

Using a File or Mill to Adjust your Sights

A neat trick you can do with a mill is to adjust front and non-adjustable rear sights. Say your pistol is hitting low and you want to adjust it. The calculation involves four figures: the amount you need the bullet moved on the target, the distance to the target, the sight radius of your handgun, and the amount of correction of the sight blade. The ratio of the bullet correction to the distance to the target is equal to the ratio of the sight correction to the sight radius. An example: a pistol with a sight radius of 6 inches is hitting two inches low at 25 yards. Convert the yards to inches, and we have $2/900 = C/6$, where "C" is the correction to the front sight. Multiply both sides by 6, and we get $6 \times 2/900 = C$. Thus we find that our correction will be to mill .013 inches off the top of the front sight.

Clamp the slide in our mill vise, level it, and then dust off the top of the front sight by the calculated amount. De-burr, cold blue and you are done.

If you are hitting too high, and your fixed rear sight has enough metal, you can do the same thing to the rear sight with one extra step. After you have dusted off the top of the rear sight with your end mill, switch to another end mill the same size as your sight notch (usually .125 inches) and deepen the notch by the same amount you lowered the top of the blade. If you didn't do this the notch in your rear sight would be shallower than it was before you started. When you de-burr the edges of the rear sight, be sure to round the corners on the outside, so you won't cut your hands handling the pistol. Cold blue the exposed steel, and you are done.

You can do the same job with a file, but you must be very careful. Even the slightest tip in our angle of filing will leave the front sight top angled. A visible angle on the top of the sight makes aiming difficult. If you plan to file, file to a depth short of the required depth. Then carefully, and with the finest file you have, file down to the required depth. Check your work regularly, to make sure you are filing evenly.