

# SCREEN RESOLUTION

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While *dpi (dots per inch)* is the measurement for printing, *pixels* is the resolution of monitor display. Typical displays — measured horizontally x vertically — are 800x600, 1024x 768, 1152x864 and 1280x800.

In monitors, the older favorites were CRT while the flat-panel, thin monitors of today are LCD.

A CRT (cathode-ray tube) (**Figure 1**) is a vacuum tube in which a hot cathode emits electrons that are accelerated as a beam through a relatively high voltage anode, further focused or deflected electrostatically or electromagnetically, and allowed to fall on a phosphorescent screen. A typical CRT screen provides 96 psi, which provides 9,216 dots per-square-inch (96x96).



Figure 1

Liquid Crystal Display (LCD) (**Figure 2**) is a low-power flat-panel display used in many laptop and desktop computers, calculators and digital watches, made up of a liquid crystal that is sandwiched between layers of glass or plastic and becomes opaque when electric current passes through it. The contrast between the opaque and transparent areas forms visible characters.



Figure 2

Flat panel displays from 110 to 200 psi have also been developed.

As the pixels rate doubles, the number of dots within a square inch is quadrupled, because pixels deals with two dimensions. Thus, while 100 psi produces 10,000 actual dots per square inch, 200 psi produces 40,000 (see below).

We have a long way to go to make the resolution on a screen as dense as a printer. A 1200 dpi printer produces 157 times as many dots of resolution as a typical 96 psi screen.

Most CRT monitors, that came with older versions of Windows, were set at 640x 480, 800x600 or 1024x768 pixels.

Most LCD monitors that come with Windows XP and Vista are preset to a “native resolution” or physical structure where they will produce the sharpest and best picture at only one designed resolution — many of which operate at 1280x1024 pixels.

However, you may want to change the resolution on your monitor. For example, if you’re using Internet Explorer and the Websites you visit run beyond the screen margins, you may want to change your CRT screen resolution from 800x600 pixels to 1024x768 pixels.

Here’s how to change your resolution using Windows XP. (While the pop-up window will appear differently in Windows 95, 98 and Me, the selection of resolution works the same.)

❶ RIGHT-click on the Desktop — away from any shortcuts.

❷ Left-click on “Properties” — the last choice (**Figure 3**).

❸ Under the Settings tab, left-click, hold and drag the marker under “Screen Resolution” until it is at the desired pixels (**Figure 4**).

A. LCD monitors and CRT monitors using Windows XP can not be taken below 800 x 600.

B. My Display Properties will look different from yours because I’m using dual monitors; however, the selection process is the same.

❹ Click “OK” button. Follow onscreen instructions.



Figure 3



Figure 4