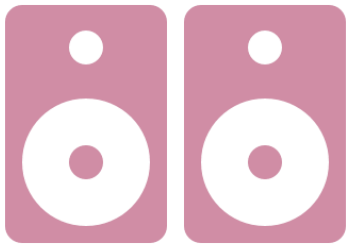
IC AUDIO POWER AMPLIFIER

OBJECTIVE:-

(i)To investigate the **gain efficiency** of an IC audio amplifier.



(ii)To investigate the **efficiency** of an IC audio amplifier.

THEORY

1

(i)Audio power Amplifier

2

(a) Gain of an Amplifier

3

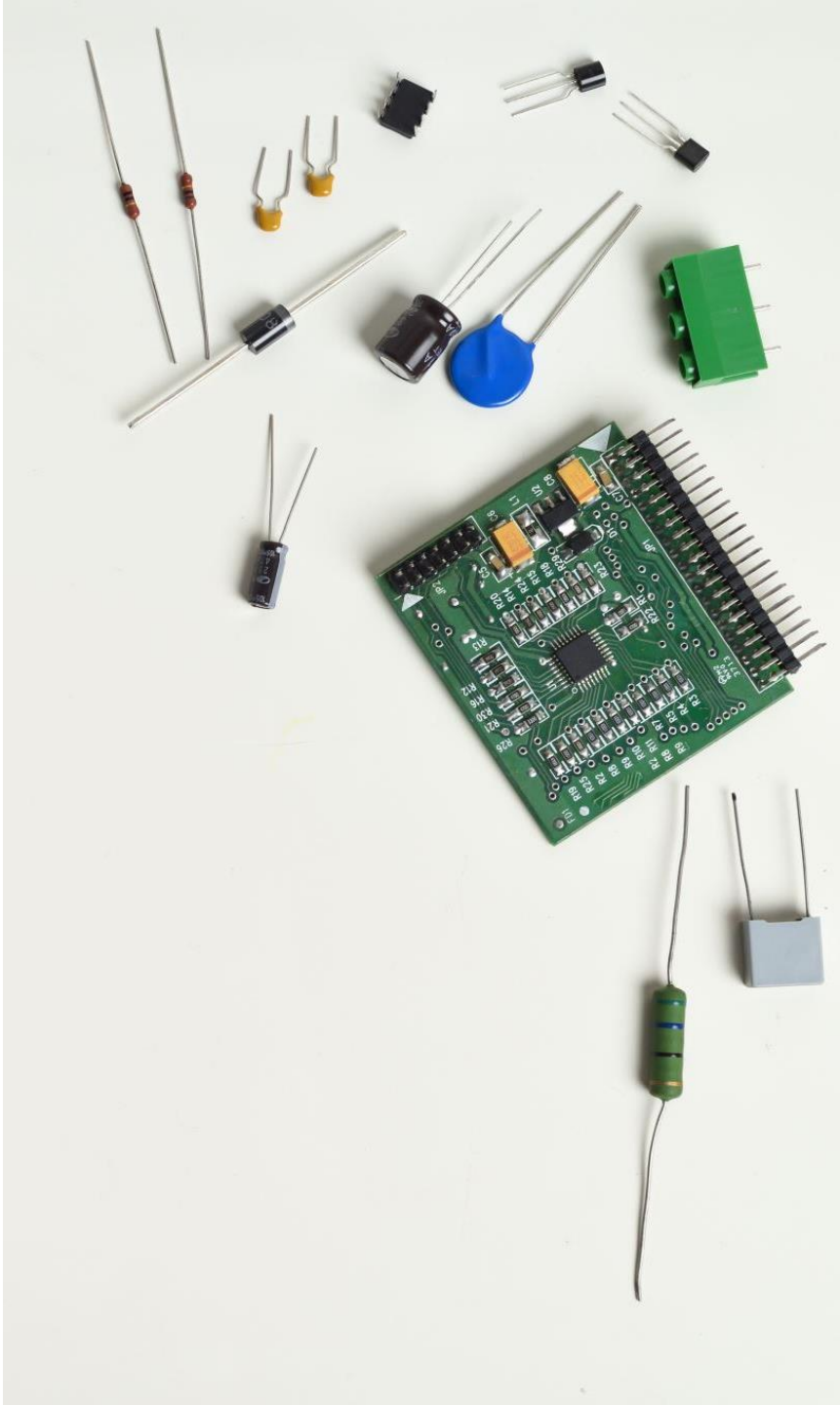
(b)Efficiency of Power Amplifier

4

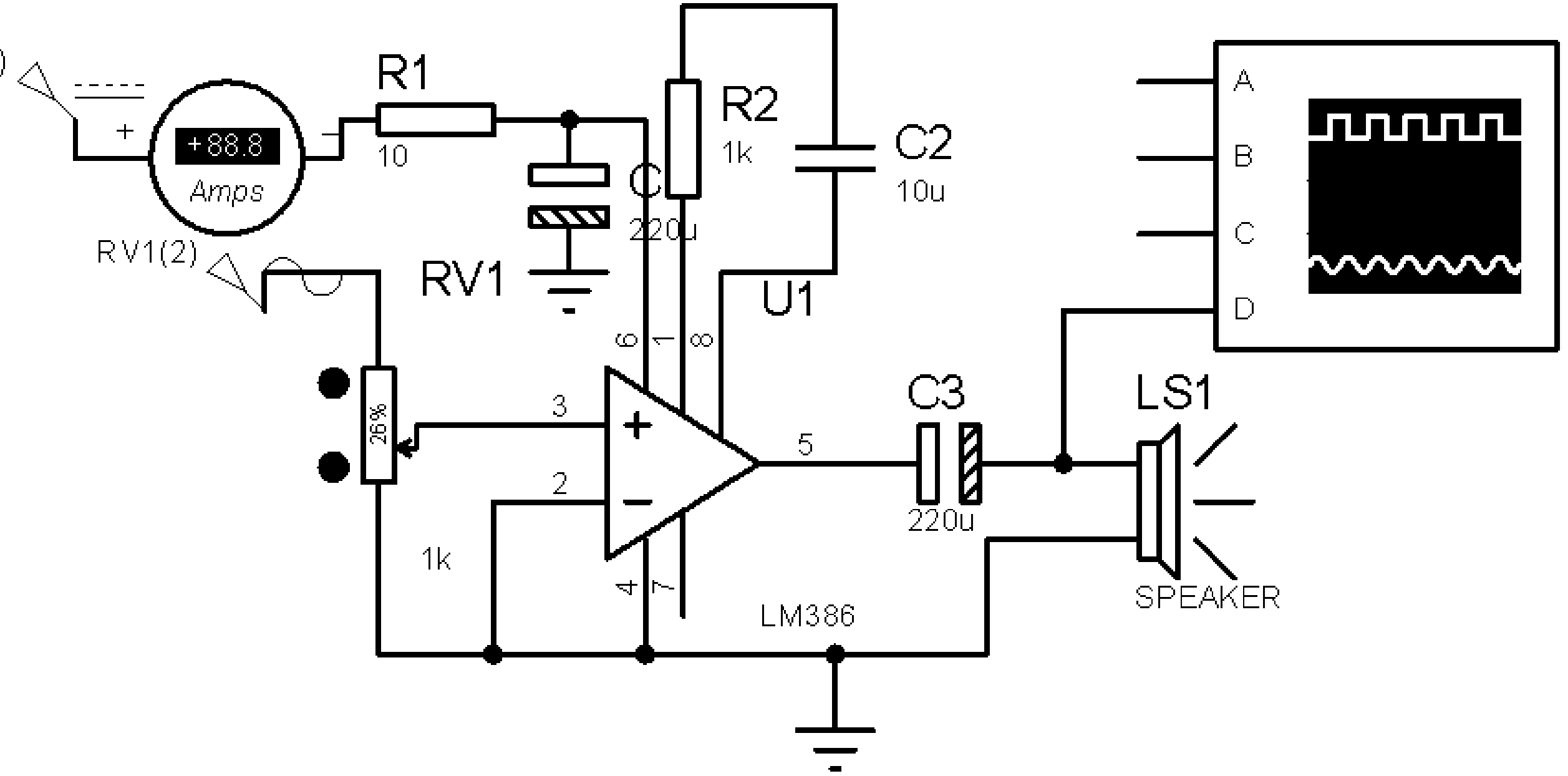
(c) Bandwidth of An Amplifier

(I) AUDIO POWER AMPLIFIER

- **Equipment and Components Required**
- i. IC audio amplifier -1pcs
- ii. Signal generator -1pcs
- iii. Oscilloscope -1pcs



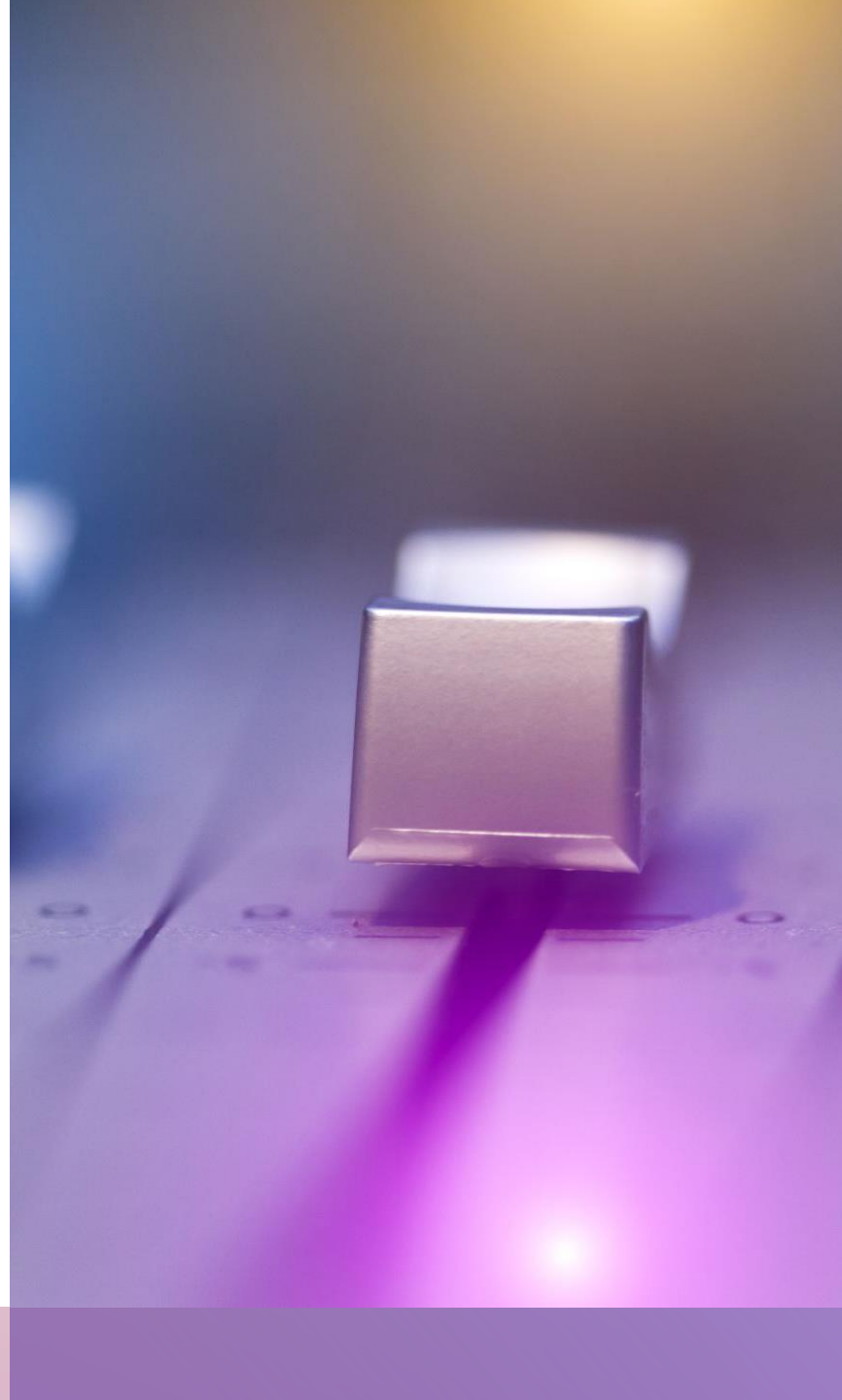
IC AUDIO AMPLIFIER(SIMULATION)


+88.8
Amps
R1
10
R2
1k
C2
10u
C
220u
RV1(2)
RV1
U1
A
B
C
D
26%
3
2
6
1
8
5
4
7
1k
C3
220u
LS1
SPEAKER
LM386

(A) OBSERVATIONS

- 1.Set the input signal to **100mvp-p (1 KHz)** from the function generator.

- 2.Observe the output of the audio amplifier and calculate the gain and efficiency of the audio amplifier.



CALCULATIONS

Gain (Av) =Vout/Vin

Output power

$P_{output} = (Vo_{rms})^2 / R$

Where R=3.2(speaker)

Pinput=Vin*Iin

η=(Pout/Pin)*100

(C) GAINOF AN AMPLIFIER

Vopp	Vipp	Av

- $\eta = (Pout/Pin) * 100$

(B)EFFICIENCY OF POWER AMPLIFIER