

■ | RV 1

Magnet
RV1



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RV 1 - Stereo-Tube amplifier

- 1 | **Clearly arranged front for easy use.**
- 2 | **Then when you take off the cover, you see the tube pre-amplifier and the three monumental EI transformers behind the 8 mm thick aluminium front panel.**
- 3 | **The remote control is confined to the basic volume and mute functions. Milled from full aluminium, it's feel is irresistible.**
- 4 | **The design of the RV 1: the phono amplifier is situated right by the phono input so as to keep the signal path as short as possible.**

Naturalness and musicality are attributes that are frequently voiced to describe the sound of a tube amplifier. Among audiophile music-lovers, high quality tube amplifiers enjoy the reputation of being the ultimate with regard to acoustic reproduction. An „all tube“ amplifier is one in which only vacuum tubes are used for the entire signal path.

However, there are huge differences between tube amplifiers with regard to design, complexity and results. A large number of modern units have been developed mainly under the maxim of the lowest price and greatest show-off effect. Kitschy chrome and gold sparkling tube temples with poor reliability and very disappointing sound quality are often the result.

The Magnat RV 1 has been developed by a German-English team based on classic tube amplifiers from the 60s and 70s. The objective was to achieve the best possible sound quality, a high degree of reliability and compatibility with modern loudspeakers.

The basic requirement for this is perfect mechanical integrity. Vibrations detrimental to the sound were to be excluded from the outset. For this reason, the enclosure of the RV 1 is a modular design constructed from solid, milled aluminium plate. Inside, the four main sections – phono equalisation stage, pre-amplifier, power supply unit and power amplifier – are separated by shielding plates. The particularly sensitive phono section has been given additional protection against radiated magnetic fields through a further shielding grille. This elaborate design and the inclusion of substantial transformers account for the major part of the total weight of 20 kg. This highly stable structure provides a perfect base for the electronic circuit.

The signal path follows the „weak-on-strong“ principle, i.e. the weakest signal (phono) is amplified immediately after the input. The input signal switching is accommodated on the same board. From there, it goes on to the volume control and to the pre-amplifier and driver stages. Finally there is the power amplifier. The mains transformer is placed in the middle to guarantee short distances.

The RIAA phono stage and the pre-amplifier circuit are designed according to the SRPP (Shunt Regulated Push Pull) principle. This circuit, favoured by most Japanese and French pre-amplifier specialists, is known for its high linearity and extremely low distortion. The tube types used are selected Russian 12AX7/ECC83 models. These tubes have an outstanding reputation with regard to reliability and sound quality. High-quality ALPS potentiometers are used for balance and volume control.

The power amplifier is a push-pull class AB circuit with an output of 35 watts at 4 and 8 ohms. With this configuration, the sound quality has a greater priority than an arbitrarily chosen higher number of Watts. This circuit utilising EL34 tubes manufactured in Russia on German machines, combines reliability, a clear sound and a high degree of compatibility for a tube amplifier in relation to loudspeaker selection. Instead of being mounted on a circuit board, the power amplifier is independently wired by hand, while matched pairs of tubes are used. The output stage is driven by series connected 12AU7/ECC82 tubes.

Before final assembly of the RV 1, all pre- and output amplifier tubes are subjected to a 60-hour burn-in test. Defective tubes or those not complying with our stringent quality stipulations are identified and rejected.

Tube experts all agree that the quality of the output transformers is the key to high performance. Many low-budget tube amplifiers use output transformers with cheap toroidal cores. They aren't found in either the legendary classic tube amplifiers or more modern high end designs due to the negative effects on the sound. In the RV 1, Magnat uses only classically designed output transformers with EI iron cores. The material selected for the laminations is high-quality, silicon-alloyed transformer plate. This complex and expensive design has been accepted for decades as the optimum configuration for high performance in tube amplifier engineering.

Even the best circuits can only display their true strengths with an exquisite power supply. In the RV 1, 9 separately stabilised supply voltages are used for the different tubes and circuits. This produces an exceptionally low noise floor and enhances long-term stability.

In addition to the mechanical design and electronic circuitry, a great deal of attention has also been paid to a variety of the details in the RV 1.

The loudspeaker terminals are very substantial gold plated items clad in transparent acrylic insulation. All sound-relevant components have exacting tolerances with only high-quality film capacitors and metal film resistors used.

The tube bases also play a crucial part. The power amplifier is equipped with extremely durable and temperature-resistant ceramic octal sockets. Noval sockets with precision-milled, gold-plated annular contacts are used on all the other tubes. This avoids contact problems even after very long operating times.

The unit is supplied with a reassuringly solid, full-metal remote control. This allows the volume to be adjusted easily and conveniently from your chair. All switch and control knobs are also machined from solid aluminium.

All the development, materials and attention to detail that have gone into the RV 1 are not geared towards short-term gimmickry. They enable the connoisseur to enjoy numerous hours of deeply rewarding immersion in perhaps the most beautiful medium known to mankind: music.






- 1 | **The tube types used are selected Russian models. These tubes have an outstanding reputation with regard to reliability and sound quality.**
- 2 | **Even the smallest components, such as the tube caps in the pre-amplifier, have milled and gold-plated contacts in order to optimise sound quality.**
- 3 | **The RV 1 also presents a very tidy and clearly laid-out appearance from above. The pre-amp and power-amp tubes, the transformers and the separate phono section are arranged very clearly.**
- 4 | **Somewhat complex for the lay person, but a work of art for the connoisseur: the power amp is intricately handwired, guaranteeing the highest possible sound quality without any disturbing influences.**



RV 1

Principle	Stereo-tube amplifier
Power handling RMS/max.	20 Hz – 20 kHz, THD < 1.0 %, 4 ohms, 2 x 35 W 20 Hz – 20 kHz, THD < 1.0 %, 8 ohms, 2 x 35 W
W x H x D	420 x 166 x 330 mm (377 mm incl. control knobs and connectors)
Cabinet surface	silver

TEST

-  *stereoplay* 11/07
Highlight, Price/performance: outstanding
-  *NXOS* 11/07, Greece
4,7 of 5 Stars
-  *Homevision* 12/07
Highlight, Price/performance: very good
-  *LP* 01/08
The RV 1 came, I saw, I heard, it conquered
-  *audio-video* 02/08, Romania
Price/performance: outstanding

