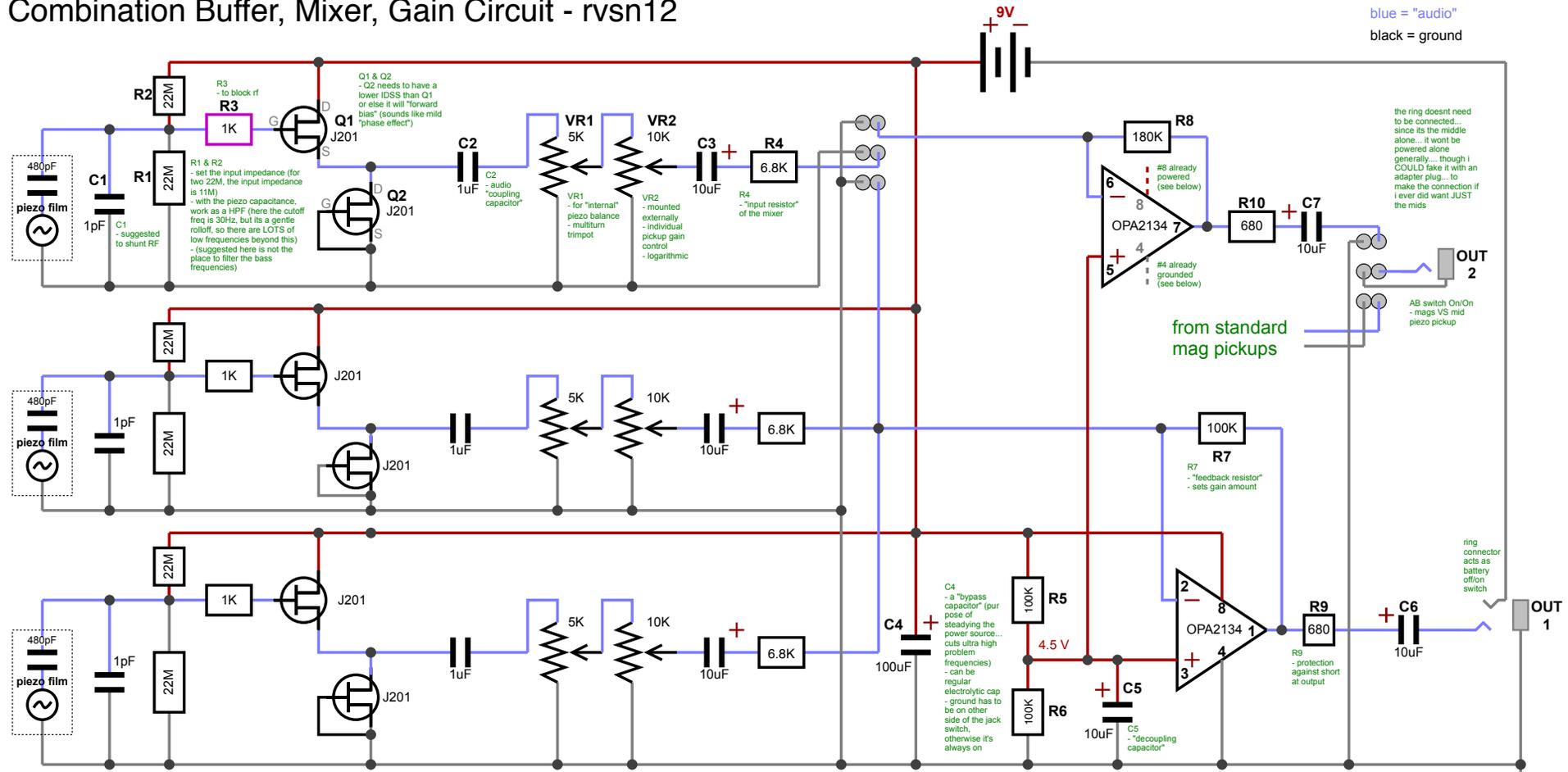


Combination Buffer, Mixer, Gain Circuit - rvsn12



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

CircuitA - Buffer Circuit

CircuitB - Mixer and Gain Circuit
(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

the ring doesn't need to be connected... since its the middle alone... it wont be powered alone generally... though i COULD fake it with an adapter plug... to make the connection if i ever did want JUST the mids

from standard mag pickups

ring connector acts as battery off/on switch

UA22 soundcard
 - [from spec sheet]
 - Input Impedance
 - INPUT 1, 2 (XLR type): 4 kΩ (balanced)
 - INPUT 1, 2 (1/4-inch TRS phone type): 34 kΩ (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: 10K Ohms, typical
 - Mic/Inst. Inputs 1-2 (Balanced; at Minimum Gain)
 - max input level -3.8dBu, typical