



The Homemade Trail Camera Project

STEP-by-STEP Instructions w/ Pictures

Revised 1/18/04

These instructions illustrate one of many ways to assemble a homemade trail camera. This information is intended as educational only, and does not constitute the only way to complete a homemade trail camera. Many alternate methods and ideas can be found by search and questions within the [forum](#).

Trail Camera Components

- (1) Metal First Aid Kit w/ Shelf
- (1) Foam Block
- (1) 1/8" Camo Rope
- (1) Rope Ratchet
- (1) Step-Up Ring (36 to 37mm)
- (1) UV Filter (37mm)
- (2) Rope Loops
- (1) Desiccant Pack
- (1) Exterior Label Sheet
- (1) [Assembled X10 Kit](#)
- (1) SPST Toggle Switch w/ Boot
- (1) 1" Glass Circles
- (1) 1 1/2" Glass Circle
- (1) [Modified Owl PF Date 35mm Camera](#)



Homemade Trail Camera Assembly Instructions:

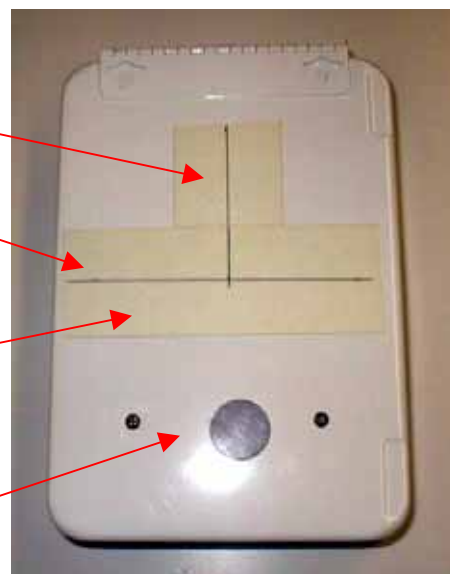
These instructions are for a finished trail camera with the camera facing out the back of the enclosure. **Red** items listed within the assembly instructions are not included in the Trail Camera Component list.

Metal First Aid Kit w/ Shelf Modifications:

- Measure and draw the centerline (vertical line) of the Metal First Aid Kit.
- Measure and draw the shelf line (horizontal line) to match the shelf location inside the Metal First Aid Kit.

NOTE: Use **masking tape** to draw the lines onto the Metal First Aid Kit.

NOTE: The X10 Kit is installed per [instructions](#).

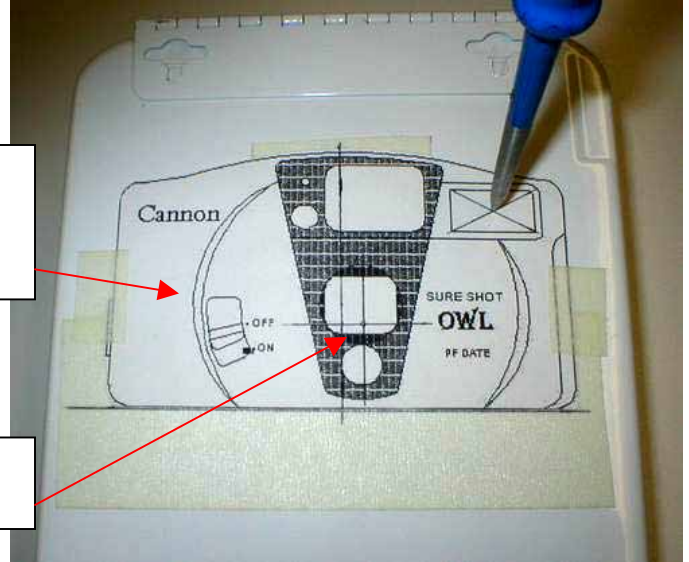


- Cut out the *ArkansasElkHunter CAD drawing of the Owl PF Camera and tape the drawing to the Metal First Aid Kit using the shelf line as the bottom of the camera and the centerline as the center of the camera.

NOTE: The CAD drawing needs to equal the size of the actual camera. Use the ruler provided with the drawing to enlarge the drawing to the actual size of the camera.

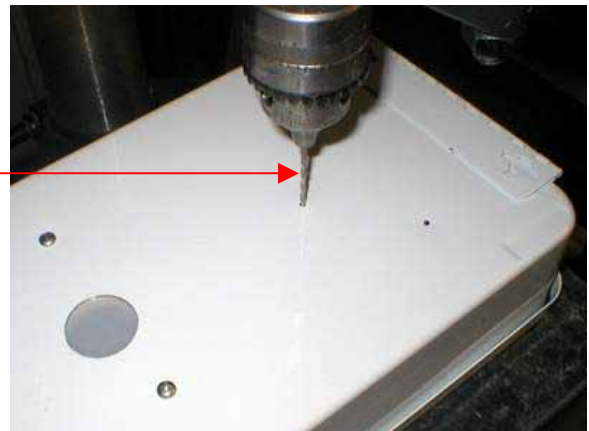
- Center punch the Shutter, AF Emitter, and Flash locations on the CAD drawing.

NOTE: The center punch for the Shutter hole is centered between the Shutter and the AF Sensor.

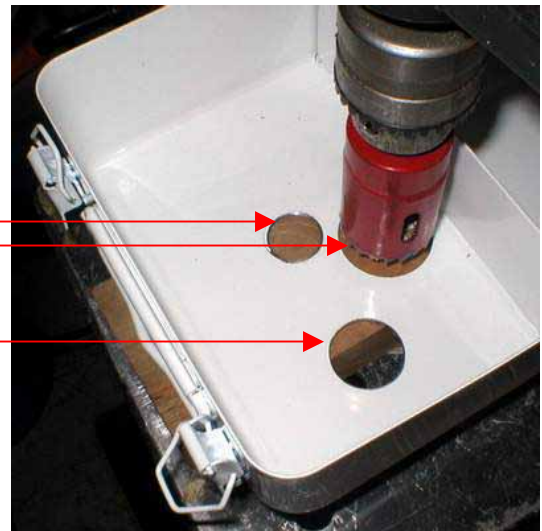


*CREDITS: Thank you to [ArkansasElkHunter](#) for the [CAD Drawing of the Owl PF Camera](#).

- Remove the CAD Drawing and save. Remove the masking tape. Drill the center punch marks w/ 1/16" metal drill bit.



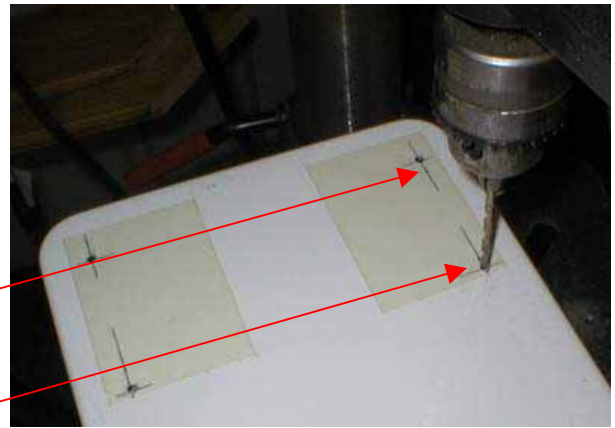
- Drill the AF Emitter hole to 3/4" diameter.
- Drill the Shutter hole to 13/8" diameter.
- Drill the Flash hole to 1" diameter.



NOTE: Drill the holes from inside the enclosure to prevent burrs on the inside edge of the holes. Drill into a wood block to protect the hole saw teeth.

- Flip the Metal First Aid Kit so the cover is up and the hinge of the cover is on the bottom.
- Measure and draw the hole locations for the Rope Loops on the top of the cover.

NOTE: Draw the holes at least 3/4" in from the edges to avoid the rubber seal gasket located inside the cover of the First Aid Kit.

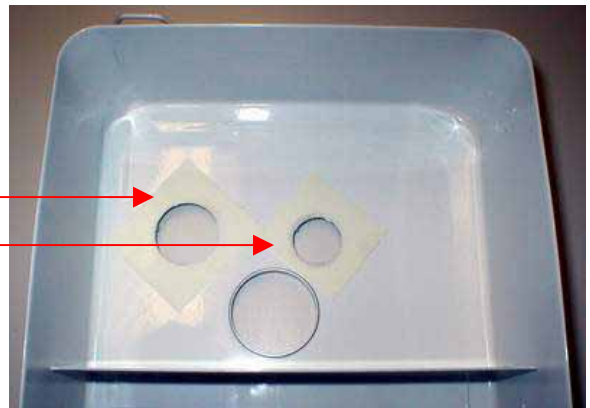


- **Center punch** the marks and **drill** the holes to 9/64" diameter.

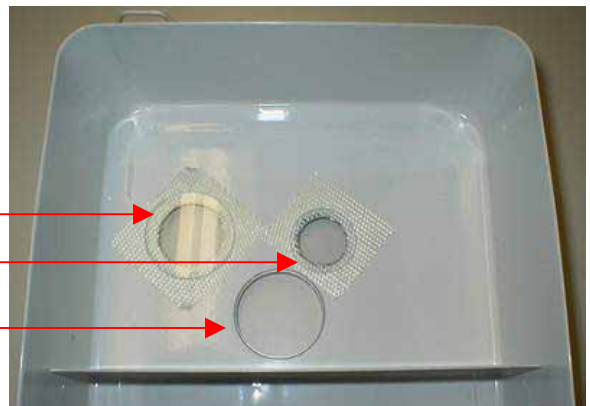


- Attach the Rope Loops with (4) 6-32 by 3/8" machine screws and (4) 6-32 stop nuts.

- Apply **Heavy-Duty Carpet Tape** over the Flash and AF Emitter holes and cut out the center circle of tape.



- Remove top linear of tape and center position the 1" Glass Circle over the AF Emitter hole and the 1 1/2" Glass Circle over the Flash hole.
- Snap the Step-Up Ring into the Shutter hole.



- Cut around the Glass Circles with an **Exacto Knife** and remove the excess carpet tape.



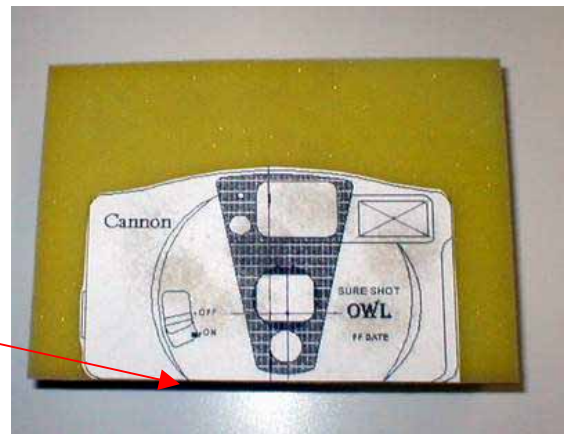
- Seal around the edge of the Glass Circles and Step-Up Ring with a **glass-metal adhesive** of choice.

NOTE: **Weldbond**, **Goop**, or **JB Weld** has been used for sealing the glass and bonding the Step-Up Ring to the metal enclosure. Thoroughly clean the area with **Acetone** before applying adhesive.

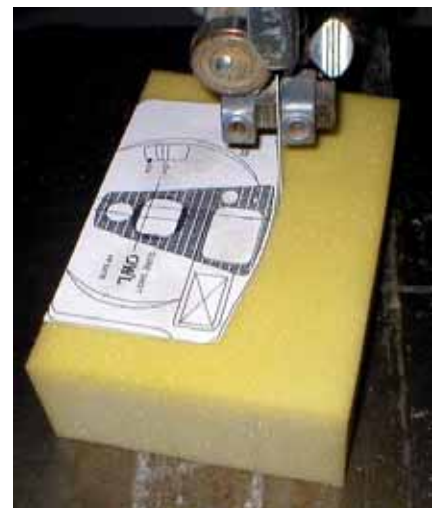


Foam Block Modifications:

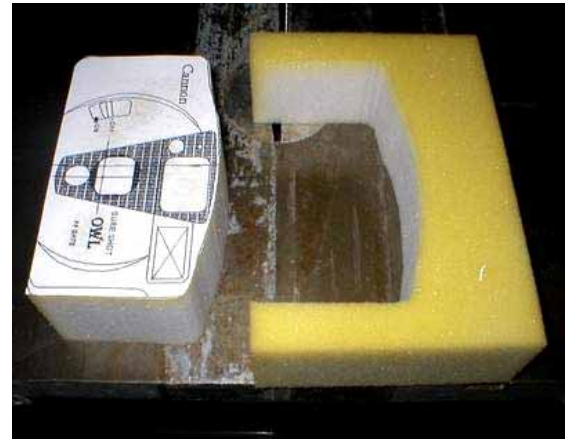
- Relocate the **CAD drawing of the Owl PF camera** and apply **spray adhesive** to the back of the drawing.
- Center position the **CAD drawing** onto the Foam Block using the bottom horizontal edge of the Foam Block matched to the bottom line of the Owl PF outline.



- **Band saw** the Foam Block using the outline of the Owl PF camera of the **CAD drawing** as a guide.



- Remove the cut out section from the Foam Block.



- Round corner the upper corners of the Foam Block to match the round corners of the Metal First Aid Kit.



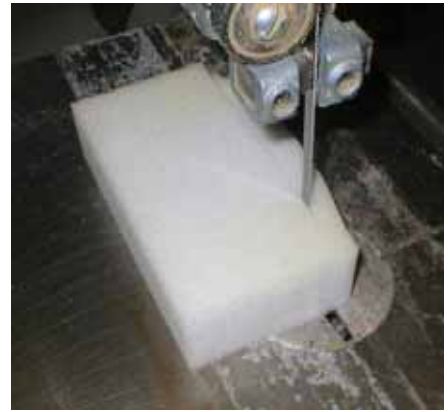
- **Band saw** the cut out section of the Foam Block lengthwise and 90 degrees to the first cut at a thickness of 3/4".



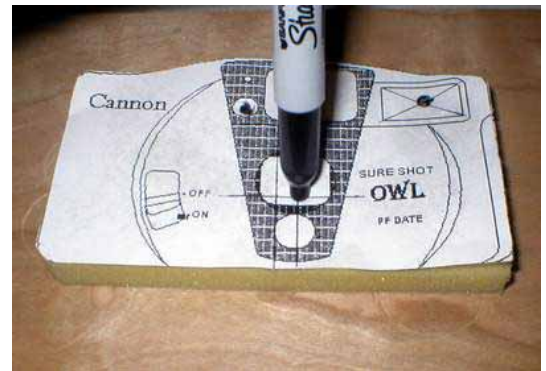
- Cut off two total slices at the same thickness for use as a Flash and Shutter Seal within the trail camera.



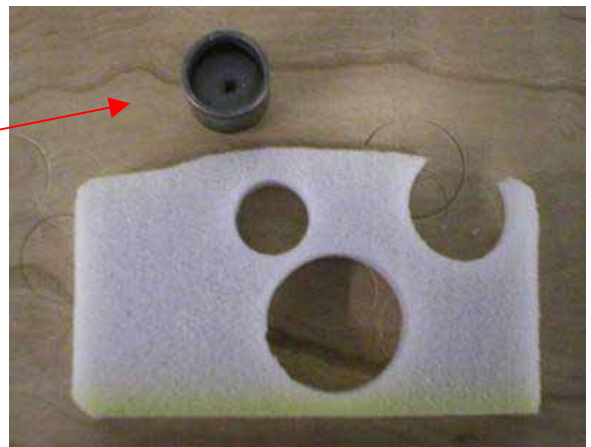
- Cut the remaining foam piece into a Rectangle Block of the largest size possible.



- Mark the center punch marks of the **CAD drawing** onto one of the thin foam slices using a **Sharpie Marker**. Save the second slice of foam for any possible slight changes needed in the hole locations.



- Cut the foam using a **sharpened copper** or **metal pipe** of the same diameter as the holes drilled in the enclosure. Use the center marks from the Sharpie Marker as the center of the punched holes.



- **Spray adhesive** the front of the Flash and Shutter Seal foam slice and position it inside the enclosure lining up the three holes of the seal to the three holes of the enclosure.

NOTE: **3M Super 77 Spray Adhesive** (available at Ace Hardware) was used on this flash and shutter foam seal.



- Insert the Foam Block cutout around the Flash and Shutter Seal.



- Insert the camera and check for proper fit.



NOTE: Upper hinge has been removed with a **grinder**.

- Check the alignment of the Shutter, Flash, and AF Emitter to the glass and filter openings.



- Spray adhesive one side of the Rectangle Foam Block and place the rectangle on top of the camera with the adhesive side up.



- Close the cover onto the foam block so the adhesive side of the Rectangle Block touches the inside of the cover.
- Open the cover with the Rectangle Block mounted to the inside of the cover.

NOTE: The Rectangle Block will press against the back of the camera and push the camera into the Shutter and Flash Seal.



- Add the Desiccant Pack below the X10 Kit with **Heavy Duty Velcro Tape**.



- Screw on the 37mm Filter to the Step-Up Ring.
- Camouflage the outside of the Metal First Aid Kit with **Camo Tape** or **Camo Paint**.



Additional Notes: