

Uncompromised character

Studio reference headphone balanced amplification system uncompromised in sonic character, technical specification, and mechanical workmanship. Combining a precisely matched solid-state fully differential low-noise wide-band op amp with a laser trimmed DC coupled output driver stage, entirely "balanced", extremely wide dynamic range, increased linearity, stereo image, channel separation, intended for demanding reference listening sessions.

The signal path from input through output is entirely balanced with a minimum amplifier topology.

Uncompromising circuit design with meticulous selection and hand-matching of critical components assures consistently transparent audio performance at all dynamic excursions and frequency extensions.

The fully differential driving method allows headphone membrane to be much more prompt to signal solicitations.



QES

www.qeslabs.com

QES Labs



HPBA-2

Studio reference Solid state high definition headphone amplifier

Headphone balanced amplification system, totally handmade with selected components.

Sales Representative:

The system

Headphones must be recabled for proper working, two stepped attenuators control the amplifier gain, so recall of exact settings is entirely possible.

Attenuation Range **0/-inf.dB**
with fine tuning precision 24 step Volume knob.

Output **28dBm**
Maximum output power, 300Ω load.

Maximum Input Level **+37dBu**
The system can work only with symmetrical (balanced) line inputs.

Headphone drive

The system can drive virtually any of the commercially available dynamic headphones. It comes with the balanced cable with Sennheiser-type connectors; other headphones must be recabled by re-soldering the cable.



Matched components

A minimum number of resistors, shortest signal path through precision S.M.T. technology, D.C. coupling have been used in the audio path for maximum sonic experience.

Gain **continuously variable**

Continuously rotary knob assures precise control over preamplifier gain.

Matched fully differential op amps

The input stage consists of a balanced topology with a matched pair of low noise, wide band, fully differential operational amplifiers, delivering an uncompromised sonic transparency.

Low Boost, Low Cut

To preserve phase in the audio path, no filters and capacitors have been used.



Spec Sheet

C.M.R.R. **>-80dB**
Rejection Ratio at 10 KHz.

Frequency response **1.5Hz – 850KHz**
-3dB points.

Signal to Noise Ratio **>-100dB**
6dB gain, 22Hz to 22KHz, 300-ohm terminated.

Nominal Max Output Power **+28dBm**
For 0.1% T.H.D. + Noise.

Filters

Complete absence of colouring filters

IC's

2x THS4131ID

Input (xlr) impedance **20 K ohms**

Output impedance **164 ohms**

Power supply **115/230 volts A.C. 50/60Hz**
(specify when ordering)

