

## Getting a Projection Screen in Tune with the Room

**BACK IN 1957**, when Draper, Inc., introduced the company's first projection screen designed for classrooms, the job of choosing a screen was fairly simple: "What size do you need?"

Today's educational needs, however, require an advanced approach involving more customization than has ever been possible. By using online tools and Draper's latest screen innovation—TecVision™ Engineered Screen Technology—you can now "fine-tune" the viewing surface to the room and content type.

The best way to fine-tune a screen to your need is to use an online calculator that takes into account all aspects of the projection experience and calculates the specifications for a screen solution. Draper offers two free calculators. One is a more basic tool and can be used without registering: [www.draperinc.com/ProjectionScreens/SurfaceSelector.asp](http://www.draperinc.com/ProjectionScreens/SurfaceSelector.asp). Draper's Surface Selector Pro requires more in depth information, and you must register to use it. It can be found here: [www.draperinc.com/DraperPro/login.asp](http://www.draperinc.com/DraperPro/login.asp).



*Consider the size of the room, and the audience location.*



*Make sure your screen is large enough for everyone in the audience to see and comprehend the content being presented.*

### The Audience

First of all, think about what this screen will be used for. Will it be passive viewing, basic presentations, critical viewing such as engineering drawings, or full motion video? You also want to consider where the audience will be sitting. Will everyone be in a fairly narrow seating arrangement, or is this a wider classroom with viewers being further off-axis?

### Room Size

The screen must be big enough for your back row students to see and understand the information being presented. Projection continues to offer a competitive advantage over flat panels, which typically are not big enough for reading data and understanding presentations from the rear of the room.

In order to properly size the screen you need to know the size and shape of the room, and where the audience will be located in relationship to the screen. More details on screen sizing can be found at [www.draperinc.com/ProjectionScreens/ScreenSizeSelection.asp](http://www.draperinc.com/ProjectionScreens/ScreenSizeSelection.asp).

### Aspect Ratio

The aspect ratio of the screen is dependent on the content used most often for the application and the native aspect ratio of the projector. If there will be mostly HD content, then a 16 x 10 screen and projector would be best. It is typically best to match the aspect ratio of the screen to the aspect ratio of the projector. A wider aspect ratio screen will allow more source content to stay at a constant height (not shrink vertically).

### Dealing with Light

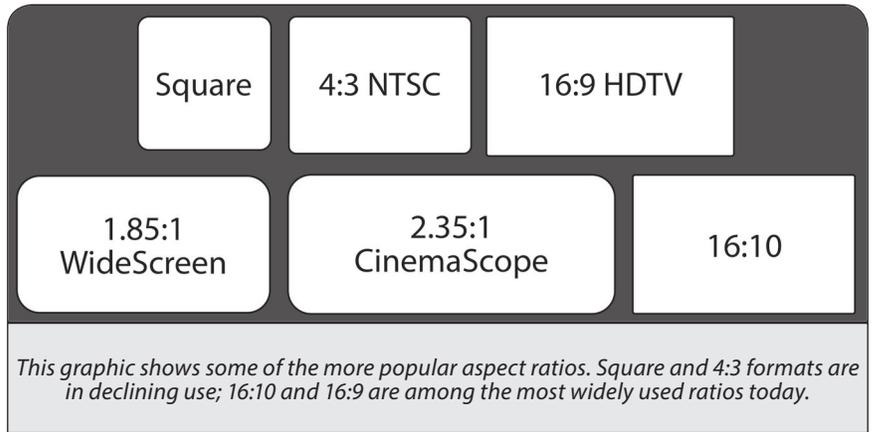
The amount of ambient light—both on the screen and above the viewers—is critical to the success of a projection system. Light hitting the screen can wash out blacks and decrease the image contrast. Light in the viewers' eyes may compete with projection light getting to the viewers' eyes, and determines how bright a system is needed. To most accurately determine the impact of lighting on projection, use a light meter to measure the light hitting the screen and the light above the audience area, and enter the readings into the online calculator.



*How much ambient light is there, and where is it coming from?*

### Contrast

Image contrast affects how well you can read, which means it affects detail and resolution. Low contrast reduces image detail and resolution, while high con-



trast increases detail and resolution. Image contrast is even more critical when the application involves high resolutions graphics and medical imaging.

### Putting it all Together

Once you have collected all of this information and fed it into one of Draper's Surface Selector Tools, the screen surface best fitted based on those specs will be determined.

In the past, a close fit was as good as a screen manufacturer could get, and often represented simply choosing the lesser of two evils. But with Draper's TecVision™ Engineered Screen Technology, a screen can be tailored to meet exact specifications for a certain type of room/situation. Rather than using "mass-production" methods to minimize costs, TecVision screens are individually formulated and programmed, and manufactured with multiple checks for quality, consistency, and uniformity from start to finish. Thus, a screen that combines the best of different surface attributes can be formulated, allowing the ultimate in "fine-tuning."

For more information on specifying a screen unique to your situation, visit [www.draperinc.com/DraperPro/login.asp](http://www.draperinc.com/DraperPro/login.asp) and register to use our Pro Surface Calculator. For more information on TecVision™ Engineered Screen Technology, visit [www.draperinc.com/go/TecVision.htm](http://www.draperinc.com/go/TecVision.htm).