

Ultimate Spice Rack Build Guide

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3D Printing & Assembly (Plates A-C)

This guide includes complete steps for printing, assembling, and testing your Ultimate Spice Rack build. Each section provides checkboxes for tracking progress and placeholders for photos of each stage.

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1) Bill of Materials

[] Part: #224 Buna-N O-Ring (70A durometer)

- Spec: 1-3/4" ID, 2" OD, 1/8" width

- Qty: 2 (spares optional)

[] Lubricant: Lucas Oil White Lithium Grease (Tube Only)

WARNING: Do not use aerosol/spray grease; propellants can crack 3D printed plastic.

[Photo Placeholder: Hardware Layout]

2) Printing Guide (3 Plates)

Plate A - The Base (Enclosure)

[] PART_TO_PRINT = 1

[] TRACTION_MODE = 1

[] Material: PLA or PETG

[] 3 Walls, 15-20% Infill, 5mm Brim, No Supports

[] Let bed cool fully before removing

[Photo Placeholder: Base Print]

Plate B - The Gears (Tires)

[] PART_TO_PRINT = 2

[] TRACTION_MODE = 1 (Critical for #224 O-rings)

[] Material: PLA or PETG

[] 3 Walls, 20% Infill, Skirt Adhesion, No Supports

[Photo Placeholder: Gears Print]

Plate C - The Handle (Lozenge)

[] PART_TO_PRINT = 3

[] Orientation: Flat top down

[] Brim adhesion, No Supports

[Photo Placeholder: Handle Print]

3) Assembly Instructions

Step 1 - Prep the Gears

[] Inspect grooves on large gears

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- [] Clean out strings/blobs
- [] Install O-rings and perform roll test

[Photo Placeholder: Gear Assembly]

Step 2 - Prep the Base

- [] Clean and sand pins
- [] Apply thin layer of grease
- [] Check wobble; add rubber feet if needed

[Photo Placeholder: Base Prep]

Step 3 - Final Assembly

- [] Drop in gears (idler + large gears)
- [] Spin test for smooth motion
- [] Attach handle (tight fit)

[Photo Placeholder: Full Assembly]

4) The Spice Test

- [] Place spice bottle on gear (rubber O-ring contact)
- [] Turn handle - check smooth rotation
- [x] Rubber should grip bottle, not slip

[Photo Placeholder: Spice Test in Action]