How to make a FOV2GO Viewer for the iPad 3 using a Holga 3D Slide Viewer

This is unquestionably one of the least expensive and easiest-to-construct **FOV2GO** iPad viewers imaginable.

Holga is a Hong Kong-based company that makes inexpensive retro film cameras and accessories. Holga makes several amazing (and cheap!) 3D film cameras: the Holga 120-3D Stereo Camera and the Holga 120-PC3D Stereo Pinhole Camera, each of which use 120 format film, producing pairs of 56mm (2 inch) square images.

That's wonderful, but what gets us really excited are the two inexpensive viewers that Holga makes to *view* the stereo 3D images that you shoot with the Holga 120: the Holga 120 3D Slide Viewer and the Holga Stereo 3D Slide/Print Viewer Collapsible Viewer.

The **Holga Stereo 3D Slide Viewer** is a slide viewer (for viewing stereo transparencies created with the Holga Stereo 3D cameras), made out of molded black plastic with a translucent back for illumination by existing light.

The **Holga Stereo 3D Slide/Print Viewer Collapsible Viewer** is a translucent plastic print/slide viewer (for viewing stereo prints or transparencies created with Holga Stereo 3D cameras) that "collapses flat for easy storage and portability".

Each of these viewers has a viewing width of about 5 inches (127mm), with quality plastic lenses that provide a fairly wide field of view. This makes them fairly ideal **FOV2GO** viewers for an iPad in Portrait orientation (vertical), with the iPad screen having a width of about 5 7/8" inches (149mm). By building a mount for the Holga viewer that incorporates a sleeve that fits over the top of the iPad, the viewer is able to mate with the tablet nicely, making a device that has a well-balanced and pleasing form factor, with an immersive stereoscopic view over an input area that displays virtual touchpads for thumb input.

This document provides instructions to make a **FOV2GO** mount for the **Holga 3D Slide Viewer.**

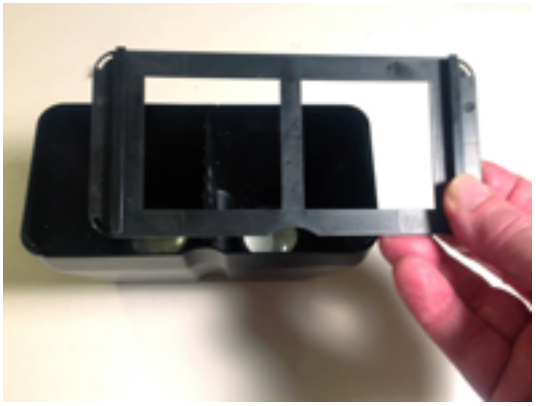
Materials & Tools

- One Holga Stereo 3D Slide Viewer (available at: http://www.freestylephoto.biz/197120-Holga-Stereo-3D-Slide-Viewer
- Two sheets of letter size printer paper
- Repositionable glue stick
- Hack saw or utility saw
- Hot glue gun & glue sticks
- Inkjet or laser printer
- Matte knife, steel straightedge & cutting surface

1. The first task is to remove the translucent plastic backplate from the Holga viewer. It's glued at the corners to the black plastic. The easiest way to remove it is to saw it in half with a hack saw or a utility saw.

2. Once you've cut the translucent back plate down the middle, you'll be able to lift up each half along the cut line at the center. Bend each half back carefully until the glue seals break.

3. Here's what your Holga viewer should look like at this point. Use a cloth or compressed air to clean off any dust or plastic shavings from the viewer.



4. Be aware that the Holga viewer is actually now in two unattached pieces: the viewer shell, and a plate to mask the left and right images. Make sure that the plate rests in the correct position in the viewer shell, held in with four little tabs in each corner.

5. Print out the the two pages of the FOV2GO viewer template (the last two pages of this document).

6. With a straightedge and a matte knife, trim along one of the two matched edges, cutting precisely along the crop marks.

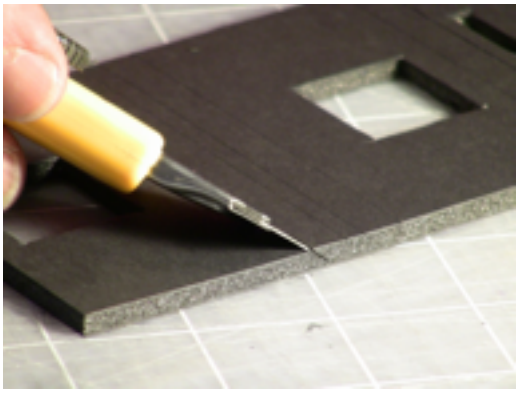
7. Carefully line up the crop marks between the two pages, and tape them together.

8. Turn the template over and, using a Repositionable Glue Stick, apply glue across entire surface.

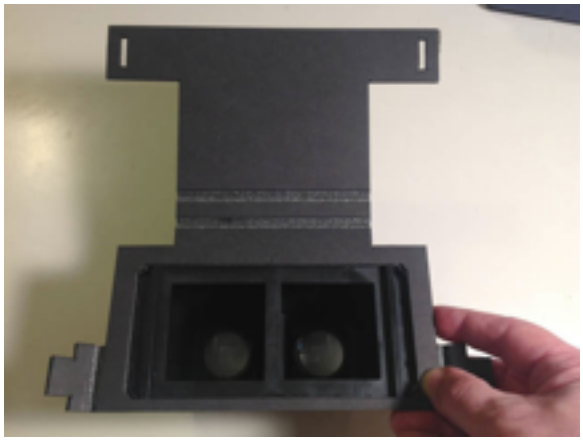
9. Place template onto foam board and press down to adhere.

10. Carefully cut along red and blue lines. Red lines are cuts; blue lines should be lightly scored. Try not to overshoot each cut.

11. Remove template paper from foam board.



12. For the v-channels, make two 45 degree cuts at each score line. Be careful not to cut through the paper surface on the opposite side.

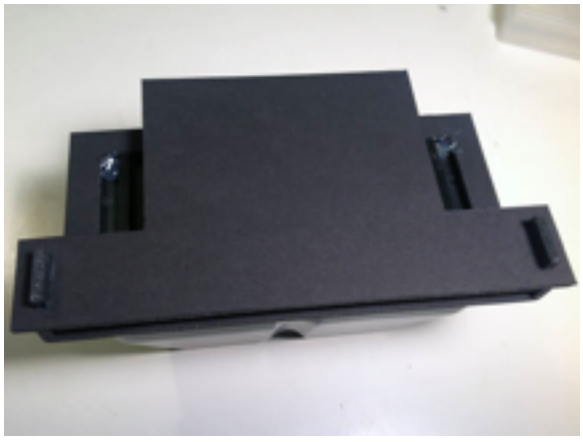


13. After you've made all the foam board cuts, place the piece over the Holga viewer. The four little tabs on the Holga viewer should be fit into the corners of the large cutout in the foam board.

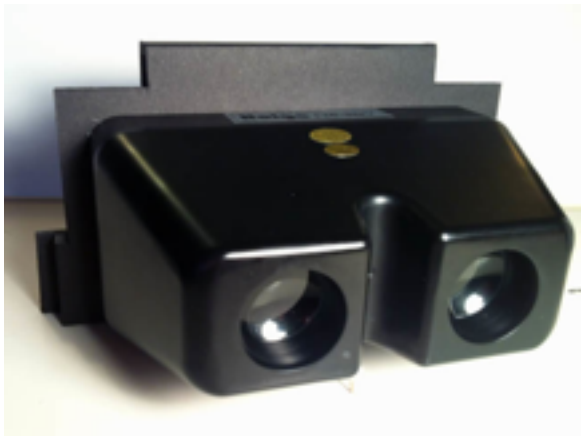
14. Using a hot glue gun, squeeze out a blob of hot glue onto each of the four plastic tabs. The glue should surround the tab completely, and should fill in any gap between the tab and the foam board

15. Make sure to hold the foam board in place until the glue cools off and hardens.

16. Here's what your viewer should look like at this point. Make sure that the foam board is securely glued to the plastic, and that the two plastic parts are held in place.



17. Fold the foam board down along the two horizontal v channels. Then fold up the two side extensions, and push the two tabs through the slots in the back panel.



18. You're done! If you want, you can glue the two tabs in place so that the viewer can't come apart. Slide the foam board sleeve over your iPad 3.

You're all done! You now have a state-of-the-art FOV2GO viewer for the iPad. Load up an FOV2GO app and get immersed! Hold the iPad (not the viewer!) with two hands, using your thumbs on the lower area of the screen for interaction.

FOV2GO is a project of the MxR Lab at USC.

Stereoskopix FOV2GO for Unity available at http://u3d.as/content/stereoskopix/fov2go/2HA

Thanks to USC Institute for Creative Technologies, USC School of Cinematic Arts, Microsoft Research, Fakespace Labs and Phasespace.

http://diy.mxrlab.com/

FOV2GO Viewer for Apple iPad 3 & Holga Stereo 3D Slide Viewer
http://www.apple.com/ipad/
http://www.freestylephoto.biz/197120-Holga-Stereo-3D-Slide-Viewer

1. Print out both pages
2. Trim & tape together two pages at registration marks
3. Trace onto 4mm (3/16") foam board
4. Using a matte knife, cut along all red lines
5. Score along all blue lines
6. Cut v-channels between scored lines

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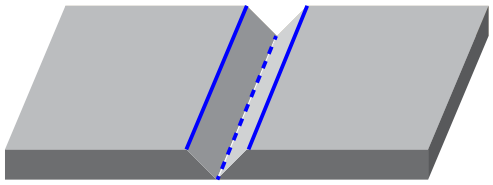
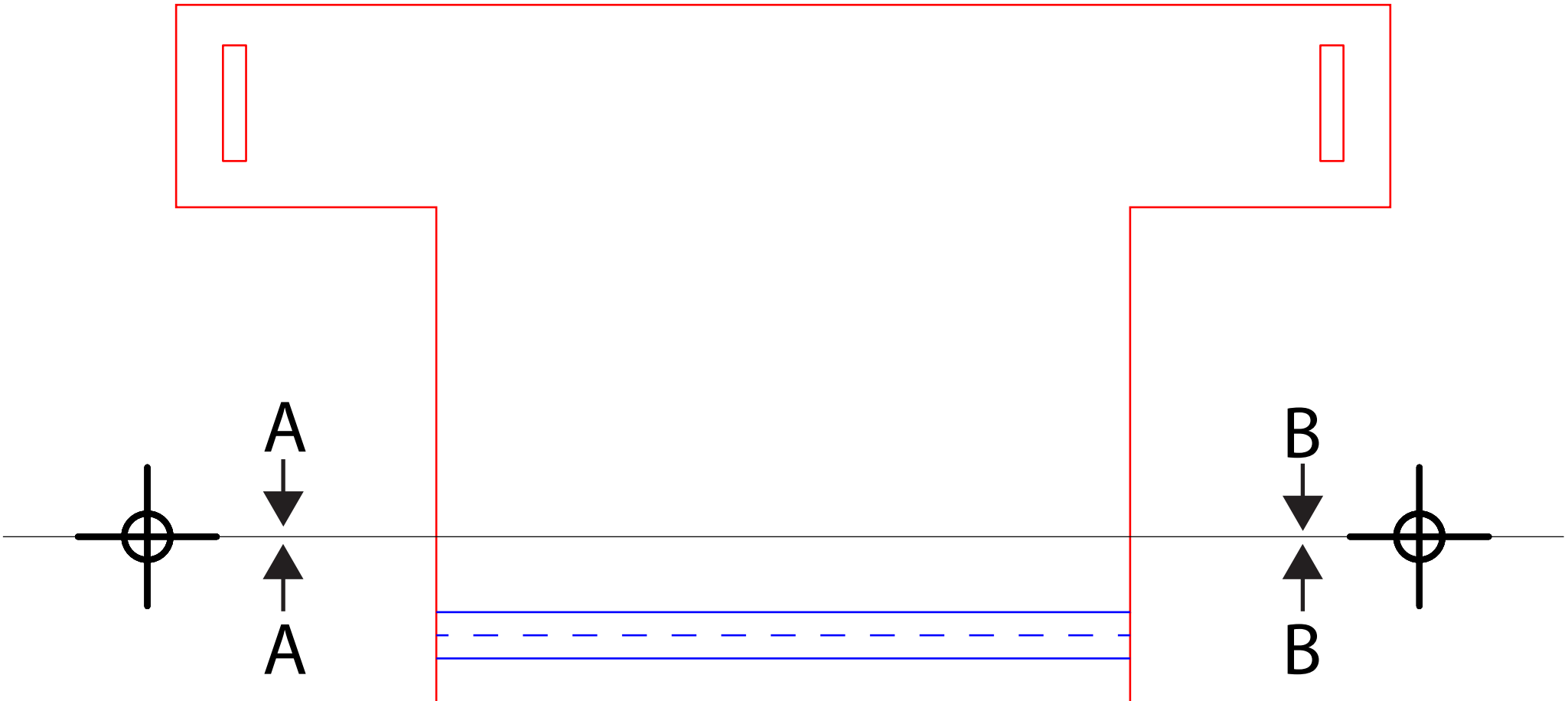
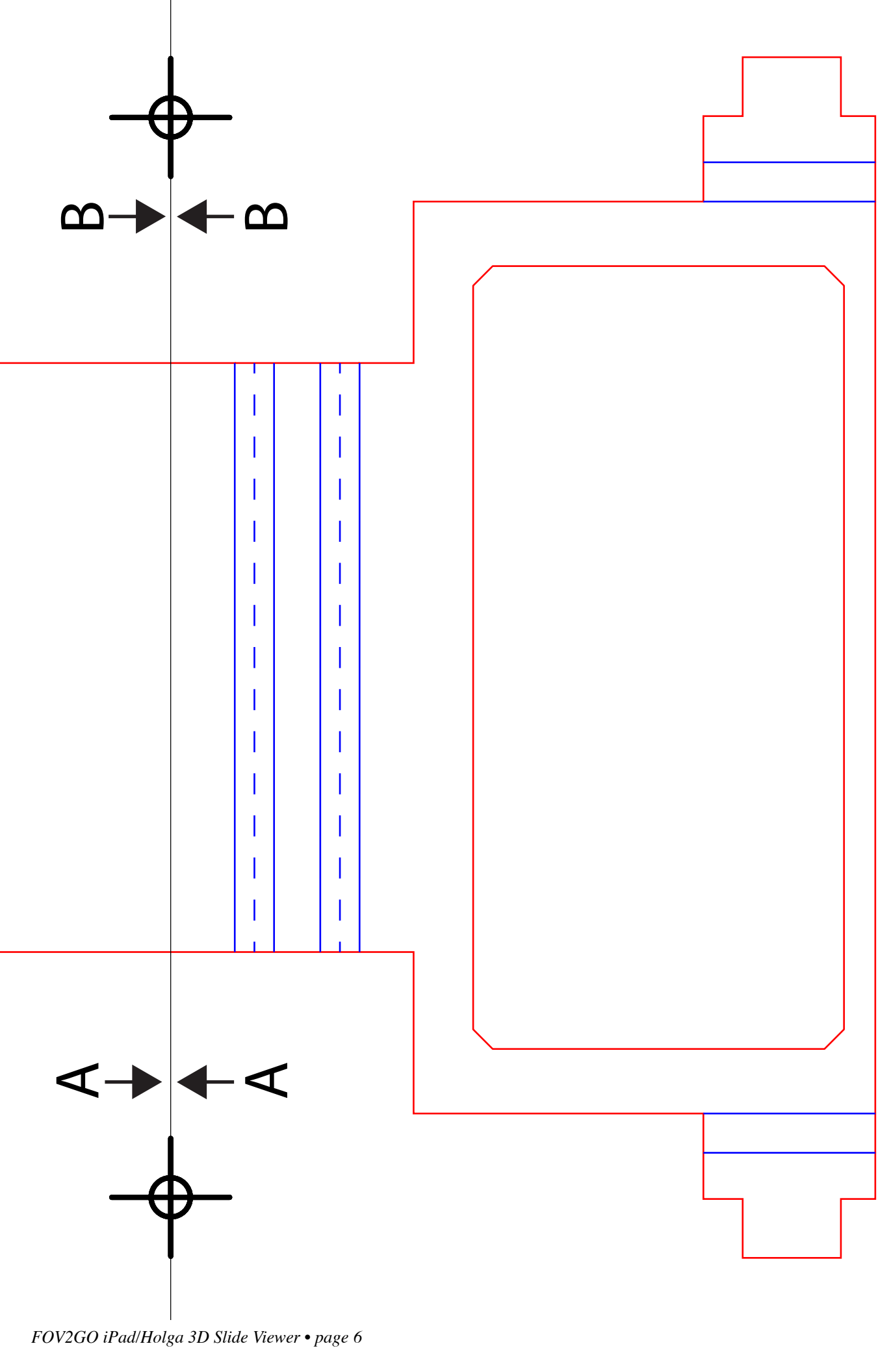
http://diy.mxrlab.com/



v-channel





design by Perry Hoberman for MxR Lab