

CRT

A cathode ray tube (CRT) is an older type monitor that uses a vacuum tube display and utilizes three electron guns to display the colors red, green, and blue to a fluorescent screen. (Red, green, and blue are the three primary colors of the computer display world.) These colors are grouped into triads and are emitted by phosphors within the screen so that a user can see the image on the display. A triad consists of three "dots": red, green, and blue. One way that CRTs are measured is in dot pitch, which is the distance between two like colors of adjacent triads. The lower the dot pitch, the better the CRT's image quality because the triads are closer together. Another measurement is dots per inch (DPI.) Common DPI defaults in Windows include 96 and 120, which are also measured as PPI, or pixels per inch. CRTs are higher in emissions and interference than LCDs. Extended usage of CRTs can result in user complaints of headaches. This can usually be solved by increasing the refresh rate and implementing a glare guard.

On a CRT, the display is painted in horizontal lines one at a time from top to bottom, at high speed. This is done by an electron beam. When the entire display has been painted, it is considered one refresh. By default on many systems, this is set to occur 60 times per second, or 60 Hz. However, to reduce eye strain when working with CRTs, it is possible to increase this number to a higher amount, for example 72 Hz or 85 Hz, which reduces *flicker*. The faster the screen is painted, the less a user's eyes have to work to register what they see. Keep in mind that the video card must support a higher refresh rate to match the monitor.