



TSE AUDIO

28.12.2012

TSE X50
v1.0

INFORMATION
MANUAL

www.TSEAUDIO.com
www.theserinaexperiment.net



Introduction

After years in part time development X50 final version is finally ready for the public.

The hours spent on this project are countless, going back and forth finding the best possible way capturing the response of the original hardware while keeping the cpu-usage on a usable level for users with a mid- to high-end system has been a challenge for sure. This project has actually been discontinued at least 3 times because it didn't meet my expectations.

The amp is modeled against a schematic of the original unit and every stage is taken into account with minimal simplifications. A few features from the beta-version such as biasing is removed.

Keep in mind this is a digital emulation and some aspects of the original sound might not be there. This plugin doesn't try in any way to replace the original hardware, If you like the plugin, you would like the original analog hardware even more ;)

Modeled/Programmed in C++ by onQel (John Adrian Johansen).

Features

- Input Level: Control the incoming (guitar) signal. Value of 1.0 = +0dB and 2.0 = +6dB
- Output Level: Control the outgoing (amp) signal.
- PreGain: Preamp gain, this is the main dirt control of the amp.
- Low, Mid, High: Tonestack/Equalizer
- PostGain: Volume/PA overdrive.
- LowEnd: The amount of resonance in the (modeled) speaker (~70Hz)
- Presence: The amount of presence, 1kHz and up
- Red Ch. Mode switch: Change between MK1 and MK2 version of the red channel (only)
- PreAmp switch: Bypass the preamp-section. Read more about this further down!
- PowerAmp switch: Bypass the poweramp-section. Read more about this further down!
- PowerTubes switch: Change between 6L6GC/EL34 tubes in the PowerAmp model.
- Quality switch: 'LO' and 'HI' setting. HI setting removes additional aliasing.
- Stereo switch: Process two guitars at once. They must be hard-panned left/right to avoid bleed between channels! Panning should be done in the IR-loader or by channel routing.



Pre Amp:

The green channel is modeled from the MK1 version of the amp. The amp has no clean channel, even though you could get a clean'ish sound with break ups by using very low PreGain and high PostGain. Improvements on this channel will be done in later updates.

The red channel is modeled from both the MK1 and MK2 versions. The technical difference is so small that it was easy to implement both.

Power Amplifier - Using the preamp/poweramp bypass functions:

The power amp has two types of tubes, 6L6GC and EL34, the LowEnd/Presence controls reacts a little different on each tube because of gain difference in the tubes.

The power amplifier consists of a phase splitter (2x 12AX7), 4x powertubes and a speaker model. Using a speaker model you get a LowEnd/Presence control that reacts to the (virtual) speaker impedance gives you a more realistic frequency response. This is a big step ahead from the official beta.

By request there's a new feature in the final version, you can now also bypass the preamp to use the poweramp only.

The plugin is divided in the send/return (effects loop) and this gives you the effects-loop by running two instances of the plugin where the first has poweramp disabled and the last one has preamp disable. In between you could run effects (stereo effects also if poweramp has stereo enabled).

It's important that you keep the output fader in the first instance untouched (value 1.0) to get the right preamp signal.

Be aware! The automatic volume adjustment of the plugin is turned off when disabling preamp or poweramp! This has potential of making the outgoing signal of the plugin very loud, so please turn down your mastervolume, postgain or outputfader before disabling/experimenting, especially if the PostGain is set high!

The poweramp has no gain control itself so you have to adjust with the input and output fader when using other sources.

Minimum System Requirements:

- CPU must support SSE2 instructions. (Pentium 4 / AMD Athlon XP) ++
- 32 bit or 64 bit Windows XP / OSX 10.5 / or higher.
- DAW / AU / VST host (Reaper or similar)

A processor of Intel type i5/i7 CPU is recommended for the best experience..

A big thanks to the users of TSE AUDIO plugins!

**THIS IS A FREWARE PRODUCT
ENJOY!**

- John A. Johansen / onQel -

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