



How to make  
your own see-  
through  
projection  
screen



Behind the screen projection may have advantages for some simulator setups. But translucent (see-through) screens are both very hard to find and very expensive. Here is how you can easily make a translucent screen using inexpensive materials that gives excellent performance.

The image will lose some brightness as it is beamed through this screen, but the loss is barely noticeable. For normal viewing a 2300 lumen projector produces a very bright, crisp 54" image from behind this screen. This 54" image may look dim, though, when using 3D glasses. But 2300 lumens concentrated into a 42" image is so bright that it works well with 3D glasses in a darkened room. Improved performance can be attained with a brighter projector.



**STEP 1:**  
Obtain a wooden frame of the size of the screen you want to build. You might purchase a 3' by 4' bulletin board with a cork backing (also called a "cork

board"). The frame around the board is large enough to make a 54" (diagonal) screen. In the U.S. 3x4 cork boards were recently for sale at Menards (\$24.99) and Staples (\$39.95). Do not pay the

outrageous prices found at some teachers' supply stores. Carefully remove the cork panel from the frame. (You may need a screwdriver or pliers to remove staples.)



**STEP 2:** Buy a vinyl shower curtain **LINER** at a hardware or grocery store. Pick the plain white liner (not clear). It should have a plain flat or very fine texture (i.e., no decorative patterns). The cheaper the better (\$2.35 and up). You will also need a roll of masking tape and scissors.



**STEP 3:** Unfold the liner on the floor or on a tabletop. Lay the frame on top lining and line it up 1 inch or more inside the liner's edge as shown. Cut off the thickened, reinforced top edge of the curtain.



**STEP 4 :** Continue cutting about 1 inch from the frame until you have a sheet of liner cut out that is an inch wider than the frame on all sides. **Put the cutout sheet and a wet washcloth in a clothes dryer at low heat for 3 to 4 minutes.** This process irons out the creases

**STEP 5:** Masking tape is perfect for stretching the liner onto the frame. It holds firm but removes easily without ripping the liner (for adjustments). Start at the center of one of the edges. Fold the edge of the liner over the frame and tape it in place as shown



**Step 6:** Go to the opposite side of the frame and pull the sheet **slightly** taught. You do not need stretch the vinyl. Just a slight tension is needed. Tape the sheet to the frame. (If the sheet overlaps the frame too much trim the extra

as shown in the next frame.)

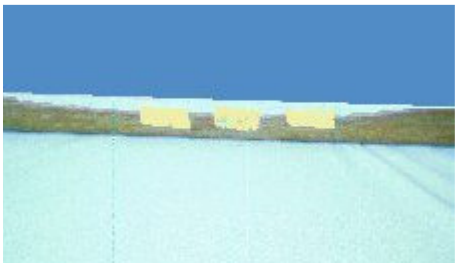


Trim the vinyl sheet if it is too wide, leaving too much material to tape to the frame.

When you pull the vinyl over the frame you may find that the sheet was cut too wide. Now is a good time to cut off the extra.



**STEP 7 :** Repeat STEP 6 for the other two sides of the frame. You will have the vinyl sheet stretched taught and anchored at the middle of each side of the frame.



**STEP 8:** Now tape the sheet about one inch on either side of one of the anchors you've just taped. Go to the opposite side, pull the sheet tight on either side of the anchor and tape. Then repeat this for the other two sides.

Continue taping the sheet to the frame as in step 8, an inch or two at a time, working from the middle out to the corners. As you approach the corners you may need to pull the sheet from the corner to take up slack.



Don't worry if the vinyl sheet has a few small ripples when you're finished, they probably will not show up on the projector image. And you can also loosen and tighten a few strips of tape to make final adjustments.



A spare 5 foot piece of thin lumber, or even a broom stick, can be taped to the screen's edge to temporarily hold it into position for testing.