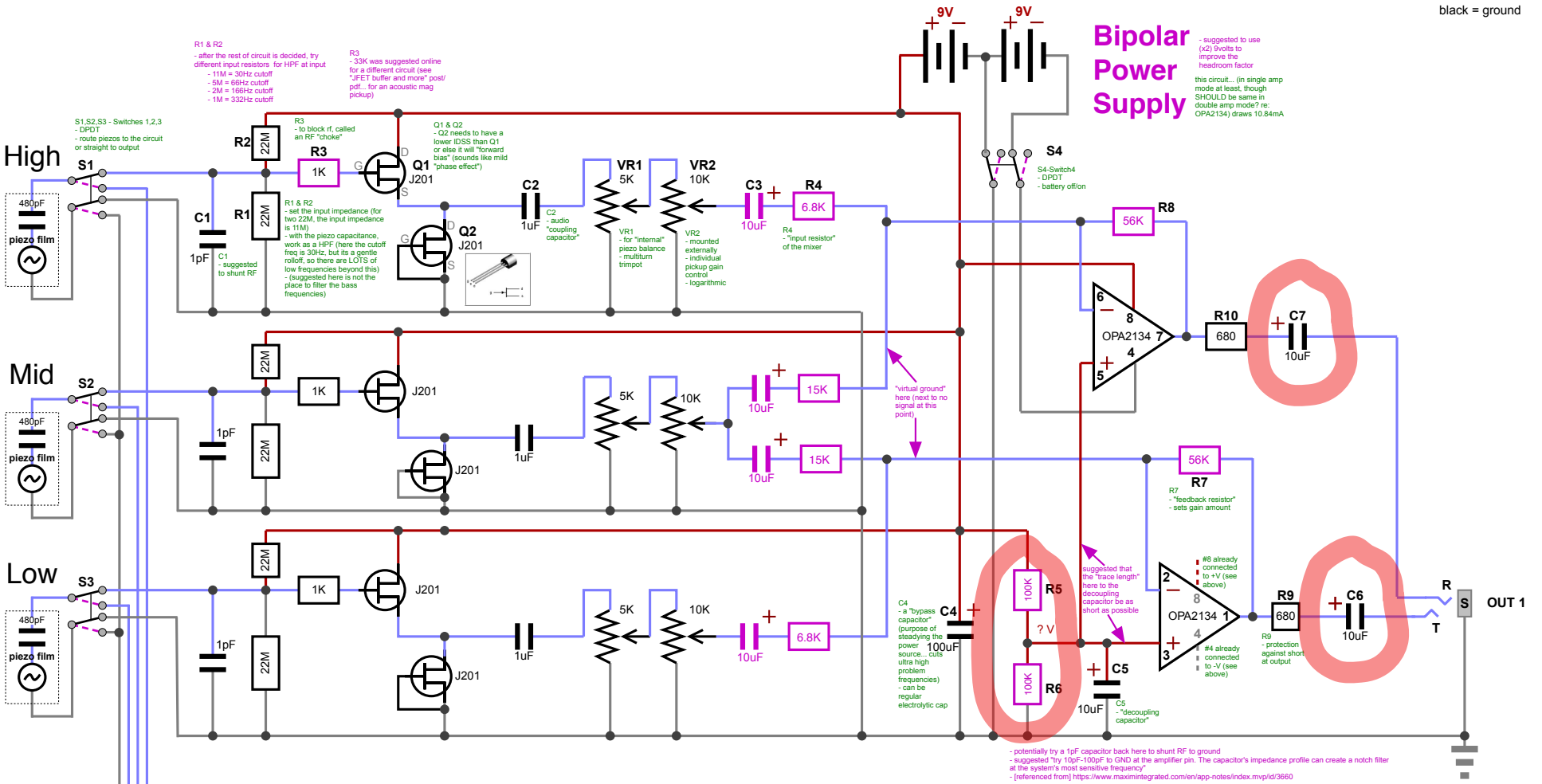
Combination Buffer, Mixer, Gain Circuit - vrsn2.4

red = power supply
blue = "audio"
black = ground



CircuitPartA - Buffer

CircuitPartB - Mixer and Gain

(in "inverting mode", acting as virtual earth mixer)

Piezo Films - LDT-0-028K

- each can act as an "input capacitor"
[the following from LDT datasheet]
- 480pF source capacitance
[the following from DTseries datasheet]
- Min. impedance- 1MΩ - recommended 10MΩ
- Output voltage- mV to 100's of volts
- the capacitance is proportional to the area and inversely proportional to the thickness of the element
[the following from "Technical Manual" refering to DT1]
- Capacitance: 1.36 nF; Dissipation Factor of 0.018 @ 10 KHz; Impedance of 12 KΩ @ 10 KHz

"Dry" Piezos

(used for testing purposes)

OUT 2

not intended to be used simultaneously with the above circuit

UA22 soundcard

- [from spec sheet]
- Input Impedance
  - INPUT 1, 2 (XLR type): 4KΩ (balanced)
  - INPUT 1, 2 (1/4-inch TRS phone type): 34KΩ (balanced)
-INPUT 1 jack supports high impedance

Firewire1814 soundcard

- [from spec sheet]
- Line Inputs
  - nominal input level -10dBV
  - max input level +2.1dBV, typical
  - input impedance 10KΩ, typical
- Mic/Inst. Inputs 1-2 (Balanced; at Minimum Gain)
  - max input level -3.8dBu, typical
  - input impedance