How to make Google Cardboard

by **CpS2** on October 28, 2014

Table of Contents

Intro: How to make Google Cardboard

In this tutorial, you will learn how to make Google Cardboard out of just a piece of cardboard. With this you can play virtual reality or 3d games, take a tour, and much more. For this to work, you will just need an Android phone and a pair of lenses.
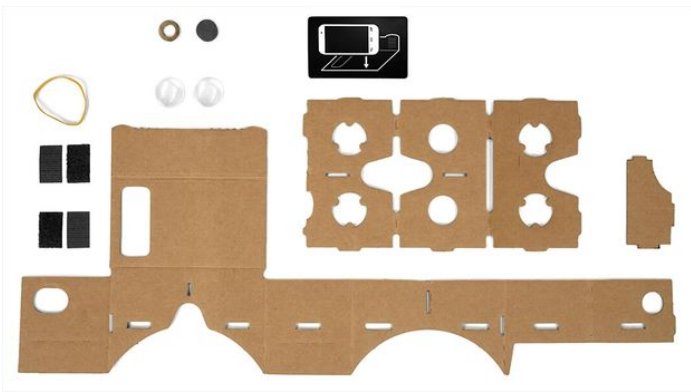

Step 1: Things you'll need

Here's what you need to get started:

1. Cardboard :- Corrugated cardboard sheet, preferably E Flute (corrugated cardboard comes in a variety of thicknesses called "flutes"), available at many art supply stores and online . For best results, you should look for strong, thin cardboard (sturdy shoe box rather than moving box). Minimum size: 8.75in (22cm) by 22in (56cm), and 0.06in (1.5mm) thickness.

2. Lenses :- This is the trickiest component. Lenses that have a 45mm focal distance might work. Biconvex lenses work best because they prevent distortion around the edges. We used the Durovis OpenDive Lens Kit available on Amazon.com

3. Magnets :- One neodymium ring magnet and one ceramic disk magnet - like this or this. Approximate size: 0.75in (19mm) diameter and 0.12in (3mm) thickness.

4. Velcro :- Two strips of regular strength adhesive-backed velcro. Approximate size: 0.75in (20mm) by 1.25in (30mm).

5. Rubber band :- One rubber band, to prevent the phone from sliding out. Minimum length of 3.2in (8cm).

6. NFC tag (optional) :- One sticker NFC tag. Program it with the URL cardboard://v1.0.0

7. You'll also need a ruler, glue, and scissors, an X-acto knife, or access to a laser cutter.(not included in the picture above)

Note that you'll find all of the above items on Amazon.com(Recommended)

Step 2: Desinging the VR viewer

Actually, you don't need to design it. The design files are officially already available here - (https://cardboard.withgoogle.com/downloads/cardboard_design_v1.0.zip).

Step 3: Making the VR Viewer

Now, follow the procedure below to make your own VR viewer :-

Firstly, open the .zip file downloaded from the website(on step 2) and double-click on cardboard.pdf file.

Secondly, print the template(cardboad.pdf) in colour by clicking File > Print in Adobe Reader or any other software.

Thirdly, glue the template onto a piece of cardboard(listed in step 1) and after drying, glue the light numbers on above of the dark ones.

Fourthly, cut out the cardboard along the black lines. Do not cut the 'RED' lines. Also cut the boxes with black line using a X-acto knife.

Step 4: Assembly-I

To assemble it, you've two choices :-

First, assemble as on http://g.co/cardboard.(Recommended)

Second, just follow me in the next step.

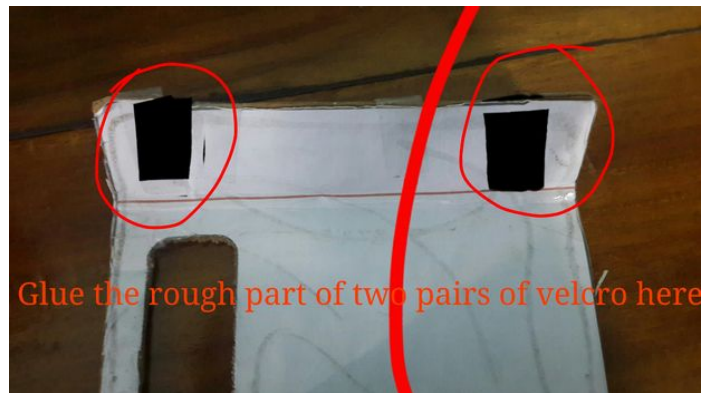## Step 5: Assembly-II

For the assembly,

First, fold along the red lines and also fold the lens part so that there'll be 3 layers od cardboard to make lens holder. But before folding affix two biconvex lens in it and then fold.

Second, attach the flaps of the cardboard into the boxes of the other cut earlier. It should look as shown in the picture.
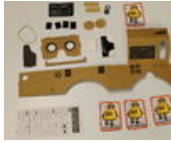
Third, firmly assemble it by following the folds. The picture is shown.

Fourth, affix the disk magnet using glue on the dotted circle with mirror image of ''Magnet'' written. After that, stick the ring magnet with the other on the reverse side.(Now, don't use glue to fix it.)

Now, your own Cardboard VR viewer is ready to use. To use it, you'll need to download Cardboard app from Google Play Store.

Affix the disk magnet here.

stick the ring magnet with the disk magnet here

Glue the rough part of two pairs of velcro here

Glue the soft part of two pairs of velcro here.

Related Instructables

DodoCase Virtual Reality Goggles Instructable by cbruck

Dodocase VR Tutorial (Instructables Build Night) by SoHa SMART

DIY Motorola Skip by sabas1080

DODO Case Intro @ TechShop in Chandler, AZ by Sevenjewel577

Make the DodoCase VR / Google Cardboard Switch Work - Samsung Galaxy S3 Phone by mazzmn

Blue LED Flashlight Mod by Deadly Computer

Comments

1 comments   **Add Comment**

CpS2 says: Oct 30, 2014. 9:12 PM **REPLY**

While making it I enjoyed very much and had a lot of fun. It is a very cool ptoject which can be made from just a piece of cardboard.