LAMPIRAN

Listing Program

```
#include <EEPROM.h>
#include <LiquidCrystal.h>
LiquidCrystal lcd(6, 5, 4, 3, 2, 1);
float kekeruhan;
float tegangan;
int val;
int m;
float rata2;
void setup() {
  // put your setup code here, to run once:
  lcd.begin(16, 2);
  pinMode(A1, INPUT_PULLUP);
  pinMode(A2, INPUT_PULLUP);
  pinMode(A3, INPUT_PULLUP);
  lcd.clear();
  delay(50);
  lcd.setCursor(0, 0);
  lcd.print(" Turbidimeter " );
  lcd.setCursor(0, 1);
  lcd.print(" Isma Tem 2015 " );
  delay(50);
}
void loop() {
  // put your main code here, to run repeatedly:
  float rata2;
  unsigned long buff=0;
```

```
  for(int i=0;i<100;i++);
  {
  val = analogRead(A0);
  buff+=val;
  }
  rata2=buff/100;
  tegangan= val*(5.0/1023.0);
if (tegangan<=0.55)
{kekeruhan=0 && 0.5;}
if (tegangan>=0.59 && tegangan <=0.60)
{kekeruhan = tegangan*0.60/0.60;}
if (tegangan>= 0.60 && tegangan <=0.61)
{kekeruhan = tegangan*0.65/0.61;}
if (tegangan>=0.62 && tegangan<=0.63)
{kekeruhan=tegangan*0.68/0.63;}
if(tegangan>=0.64&& tegangan<=0.65)
{kekeruhan=tegangan*4.26/0.65;}
if(tegangan>=0.66&& tegangan<=0.67)
{kekeruhan=tegangan*10/0.67;}
if(tegangan>=0.67&& tegangan<=0.68)
{kekeruhan=tegangan*50/0.68;}
if (tegangan>=0.69 && tegangan<=0.72)
{kekeruhan=tegangan*100/0.72;}
if (tegangan>=0.73 && tegangan<=0.74)
{kekeruhan=tegangan*120/0.74;}
if (tegangan>=0.83 && tegangan<=0.88)
{kekeruhan=tegangan*150/0.88;}
if (tegangan>=1.25 && tegangan<=1.28)
```

```
{kekeruhan= tegangan*200/1.28;}
if (tegangan>1.28)
{kekeruhan=200;}  if (digitalRead(A1) == LOW) {
    tampilkan_hasil();
  }
  if (digitalRead(A2) == LOW)
  {
    lcd.clear();
    lcd.setCursor(0, 0);
    lcd.print("  Clear Memori " );
    delay(1000);
  }
  if (digitalRead(A3) == LOW) {
    m++;
    delay(500);
    lcd.clear();
    if (m == 1)memori_1();
    if (m == 2)memori_2();
    if (m == 3)memori_3();
    if (m == 4)memori_4();
    if (m == 5)memori_5();
    if (m == 6)memori_6();
    if (m == 7)memori_7();
    if (m == 8)memori_8();
    if (m >= 8)m = 0;
  }
}
void tampilkan_hasil() {
```

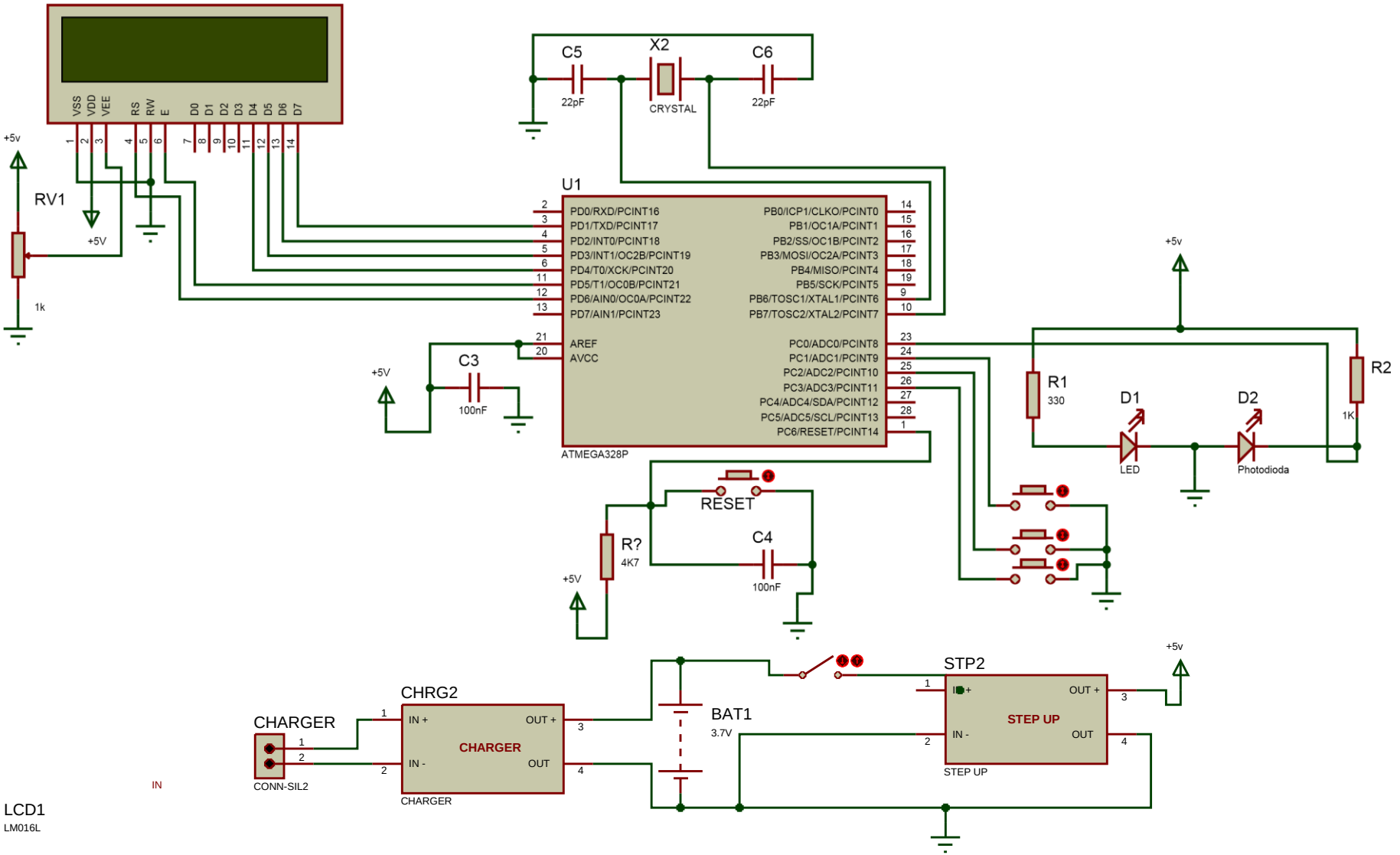
```
  delay(1000);
  while (digitalRead(A1) != LOW) {
    lcd.setCursor(0, 0);
    lcd.print("Teg  :");
    lcd.print(tegangan);
    lcd.print(" Volt");
    lcd.setCursor(0, 1);
    lcd.print("Nilai:");
    lcd.print(kekeruhan);
    lcd.print(" NTU");
    if (digitalRead(A2) == LOW) {
      lcd.clear();
      m++;
      if (m >= 8)m = 0;
      simpan(m);
    }
  }
  delay(1000);
 lcd.clear();
 setup();
}
void simpan(int m) {
  if (m == 1) {
    EEPROM.put(0, tegangan);
    EEPROM.put(10, kekeruhan);
  }
  if (m == 2) {
    EEPROM.put(20, tegangan);
```

```
  EEPROM.put(30, kekeruhan);
}
if (m == 3) {
  EEPROM.put(40, tegangan);
  EEPROM.put(50, kekeruhan);
}
if (m == 4) {
  EEPROM.put(60, tegangan);
  EEPROM.put(70, kekeruhan);
}
if (m == 5) {
  EEPROM.put(80, tegangan);
  EEPROM.put(90, kekeruhan);
}
if (m == 6) {
  EEPROM.put(100, tegangan);
  EEPROM.put(110, kekeruhan);
}
if (m == 7) {
  EEPROM.put(120, tegangan);
  EEPROM.put(130, kekeruhan);
}
if (m == 8) {
  EEPROM.put(140, tegangan);
  EEPROM.put(150, kekeruhan);
}
delay(100);
lcd.print("tersimpan ");
```

```
  lcd.print(m);
  delay(1000);
  digitalWrite(A1, LOW);
}
void memori_1() {
  float f2 = 0.00f;
  EEPROM.get(10, f2);
  lcd.setCursor(0, 0);
  lcd.print("Nilai:");
  lcd.print(f2);
  lcd.print(" NTU ");
  lcd.setCursor(15, 1);
  lcd.print("1");
}
void memori_2() {
  float f2 = 0.00f;
  EEPROM.get(30, f2);
  lcd.setCursor(0, 0);
  lcd.print("Nilai:");
  lcd.print(f2);
  lcd.print(" NTU ");
  lcd.setCursor(15, 1);
  lcd.print("2");
}
void memori_3() {
  float f2 = 0.00f;
  EEPROM.get(50, f2);
  lcd.setCursor(0, 0);
```

```
  lcd.print("Nilai:");
  lcd.print(f2);
  lcd.print(" NTU ");
  lcd.setCursor(15, 1);
  lcd.print("3");
}
void memori_4() {
  float f2 = 0.00f;
  EEPROM.get(70, f2);
  lcd.setCursor(0, 0);
  lcd.print("Nilai:");
  lcd.print(f2);
  lcd.print(" NTU ");
  lcd.setCursor(15, 1);
  lcd.print("4");
}
void memori_5() {
  float f2 = 0.00f;
  EEPROM.get(90, f2);
  lcd.setCursor(0, 0);
  lcd.print("Nilai:");
  lcd.print(f2);
  lcd.print(" NTU");
  lcd.setCursor(15, 1);
  lcd.print("5");
}
void memori_6() {
  float f2 = 0.00f;
```

```
  EEPROM.get(110, f2);
  lcd.setCursor(0, 0);
  lcd.print("Nilai:");
  lcd.print(f2);
  lcd.print(" NTU");
  lcd.setCursor(15, 1);
  lcd.print("6");
}
void memori_7() {
  float f2 = 0.00f;
  EEPROM.get(130, f2);
  lcd.setCursor(0, 0);
  lcd.print("Nilai:");
  lcd.print(f2);
  lcd.print(" NTU");
  lcd.setCursor(15, 1);
  lcd.print("7");
}
void memori_8() {
  float f2 = 0.00f;
  EEPROM.get(150, f2);
  lcd.setCursor(0, 0);
  lcd.print("Nilai:");
  lcd.print(f2);
  lcd.print(" NTU");
  lcd.setCursor(15, 1);
  lcd.print("8");
}
```


VSS
VDD
VEE
RS
RW
E
D0
D1
D2
D3
D4
D5
D6
D7
LCD1
LM016L
RV1
1k
+5V
C5
22pF
X2
CRYSTAL
C6
22pF
U1
PD0/RXD/PCINT16
PD1/TXD/PCINT17
PD2/INT0/PCINT18
PD3/INT1/OC2B/PCINT19
PD4/T0/XCK/PCINT20
PD5/T1/OC0B/PCINT21
PD6/AIN0/OC0A/PCINT22
PD7/AIN1/PCINT23
AREF
AVCC
PB0/ICP1/CLKO/PCINT0
PB1/OC1A/PCINT1
PB2/SS/OC1B/PCINT2
PB3/MOSI/OC2A/PCINT3
PB4/MISO/PCINT4
PB5/SCK/PCINT5
PB6/TOSC1/XTAL1/PCINT6
PB7/TOSC2/XTAL2/PCINT7
PC0/ADC0/PCINT8
PC1/ADC1/PCINT9
PC2/ADC2/PCINT10
PC3/ADC3/PCINT11
PC4/ADC4/SDA/PCINT12
PC5/ADC5/SCL/PCINT13
PC6/RESET/PCINT14
ATMEGA328P
C3
100nF
R1
330
D1
LED
D2
Photodioda
R2
1K
RESET
R?
4K7
C4
100nF
CHARGER
CONN-SIL2
CHRG2
IN +
IN -
OUT +
OUT
CHARGER
BAT1
3.7V
STP2
STEP UP
IN
LCD1
LM016L