

4 Digital Display Clock Module Model:TM1637 Clock User Manual



TM1637 4-digit Display Example Sketch

A useful data output for your Arduino project might be a simple 4-digit display . These displays make use of the TM1637 chip.

A library for the arduino to allow these displays to be connected to any digital pins you like. You will need to download this library and install it into yourarduino/libraries directory.

You can also download the TM1637 library from the following webpage: <u>A Collection of Arduino Libraries Used</u>

<u>in This Project</u>. The Simple Example

This example is to show the most basic function of the TM1637 4-digit display, namely using it to display digits. In this case a variable value is displayed.

For the sake of making the sketch a tiny bit interesting, the variable is incremented using a *for-loop* and so the display will show a steadily increasing number.

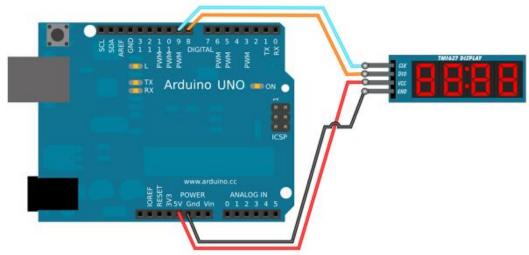
For more a more complex example, use the example sketch that ships with the TM1637 library. This demonstrates

changing the display brightness and also direct access to the LEDs making up each digit to produce lettering.

The Arduino Connections

The connections between the display and the arduino are very simple and there is no need for any other components. Just plug 'em together.

The connections to the **CLK** and **DIO** on the display can come from any of the digital pins. You will just need to adjust the sketch below to suit the pins you have selected.



The Sketch

You can download the sketch from here: <u>TM1637 4 Digit Display Basics.ino</u> /* TM1637_4_Digit_Display_Basics.ino The purpose of this sketch is to provide the basic structure for using the TM1637 based 4-Digit Displays

This has been developed to run on any Arduino.

Pin assignments are: CLK - D9 DIO - D8 5V or 3.3V supply to Display GND to Display

The operation is very simple. The sketch initialises the display and then steps through the loop incrementing the value of a variable which is then displayed on the 4-Digit display. Essentially it is the most basic function you would want from such a display. If you want more sophisticated functionality then use the example that ships with the library.

```
*/
```

#include <TM1637Display.h>

const int CLK = 9; //Set the CLK pin connection to the display
const int DIO = 8; //Set the DIO pin connection to the display

int NumStep = 0; //Variable to interate

TM1637Display display(CLK, DIO); //set up the 4-Digit Display.

```
void setup()
{
    display.setBrightness(0x0a); //set the diplay to maximum brightness
}
```

```
void loop()
```

```
{
for(NumStep = 0; NumStep < 9999; NumStep++) //Interrate NumStep
{
    display.showNumberDec(NumStep); //Display the Variable value;
    delay(500); //A half second delay between steps.
}
</pre>
```