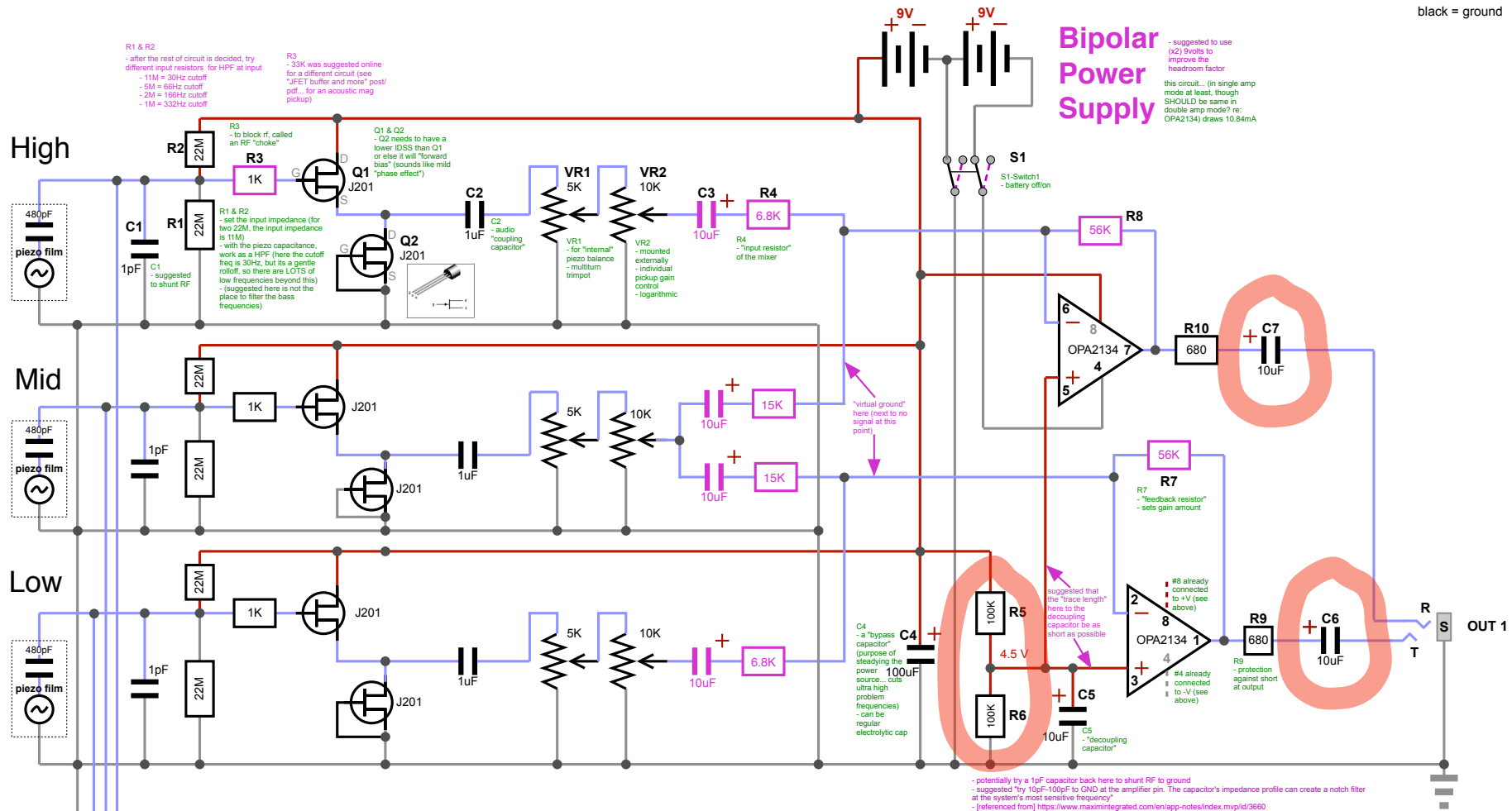


Combination Buffer, Mixer, Gain Circuit - vrsn2.4

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" referring 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)
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