

- TO get 500 Hz and 1ms

Formula;

- $\text{frequency} = \frac{1}{\text{time per loop}}$

- $\text{Time per loop} = \frac{\text{Period}}{\text{loop}}$

$$\Rightarrow 500 = \frac{1}{\frac{1 \text{ ms}}{\text{loop}}}$$

$$\Rightarrow 500 \cdot \frac{1 \text{ ms}}{\text{loop}} = 1$$

$$\Rightarrow \frac{500 \text{ ms}}{\text{loop}} = 1$$

$$\Rightarrow \text{loop} = 2$$

- Because 1000 loop = 9.50ms

\Rightarrow 200 loops will give approximately 1ms less or larger