

**HUES**

A hue, another word for a specific color, can convey the physical and emotional sensations of temperature. Reds, oranges, and yellows connote warmth while blues, greens, and violets connote coolness.

Warm hues are more likely to cause color vibration because they are more likely to generate intensity when juxtaposed with white or light elements.



Warm Hues



Cool Hues

**BRIGHTNESS**

Brightness, also known as value, refers to how light or dark a hue is. A hue's intrinsic brightness increases with the addition of white (called a tint), and decreases with the addition of black (a shade). It is important to note that color created from light, the additive system, is unable to present colors with the same intensity as color created from pigment.



Tints of yellow

**SATURATION**

Also referred to as chroma or intensity, saturation refers to a hue's freedom from dilution with white, black, or another hue. A hue with no other colors mixed in is the most saturated form.



Shades of yellow



The intensity that is the result of the juxtaposition of two complementary colors is called simultaneous contrast. On the screen this intensity is amplified and it will appear as vibrating to the human eye. These examples are from the additive (RGB) color system, where the primary hues are red, blue and green, and the secondary hues are cyan, magenta, and yellow.



A light colored element on a darker screen background appears slightly larger and bolder



A dark colored element on a lighter screen background appears slightly smaller

**CONTRAST**

The vibration of colors on a video or computer screen is caused by too drastic a contrast between foreground and background. This is an important factor in determining legibility. Strong color contrasts create distracting vibrations, while subtle contrasts leave type difficult to see. Black backgrounds create the least amount of vibration on television and in film, so credits are often set white on a black background. The opposite is true of print, for which black type on a white background is the most legible.

**RELATIONSHIPS**

There are other hue relationships in addition to the primary, secondary, and tertiary relationships already discussed. The examples below illustrate the additive RGB color system with primary hues of red, blue, and green, and secondary hues of cyan, magenta, and yellow.



Monochromatic: a single hue and its values



Complementary: any two hues directly opposite to each other on the color wheel



Split complementary: a single hue and the two hues on either side of its complementary



Achromatic: black, white, and grey hues and values



Analogous: hues adjacent to one another on the color wheel



Neutral: a single hue and a percentage of its complementary or black