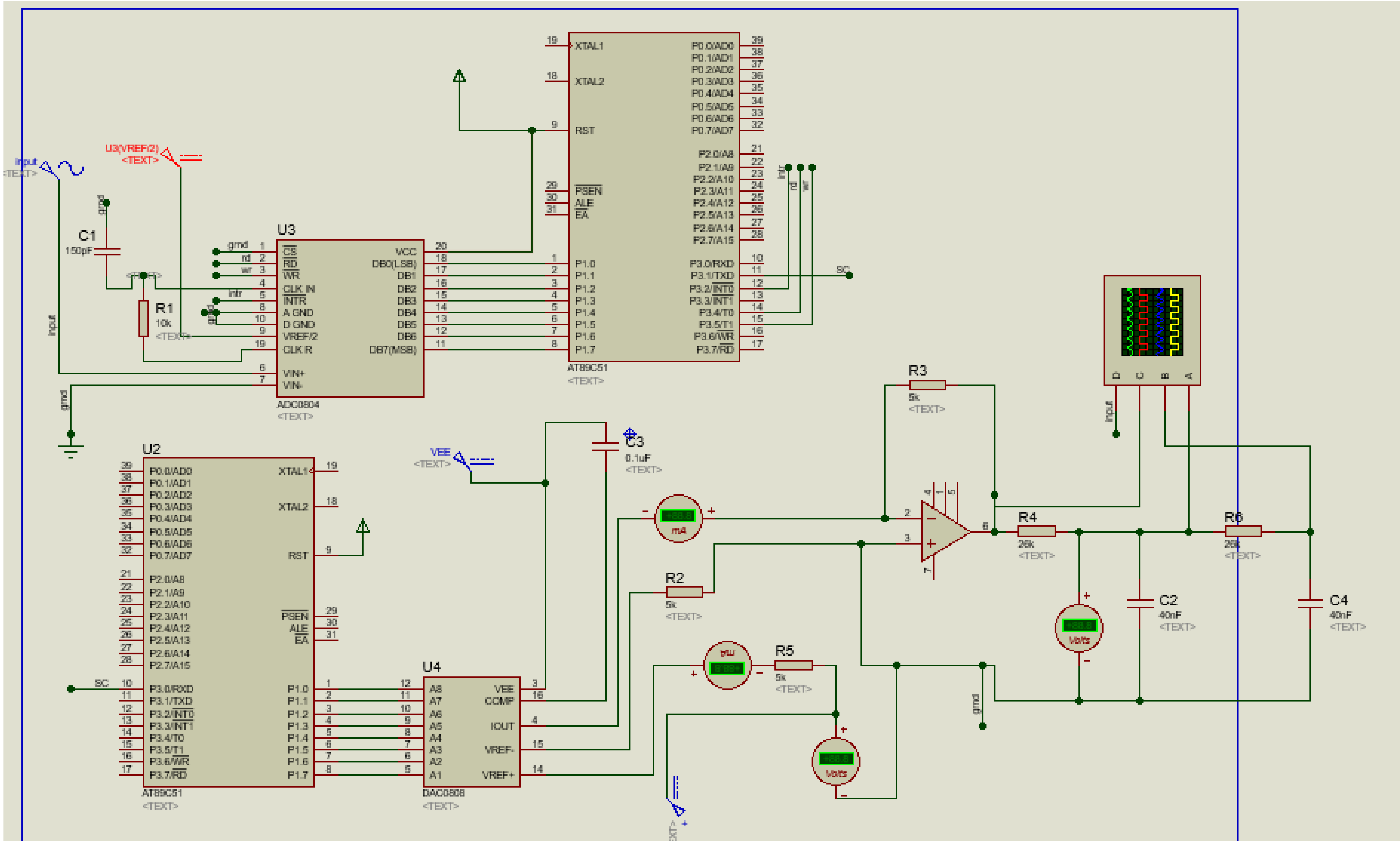

U3
ADC0804
U2
AT89C51
U4
DAC0808
AT89C51
C1
150pF
R1
10k
C3
0.1uF
R2
5k
R3
5k
R4
26k
R5
5k
R6
26k
C2
40nF
C4
40nF
VEE
U3(VREF/2)
input
gnd
SC
intr
rd
wr
mA
Volts
XTAL1
XTAL2
RST
PSEN
ALE
EA
VCC
CLK IN
INTR
A GND
D GND
VREF/2
CLK R
VIN+
VIN-
COMP
IOUT
VREF-
VREF+

Transmission of data:

```
#include <reg51.h>
#include <stdio.h>
#define input P1;
//ADC pins
sbit rd=P3^4;
sbit wr=P3^5;
sbit intr=P3^2;

void adc() ;
void serial_comm();
void sample_rate(unsigned int i);

void main(void)
{
 serial_comm();
  while (1){
       adc();
        SBUF=input;
        while(TI==0);
              TI=0;
  }
}
void adc()
{
  sample_rate(2);
rd=1; //high to low to read from adc
 }
void adc()
{
  sample_rate(2);
rd=1; //high to low to read from adc

wr=0; //low to high to write on adc wr=1;
  wr=1;
while(intr==1); //interrupt is low active
rd=0;
}
void serial_comm(){
      TMOD=0x20;  //timer 1 in autoreload mode
       TH1=0xFD;  //9600bps
       SCON=0x50;  //serial mode 1, receive enable
       PCON=0x00;  //SMOD=0, Transmission rate 1x
       TR1=1;   //start timer 1
}
void sample_rate(unsigned int i)
{
  for(i=0; i<125; i++);

}
```

Receive the data:

```
#include <reg51.h>
#include <stdio.h>
#define input P1;
void serial_comm();
void main(void)
{
   serial_comm();
  while (1){
        while(RI==0); //loop continue till all 8 bit not received
             RI=0; //set the recieve interrupt to 0 when all bit recieved
        P1=SBUF;
  }
 }
void serial_comm(){
      TMOD=0x20;  //timer 1 in autoreload mode
      TH1=0xFD;  //9600bps
      SCON=0x50;  //serial mode 1, receive enable
      PCON=0x00;  //SMOD=0, Transmission rate 1x
      TR1=1;   //start timer 1
}
```