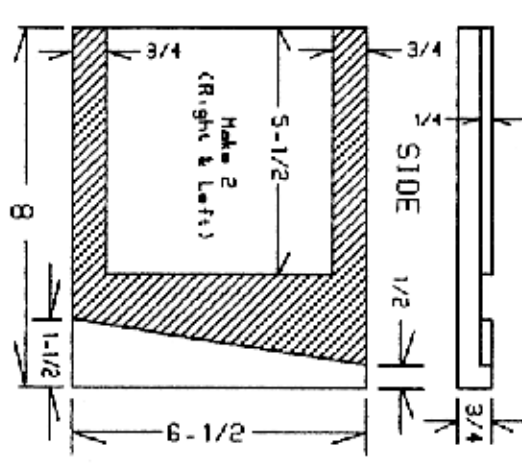
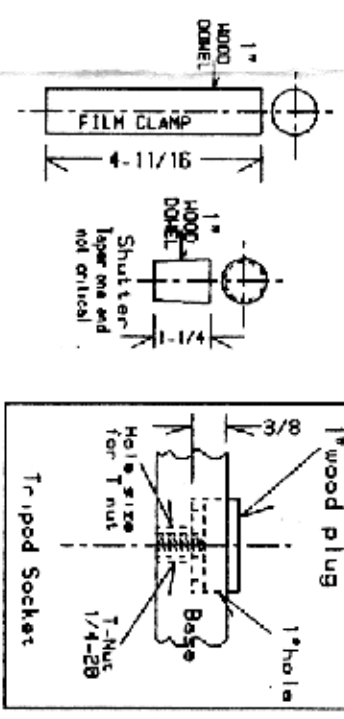
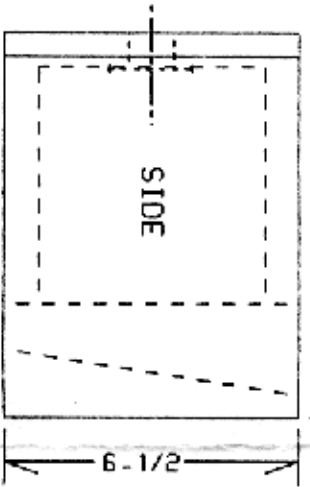
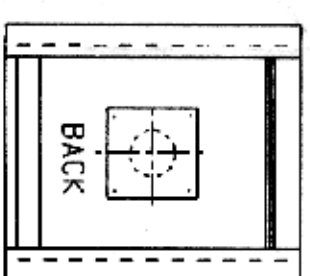
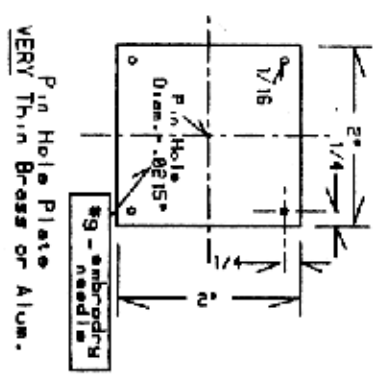
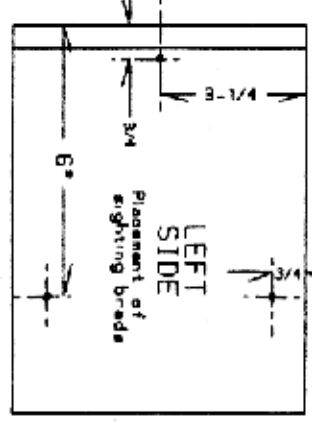
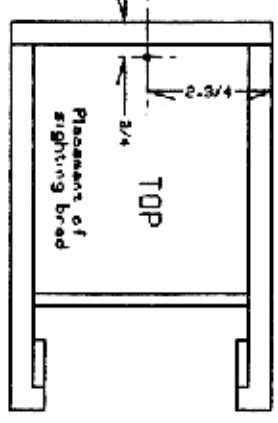
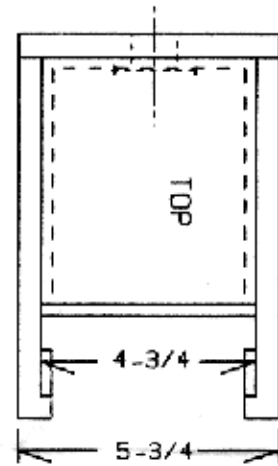


Detail



NOTE:
All wood is 3/4 unless noted.
Route out all shaded areas.
All routing is 1/4 inch deep.



4x5 Pin Hole Camera
Designed & Drawn by: 2/17/92
ROGER FODTE
18302 Exodus Ct.,
Farmington, Mn. 55024
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ALL DIMENSIONS ARE IN INCHES.

Materials List for 4x5 Pin Hole Camera:

1. 1 - 1" x 8" x 36" clear wood board (type of your choice) NOT plywood
2. 1 - 1" x 8" hard wood dowel
3. 1 - 1/4" x 20 "T" nut used for tripod socket.
Note: If you want to add another tripod socket, then add another "T" nut. If you do not wish to have a tripod socket on the camera, then omit the "T" nut.
4. 1 - 2" x 2" very thin brass or aluminum shim stock for the Pin Hole.
Note: An aluminum pop can or a beer can works well.
5. 4 small round head brass nails for sighting pins.
6. Wood glue, 1" wire nails, wood putty, flat black paint, wood stain, varnish or finish of your choice.
7. 4x5 film holder (Needed for taking pictures and to check sizing on assembly of cameras.)
8. 4x5 Film for pictures (medium speed black & white or color film of your choice)
9. 4 small wood screws or black masking tape used to fasten the pin hole to the camera.

Recommended Tools List for Pin Hole Camera:

1. Table saw or Radial Arm saw
2. Drill press or hand drill
3. Router with 3/4" flat router bit
4. 1" wood drill or spade bit
5. 5/16" wood drill
6. Small hammer
7. Nail set
8. #9 embroidery needle or a .0215" drill for pin hole
9. Small fine flat file to hone pin hole
10. Power Sander or a Sanding Block with sandpaper (course, medium and fine)
11. Paint brush for finishing
12. Wood chisel (if you don't have a router)
13. Black permanent magic marker to color shim stock used in pin hole.
14. Good accurate ruler
15. Pencil

Follow these steps in building your Pin Hole Camera:

1. Watch the video first.
2. Cut out all the pieces of the camera. Lay out the parts with the long dimension following the wood grain. Remember to make two sides. One left. One Right. Do not route out wood yet. You may make the notches in the top and bottom now.
3. Cut out the three wood dowel parts now. The Film Clamp, Shutter and Wood Plug for the tripod socket.
4. Bore all holes and mount "T" nut for tripod socket. Glue the Wood Plug over the "T" nut now. This closes off the hole in the "T" nut, and makes the camera light tight.
5. Route out the Front and two Sides now. Remember to make a Left and a Right side. These should be a mirror image of each other. If in doubt watch the video.
6. Make a trial fit of all parts and use your 4x5 film holder to make sure all parts fit as they should. If they don't, correct the parts by re-routing the parts or re-making the parts. Use files, sandpaper and chisel if needed.
7. When all parts fit, sand all the parts and paint the inside side of the parts with flat black paint BEFORE final assembly.
8. After the parts are dry, glue and nail all parts together. To make sure fit is correct, use your 4x5 film holder to check fit as you assemble camera. Use wood filler putty to fill all cracks

and make the camera good and light light. Remember, the only hole you want in the camera when you are taking your pictures is the pin hole lens.

9. Sand all the wood parts smooth and finish the outside the way you wish. Use stain, paint or varnish any way you choose, just make your camera the way you like it.

10. While the outside is drying, you may make the pin hole lens now. Just watch the video tape and work carefully. This is the eyes of the camera. The more care you take the better the photos. Pin hole photos are never "sharp" but have a clear soft look that a glass lens can not give. The look is very different. Use a black magic marker and color both sides of the pin hole lens you just made. Make sure it is all colored black so it doesn't reflect stray light.

11. After all is dry and the pin hole is made you may mount the pin hole in the inside of the camera now. Use small nails, screws, or black masking tape. Just center the pin hole in the large 1" hole in the front of the camera. If it's not dead center, don't worry it won't matter much in the end result.

12. Use round head brass nails to put in the sight points now. This is the pin hole cameras viewfinder. Just sight over the top of the brass nails to align the camera view. It's very accurate.

13. Paint Shutter Plug black, and give the Film Clamp a good coat of varnish or paint it black also. Take candle wax and rub in the area on the camera back where the 4x5 film holder goes. This makes the film holder ride smoothly over the wood and it will not bind while changing holders.

14. Remember to always use a strong tripod or some other firm base for the camera when taking photos with the pin hole camera. All photos taken with the camera are lime exposures. Do not jar the camera while taking photos. The wind is the worst enemy of pin hole photography. A good starting point for exposures with ASA 100 film is around 10 seconds in bright sun. You must test your own camera and find what works best for you.

Pin Hole photography is a very basic and different form of photography then you are used to. You must think if the photograph you are creating not of the equipment. I don't believe you can get a bad picture with a pin hole camera. The exposure is not that critical. You are dealing in a different time frame with this type of camera. The difference in a 10 to 25 second exposure is less than one f stop and the difference in 25 and 60 seconds is again less than one f stop. Resposssity factor is working here in the films. In a regular camera and a modern high speed lens, these limes are equivalent to 1/125 sec. to 1/60 sec. and 1/60 sec. to 1/30 sec. not much time difference. So if you are off on your times a small amount it just won't show in the final photo. You are dealing in a very different time frame and you are not freezing motion. Motion is a blur, even very slow motion. Fast moving objects just don't show up in the film.

Have fun with your new Pin Hole camera and enjoy a different form of photography.