

## Subject of the MSc Dissertation:

Controlled Audio Valve Amplifier

## Team:

Student: Tiago José da Silva Campos

Supervisor: Vítor Manuel Grade Tavares

Co-supervisor: Ricardo Ivo Rainha Dias Faro de Carvalho

## Accomplishments:

- A meeting between the Student, Supervisor and Co-Supervisor took place in March the 2<sup>nd</sup>, in order to discuss the final component choice and the price involved. Valves and specially the transformers involve considerable costs. The Supervisor, Prof. Vítor Tavares is in conversations with the Direction of Departamento de Engenharia Electrotécnica e de Computadores in order to know the funds available for the implementation of this work;
- The student started the simulation of some topologies in order to figure out which ones to use in the circuit. Matters like frequency response, gain, total harmonic distortion and slew-rate are the main issues to optimize;
- For the output stage, the Circlotron topology was chosen because of its advantages when compared to the classic push-pull or single-ended. A great balance can be achieved with it, also avoiding the flow of DC current in the output transformer. The output transformer will have a lower primary impedance and consequently its size will be smaller, probably reducing the design costs and improving the overall frequency response of the amplifier.