

What is the difference between Hex, RGB and HSL?

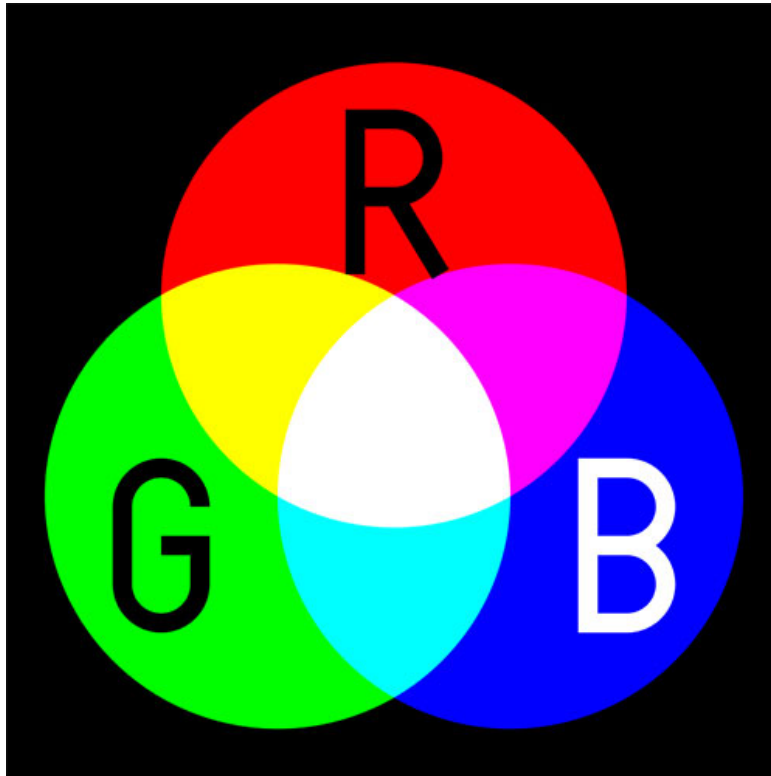
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What is RGB?

Starting with the RGB values ??(Red, Green, Blue) is best, because red, green and blue are the three colors that the screen can use to create quite a lot of other colors.



RGB

`rgb(255, 0, 0)` is red, because R is maximized. If you set G or B to 255, you get real green or red. Setting them all to 255 at once, you will have white (sum of all colors), and setting all values to 0 will give black. If you add a fourth value (alpha channel, from 0 to 1), you can also get transparency. `rgba(0, 0, 0, .5)` means semi-transparent black.

The RGB balance can change a lot even if you only change the hue of the color, making it difficult for people to manually adjust without a type of RGB generator.

What is hex?

000000	005f00	008700	00af00	00d700	00ff00	5fff00	5fd700	5faf00	5f8700	5f5f00	5f0000
16	22	28	34	40	46	52	58	64	70	76	82
00005f	005f5f	00875f	00af5f	00d75f	00ff5f	5fff5f	5fd75f	5faf5f	5f875f	5f5f5f	5f005f
17	23	29	35	41	47	53	59	65	71	77	83
000087	005f87	008787	00af87	00d787	00ff87	5fff87	5fd787	5faf87	5f8787	5f5f87	5f0087
18	24	30	36	42	48	54	60	66	72	78	84
0000af	005faf	0087af	00afaf	00d7af	00ffaf	5fffaf	5fd7af	5fafaf	5f87af	5f5faf	5f00af
19	25	31	37	43	49	55	61	67	73	79	85
0000d7	005fd7	0087d7	00afd7	00d7d7	00ffd7	5fffd7	5fd7d7	5fefd7	5f87d7	5f5fd7	5f00d7
20	26	32	38	44	50	56	62	68	74	80	86
0000ff	005fff	0087ff	00afff	00d7ff	00ffff	5fffff	5fd7ff	5fafff	5f87ff	5f5fff	5f00ff
21	27	33	39	45	51	57	63	69	75	81	87

hex

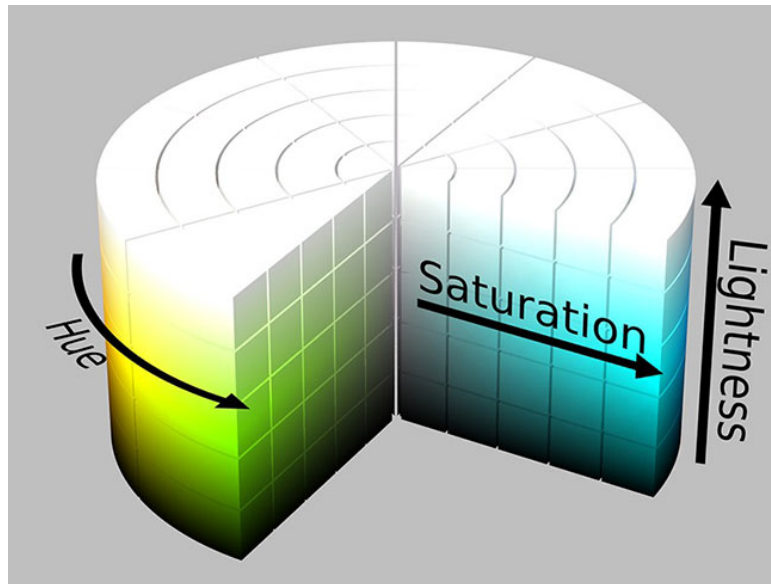
Hex is a different way of writing RGB values. Something like `#6a79f7` (chrysanthemum blue) maps directly to `rgb(106, 121, 247)`. **6a** is red, **79** is green and **f7** is blue.

First, you should know that in the Hex color system, the letters 'a' represent numbers 10 through 15. Second, everything is in base 16. 21 is $2 * 10 + 1$ in muscle. number 10, but in hexadecimal it will be $2 * 16 + 1$.

Hex creates hexadecimal codes that are even more difficult for humans than RGB, although they are easy to copy - paste and can have easy-to-remember alphanumeric combinations.

You can also add transparency to hex code by putting a value equivalent to a 255 percentage at the beginning, such as: `#806a79f7`. 80 in hexadecimal = 126, almost equal to 50% of the maximum value of 255.

What is HSL?



HSL

HSL has been designed quite a lot for human readability, and it has become popular, especially as an RGB alternative. It works as follows:

Hue means color, and it uses levels of the color wheel to tell you what color you are wearing. If you know the color wheel and position of these main colors, you will be able to tell that 45 is orange and 270 is purple in just 1 second.

1. 0 = red
2. 60 = gold
3. 120 = green
4. 180 = cyan
5. 240 = blue
6. 300 = bright red

Saturation is basically what colors look like. 0% saturation means that the color will only be a gray, while 100% means that it will display fully. If you want to 'hide' the color or make it a bit more floating, you can change this value.

Lightness lets you know how dark or light it is. 0% brightness means the color will be black, regardless of Hue or Saturation settings and 100% brightness will give you white. 50% brightness gives you the most accurate color.

With that information, you can immediately know what `hsl(0, 100%, 50%)` means. It is red! If you want a richer, richer red, try `0, 70%, 40%`. With blue, just change 0 to 240 is! HSL also has transparency, which works like RGB. Just add the fourth value (from 0 to 1), for example `hsla(240, 70%, 40%, .5)`.

Should use Hex, RGB or HSL?

In general, choosing a color model is a fairly small decision in design, but contributes significantly to the end result. In general, Hex code makes copying easy and great in situations where people can't get too involved. RGB / RGBA is suitable for readability and is best used when humans can adjust the transparency. If you need to change colors manually, go with HSL / HSLA.

>> See more: [Standard color code table for programmers, designers](#)

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