Manley 50 Watt Mono Amplifier Upgrade

Prologue

To your attention, dear readers, are the results of an interesting experiment. On the one hand, an attempt was made to improve the sound of an already not bad amplifier, with the other, I didn't have direct access to it. So everything happened remotely. Having received an offer from Sergei to participate in the modernization, I hesitated a little, but decided to try anyway. In general, the result of the experiment turned out to be positive (in fact therefore, the report saw the light of day). We hope that the results obtained will be of interest to others. owners of such amplifiers and inspire them to take decisive action. Below are the

impressions and considerations of the main active participant in the experiment.

Evgeny Karpov

Result

The thought of stabilizing the anode voltage has been visiting me for a long time, but I was kept from trying in this direction by the opinion that adding additional elements to the power circuit would worsen the sound of the system rather than vice versa. The need to stabilize the supply voltage equipment results from the simple fact of constant changes in the mains voltage, and the tonal balance of the sound changes accordingly. Based on this, for example, in the morning and evening, in weekend and workday, you can really hear the sound of systems that differ from each other with the same set of components. My system

is four-way active amplification and consists of VCM, preamplifier, two stereo amplifiers and four tube monoblocks. All industrially manufactured amplifiers of average price value according to the criteria for the cost of hi-end equipment. Stereo amplifiers are responsible for amplifying the bass and midbass, and monoblocks, respectively, for the midrange and treble ranges. I will not describe the advantages of an active system, I will only note that such an approach to amplification, under equal conditions, makes it possible to obtain much greater resolution and musicality, since amplifiers operate in a specific frequency band and they have the most comfortable conditions in compared to a passive system.

Earlier, I tested the idea of using a UPS to stabilize the input voltage network, according to reviews on the Internet, the use of UPS with double voltage conversion (ON line models) has a very beneficial effect and improves the sound, but after a series of experiments on I have a completely different opinion on this one. In the idea, everything is fine, it would seem, why stabilize glow and anode voltage, if you can simply stabilize the network? But in practice, even my use of powerful On-line UPS APC 2000 (power 2 kW) and Power Ware 6000 (power 4.5 kW), on the one hand, it seems to allow you to get a stable sound image, but on the other hand, it makes the sound dull and somehow slow, sparkle and involvement disappear (all of the above is applicable in direct comparison with sound without using a UPS and on a specific system).

Having made an attempt to find an anode voltage stabilizer circuit on the Internet, I stumbled upon E. Karpov's project - “A simple anode voltage stabilizer”. When studying this project, the high competence of the author immediately catches the eye and is especially captivating by the fact that the author starts not only from listening to the implemented scheme, but also conducts a mandatory measurements of technical parameters.

At my request, E. Karpov somewhat modified the stabilizer circuit in relation to my specific amplifiers, and also advised and proposed another scheme for stabilizing the bias voltage of the control grids of the output lamps. The entire element base used in both schemes is available and is very cheap. Four hours were spent in order to make mock-ups of both boards for the purpose of carrying out test listening. The first switching on was carried out using test transformers and without connecting the load. Scheme according to

behaved absolutely friendly and surprised by the absolute uselessness of any additional settings and adjustments. Although the amplifiers are connected directly to the speakers (no AC crossover filters) and any interference in the amplifiers is immediately clearly audible (background, buzz, excessive noise) after connecting the stabilizer circuit, it seemed that it was not connected at all, that is, the circuit itself does not introduce absolutely any extraneous, unnecessary overtones. But how it improves the sound! On the advice of E. Karpov, since the anode voltage decreased and was fixed, I increased the quiescent current of the output lamps (thereby shifting the mode towards class A). As
a result of the application of this stabilizer, the musical picture and tonal balance have become stable, improved musicality, naturalness of sound, some kind of
delicacy and attractiveness. And this result was obtained simply on a test layout, one can only imagine how the sound will change when installing elements on a printed circuit board with
short conductors and not the cheapest element base. There is a reasonable assumption that even greater delight is ahead of me. Well, as a result of my impressions from using the stabilizer circuit on a breadboard test board, the author really wants to simply say: THANK YOU!

Sergey.

Anyone who wants to ask a question directly to Sergey can do this through the site's mail.