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THE THREE AXES OF A BOW SIGHT

By: P.J. Reilly

Did you know your compound bow sight has three axes?

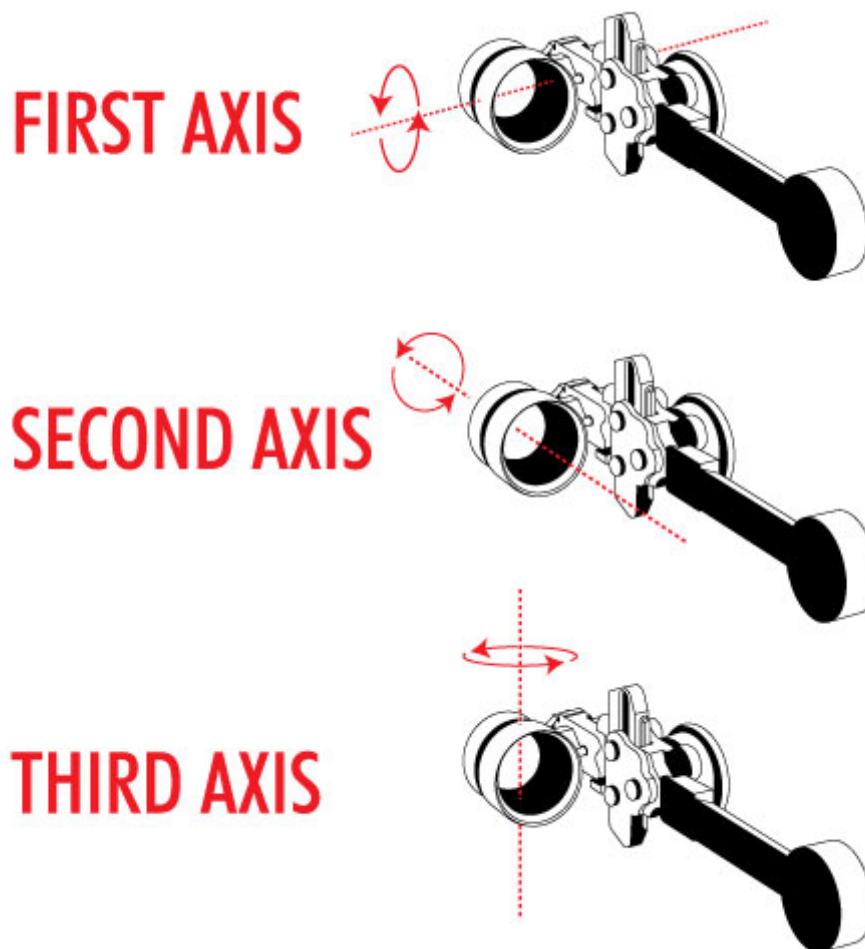
Did you know “axes” is the plural of “axis?”

An axis, of course, is an imaginary line around which an object rotates. To achieve a truly level sight – which is critical for accuracy – you have to account for all three axes.

Not all sights allow you to do this. Some are made to be simple, and so you have to hope that the three axes are level or darn close to it, based on the construction of the sight.

But many sights – especially those designed for target and 3-D shooting – do allow you to level all three axes. Do that, and you’ll know your sight is aligned for maximum accuracy.

You'll know if you can level the axes on a sight because the manufacturer will proudly announce that you can. Or you might see set screws in strategic locations on the sight labeled with "2nd axis," or something similar. If you don't know if your sight can be adjusted to level the three axes, look it up on the manufacturer's website.



The first axis runs from left to right in front of you, parallel to the ground. If you have a scope around your sight, then this axis would allow it to spin bottom over top.

The second axis, which many consider to be the most important, runs straight through the center of your scope as you would look through it. The scope would spin like the hands of a clock around it.

Failing to level this axis can lead to shots similar to canting your bow left or right. It might not make a huge difference at 20 yards, but the problems will grow the farther you shoot.

And the third axis runs parallel to your body through the center of your sight, so that your scope would spin around it like a top. When you're shooting on level ground, the

third axis means nothing, as long as your second axis is level. This axis comes into play when you have to shoot uphill or downhill. If it's not level, the effect will be similar to canting your bow.

How do you adjust them all so they're level? By using levels, of course.

There are many levels on the market made just for setting the axes on a bow sight. Most compound sights today have a level built into the scope housing, and you will use it in conjunction with others to get your sight straight. If your sight doesn't have a built-in level, you're going to have to find a way to attach one to your scope or sight housing through the leveling process. You'll want it to sit on top or underneath the scope, perpendicular to the sight bar.

Use vertical and horizontal levels attached to your bowstring or riser to level your bow. It's best to do this by clamping your bow into a bow vise. Once the bow is level, you can lock it in place.



Next place a level on top of your scope housing, so it's parallel to the sight bar. If it's possible for you to do so, spin your scope until the bubble is centered. Now you've set the first axis. (Many sights won't have an adjustment for this axis, and will already be leveled by the manufacturer.)

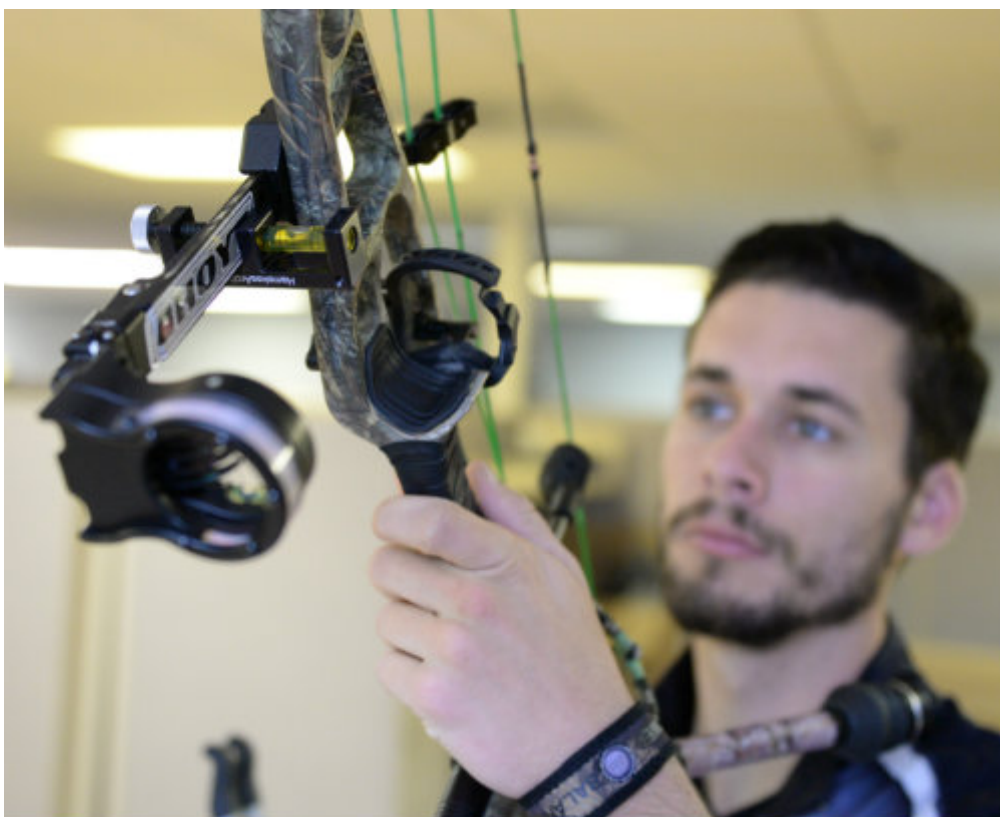
Next, attach a level to your sight bar so that it's perpendicular to the bar. If your bow is level, this one should be too.



And so look at the level that's in the scope housing, and which is also perpendicular to the sight bar. Assuming your sight has the capability, adjust the scope using the second-axis adjustment screws until that bubble hits the center, too. When it does, you've leveled the second axis.



Now, tip your bow 45 degrees as if you'd be shooting at the ceiling or the floor, while keeping the bubble centered on your sight bar level. If your third axis isn't level, you'll notice the bubble inside your scope housing will shift to one side or the other.



Make adjustments to the scope using the third-axis adjustment screws, until the bubble in the scope housing is centered. Your third axis is now level.

Now your sight is perfectly level, and you're ready to sight in.

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