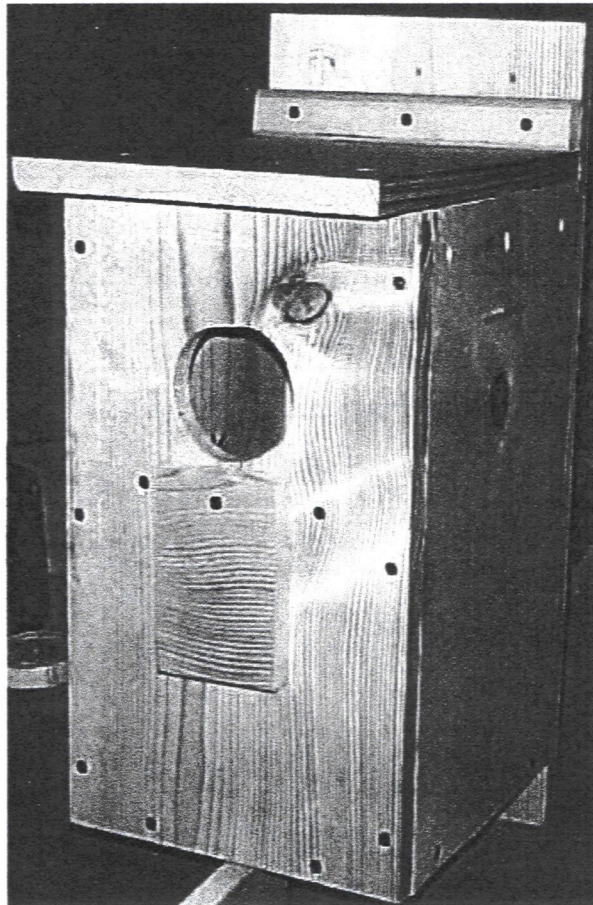


Wildlife In Need Center

Nest box project

Instructions to build a wooden nest box for Squirrels, Small Owls, and Kestrels.



This nest box is designed to provide a secure place for young animals to grow. The better it is built, the better it will serve its inhabitants. Please take care and follow the directions as closely as possible and use the materials we have recommended. Construction time will vary depending on the skills of the builder and the tools available. A well built nest box made by an average builder takes about 2 hours with basic hand tools. With power tools it can be done in just under one hour.

The design for this nest box is based on the 1992 publication "Woodworking for Wildlife" by the Minnesota Department of Natural Resources. Some changes have been made to adapt the basic design for the Wildlife In Need Center's requirements.

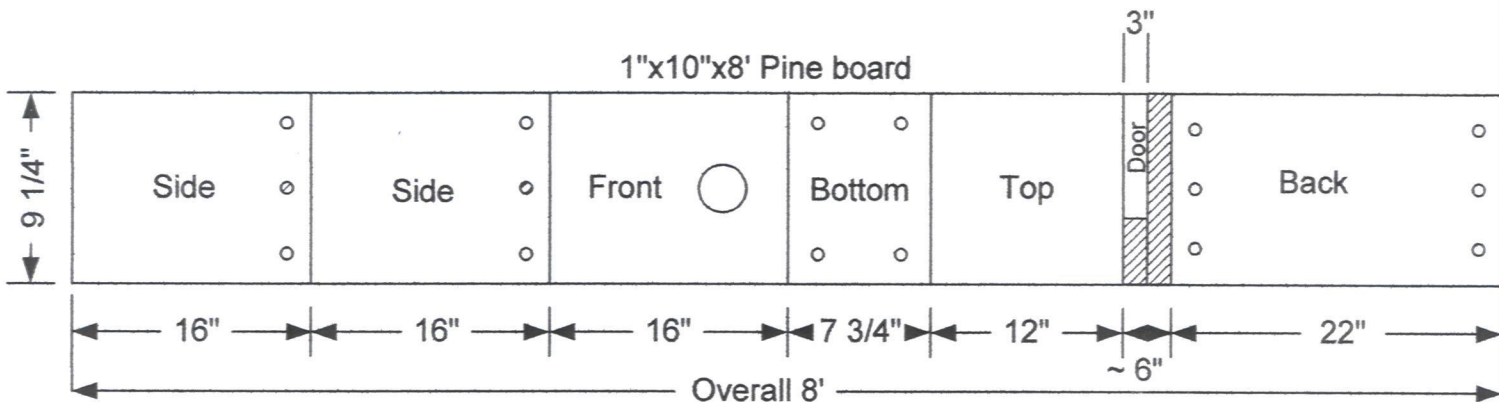
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Nest box project

Parts & tools list

Parts list:

One, 1"x10"x8'0" Pine board (Straight, flat, and few knots or splits is best) (Makes 1 Nest box)
One, 1"x2"x8' Used for the cleat and predator guard. (1 piece will be enough for 5 Nest boxes)
25 sheet rock screws per nest box (black or silver O.K.) 2" long.
6 sheet rock screws 1 1/4" long per nest box. (for roof and predator guard)



Tools:

Eye protection (safety glasses)

Pencil.

Measuring tape or yard stick.

Carpenters square or T-square.

Hand Saw (Wood).

#1 Phillips screw driver.

3" hole saw or circle cutter for door hole.

3/8" or larger Battery or Electric Drill.

1/4" drill bit for vent holes.

Optional:

1/8" drill bit (used for pilot holes for the screws).

12" bar or grip clamps, to hold pieces during assembly.

Power screw driver with #1 Phillips bit.

Power jig saw to cut 3" circle if 3" hole saw is not available.

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Nest box project Construction

Construction is divided into 3 easy steps:

- 1) Measuring & Cutting
- 2) Drilling
- 3) Assembly

But first SAFETY!!!

Working with wood or any power or hand tools can be dangerous. A few simple safety considerations to follow include:

- 1) Always wear approved Safety glasses or face shield. This includes others in the immediate area.
- 2) Make sure the work area is safe. Unplug power tools when not in use. Avoid using power tools near water or on wet ground.
- 3) Tie long hair back and Do NOT wear loose clothing when using power tools.
- 4) Follow all manufactures safety precautions for the tools you are using.
- 5) Persons not involved in the construction of this project should maintain a safe distance.
- 6) Any persons under 18 and / or not familiar with the tools being used should be under direct supervision of an adult who knows the proper safety and operation of those tools.
- 7) Use common sense! If you don't know ASK someone who does!!!

SAFETY FIRST!!!

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Nest box project Measure & Cutting

A few tips for Measuring and cutting:

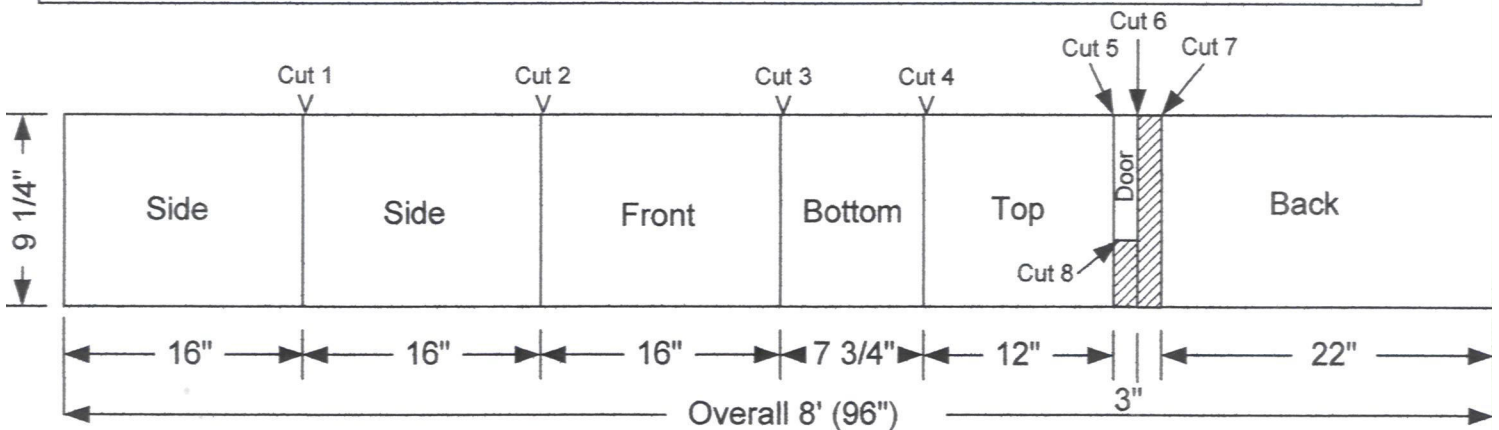
In my experience I have found it better to measure and cut each piece one at a time. This allows for the thickness of the saw blade. If you measure everything first and don't take into account the thickness of the saw cut you can be off by as much as 1/4" or more by the time you cut the last piece.

Group pieces when you can. Example of grouping: the two sides and the front are the same size, measure and cut one piece then use it as a template to measure and cut the other two pieces.

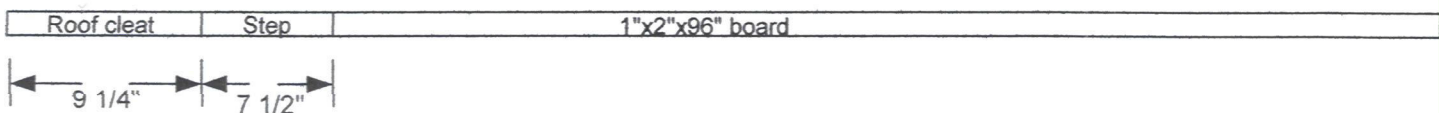
Use the pencil to mark each piece with its name as you cut it, that way you can keep track of what they are to be used for later.

I have found it best to measure and cut each item in the following order:
(Start from one end and work to the other)

- 1) Measure (16") from the end and cut one of the Sides.
- 2) Use the side piece just cut in step 1 to mark (16") for the next Side then cut.
- 3) The use the first side piece again to mark (16") and cut the Front piece.
- 4) Measure (7 3/4") for the Bottom and cut.
- 5) Measure (12") for the Top and cut.
- 6) The next step is to measure and mark (do not cut) 22" for the Back piece. Past the 22" mark ~ 6" should be left over, Measure 3" of the remaining and cut for the door cover.
- 7) Now finish cutting the Back at the 22" mark made in the last step.
- 8) The 3"x 9 1/4" door cover piece cut in step 6 needs to be shortened to 5" Mark and cut from the best end.



- 9) From the 1'x2"x8' board mark and cut the Roof cleat and predator guard as shown.



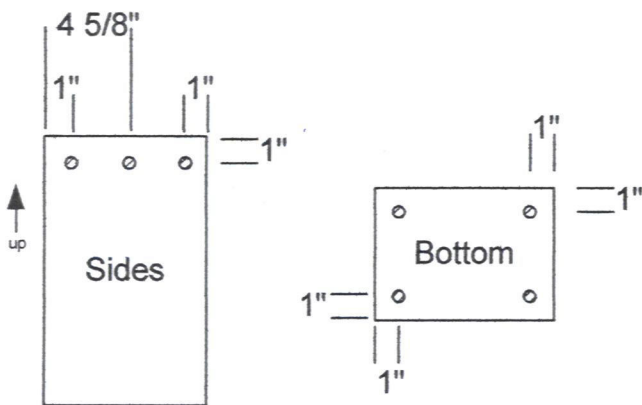
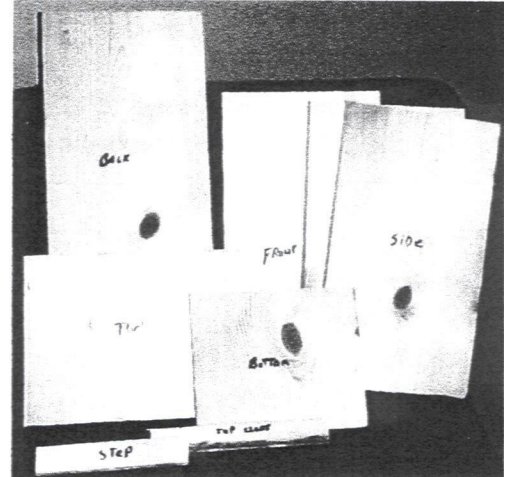
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Nest box project

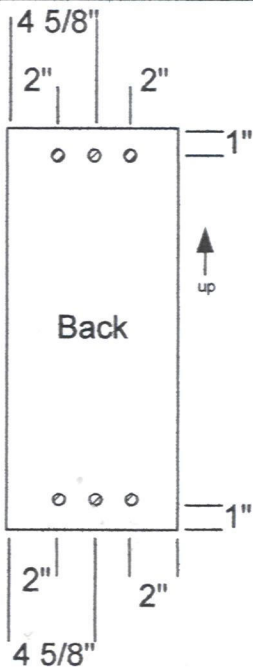
Drilling

Now that you have finished cutting the pieces, the next step is to drill the vent holes, mounting holes, and the 3" hole for the door.

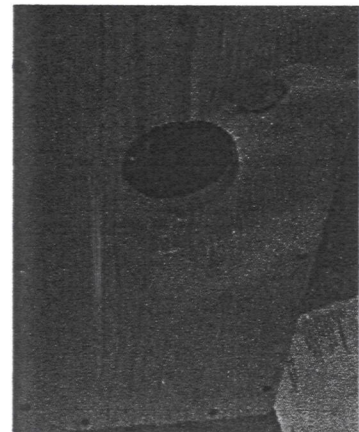
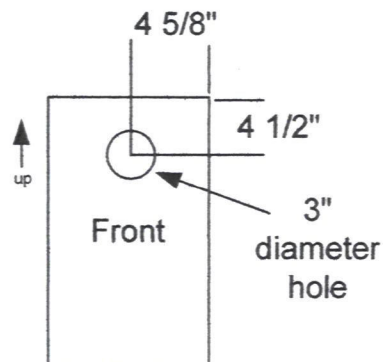
There are 3, 1/4" vent holes in each side piece and 4, 1/4" drain holes in the bottom piece. Mark and drill as shown below.



Next mark and drill the 1/8" mounting holes in the Back piece as shown below.



Locate and mark the center of the door opening. The door opening should be 3" in diameter and located as shown below. If a 3" hole saw is not available, draw a 3" circle around the center point and cut out the circle using a jig saw. Try to get the hole as close to round as you can.

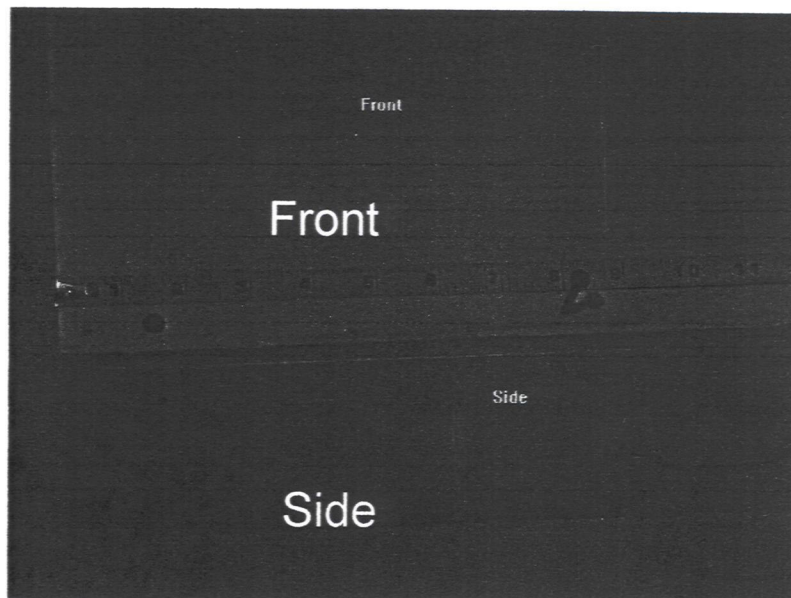


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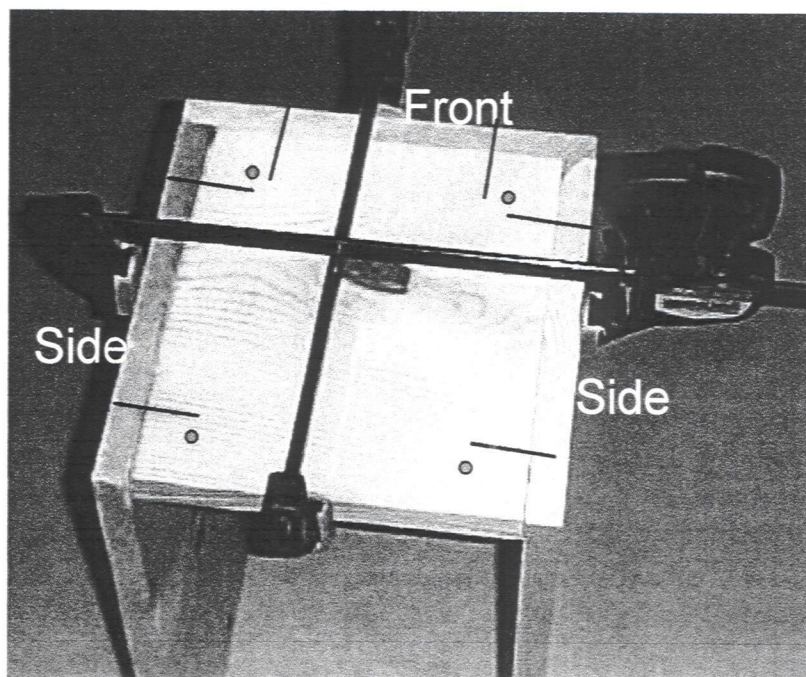
Nest box project Assembly

Now that all the pieces are cut and drilled it is time to assemble the nest box. If the wood is dry or showing signs that it will split easily or if you are going to drive the screws by hand it is recommended to drill 1/8" pilot holes for the screws. Use the 2" sheet rock screws except where noted.

1) Screw the front of the nest box onto both sides. Take care that the top edges of the Front and Sides are square and flat for the top to sit on. The bottom edges of the Front and Sides are not as important. Locate your screws 1 1/2" from the top and bottom end and 3/8" from the edge. The center screw should be 1/2 way between or 8" from the end. (If you miss with a screw, back it out, move it over and try again)



2) Fit the bottom piece inside the sides and front. (This is where the clamps work well to hold things tight as the screws go in). Flush it as best you can and secure with 2 screws in the front and each side. Locate the screws 1 1/2" from the corner of each Side board (2" for the Front) and 3/8" from the edge. Because this is mostly end grain wood you are working with, splitting the wood as the screw goes in is very easy. I suggest drilling 1/8" pilot holes for these screws. This should prevent splitting. The black lines on the picture show about where the screws will be. (Missing the vent holes)...

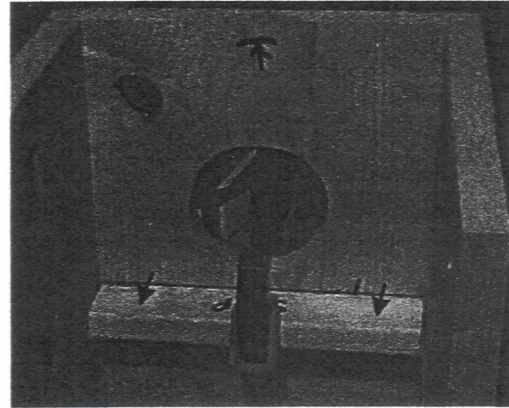


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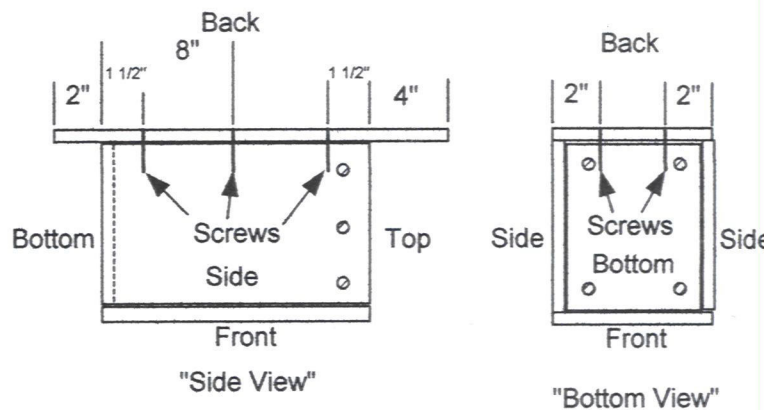
Nest box project

Assembly #2

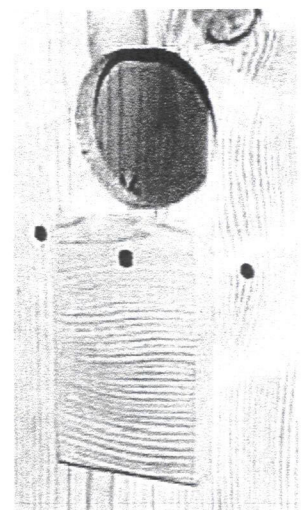
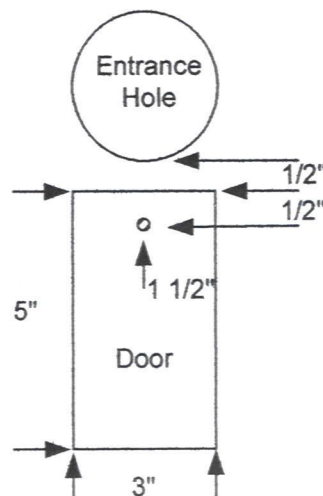
3) To attach the predator guard (1"x 2"x 7 1/2") inside the nest box use 2, 1 1/4" sheet rock screws. The step should be level 1/2" below the bottom edge of the door hole. Use a clamp to hold it in place and screw it from the front side. Locate the screws 2" in from the front edge and 7/8" down from the bottom of the door hole. The screws should secure the step about where the arrows are in the picture.



4) Attach the Back to the Sides and Bottom. Lay the Nest box on its Front (door hole down) and position the 22" Back piece where it extends 2" past the bottom of the box. Secure with 3 screws through the Back and into each Side piece. Locate screws as shown. Also place 2 screws through the back piece and into the Bottom 2" from the edge just as was done when attaching the Front piece to the Bottom.



5) Attach the door piece (3"x 5") to the front of the nest box. Drill a 1/8" hole through the door as shown. Start a 2" Screw through the Pilot hole so that the point just comes through the other side. On the front of the nest box place a mark 1" below the center of the entrance hole. This should just about line up with the two screws that hold the predator guard. Position the door so that the screw is over the mark and screw it in. The door should not move, but don't over tighten it or the wood could split. The door screw should also help to hold the predator guard.

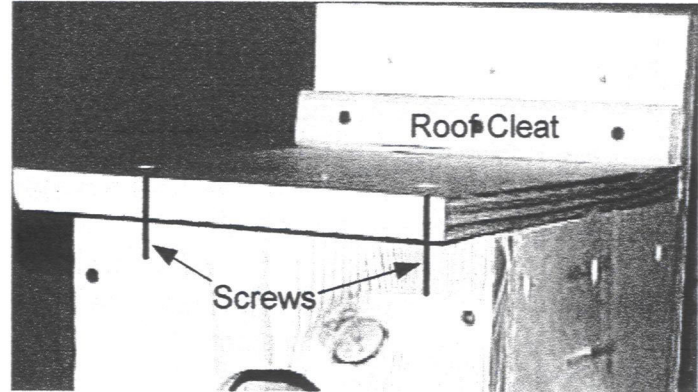


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Nest box project

Assembly #3

The Top (roof) is held on by the roof cleat and two screws through the roof and into the Front piece. Place the roof on the top and position the cleat as shown. Use 3, 1 1/4" screws to attach the cleat. 1 1/2" from each side and center the third. Screws should not come through the back! Last secure the roof to the Front piece with 2, 2" screws 1 1/2" from the side. To remove the roof, all you need to do is remove the two screws on the top front and slide the roof out from under the cleat.



Congratulations! The nest box is now complete and ready to serve its inhabitants! Some final advice:

- 1) Do not paint the nest box, many paints are hazardous and the residents tend to chew on the box.
- 2) Do not decorate the box, we do not want to draw unnecessary attention to the nest box when it is placed at the release site. Over time the wood will age, deteriorate and return to nature. The screws will rust and return to the earth as well.
- 3) If you want to identify your nest box donation, place your information on the back with a felt tip pen. I suggest something like: Made with pride by (YOUR NAME, Troop or Pack # etc...). or Donated by...

