

Ars-Sonum

Gran Filarmonia

STEREO INTEGRATED TUBE AMPLIFIER



Summary of characteristics:

Output power: 2x60W RMS (8 Ohms).

Up to 40Wpc in class A, less than 0.5% distortion Input sensitivity: 300mV.

Total harmonic distortion: 0.5% (40W RMS). Frequency range: 5Hz-80 kHz (-3dB).

Signal/noise ratio: >90dB.

Connectivity: Three line-level inputs / monitor and tape output.

Tubes: 8 x E34L, 2 x JAN 6189W, 2 x E88CC.

Top grade Audiophile custom manufactured components.

- ELMA precision rotary switch input selector
- DACT 24-steps volume control
- V-CAP Cutf series (film/foil copper/tefl6n) coupling capacitors.

Exclusive Ars-Sonum designed and handmade output and power transformers.

Extraordinary craftsmanship.

Ars-Sonum products are exclusively sold/distributed in the USA by Signature Sound Hi-End Audio.

To place or order or to ask a question, please contact:

Signature Sound, 8409B Shallowcreek Rd, Liverpool, NY 13090 USA

www.sigsound.com 315-622-4137 hifi@sigsound.com

GENERAL TECHNICAL OVERVIEW

The **Gran Filarmonia** is a stereo integrated amplifier with a maximum output power of **60 watts RMS** per channel at 8 ohms. Its output section utilizes four **E34L** pentodes in Push- Pull Parallel configuration per channel. The E34L is a special upgraded version of the EL34 / 6CA7 tube. The drive and phase inversion stage uses one **JAN 6189W** dual triode, while the input section is driven by the **E88CC** dual triode.

One of its most remarkable characteristics is the adoption of an output stage which does not use the classical, and more conventional Ultralinear configuration, but a special circuit designed by Ars-Sonum, consisting in a screen-grid regulated pentode. Biasing is automatically regulated. These features allow an extremely accurate and stable working point of the final path. This configuration allows using a very low global negative feedback rate of 6dB, keeping low distortion levels and adding interesting benefits, such as more phase coherence, great frequency response stability along the audio band, and lower TIM Distortion levels. The global negative feedback is complemented by the slight use of lower local negative feedback rates at the previous stages.

The output stage's biasing circuit uses high precision components, matched for tolerances below 1%. They include the output transformers and especially the cathode resistors, which are matched within a 0.5% tolerance. The **JJ E34L** tubes are object of a special selection process, to obtain two matched quartets within a 2% of their performance characteristics. This effort assures that the stability and performance of the amplifier is kept uniform and unaltered along the aging process of the tubes. It also allows the tube replacement without any further adjustments. Moreover and fundamentally, it makes for a very precise working point into class A for most of the power delivery of the amplifier. Only during short musical transient peaks does the amplifier work into Class B and then it quickly returns to its optimal working point, for a better musical quality.

The output transformers (designed by Ars-Sonum and exclusively manufactured for us) are conceived to reach an especially wide frequency response, even without using global negative feedback. Their main attributes are a high primary inductance (>50Hy), an extraordinarily low fugue inductance (<2mHy) and a high precision balance (<1%) between primary windings. All of this is thanks to a complex design with multiple windings and a careful craftsman work to wind them.

Special care has been placed on how the **power supply** was conceived. Its complex design includes eight independent sections, six of them stabilized independently for each channel and each stage, with the aim placed in achieving the lowest interference among channels (crosstalk) and among stages (intermodulation). The implementation of a power transformer with electrostatic screen gives a good common mode noise rejection. It makes the use of external power filters/conditioners to clean the electrical supply from noise unnecessary, and also provides extra safety protection to the user. The passive components in this section have been specially selected in an unusual way: choosing filtering and decoupling capacitors of professional quality using special series parts (Aerovox / BHC, Nichicon and Panasonic, electrolytic, and polypropylene dielectric capacitors from Wima). The power resistors are selected at 1% tolerance and oversized for reliable performance.

The driver and phase inversion stage uses tubes from professional / military series (**JAN 6189 Sylvania**), and low-noise, high-precision components, such as metal film resistors selected and pair-matched at 0.5% and top audiophile quality path capacitors (specially treated Hovland MusiCap film/foil types).

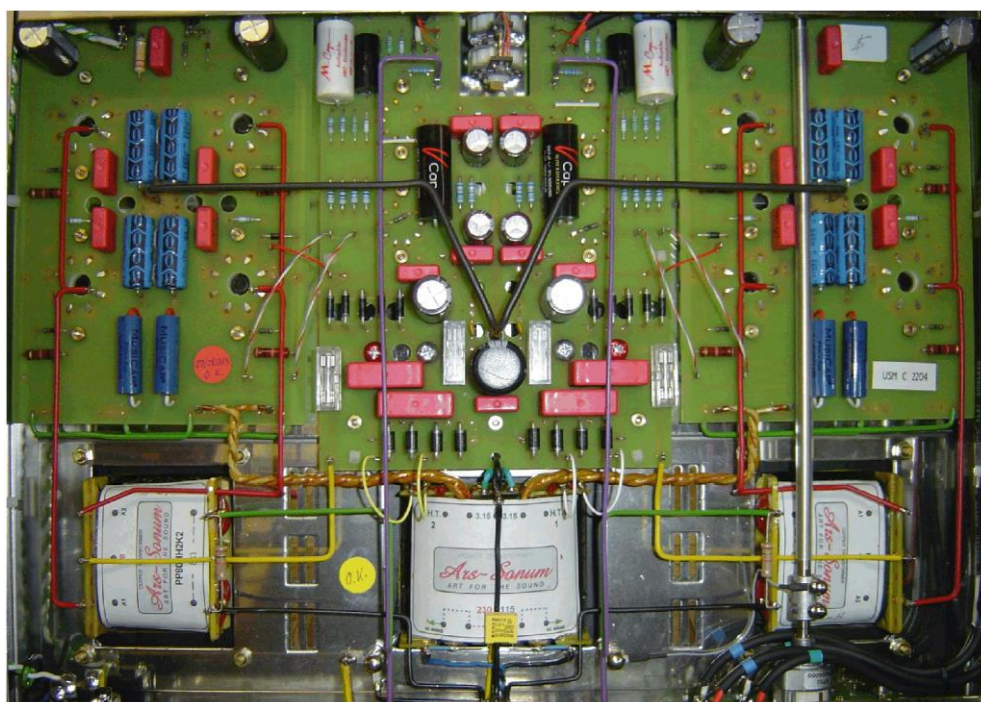
The input stage is based on an exceptionally low noise tube (**JJ E88CC**), and the associated components have been carefully selected to achieve the highest signal to noise ratio. Special mention is required for the **V-CAP Cutf series** (film/foil copper/Teflon) coupling capacitors, which are considered to be the newest and most sophisticated High-End technology for this kind of components.

Parallel to the input stage, the Gran Filarmonia amplifier has a special stage to allow the inclusion of a buffered **monitor output**, which works in isolation and is independent of the input stage. It is a cathode follower circuit configuration, which uses one of two triodes that compose the E88CC tube. This special stage allows it to obtain a low output impedance of 600 Ohms, *with the signal controlled by the amplifier's volume control*, to allow control of external devices such as subwoofers, signal processors, power amplifiers, etc.

The volume control is made through a switched device (stepped attenuator) of 24 steps (**DACT**), equipped with high precision SMD resistors and gold plated contacts with the purpose of achieving a perfect attenuation curve and keeping exact balance in both channels.

The internal wiring and the circuit board have received special attention, which required a great deal of the time dedicated in the design and development of the amplifier, in order to provide the best signal-to-noise ratio, and the lowest interference and parasitic capacitance between components and stages. For this reason, we use a mixed technique of point-to-point wiring and print circuit board, whichever is considered optimal for the requirements of each amplifier's stage.

The chassis is made of die cast stainless steel, folded and soldered with high precision and polished. The control buttons are exclusively hand-crafted for us, made from a piece of solid aluminum lathe turned and handpolished.



Gran Filarmonia inside

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ART FOR THE SOUND
Handcrafted in Madrid, Spain

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