Voltage Follower

Comparator with Hysterisis

Non-Inverting Amplifier (AC-Couple)

Square Wave Generator

Power Amplifier

1KHz Band Pass Active Filter

Differential Amplifier

Stereo Tone Control
**OP AMP. APPLICATION CIRCUIT**

Non-Inverting Amplifier

\[ V_{OUT} = \frac{R_1 + R_2}{R_1} V_{IN} \]

Inverting Amplifier

\[ V_{OUT} = \frac{-R_1}{R_2} V_{IN} \]

\[ R_{eq} = \frac{R_1 R_2}{R_1 + R_2} \]

\[ A_v = \frac{R_2}{R_1} \]

Differential Amplifier

\[ V_{OUT} = \left( \frac{R_1 + R_2}{R_1 + R_3} \right) R_2 V_{IN} \]

FOR \( R_1 = R_2 \) AND \( R_3 = R_4 \)

\[ V_{OUT} = \frac{R_2}{R_1} (V_T - V_1) \]

\[ R_L = R_3 \]

\[ R_2 = R_4 \]

Inverting Summing Amplifier

\[ V_e = \frac{-R_1}{R_2} (V_{IN1} + V_{IN2} + \ldots + V_{INn}) \]

Sample and Hold

0.5Hz Square Wave Oscillator

\[ f = \frac{1}{2\pi R \cdot C_v} \]

\[ R_v = 100k\Omega \]

\[ C_v = 3.3\mu F \]

\[ 3.3k\Omega \]

\[ 1k\Omega \]

\[ 9.1k\Omega \]
Voltage Control Oscillator (VCO)

Low Frequency Sine Wave Oscillator

Triangle Wave Oscillator

Full Wave Rectifier and Average Filter
Inverting Amplifier (AC-Couple)

1kHz Low Pass Active Filter