

LAMPIRAN A

```
#include <mega16.h>
#include <delay.h>

// Declare your global variables here
int a=4,b=0,c=0;
int waktuX1 = 0, waktuX2 = 0, waktuX1X2 = 0;
int start = 0, end = 0;
float waktuTotal = 0;
float kecepatan = 0;

void ulang()
{
    b=0;
    a=4;
    c=0;
    start = 0;
    end = 0;
    waktuX1 = 0;
    waktuX2 = 0;
    waktuX1X2 = 0;
    kecepatan = 0;
    waktuTotal = 0;
}

void motor()
{
    while(b<=4)
    {
        PORTC=0x01;
        PORTB=0x01;
        PORTD=0x00;
        delay_ms(100);
        PORTC=0x02;
        PORTB=0x02;
        PORTD=0x00;
        delay_ms(100);
        PORTC=0x04;
        PORTB=0x04;
        PORTD=0x00;
        delay_ms(100);
        PORTC=0x08;
        PORTB=0x08;
        PORTD=0x00;
        delay_ms(100);
        b=b+1;
    }
};
```

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delay_ms(2000);
while(a>=0)
{
    PORTC=0x08;
    PORTB=0x08;
    PORTD=0x00;
    delay_ms(100);
    PORTC=0x04;
    PORTB=0x04;
    PORTD=0x00;
    delay_ms(100);
    PORTC=0x02;
    PORTB=0x02;
    PORTD=0x00;
    delay_ms(100);
    PORTC=0x01;
    PORTB=0x01;
    PORTD=0x00;
    delay_ms(100);
    a=a-1;
};
}

void main(void)
{
// Declare your local variables here

PORTA=0x00;
DDRA=0x00;
PORTB=0x00;
DDRB=0xFF;
PORTC=0x00;
DDRC=0xFF;
PORTD=0x00;
DDRD=0xFF;

TCCR0=0x00;
TCNT0=0x00;
OCR0=0x00;
TCCR1A=0x00;
TCCR1B=0x00;
TCNT1H=0x00;
TCNT1L=0x00;
ICR1H=0x00;
ICR1L=0x00;
OCR1AH=0x00;
OCR1AL=0x00;
OCR1BH=0x00;
OCR1BL=0x00;
ASSR=0x00;

```

```

TCCR2=0x00;
TCNT2=0x00;
OCR2=0x00;
MCUCR=0x00;
MCUCSR=0x00;
TIMSK=0x00;
ACSR=0x80;
SFIOR=0x00;

```

```

while (1)
{
while(PINA.0 == 0)
{
waktuX1 += 1;
delay_ms(10);
start = 1;
}
while(start == 1)
{
while(PINA.7 == 1)
{
waktuX1X2 += 1;
delay_ms(10);
}
start = 2;
}
while(start == 2)
{
while(PINA.7 == 0)
{
waktuX2 += 1;
delay_ms(10);
}
end = 1;
start = 0;
}

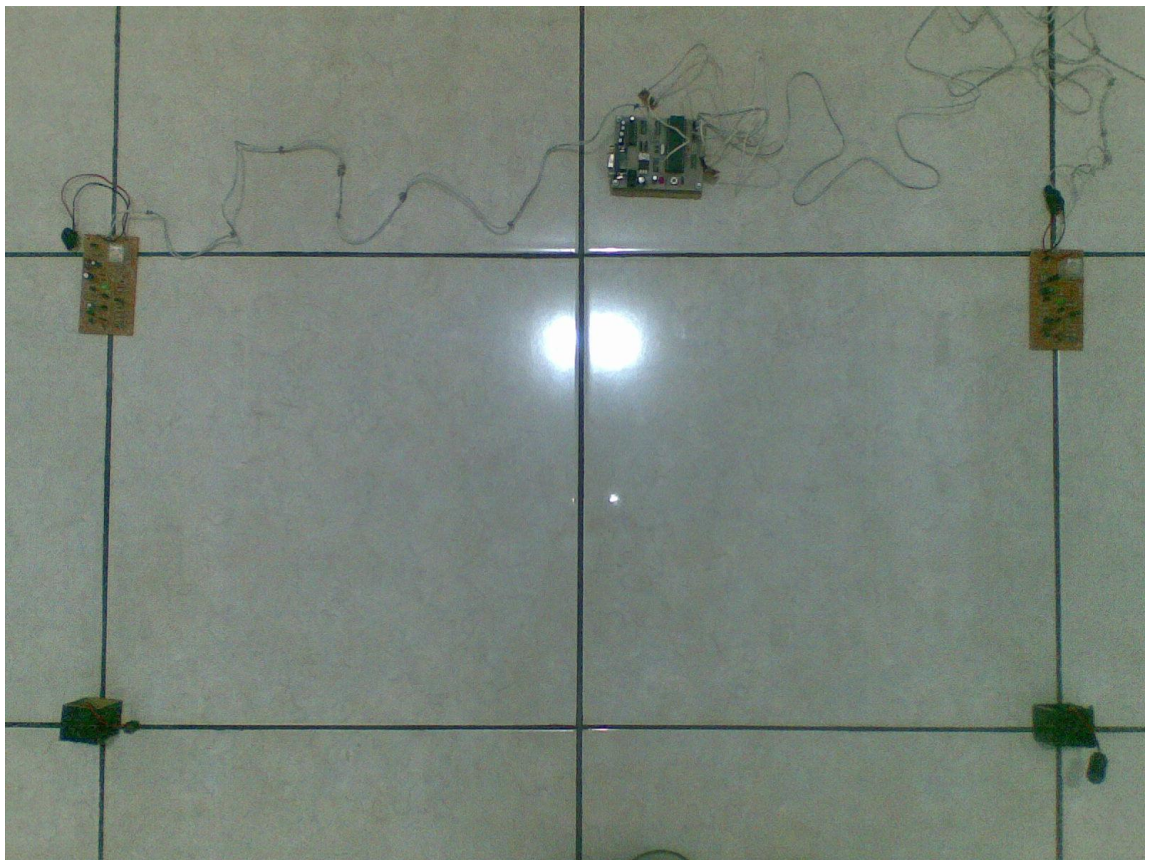
while(end == 1)
{
waktuTotal = ((float)waktuX1 + (float)waktuX2 + (float)waktuX1X2) / 100;
kecepatan = (6 / waktuTotal) * 3.6;
if(kecepatan >= 20)
{
motor();
}
ulang();
}
};
}

```

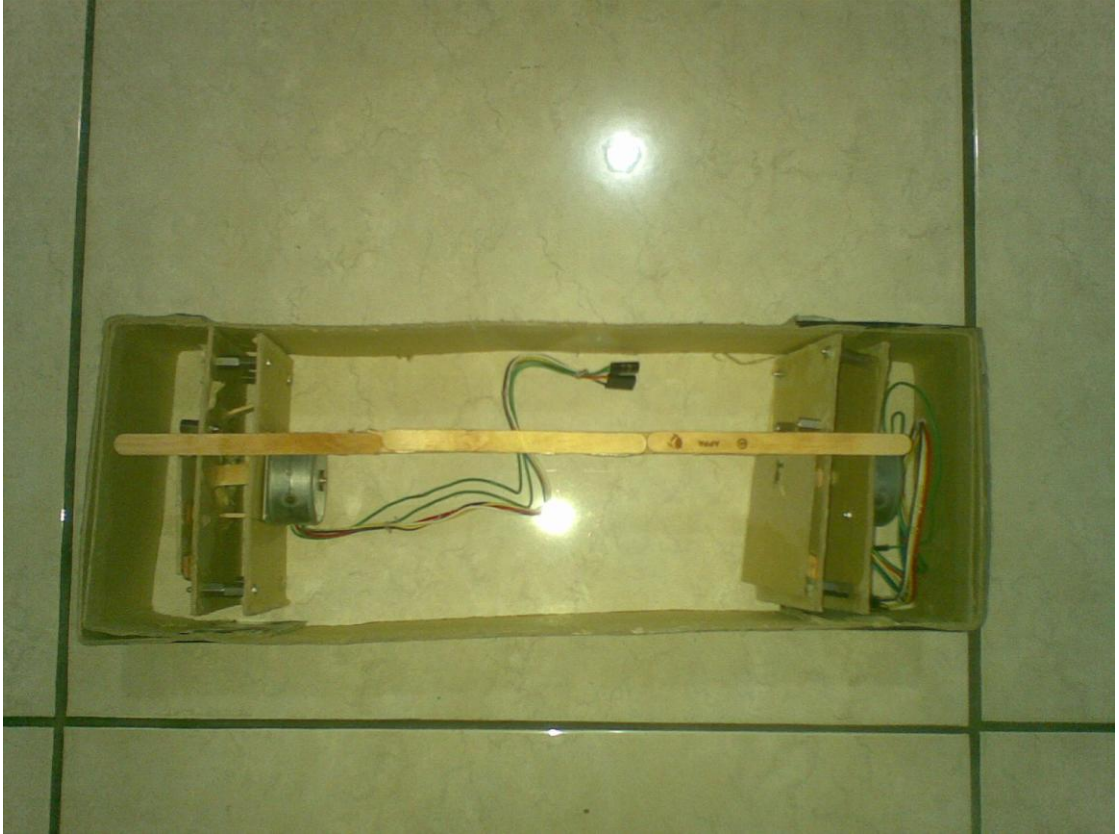
LAMPIRAN B

Foto Alat

B.1 Foto Maket Sensor Infra Merah



B.2 Foto Maket Polisi Tidur Otomatis



LAMPIRAN C

Skematik Rangkaian

