

# Turning a Yo-Yo

## Supplies Needed

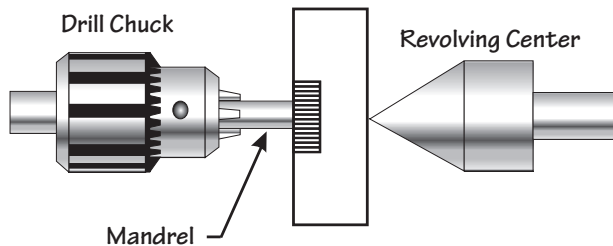
- 5/8" Forstner Drill Bit
- Wood Blank
- Yo-Yo Mandrel
- Revolving Center
- Glue (Thick CA or Epoxy)
- Sandpaper/Finish
- Drill or Drill Press
- Disc Sander
- Clamp/Bench Vise
- Eye and Ear Protection

## Wood Preparation

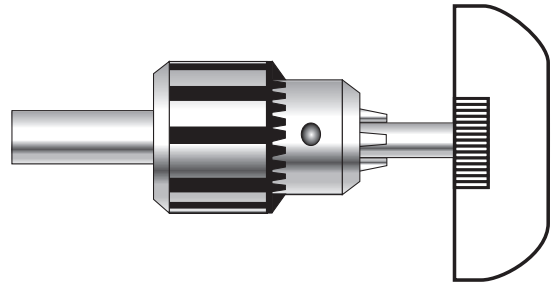
1. For best yo-yo performance select a dry, hard, dense wood such as maple or cocobolo. The piece should be free of sap wood and any defects that may cause the yo-yo to spin out of balance. The diameter and thickness of the blanks will vary according to the desired shape and style. We recommend starting with two blanks that are 2 1/2" square by 3/4" thick.

## Steps

1. Mark the center of the blank and drill a 5/8" hole 1/4" deep with a forstner bit.
2. Place a circle of thick CA glue or epoxy in the bottom hole.
3. Press the hubs into the drilled hole with a clamp or bench vise. Be sure to place a non-marking material between the jaw face and hub before pressing into place.
4. Mount the yo-yo mandrel in a drill chuck. Thread the hub and the blank onto the end mandrel.
5. With the revolving center advanced into the blank gently turn the corners off and rough turn the blank to the desired shape. Carefully true the backside of the blank making sure not to contact the hub with the tool. This ensures the disc face is concentric with the hub.



6. Remove the revolving center from the blank and finish shaping the blank. Proceed with final shaping, sanding, and finishing the piece.



7. Repeat steps 1-6 for the second blank. It should be turned identical to the first blank in order for the yo-yo to spin true.

## Assembly

Layout the parts according to the drawing below. This helps familiarize yourself with the parts and how they will go together.

1. Thread the axle into one of the finished blanks.
2. Open the loop of the yo-yo string and slip it over the axle. Thread the second blank onto the axle making sure not to pinch the string between the axle and the hub. This will complete your yo-yo.

