / 192 kHz

REMOTE CONTROL OPTIONS

VIOLECTRIC MRC

Remote Control with Motorpoti - DAC

- · Remote control and motorpoti-device
- · For all VIOLECTRIC D/A converters

VIOLECTRIC MRC

Remote Control with Motorpoti - KHV

- · Remote control and motorpoti-device
- For all VIOLECTRIC headphone amplifiers

VIOLECTRIC RRC

Remote Control with Relaispoti – KHV

- · Remote control and 128-step relay-device
- For VIOLECTRIC headphone amplifiers V220 and V281



Picture shows VIOLECTRIC MRC (DAC).

VIOLECTRIC

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