

Using a monitor other than the 17" or 19" 4:3 aspect ratio recommended:

The aspect ratio is the lateral (width) measurement relative to the vertical (height) measurement (width:height). The old televisions, CRT monitors and many LCD monitors have the more "squared" 4:3 aspect ratio. This allows for a "taller" monitor relative to the monitor size (15", 17" 19" etc). The new "widescreen" monitors have an aspect ratio of 16:9. Any image viewed on these, without compensation, would be stretched by about a third, relative to the 4:3 aspect. The main reason we do not recommend the widescreen monitors is that they truncate the vertical aspect of the display and limit the room size.

	17" 4:3 Aspect (normal)	19" 4:3 Aspect (normal)	17" 16:9 Aspect (widescreen)	19" 16:9 Aspect (widescreen)
Width	13.375"	15"	14.5"	16.125"
Height	10.625"	11.75"	9"	10"

Thus, even a larger, more expensive 19" widescreen will not have the same vertical depth as the 17" "normal" 4:3 monitor. The longest practical viewing distance (limited by the size of the 20/400 letter) is about 22 feet for a 17" 4:3 aspect monitor. For a 19" widescreen monitor, we can expect it to be about 20.7 feet.

With decreasing prices, some offices have contacted us about using a HDTV as a monitor for the screen. The iChartPlus program is not troubled by the size of the monitor. iChartPlus is engineered to be calibrated to display the characters to the correct vertical size. That is to say, when setting up the iChartPlus program for the first time on a given computer/monitor combination, the user will enter the correct viewing distance and allow iChartPlus to calculate what size the sample letter should be. The user then sets the letter to the proper size and saves the setting. Calibration for all acuity levels will be correct.

As an example, we fed iChartPlus to a 42" widescreen 780p HD LCD television. The television had four different display settings: 4:3, "normal," stretched and 16:9 widescreen.

Relative to our standard 4:3 aspect ratio 19" LCD monitor (1024x768 resolution), calibrated to 19 foot viewing distance, the measured dimensions of the 20/400 N was found to be 17.05 mm H x 12.45 mm wide. On the 42" HDTV, with the setting to 4:3 - the dimensions are identical. With the 42" HDTV, with the setting to "normal" the dimensions are 17.05 mm H x 13.45 mm wide. With the 42" HDTV, with the setting to "widescreen" the dimensions are 17.05 mm H x 17.88 mm wide. Thus the widescreen HDTVs will work fine with the dimension setting set to 4:3.