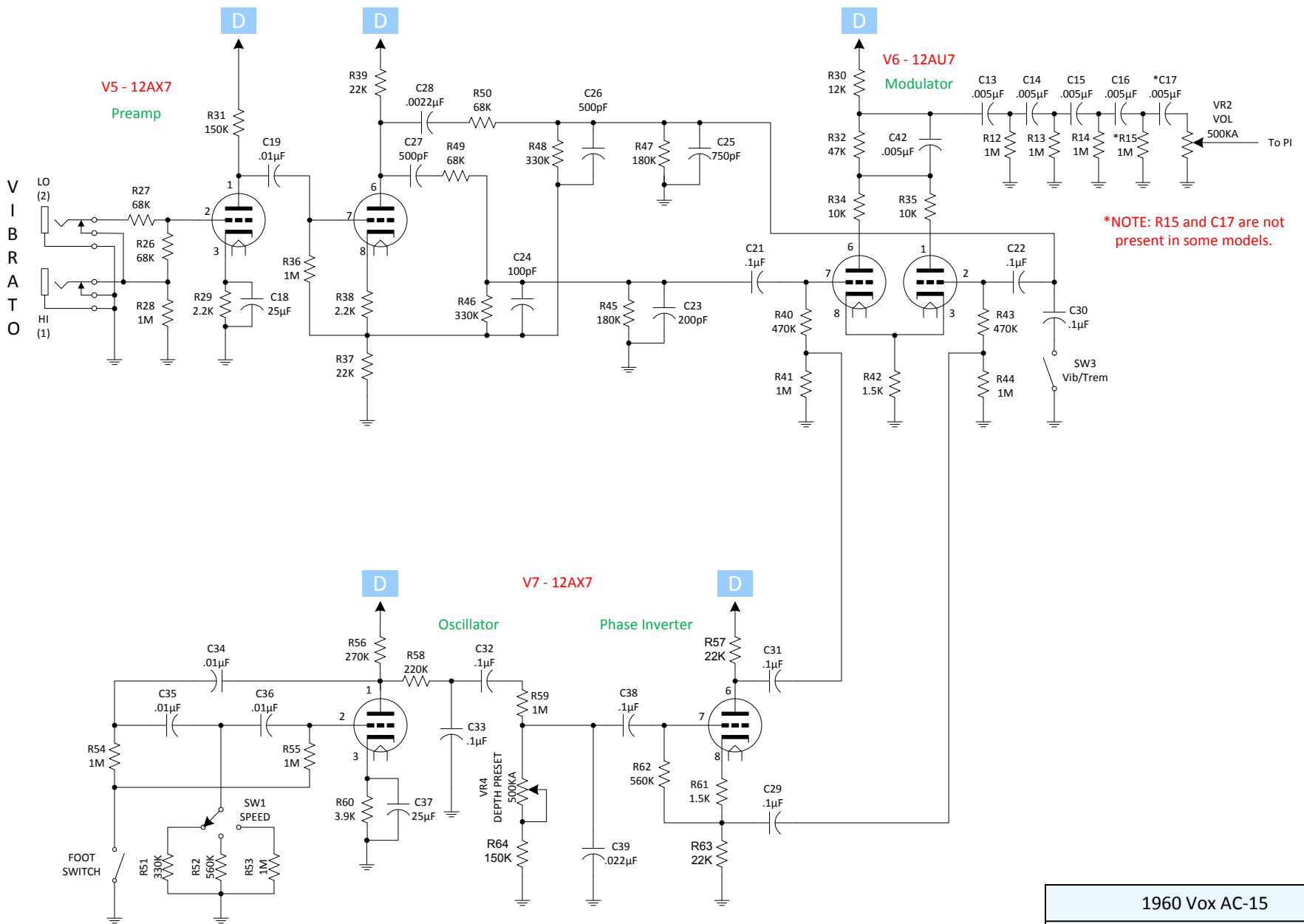


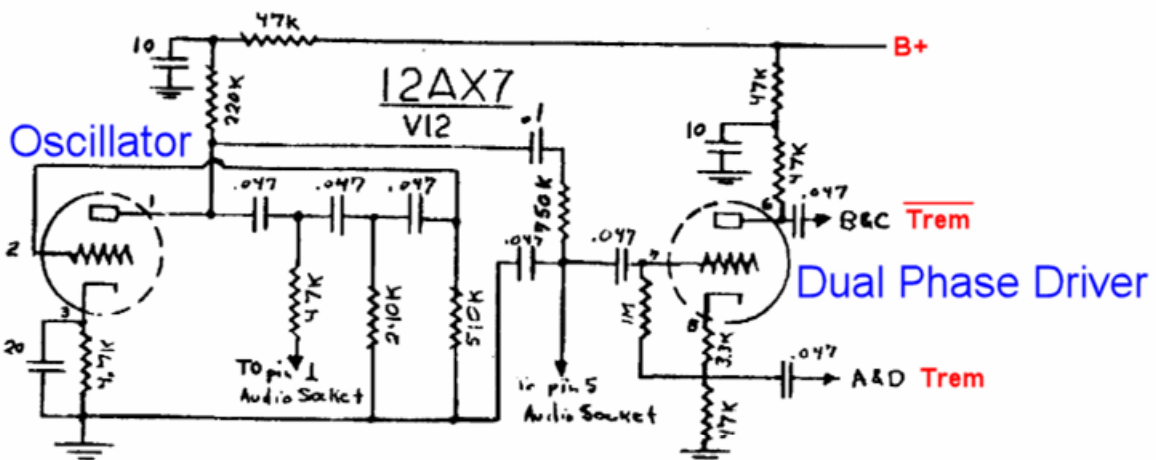
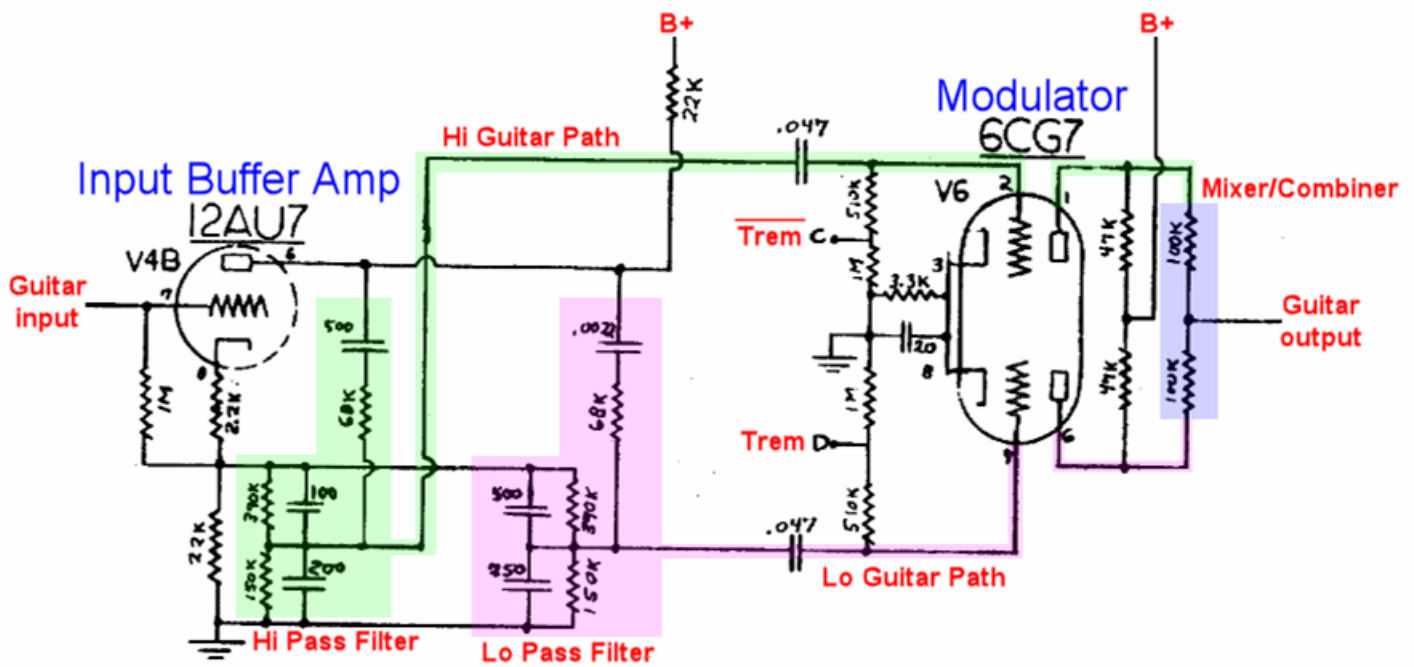
1960 Vox AC-15

Redrawn by Steve Luckey
 08/12/12



1960 Vox AC-15
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Gibson GA-83S Vibrato circuit



It's really just a fancy tremolo circuit. This circuit is almost identical to the original Vox AC-15 circuit, except for the combiner on the plates of the modulator. I bet Vox copied this circuit. Only one channel is shown for simplification.

The guitar signal is applied to the Input Buffer Amp whose output is connected through a low pass filter and a high pass filter. This splits the guitar signal into a low frequency signal and a high frequency signal. These signals are then applied to the modulator grids.

The Oscillator and Dual Phase Driver provide two equal amplitude 5-10Hz sine wave signals (180° out of phase). These tremolo signals are applied to the modulator grids and will amplitude modulate (at the trem frequency) the guitar signal that is also applied to the modulator grids.

The Modulator outputs are re-combined into a single guitar signal by the two 100K mixing resistors. The actual trem signal components should cancel since they are equal in amplitude but 180° out of phase. The resultant output signal is a juicy sounding complex guitar signal. The low frequency guitar signal is amplitude modulated by the LFO trem signal and the high frequency guitar signal is amplitude modulated by the LFO trem signal that is 180° out of phase. Fender also had a few amps that utilized this same circuit concept and were functionally identical.