

# ENTER THE DRAGON

## USHER P-307 PREAMPLIFIER AND REFERENCE 1.5 AMPLIFIER

The Taiwanese company Usher is one of the most respectable high-end manufacturers of the Asian origin. The company has a long tradition of 30 years on the market, and a wide range of products. One of them – Usher X-718 – has already been tested in the *AV magazine* 10/03. This time we tested Reference 1.5 amplifier combined with the latest P-307 preamplifier.

### STRUCTURE

Both the appliances look as solid as a rock. The cases are made of thick pieces of sheet metal, whereas the front panels are made of massive slices of brushed aluminum. The design, the choice of colors and the layout of controls resemble the typical solutions characteristic of the high-end equipment.

The overall structure of the P-307 preamplifier is probably adopted from one of the latest versions of the preamplifier designed by Akihiko Kaneda – physics professor at the University of Akita (Northern Japan), who during the last 25 years managed to design over 160 versions of this renowned piece of equipment. The full-size case contains only the signal part, the power supply unit is a separate module, providing voltage to the preamp via a 4-contact cable. The signal path utilizes four amplification stages built of discreet elements – two for the line stage and two for the MM input. Each of the stage inputs uses a J-FET 2N3958 double transistor and eight 2N3440, 2N5416 bipolar transistors closed in metal cases.

The source selection is made with Takamisawa microswitches controlled with massive gauges, welded directly into the printed circuit board. Next, there are two, blue Alps potentiometers (controlling the volume and balance) and the above-mentioned line stage. At the output of the preamplifier there is a film capacitor of great capacity. P-307 possesses non-symmetrical outputs only (two pre-out and two rec-out). The preamplifier is powered by symmetrical voltage  $\pm 35$  V, which ensures a great overload distance. 100VA toroidal transformer, AC filter integrated with the IEC socket, as well as the set of two electrolytes 10 000  $\mu$ F each and a rectifier are contained in an external power supply module. The third voltage (5V) is used for powering the switches and blue LEDs. The appliance is not equipped with a remote control unit. The Reference 1.5 amplifier has been named “ideal class A power amplifier” by the manufacturer. In reality, it is an AB class amplifier with quiescent current of significant value. Standing by, the amplifier warms up very insignificantly, consuming the power of “merely” 175 W. During excessive exploitation, the temperature of the case remains unchanged. The massive, but neatly designed case looks very reliable. In its appearance it is similar to Threshold, and Jeff Rowland monoblocks, as well as a couple of other high-end manufacturers. Large handles on the front and rear panel help to carry this 40 kg “stove” in a safe way. Also, holes at the edges of the front panel denotes another, professional application of this equipment.

When looking at the interior of R 1.5, we have no doubts. Individual parts are very cleverly positioned, which guarantees reliable functioning even in the most extreme conditions. The AC transformer is enormous, covered by a metal screen, which is probably filled with resin. Judging from the description on the case, it includes EI core and a special electrostatic screening. Both channels use the same secondary windings. Other elements the power supply unit is built of are a 35 amperes rectifying bridge, four electrolytes 10 000  $\mu$ F each, by-passed with RC filters, used for high frequencies. R 1.5 can be controlled via XLR sockets, or work in a bridged mode (mono). To achieve this, there are special input stages

using Burrow-Brown OPA2134P Sond Plus Series op amps, and switches used for configuring the system. When using XLR sockets, these stages convert the signal to non-symmetrical, whilst for RCA source signal they function as an impedance adjusting buffers. Power stage electronic system is based on fully electronic structure with a double output differential amplifier and 8 pairs of parallel connection power transistors. In order to meet sophisticated power and current requirements, high-power, bipolar transistors, designed by Motorola, have been used – MJ15024/MJ15025. They are mounted to a broad aluminum rail, from which heat is carried away by huge radiators situated on the sides of the appliance. The power supply unit is equipped with switches, powering the loudspeakers on with a delay, as well as with a soft-start system (high-power ceramic resistors screwed to the internal surface of the front panel). The manual informs, that the manufacturer did not provide any safety systems preventing the possibility of loudspeaker output short circuit. Interestingly, the amplifier's systems are activated by plugging the power cable into the socket, even though the main power switch is off.

## **SOUND**

Listening to the Usher sound system might be a very enjoyable surprise, not only for those in love with powerful transistor amplifiers, but for tube-freaks as well. The combination of P-307 and R 1.5 offers a very enjoyable and comprehensive sound, saturated with timbres and musical details. The sound of Usher is a counterbalance to what, in people's opinions, semiconductor amplifiers offer. The mixture of high dynamics and the energy of transfer with smoothness and complete lack of accidental aggression in the amplified sound is a very intriguing effect. It does not mean, however, that in the case of records with more aggressive musical material, the Usher loudspeakers try to calm them down, or beautify them by force. The recordings are differentiated very reliably, and the dynamics, both in micro- and macroscale, possesses excellent gradation. Spatial effects are, first of all, realistic sound stage, with excellent dimensions. The high quality of the amplifier is manifested by the fact, that it is very easy to lose the sense of time while listening to the most favourite records.

## **OPINION 2**

Complete silence, lights off, closed curtains, and a comfortable armchair – these are the necessary conditions, which let us enjoy music and high-end equipment. What other things can interrupt the audiophile but poor sound or a noisy neighbour? The reviewers of the tested system found yet another culprit: fiercely bright LEDs on the front panels. Both blue, both so bright, that you get dazzled in the dark room. If I am the only person, who likes to listen to music in the dark, I take all these accusations back. But I have a feeling, that it is not the case. Let us get back to the point. The Usher amplifier offers the sound of very high quality. It is so good, that I would hesitate to blind-test some more expensive constructions with well-recognized trademarks. The R 1.5 and P-307 is a reliably designed “stove”. It sounds free, with a large margin of dynamics, and a reasonable dose of power pumped into the audition room. The bass is exceptionally deep and powerful, even monumental, but at the same time concise and clear. Sometimes it is short, kicking, and sometimes it is rich, or even bulky – it all depends on the played recording. It is so due to the preamplifier. As far as bass reproduction is concerned, the R 1.5 amplifier did not cause any configuration problems with the Zoller Temptation systems. Usher played all recordings testing low octaves without any problems. It is a very precise amplifier, with easily discernible sound contours, and at the same time it is endowed with extremely rich timbre. The sound of R 1.5/P-307 combination deserves all praise not only because of perfect dynamics and expression, but also excellent

representation of midrange. It is juicy, but swift at the same time. It is also smooth, with full instrument sounds and tangible vocal. Generally speaking, I found Usher's sound full, natural and a bit warmed up. My experiences with cables, as well as the amplifier itself (connected with the preamplifier via reference cinch and XLR cables), reassured me, that it can offer exceptionally vivid and clear insight into the recording. Without a doubt, the combination with P-307 is very successful. The only, really small drawback is slight hardness of midrange and lack of absolute clarity of the highest registers. One breath of "air" certainly would not do any harm. Spatiality is another virtue of the Taiwanese design, although it is not as spectacular, as its mobility.

## CONCLUSION

Usher P-307 / R 1.5 is a unique design on the high-end market of amplifiers and preamplifiers, which deserves to be recommended. No other manufacturer known to us offers an amplifier which is so comprehensive and reproduces such excellent sound for less than 20 thousand zloty. A multitude of functions and high output power make the P-307/R 1.5 duet a very flexible system compatible with virtually every loudspeaker system and almost every sound source.