Richard's method of mounting a scope using Conetrol Scope Mounts

Ideally begin with a new scope which has not had the scope adjusters fiddled with. If that is not possible, I advise that you begin by centering the adjusters in your scope as follows. Wind either the elevation or the windage adjuster outwards until either it comes up against a stop, OR you no longer see the view moving in an image moving second focal plane scope, or the reticle moving in a reticle moving first focal plane scope. You should have the scope secured as you look into it and make this adjustment. Many early scopes do not have captive adjusters and it is possible to unscrew them completely which is not desirable. If your scope has captive adjusters, simply wind it out until it stops then, wind it back the other way counting the turns as you go. When it stops, wind it back halfway. Repeat for the other adjuster. This will get the scope back somewhere close to the ideal neutral, central internal optical position. Now you are ready to mount the riflescope.

To mount the scope in Conetrol Scope Mounts.

Firstly, the rings are individually made so do not mix the parts from two different rings and expect them to look right. If you have already mixed the parts, there is a good description of how to go about restoring the situation on Conetrol's website here:

http://www.conetrol.com/mountingtips.html

Next step.
To set the scope in the correct position for eye relief, get the rifle owner (or principle user) to shoulder the rifle as if to shoot, observing all the safety rules of firearms ownership at all times. Get him or her to hold their head in one position, allowing only a raising of the head to see through the scope, but not any forward or backward head movement. Have a second person hold the scope over the already mounted base and, beginning with the scope hopelessly too far forward, slowly bring the scope backwards until the "shooter" sees the field of view through the scope suddenly widen to full picture size and tells you to "stop". The second person, holding the scope in the called position then marks in pencil on the barrel a mark level with the objective end of the scope when viewed from directly above. That mark is the reference for where the scope will be fitted.

Next, mount the rifle horizontally in a padded vice, shooters cleaning stand, or just a big cardboard box with a couple of "V"s cut in the top of opposite ends in which to rest the rifle in a horizontal position. Loosen the four cone screws from the bases so that a full hole can be seen looking down into both ring location holes. Holding the scope in line with the pencil reference, take one half of the forward scope ring and clamp it as near to vertical around the scope body with the foot down inside the front ring hole in the base. Now lift the scope and

this one ring half up and without losing your grip on the ring half and scope, bring up the other half of the scope ring and fit it to the other side of the scope in such a way that the top edges of each ring half touch together and one is not forward of the other. Next, observe that one half of each ring has an angled cut showing as a reference. Look for a similar mark inside the ring cap. These marks show which way the ring is to be assembled. The mark in the ring cap will be nearer to one flat section of the ring cap's edge. That flat section will need to be aligned with the front or the back of the two fitted ring halves, whichever one has the reference slit nearest. When you are satisfied that the cap is in the ideal position, squeeze the bottom feet of the rings together with your fingers to engage the cap in position. Inspect the job. If the cap looks neat and tidy, you are ready for the next stage. If not, then you will need to rotate the cap until it is right. This can be tricky if the ring is a particularly tight fit to the scope. Some are loose enough to simply rotate with the fingers, while others will need to be released to begin again.

If you need to release the ring then this is where I differ from Conetrol in my method of releasing the ring from the scope body. Conetrol states that you should put a screwdriver blade between the feet of the rings and rock it back and forward to, once again, get the two ring tops to meet inside the cap, thus allowing the cap to either be removed, or rotated to the proper place. I have observed that this method will often result in a damaged (but still useable) cap. The damage which occurs will be seen as a cap with two turned up rims like a hat brim. If this happens it is possible to assemble the ring around a piece of appropriate diameter bar or even the forward half of a riflescope and gently panel-beat the upturned edges back into place with a very light hammer.

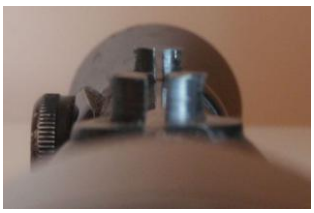
My method to remove a Conetrol ring is as follows:
Holding the scope upside down with the ring to be removed held loosely in one hand, take a plastic handled screwdriver or similar plastic tool (which you don't mind getting marked in the process), and, taking careful aim with the handle end (not the blade end), give the foot of one ring a smack on the FLAT edge of the ring. Where I mean is the part of the ring which faces the other ring half as two parallel flat faces. The outside edge of each ring is rounded to form a semicircle. You are trying to shock the ring apart, not together. One sharp tap is usually enough for the ring to fall apart safely in your supporting hand. This has never damaged a ring or cap for me in about forty years of selling and fitting Conetrol Scope Mounts and will completely avoid having to panel-beat a cap back into shape.

Having successfully aligned the two ring halves and top cap for one ring, the next stage is to align the reticle. Using whatever tool or method you have available, you need to rotate the ring around the scope until the reticle 12 o'clock / six o'clock wire creates an imagined line through the vertical centre of the rifle bore. If the ring needs to be rotated to achieve this position, again, invert the scope with the ring in place in a loose grip in one hand and this time tap the round edge side of the ring to rotate the ring in the desired direction. Each time you strike the ring, lower the scope and ring into the front base hole and check the reticle alignment. When you are happy that the front ring is in the desired position, it is time to fit the rear ring. Proceed as follows. Sometimes a ring will be loose enough to move by finger pressure alone, but usually they are already tightly in place around the scope body and need this method to be moved into the correct position.

Fit the scope with front ring into the base hole and swing the scope and the one ring either way, about thirty degrees so that the rear base hole is easily accessible. I find it easier to swing the scope towards my body rather than away for this part of the job.

You need to be holding the front ring firmly in place during this part of proceedings as it is your reference for the remainder of the work. With the scope swung aside, offer one half of the remaining ring into the rear base hole and then swing the scope back to engage with that ring half. Squeeze that ring half onto the body while it is located in the base hole. That will give you the correct spacing of the rings relative to where they will mount in the base. Now, carefully lift the scope with the front ring still in position and the one half of the rear ring where it needs to be and fit the other half of the remaining ring and cap by the method described above.

When you have both rings assembled, it is time to check the alignment of the rear ring, relative to the front ring. To do this, invert the scope so that you now have all four feet of the two rings pointing upward. Look along the gaps created by the two feet of each ring. Probably the two gaps don't line up properly. Remember: the front ring is still in the correct position. Your job, now, is to tap the rear ring in the required direction until both ring gaps are exactly in line with each other.



When this is done, you bring the scope right way up and lower it into the Conetrol base and begin to tighten the four cone screws. When you have them firm enough that the scope can't slip, it is time to adjust the scope for windage using just the Conetrol cone screws.

Failure to correctly align the two rings as described above, will result in a scope being mounted other than in line with the rifle's bore. In turn, this will result in an unnecessary amount of adjustment being used to bring the scope onto the target. The Conetrol windage system is there to minimize the internal windage adjustment needed to get the rifle sighted in to your maximum advantage.

The cone screws do two jobs. They secure the scope to the base and they also offer very precise windage adjustment for both the front and the rear ring. Using an optical bore-sighter (collimator)

or simply using the old eyeball bore-sighting method, it is almost invariably possible to get the windage correct without using the windage adjustment in the scope at all. By slackening one side and tightening the other, you will be able to get the windage just where you want it with the internal adjustment still in the ideal central position. Once you have completed this

stage, make sure that the cone screws are nipped up firmly by tightening each cone screw the same amount on each side. Having got the windage correct, and the scope all tightened down, make any necessary vertical adjustment using the elevation adjuster in the scope and you are ready to go to the rifle range for the final sighting in process.

Richard Wilhelm.
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