

# Shopping tips for buying a big screen TV for the Super Bowl

January 29 2016, by Troy Wolverton, San Jose Mercury News

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The Super Bowl represents not only the pinnacle of the football season, but also one of the peak periods for TV purchases.

With the big game coming up, many consumers decide that it's time to buy a newer, bigger screen. This year is likely to be no different.

Here are some tips on how to find the best set for you:

-Ignore 4K. 4K, also known as ultra-high definition or UHD, is the new resolution standard for televisions that offers four times as many pixels as regular HD sets. A growing number of TVs tout their 4K capabilities.

But with most TVs for most viewers in most situations, 4K by itself is meaningless; you won't be able to tell the difference between a high-definition video seen on a standard HD set and a 4K video viewed on a new UHD TV. 4K matters only if you sit closer to your TV than the typical eight to 10 feet, if you have better than 20-20 vision, or if you get a TV screen larger than at least 60 inches.

Even if one of those situations applies, 4K still doesn't matter much, because there remains a dearth of content available at that resolution. Some movies will be coming out in 4K on special Blu-ray discs this year, but you'll need a new 4K Blu-ray player to watch them. Meanwhile, only a handful of shows are available in the format via Netflix, Amazon and other streaming services. And no television stations on pay or over-the-air TV are broadcast in 4K, which means that you won't even be able to

watch the Super Bowl this year in UHD.

-Think refresh. Most of the specifications that TV manufacturers list for their sets are more marketing mumbo jumbo than meaningful data points. One that's different, at least somewhat, is a set's refresh rate.

The refresh rate represents how frequently a television redraws the image on its screen, usually expressed in hertz, or cycles per second. Televisions that have lower refresh rates are prone to motion blur, where a fast-moving image can appear to be chopped up or move jerkily across the screen. That's something to avoid, especially if you are planning on using the new set to watch the Super Bowl or other sports.

Look for a set's "true panel refresh rate." And generally, you're going to want one that's at least 120 Hz.

-Consider the colors. The ability to display a wider color range is one of two big new features that promise to deliver better looking images on TVs.

The problem with LEDs used to illuminate most TVs is that the spectrum of light they produce typically leaves some big holes, making it difficult for them to produce certain red and green tones. A technology called quantum dots can address those holes, by taking the light emitted by the LEDs and reradiating it at very precise wavelengths of green or red light, allowing those sets to produce a complete spectrum of colors.

The wider color range produced by quantum dots was only available on premium sets in 2015 and was called such things as "nano crystals" by Samsung, ColorPrime by LG and Triluminos by Sony. The technology should be available on a wider range of 2016 models, which will hit stores later this year. "UHD Premium," a new labeling program recently announced by the TV industry that aims to set a standards for 4K TVs,

will include a specification for a particular, wider than typical color range that such sets will have to meet.

-Compare the contrast. The use of backlights in LCD TVs gives them one other shortcoming: Because the lights are always on, LCD TVs have a tough time displaying dark images or blacks showing a range of brightness levels within the same scene. A second new technology coming to TVs, HDR, or high-dynamic range, aims to address that problem.

HDR aims to boost the contrast ratio on LCD sets by increasing overall brightness levels. The technology promises to allow TVs to display details in dark scenes and to allow them to show things like clouds in a bright sky. A standard for HDR is going to be a part of the UHD Premium label, but some sets including the technology, such as Samsung's "SUHD" line, are already available on store shelves.

-See them in person. It can be hard to judge TVs in a retail showroom. The ambient lighting is often bad. The pictures are usually turned up to garish levels to make them pop. And some can be misadjusted. But there are things you can look for.

One thing to look for is the viewing angle. Take a look at the picture from each side and from above and below. Also, see how they look from a normal viewing distance, not right up close. The imperfections you may see at two feet away tend to be invisible from six or eight feet.

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Citation: Shopping tips for buying a big screen TV for the Super Bowl (2016, January 29)  
retrieved 26 April 2024 from <https://phys.org/news/2016-01-big-screen-tv-super-bowl.html>

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