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## In this plan you will be getting:

- Step by Step construction instruction.
- A complete bill of materials.
- Exploded view and elevation drawings.
- How-to photos with instructive captions.
- Tips to help you complete the project and become a better woodworker.



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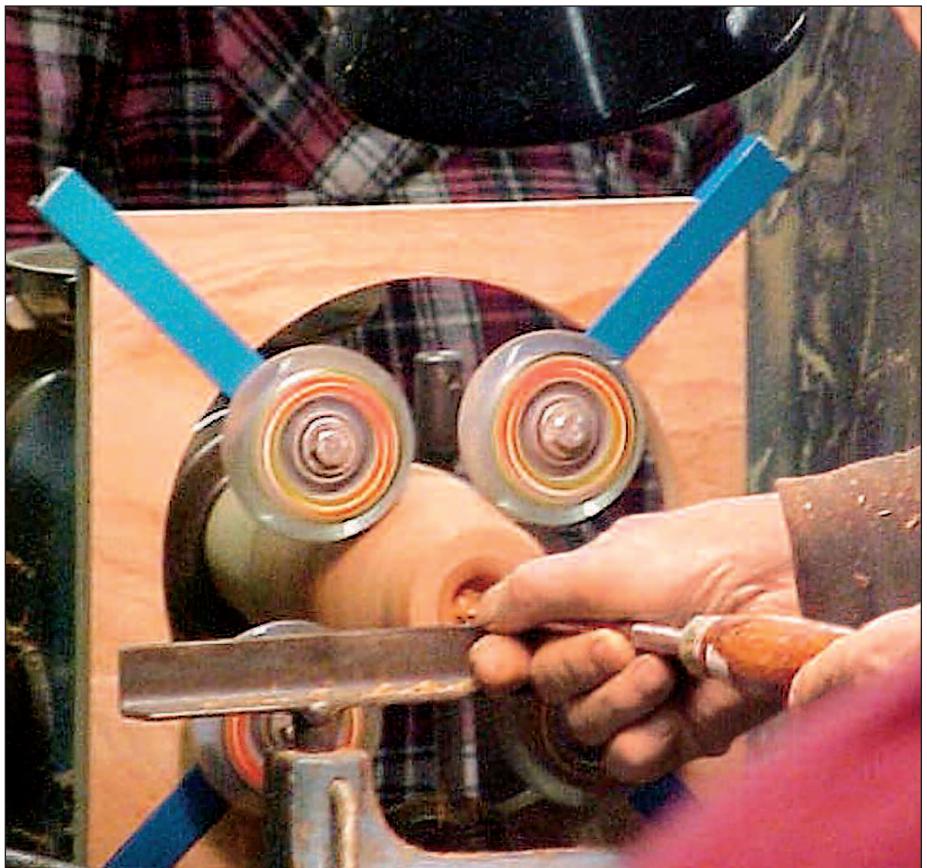
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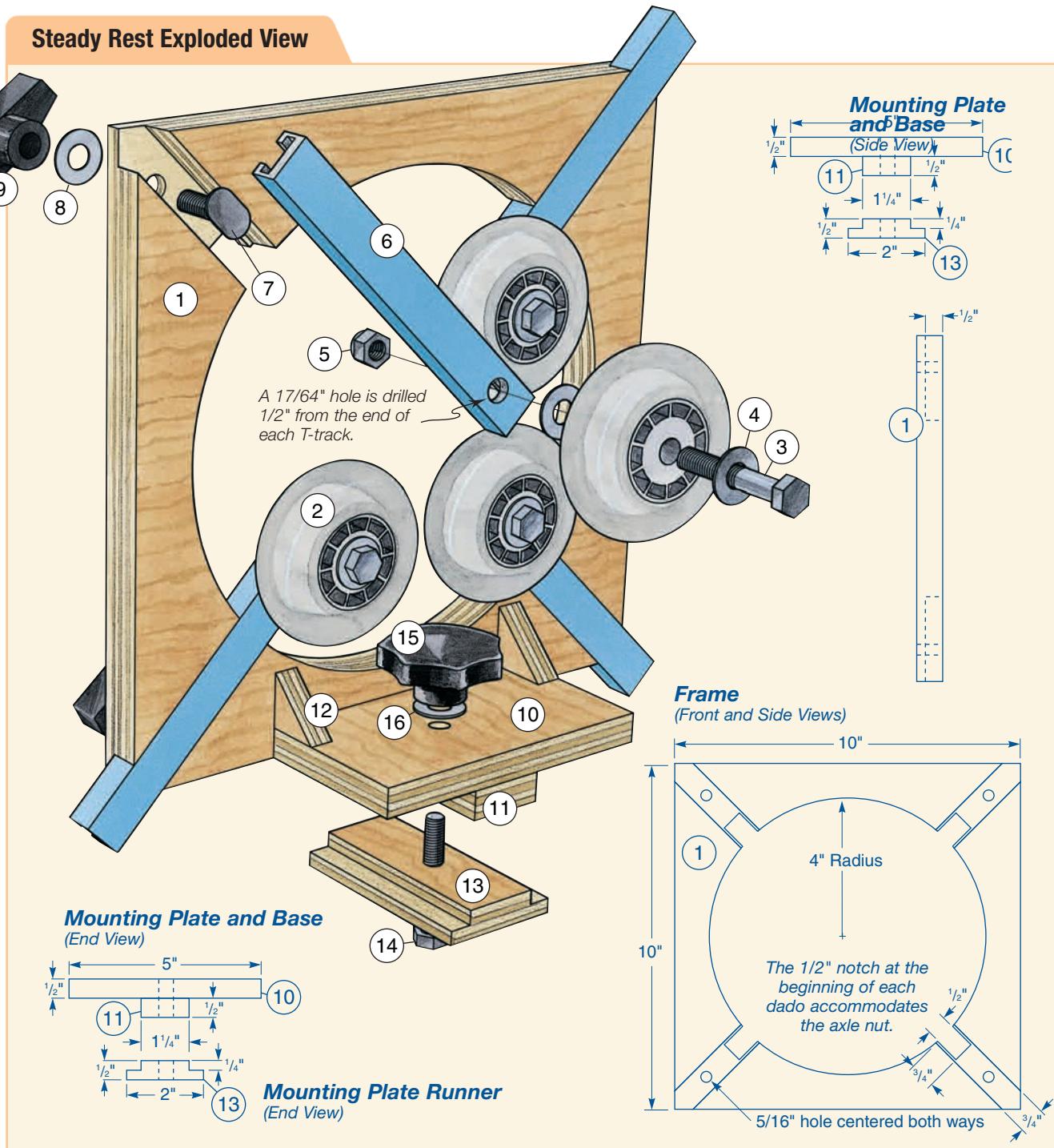
## Lathe Steady Rest



Published in Woodworker's Journal "Woodworking Classics: Skill-Building Projects for the Home Woodworker"

# Lathe Steady Rest

**H**ere's an innovative, adjustable rest for holding spindles steady. It just may give those dusty, discarded in-line skates a second shot at useful life—in the shop!



## MATERIAL LIST – Steady Rest

	T x W x L
1 Frame (1)	3/4" x 10" x 10"
2 Wheels (4)	2 <sup>3</sup> / <sub>4</sub> " Dia.
3 Axles (4)	1/4" x 2 <sup>1</sup> / <sub>2</sub> " Hex bolt
4 Wheel Washers (8)	3/4" O.D.
5 Wheel Nuts (4)	1/4" Locking
6 T-track (4)	1/2" x 3/4" x 6"
7 T-bolts (4)	1"
8 T-bolt Washers (4)	3/8" I.D.
9 T-knobs (4)	1/4" x 20
10 Mounting Plate (1)	1/2" x 5" x 2 <sup>3</sup> / <sub>4</sub> "
11 Mounting Plate Base (1)	1/2" x 1 <sup>1</sup> / <sub>4</sub> " x 3 <sup>1</sup> / <sub>2</sub> "
12 Mounting Plate Gussets (2)	1/2" x 1" x 1"
13 Mounting Plate Runner (1)	1/2" x 2" x 3 <sup>1</sup> / <sub>2</sub> "
14 Mounting Plate Bolt (1)	1/4" x 2" Hex
15 Base Star Knob (1)	1/4" x 20"
16 Base Washer (1)	3/8" I.D.

If you've ever tried to hollow out the inside of a vase or other narrow form, you know that at some point you'll have to remove the tailstock. This steady rest resolves the dilemma of working without the tailstock by securing the turning between four in-line skate wheels. Better still, the T-tracks make the rest easy to adjust for turning different diameters.

### Constructing the Rest

Begin by cutting a piece of plywood to size for the frame (piece 1). Mill two diagonal dadoes in one face, then lay out the circle on the frame and cut it out with your jigsaw. Sand the edges with a drum sander chucked in the drill press, and form the small notch for each wheel nut to slide into, as shown in the *Drawing* on the previous page.

Slide the wheels (pieces 2) onto their axles (pieces 3) with a washer (piece 4) located between each wheel and bolt head. Slide a second washer onto the axles, so a pair of washers sandwich each wheel. Keep them in place temporarily with the wheel nuts (pieces 5).

Cut the T-track (pieces 6) to length and file or sand each end to remove any burrs. Drill a 17/64" hole located 1/2" from one end of the T-track sections. Remove the nuts and slide the axles into these holes. Secure them with a washer and locking nut so the nut is on the open side of the T-track.

### Installing the T-tracks

The diagonal dadoes in the jig are milled to accept standard T-track. To install it, begin by drilling a 5/16" hole in each dado, centering it both side-to-side and along the length of the dado.



The steady rest allows a vase to be chucked and comfortably supported while the inside of the neck is being shaped.

Slip a T-bolt (piece 7) into each hole so the large head of the T-bolt sits in the dado. On the other side of the base plate, slide a T-bolt washer (piece 8) onto the protruding threads of each bolt, then screw the knob in place with a couple of turns. Push the knob in to raise the T-bolt's head in the dado, and slide the track into the dado, catching the bolt head as you do.

### Mounting the Jig on Your Lathe

No two lathes are alike, so the mount for your jig may have to be customized. A good starting place is to create a mounting plate (pieces 10 and 11) at a right angle to the face of the jig. These pieces are cut to size, glued together, and glued in place. Glue a couple of triangular gussets (pieces 12) to the frame and plate, then move on to creating the rest of your base (pieces 13 through 16), which will vary with the type of lathe you own.

To locate the jig correctly, chuck a piece of straight dowel or steel pipe between the centers, slipping it through the jig as you do. Then you can adjust the wheels so they are centered and locked on the dowel. The jig is now located properly, and you can measure for your custom mounting device.

### Safety Tip

After you've mounted a work-piece in the jig and the wheels have been drawn up to ride freely and lock in place, install a chuck on the tailstock. Use a Forstner bit in the chuck to core out the neck, rather than hogging out the inner waste with a gouge. It's a safer and smoother method.



Here's an example of an inside-out turning made by Ron Mostel, designer of this steady rest. Ron has experimented with various materials using his steady rest, including Corian®.