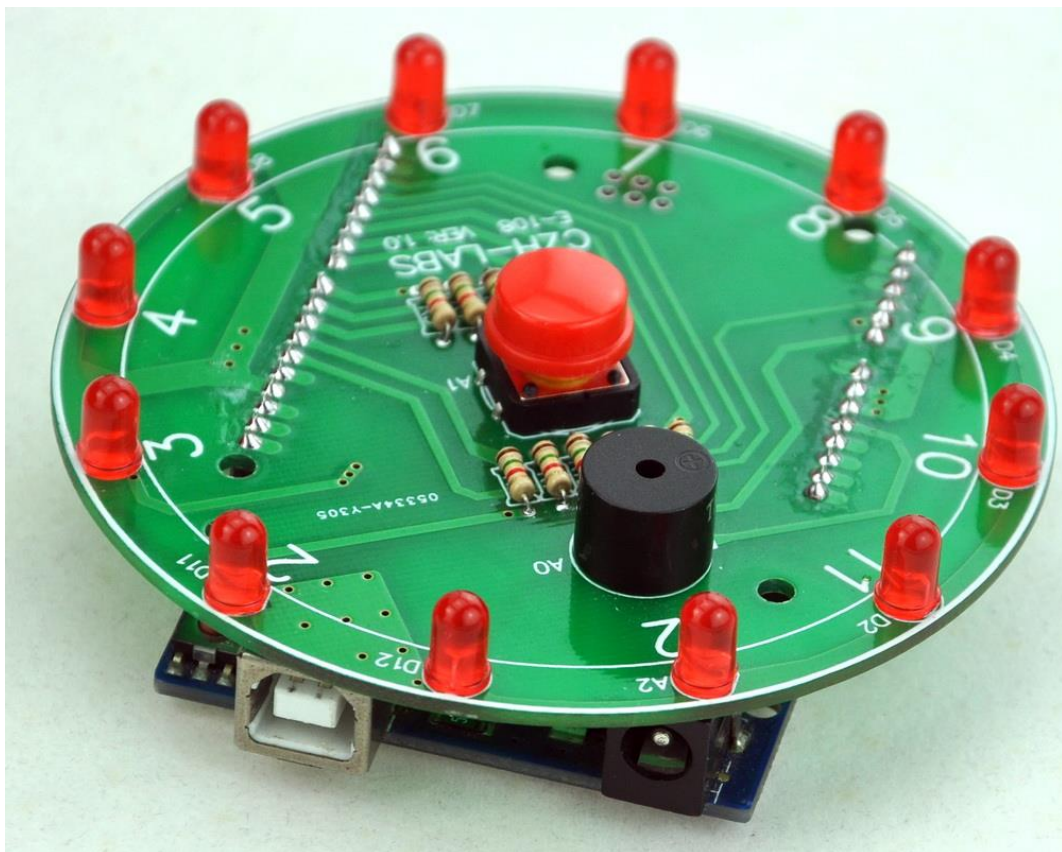


CZH-LABS

Electronics-Salon

E-108U

12 Position LED Electronic Lucky Rotary Board Kit
For Arduino UNO R3



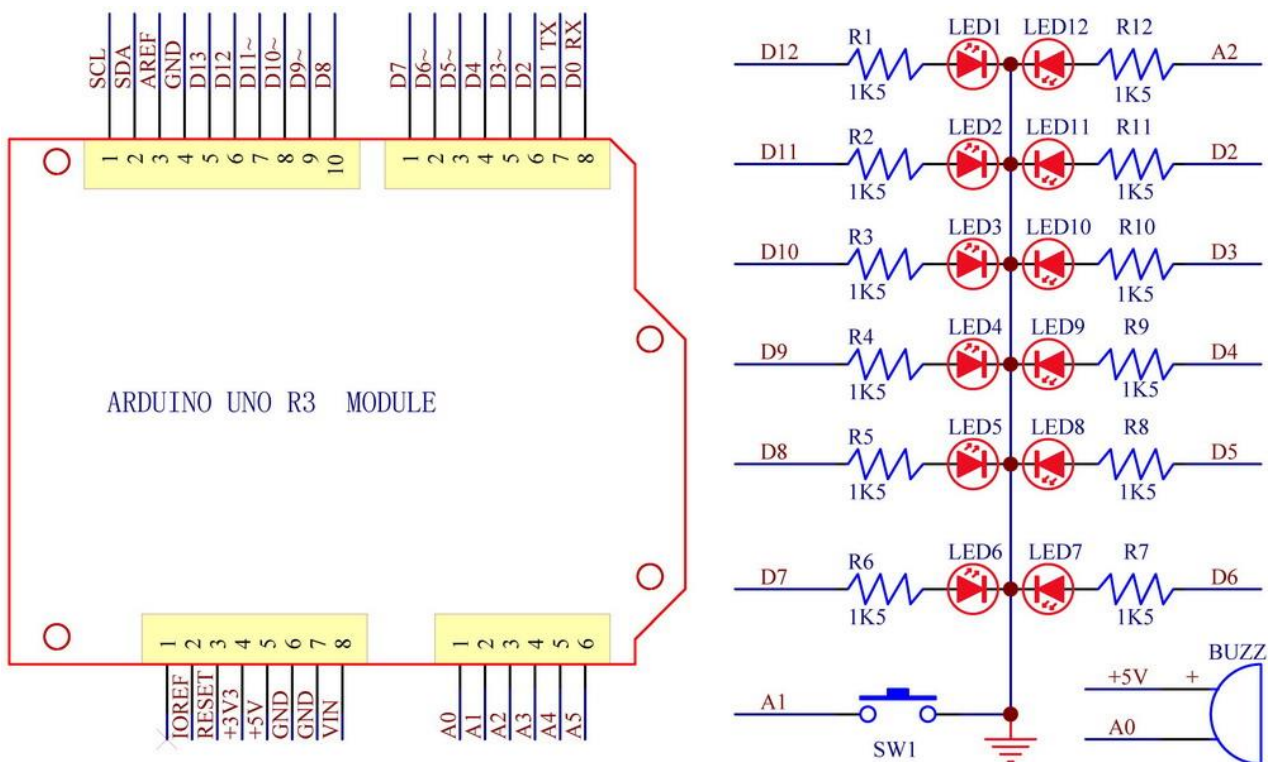
This is an intuitive, simple and inexpensive circuit kit, both exercise your soldering skills, also profound learning Arduino program, will attract and enhance students' interest in learning.

The item unassembled, you must soldering and assembly, and the item not include Arduino UNO R3.

PCB diameter: 88mm / 3.46 inch

Youtube video link: <https://youtu.be/GXj6HNA7U8Q>

Schematic:

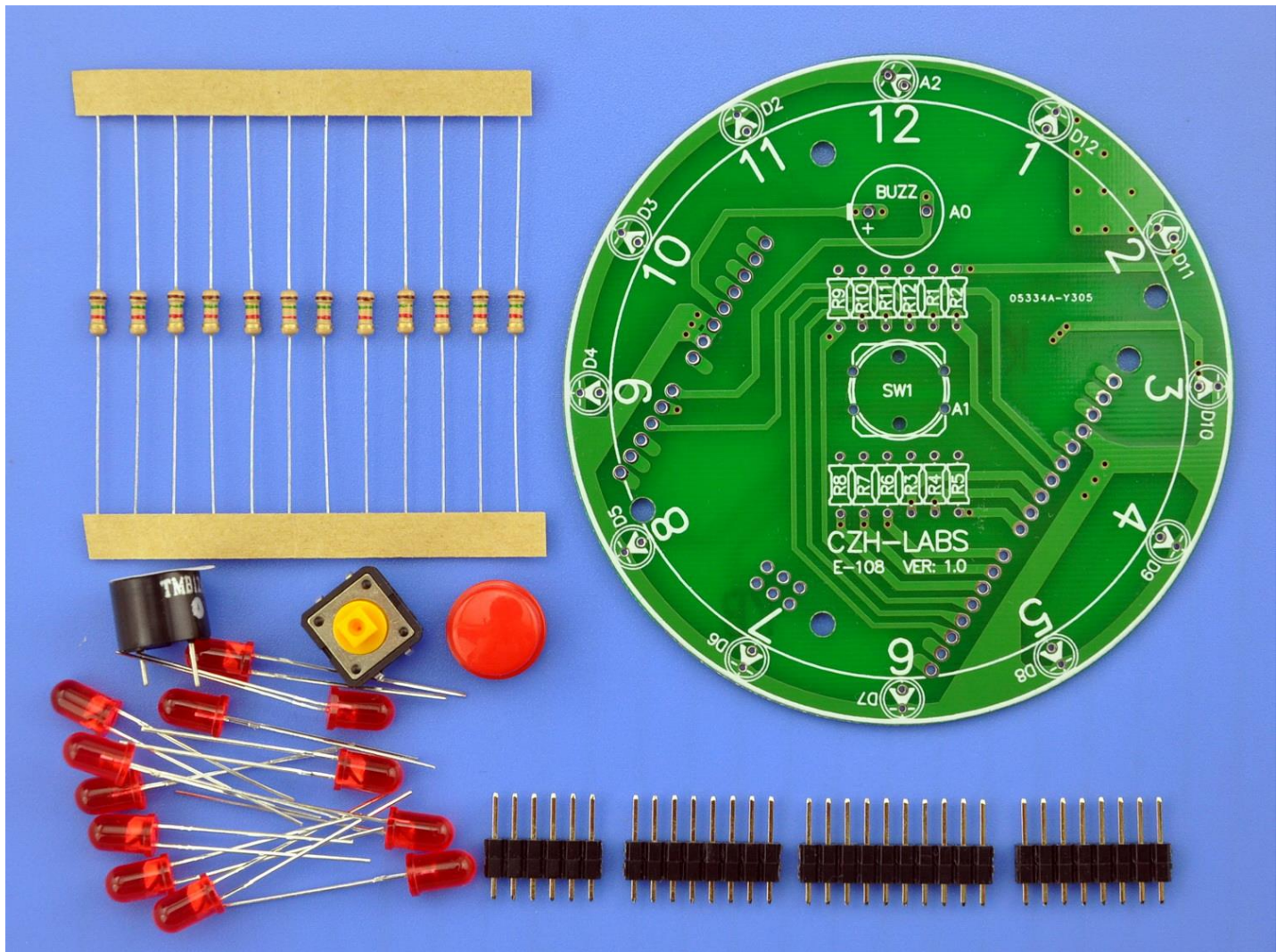


Bill of Material

Parts	Description	Position	Quantity	Note
Pin header	10 + 8 + 8 + 6 pins	Bottom layer	32 pins	
Resistor 1.5K ohm	Carbon film 5%, 1/4W	R1~R12	12	
Buzzer	Active buzzer	BUZZ	1	TMB12A05
LED	D=5mm	1~12	12	Red
Button switch	12*12mm	SW1	1	OMRON BF3
Button knob	D=12mm	SW1	1	Red
PCB	CZH-LABS E-108 VER:1.0		1	

Note:

LED and Buzzer watch the polarity.
Pin headers mount to PCB bottom surface.



Example source code for Arduino UNO R3

```
//*****E-108 Rotary table Program*****  
//***** DATA:2015.11.11 *****  
//***** CZH-LABS *****  
  
int Time_data;  
int RUN_DATA=0;  
int random_FLAG=0;  
int STOP_FLAG=0;  
long RANDOM_DATA;  
long SEED_DATA;  
long LED_COUNT=59;  
int buzz=14;  
int led12=16;  
int ledPin[ ] = {12,11,10,9,8,7,6,5,4,3,2,16,14}; //i/o pin array ,pin 14 is buzz;  
int led_timer[ ]={60,60,60,60,60,60,60,60,60,60,60,60,60,60,  
                  70,70,70,70,70,70,70,70,70,70,70,70,  
                  80,80,80,80,80,80,80,80,80,80,80,80,  
                  100,100,100,100,100,100,100,100,100,100,100,100,100,  
                  110,110,120,120,120,130,130,130,140,140,150,160,  
                  170,190,210,230,250,270,290,300,310,320,330,340,};  
  
int dir = 1;  
int currentLED = 0;  
int currentLED_OFF = 11;  
unsigned long changeTime;  
int buzz_flag = 0;  
int buzz_timer = 50;  
unsigned long buzz_timer_buffer;  
int sw = 15;  
int sw_flag = 0;  
int start_flag =0;  
//*****  
void setup()  
{  
    pinMode(2,OUTPUT);   pinMode(3,OUTPUT);   pinMode(4,OUTPUT);  
    pinMode(5,OUTPUT);   pinMode(6,OUTPUT);   pinMode(7,OUTPUT);  
    pinMode(8,OUTPUT);   pinMode(9,OUTPUT);   pinMode(10,OUTPUT);  
    pinMode(11,OUTPUT);   pinMode(12,OUTPUT);   pinMode(16,OUTPUT);  
    pinMode(buzz,OUTPUT);  
    digitalWrite(buzz,HIGH);  
    pinMode(sw,INPUT_PULLUP);  
    changeTime = millis();  
    //*****power on led and buzzer test*****  
    for(int j=0;j<2;j++)  
    {  
        for(int i=0;i<12;i++)  
        {  
            digitalWrite(ledPin[i], HIGH); //next one led  
        }  
    }
```

```

    digitalWrite(buzz,LOW);
    delay(50);
    digitalWrite(buzz,HIGH);
    delay(150);
    for(int i=0;i<12;i++)
    {
        digitalWrite(ledPin[i], LOW);    //next one led
    }
    delay(200);
}

    delay(200);
    digitalWrite(led12,HIGH);
    for(int i=0;i<2;i++)
    {
        digitalWrite(buzz,LOW);
        delay(50);
        digitalWrite(buzz,HIGH);
        delay(70);
    }
}

//*****
void loop()
{
    if(digitalRead (sw))
        sw_flag = 0;
    else
    {
        if (sw_flag==0)
        {
            delay(20);
            if(digitalRead (sw))
                sw_flag = 0;
            else
            {
                sw_flag =1;
                start_flag=1;
                STOP_FLAG=0;
            }
        }
    }
}

    if (RANDOM_DATA<12) //random seed option;
        SEED_DATA++;
    else
        SEED_DATA=1;
    if (start_flag==1)
    {
        if((millis() - changeTime) > Time_data)    //LED RUN TIMER
        {

```

```

        changeLED();
        changeTime_data();
        changeTime = millis();
    }
}

if (buzz_flag==1)
{
    if((millis()-buzz_timer_buffer) >buzz_timer) //buzzer on timer 50ms
    {
        digitalWrite(buzz,HIGH); //buzzer off
        buzz_flag=0;
    }
}

```

```

}
//*****
void changeLED()
{
    digitalWrite(ledPin[currentLED_OFF],LOW); //LED OFF before
    digitalWrite(ledPin[currentLED], HIGH); //next one led
    currentLED_OFF=currentLED; //OFF LED DATA SET
    currentLED+= dir;
    digitalWrite(buzz,LOW);
    buzz_flag=1;
    buzz_timer_buffer = millis();
    if (currentLED == 12)
    {
        dir = 1;currentLED = 0;
    }
}

```

```

//*****
void changeTime_data()
{
    if(RUN_DATA<LED_COUNT)
    {
        Time_data=led_timer[RUN_DATA];
        RUN_DATA++;
    }
    else
    {
        if (random_FLAG==0)
        {
            randomSeed(SEED_DATA);
            RANDOM_DATA = random(12); //random data option;
            LED_COUNT =(LED_COUNT + RANDOM_DATA);
            random_FLAG=1;
        }
        else
        {

```



```
STOP_FLAG=1;  
RUN_DATA=0;  
LED_COUNT=59;  
start_flag=0;  
random_FLAG=0;
```

```
}
```

```
}
```

```
}
```