

TIP 10a — A Simple Way to Mount a DRO Box on the Mill/Michael Gipe

Michael A. Gipe of Saratoga, California e-mailed the digital photo below along with the following tip:

“The digital readout option for the Sherline mill is a terrific addition. To make it even more convenient, I mounted the display on top of the motor control housing with a 2" x 4" piece of Velcro®. The Velcro strips are available from any hardware store, and they come in two halves that stick together. Separate the pieces and glue one to the bottom of the DRO display box. Glue the other piece to the top of the motor control housing. To mount the DRO, just press it in place on the motor housing at any convenient angle for viewing. The sensor wires can be bundled together with a tie-wrap and attached to the motor power cord to keep them out of the way.

Mounting the DRO display this way puts it right at eye level for easy viewing while you turn the cranks, and it keeps it out of the way of metal chips. It is also easy to remove if you need to change the pulley position.”

NOTE: Velcro is also available in rolls or strips with a peel-off adhesive backing. Just cut it to length, stick one half to the DRO and the other to the motor housing (or any desired location) and you're done.



This eye-level mounting system makes the display easy to read and keeps it out of the way of flying chips. Be sure to bundle the wires to keep them away from the pulley.

(TIP 10b continued on next page)

TIP 10b — An Adjustable Mount for a DRO Box on the Mill/Ronald Melvin

Ronald Melvin has one of the neatest small shops around. In fact, a photo of his shop will be included in the upcoming Sherline television commercial on the Discovery Channel. The recent addition of a DRO to his mill caused him to look for a mounting system that allowed the box to be repositioned to several heights and orientations depending on whether he was standing up to do milling operations or sitting down with his face near the part when using tiny drills. This elegant solution could make a fun rainy day project, and allows the box to be positioned with the loosening and tightening of just one 10-32 hex bolt. Ron used materials that he had on hand in his scrap box, and sizes are not particularly important. In this case the support rod is made from 3/8" drill rod 12" long and the base is from 1.25" dia. 303 stainless. It is held to the baseboard with 8-32 screws going into T-nuts with points pushed into the bottom of the board. (Ron also mounts his machines to the board using these T-nuts, as it makes removal for cleanup quick and easy.)

Ron goes on to say, "The flatstock portion of the bracket for the DRO is 1" aluminum, with a corresponding 1" tapped aluminum flatstock piece fixed with mounting tape to the inside of the DRO case. This allows for easy removal of the bracket. The round portion is 1.5" aluminum, about 0.5" thick with a 0.1" nipple to stand off the adjustable link. The adjustable link is 303 stainless steel with a 0.050 slit. Obviously, materials used can vary, although I would recommend aluminum for the bracket itself just to keep down the hanging weight. I used the 303 because I happen to like it (even though I seem to have some allergic skin reaction to the nickel content) and I had the right sizes in my scrap bin. Actual dimensions are not critical in most cases and construction is obvious from the photos. The socket screws are 10-32, which is the same as most other adjusting screws on Sherline machines, so the same hex key will be readily available when adjusting the position of the DRO. The flathead screws are 8-32."



Photo 1: Side view of the adjustment mechanism shows the flat stock pieces. The mounting plate for the two attachment screws is fixed inside the box using double-sided tape to keep it in place and it is tapped to accept the mounting screws. The rectangular part is slit, allowing the single adjustment screw to control both rotation of the box and position of the bracket on the rod.



Photo 2: An overall view of the mill shows the neat use of spiral plastic wire bundling material to control the clutter of wires from the box to the individual axes and the RPM sensor.



Photo 3: A closer view of just the box and stand.

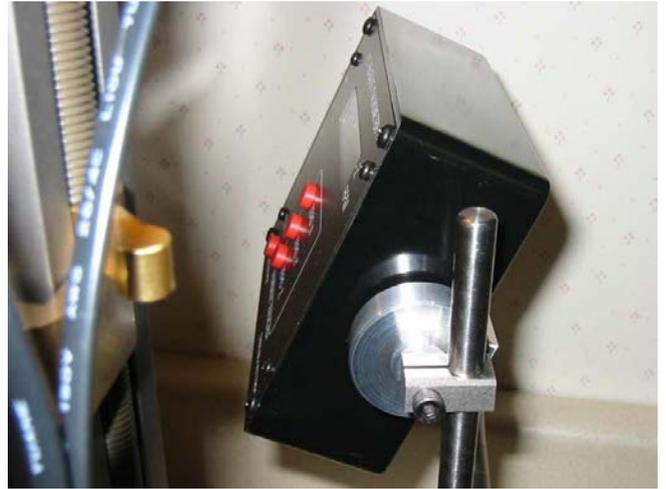


Photo 5: Another side view of the mounting system.



Photo 4: A closeup of the base shows the stainless steel mount that is attached to the board. Spiked T-nuts are mounted to the bottom of the board to accept the 8-32 countersunk screws.



Photo 6: A top view of the adjustment system shows the slit in the piece that slides on the shaft. The vertical shaft is 12" long because Ron has a 15" tall Z-axis on his mill in place of the standard 11" column. For normal height mills the rod could be shorter than 12".