DIY Shoulder mount DSLR rig

All parts and tools found in Lowe's, Home Depot & Walmart.

CAUTION! Always observe safety practices in your work place. Use proper tools and protective gear for your hands and eyes.

By: Ted Ramasola www.ramasolaproductions.com





Do first the DIY basplate tutorial. I personally prefer to add a QR adapter to the baseplate for quick set ups. (refer to DIY baseplate and rods)



Then make the 2 handles attached to railblocks. (refer to DIY rig handles)



A shoulder pad is needed for comfort and also stability.(refer to the guide to make DIY shoulder pad)



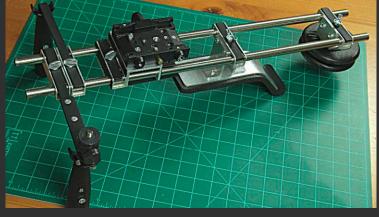
You'll need longer rods. I use 1/2" rods at 22" long. Tubes are available at 3' lengths at lowe's & home depot at either steel or aluminum.



For balance place counter weights at the rear of the rig. (refer to DIY counterweight for dslr rig)



On one of the handle bars you can attach an LCD monitor or an EVF.



For initial use you might have to slide around the components to till you get the right balance.

DIY Rig Handles

All parts and tools found in Lowe's, Home Depot.

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The handles I found cheaply at Lowe's or any home improvement store are paint rollers. Heat the metal holding the roller and you can slowly pull off the handle. I used my grinder to heat the metal part which softened the plastic handle. BE CARFUL WHEN DOING THIS.



Make 2 rail blocks excluding the steel flat bar clamp.
(Refer to separate guide to making a DIY rail block)



Cut two 12 inch long steel flat bar that is 1/2" wide, 1/8" thick. Bend the bar at 6.75" mark.

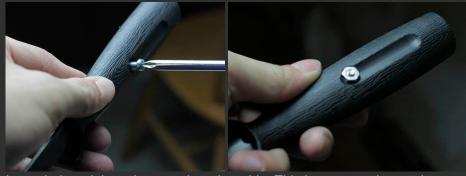




Taper the short end using a grinder and while its hot hammer it carefully into the handle. Leave about 1/2 inch of metal.



Drill carefully through the handle going through the metal bar inside the handle. The bit size I used is 5/32" since I $8-32 \times 34$ round head bolt with nut.



Insert bolt and thread nut on the other side. This is a precaution so the handle will not accidentally slip from the flat bar.



On the other end, drill a 1/4" hole 40mm from the end. This end becomes your metal clamp for the railblock. This holds down the rods in the railblock.



A 3/4" winged screw or thumb screw will hold the handle and the rail block together.



To add functionality to these handles I cut another piece of flat bar at 11cm long with a 1/4" hole on one end for holding any accessory. I riveted this piece to handle bar. I used 5/32"-6mm long rivets spaced 3cm apart.



Together with the baseplate and rods you can now configure the rig for hand held shooting, for tight spaces, run and gun, and with the addition of a shoulder pad and counterweight configure your camera for shoulder mounted shooting.

Go to the link on DIY shoulder mounted rig to see how its made.

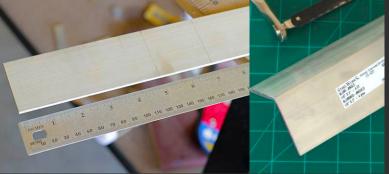
DIY Shoulder pad for DSLR rig

All parts and tools found in Lowe's, Home Depot & Walmart.





1st make 1 rail block.



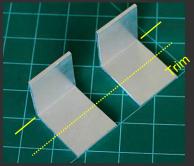
We'll need an 8" long 1/8" thick 2" wide aluminum bar. You can cut this from a 2" angled aluminum or if your budget permits, you can get a 2" wide 1/8" thick bar.

Using a pipe and piece of wood I bent this down at around the 5" mark for 45 to 50 degrees.





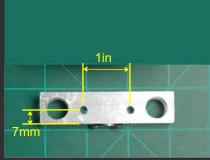
Here's how it looks like after bending. Lets call this the plate for the cushion.



Cut 2 pcs from the 2" angled aluminum. At 4cm wide. Cut off about 1" from 1 side of each. These are your 2 L-brackets.



Drill 4 holes on each bracket. 2 on each end 1" apart. Use 5/32" drill bit for the holes.



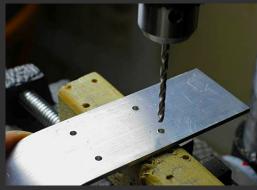
On your rail block, drill 2 holes on each side aligned with the holes on the brackets.



Rivet the L-brackets to the rail block using 5/32" rivets.



Mark the cushion plate for drilling using the holes of the bracket as your guide.



Drill using 5/32" bit.



On the underside of the plate, widen the entry holes using a 5/16" bit so the rivet heads will be sunk and flushed. Fasten the brackets using 5/32" rivets.



For my cushion I used a "cup cozy" drink holder. Remove the bottom. Cut on the side and straighten out.



Trace the area that will come in contact with the plate. Cut around the cup cozy material leaving a 1/2 cm "margin" around the plate.



Using contact cement, glue the "cup cozy" cushion to the plate.



Finished shoulder pad. Don't forget to file the edges to prevent injury.

DIY Counterweight for a DSLR rigAll parts and tools found in Lowe's, Home Depot & Dick's.

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Make 1 rail block. from 2" wide 1/8" thick aluminum angle bar.



efer to separate 1 pc 5/8" hex bolt, 3 nuts. Cut 40cm piece 3 pcs 5/8" washers 1 3/4" in diameter.



Using a 3/4" hole cutter bit, I cut a hole on one side of the angle bar then trimmed off 1/4" from one side. I drilled 2 holes through the short side and through the rail block.



Put the bolt with a washer through the hole.



On the other side, another washer then securely tighten with a nut.



Add another nut to the bolt



Attach the angular bar to the rail block using 2 bolts as shown.



For added safety I used 2 nuts per bolt placing them as shown.



Insert standard dumbell weights as



Secure with a washer and nut. If the weights are loose you need to add a thick material similar to the cushion used in the shoulder pad.



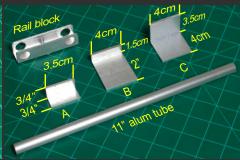
Finished counterweight attached to the rails of the rig.

DIY Chest Pad Support for DSLR rig All parts and tools found in Lowe's, Home Depot & Walmart.

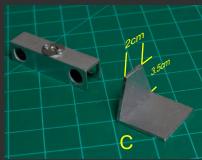
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Do first the DIY basplate, and DIY Shoulder pad tutorial. Then make 1 DIY Railblock.



With the finished rail block cut 3 pcs of angled aluminum. 1/8" thick.(A,B,C) An 11" long 1/2" round aluminum tube, same one we use for or DIY rod/rail rig.



Taper the 3.5cm side of part C. From a width of 4cm to 2cm.



Drill 2 holes on the rail block and the tapered side of part C for rivets. Space the holes to avoid blocking the rail rods when inserted into



Use 1/4" bit to drill on center of the 4cm side of part C. Drill 2 holes on side to rivet a tee nut. Widen the entry hole with 1/4" bit to sink the rivet heads.



Rivet part C to the rail block.



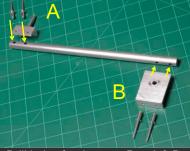
Rivet the teenut to part C. Round off the edge using a grinder or file.



Drill a 1/4" hole to fit a 1/4-20 hex head bolt 1.5" long.



Drill the hole in a way that one side of the hex head is flat against the side of the angle bar to prevent it from twisting.



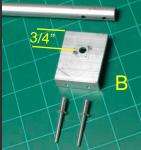
Drill holes for rivets on Part A & B and the 11" rod. See photo above for reference on hole positions.



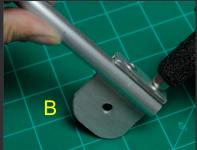
Close up view of part A riveted to rod.



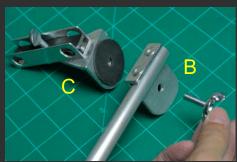
Close up view of part A riveted to rod.



Close up view of part B and the 1/4" hole at the center, 3/4" from the edge.



Round the edge of part B using a grinder and a file, then rivet to the rod as shown.



Place a rubber washer between part C and B then fasten with a 3/4" 1/4-20 winged screw.



Drill a 1/4" hole on the support brackets of the shoulder pad.



Insert the bolt of part A to the hole of the shoulder pad bracket.
Fasten with a winged nut.



Finished chest support.



Chest support attached to DIY baseplate.