How to make a FOV2GO Viewer for the iPad 3 out of a Holga 3D Slide/Print Collapsible Viewer

Revision 2: New & Improved Design!

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 collapsible slide/print viewer.**

Materials

- One Holga Stereo 3D Slide/Print Viewer Collapsible Viewer (available at: *http://www.freestylephoto.biz/290120-Holga-Stereo-3D-Slide-Print-Collapsible*)
- One letter-size (8 1/2 x 11) sheet of card stock or heavyweight paper (at least 10 mil)

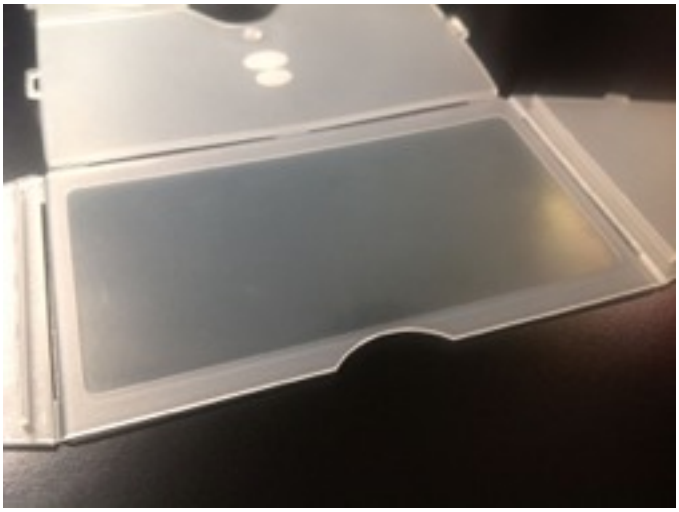
Materials (continued)

- doubled-sided tape (1/2" width)

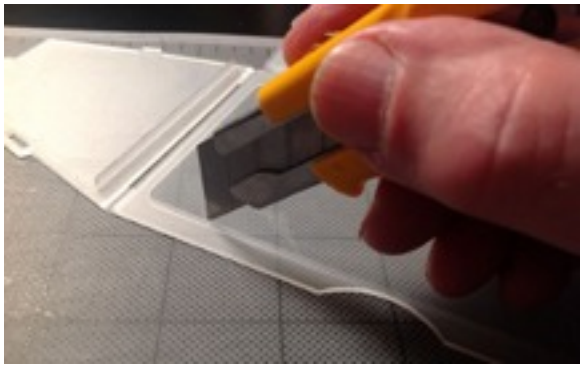
Tools

- Inkjet or laser printer
- Matte knife, steel straightedge & cutting surface

Remove the slide/print viewer from its box and unfold it flat, with the Holga 3DCV sticker facing down. We first need to remove the translucent backplate so that we can see the iPad screen through the lenses.

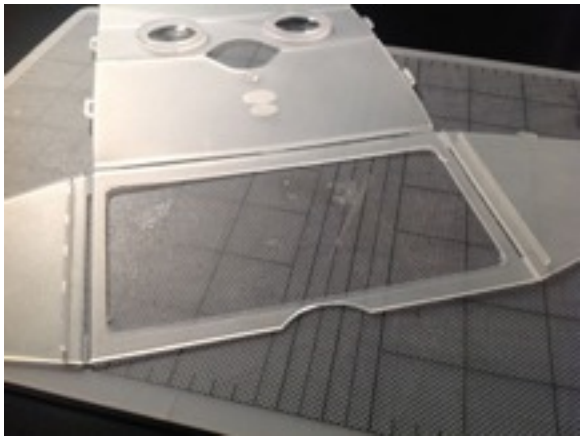


Notice that the backplate (the panel between the two wings) has an embossed rectangle with rounded corners. The side that has the ridge should be facing up.



With a matte knife, gently cut along the ridge. Don't press down at first; just lightly score the plastic. Be very careful; if you press down too hard, the knife will almost certainly slip along the plastic. As you come around the rectangle each time, you can press a little harder. It took me about ten times around the rectangle to cut it all the way through.

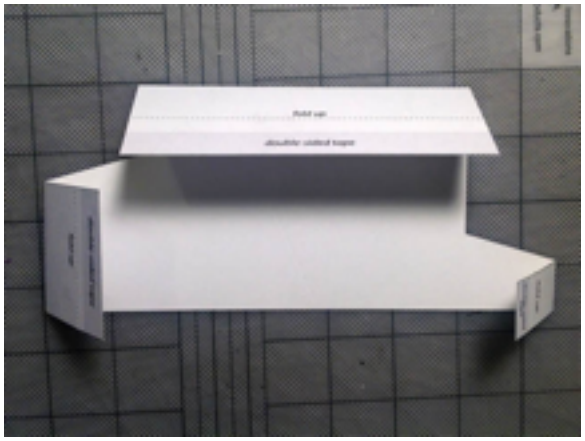
Be especially careful as you cut around the rounded corners, trying to stay as close to the ridge (but not overshooting it) as possible. Eventually you will cut all the way through the plastic and you will be able to snap the rectangle out of its frame.



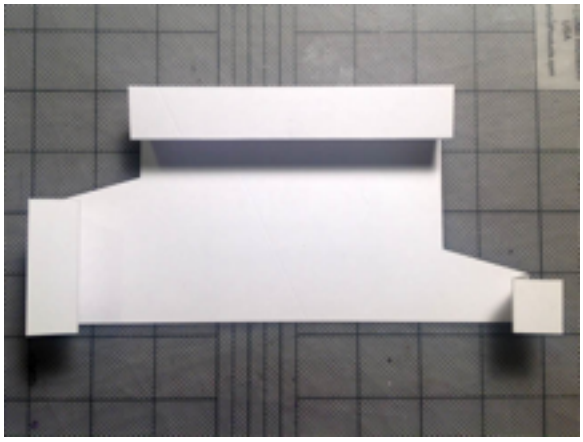
That's the only alteration that you have to do to the Holga viewer. The last page of this document contains a template for the FOV2GO viewer sleeve. Print it out onto a sheet of card stock or thick paper (at least 10 mil).

Cut along all the solid lines carefully. You could use scissors for this task, but the recommended method is to use a matte knife and a straightedge. Be careful not to overshoot any of the lines.

Score lightly along the six dotted lines. Make sure to use something that is pointed but blunt so that you score the line without breaking the surface. Here I'm using a common nail, but you can use a ballpoint pen.



Fold down along the three unlabled dotted lines.



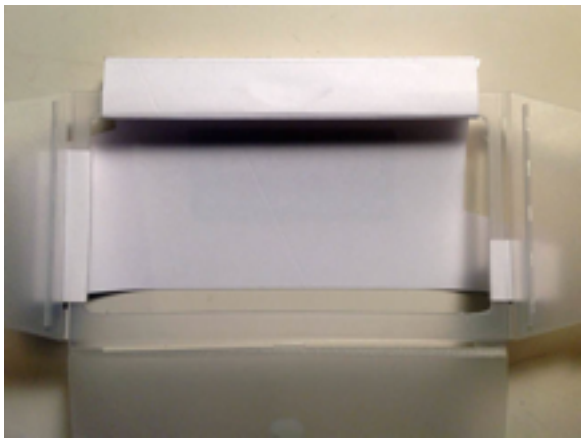
Fold up along the three dotted lines labled "fold up".

Put lengths of 1/2" double-sided tape along the three grey rectangles on the tabs.

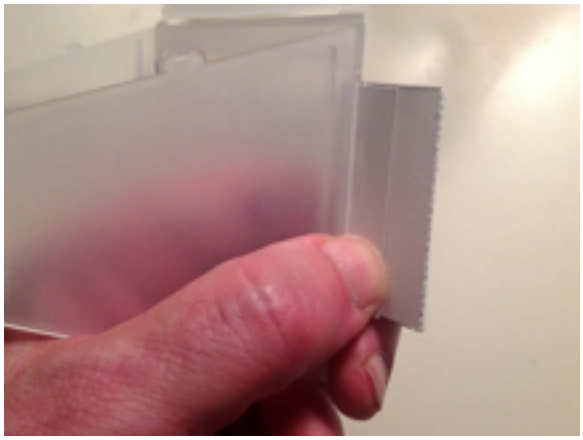
Place the Holga viewer on top of the paper, with the stickers facing down and with the backplate at the top. Line up the viewer so the top edge of the backplate cutout is directly under the lower fold on the long tab.

Make sure the tab is horizontally centered. Fold it up and press down hard to secure the tab with the double-sided tape.

Fold the paper back along the upper dotted line, and then fold the two side tabs in so that they poke out from the sides of the backplate cutout.



Feed the two side tabs into the narrow slits at the joints where the side flaps of the Holga viewer bend.



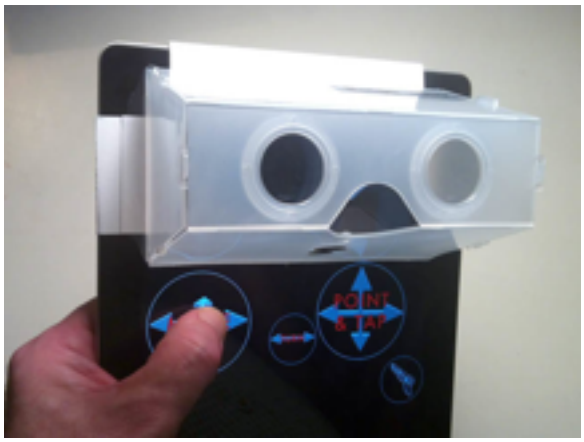
Make sure that the tabs are fit snugly against the edges of the backplate cutout, and press them down hard to secure the double-sided tape.

You're pretty much done. Now you can assemble the Holga viewer.

To assemble the Holga viewer, just follow the instructions that came with it. It's all pretty simple, just bending and fitting a few plastic tabs together.

Slide the paper sleeve over the top of your iPad. Important: use your thumb to squeeze a little bit of slack in the smaller paper loop so that it doesn't get caught on the volume or mute buttons.

The sleeve is designed to keep all buttons and the camera accessible and exposed.



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!

The Holga plastic viewer can be disassembled for easy transport and storage - just pop out the tabs and fold it aroound the paper sleeve (the side flaps can no longer be folded in, however).

The viewer is designed to be held with two hands, using your thumbs on the lower area of the screen for interaction.

One added benefit is that, because of the translucent plastic, this viewer looks spectacular when you use it in a dark room!

FOV2GO is a project of the MxR Lab at USC.

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

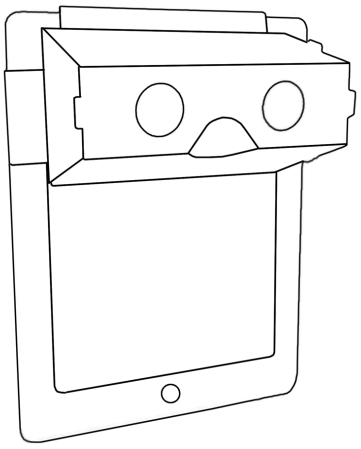
Thanks to USC Institute for Creative Technologies, USC School of Cinematic Arts, Microsoft Research, Fakespace Labs and Phasespace.

http://diy.mxrlab.com/

FOV2GO iPad Viewer Rev 2

for Holga Stereo 3D Slide/Print Viewer Collapsible Viewer 3DCV

cut on solid lines • fold on dotted lines
double-sided tape goes on grey rectangles



double-sided tape

fold up

fold down

FOV2GO

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double-sided tape

fold up

fold down

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design by Perry Hoberman for MxR Lab