

## The Pop Bumper Drilling Template

This template gives precise positioning for pop bumper mounting holes and dimples. The pop bumper drilling pattern as we know it today has been around for decades.

### Drilling the Top Side (Nailscrews and mounting screws)

1) Place the template on the playfield oriented as shown in the picture. Align the large holes with the drilling template, and then tape the template in place. Your playfield will likely have holes marked for the three pop bumper mounting screws. These markings may well be off; the template is correct.



2) Drill three 1/16" pilot holes for the bracket nailscrews, or use a sharp point to mark the spot. Also, prepare the two small holes on the pop bumper pattern for the #4 mounting screws.

3) Countersink the mounting screw holes. Nailscrews have a 0.275" diameter head, which means a 5/16 or 9/32 bit if you don't have a proper countersink.

4) Drill out the rest of the hole. Nailscrews have a #6 thread, so a .140" drill would be perfect. Failing that, a 1/8" drill will let the nailscrew make some threads in the wood. The top thread of the nailscrew is about the same as a #8 screw. For the mounting screws, a 1/16" hole is fine.

### Drilling the Bottom Side (Spoon switch)

The spoon switches are not always at the same angle. They can be located across a sector of about 90 degrees. Designers could set them at a convenient angle to avoid inserts; wiring; mechanisms; switches or any other inconvenience.

1) Place the template on the playfield as shown.

2) Align the template to the large center hole and rotate the template to the correct angle. Then drill pilot holes for the spoon switch. **Do not drill through the playfield.** Using this template guarantees that the spoon switch will be centered on the pop bumper tail.

