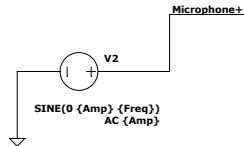
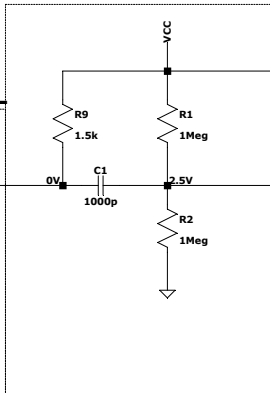


MICROPHONE MODEL

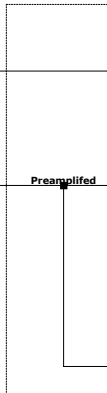
<https://www.circuitlab.com/editor/#?id=w88e3e>



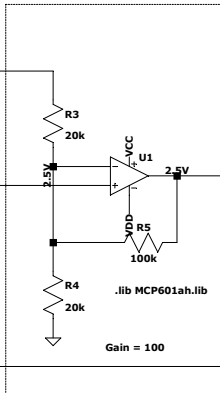
INPUT



REF.POINT



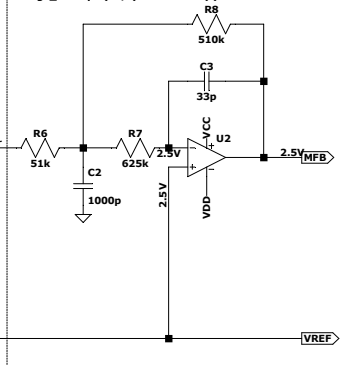
GAIN STAGE



MFB FILTER

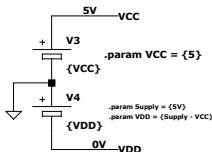
$$\text{Gain} = -R8 / R6$$

$$\Omega_0 = \sqrt{1 / (R1 R2 C1 C2)}$$



```
.param Freq=440
.param Amp=8m
.param DCOffset=62m
.ac dec 1000 1 1Meg
```

```
;tran {5/Freq}
;op
```



The OPA2344 driving an ADS7822 in a speech bandpass filtered data acquisition system. This small, low-cost solution provides the necessary amplification and signal conditioning to interface directly with an electret microphone. This circuit will operate with $V_S = +2.7V$ to $+5V$ with less than $500\mu A$ quiescent current. Fra <http://www.ti.com/lit/ds/symlink/opa4344.pdf>