PROJECTOR CHECKLIST

Resolution: If you are projecting engineering drawings, digital photography, complex Excel spreadsheets, or other images of a highly detailed or technical nature, you will probably need a projector of SXGA+ resolution (1400x1050) or higher to produce an acceptable image for your purposes.

MacbookPro Retina Resolution: 3360 x 2100

Thunderbolt Display Resolution: 2560 x 1440

Less than 2000 lumens: Typically small and highly portable, these are the lowest light output projectors available today, and they are typically the least expensive. For display of training videos or still photography in a darkened room, projectors in this category may be perfect for your needs. Keep in mind that the low light output means that you will want to make your presentations in a dark or dimly lit room so that the image on the screen is not washed out by ambient room light.

2000 to 3000 lumens: This lumen range is a step up in performance and price. These machines are suitable for normal business conference room and classroom use. Presentations should be done with the room lighting reduced somewhat for best screen viewing. A completely dark room is usually not necessary.

3000 to 4500 lumens: This represents the high-performance range of the portable and semi-portable projectors. Products in this class are suitable for large conference rooms and classrooms. They offer more flexibility in terms of ambient room light, since the image is bright enough that a reasonable amount of room light can be tolerated without washing out the image. They also offer more flexibility in terms of audience size, since they produce enough lumens to properly light a larger screen.

4500 lumens and up: These ultra-bright projectors are in several performance classes unto themselves, ranging from 4500 lumens up to 12000 lumens or more. Prices of these products also cover a wide range depending on other performance characteristics. They are used in a variety of large venue applications, including board rooms, conference rooms, training rooms, auditoriums, churches, concerts, nightclubs, and so forth.

Zoom lens: A zoom lens gives you the ability to adjust the projected image size without physically moving the projector. Many portable projectors have zoom lenses with limited range, and many short-throw projectors have no zoom capability at all. A unit with a zoom factor of 1.2 to 1 will only let you adjust picture size by 20%. You can often move the projector a foot or two either way and accomplish the same adjustment. If you have a fixed screen size you are trying to fill, even a limited-range zoom will make it easier to fine tune the image size to the screen. If you plan on projecting in many different environments, you may wish to invest in a projector with a more versatile zoom range, which will allow for more placement flexibility. Zoom Lenses Range: From 1.1 to 1 up to 2.0 to 1 or more. The higher the number, the greater the zoom range.

Keystone Correction: In addition to the zoom lens feature, mobile users should consider the benefits of keystone correction. When you project an image from any angle other than straight onto the projection surface, the result is an image that is not completely square, instead appearing trapezoidal. Most projectors include a feature called vertical keystone correction, which correct the trapezoidal effect which results from tilting the projector downward or upward. Others go a step further and provide additional correction for horizontal keystone, which occurs when you are projecting from either side of the screen. Keep in mind that applying keystone correction results in a loss of detail and sharpness, but it can be invaluable when your projector cannot be set up perfectly square with the screen.

Contrast: Contrast is the ratio between the brightest and darkest areas of the image. A projector's contrast rating represents a theoretical maximum, obtained under ideal conditions, and may not reflect what you actually see on the screen. This is doubly true when projecting in a room with any amount of ambient light--with moderate room lighting, a projector with 400:1 contrast and one with 1500 to 1 contrast will look almost identical, all other factors being equal. If you are using your projector in a room with a good deal of ambient light, lumen output is far more important than contrast. However, in a darkened room, contrast will become more important for accurate display of graphics and video.

Video Signal Standards: Most business projectors accept composite video, S-video, and computer/RGB signals as three types of signal transmission. Most projectors also recognize YPbPr/YCbCr component video as well. However, there are two all-digital standards known as DVI and HDMI. Many computers feature DVI or HDMI output, which allow the user to keep the signal in the digital domain and eliminate analog to digital conversions. If you are interested in optimizing video performance and you have a video source that offers DVI or HDMI output, check to see which of the projectors on your list possess a digital input. The spec sheet may say HDMI, DVI-I, or DVI-D.

Multiple Ports: If you want to connect multiple computers or video sources to the projector simultaneously, you will need multiple input jacks to accommodate this. For example, you may want to connect a notebook computer and a desktop computer to support two consecutive presentations, or two different presenters. If your projector only has one computer input, you'll have to unplug the notebook and plug in the desktop between presentations. Check to make sure the projector has enough connections to support your typical use.

Computer-free projection: Increasingly, projectors include media players that are able to directly display photos, video, and common office documents without the use of a computer. These projectors have special input slots for flash media (SD cards and other common camera memory cards) or USB thumb drives. PC-free projection can cut down on weight and clutter, but compatibility may vary. You should always test your documents with your projector before you rely on these functions for business-critical applications.

LCD: delivers a somewhat sharper image than DLP at any given resolution. The difference here is more relevant for detailed financial spreadsheet presentations than it is for video. This is not to say that DLP is fuzzy--it isn't. When you look at a spreadsheet projected by a DLP projector it looks clear enough. It's just that when a DLP unit is placed side-by-side with an LCD of the same resolution, the LCD typically looks sharper in comparison.

Throw Ratio: 1.5 to 1 throw needs to be 1.5” from wall to display 1” wide.

ProjectorCentral.com - Optoma EH505 - $3,345