



The Ping Ponger uses almost half of a rubber racquetball as a disc spring that's *bistable* (it can be at rest in 2 possible states) to propel a ping-pong ball from a compact PVC launcher.

1. Make the PVC parts.

Cut all PVC pipe pieces to length. For the body, cut the ends off the snap tee so it's 2½" long, then press-fit the female adapter into the bottom of the tee and cut it off flush.

Glue the backstop rings together so that one edge is flush.

Bevel the inside edges of the barrel pieces with a file, so they curve to match the shape of the racquetball. Glue the 2 barrel pieces together.

For the handle, sand the 1" repair coupling so it fits into the 1½" pipe and glue it in place, then glue the tip of the 1" pipe into this coupling.

2. Make a disc spring.

Seat a racquetball into the beveled end of the barrel. Trace a line around the ball (parallel to the seam) and cut on this line, leaving a dome. This is your disc spring.

3. Put it all together.

Glue the backstop into the body (the snap tee), flush with the back end.

Set the rubber spring on the backstop inside the body. Slip the barrel in place over the spring, leaving just enough room for it to spring forward and back. Don't glue the barrel; you can remove it to change the spring.

Slip (don't glue) the handle into the bottom of the body. The handle also acts as a ping-pong ball holder and ramrod.

Now Ping-Pong Away!

Put a strong, name-brand ping-pong ball into the barrel, and push it into the spring using the handle, until the spring sticks open (back), gripping the ball.

Through the backstop, poke the tensed back of the spring to make it un-spring. Pong!

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YOU WILL NEED

Rubber racquetball
Ping-pong balls
Marker, knife, saw, and half-round file
PVC glue, epoxy, and sandpaper

For the backstop:
2" pipe, 1" length
⅝"-wide ring from the insert coupling (below)

For the barrel:
2" pipe, 1¾" length
2" insert coupling

PVC pipe and fittings:

For the handle:

1" pipe, 1½" length

1" repair coupling

1½" pipe, 4½" length

For the body:

2" snap tee part #463-

020S from

flexpvc.com

1½" female adapter

coupling

ProPlumber model #PPFC200, Lowe's part #153807 (as used in the Boom Stick, MAKE Volume 13). Cut it down to 2" long. Also cut a ⅝" ring from the scrap.

