

⇒ Circuit # 01: RC Low Pass Filter

$f_c = 500 \text{ Hz}$ (low audio freq) ⇒ so we will go with a 100's of nF capacitor

let $C = 100 \text{ nF}$ ⇒ $R = \frac{1}{2\pi f_c C} = 3.18 \text{ k}\Omega$

