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Macintosh: No Standard RGB Colors (5/95)

Revised: 5/1/95
Security: Everyone

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Article Created: 1 May 1995

TOPIC -----

I am trying to determine what the RGB values used when the Macintosh monitor is set to 256 colors? I want to use these values for a project, and need to know if there is a table of these values available.

DISCUSSION -----

There really are no 'standard colors' used when you set the control panel to 256 colors. Colors are loaded by each individual application when launched on the Macintosh or when an individual file is opened by an application.

The circuitry that controls the colors that are displayed on the screen has a color look-up table (CLUT) and digital to analog converter (DAC). Computer software provides information to the CLUT, which provides color values to the DAC, which provides the correct signals to the display.

The DAC converts the digital number representation of a color pixel into the proper (analog) signal that is used by the display. The digital number is a 24 bit value. The output of the DAC provides the analog Red, Green, and Blue voltage levels that the monitor uses to display the proper colors for each pixel.

The CLUT, when the monitor control panel is set to 256 colors, will display up to 256 different colors that are 24 bits each. In other words, out of an approximate 16 million colors, you can select and display up to 256. The 256 (24 bit) colors that are selected and used are stored and 'looked up' for each pixel that you see on the screen. So what you really have instead of having to choose from only 256 colors is a choice of millions - but you can only select and use 256 colors at a time from the millions that are available.

A DIFFERENT WAY TO LOOK AT IT

It is kind of like having millions of different colored crayons in a storage room to choose from, but for each individual picture you draw, you have a box that only holds 256 crayons. You can only select 256 crayons or colors to use because the box won't hold any more. If you want to draw another picture, you can go back, return the original crayons, and select a completely different group of 256 crayons or colors. The storage room is like the computer and the crayon box that limits the number of crayons you can use for a single picture is the VRAM (if you have more VRAM, you can get more colors).

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Tech Info Library Article Number:17675