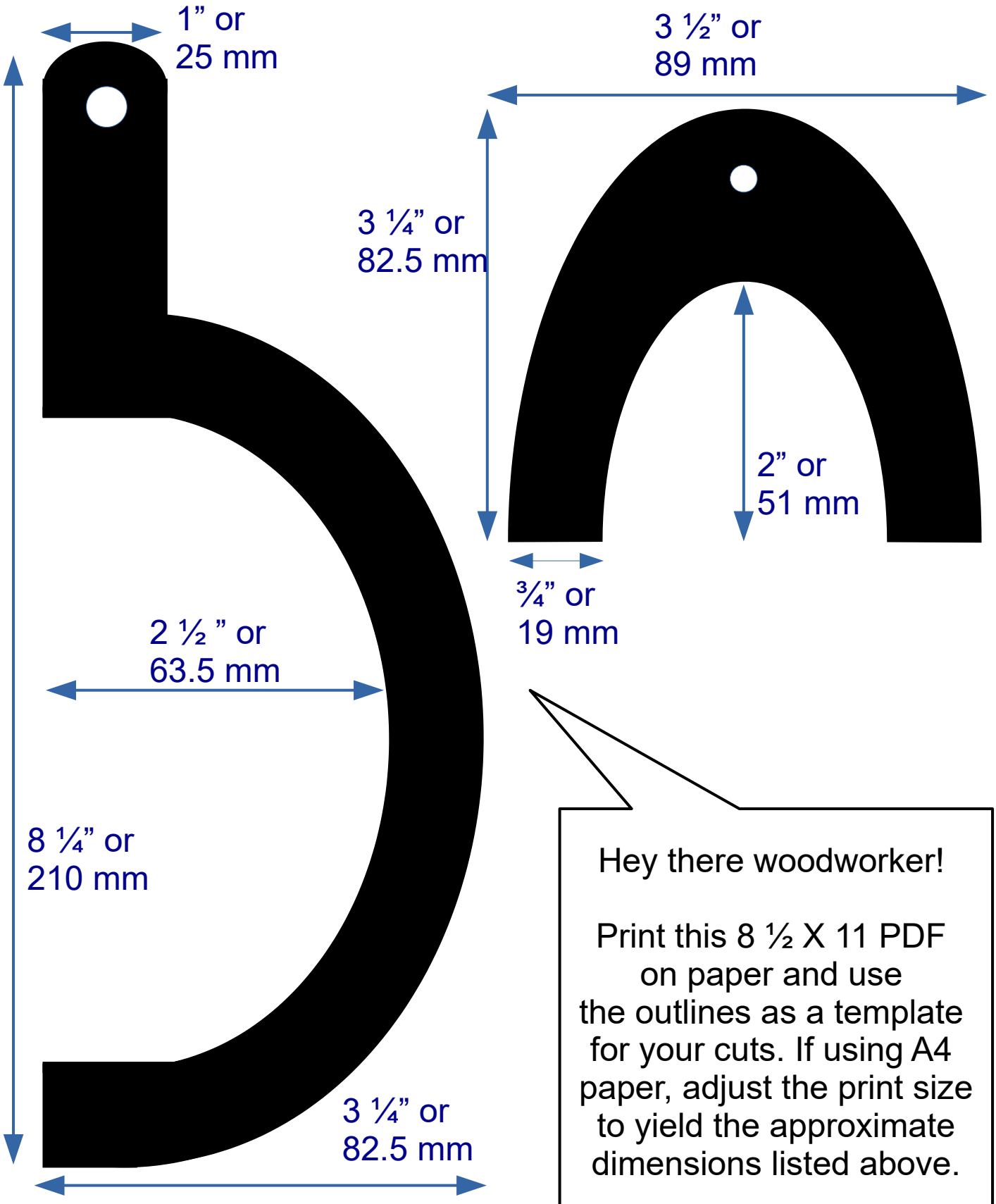


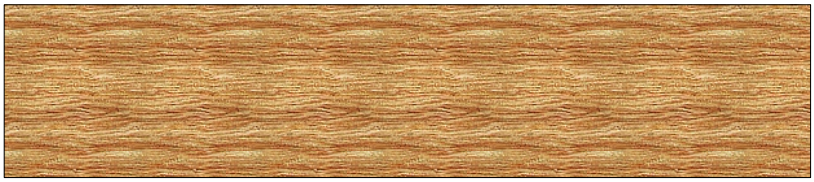
Hey there woodworker!

Print this 8 ½ X 11 PDF on paper and use the outlines as a template for your cuts. If using A4 paper, adjust the print size to yield the approximate dimensions listed above.

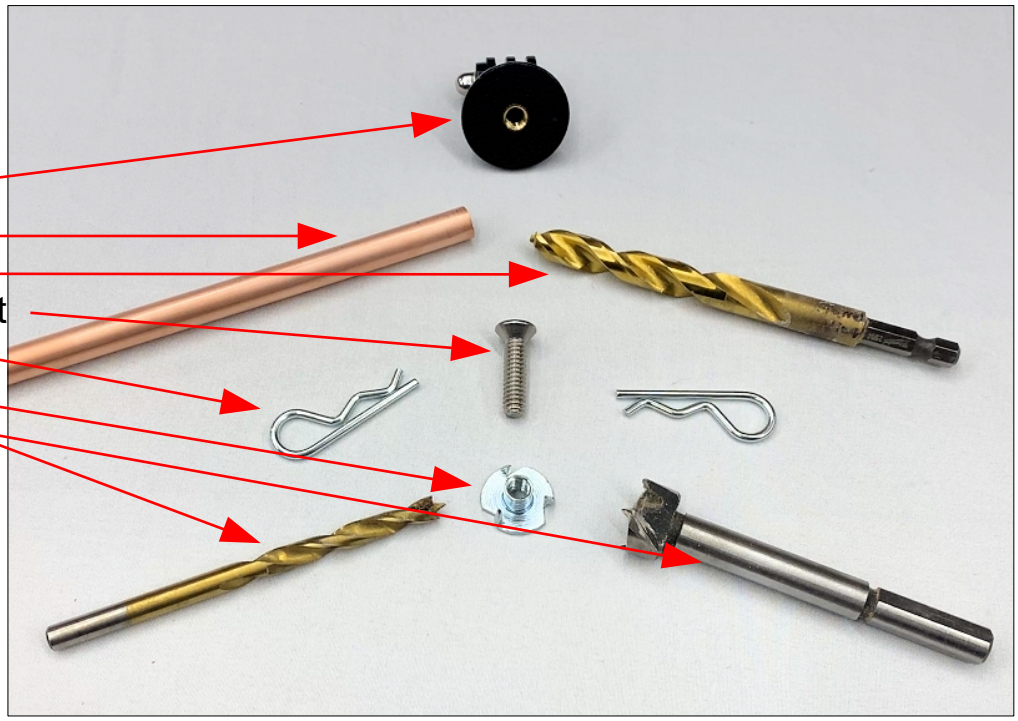
Project Pieces and Parts:

Small 1X4 hardwood board like oak or maple, 12 inches in length. DO NOT use soft woods like pine or poplar.

Actual board width = 3 ½ inches.



- Your camera mount
- ¼ inch copper tube
- Drill bit for tube
- ¼ X 20 mounting bolt
- Small cotter pins
- ¼ X 20 T-Nut
- Drill bits for T-Nut



TOOLS NEEDED:

- Band saw / scroll saw or jig saw to make these curved cuts
- Drill and/or drill press
- Sanding tools or sanding block with sandpaper

Project Steps:

STEP 1: Source a piece of hardwood like oak or maple at least ¾ inch thick and at least 12 inches long by 3 ½ inches wide. You'll also need the copper tube and T-Nut listed on page 2, as well as camera mounting bolt and necessary drill bits.

STEP 2: Size and print the graphics on page 1 so that the shapes closely match the measured dimensions of the two wooden pieces.

STEP3: Carefully cut out the wooden shapes on the band saw or with a jig saw where the wood is securely attached to a work table. Sand the rough cut shapes to a smooth finish.

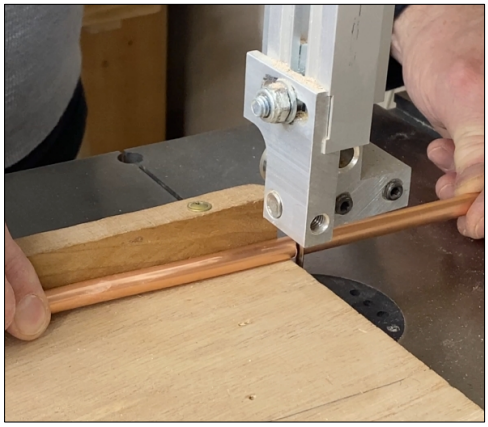
STEP 4: At the top center of the "U" shaped wood block, select a Forstner or paddle bit that will drill a hole just wide enough for the T-Nut to fit. Drill about halfway through the thickness of the wood. Stop, and change out the drill bit for a smaller size that will fit the threaded collar of the T-Nut – go to step 5.

STEP 5: With the smaller drill bit, center the bit into the larger hole and finish drilling the smaller hole completely through the block. This will allow the collar of the T-Nut to fit through the hole and mount flush to the bottom side of the block. Check the depth of the smaller hole to see if it matches the depth of the bolt collar and drill out more material with the larger forstner bit if needed.

Project Steps:

STEP 6: Measure the outer diameter of your ¼ inch copper tube and select a drill bit that is just slightly wider than the tube. It should be a snug fit, but still allow for the tube to turn freely inside the drilled hole. Carefully drill through the two forks of your “U” shaped block so that the copper tube will be centered on the thickness of the block and straight through the forks. This is your pivot point for the gimbal.

STEP 7: With the same drill bit, make a hole through the middle of the larger curved block at the top of the straight piece. This is your alignment hole for the copper tube as it passes through the U shaped forks. Make sure to drill your hole straight down through the wood to ensure a straight pivot alignment with the forks. A drill press works best here. See the video for more detail on these drilling steps.



STEP 8: With a hack saw or metal cutting blade on a jig saw or band saw, cut a 5 inch length of your ¼ inch copper tube. This was a 24 inch piece of tube purchased at my local home center for less than $4.

STEP 9: Using your 2 cottar pins as a reference, select a smaller drill bit that the cottar pin will fit into. Carefully drill a hole through the center of the copper tube at both ends for those locking pins.

Project Steps:

STEP 10: To mount the camera or the camera receiving nut, you'll also need to drill in a ¼ inch hole on the bottom/middle of the curved block as seen in the video. This is the flat mount point on the inside of the curve where your camera will attach to the gimbal. A standard ¼ inch X 20 thread per inch bolt about an inch long will work well, fitting through the bottom of the curve and attaching to the camera mount on the inside of the curve.

STEP 11: Assembly! As shown in the picture to the right, the U shaped fork attaches to the C channel gimbal with your copper tube, secured on each side by cottar pins. Camera mounts to the inside of the "C" channel and the extended monopod or "selfie stick" will thread into the T-Nut on the U shaped fork.

FINISHING: While this is really a photo and video tool and doesn't really need a furniture finish, a little butcherblock or Danish oil sealer will help seal the wood. It's really your choice on how you choose to stain or finish your gimbal but I'm pretty sure you will enjoy using it no matter how it looks!

SAFETY:

PLEASE, read and follow all safety and usage instructions for any tool you use on this or any woodworking project. Always wear the appropriate protective equipment to protect yourself from injury and use proper ventilation with certain wood finishes.

While this is a pretty simple woodworking project, if you are uncomfortable with using power tools or any of the steps shown in the build video, please reach out to a friend or family member who uses these tools and ask for help. With only a few cuts and drilled holes, this project can be knocked out in a couple hours or less. Stay safe, have fun and create some cool video shots with your new DIY gimbal!