

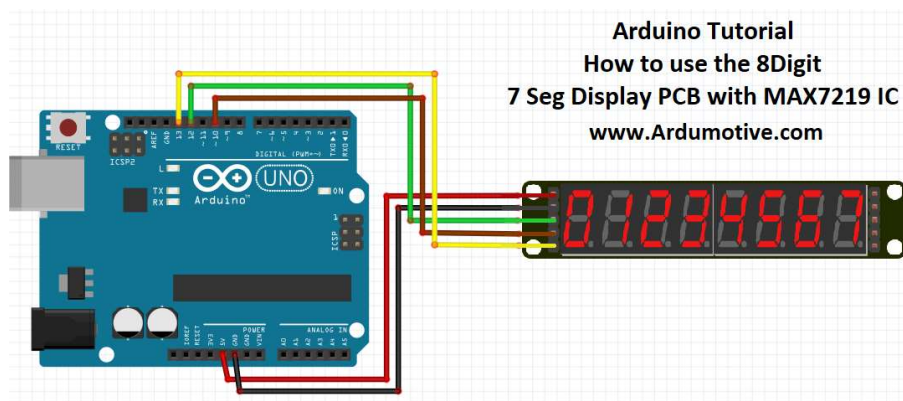
8-Digit Seven Segment Display with MAX7219

Introduction



In this tutorial we will show you how to use the 8-Digit seven segment display with MAX-7219 IC. with the Arduino uno board.

The Circuit



The connections are easy, see the image above with breadboard circuit schematic.

- Vcc to Arduino 5V Pin
- GND to Arduino GND
- DIN to Arduino pin 12
- CS to Arduino pin 10
- CLK to Arduino pin 13

The code

```
//We always have to include the library
#include "LedControl.h"

/*
Now we need a LedControl to work with.
***** These pin numbers will probably not work with your hardware *****
pin 12 is connected to the DataIn
pin 13 is connected to the CLK
pin 10 is connected to LOAD
We have only a single MAX72XX.
*/
LedControl lc=LedControl(12,13,10,1);

/* we always wait a bit between updates of the display */
unsigned long delaytime=250;

void setup() {
  /*
  The MAX72XX is in power-saving mode on startup,
  we have to do a wakeup call
  */
  lc.shutdown(0,false);
  /* Set the brightness to a medium values */
  lc.setIntensity(0,8);
  /* and clear the display */
  lc.clearDisplay(0);
}

/*
This method will display the characters for the
word "Arduino" one after the other on digit 0.
*/
void writeArduinoOn7Segment() {
  lc.setChar(0,0,'a',false);
  delay(delaytime);
  lc.setRow(0,0,0x05);
  delay(delaytime);
  lc.setChar(0,0,'d',false);
  delay(delaytime);
  lc.setRow(0,0,0x1c);
  delay(delaytime);
  lc.setRow(0,0,B00010000);
  delay(delaytime);
  lc.setRow(0,0,0x15);
  delay(delaytime);
  lc.setRow(0,0,0x1D);
  delay(delaytime);
  lc.clearDisplay(0);
}
```

```
delay(delaytime);
}

/*
 This method will scroll all the hexa-decimal
 numbers and letters on the display. You will need at least
 four 7-Segment digits. otherwise it won't really look that good.
 */
void scrollDigits() {
  for(int i=0;i<13;i++) {
    lc.setDigit(0,3,i,false);
    lc.setDigit(0,2,i+1,false);
    lc.setDigit(0,1,i+2,false);
    lc.setDigit(0,0,i+3,false);
    delay(delaytime);
  }
  lc.clearDisplay(0);
  delay(delaytime);
}

void loop() {
  writeArduinoOn7Segment();
  scrollDigits();
}
```