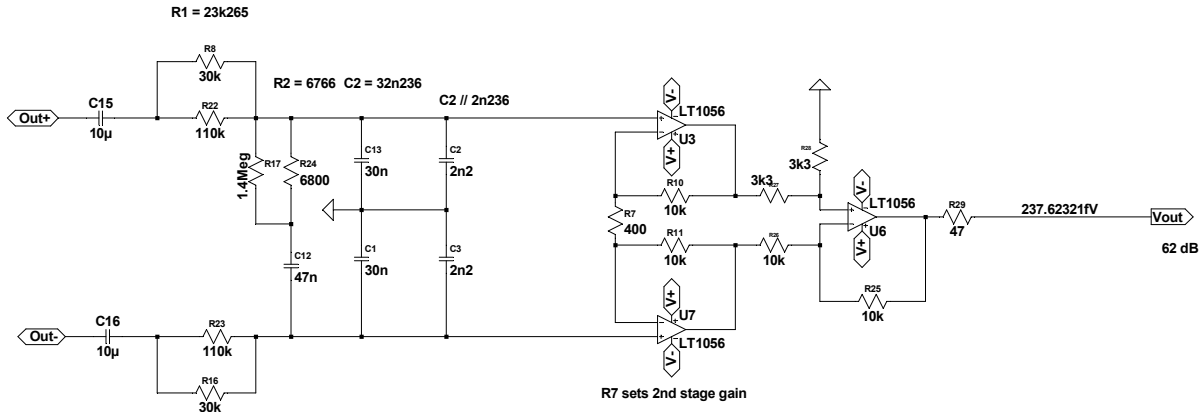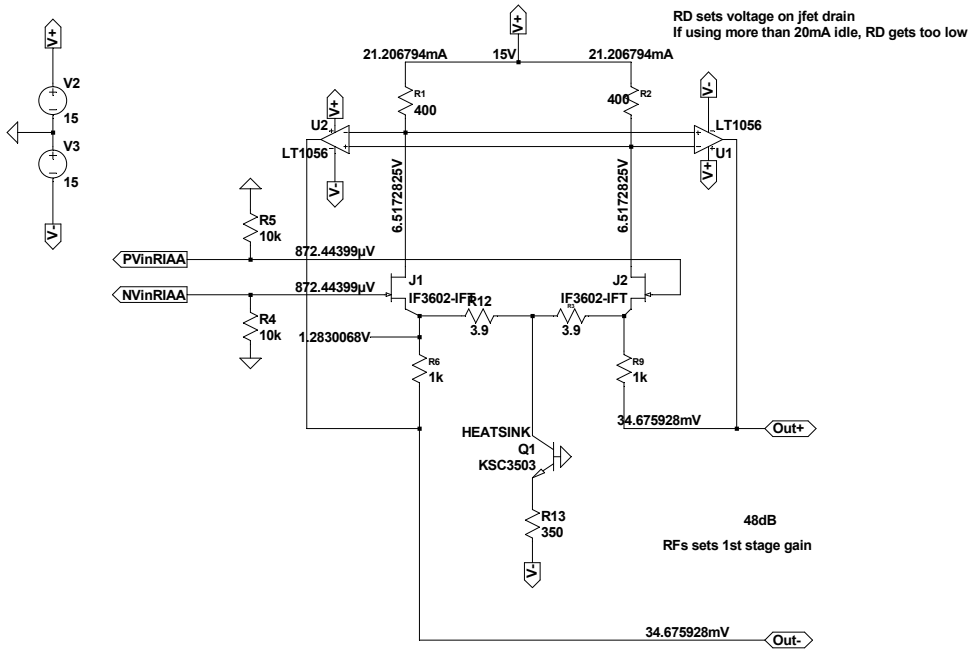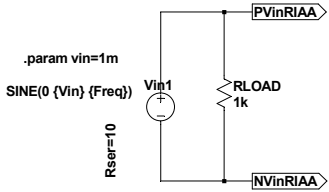.include C:\Users\Ricardo\LT SPICE RC\MODELS\RCAUDIO MODELS 2021.txt

.MODEL IF3602-IFT NJF VTO=-1.5 BETA=260m LAMBDA=1m RD=0.04 RS=0.04 CGS=600p CGD=1200p PB=0.75 IS=50000f AF=1 FC=0.5 BETATCE=-0.5 N=1 NR=2 XTI=3 VTOTC=-2.5m ALPHA=1u VK=1 ISR=10f KF=0.001f M=0.5 B=1.8 NLEV=2 MFG=InterFET

RD sets voltage on jfet drain
If using more than 20mA idle, RD gets too low

21.206794mA   15V   21.206794mA

V2
15
V3
15

R1 400   R2 400

U2 LT1056   U1 LT1056

6.5172825V   6.5172825V

R5 10k

PVinRIAA   872.44399µV

NVinRIAA   872.44399µV

J1 IF3602-IFT   R12 3.9   J2 IF3602-IFT

R4 10k   1.2830068V

R6 1k   R9 1k

.param vin=1m

SINE(0 {Vin} {Freq})   Vin1   RLOAD 1k

Rser=10   34.675928mV   Out+

PVinRIAA

NVinRIAA

HEATSINK
Q1 KSC3503

R13 350

48dB

RFs sets 1st stage gain

34.675928mV   Out-

R1 = 23k265

R8 30k

C15 10µ   R22 110k

R2 = 6766 C2 = 32n236   C2 // 2n236

LT1056 U3

R17 R24 6800   C13 30n   C2 2n2

1.4Meg

3k3   3k3

R10 10k   3k3   LT1056 U6

R7 400   R29 47   237.62321fV   Vout

C12 47n   C1 30n   C3 2n2   R11 10k   R26 10k

62 dB

R25 10k

C16 10µ   R23 110k   U7 LT1056

Out-   R16 30k

https://www.tubecad.com/2007/09/blog0120.htm

R7 sets 2nd stage gain