

TURNING A DUCK CALL

TURNING THE BARREL:

1. Begin by cutting a piece of 2"x2"x4" piece of wood (Use a hardwood such as African Blackwood, Cocobolo, Bocote, Purpleheart, or Bois D'Arc). Keep in mind the longer the piece of wood, the deeper the sound. The shorter the piece of wood, the higher the sound pitch.
2. Mark the middle of both ends of the 2"x2"x4" piece of wood and place it in a chuck. Drill a 5/8" hole completely through the piece of wood.
3. Remove the piece of wood and the chuck. Using a 5/8" duck call mandrel, place the piece of wood blank on the mandrel and tighten the set screw.
4. Carefully, turn the wood blank round.

SETTING THE RING:

1. Square the end and measure 1/2" from the end and place a mark.
2. Using DIGITAL CALIPERS. Measure the inside of the ring (approximately 1-1/8" inside diameter).
3. Using a 3/16" PARTING TOOL, turn the tenon to approximately 1-3/16" in diameter. Carefully, turn the tenon down, using the ring to a tight fit. Remove the barrel from the mandrel and seat the ring (if the ring is too loose, glue the ring to the tenon using epoxy).
4. Once the ring is flush with the shoulder, place the barrel back on the mandrel and face off the tenon in front of the ring. Chamfer the outside of the ring to remove sharp edges.
5. Measure 1/8" behind the ring and turn the tenon almost flush. Sand the tenon flush to the ring.
6. Measure 3-5/8" from the front of the ring to the back of the barrel and face off.
7. Turn the barrel so that the ring faces the headstock.
8. Measure 1/2" from the back of the barrel and make a mark. Using OUTSIDE CALIPERS and a 3/16" PARTING TOOL, part a tenon to 2" in diameter.
9. To make the lanyard groove, measure 3/8" behind the ring and make a concave groove approximately 7/8"-15/16" in diameter.
10. Shape the duck call and finish by sanding with 80, 120, 220, 400 and 600 grit sandpaper.

TURNING THE INSERT:

1. Begin by cutting a 1 1/2"x1 1/2"x4" piece of wood (African Blackwood, Cocobolo, Bocote, Purpleheart, or Bois D'Arc).
2. Mark the middle of both ends of the 1 1/2"x1 1/2"x4" blank and place it between centers.

3. Using a $\frac{3}{4}$ " ROUGHING SPINDLE GOUGE, turn the blank round.

TURNING THE TENON FOR THE SOUND BOARD:

1. Using a RULER, measure 2" from the tailstock end and make a mark. Using OUTSIDE CALIPERS, turn the tenon to $\frac{11}{16}$ " in diameter.
2. Carefully, turn the tenon to $\frac{5}{8}$ " in diameter, frequently checking the fit to the barrel. The last $\frac{1}{4}$ " should be tapered to fit snugly in the barrel.
3. Place the $\frac{5}{8}$ " tenon in a $\frac{5}{8}$ " COLLET. From the 2" mark on the sound board tenon, measure $1\frac{3}{4}$ " and make a mark. Using a $\frac{3}{16}$ " PARTING TOOL, square off the end.
4. Using a $\frac{3}{4}$ " ROUGHING SPINDLE GOUGE, turn the end of the insert to a diameter of $1\frac{1}{4}$ ". From the end of the insert, begin tapering down to $\frac{7}{8}$ " in diameter.
5. Using the diagram form a $\frac{1}{4}$ " slot for the lanyard.
6. Using a DRILL CHUCK and STEP DRILL BIT, drill a hole at the end of the insert to a depth of the $\frac{1}{2}$ " step.
7. Using a LONG $\frac{1}{4}$ " DRILL BIT, mark the depth to be drilled in the insert. (You will need to use a PJ1 DUCK CALL JIG for this operation. On the side of the jig is a mark $\frac{1}{2}$ " from the end).
8. Using the LONG $\frac{1}{4}$ " DRILL BIT and DRILL CHUCK, drill the hole to that depth, clearing several times to keep the drill bit from wandering.
9. Using a $\frac{3}{8}$ " FINGERNAIL SPINDLE GOUGE, widen the end of the insert with a small taper. Sand the inside of the insert end with 120, 220, 400, and 600 GRIT SANDPAPER. Ensure there are no loose wood strands in the $\frac{1}{4}$ " channel.
10. Using the LONG $\frac{1}{4}$ " DRILL BIT and a CORDLESS DRILL, find the high point of the $\frac{5}{8}$ " tenon. This is completed by inserting the LONG $\frac{1}{4}$ " DRILL BIT in a CORDLESS DRILL and placing the insert on the drill bit as deep as possible. Slowly, turn the drill and, using a PENCIL, mark the high point of the insert tendon.
11. Place the tenon in the PJ1 DUCK CALL JIG, with the pencil mark pointing up. Using a BANDSAW, cut away that portion of the tenon, leaving it a little proud.
12. Using a THIN RASP and 100 GRIT SANDPAPER, carefully sand the tenon flush with the PJ1 DUCK CALL JIG.

FINISHING:

1. There are several ways to finish a duck call. Always take in consideration that the duck call will be exposed to moisture and the outdoor elements which will call for a durable finish. I feel MARINE WATERLOX is the best. I used 4 coats of MARINE WATERLOX as my finish.
2. **TUNING THE DUCK CALL:** Take the reed and place it between your thumb and 4th finger. Gently, bend the reed. The BEND should be placed DOWNWARD on the sound board. Insert a piece of cork to hold the reed in place. Trim the cork.
3. Using SMALL SCISSORS, trim the reed until you reach the desired sound. Trim the dog ears.

4. Assemble the duck call by placing the insert in the barrel.

TOOLS NEEDED:

Dust mask/respirator

PJ1 Duck Call Jig

3/16" Parting tool

Easywood Mid-size Hollower #1

Long 1/4" Drill Bit w/stop block

1/2" Skew

6" Ruler

60-revolving cone center

Spiraling Tool (Optional)

1/8" Beading Tool (Optional)

1/8"- 1/2" Step Bit

Chuck & Collet Set

Mallet

Face shield

3/8" Fingernail Spindle Gouge

3/4" Roughing Spindle Gouge

Small scissors

Drill Chuck

Chuck w/50mm

Pencil

Drive Center

Jig for setting insert ring

5/8" Drill Bit (5" long)

5/8" Mandrel

Outside Calipers

MATERIAL NEEDED:

2"x2"x4" block of hardwood

Duck accent ring *WOODCRAFT / CRAFT supply*

Sandpaper (80, 120, 220, 400, & 600 grit)

Marine Waterlox (gloss)

1 1/2"x1 1/2"x4" block of wood

Duck Call Hardware (optional) *WOODCRAFT*

paper towels

Reed & Cork *WEBFOOT.COM*

