

Exp: No: 10

Traffic Light Controller

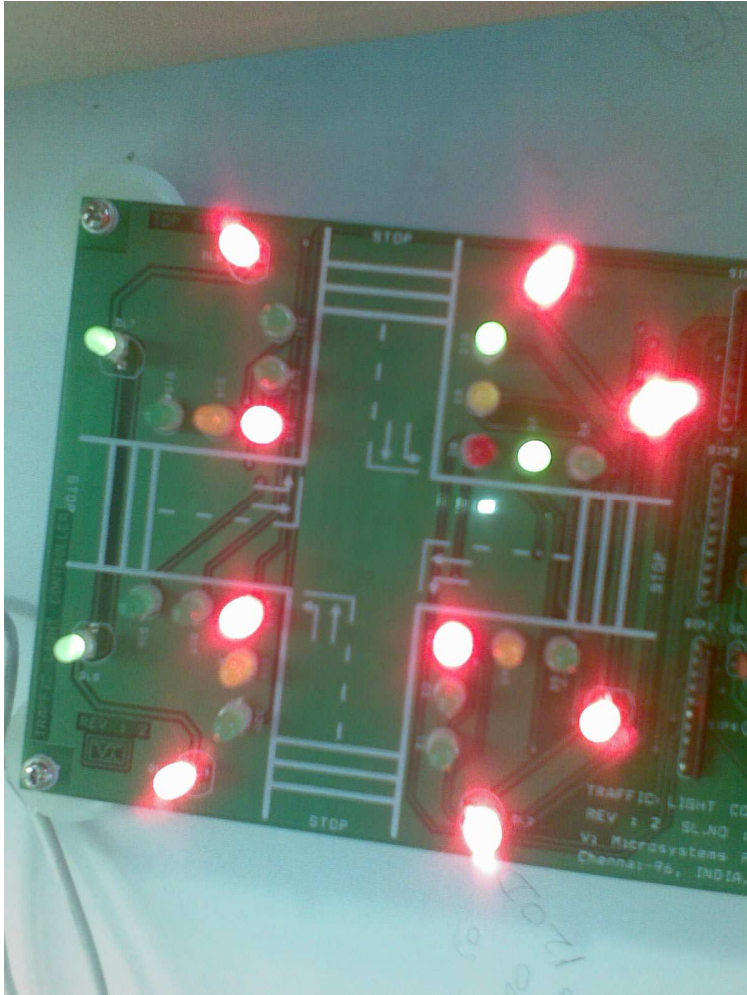


Fig 1

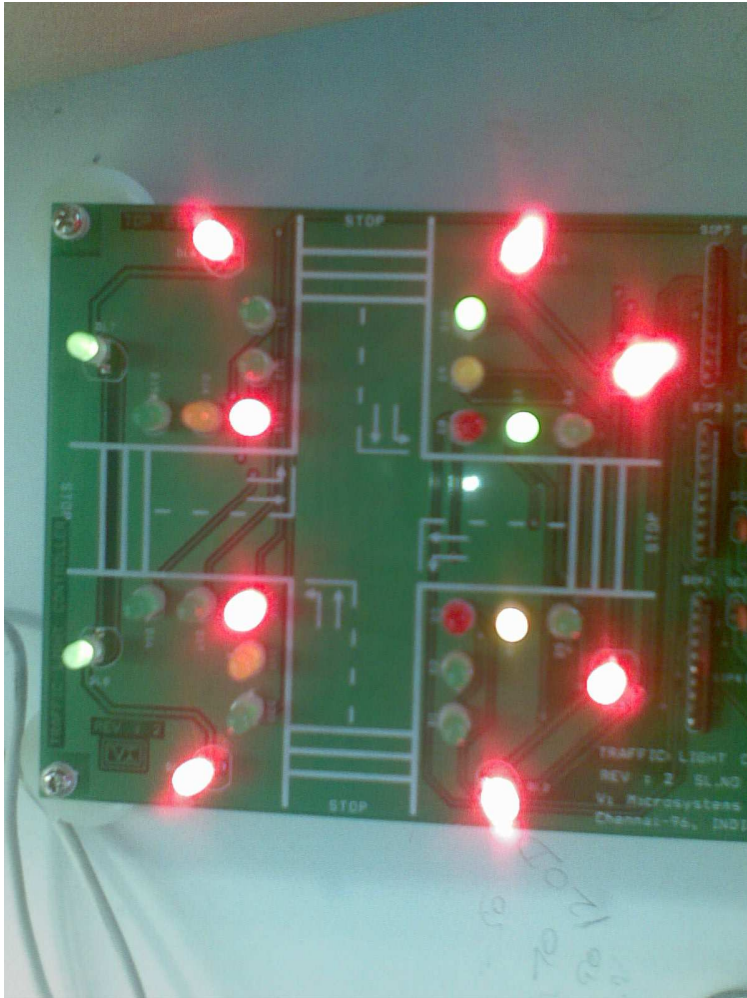


Fig 2

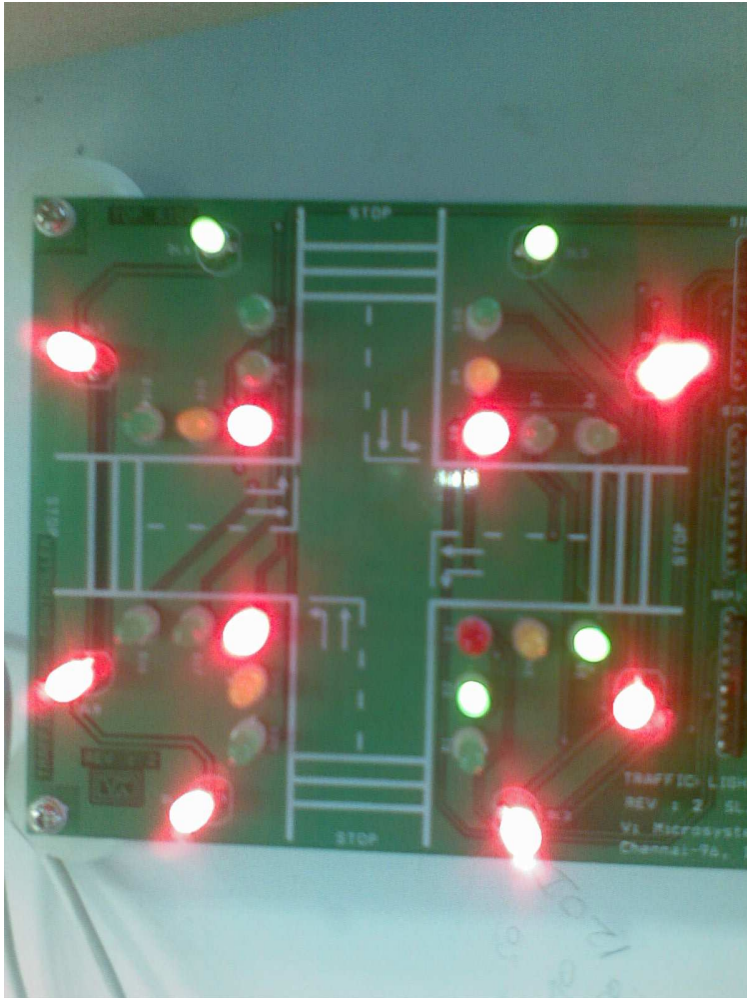


Fig 3

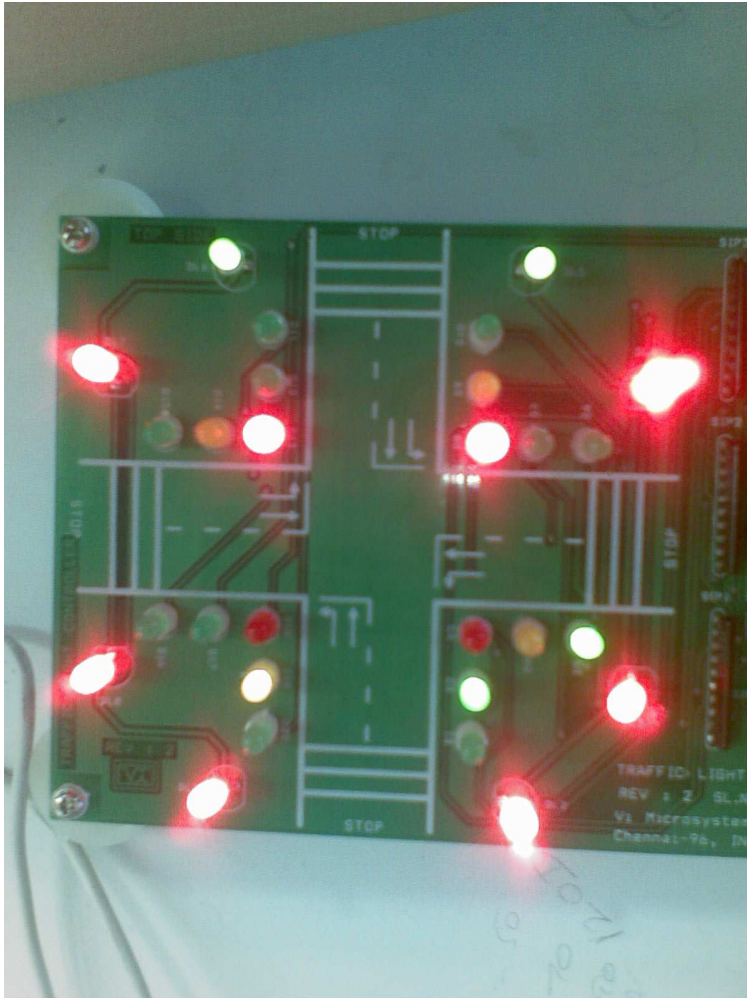


fig 4

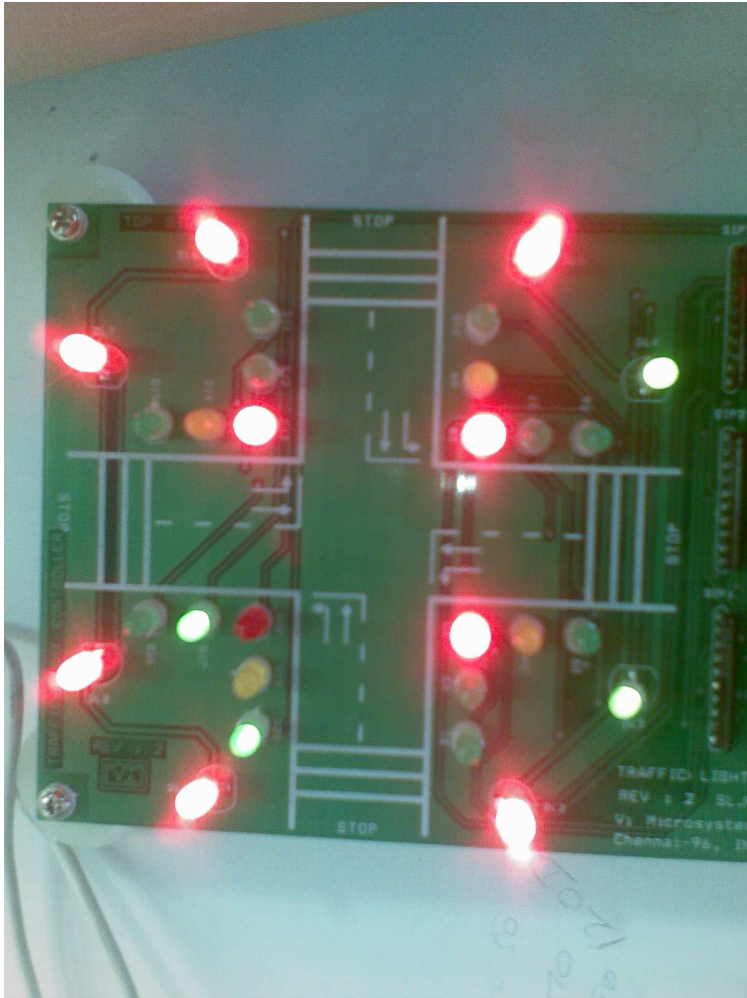


fig 5

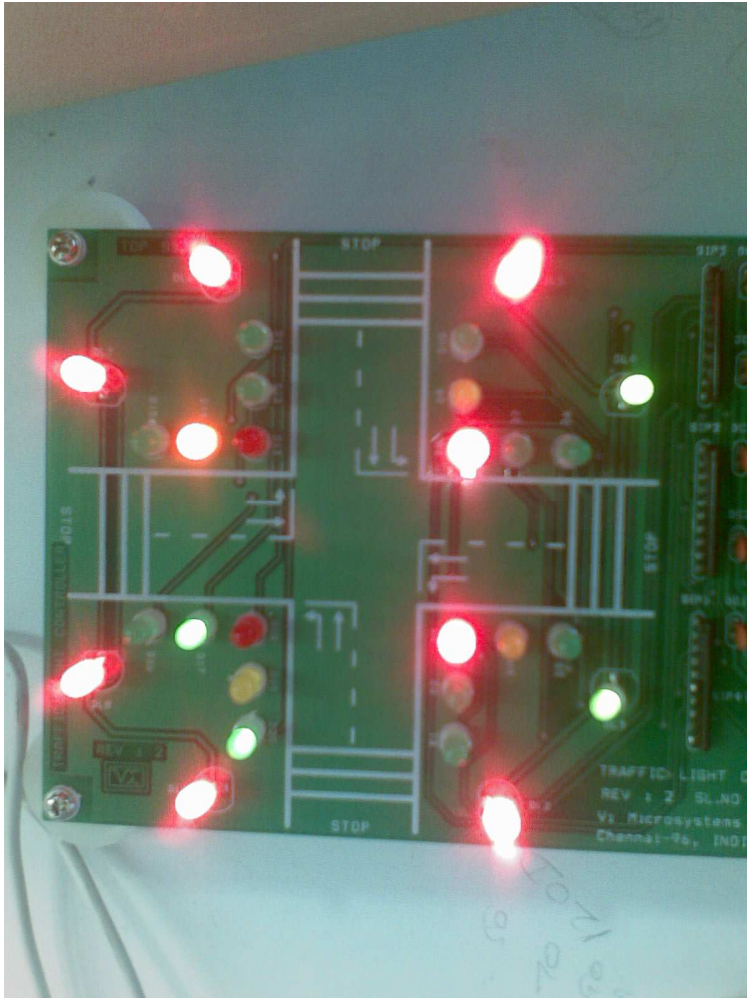


fig 6

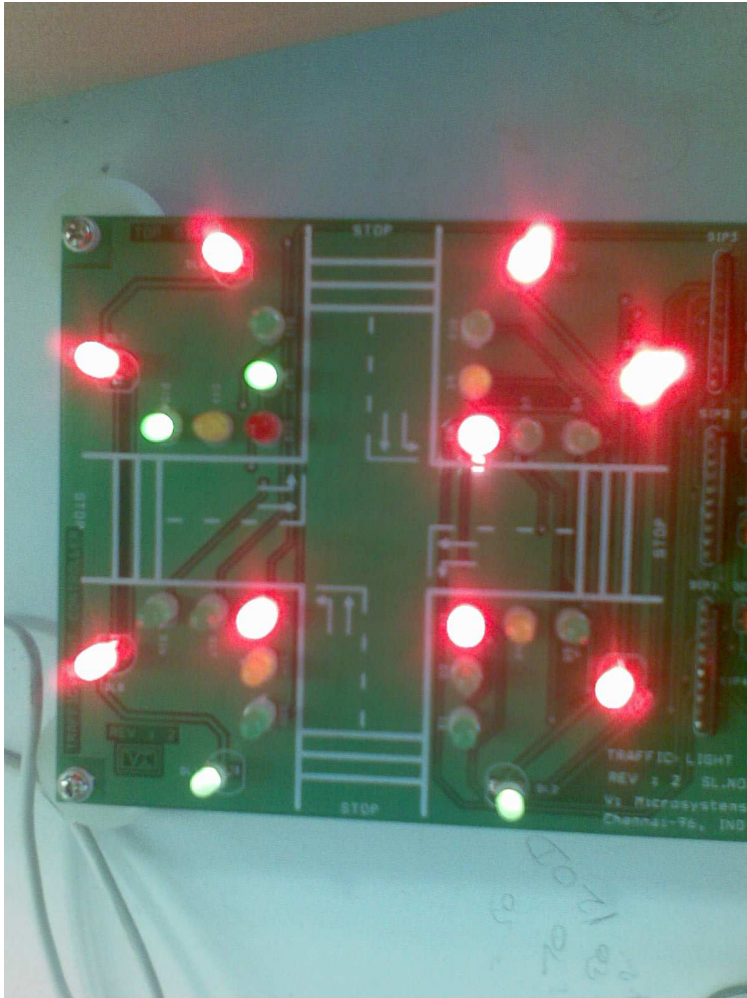


fig 7

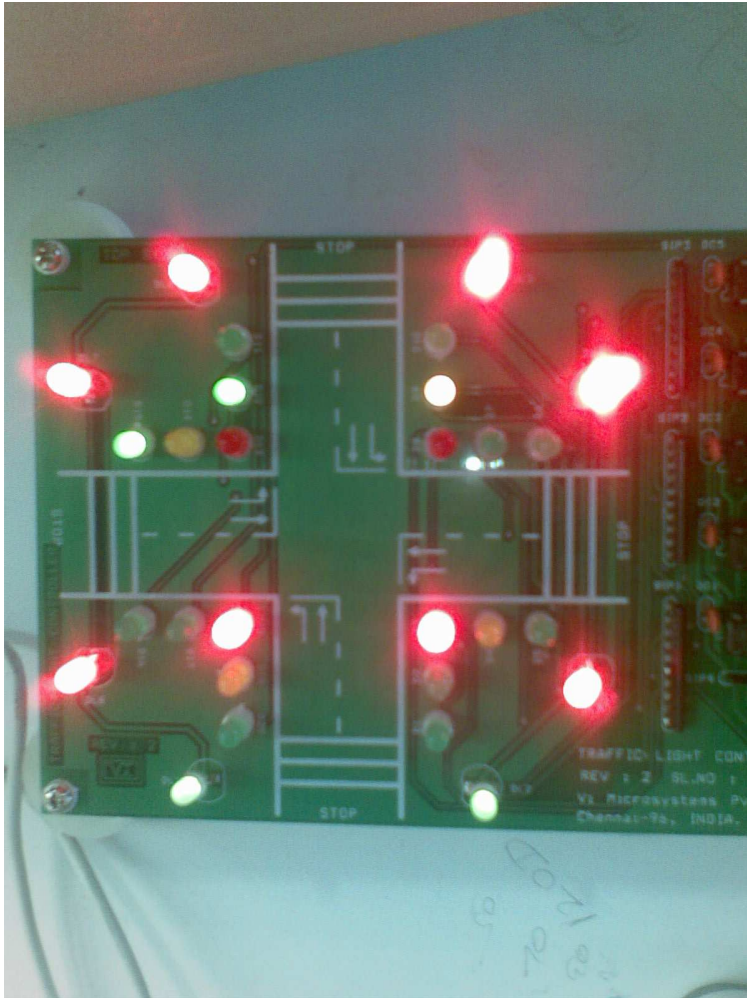
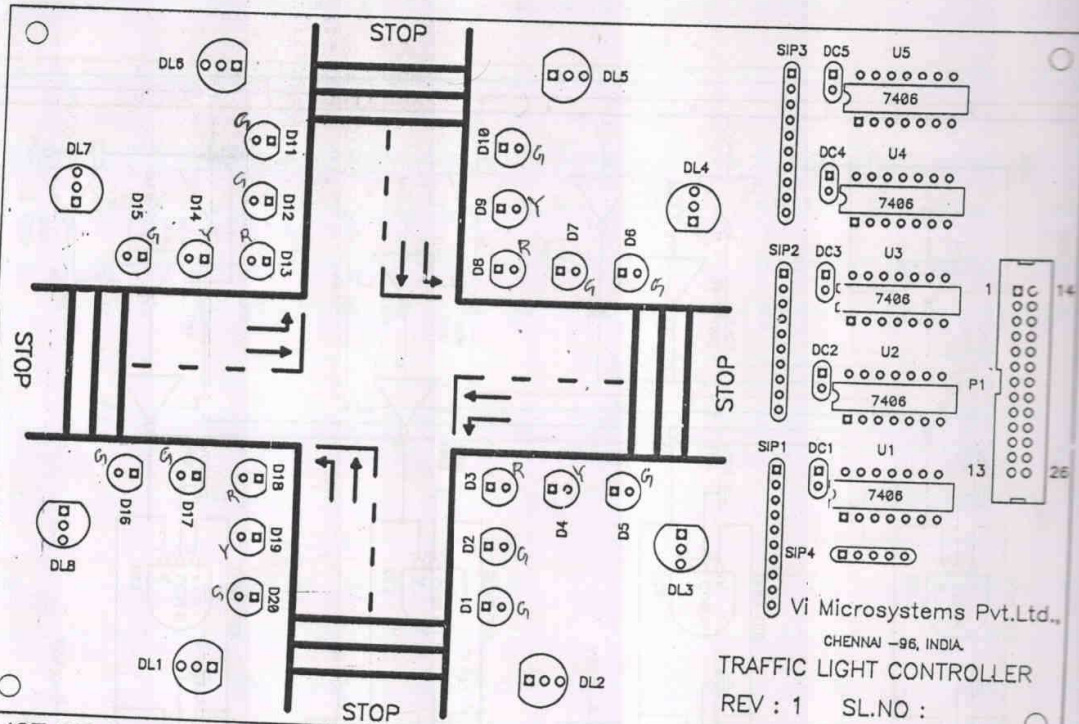


Fig 8

Repeat the Following

12 > Port C 27 > Port B 44 > Port A Call Delay	Fig 1
48 > Port A Call Delay1	Fig 2
10 > Port C 2B > Port B 92 > Port A Call Delay	Fig 3
4B > Port B Call Delay1	Fig 4
10 > Port C 9D > Port B 84 > Port A Call Delay	Fig 5
20 > Port C Call Delay1	Fig 6
48 > Port C 2E > Port B 84 > Port A Call Delay	Fig 7
49 > Port C 04 > Port A Call Delay1	Fig 8



Vi Microsystems Pvt.Ltd.,
 CHENNAI -96, INDIA
 TRAFFIC LIGHT CONTROLLER
 REV : 1 SL.NO :

LIST OF COMPONENTS :-

- IC :-**
 U1 - U5 = 7406 (14PIN BASE)
- CONNECTOR :-**
 P1 = 26PIN FRC CONNECTOR
- RESISTORS :-**
 SIP1, SIP2 = 3.3K 10PIN SIPRESISTOR
 SIP3 = 330E 18PIN SIPRESISTOR
 SIP4 = 3.3K 5PIN SIPRESISTOR

- CAPACITOR :-**
 DC1 - DC5 = 0.1MF
- LED :-**
 DL1 - DL8 = DUAL LED
 D1 - D20 = 5MM LED

Vi Microsystems Pvt.Ltd.,	
TRAFFIC LIGHT CONTROLLER	
REV : 1	COMPONENT LAYOUT
DATE:31/08/2K2	
SHEET 1 OF 1	
DRN BY:Mrs.R.V	CHK BY:Ms.A.K

PORT A

Bits	A7	A6	A5	A4	A3	A2	A1	A0
LEDS	D8	D7	D6	D5	D4	D3	D2	D1

PORT B

Bits	B7	B6	B5	B4	B3	B2	B1	B0
LEDS	D20	D19	D18	D17	DL7	DL5	DL3	DL1
					DL8	DL6	DL4	DL2

PORT C

Bits	C7	C6	C5	C4	C3	C2	C1	C0
LEDS	D16	D15	D14	D13	D12	D11	D10	D9

PROGRAM - 2.1

PROGRAM FOR THE TLC USING 8086/88 LCD MNEMONICS

```

                                ORG 1000H
                                ✓
                                CNTRL EQU 26H
                                PORTA EQU 20H
                                PORTB EQU 22H
                                PORTC EQU 24H

0000 C6 C0 80          START:  MOV AL,80H
0003 E6 26            OUT CNTRL,AL
0005 C7 C3 73 10     REPEAT: MOV BX,LOOK UP
0009 C7 C6 7F 10     MOV SI,LABEL
000D E8 33 00        CALL OUT
0010 8A 04            MOV AL,[SI]
0012 E6 20            OUT PORTA,AL
0014 E8 4D 00        CALL DELAY1
0017 46              INC SI
0018 43              INC BX
0019 E8 27 00        CALL OUT
001C 8A 04            MOV AL,[SI]
001E E6 22            OUT PORTB,AL
0020 E8 41 00        CALL DELAY1
0023 46              INC SI
0024 43              INC BX
0025 E8 1B 00        CALL OUT
0028 8A 04            MOV AL,[SI]
002A E6 24            OUT PORTC,AL
002C E8 35 00        CALL DELAY1
002F 46              INC SI
0030 43              INC BX
0031 E8 0F 00        CALL OUT
0034 8A 04            MOV AL,[SI]
0036 E6 24            OUT PORTC,AL
0038 46              INC SI
0039 8A 04            MOV AL,[SI]
003B E6 20            OUT PORTA,AL
003D E8 24 00        CALL DELAY1
0040 E9 C2 FF        JMP REPEAT
0043 8A 07            OUT:  MOV AL,[BX]
0045 E6 24            OUT PORTC,AL →
0047 43              INC BX
0048 8A 07            MOV AL,[BX]

```

TRAFFIC LIGHT CONTROLLER

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104A E6 22          OUT    PORTB,AL
104C 43            INC    BX
104D 8A 07        MOV    AL,[BX]
104F E6 20        OUT    PORTA,AL
1051 E8 01 00     CALL   DELAY
1054 C3          RET
1055 C7 C7 40 00  DELAY:  MOV    DI,00040H
1059 C7 C2 FF FF  A:      MOV    DX,0FFFFH
105D 4A          A1:    DEC    DX
105E 75 FD        JNZ   A1
1060 4F          DEC    DI
1061 75 F6        JNZ   A
1063 C3          RET
1064 C7 C7 15 00  DELAY1: MOV    DI,00015H
1068 C7 C2 FF FF  B:      MOV    DX,0FFFFH
106C 4A          B1:    DEC    DX
106D 75 FD        JNZ   B1
106F 4F          DEC    DI
1070 75 F6        JNZ   B
1072 C3          RET
1073 12 27 44 10  LOOK UP: DB    12H,27H,44H,10H
1077 2B 92 10 9D  2BH,92H,10H,9DH
107B 84 48 2E 84  84H,48H,2EH,84H

107F 48 4B 20 49  LABEL :  DB    48H,4BH,20H,49H
1083 04          04H
107C          END
    
```