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Choosing a Windows 10 Monitor

After upgrading from Windows 7 to Windows 10, my computer was plagued by many crashes of the video card that rendered the computer with the "Windows 10 Black Screen of Death" that required a reboot to fix. The printer menu on Microsoft Edge also had the "Print" and "Cancel" buttons off the bottom of the screen. I decided to investigate using an external monitor as the sole display to see if this fixed the problems with the 2011 HP G72-B50US laptop computer system. The monitors were used in a standing desk configuration and were approximately two to three feet from the head with the head aligned to the center of the monitor. This is what happened with my quest for a solution:

1. **Element ELEFW195 19" 720p 60Hz Class LED HDTV at $69.99 from Walmart.** The television/monitor has a VGA port and was by far the worst of the bunch. This was connected to the laptop computer through a 10' long VGA cable. The colors and viewing angles were horrendous and it did not display text clearly. Using it for long periods brought on headaches. It also had really bad speakers with terrible sound quality. The computer performance was no different using this 1366 x 768 resolution monitor. I kept it and used it as a digital television for the bedroom using a pair of computer speakers plugged into the headphone socket for good sound quality.

2. **LG 24" Class Full HD LED Monitor (23.6" Diagonal) 24M47H-P at $129.99 from Costco.** This was connected to the laptop computer through a 10' long VGA cable. It had a ghosting problem on text and did not render colors correctly. It was a twisted nematic (TN) display and these are noted for their poor color rendition. In particular, the colors and brightness would change as you moved your head around. This was returned to Costco as unsuitable. My computer prior to plugging in the full HD 1920 x 1080 monitor was becoming unusable and was showing numerous issues. Using the full HD monitor cleared up many of the Windows 10 problems that I had been experiencing and I concluded that Windows 10 was optimized for use with full HD monitors. This monitor did not have any speakers.

3. **Acer R240HY bidx 23.8-Inch Full HD monitor at 134.99 from Amazon.** This was connected to the laptop computer using a 10' long HDMI cable. This monitor was superior to the LG for colors, although it did suffer a bit from colors and brightness changing when the head was moved around. It used an in-plane switching (IPS) display which is supposed to be superior to a TN. Windows 10 performance continued to be much better with a full HD monitor. This monitor did not have any speakers. After a few weeks of use and two unexpected irritability episodes, I decided to look into the electromagnetic interference (EMI) fields that it was emitting. Using a standard AM radio that was tuned to static (no radio station) I found that the room was filled with a pulsing AM radio wave field and the monitor had a 2-3 feet radio wave field around it. I use a standing desk and my head is 2 feet from the screen and in the radio wave field. It appeared that I had developed radio wave sickness (RWS) from being in these EMI fields. Fortunately this occurred during the warranty period and I was able to send it back for a refund.

4. **Samsung 23.5" Curved LED Monitor with High Glossy Black Finish LS24E510CS/ZA at $149.99 from Samsung.** From the above testing, I had realized that a curved monitor should give better color and brightness performance across the screen, as compared to the flat monitors. On large screen flat monitors that are used up close, the color and brightness change can be noticeable across the screen, particularly near to the edge. This had a vertical alignment (VA) display. VA displays are regarded as superior to TN and generally have better blacks than IPS. It was connected with a 10' long HDMI cable and the monitor did not have any speakers. The display was far superior to any of the others tested and the curve prevented the pixels from going out of alignment with the eye near to the edges. It had nice uniform colors across the display. The curve in the display does produce a curve in horizontal lines that are displayed on the screen when used up close.

Screen Back-lights: The Element had a florescent back-light and all others had the newer LED back-lights.

Monitor Size: I opted not to test computer monitors above 24 inches due to the radiation dose that the monitor emits being much larger. Very large monitors used up close also block the field of view of the eyes. This was done in order to reduce the possibility of Computer Vision Syndrome occurring.

References:

1. Computer Vision Syndrome https://en.wikipedia.org/wiki/Computer_vision_syndrome
2. Electromagnetic Interference https://en.wikipedia.org/wiki/Electromagnetic_interference
3. Electromagnetic Radiation and Health https://en.wikipedia.org/wiki/Electromagnetic_radiation_and_health
4. Monitor Buying Guide http://www.cnet.com/topics/monitors/buying-guide/
5. Symptoms of Radio Wave Sickness http://docs.stetzerelectric.com/Firstenberg-symptoms-of-radio-wave-sickness.pdf
6. Toxic Electricity http://amzn.com/1475295693
7. Toxic Health: http://amzn.com/1466336153
8. Toxic Light http://amzn.com/1461151880
9. Windows 10 http://www.microsoft.com/en-us/windows/windows-10-upgrade

The monitor that I found to be acceptable for use with Windows 10 was the Samsung LS24E510CS/ZA