

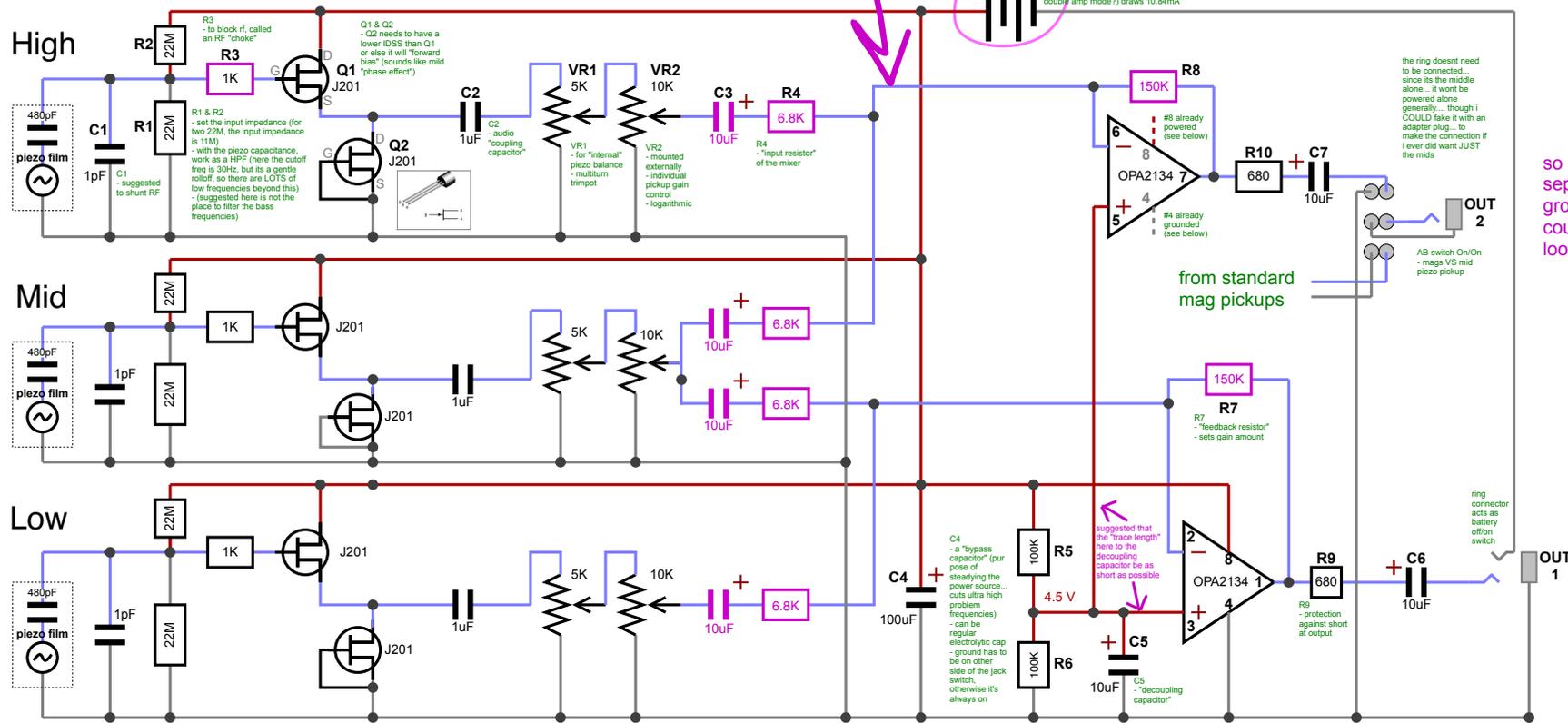
virtual ground

R3 - 33k was suggested online for a different circuit (see "JFET buffer and more" post) pdf... for an acoustic mag pickup)

- after the rest of circuit is decided, try different input resistors for HPF at input

- 11M = 30Hz cutoff
- 5M = 69Hz cutoff
- 2M = 168Hz cutoff
- 1M = 332Hz cutoff

Combination Buffer, Mixer, Gain Circuit - vrsn2.0



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

9V
- suggested to use 2x 9volts to improve the headroom
this circuit... though SHOULD be same in double amp mode(?) draws 10.84mA

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

so out 2 needs to be separated from chassi ground i think, or there could be a ground loop, no?

from standard mag pickups

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
- 480pF source capacitance (the following from D7series 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

- potentially try a 1pF capacitor back here to shunt RF to ground
- suggested "try [100pF 100 pF] to GND at the amplifier pin. The capacitor's impedance profile can create a notch filter at the system's most sensitive frequency"

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 10K, typical
- Mic/Inst. Inputs 1-2 (Balanced, at Minimum Gain)
- max input level -3.8dBu, typical
- input impedance