

Seven-Hole Bubble Wand / Bubble Quest

MDL-BUBBLE-007 / REV B / 2026.09.07

One opening in the center, six around it, and a handle sized for a small side quest. The original brief capped the wand at 7 inches long, 3.5 inches wide, and 0.125 inches thick. A hand-drawn perimeter sketch led to the scalloped revision: it follows the outer rings and reduces solid model volume by 24.3%. Each opening retains 40 rounded inner ridges and a recessed solution groove. The flat underside is intended for support-free printing. The design passed dimensional and watertight-mesh checks; bubble performance still needs a physical dip test. The conversation also considers closer hole spacing, sets SLSA aside, and settles on a household dish-soap mixture. The supplied bubble-adventure sticker is attached as received.

STATUS	EXPERIMENTAL
CLASSIFICATION	MDL
MATERIAL	3D PRINT / BLENDER / BUBBLE SOLUTION
DISPOSITION	SIDE QUEST / MODELS + CONVERSATION + STICKER
CATEGORY	Side Quests / 3D Printing
RECORD TYPE	printable-toy

TECHNICAL NOTES

A flat seven-hole bubble wand with a scalloped head, rounded solution-holding ridges, and 24% less solid volume than the original circular design. Models, design conversation, recipe, and fantasy sticker included.

GOAL

Make a compact seven-hole bubble wand that prints flat and uses less filament without losing the solution-holding details.

EQUIPMENT

- 3D printer and slicer
- Blender for editing
- Shallow dipping dish
- Measuring cup and tablespoons

MATERIALS

- Printer-compatible filament
- Supplied sticker artwork

INGREDIENTS

- 2 cups water, preferably distilled
- ¼ cup liquid hand-dishwashing soap, such as Dawn or Joy
- 2 tablespoons light corn syrup; substitute the same amount of plain glycerin if available

METHOD / STEPS

1. Download the Rev B STL and import it into your slicer as millimeters.
2. Place the flat underside at Z=0 with the recessed grooves facing upward; inspect the fine ridge features in the slicer.
3. Print a test wand and check that all seven openings and the grooves remain clear.
4. Dissolve the corn syrup in the water, add dish soap, and stir gently. Let surface foam settle.
5. Dip the whole head into a shallow dish, lift it out, and try a gentle wave or steady breath.
6. Compare film formation and bubble release before changing the geometry or recipe.

RESULT / WHERE THIS STANDS

Digitally verified prototype. Solid volume falls from 13,260.7 to 10,037.4 mm³. Actual printing and bubble performance remain untested.

TROUBLESHOOTING

- The hole edges are already only 3.6 mm apart, with 0.9 mm between the surrounding grooves. Closer spacing would require redesigning those grooves.
- Recipe source: Science Buddies, Blowing the Best Bubbles. Brand formulation, water, and conditions can affect results.
- STL coordinates are millimeters; check the overall dimensions after import.

SAFETY / LIMITATIONS

- Bubble solution is not for drinking; keep it out of eyes.

SPECIFICATION

FINAL DIMENSIONS	174.5 × 77.765 × 3.175 mm / 6.870 × 3.062 × 0.125 in
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OPENINGS	7 / one center + six around
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HOLE SPACING	27 mm center-to-center
CLEAR OPENING	22.2-23.4 mm across the rounded ridges
RIDGES	40 per opening / 0.60 mm radial depth
SOLUTION GROOVES	0.80 mm wide / 0.55 mm deep / top face
MATERIAL REDUCTION	24.3% less solid volume; actual filament use depends on slicing
VALIDATION	One connected watertight mesh / physical bubble test pending

DEVELOPMENT HISTORY

2026.09.07 / A

Created the circular seven-hole Blender model within the original size limits.

2026.09.07 / B

Followed the supplied scalloped perimeter sketch while preserving all openings, ridges, grooves, and the flat underside.

2026.09.07 / SIDE QUEST

Added both model versions, the design conversation, household bubble recipe, and supplied sticker.

RELEASED MATERIAL / SOURCE LINKS

scalloped_bubble_wand.stl

MODEL / REV B / PRINTABLE SCALLOPED WAND

https://u225x.com/uploads/seven-hole-bubble-wand/scalloped_bubble_wand.stl

scalloped_bubble_wand.blend

BLENDER SOURCE / REV B

https://u225x.com/uploads/seven-hole-bubble-wand/scalloped_bubble_wand.blend

conversation.html

READ THE CHAT / DESIGN + SPACING + RECIPE

<https://u225x.com/uploads/seven-hole-bubble-wand/conversation.html>

conversation.md

CHAT TRANSCRIPT / DOWNLOADABLE MARKDOWN

<https://u225x.com/uploads/seven-hole-bubble-wand/conversation.md>

bubble-quest-sticker.png

STICKER / SUPPLIED ORIGINAL ARTWORK

<https://u225x.com/uploads/seven-hole-bubble-wand/bubble-quest-sticker.png>

scalloped_wand_preview.png

IMAGE / FINAL SCALLOPED WAND

https://u225x.com/uploads/seven-hole-bubble-wand/scalloped_wand_preview.png

scalloped_wand_ridge_detail.png

IMAGE / RIDGES + SOLUTION GROOVES

https://u225x.com/uploads/seven-hole-bubble-wand/scalloped_wand_ridge_detail.png

perimeter-sketch.png

IMAGE / USER PERIMETER SKETCH

<https://u225x.com/uploads/seven-hole-bubble-wand/perimeter-sketch.png>

seven_hole_bubble_wand.stl

MODEL / REV A / ORIGINAL CIRCULAR HEAD

https://u225x.com/uploads/seven-hole-bubble-wand/seven_hole_bubble_wand.stl

seven_hole_bubble_wand.blend

BLENDER SOURCE / REV A

https://u225x.com/uploads/seven-hole-bubble-wand/seven_hole_bubble_wand.blend

bubble_wand_preview.png

IMAGE / ORIGINAL CIRCULAR WAND

https://u225x.com/uploads/seven-hole-bubble-wand/bubble_wand_preview.png

scalloped_geometry_checks.json

VALIDATION / REV B DIMENSIONS + MESH

https://u225x.com/uploads/seven-hole-bubble-wand/scalloped_geometry_checks.json

scalloped_README.txt

PRINTING NOTES / MILLIMETER STL

https://u225x.com/uploads/seven-hole-bubble-wand/scalloped_README.txt

CONNECTED RECORDS

MDL-BUBBLE-001

<https://u225x.com/record/MDL-BUBBLE-001>

RETURN TO THE LIVING RECORD

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This PDF preserves the public notes at this revision. Visit the record for updates and attached images.

<https://u225x.com/record/MDL-BUBBLE-007>