

TIP 84 — Boring Head Modification/David Nelson

When I used the boring head I picked up from you at NAMES I found that it was difficult to adjust with accuracy. To remedy this I modified it so that turning the adjustment dial causes positive movement of the lower portion of the head in both directions.

The first image is a side view of the head. It shows how I plugged the original 3/8" boring bit hole and made one that is 1/4" so it fits the bits I use.



Figure 1



Figure 2—shows the other side of the head

Image three shows the threaded block I used to replace the pin in the original head. The original pin was removed from the head and silver soldered into the block before the block was tapped for a 4-40 screw.

The pin is then reinserted into the hole it came from but not fixed so that it could align with the screw. The slot in the head was machined larger to accept the block and allow the block to slide when the head is adjusted.



Figure 3

Image four shows the 4-40 cap screw, which is now the adjustment screw.



Figure 4

The inner collar is tapped to 4-40 and Loctited in place. The outer collar is held in place with a 2-56 set screw and is tight against the head body to prevent any backlash. The index dial is Loctited to the cap screw head. Please note here that the numbers on the dial are in the wrong direction in this configuration.



Figure 5—shows another view of the screw



Figure 6—shows the screw just starting into the block

I hope this is of use to you and feel free to use the information as you see fit.

Thank you,
David Nelson