

# Shattered Glass Audio

## ACE



## User Manual

Introduction .....	3
System Requirements .....	3
Mac .....	3
Windows .....	4
User Interface .....	4
Controls.....	4

## Introduction

Ace™<sup>1</sup> is designed to emulate the legendary 1950s 5W, all tube, tweed covered amp. The original circuit, shown in Figure 1, has one 12AX7 dual triode in the preamplifier section and a single 6V6GT power tube. The amp has only a volume control located between the first and the second preamp stage, and no tone controls.

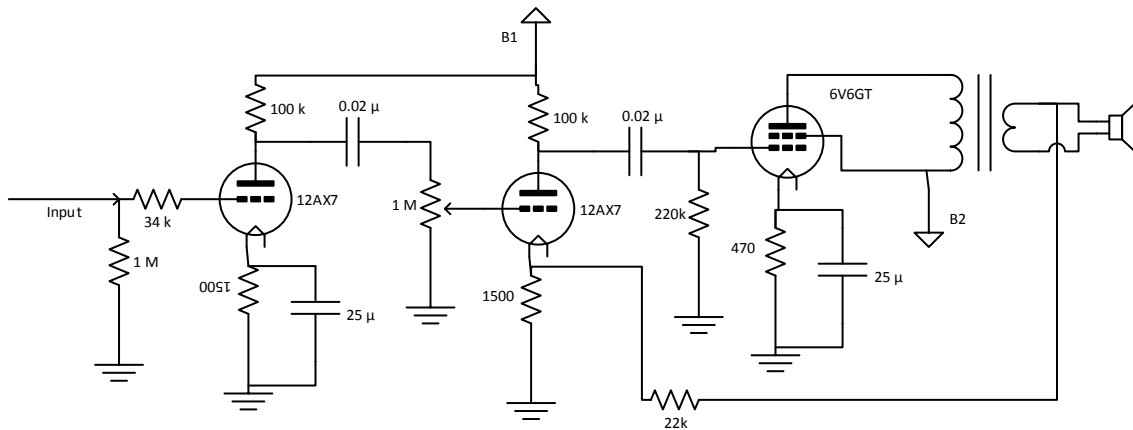


Figure 1. Amplifier Schematic

Every component and interaction between components in the signal path has been accurately modeled. Since the original amp has a small, 6", speaker we have used an impulse response of a small speaker for the cabinet emulation. By using an impulse response of a small speaker for cabinet emulation we have preserved the natural bass roll-off, a consequence of inability of a small speaker to faithfully reproduce bass frequencies.

To make Ace more versatile, we have added to the model two of the most common amplifier mods, removal/adjustment of the amount of feedback and addition of grid stopper resistors. The amount of feedback directly influences the gain whereas grid stoppers among other things mediate the blocking distortion.

Ace's conservative CPU usage makes it suitable for live performance uses.

## System Requirements

This plugin is available in both 32- and 64-bit VST and AU versions. AU version is available for Mac only.

### Mac

OS X 10.7 or higher.

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<sup>1</sup> Ace is a trademark of Creative Bytes, Inc.

## Windows

XP/7/8.

## User Interface

Figure 2 shows Ace's control panel.



Figure 2. Ace controls panel

Settings controlled by knobs can be changed by clicking on them and dragging the mouse up and down. Settings controlled by switches can be changed by clicking on the appropriate switch or by clicking a switch and dragging the mouse.

## Controls

### Input

Controls the input gain, and therefore the strength of the input signal.

### Volume

This control corresponds to the “Volume” knob on the amp.

### Feedback

Feedback allows you to adjust the amount of feedback in the original circuit. The amount of feedback can be adjusted from “ZERO” to “FULL”. ZERO setting corresponds to no feedback, whereas FULL corresponds to the amount of feedback in the 5E1 circuit (i.e. the original feedback).

### Output

This control lets you adjust the output level of the whole plugin.

### Oversampling

Select 2, 4, or 8 times the original sampling rate.

### Mode

Mode control allows you to choose between the original 5E1 circuit and the 5E1 circuit modified to control the blocking distortion. Mode “A” corresponds to the original 5E1 circuit, whereas the mode “B” corresponds to the circuit with grid stoppers added to control the blocking distortion.

### **Cab**

This control allows you to bypass the cabinet emulation. To bypass the cabinet emulation set the CAB switch to OFF.

### **Stereo**

Stereo control lets you switch between mono and stereo processing. To set processing to mono, set the STEREO switch to OFF. Stereo processing nearly doubles the CPU load of the plug-in when compared to mono processing since in the stereo mode the plug-in needs to process two channels compared to one channel in the mono mode.