

Additive Color

by Sophia



WHAT'S COVERED

In this lesson, you'll learn how to recognize and explain additive color and its uses in visual communication. Specifically, this lesson will cover:

1. Additive Color

The **additive color process** is the mixing of color with light. Additive colors are seen when light is projected.

The idea is that color is created by mixing light together; devices such as computer monitors, television screens, and smartphones depend on additive color models.



HINT

It's worth noting that because light is what is being combined, you're going to get different color combinations. This is different from paint, where mixing red and blue will give you purple, or mixing yellow and red will give you orange. The primaries in light are red, green, and blue (RGB).

As mentioned previously, the primaries of red, green, and blue are used in many devices. They were even used in older televisions or computer monitors, called **CRTs**, or cathode ray tubes.



TERMS TO KNOW

Additive Color Process

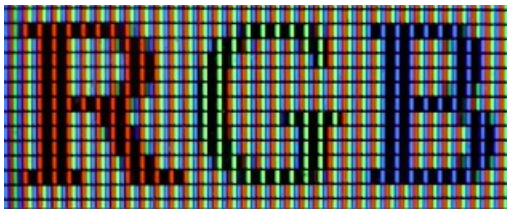
The mixing of color with light; additive color is seen when light is projected.

CRT

Cathode ray tube; the name for the display found on older traditional computer monitors and television sets; CRTs use the additive primaries, RGB, to produce color.

2. Additive Color Process

Now we can look at how the process works. Below is a close up of an LCD screen.



If you were looking at the screen at a normal distance, each letter would appear as red, green, and blue, respectively, and the background would be white. If you look at the letter R, only the red pixels are lit; in the letter G, only the green pixels are lit; in the letter B, only the blue pixels are lit.

You can see that each letter lowered the brightness of the two other pixel colors to achieve the desired results.

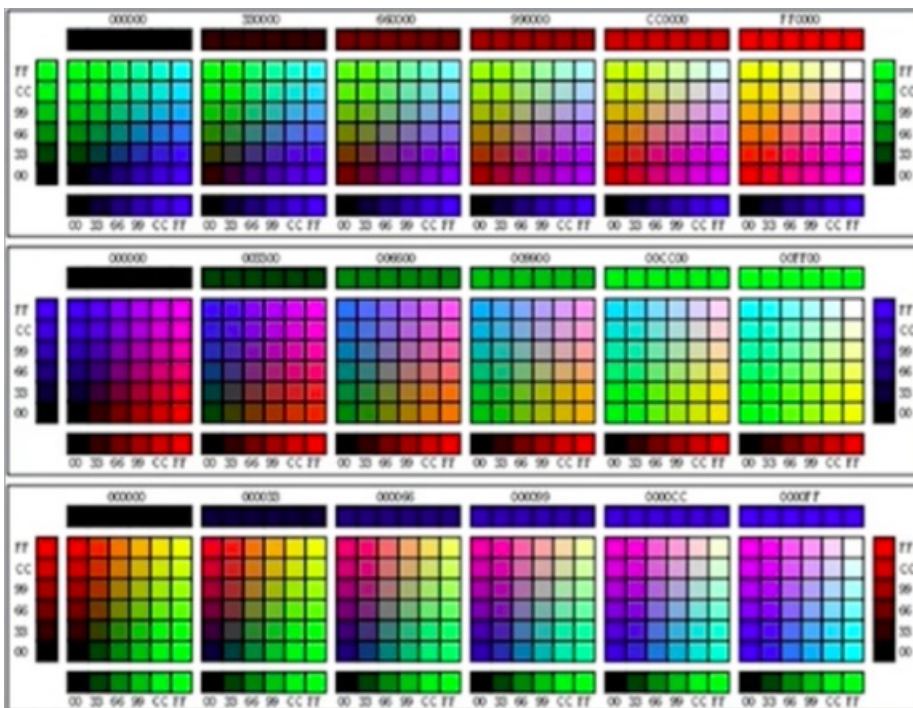
A combination of these three colors is going to give you a variety of different colors. If you wanted to create a magenta color, you'd use the red and blue pixels. If you wanted to create yellow, then you'd use the green and red pixels.

3. Additive Color Application

As you can imagine, because additive color applies to so many devices and practices, many communications professionals depend on the additive color model in fields like photography, television, web design, etc.

Depending on the profession, there could be a variety of additive color specification systems being used, such as **hexadecimal color**. This color system is used to describe web pages and is defined by the base 16 notational system.

Combinations of the numerals from zero through nine and letters from A through F are assigned to each color in the system. Below is an example chart.



In web design, colors are described by a six-digit alpha (A through F) and numerical (zero through nine) combination. So black is 000000, while white is FFFFFFFF.

If you've ever played around with making your own website or spicing up an old MySpace page with pretty text, then you might have used this system to get the job done. Hexadecimal color gives you quite a range of colors since there are so many possible combinations.



TERM TO KNOW

Hexadecimal Color

The color system used to describe web pages, defined by the base 16 notational system; combinations of the numerals from 0 through 9 and letters from A through F are assigned to each color in this system.



SUMMARY

In this lesson, you learned that **additive colors** are seen when light is projected, and that the **additive color process** is the process of mixing color with light. You also learned about **applications of additive color**, such as the hexadecimal color system.

Keep up the learning and have a great day!

Source: SOURCE: THIS WORK IS ADAPTED FROM SOPHIA AUTHOR MARIO E. HERNANDEZ



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