

EW-2 PROJECT

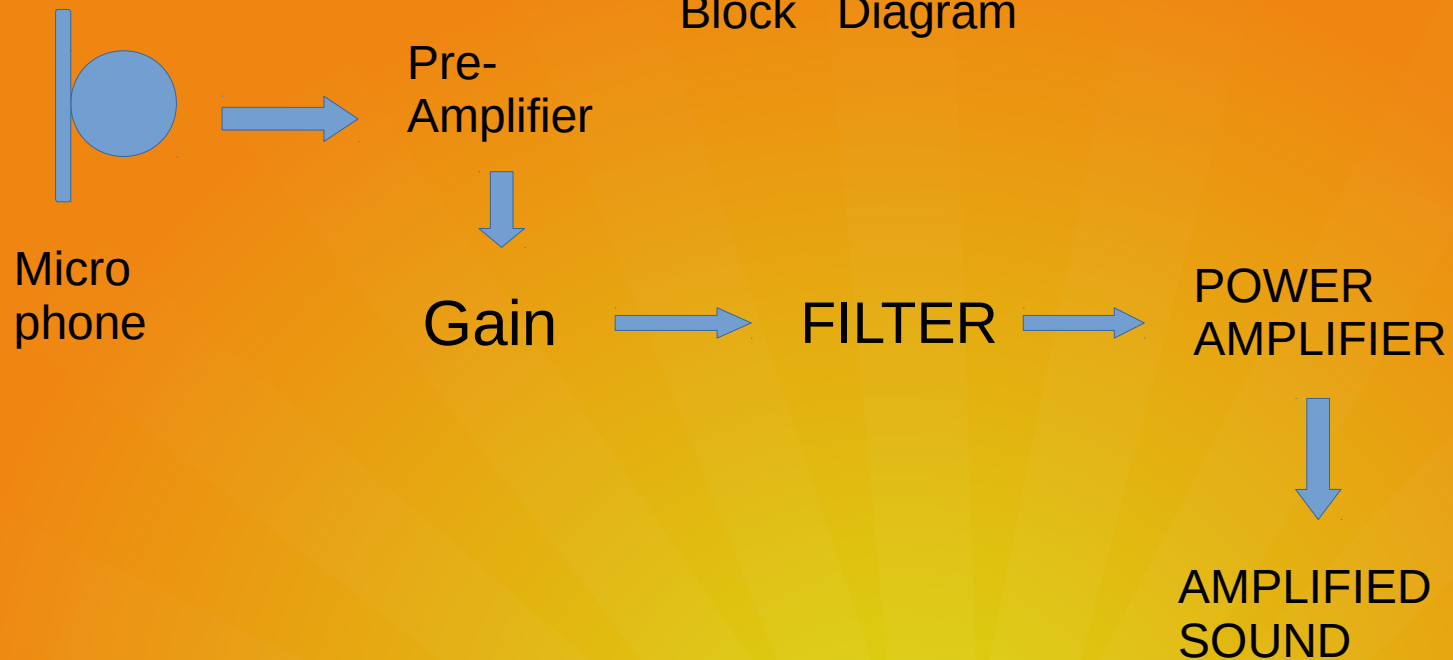
AUDIO AMPLIFIER

BY

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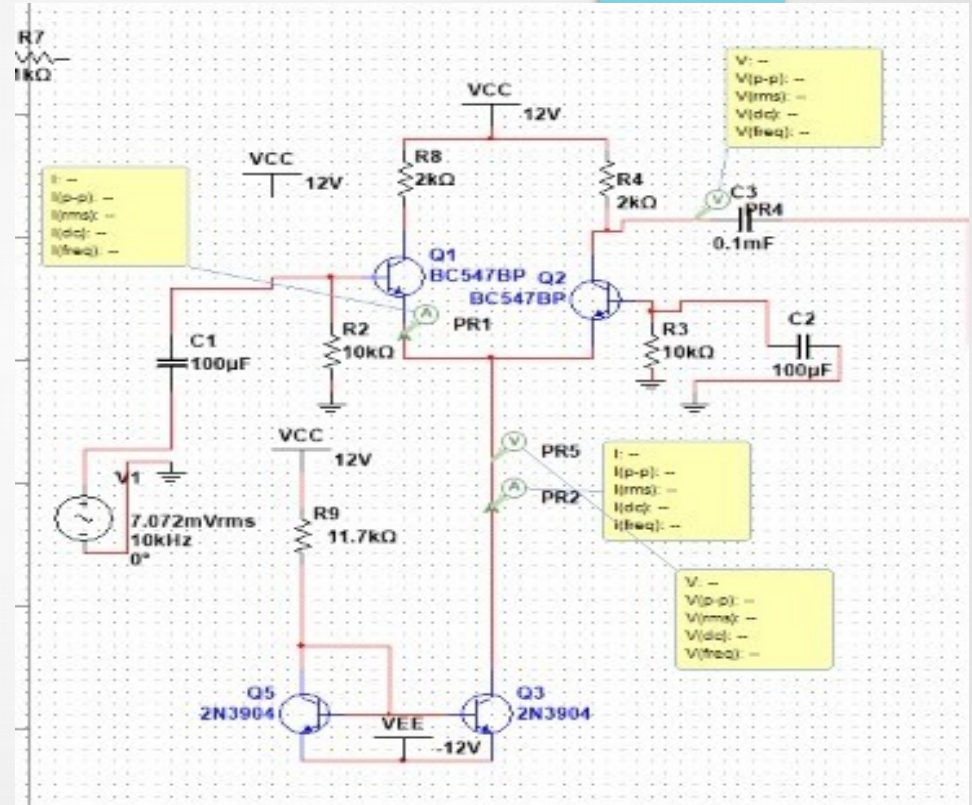
Introduction

Block Diagram



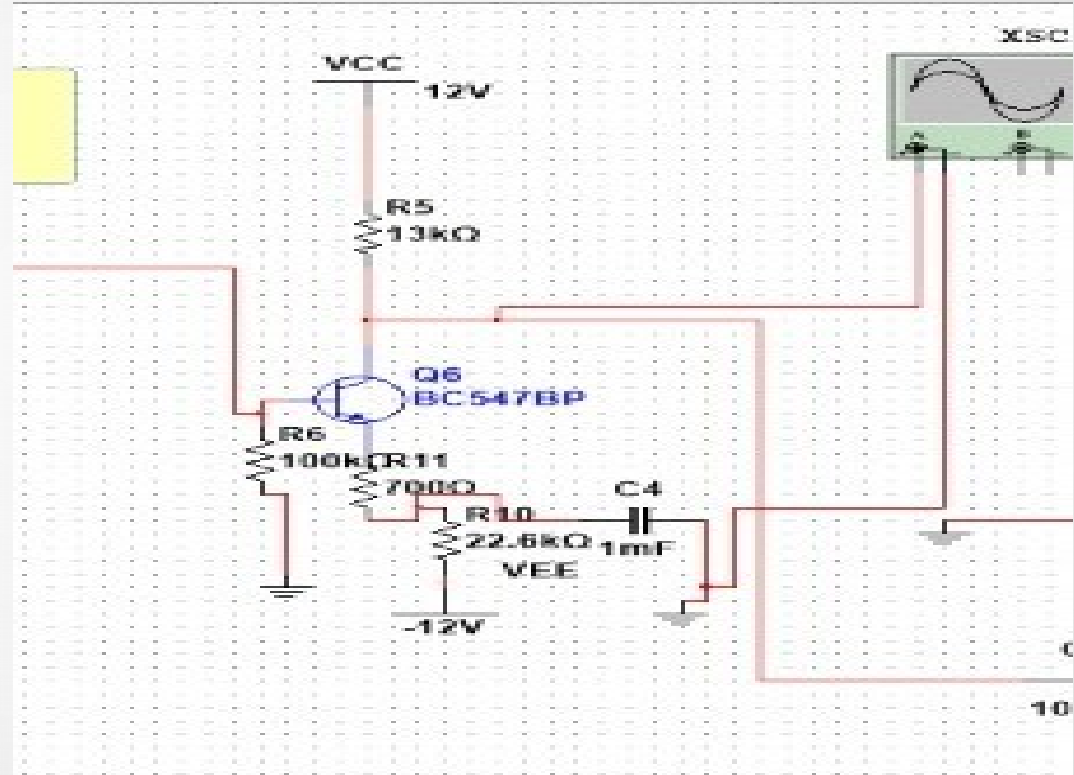
PRE-AMPLIFIER

- This pre-amplifier stage is used to remove noise.
- Gain in this stage is $G=(I_c \cdot R_c)/V_t$.
- We have taken gain to be 20.
- So we have use 2kilo ohms resistor as R_c .



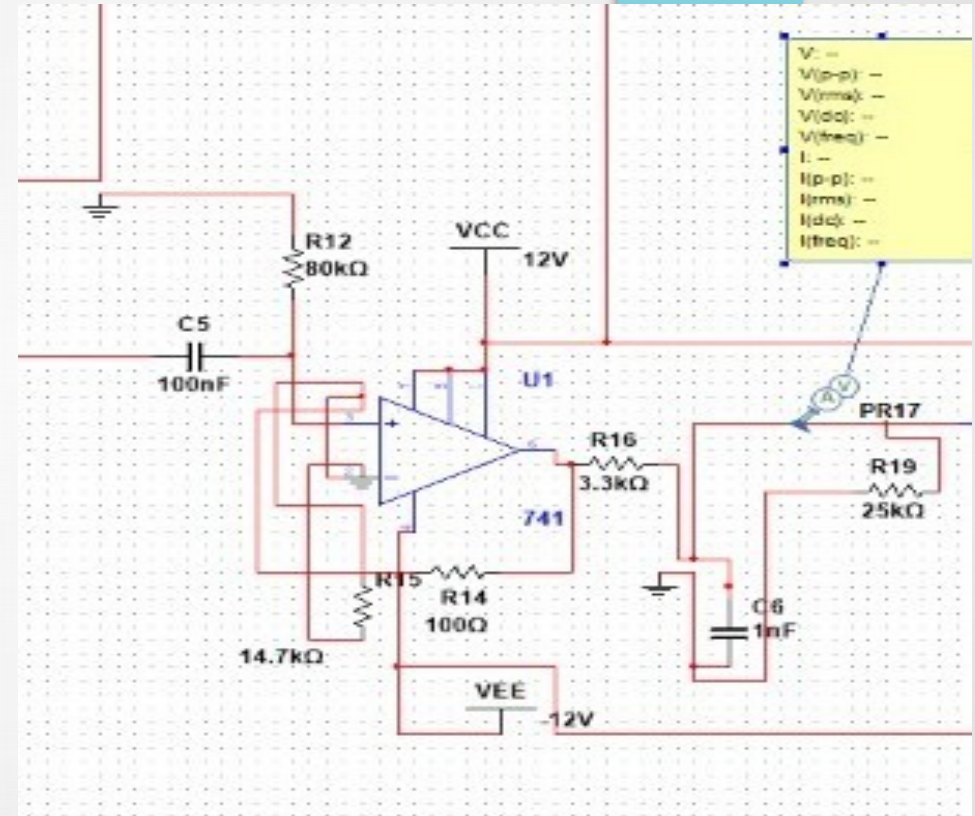
Gain Stage

- We have used Common emitter circuit as gain cell.
- Our Gain cell gain is 50.
- In gain cell gain is given by
$$G = R_L / R_e$$



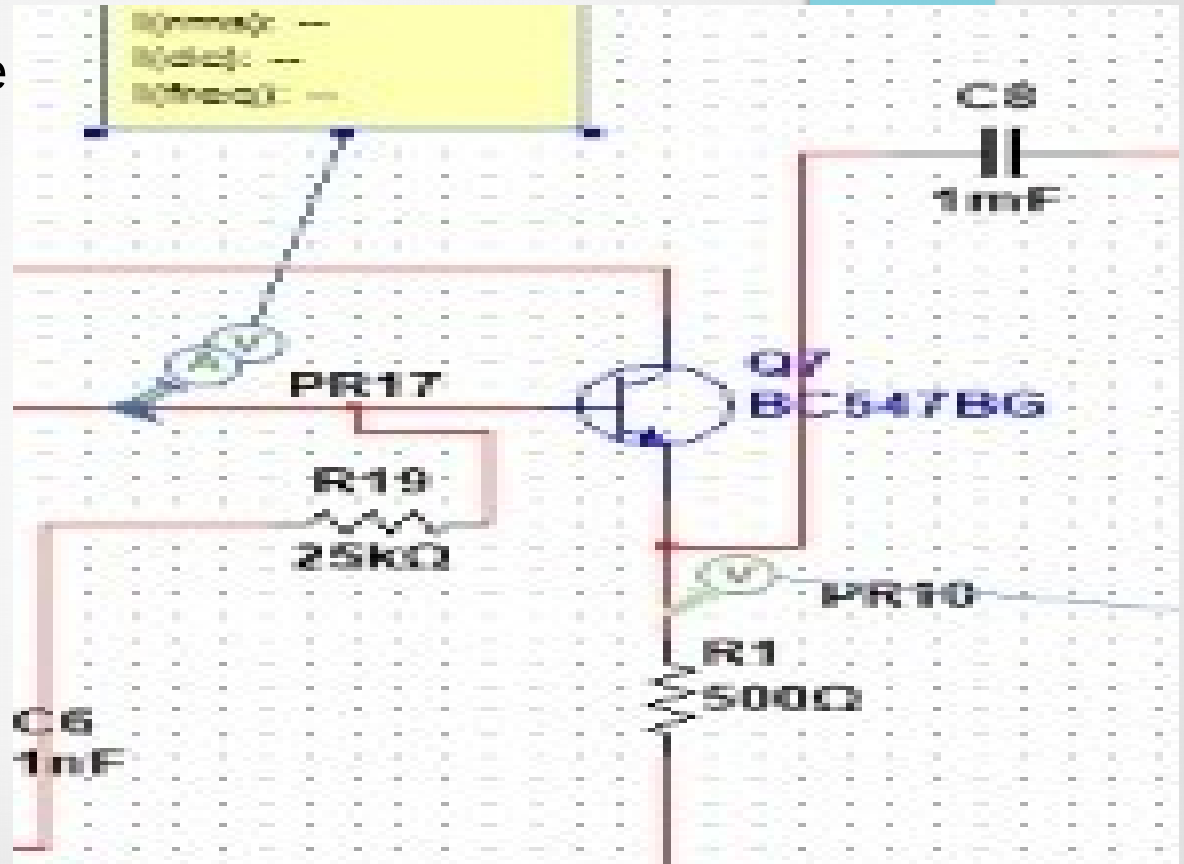
FILTER

- The first stage of band pass filter is high pass filter.
- The second stage is low pass filter
- our resistances and capacitances can be given by $f = 1/(2 \cdot \pi \cdot R \cdot C)$
- We put lower bound frequency 20Hz and upper bound frequency 20KHz.



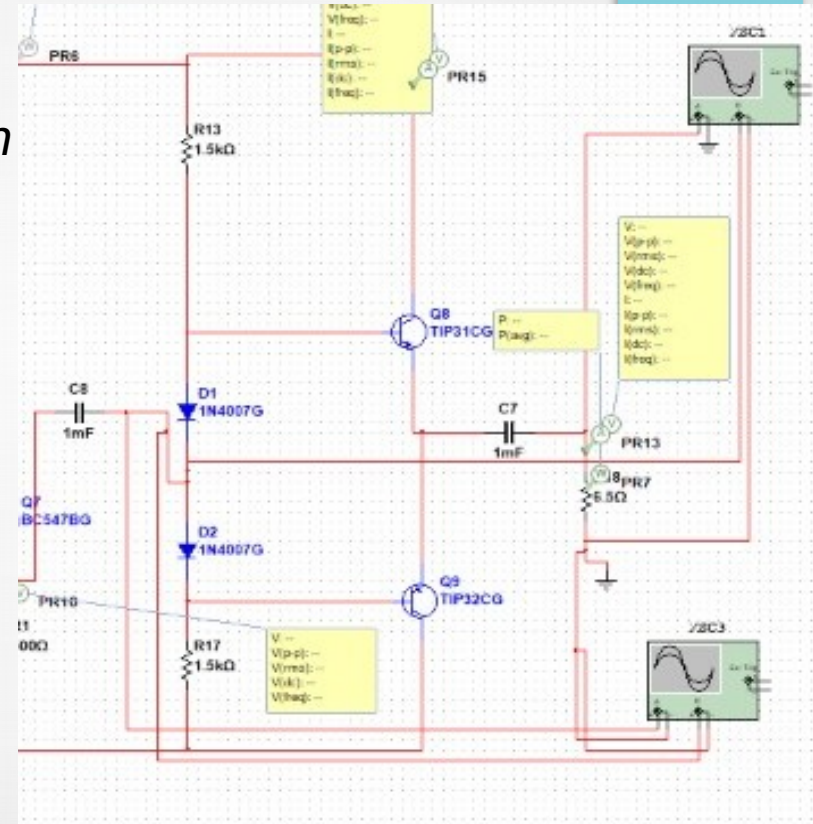
BUFFER

- Buffer is used for impedance matching.
- It has very high impedance.

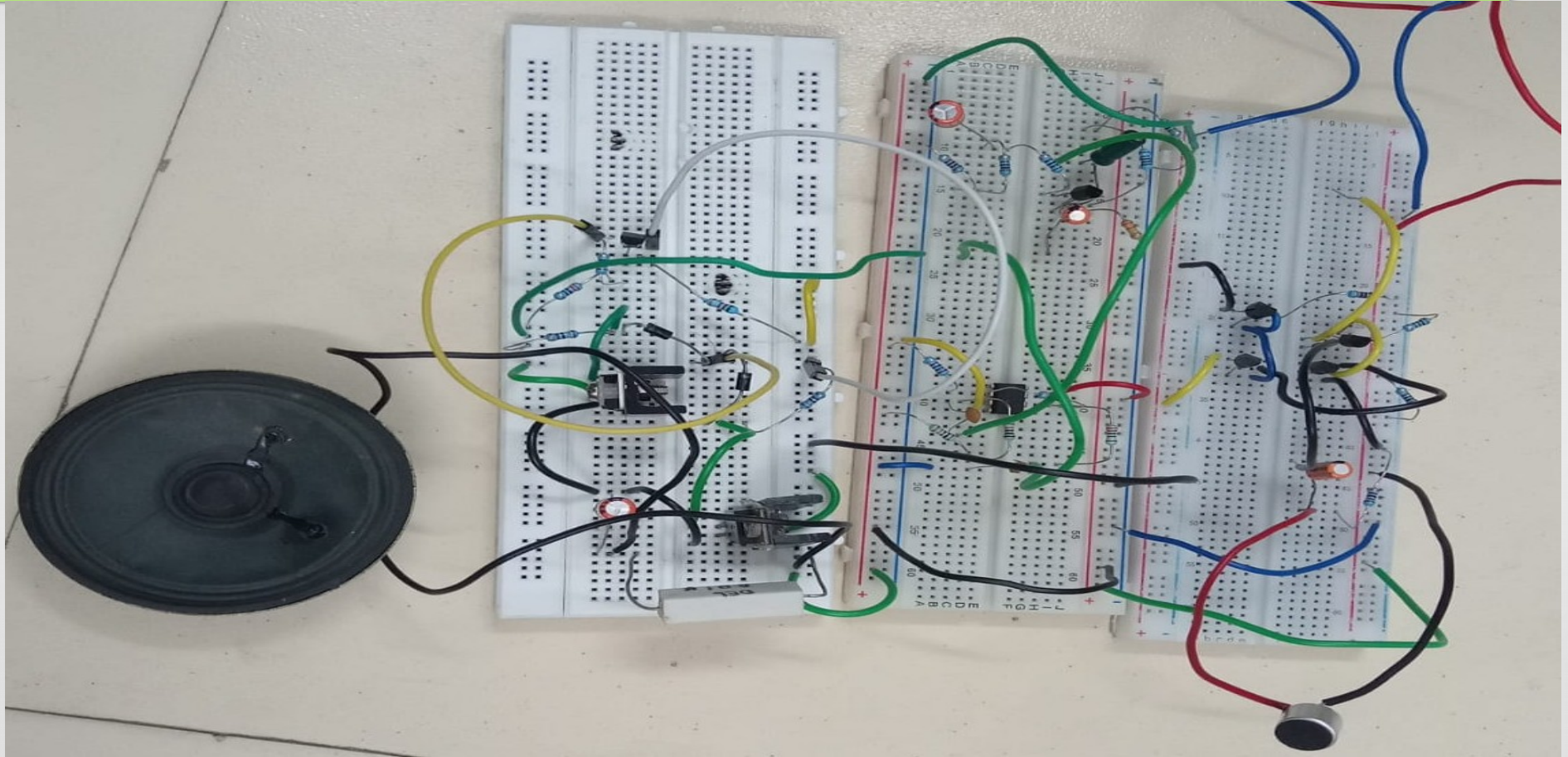


POWER AMPLIFIER

- *Power Amplifiers are used to increase the power of input signal to a level high enough to drive the loads of output devices.*
- *We use diode biasing configuration.*
- *We use a class AB power amplifier as it overcomes the efficiency and distortion problems present in Class-A Class-B respectively.*

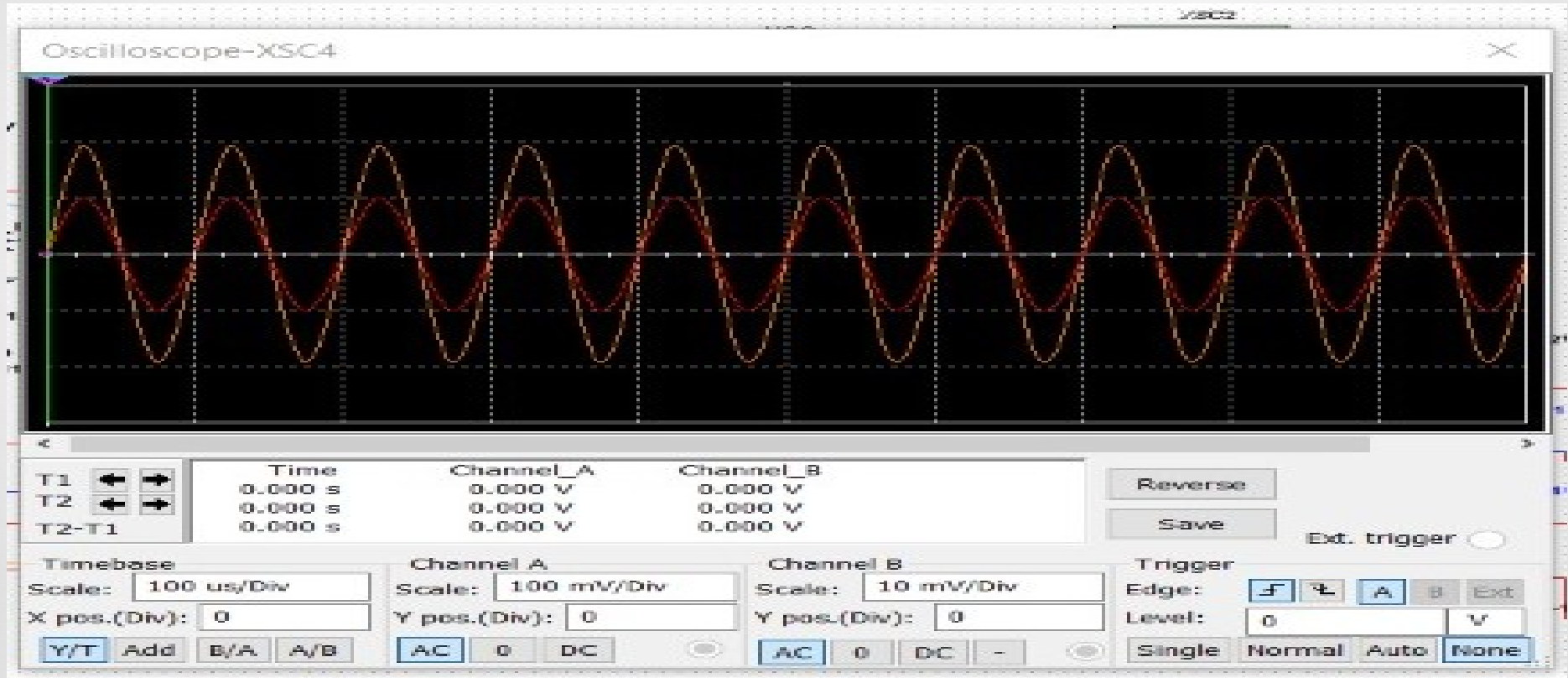


OUR CIRCUIT

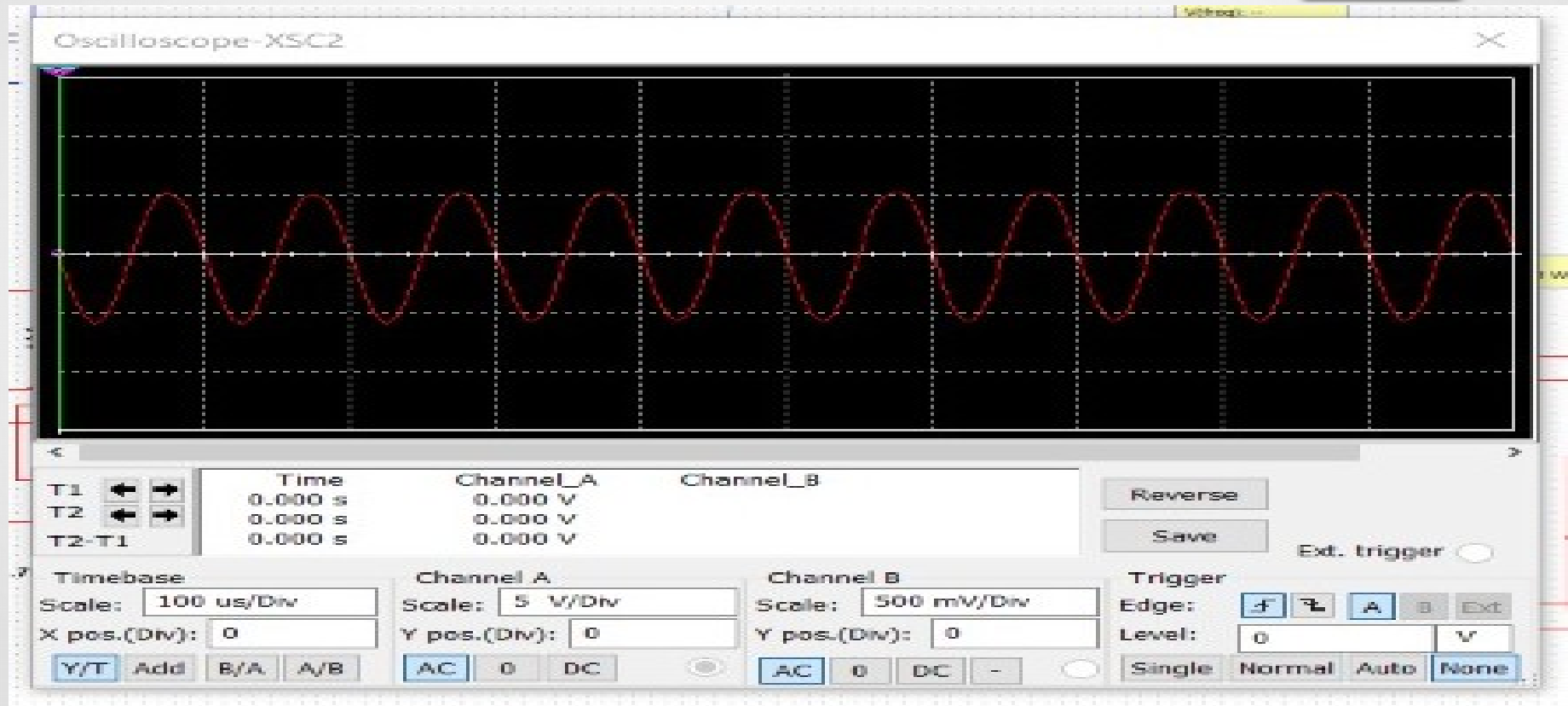


Results

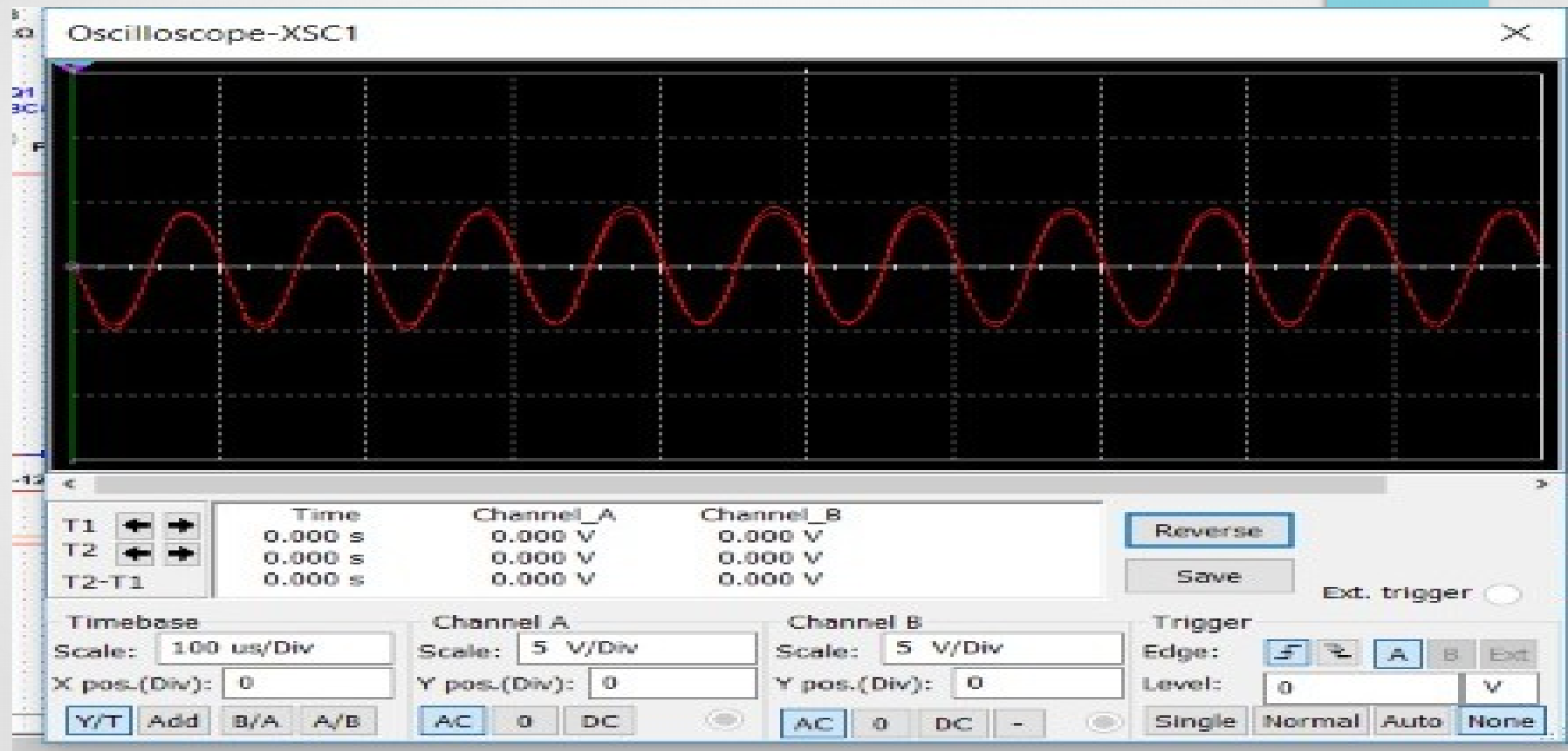
Pre-Amplifier output



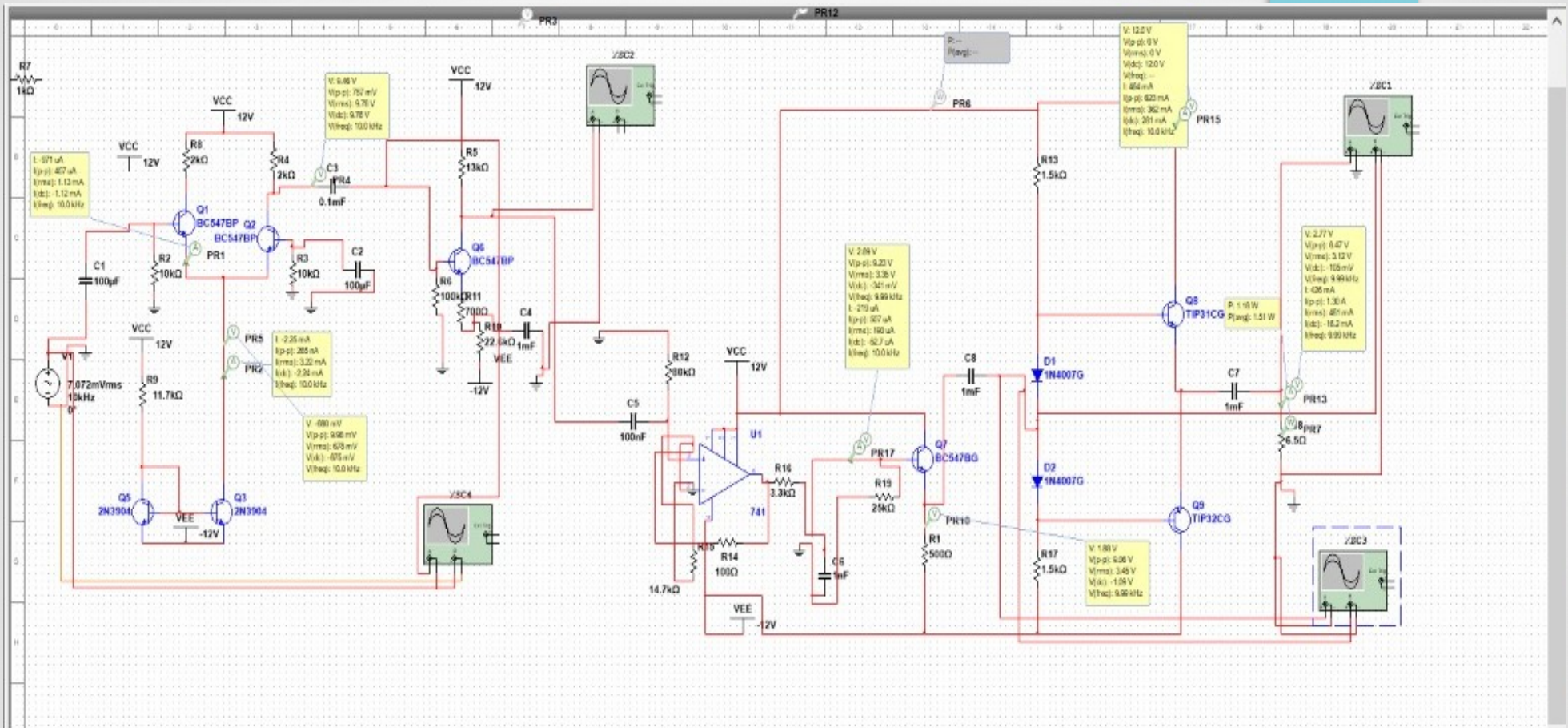
Gain Cell Output



Filter and Power-Amplifier output

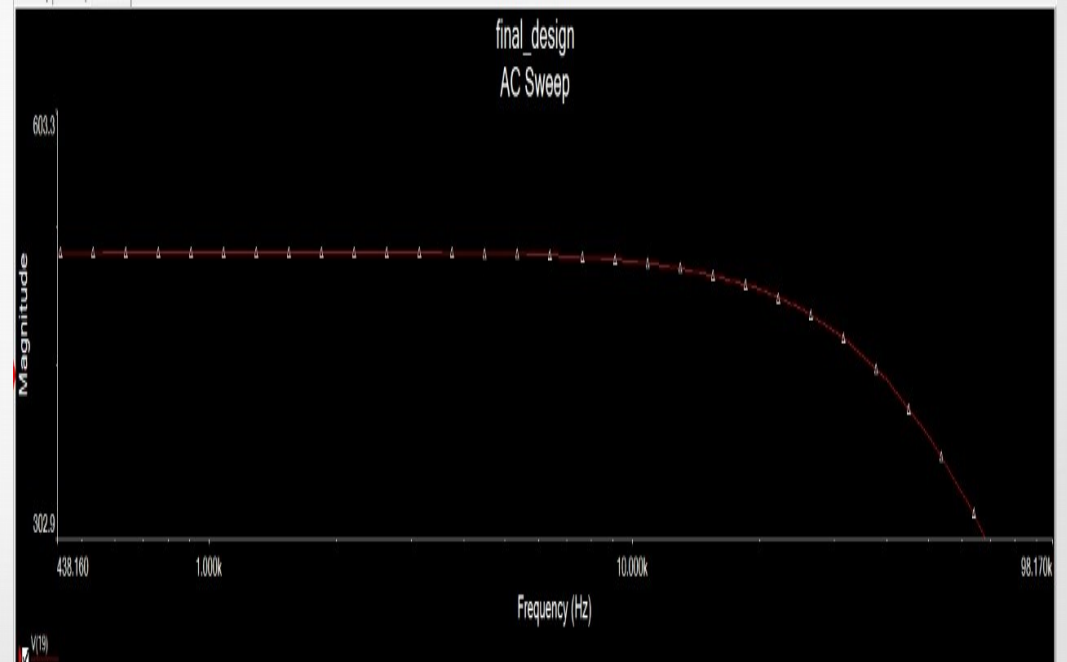
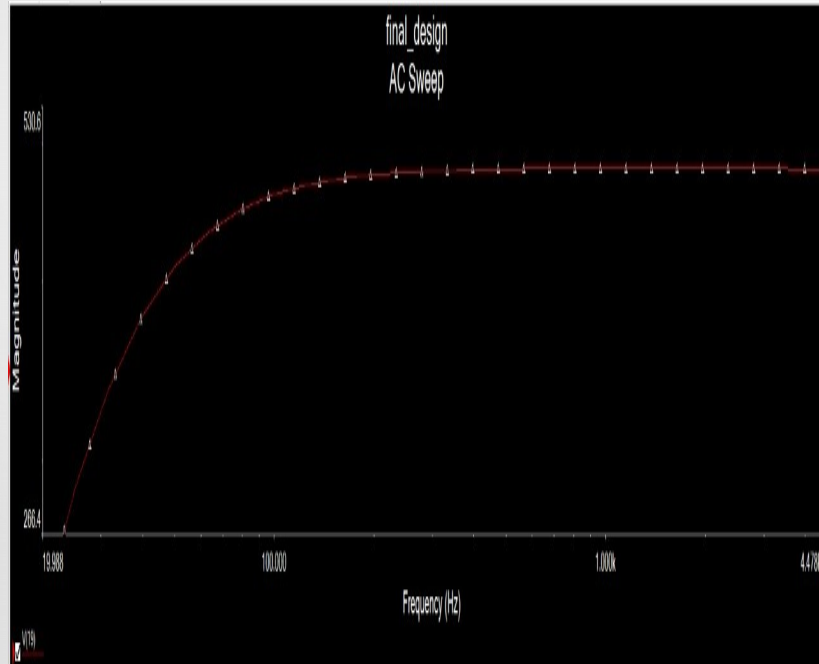


Overall Results in circuit



Frequency response

Our circuit got 5Vpp at 35KHz





THANK YOU