

AROUND THE MAKER WORKSHOP, BROUGHT TO YOU BY DREMEL

By John Edgar Park

» Custom-make a simple, brushed-aluminum iPad stand

My iPad deserves better than the ugly beige plastic cookbook holder I've been using to prop it up. Instead of splurging on an expensive pre-made one, I decided to build a one-of-a-kind brushed aluminum stand. A trip to my local hardware store yielded the channel aluminum, flat bar, and hardware fittings I'd need. Cutting, drilling, and finishing with my Dremel rotary tool made this beauty come together in a single afternoon. The iPad is very secure in this stand, thanks to the angles involved, and a bit of gravity. If you want to add additional grip, place two small adhesive rubber feet inside the front edge of the channel.

Directions

Step 1: Clamp the aluminum channel into your bench vise. Measure and mark a 10½" length (Figure A); this is just wide enough to accommodate the iPad in landscape mode, with enough clearance for the hardware fasteners. Put on your safety goggles. Using the metal cutting wheel on your rotary tool, carefully cut the aluminum channel to size (Figure B).

⚠ WARNING: It's always important to use safety goggles or safety glasses when operating any power tools. This project involves cutting metal, so all caution and common sense should be used.

Step 2: Use the grinding stone or a small file to smooth down the sharp edges where you made the cut in the aluminum channel (Figure C).

Step 3: Clamp, measure, and mark a 7" length of the aluminum flat bar. Use the metal cutting wheel to cut the bar. Repeat for a second 7" length. These will be the rear legs/supports for the stand.

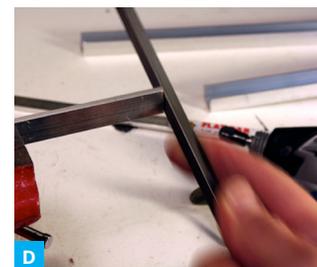
Again, use the grinding stone, or file (Figure D), to clean the flat bar edges.

Step 4: Next, you'll be drilling holes to attach the flat bar to the channel. Measure and mark two holes in the bottom of the



MATERIALS AND TOOLS

- » **4 1/64" x 1/2" x 1/16" aluminum channel** (you'll need a 10½" length)
- » **1/8" x 1/2" aluminum flat bar** (you'll need two 7" lengths)
- » **Two 1/4" x 1/2" bolts** with finish washers and hex nuts
- » **Dremel Rotary Tool** with metal cutting wheel, grinding stone, and wire brush
- » **Dremel WorkStation** or clamps and hand drill
- » **1/4" drill bit**
- » **Metal file**
- » **Ruler**
- » **Permanent marker**
- » **Bench vise**
- » **Safety goggles**



channel, each $\frac{3}{16}$ " from the open side edge and centered from front-to-back ($\frac{1}{4}$ " from either edge). Drill a $\frac{1}{4}$ " hole to accommodate your bolt (Figures E and F). I used the Dremel WorkStation (drill press accessory), starting with a $\frac{1}{8}$ " bit and moving up to a $\frac{1}{4}$ " bit on my drill press. Alternatively, you could clamp it and use a hand drill.

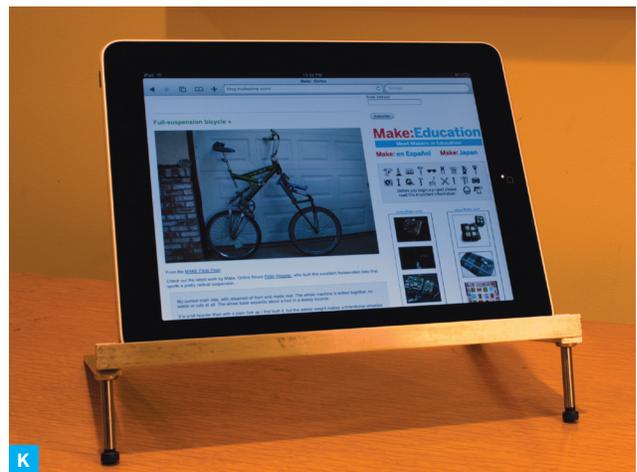
Step 5: Measure and mark a hole at one end of each flat bar (Figure G). I set each bar under the channel, aligned the edges, and marked the spot through each existing drill hole. Again, drill out a $\frac{1}{4}$ " hole in each flat bar leg (Figure H).

Step 6: Fit a washer onto one of the bolts (you may need an extra hex nut first, depending on the style of bolt you purchased). Feed the bolt through the flat bar hole and the channel hole. And finally, screw on the hex nut. Straighten the leg, then tighten the bolt using a small wrench and screwdriver or hex key, depending on your bolt (Figure I).

Repeat for the other flat bar leg.

Step 7: The stand is now assembled; time to style it up a bit. Switch to the wire brush on your rotary tool. Carefully brush the surface until it is uniformly matte finished (Figure J). Take your time and be careful not to gouge the aluminum.

Step 8: Use a damp cloth to wipe down the entire surface, then dry it. You may now set your iPad into the stand and admire your ultra-stylish handiwork (Figure K). You can use the stand for watching movies, as a picture frame, or for full-blown iPad workstation mode when coupled with a Bluetooth keyboard.



About the Author

John Edgar Park is the host of *Make:* television and a CG Supervisor at DisneyToon Studios. Find him online at jpixl.net.

Suggested Dremel Accessories

- » EZ456 EZ Lock Cut-off Wheel
- » EZ402 Mandrel
- » 932 Aluminum Oxide Grinding Stone
- » 428 Carbon Steel Brush
- » 2500-01 Dremel Multi-Vise