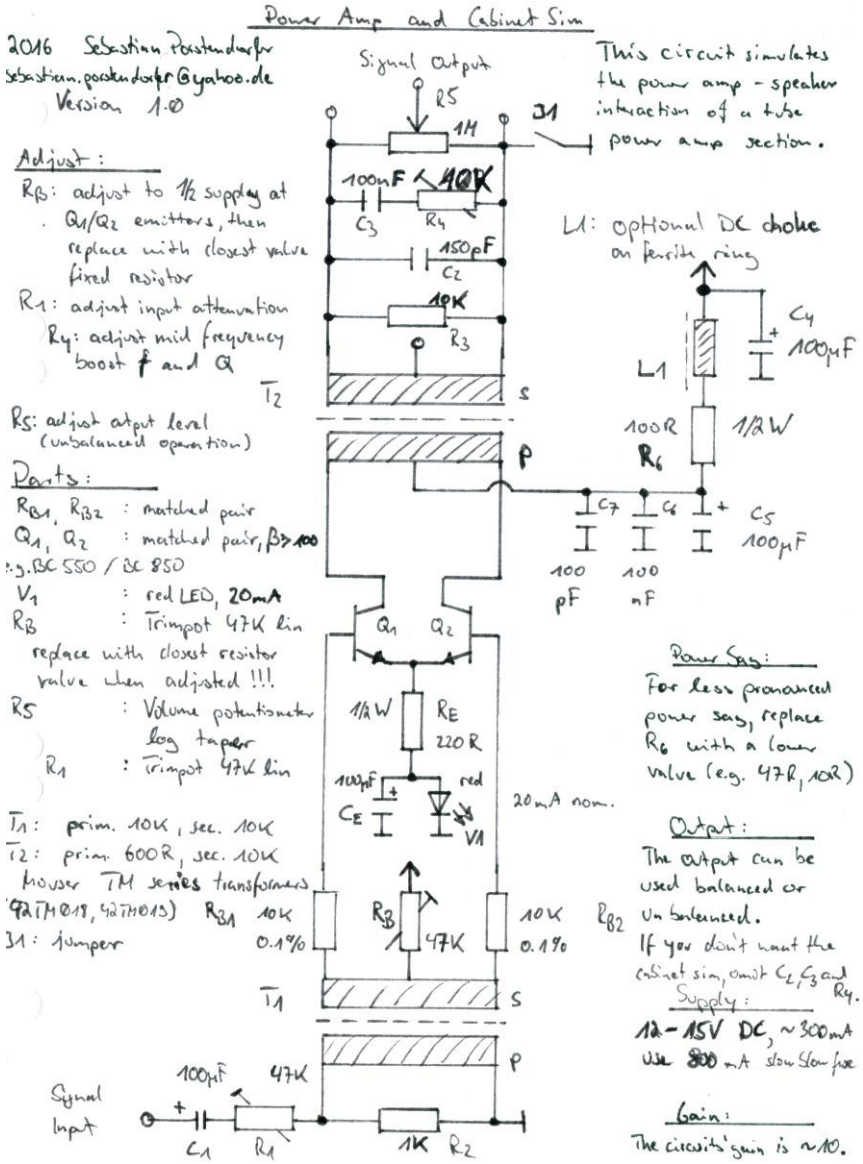

Power Amplifier and Cabinet Simulation

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Version 1.0

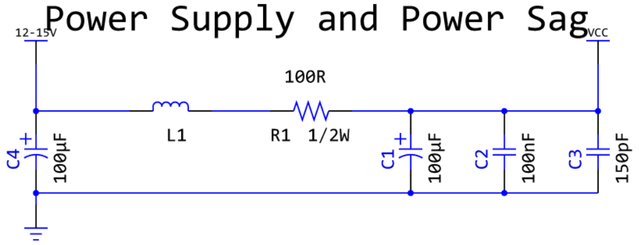
This circuit simulates the interaction between a current mode amplifier, as it is typically found in tube power amplifier stages, and a speaker load. It includes power supply sag simulation as present in tube power amplifiers.

It is of particular use in conjunction with a tube preamp emulation circuit, especially for use in guitar amplifiers. It can be used for recording, for providing a PA system with guitar signal without mic'ing a cabinet, or to bring tube output stage behaviour to a voltage mode solid state power amplifier like a chipamp, gainclone or discrete design. The output can be used in balanced or unbalanced configuration.

It is a tiny power amplifier with a reactive load in current mode and thus will behave very much like a tube output stage with an output transformer would; it's amplification behaviour is dictated by the current consumed by the output load, and thus behaves in exactly the opposite fashion as a voltage mode amplifier would (which is dictated by the voltage across the output load). It is dimensioned so it can be powered by a small power supply (12-15V, 300 mA max.; recommended fuse is 800mA slow blow) and built into a stompbox. it uses readily available parts only and costs about 15€ in parts including a wall wart power supply.

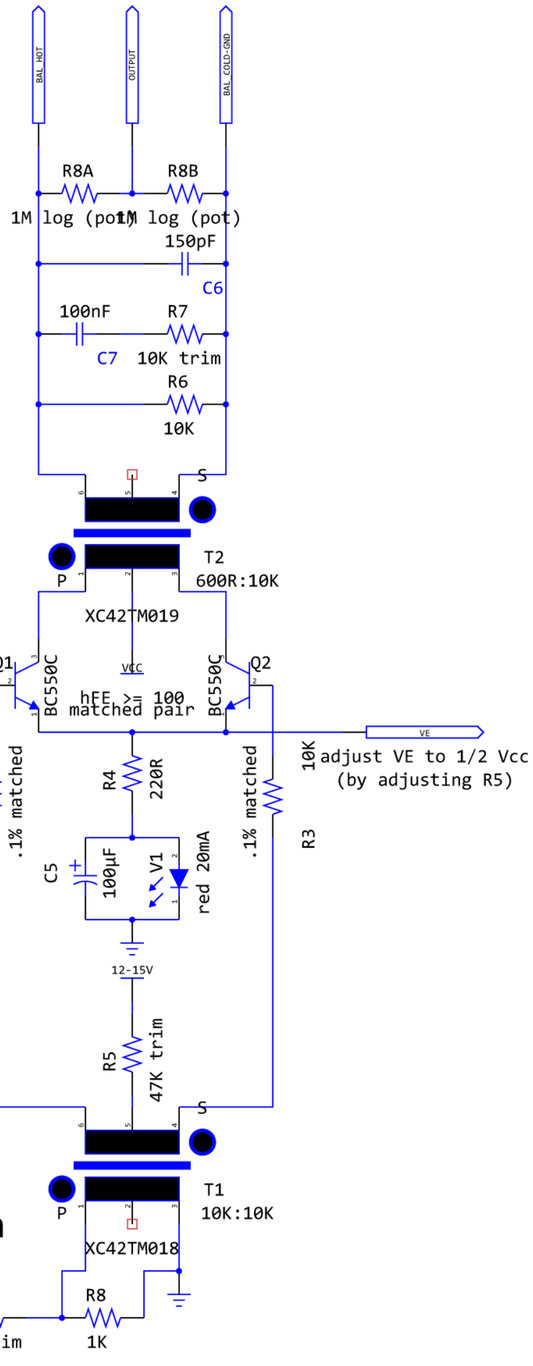
Comments, criticism and mods or improvements are of course welcome.

Power Supply and Power Sag

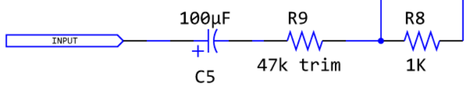


Speaker Load

Power Amplifier



Input attenuation



Company name	liveperformer.org
Project name	Power Amp Simulator
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