

## 7-Segment LED Library

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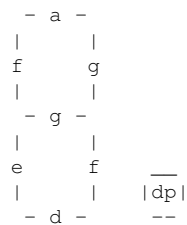
# Chapter 1

## Main Page

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This is a library designed for using a seven-segment LED with an Arduino UNO.

This library is designed for use with a seven-segment LED display, set up according to a "common ground" scheme which follows the following pin diagram (note that pin `dp` represents pin for the dot/period):



These LED display pins are then expected to be connected to an Arduino UNO's digital pins according to the following table:

LED Pin	Arduino Pin
A	2
B	3
C	4
D	6
E	7
F	8
G	9
DP	5



## Chapter 2

# CHANGELOG

### 0.1.0

- Initial release
- Basics for output are in place
- Pins to use are currently hard-coded using preprocessor statements





## Chapter 3

# File Index

### 3.1 File List

Here is a list of all documented files with brief descriptions:

<a href="#">ledseven.c</a>	
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## Chapter 4

# File Documentation

### 4.1 ledseven.c File Reference

The main sources for the library.

```
#include "ledseven.h"
```

#### Functions

- void [printHex](#) (uint i)
- void [printDec](#) (uint i)
- void [printPeriod](#) ()
- void [clearScreen](#) ()

#### 4.1.1 Detailed Description

The main sources for the library.

This file contains the source for the functions to write to the seven-segment LED.

#### Author

Ethan Ruffing [ruffinge@gmail.com](mailto:ruffinge@gmail.com)

#### Since

2014-12-25

#### Version

0.1.0

Definition in file [ledseven.c](#).

### 4.1.2 Function Documentation

#### 4.1.2.1 void clearScreen ( )

The `clearScreen` function is designed to clear a seven-segment LED so that it can be written to again.

Since

2014-12-25

Definition at line 153 of file `ledseven.c`.

#### 4.1.2.2 void printDec ( uint *i* )

The `printDec` function is designed to print a decimal digit to a seven-segment LED.

Since

2014-12-25

Version

0.1.0

Parameters

<i>in</i>	<i>i</i>	The digit to display (must be between 0 and 9, inclusive)
-----------	----------	---

Definition at line 72 of file `ledseven.c`.

Referenced by `printHex()`.

#### 4.1.2.3 void printHex ( uint *i* )

The `printHex` function is designed to print a hexadecimal digit to a seven-segment LED.

Since

2014-12-25

Version

0.1.0

Parameters

<i>in</i>	<i>i</i>	The digit to display (Must be between 0x0 and 0xF, inclusive)
-----------	----------	---

Definition at line 16 of file `ledseven.c`.

#### 4.1.2.4 void printPeriod ( )

The `printPeriod` function will display a period on the seven- segment LED.

**Since**

2014-12-25

**Version**

0.1.0

Definition at line 148 of file ledseven.c.

## 4.2 ledseven.h File Reference

The header file for the library.

```
#include <Arduino.h>
```

**Macros**

- `#define LED_PIN_A 2`
- `#define LED_PIN_B 3`
- `#define LED_PIN_C 4`
- `#define LED_PIN_DP 5`
- `#define LED_PIN_D 6`
- `#define LED_PIN_E 7`
- `#define LED_PIN_F 8`
- `#define LED_PIN_G 9`

**Functions**

- void [printHex](#) (uint i)
- void [printDec](#) (uint i)
- void [printPeriod](#) ()
- void [clearScreen](#) ()

### 4.2.1 Detailed Description

The header file for the library.

The [ledseven.h](#) file is the primary header file for this library. It contains all necessary declarations, preprocessor statements, and related code.

**Version**

0.1.0

Definition in file [ledseven.h](#).

## 4.2.2 Function Documentation

### 4.2.2.1 void clearScreen ( )

The `clearScreen` function is designed to clear a seven-segment LED so that it can be written to again.

Since

2014-12-25

Definition at line 153 of file `ledseven.c`.

### 4.2.2.2 void printDec ( uint *i* )

The `printDec` function is designed to print a decimal digit to a seven-segment LED.

Since

2014-12-25

Version

0.1.0

Parameters

<i>in</i>	<i>i</i>	The digit to display (must be between 0 and 9, inclusive)
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Definition at line 72 of file `ledseven.c`.

Referenced by `printHex()`.

### 4.2.2.3 void printHex ( uint *i* )

The `printHex` function is designed to print a hexadecimal digit to a seven-segment LED.

Since

2014-12-25

Version

0.1.0

Parameters

<i>in</i>	<i>i</i>	The digit to display (Must be between 0x0 and 0xF, inclusive)
-----------	----------	---

Definition at line 16 of file `ledseven.c`.

### 4.2.2.4 void printPeriod ( )

The `printPeriod` function will display a period on the seven- segment LED.

### Since

2014-12-25

### Version

0.1.0

Definition at line 148 of file ledseven.c.