

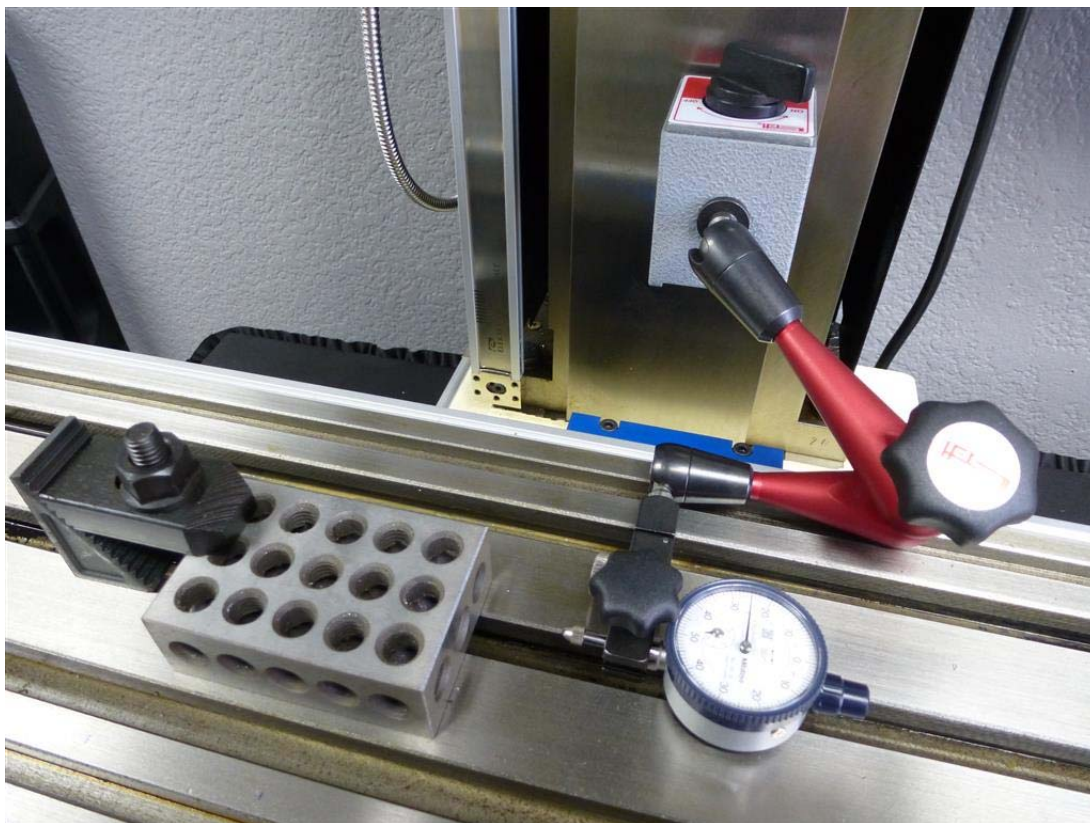


Validating Movement:

This document describes how to setup a dial indicator to "validate" your DRO's movement. Please keep in mind that the only "proper" procedure for validating movement is with a laser. However, with a high grade gage block, combined with a high quality plunge style dial indicator, it is possible to achieve satisfactory results. Best results are usually obtained by the simplest, most robust setup.

Be sure to also check / adjust your machines jib play before attempting to validate your movement. The following also assumes that your kit has been properly installed. The scale must be level to your machines movement, and the readhead / scale gap must be properly set or the following results will be meaningless.

1. Install your dial indicator to plunge against a solid surface:

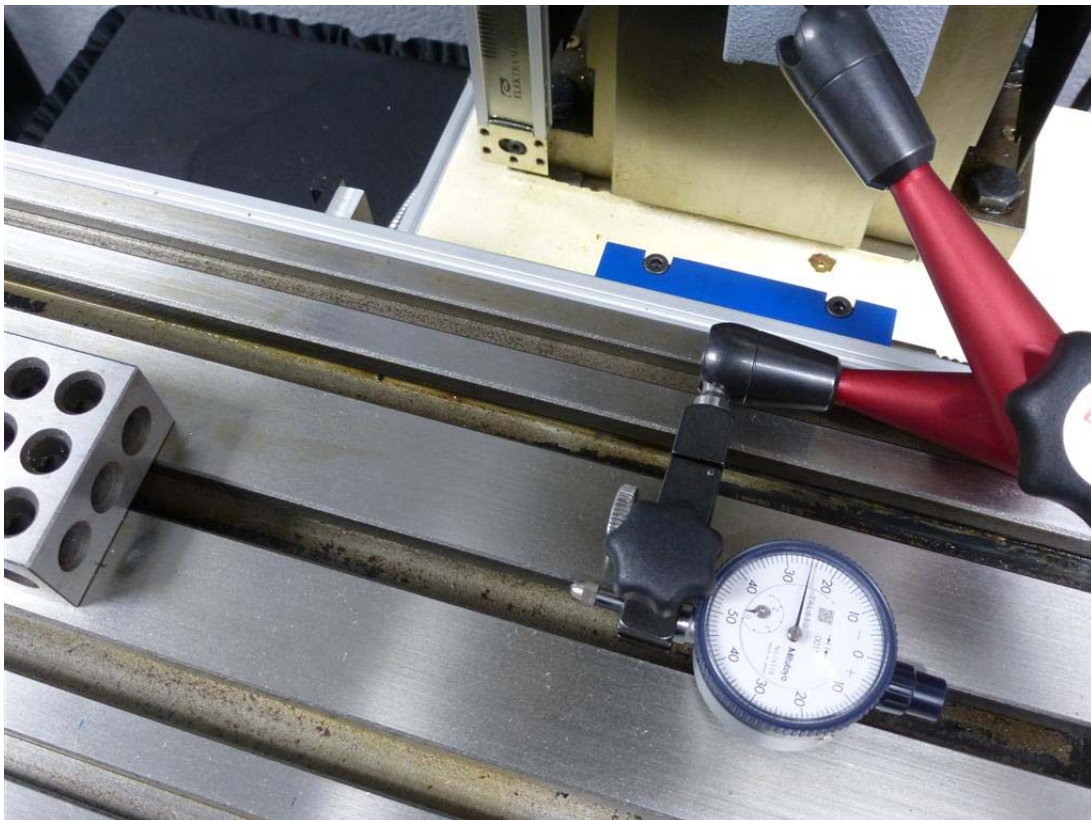


Note the simplicity of the layout. The 1-2-3 block is solidly clamped and checked for parallel with the table, and the dial indicator is being held in place very robustly from the column, not the quill. NOTE: The dial indicator and arms are above the table, and in no way "drag" or touch anything else.

2. Move the table so that the dial indicator "plunges" against the 1-2-3 block and zeroes. At this point you would "zero" your digital readout X axis value.



3. Move the dial indicator away from the 1-2-3 block:



4. Place a high quality gage block between the dial indicator and the vertical surface. Be careful not to disturb your setup or accidentally move anything:



5. Move your table so that the dial indicator now plunges against the gage block and the dial indicator zeroes out:



At this point, the reading on your DRO should now match the length of your gage block. If it does not, repeat this procedure again. If the reading is consistently off by an identically small amount each and every time, then you may want to perform the Linear Error Compensation procedure unique to your display. See our Library section for a step by step walkthrough on how to perform LEC. However, if repeating this procedure does not yield identical results, then the problem most likely lies elsewhere and performing Linear Error Compensation will most likely make your problem worse.

Typically, incorrect readings are caused by the following:

- Scale not being level with the travel of the machine
- Incorrect gap between the readhead and the scale (should be 0.5mm)
- Improperly adjust jibs / worn machine
- Readhead and scale improperly oriented to one another (are the last few digits on the display flickering?)

DRO PROS