**RGB Vs YUV**

https://www.youtube.com/watch?v=SjN\_vCDi6\_I

https://www.avsforum.com/threads/ycbcr-vs-rgb-whats-the-difference.780809/

<https://forums.guru3d.com/threads/quick-question-about-rgb-and-ycbcr.434214/>

Computer graphics are regularly displayed in the [RGB colorspace](https://en.wikipedia.org/wiki/RGB_color_model), which is a form of uncompressed color.  
  
A display's final color output is RGB, as the sub-pixels on a flat-panel display (or electron gun(s) in older rear-projection or single CRT displays) are made up of Red, Green, and Blue. No matter which color format is sent to a display, it will always display as RGB.  
  
With a computer or game console, the optimal image quality will start with using RGB.  
If your display is able to expect full contrast range (0-255), you will want to set your graphics card's color settings to "Full" output dynamic range and your display to a picture mode that does not crush/blow out dark and bright details in an image.  
  
  
As for [YCbCr](https://en.wikipedia.org/wiki/YCbCr), it is a different method of expressing RGB color focusing on luminosity and chromacity of color.  
The 'Y' is the luminance component (green), followed by Chroma-blue (Cb), then Chroma-red (Cr).  
  
YCbCr is the digital expression of this 3-component color (can be used in mediums like HDMI or DisplayPort), while YPbPr is the analog expression of this colorspace (red-green-blue analog component RCA cable for example).  
  
As it is a form of compressed color, it is mainly used with media like DVD, Blu-Ray, or cable/satellite broadcast television to reduce the amount of data required over these more bandwidth-limited mediums (in comparison to local computing devices attached to high-bandwidth video mediums such as HDMI or DisplayPort).  
  
Since it is compressed color, its contrast range is also limited (16-235).  
If you were to display limited-range content on a display expecting full-range, black would show as grey and this can be compensated if the display has a black level adjustment.  
  
  
In summary, if you are running graphics, productivity, or browser video applications (such as youtube) you will want to use RGB.  
If you are watching a DVD, Blu-Ray, or broadcast television, you will want to use YCbCr.