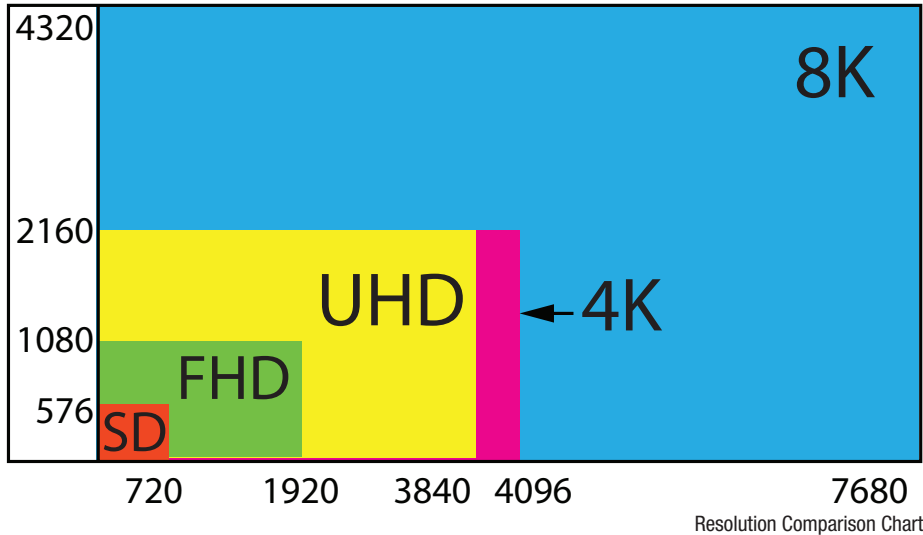


AUDIO VISUAL SCREENS TIME FOR AN UPGRADE?

WHITE PAPER - SEPTEMBER 2016



JVC_DLA-X550R_(4K_projector) (top)
Panasonic High Definition PT-AE700E (bottom)

- There are many reasons for replacing a projector. The image quality has deteriorated, the space is changing, or you'll be using it to view a different kind of content. Perhaps technological progress has left it behind. But when it's time to change your projector, is it also time to change the screen? Perhaps not in every single case, but quite often the answer is yes, for several reasons.

ASPECT RATIO

Back when you installed your projector and screen, 4:3 may have been the dominant resolution. Or perhaps your old projector was 16:9 and your new one is 2.35:1. If you keep using the same screen, you will wind up with either a smaller image, or a distorted picture as you try and make it work with your new projector's resolution. It's best to match the screen's aspect ratio with that of your projector or you could encounter the dreaded black bars.

RESOLUTION

One of the most important advances in projection technology has been the ability to fit more pixels into the image. The resulting native resolution increases to 720p, then 1080p, and now to 4K, mean a much sharper, more accurate picture. As the image quality increases, an older screen can become a liability, because flaws in the material or limitations in performance can offset the gains in the projector. If you are replacing a projector, these days it's likely to be a 4K model. To enjoy the full benefit, make sure to also purchase a 4K-ready projection screen.

NEW SURFACE TECHNOLOGIES

As projectors have improved, so have projection screens. First there was Matt White and Glass Beaded. Then grey screens were introduced to enhance contrast. Now there are screen surfaces designed to reject ambient light—that's light from sources other than your projector—so the image doesn't wash out when the lights are on. These and other advances mean that a projection screen solution specific to room conditions can be installed. For example, Draper's TecVision line of premium surfaces contains different formulations, each designed for a specific need, and new formulations can be developed to handle changing needs.

COLOR

Today's projectors are able to display more colors more accurately than previous models. With more projectors using High Dynamic Range (HDR), and even broader range of colors is on the way. Many projectors are certified by the Imaging Science Foundation for color accuracy; that is, they have little to no impact on the original colors. Whatever actual colors the content creators used, that's what you should see. Except most projection screens also influence image color.

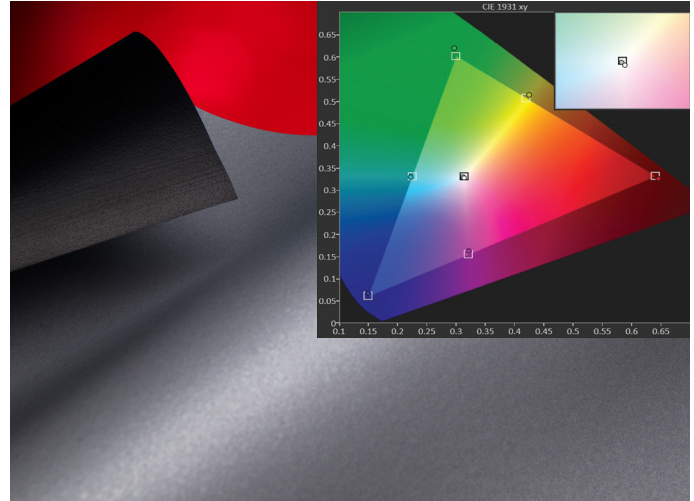
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LED Backlit screen.



TecVision XH700X Grey viewing surface and color gamut

For instance, blue tints are often added to a screen to make the picture appear brighter. Unfortunately, that also means the colors in your image are no longer accurate. Some viewing surfaces are also certified by the ISF for color accuracy. When you upgrade your projector, make sure to get a new screen with this certification—such as Draper’s TecVision line of surfaces.

FASHION STATEMENT

More than just projection viewing surfaces have undergone improvement. The frames and cases have also been updated. There are now smaller screen cases that can recess a screen in a much smaller space above the ceiling. There are also new frame designs that give your screen the look of a flat panel, but in much larger sizes than is sometimes economically feasible in a TV. Plus, with cool accessories like LED lights providing a backlight in hundreds of available colors, new screen models add real pizzazz to your room.

DETERIORATION

Over years of exposure to sunlight, cigarette smoke, heat, kids and animals, your screen surface has definitely deteriorated, and may have suffered damage that shows up much more readily under modern projectors. Your surface may have yellowed or changed color over time. Since many screens are made of vinyl, the plasticizers that make it

flexible may have leached, making the screen surface tacky and splotchy in appearance. These problems are an eyesore when the screen isn’t under projection; they detract from picture quality while under projection.

PAYING FOR PERFORMANCE

When you upgrade to a new projector, you’re paying for improved performance. With 4K, HDR, and more light you’re getting a better picture. Keeping an old screen means you’re paying that extra money for no reason. A premium projection screen surface can definitely make a cheaper projector look much better; an out-of-date, underperforming screen can make an expensive projector look cheap. So to make the most out of your new projector’s improved performance, replacing the screen may also be required.