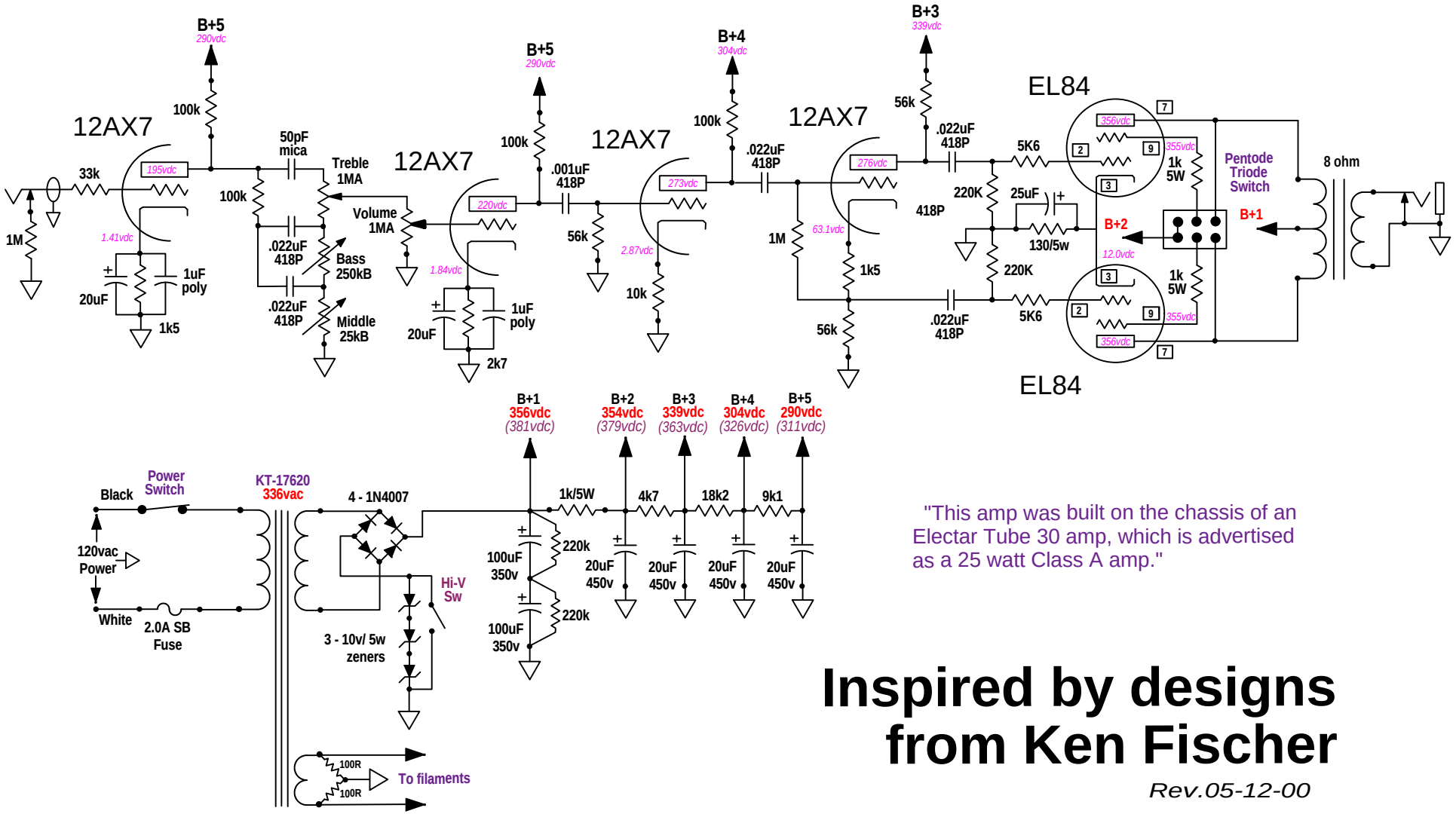
Trainwreck Blues Express
Version A5a

This version uses a Triode switch to smooth out the response (which is very harsh in the Pentode mode).



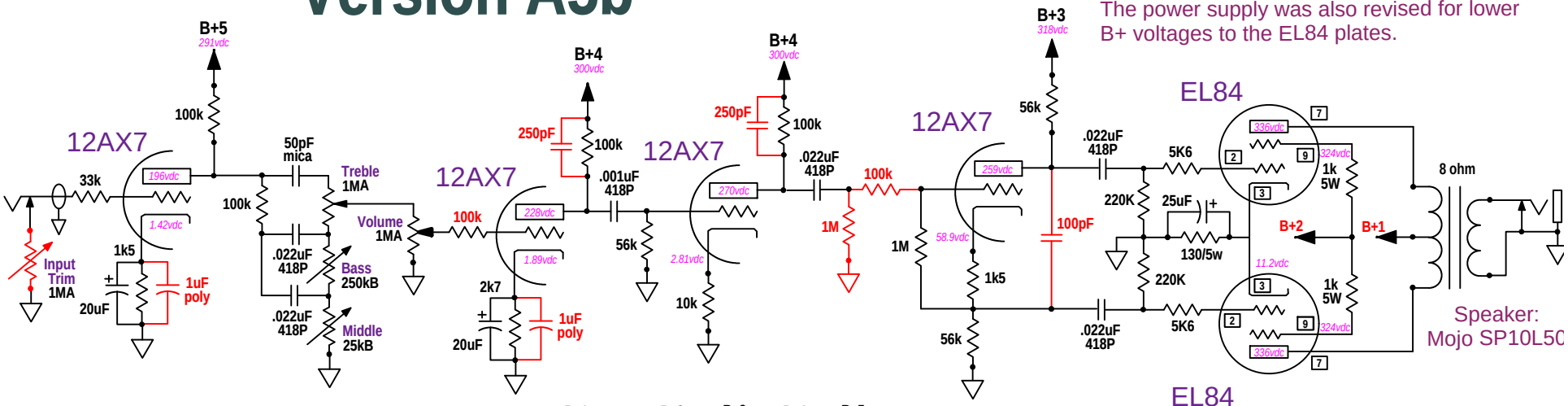
"This amp was built on the chassis of an Electar Tube 30 amp, which is advertised as a 25 watt Class A amp."

Inspired by designs from Ken Fischer

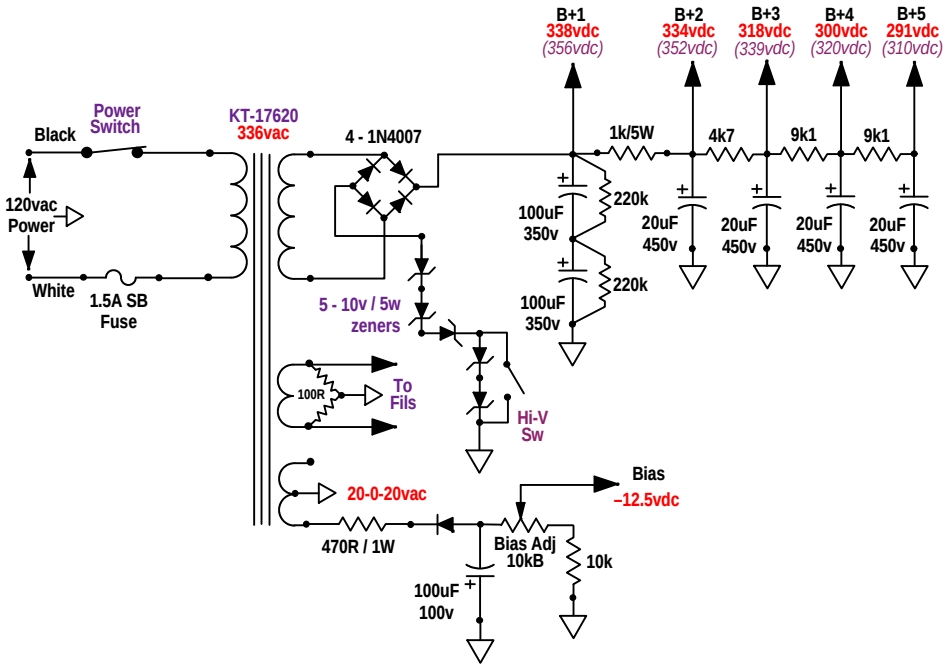
Rev.05-12-00

Trainwreck Blues Express
Version A5b

This revision reduced the signal level and treble response in the preamp for a smoother sound in both cathode and fixed bias modes. The power supply was also revised for lower B+ voltages to the EL84 plates.



Speaker:
Mojo SP10L50



"This amp was built on the chassis of an Electar Tube 30 amp, which is advertised as a 20 watt Class A amp. It sounds like an old BF amp on Viagra..."

Revisions from Versions 2 & 5 shown in RED

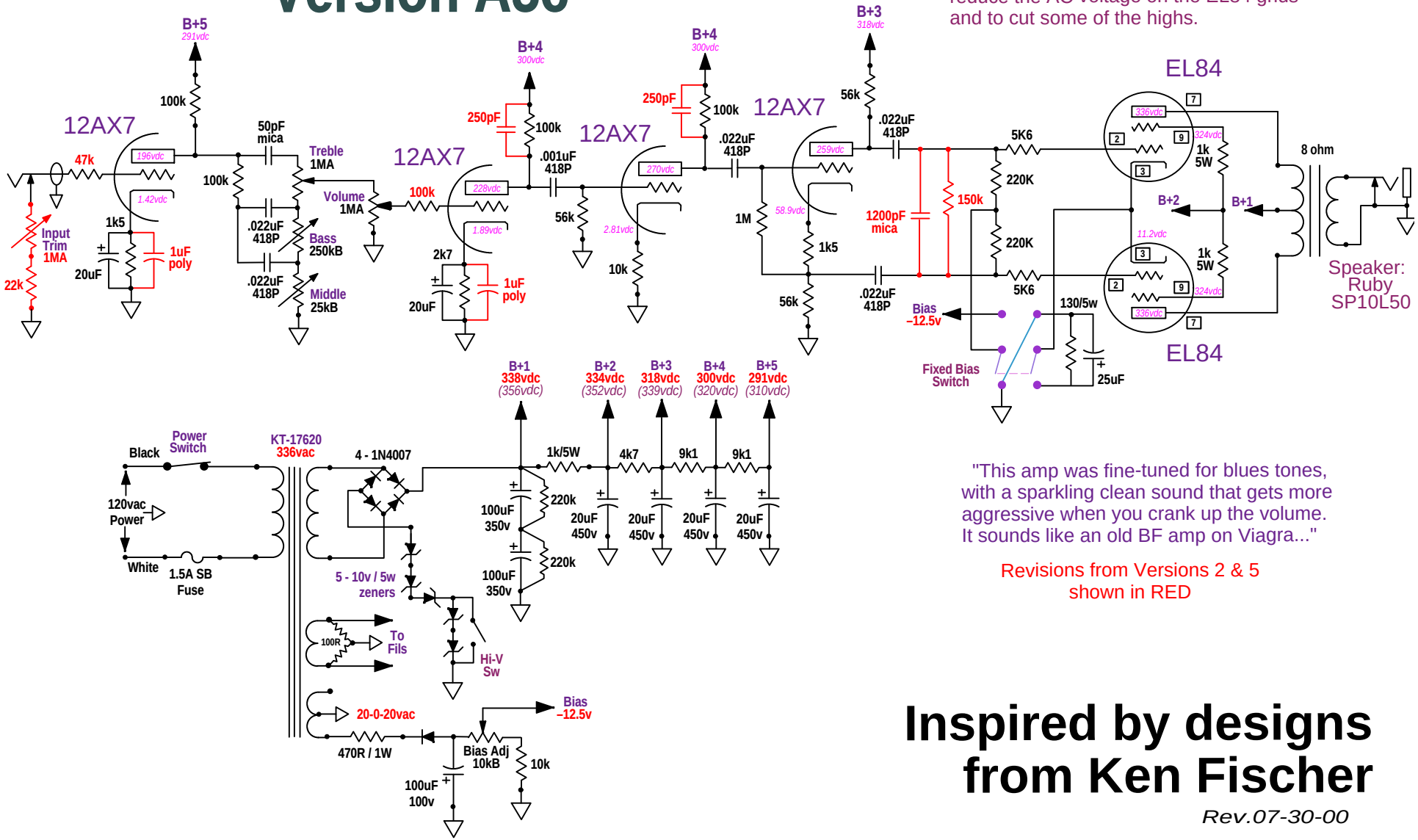
Cathode/Fixed bias switch not shown on this schematic

Inspired by designs from Ken Fischer

Rev.06-25-00

Trainwreck Blues Express
Version A5c

This variation uses a crossline 150k/1200pF RC network after the PI coupling caps to reduce the AC voltage on the EL84 grids and to cut some of the highs.



"This amp was fine-tuned for blues tones, with a sparkling clean sound that gets more aggressive when you crank up the volume. It sounds like an old BF amp on Viagra..."

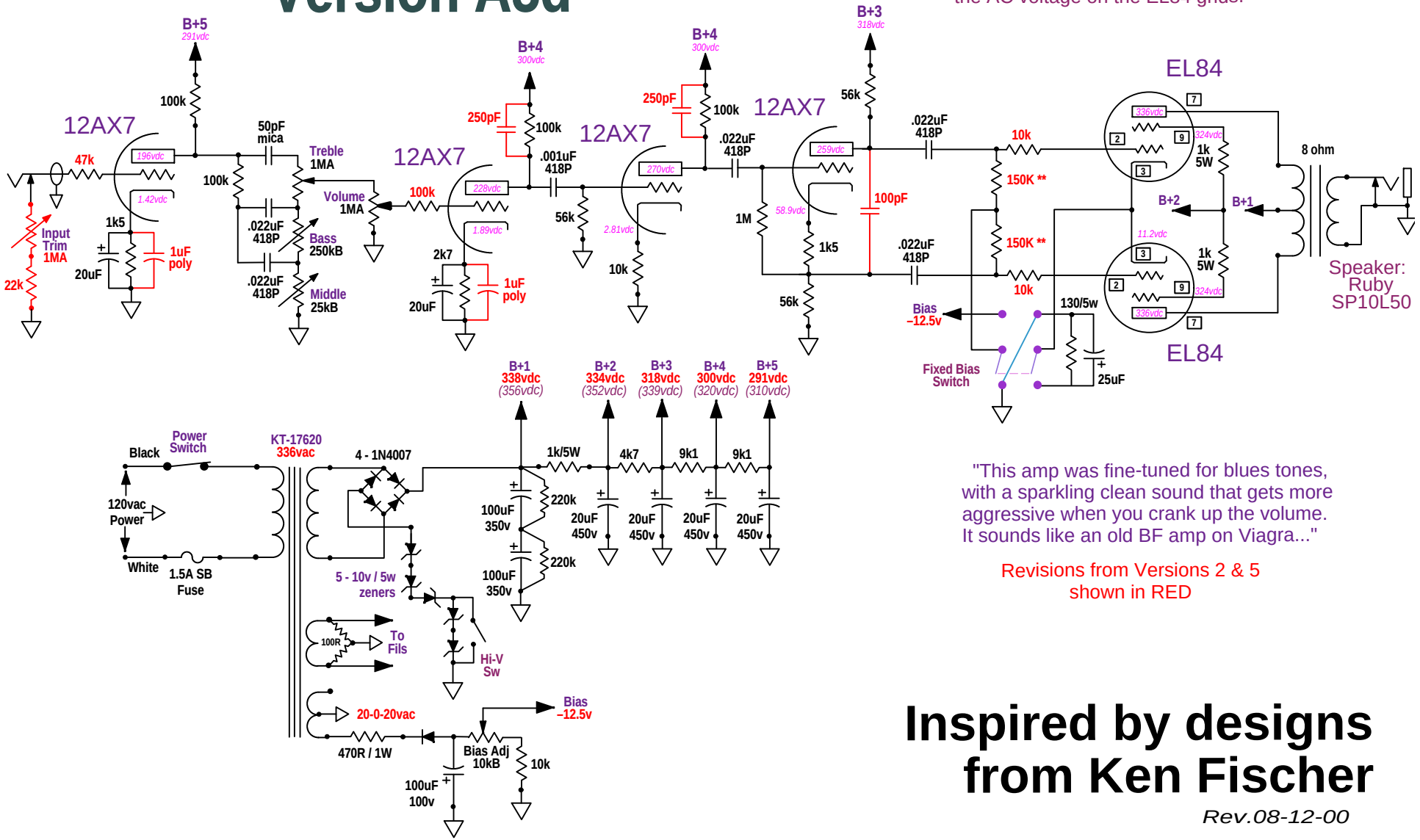
Revisions from Versions 2 & 5 shown in RED

Inspired by designs from Ken Fischer

Rev.07-30-00

Trainwreck Blues Express
Version A5d

This variation uses 150k ** grid load resistors (instead of 220k) to reduce the AC voltage on the EL84 grids.



"This amp was fine-tuned for blues tones, with a sparkling clean sound that gets more aggressive when you crank up the volume. It sounds like an old BF amp on Viagra..."

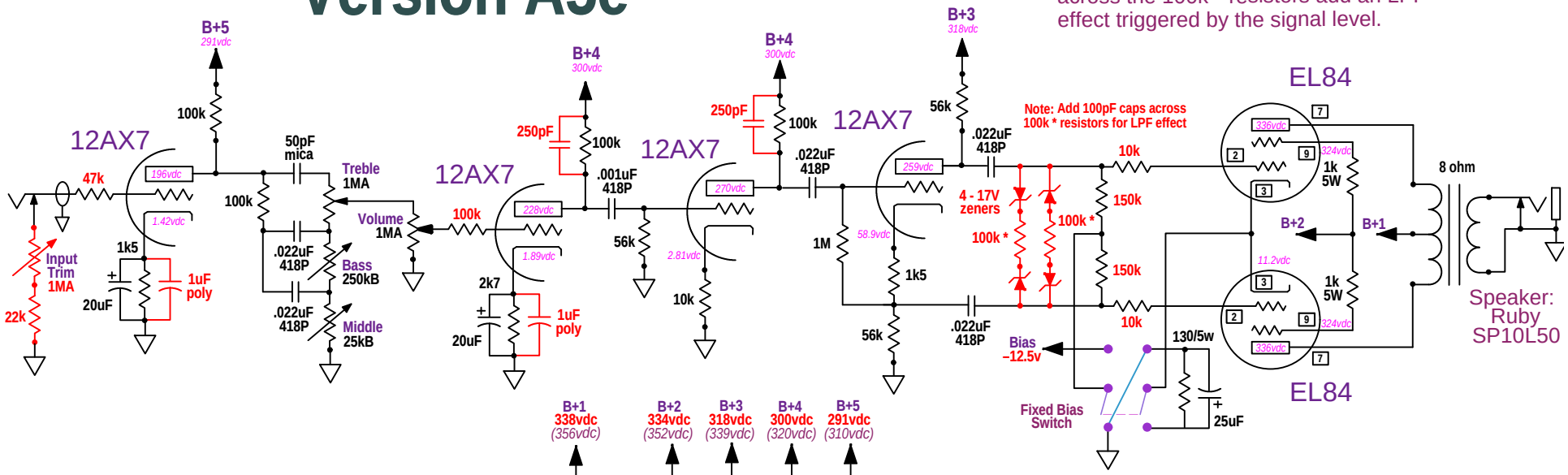
Revisions from Versions 2 & 5 shown in RED

Inspired by designs from Ken Fischer

Rev.08-12-00

Trainwreck Blues Express
Version A5e

This variation uses zeners across the EL84 grid stoppers to limit the AC voltage on the grids. The optional 100pF caps across the 100k * resistors add an LPF effect triggered by the signal level.



"This amp was fine-tuned for blues tones, with a sparkling clean sound that gets more aggressive when you crank up the volume. It sounds like an old BF amp on Viagra..."

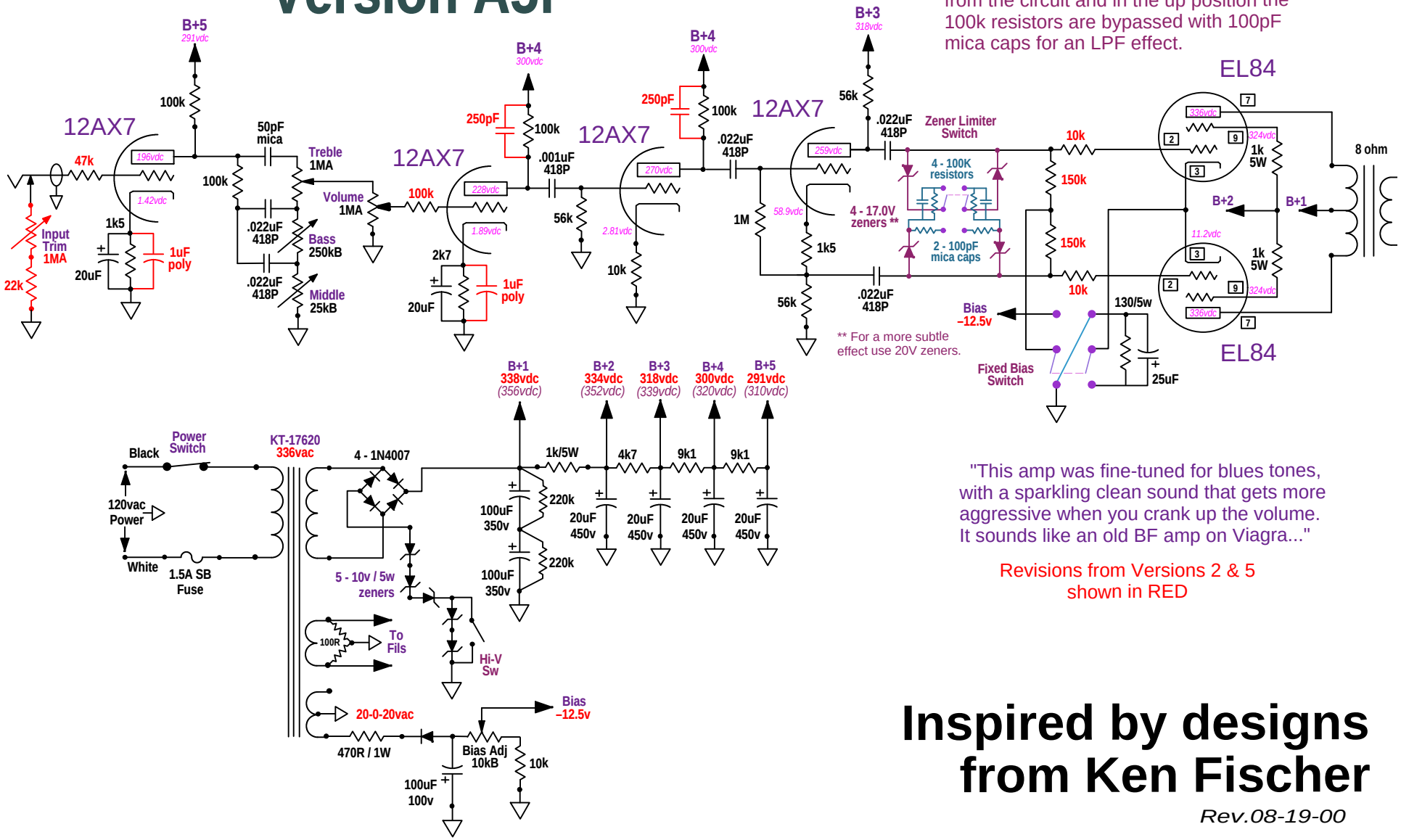
Revisions from Versions 2 & 5
shown in RED

Inspired by designs from Ken Fischer

Rev.08-18-00

Trainwreck Blues Express
Version A5f

This variation adds a switch to the zener limiting circuit from version A5e. In the center position the zeners are removed from the circuit and in the up position the 100k resistors are bypassed with 100pF mica caps for an LPF effect.



"This amp was fine-tuned for blues tones, with a sparkling clean sound that gets more aggressive when you crank up the volume. It sounds like an old BF amp on Viagra..."

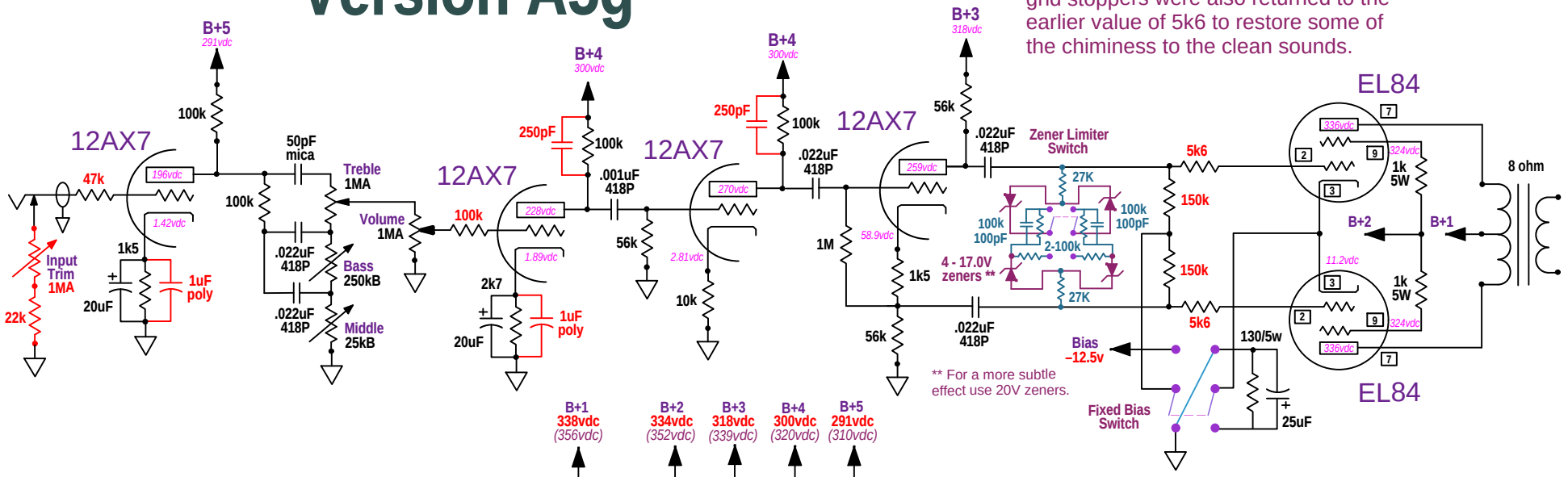
Revisions from Versions 2 & 5
shown in RED

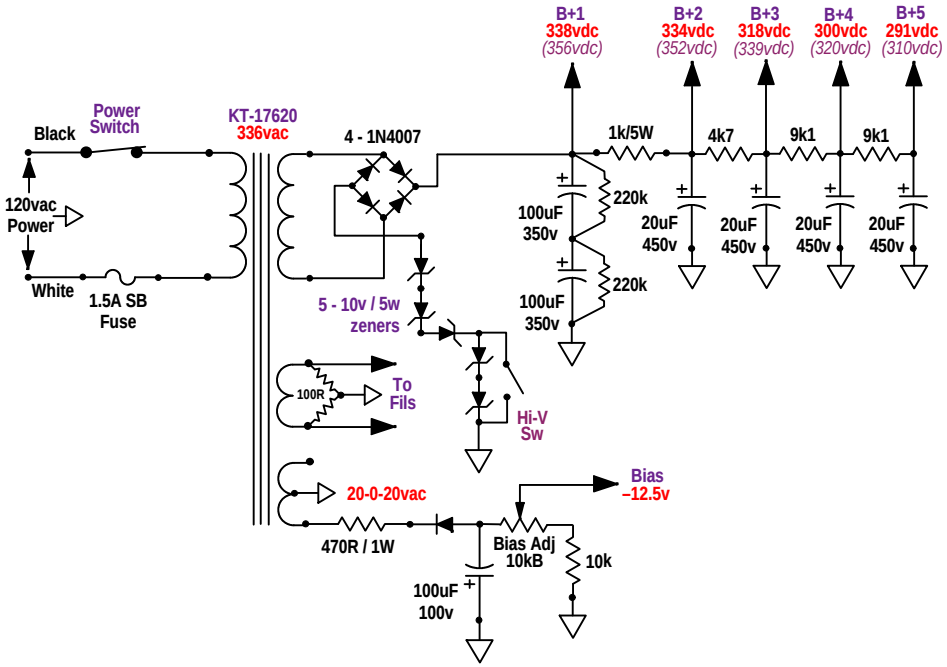
Inspired by designs from Ken Fischer

Rev.08-19-00

Trainwreck Blues Express
Version A5g

This variation adds two 27k resistors in series with the zener limiting circuit to make the effect more subtle. The EL84 grid stoppers were also returned to the earlier value of 5k6 to restore some of the chiminess to the clean sounds.





"This amp was fine-tuned for blues tones, with a sparkling clean sound that gets more aggressive when you crank up the volume. It sounds like an old BF amp on Viagra..."

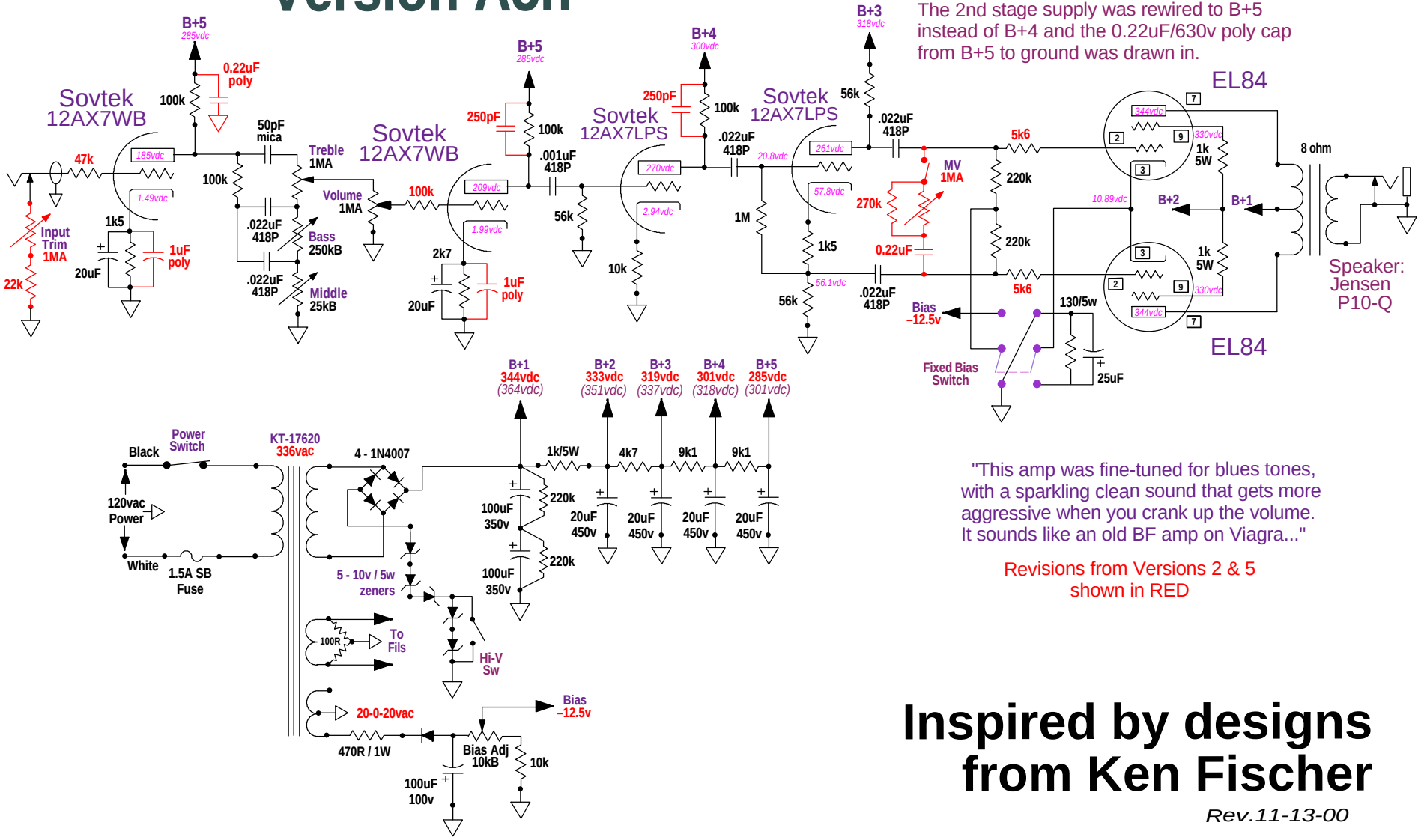
Revisions from Versions 2 & 5 shown in RED

Inspired by designs from Ken Fischer

Rev.08-25-00

The Blues Express
Version A5h

This is the final version of the Blues Express amp. The zener limiting circuit was removed and a modified cross-line MV was installed in its place. The bias/grid load resistors were returned to their original value of 220k. The 2nd stage supply was rewired to B+5 instead of B+4 and the 0.22uF/630v poly cap from B+5 to ground was drawn in.



"This amp was fine-tuned for blues tones, with a sparkling clean sound that gets more aggressive when you crank up the volume. It sounds like an old BF amp on Viagra..."

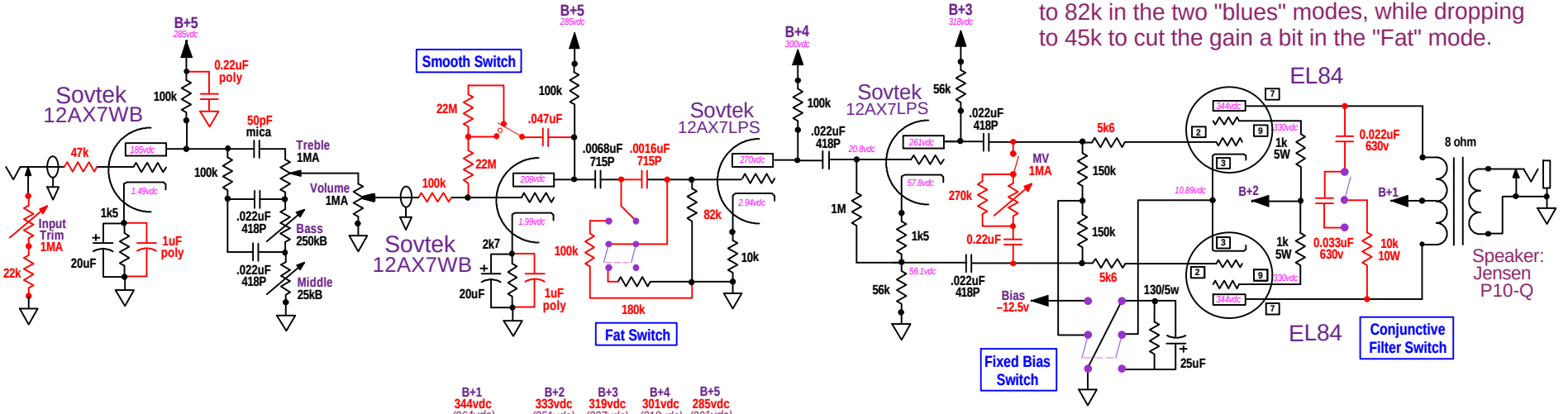
Revisions from Versions 2 & 5 shown in RED

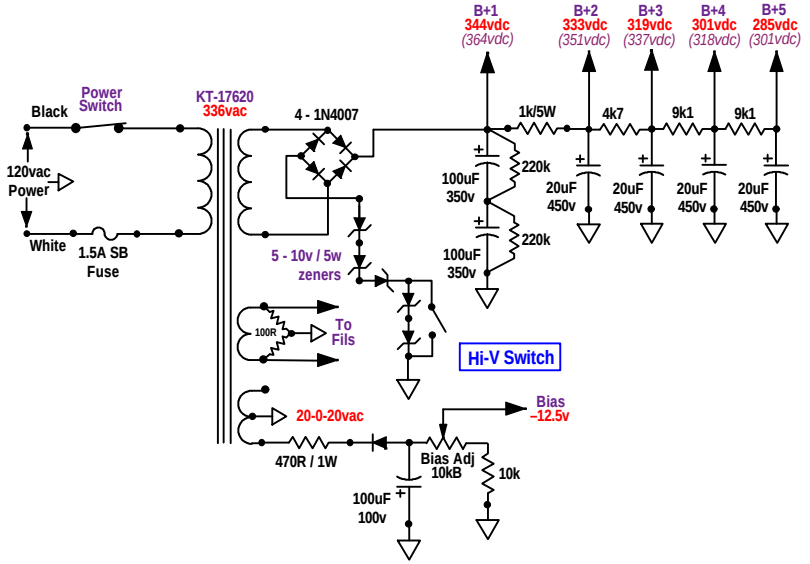
Inspired by designs from Ken Fischer

Rev.11-13-00

Blues Express Plus
Version A8a

The Blues Express Plus adds a "Fat" switch to allow for more Marshall-ish sounds by using a switchable .0068uF coupling cap after the second stage. In the other modes this cap is run in series through a .0016uF cap which results in a net capacitance of 1295pF. A center-off DPDT switch was used to toggle the grid load of the 3rd stage from 56k to 82k in the two "blues" modes, while dropping to 45k to cut the gain a bit in the "Fat" mode.





The switchable conjunctive filter was used to smooth out the response of the amp, making the 250pF caps across the 2nd and 3rd plate resistors unnecessary. With the .022uF and .033uF caps in series the net capacitance is .0132uF.

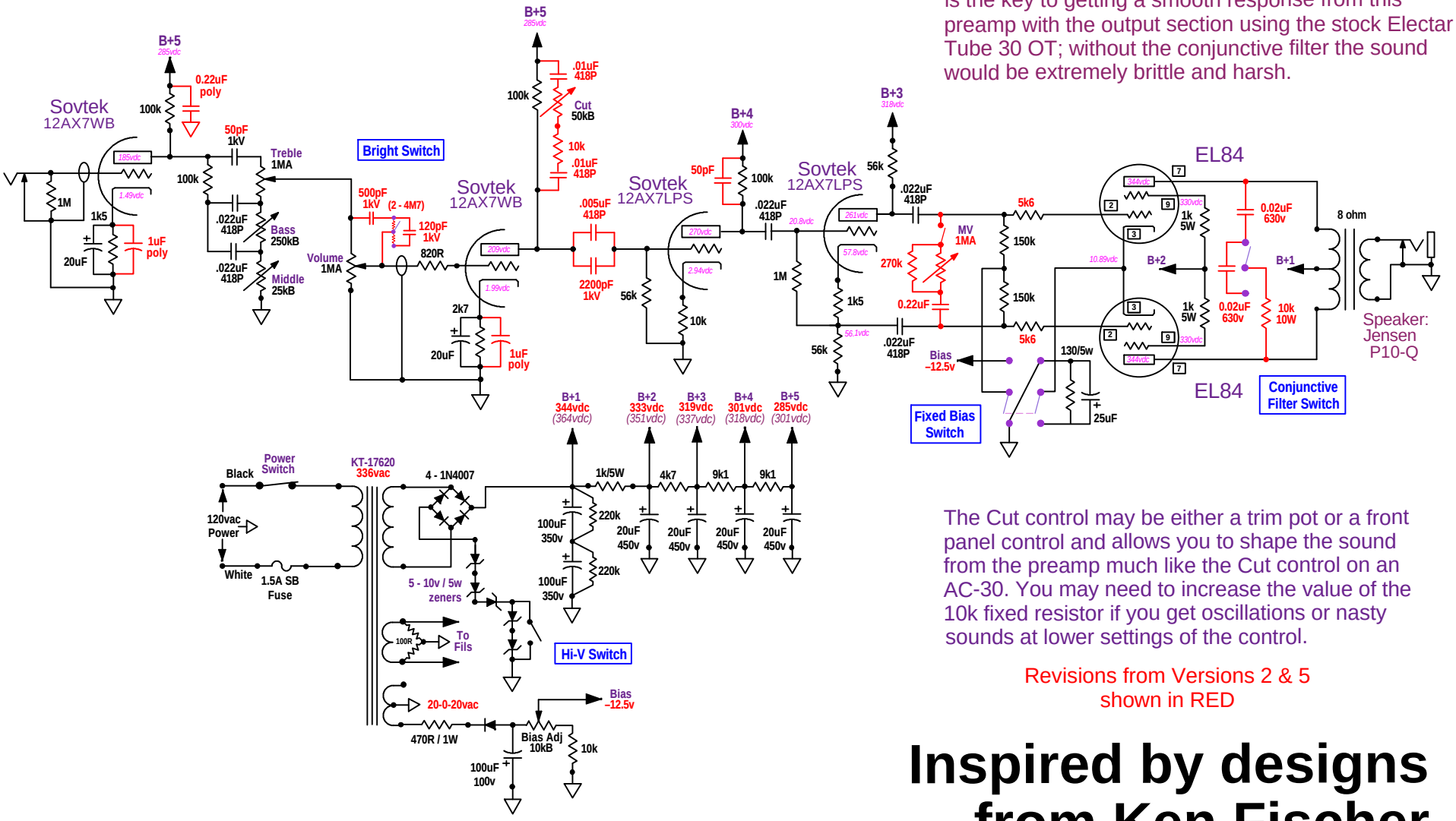
The Smooth switch is a local feedback loop between the plate and grid of the 2nd stage. The traditional value of 22M allows for a compressed sound while the alternate value of 44M has a more subtle effect.

Revisions from Versions 2 & 5 shown in RED

Inspired by designs from Ken Fischer

Rev.05-03-01

Blues Express Plus
Version A9b



The Blues Express Plus is a radical reworking of the Blues Express chassis along the lines of more traditional Trainwreck designs. The conjunctive filter is the key to getting a smooth response from this preamp with the output section using the stock Electar Tube 30 OT; without the conjunctive filter the sound would be extremely brittle and harsh.

The Cut control may be either a trim pot or a front panel control and allows you to shape the sound from the preamp much like the Cut control on an AC-30. You may need to increase the value of the 10k fixed resistor if you get oscillations or nasty sounds at lower settings of the control.

Revisions from Versions 2 & 5 shown in RED

Inspired by designs from Ken Fischer

Rev.05-06-01