

## Experiment – 2

### Title: Traffic light controller using 8051 microcontroller.

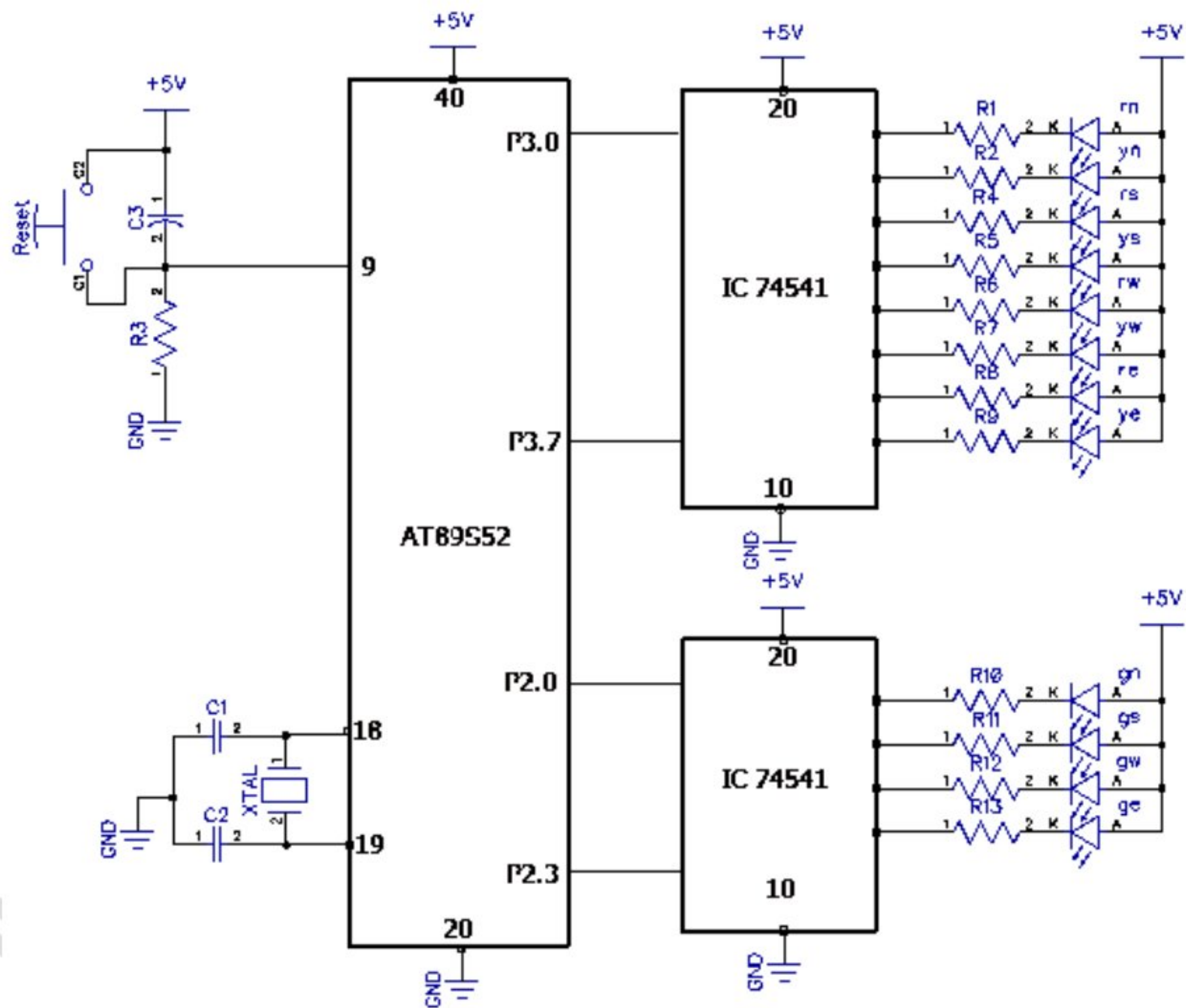
**Aim:** To study and understand Interfacing Traffic light controller to 8051.

#### **Objectives:**

- To understand the concept of Traffic light controller.
- To study interfacing of Traffic light controller to 8051.
- To study Keil uVision IDE software.

**Software Used:** Keil uVision IDE

#### **Circuit Diagram:**



#### **Procedure:**

- Connect DC power adaptor to the MGTechSolution 8051 Target board.
- Start Keil IDE and follow the steps mention in the “Steps to use of Keil IDE software”.
- Compile the written program, if there are no errors connect the PC to the programmer placed on the MGTechSolution 8051 Target board; by using USB cable.
- Follow the procedure mention in the “Steps to use of WLPRO software”. Upload the program.

- Make necessary connections as shown in the circuit diagram.
- Observe the output.

### Program:

```
#include<reg51.h>

sbit rn=P3^0;
sbit yn=P3^1;
sbit rs=P3^2;
sbit ys=P3^3;
sbit rw=P3^4;
sbit yw=P3^5;
sbit re=P3^6;
sbit ye=P3^7;
sbit gn=P2^0;
sbit gs=P2^1;
sbit gw=P2^2;
sbit ge=P2^3;

void delay()
{
    long int i;
    for(i=0;i<=50000;i++); //3 sec
}

void main()
{
    while (1)
    {
        //north
        rn=1;rs=0;rw=0; re=0;
        gn=0;gs=1;gw=1;ge=1;
        yn=1;ys=1;yw=1;ye=1;
        delay();delay();delay();delay();delay(); //15 sec
```



```

        //south
rn=0;rs=1;rw=0; re=0;
gn=1;gs=0;gw=1;ge=1;
yn=1;ys=1;yw=1;ye=1;
delay();delay();delay();delay();delay();    //15 sec

        //west
rn=0;rs=0;rw=1; re=0;
gn=1;gs=1;gw=0;ge=1;
yn=1;ys=1;yw=1;ye=1;
delay();delay();delay();delay();delay();    //15 sec

        //east
rn=0;rs=0;rw=0; re=1;
gn=1;gs=1;gw=1;ge=0;
yn=1;ys=1;yw=1;ye=1;
delay();delay();delay();delay();delay();    //15 sec
    }
}

```

**Applications of Traffic light controller:** *(Student can search & write application here)*

**Result:** Interfacing of Traffic light controller with 8051 is successfully studied, tested and observe the output.

***Teacher's Sign.***

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