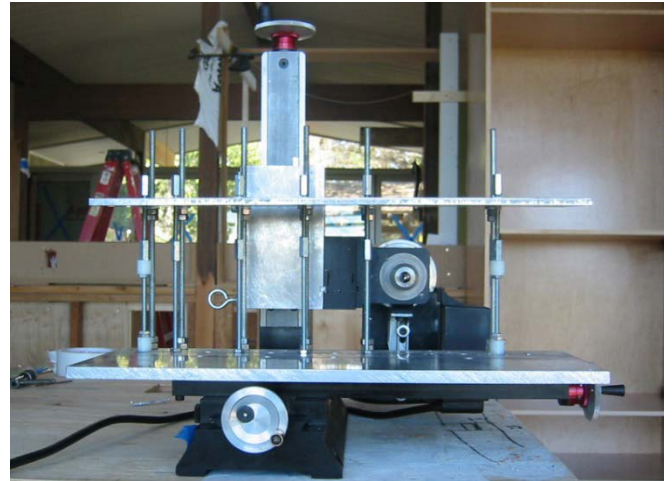
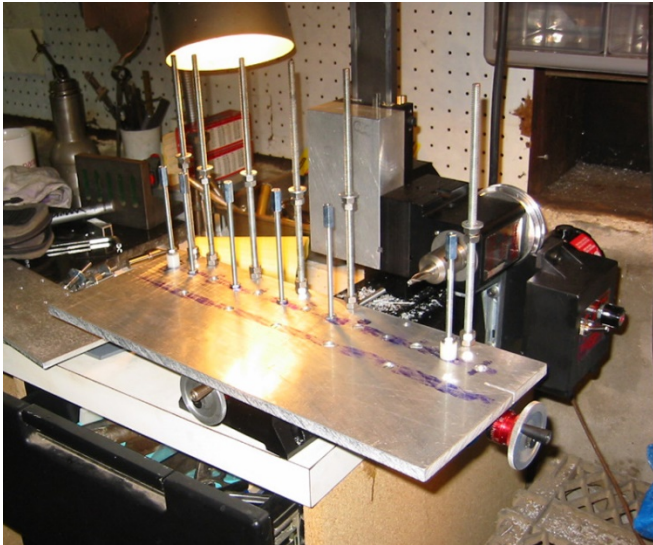
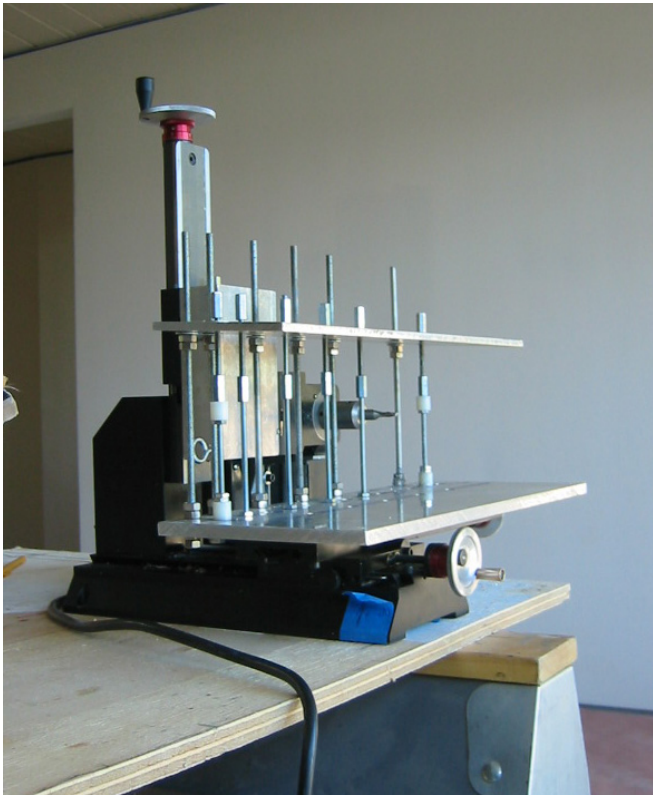


## Extreme Project 4—A Portable Metal Door Jamb Router from a Sherline Mill/Gregg Roos

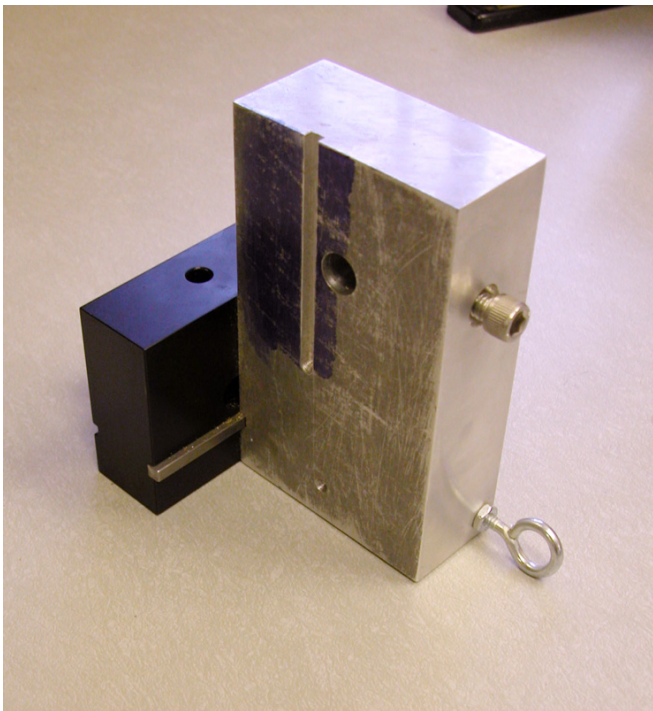
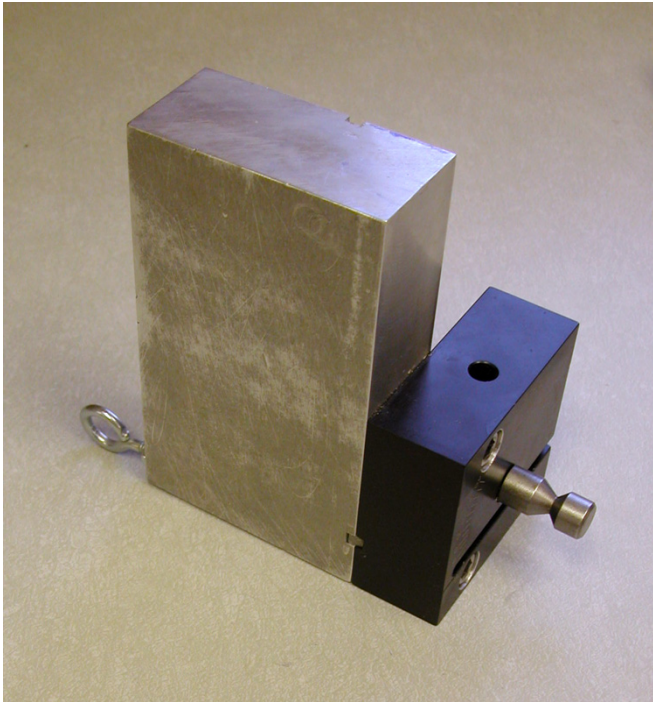


*The clamping fixture under construction and in place on the job site.*



Gregg had a requirement to route out the holes for deadbolts on a number of metal door jambs that had already been installed in a building. He could not take the frames to his milling machine, so he brought his milling machine to the job site. He made a special fixture that allows him to mount his 5400 mill to the jamb or the door itself and machine out the holes on-site. He even used his own toolbox for a counterweight to keep the head from sagging when mounted vertically. Here are some photos of the project and what Gregg had to say about how he did it.

*Continued, Page 2*



*The head needed to be offset, so Gregg used a block of aluminum to relocate the headstock spacer block to mount the headstock. Note the eye bolt to attach the rope for the counterweight.*

“I had to machine a strike on an installed full size clear anodized aluminum door jamb in place. After the door was installed and tiled into place the client added a deadbolt. Essentially the work

piece was 7' tall and 7" wide. The solution was to make two fixtures: a large offset mounting block that rotated the milling head 90 degrees in 2 axes, and a clamping fixture that mounted the mill to the door jamb. I designed the clamping fixture so that it could adapt to both doors and jambs, since I have had similar tasks in the past on large metal work pieces. Even a full-size milling machine can't cut a mortise in the edge of a 3' wide metal door, much less be taken to a building site in the passenger seat of my truck. All the work to make the fixtures was performed on my 5400 mill using the fly cutter and boring head attachments.

Because the mill is used on its side there was far more weight on the X-axis leadscrew, plus a twisting action. It was simple to add a counterbalance on the center of gravity—just a pair of pulleys and one of my tool boxes (the rope and eye-bolt in the photo). It offers very smooth and effortless vertical travel.



*Continued, Page 3*



*The finished mill in place machining out the strike hole for the deadbolt. In the first photo, the rope attached to the eye bolt leads up over a pulley and is attached to Gregg's tool box, which is used as a counterweight.*

My current project will have 60+ metal clad doors and jambs. Changes? Bring it on!"

—Gregg Roos  
San Francisco CA