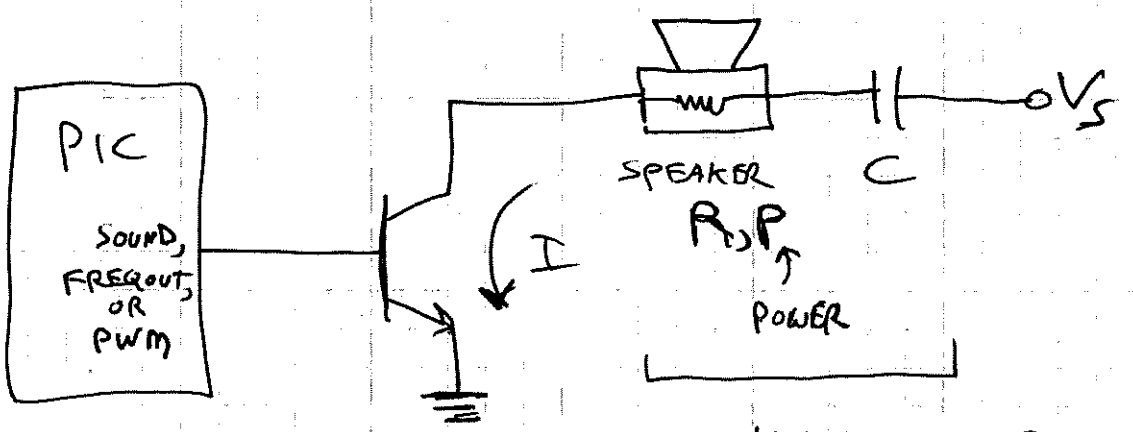
CHEAP/EASY WAY TO GET LOUDER AUDIO FROM MICROCONTROLLER



HIGH-PASS FILTER w/:

$$\omega_c = \frac{1}{RC}$$

$$f_c = \frac{\omega_c}{2\pi} = \frac{1}{2\pi RC}$$

CHOOSE $f_c < f_{AUDIO}$

LOWEST FREQUENCY SENT TO SPEAKER

$$\Rightarrow C > \frac{1}{2\pi R f_{AUDIO}}$$

CHOOSE V_S BASED ON SPEAKER POWER RATING:

$$P_{MAX} = \frac{V_S^2}{R}$$

$$\Rightarrow V_S < \sqrt{R \cdot P_{MAX}}$$

SELECT TRANSISTOR W/ ADEQUATE CURRENT CAPACITY:

$$I_{MAX} = \frac{V_S}{R}$$