

ASCII

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Chapter 1

Directory Hierarchy

1.1 Directories

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Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

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Chapter 3

Directory Documentation

3.1 ASCII Directory Reference

Files

- file [ASCII.ino](#)

Chapter 4

File Documentation

4.1 ASCII/ASCII.ino File Reference

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

Functions

- void `setRGB` (int r, int g, int b)
Set the RGB LED color using PWM.
- void `setup` ()
Arduino setup function.
- void `loop` ()
Arduino main loop.

Variables

RGB PWM pins

PWM pins used to drive the RGB LED channels.

- const uint8_t `pinR` = 9
PWM pin for the red channel.
- const uint8_t `pinG` = 10
PWM pin for the green channel.
- const uint8_t `pinB` = 11
PWM pin for the blue channel.

4.1.1 Function Documentation

4.1.1.1 `loop()`

```
void loop ()
```

Arduino main loop.

When serial data is available: 1) Read three integers using `Serial.parseInt()` -> r, g, b 2) Remove leftover newline/↵ carriage return characters from the buffer 3) Print parsed values for debugging 4) Update the RGB LED using `setRGB(r, g, b)`

Note

`Serial.parseInt()` skips non-numeric characters (like commas), so input formats like `200,100,40` or `200 100 40` both work.

4.1.1.2 setRGB()

```
void setRGB (
    int r,
    int g,
    int b)
```

Set the RGB LED color using PWM.

Ensures each channel is clamped to the valid PWM range (0..255), then writes the values using `analogWrite()`. For a common-cathode RGB LED:

- 0 = off
- 255 = full brightness

Parameters

<i>r</i>	Red intensity (0..255)
<i>g</i>	Green intensity (0..255)
<i>b</i>	Blue intensity (0..255)

4.1.1.3 setup()

```
void setup ()
```

Arduino setup function.

Initializes Serial communication and sets RGB pins as OUTPUT. Turns the LED off initially by setting (0,0,0).

4.1.2 Variable Documentation

4.1.2.1 pinB

```
const uint8_t pinB = 11
```

PWM pin for the blue channel.

4.1.2.2 pinG

```
const uint8_t pinG = 10
```

PWM pin for the green channel.

4.1.2.3 pinR

```
const uint8_t pinR = 9
```

PWM pin for the red channel.

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