Allnic L-7000

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Well-made vacuum tube preamps

What is the preamp's virtue? The first thing you'll feel when using an integrated amplifier, then, is to expand the sound stage depth, increase the negative number, and increase the expressiveness of detail. The higher the preamp level, the finer air at the time of recording or the nuances of musical instrument performance. The outlines and surfaces of the notes are often sharper and smoother.

I listened to the tube preamplifier L-7000 of Allnic, a Korean audio company. In terms of price, the L-8000 DHT is the top, but the two preamps are different. In addition to the output tube, the L-8000 DHT

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puts a series of triodes (DHT) into the front end of the amplifier and saw the end of the full DHT preamplifier. In contrast, the L-7000 is a preamplifier with a series of three-pole tubes, one 300B vacuum tube per channel, complete with a constant voltage circuit to the limit.

I really listened to several songs with the L-7000. Rachmaninov's piano trio, played by Daniil Trifonov and others, hit the rich reverberation of piano time. In Lee Morgan's alum, the scene of playing the drums was unfolded in front of her eyes, and as he reached out, the musicians and instruments seemed to be in their hands. Without knowing myself, the shoulder shakes and paws were followed. Praise makes whales dance, but well-made preamps make audiophiles dance. The L-7000 was a preamp that made me feel good.

300B, a brilliant transformation into a constant voltage tube

The first keyword for the L-7000 is 300B put into a constant voltage circuit. When the L-7000 was introduced into the audio system, the most striking features were the increase in quietness and dynamic range and the expansion of the sound stage, thanks to the design of a robust power supply and vacuum tube constant voltage circuit completely separated into the left and right channels.

As everyone knows, the power supply of the amplifier consists of a power transformer, rectifier circuit, smoothing circuit, and constant voltage circuit. Among them, the constant voltage circuit is designed to output a constant output voltage regardless of the input voltage or load resistance. And the basic concept of a vacuum tube constant voltage circuit that I understand is this. 'Input voltage → constant voltage vacuum tube + feedback circuit (cold cathode tube or zener diode → voltage error detector → constant voltage vacuum tube) → output voltage'.

It looks a bit complicated, but the principle of constant voltage is easy to understand when you think about a faucet. Constant voltage is the constant flow of water from the tap. Then, if you get a lot of water, just close the valve on the faucet. The valve acts as a constant voltage vacuum tube as described above, and the valve hand acts as a voltage error detector. In short, a constant voltage vacuum tube (valve) is operated with a feedback circuit (human hand), resulting in a structure that always obtains a constant output voltage (water). Of course, this output voltage is the B voltage applied to the tube plate of the amplifier amplification stage which is bitten by the rear stage.

The L-7000 uses 300B for these constant-voltage tubes and 5654 for 5-poles for voltage error detector tubes. The L-7000 shines because it uses a 300B constant voltage tube. The 300B is renowned for its high and beautiful sound, but the other value of the 300B is its constant voltage performance. Since the birth of the original WEWE 300B in 1938, the tube has been used for signal amplification and constant voltage in theater projection and audio equipment. The original WE300B, which was discontinued in 1969, was splendidly revived in 1981-1988, when the transistor era was in full swing, for use in the NASA internal equipment.

Western Electric also introduced 300B into the constant voltage circuit in the early 1940s. It is still the legendary power supply WE 20A that is still mentioned in the population. The circuit diagram can be found on the Internet, and if you look closely, you put 300B into the constant voltage tube and 348A into the voltage error detector tube. This is why Park's CEO, Olnick, describes the L-7000 constant voltage circuit as a modern improvement of the WE 20A.

Then why did WE 20A, NASA and L-7000 use 300B as constant voltage tube? Again, think of the principle of a faucet. I tried to close the valve by hand when there was a lot of water. It will not be instantaneous coping. The same principle. If the output voltage is higher or lower than the reference value, the voltage error detector tube enters the constant voltage tube control. If the internal resistance of the constant voltage tube is high, proper constant voltage implementation will not be possible in the first place. In other words, the constant voltage vacuum tube can flow a lot of plate current even with a minute voltage change only when the internal resistance is low, and it is possible to cope with the instantaneous constant voltage. However, 300B is a typical triode, with an extremely low internal resistance of only 700Ω.

5 Luxman LX-380

6 Jadis Orchestra Reference SE

7 Master Sound Evo 300B New

8 Apollon Amazing 60

Power and Amplifier, Complete Dual Mono System

Perfect separation of the left and right channels is the final result of high-end audio. Above all, this is to prevent cross-signal interference (crosstalk) of the left and right channels and to secure dynamics by configuring an independent power supply. That's why there are dual monos with independent left and right channels in one chassis, monoblocks with separate chassis, and even four blocks in a separate chassis.

The L-7000 consists of a complete dual mono system, all of which include a constant voltage circuit. In other words, the entire process from power transformer to rectification, smoothing, and constant voltage is independent for each channel. When viewed from the top, the L-7000's two large transformers are powered by Olnick's 1% voltage fluctuations, while the tubes on both sides of the middle row are 5654 (in the middle of the tube, E810F, amplifying tube). The vacuum tube on both sides of the string is the constant voltage tube 300B, and the two two transformers are Olnick's trademark nickel output transformers.

The eye-catching feature of this dual mono configuration is its large power transformer. Although the L-7000 forms a constant voltage circuit at the rear of the power supply section, the voltage fluctuation rate of the power transformer already applied at the front stage is only 1%. The rate of change in voltage refers to the difference between the voltage with and without the load. Of course, the smaller this value, the better the power transformer. Because if the voltage fluctuation rate is large, the B voltage fluctuates greatly with the music signal, which is almost a disaster for the amplifier handling the audio signal.

The amplifier is also a dual mono system. Olnick's preamplifiers traditionally put only one tube into the amplifier to prevent sound quality and noise. In this L-7000, a 5-pole E810F is used on the left and right channels. The E810F is a vacuum tube often used for single-stage amplification, with a low internal resistance of 560Ω and high current amplification (gm) of 50mA / V. 'I put a direct heat pipe instead of the heat pipe used so far to control the electricity. Accordingly, the output transformer has also been improved to make the mid and high ranges more beautiful. '

Finish of transformer preamplifier, nickel output transformer

Nickel-output transformers decorate the L-7000's damage, consisting of a power supply and an amplifier in a dual mono system. Olnick's amps are 'vacuum amp' The low-distortion, high-speed characteristics of the broadband, which are undesirably desirable, are also due to this nickel output transformer.

All of Olnic's output transformers are nickel transformers, or Permalloy transformers, an alloy of nickel and iron. Permalloy is divided into Permalloy PC (Nickel 78% + Iron 22%) and Permalloy PB (Nickel 50% + Iron 50%) according to the alloy ratio of nickel and iron. Initial Magnetic Permeability) is the highest rate. That's why Permalloy PCs are used in low-power, sensitive areas, such as preamp output transformers including the L-7000, interstage transformers, and boost transformers for MC cartridges.

Then why do all Olnick's preamplifiers, including the L-7000, finish the output stage with an output transformer, or pre-out transformer? This is because the output transformers can carry more power (W =

I × V), or energy, since they flow not only voltage but also current. In short, the power amplifier can be driven powerfully. In contrast, capacitor-coupling (CR-coupling) is only voltage-coupling and does not deliver power. The output transformer also has the advantage of low output impedance, reducing the need for inter-cables and reducing noise when combined with power amplifiers.

41-stage silver contact attenuator with one contact

Another lifeline of the preamp is the volume stage. Olnik uses its own attenuators on the volume stages of all preamps and integrated amplifiers. All contacts are made of silver with excellent conductivity, and the 41-stage attenuator is manufactured by innovating from two existing contacts to one contacted at each volume step. Usually the attenuator has two contact terminals, the inner ring and the outer contact, so the music signal must go through this contact twice. On the other hand, Olnick's attenuator turns the existing structure that was in contact with the inner ring to a fixed cable, and consequently reduced the contact to one outside. This means that the room for distortion of sound quality has been reduced from the beginning.

City Hall

I used Lumin's network player T1 as a source device, D-5000 DAC at Olnick, M-3000 MK2 monoblock power amplifier at Olnick, and I used Wilson Benesse's Discovery 2 as a speaker. In the mandolin concerto in D major by Johann Andreas Cauclitz, performed by Concerto Cologne, the sound is thick and solid. The L-7000 keeps the center of gravity of the entire system steady. The height of the instruments feels quite high, and the mandolin has a distinctly clear tone without any color bleeding or blurring.

Listening to the dancing of the hell of the Kasei flock among the firebirds of Pierre Bullez and the Chicago Symphony Orchestra, the admiration begins with the three-dimensional spraying of orchestra instruments. The depth is drawn clearly up to the height of the top and bottom. Also, the sound is jumping smoothly without sticking or clinging to it. It's like seeing a wide jump player with a different level of leap itself. The parabola itself is large and cool. Overall, the impression of watching a natural documentary on a 4K UHD TV.

In Patricia Barber's Summertime, the audio pleasure suddenly rises to the shaker's rhythm and bass boom. Barber appears in life-size without any big mouse phenomenon, giving a detailed sound of each pronunciation. Noise management, including power amplifiers, is extremely extreme. No matter how well-built the intiamp can not easily follow this sense of space and the ability to pull out the sound is amazing.

In Rachmaninov's piano quartet, there were so many strands of note, and even the nuances of playing 'different and different' instruments were apparent.

General comment

I was surprised to hear 'The Sidewinder' with the L-7000. Enjoying a holographic virtual sound stage, because suddenly Morgan's trumpet came to me from the left. It feels like you have been invaded by the gold road. But I didn't like this feeling, but it was good enough to sleep. I was amazed at the generosity and generosity that the L-7000 gave me and all the instruments in the song, including the drum trumpet bass saxophone piano.

To sum up. 1) L-7000's amazing quietness and wide dynamic range. This seems to be the result of adopting 300B, a series triode, as a constant voltage vacuum tube and further increasing the power transformer capacity. 2) Sound stage itself. This seems to be due to the expansion of the tube constant voltage circuit to dual mono. 3) Detailed reproducibility and high speed unique to Olnick preamps. This may be due to a design with a single stage amplification with a 5-pole E810F with low internal resistance and high current amplification and then coupled to a nickel output transformer. right. Olnick's L-7000 is a well-made tube preamplifier that makes you feel good all the time.

Distributor Audiomentos (031)716-3311 **Price** 14,000,000 yen **Use tube** E810F × 2, 300B × 2, 5654 (EF95, 6AK5) × 2 **Analog input** RCA × 3, XLR × 2 **Analog output** RCA × 1, XLR × 2 **Frequency range** 20Hz-20kHz **S / N Ratio** -90dB **Voltage Gain** + 20dB **THD** 0.06% (0.3V) **Input Impedance** 10 kΩ **Output Impedance** 150Ω **Size (WHD)** 43 × 17.3 × 41cm **Weight** 18kg

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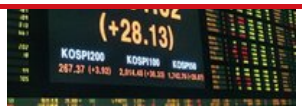

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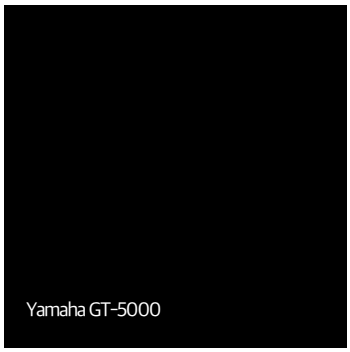

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