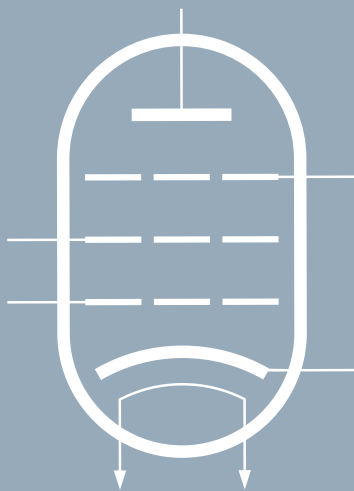


# High-End Tube Amplifier Design

A Toolbox for Audio Lovers  
and Engineers



Academy Pro Title by  
Zoran M. Dukic

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Zoran M. Dukic

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As a focus of the audiophiles, sound is a very complex matter considering its physics and physiology characteristics. Live music sound comes to the audiophile's home audio systems processed by a sophisticated electronics audio chain: live music, recording processes, sound carrier manufacturing. All specifics of human hearing process and differences in physical ambient of live music and home music listening must be taken into account. Most of the problems, including subjective feeling of sound (equiphonic lines or contour), sound levels, frequency response, reverberation time (adopted to law dimension of home listening room), distortion, noise, dynamics (ratio of the highest and the lowest levels of sound in music rendition...) are solved in recording process by very complicated electronic equipment.

Audiophiles typically want to listen the music in the home environment, with sound reproduction which exhibits the highest order of artistic and subjective resemblance to that of the performance in concert hall. At home, music comes from the electronics audio chain (sound carrier, reproduction unit, preamplifier, power amplifier and speaker) instead from the music artists. Physical ambient of the home is totally different than the original ambient where the live music is performed. The music artists, audio scientist and audio equipment constructors packed all this things together to fulfill the audiophile's desires, guided by the human ear, with its specific hearing mechanism as the final judge.

Without any ambition to present high level science article, this book has to be accepting as a tool box for audiophiles Hi End equipment designers. The elementary theory is present at the form just necessary to the readers to understand and become familiar with the nature of physics, electric, electromagnetic and electronic process present in certain tool. Each tool is explained in a minimum of words and theory with some equations or figures presented "as is".

So, in the following chapters I will try to guide you through the process of designing quality amplifiers, from the very beginning, fully taking into account both technical and subjective requirements, theory and practice.

#### ***Post Scriptum***

Some topics are found in unusual places in the book and there is a visible deviation from the methodology of composing a school and science text - the author just wanted to encourage readers on their original path to the realization of their ideas in the world of designing Hi End equipments.

The book is a compilation of the author's notes used in his professional and educational career, but the book was nevertheless primarily written as a result of true love for the audiophile hobby.

Zoran M. Dukic