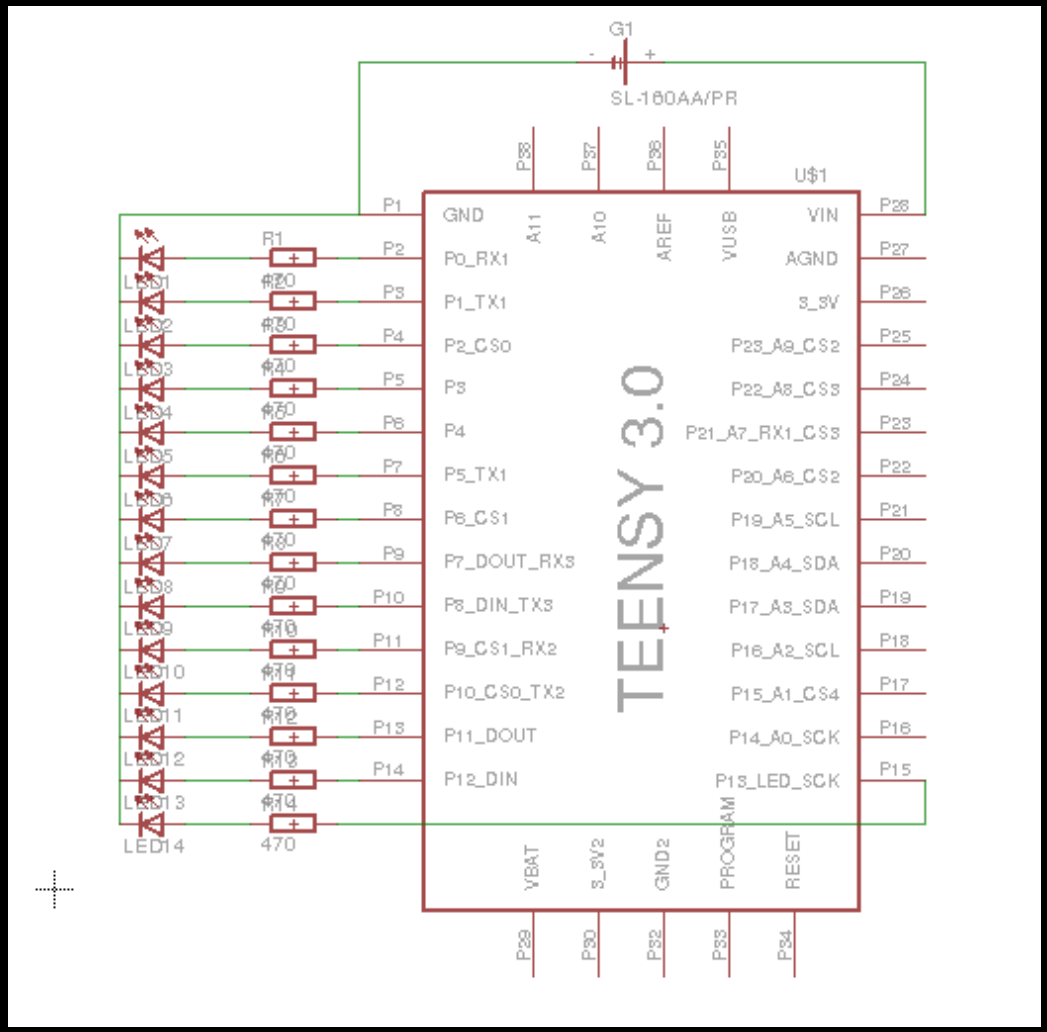
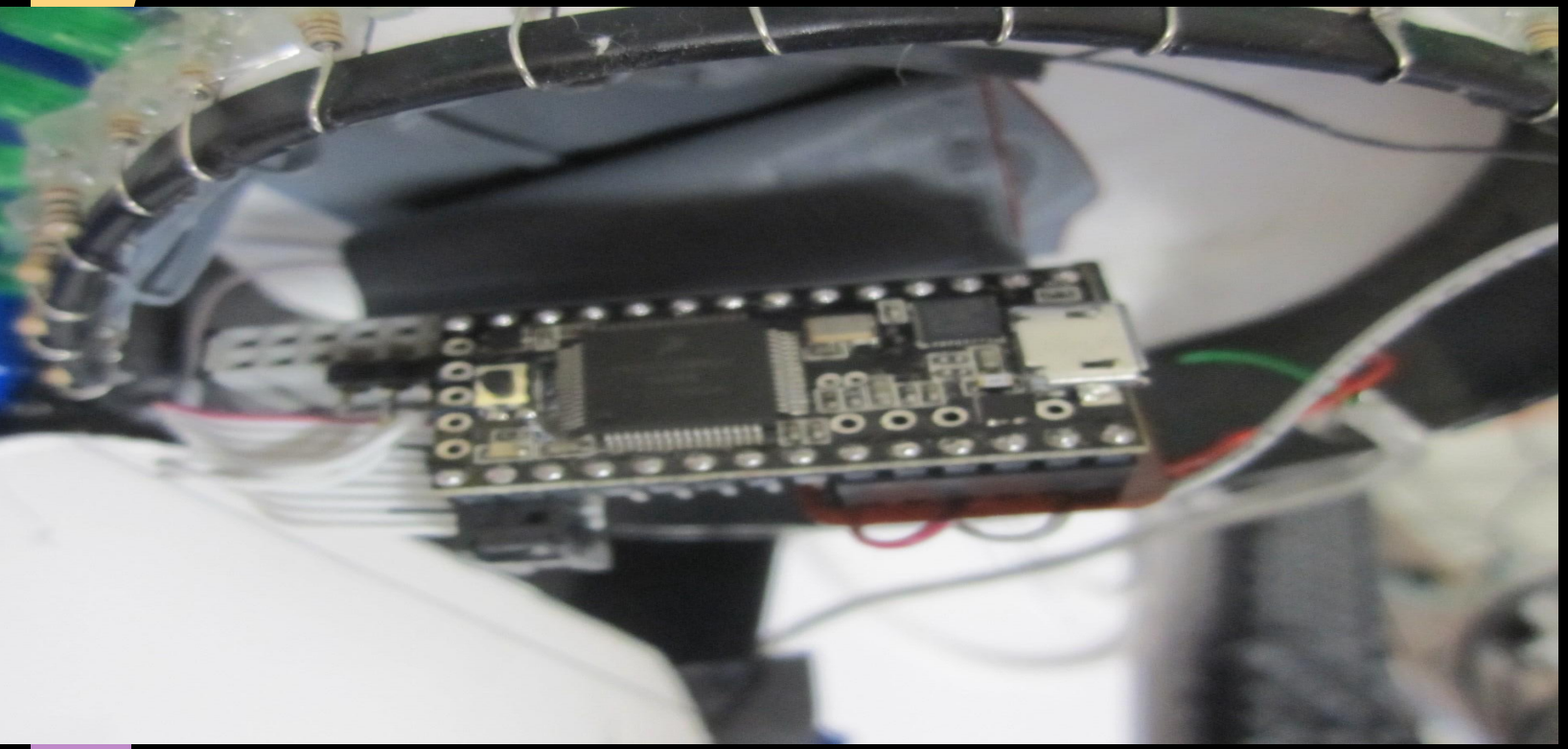
POV Globe

Evan Allen

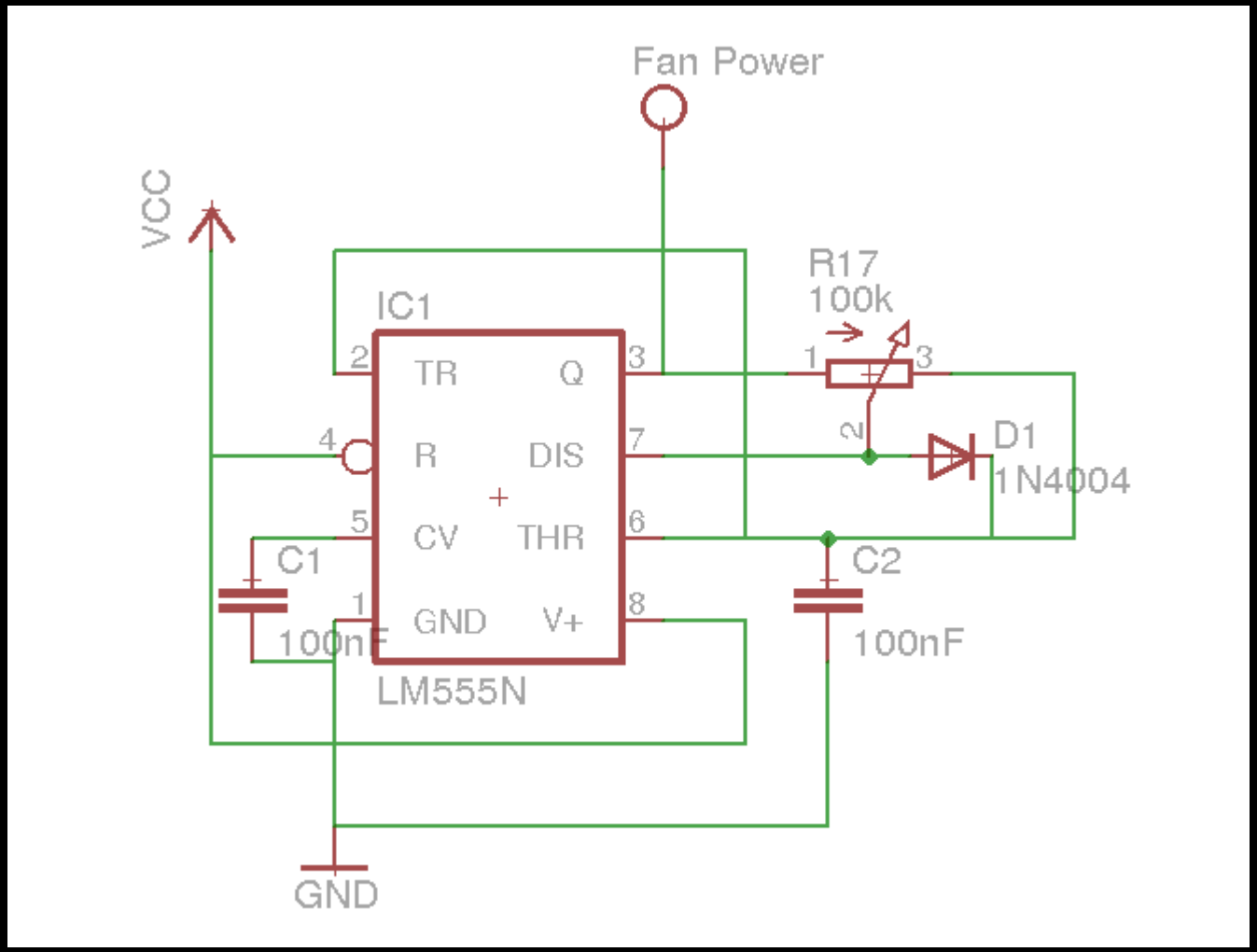
Main Schematic



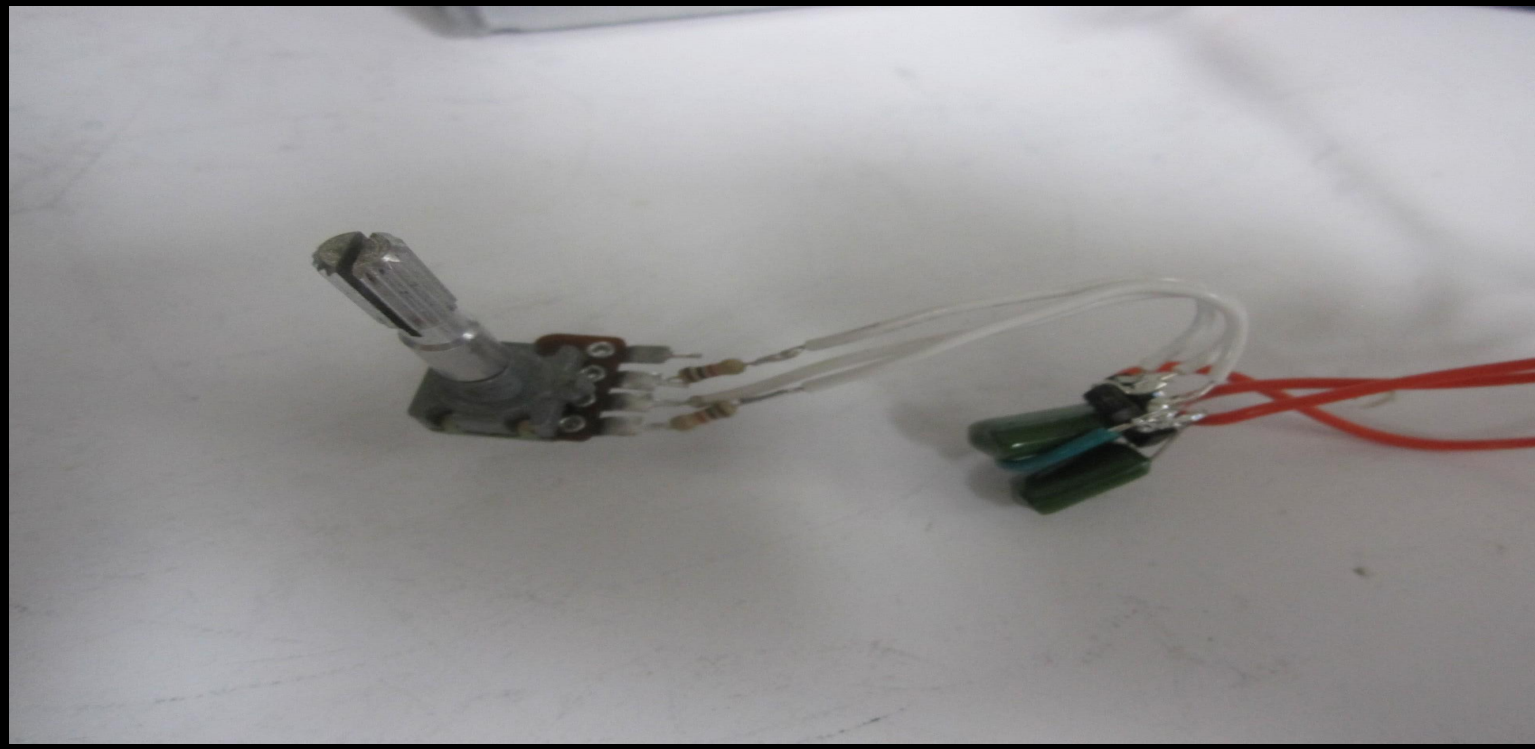
Main Circuit



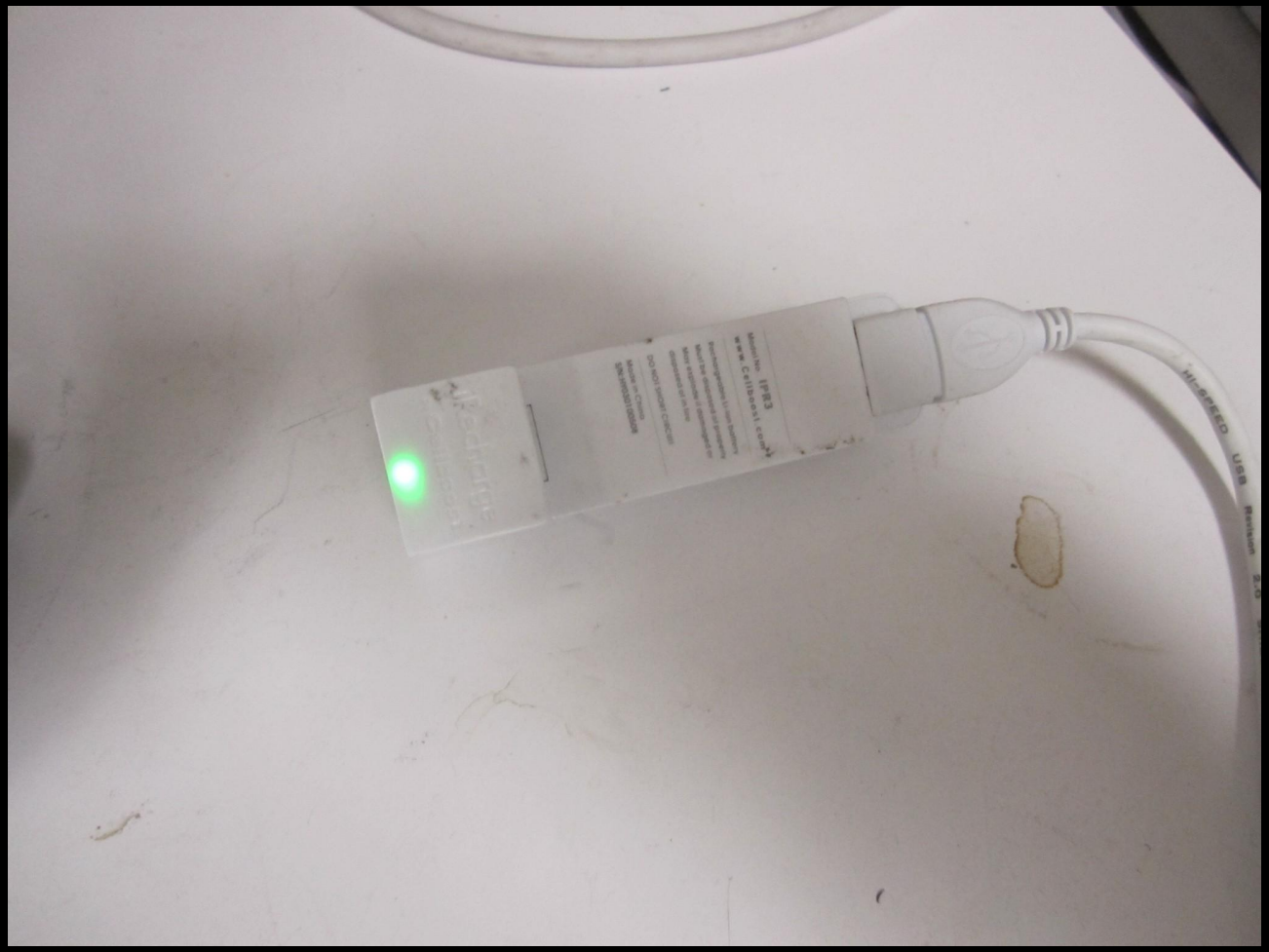
PWM Generator Schematic



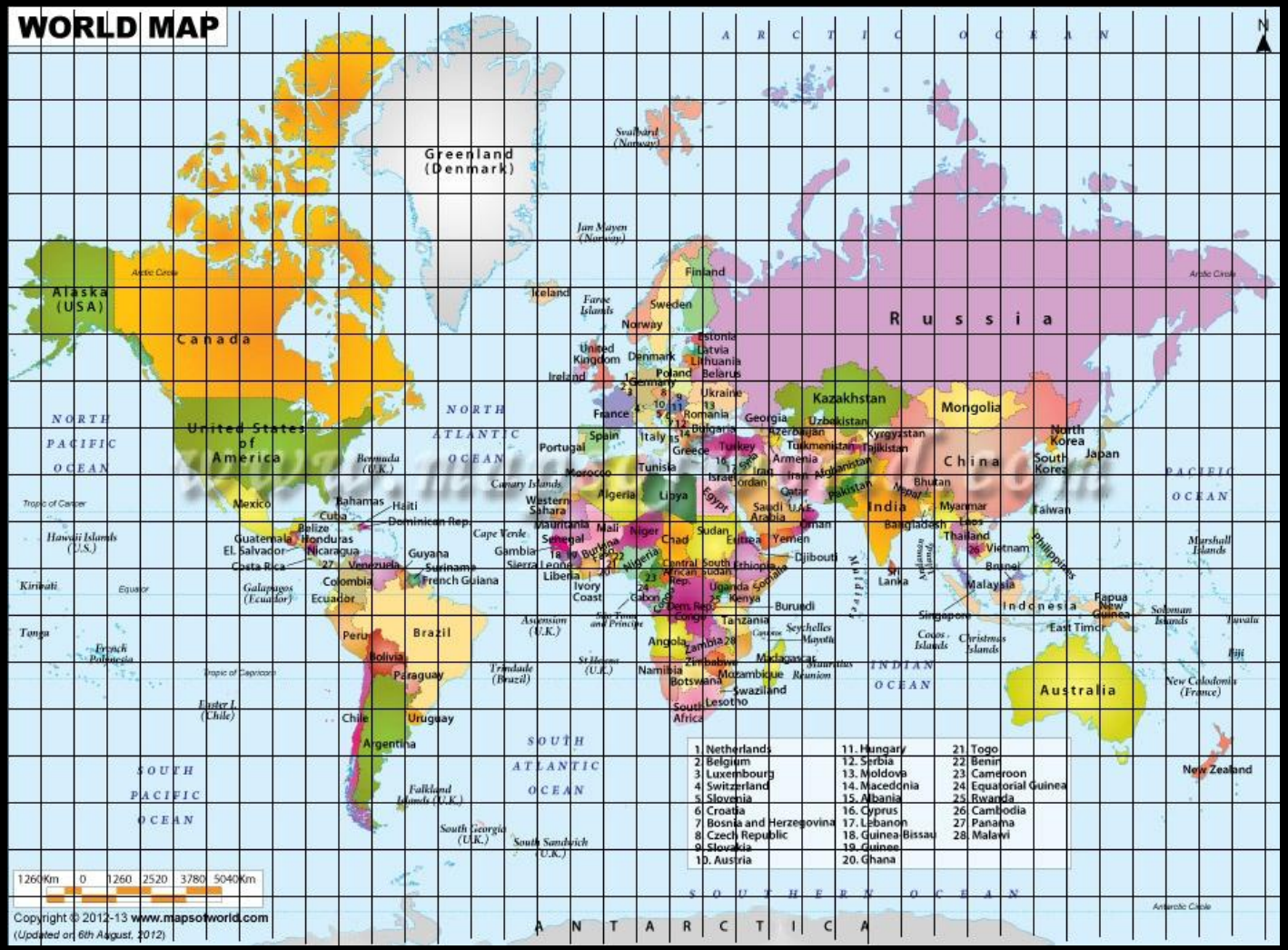
PWM Circuit



Battery



Mercator projection



Code

```
int worldmap[][38] =
  {
  {0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,0,0,0,1,1,0,0,0,0,0,0,0,1,0,0,0,0,0,0,0,0,0},
  {0,0,0,0,0,1,1,1,1,1,1,0,1,1,1,1,1,0,0,0,0,0,0,0,0,1,0,0,0,1,1,0,0,0,0,0,0,0},
  {0,0,0,0,0,1,1,1,1,1,1,0,0,1,1,1,1,1,0,0,0,0,0,0,0,1,0,1,1,1,1,1,1,1,1,0,0,0},
  {0,1,1,1,1,1,1,1,1,1,1,1,0,1,1,1,1,0,0,0,0,0,1,1,0,1,1,1,1,1,1,1,1,1,1,1,1,1},
  {0,1,1,1,1,1,1,1,1,1,1,0,1,0,0,1,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0},
  {0,1,0,0,1,1,1,1,1,1,0,1,1,0,0,0,0,0,0,1,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,1,0,0},
  {0,0,0,0,0,1,1,1,1,1,1,1,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0},
  {0,0,0,0,0,1,1,1,1,1,1,0,0,0,0,0,0,0,0,1,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,1,0,0,0,0},
  {0,0,0,0,0,0,1,1,0,1,0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,0,0,0,0,0},
  {0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0,0,1,0,1,1,0,0,0,0,0,0,0},
  {0,0,0,0,0,0,0,0,0,0,1,1,1,0,0,0,0,0,0,1,1,1,1,0,0,0,0,0,1,1,1,1,1,0,0,0,0,0,0,0},
  {0,0,0,0,0,0,0,0,0,0,1,1,1,1,0,0,0,0,0,1,1,1,1,0,0,0,0,0,0,0,0,1,1,1,1,0,0,0,0,0},
  {0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,1,1,1,1,1,0,0,0,0,0},
  {0,0,0,0,0,0,0,0,0,0,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,1,0}
  };

int pinnumbers [] = {0,1,2,3,4,5,6,7,8,9,10,14,12,13};
int d = 1800;

void setup() {
  for (int i = 0; i<=14; i++){
        pinMode(i,OUTPUT);
    }
}

void loop() {
  for (int c = 0; c<=37; c++){
    for (int r = 0; r<=14; r++){
         if( worldmap[r][c] == 1) {
             digitalWrite(r, HIGH);
           }
         if( worldmap[r][c] == 0){
             digitalWrite(pinnumbers[r], LOW);
           }
      }
      delayMicroseconds(d);
    }
}
```