

# INSTALLATION OF A SCOPE WITH BADGER RINGS AND MOUNT ON A REMINGTON 700 SHORT ACTION



To properly install a scope on a rifle takes a few tools and some patience. I recently installed a Leupold M3LR scope on my Remington M40 using Badger Ordnance rings and short action base. Below the procedure is described in detail with accompanying photos.

My decision to use Badger Ordnance rings and mounts comes from the quality of the product and the rugged reliability Badger offers. I specifically needed the 20 MOA forward cant of the base to provide the extra movement in the elevation adjustment to allow me to zero on targets well beyond 1000 yards. Using a zero cant base, I found that I ran out of adjustment around 1050 yards.

The gun is a Remington 700 built by Tom at Guntek in Virginia. The caliber is .308 Winchester with a trued action and 24 inch barrel. The scope is a Leupold M3LR USMC mildot 3.5-10 power scope. The Rings are Badger Ordnance 50 rings and as described above, the base is a Badger Ordnance 20 MOA forward cant short action mount.

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This procedure requires several tools. You will need a bubble level, a 65 inch pound torque wrench with a 1/2 inch socket, and a 15 inch pound torque wrench (or you can estimate if you are familiar with the feel of the torx bit wrench included in the package with the rings and mount).

The level is used to ensure that the mount, rings and scope are stacked properly to avoid the stadia in the scope from being off center or crooked. If either condition exists, your longer shots will be off center and windage corrections will be required to maintain proper zero at various ranges.

To begin, I removed the old setup. The base I had used before was a zero cant base. Once that was accomplished, the real work began.



Using a clean rag, remove any loose debris or oil that might have found its way onto the receiver. Then set the gun up on a flat and solid surface. Using your level, make sure the gun is level with the plane of the butt stock at a 90 degree angle to the table top.

Lay the mount on top of the receiver and just begin to thread the mounting screws. Before you tighten the screws down, lay your level on the mount taking care to keep it even across. Make sure the bubble is in the middle. You will want to check both the front of the mount and the rear of the mount. Once this has been accomplished, tighten the screws down to where they just snug up. (Note the torx head on the mount screws in the picture)



Check the level once again before tightening down the screws to 15 inch pounds. If you are using a 15 inch pound torque wrench, you will feel the click at the proper setting. If you are going by feel using the supplied wrench, you will tighten down on the torx heads until you feel the wrench starting to slip in the head. Start from the muzzle end of the

mount and work your way back. Once the mount is tightened down, check the level once again.



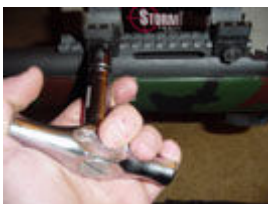
NOTE: Badger rings are center bored as a pair. It is important to make sure the tops of each ring stay oriented in the same direction and remain with the same ring during installation. Note that the serial numbers on the ring lower portions should be facing the muzzle of the firearm.



Remove the top of each ring setting it aside carefully for installation later. Set the rings on the mount where you think you will want them. It is recommended that they be as far apart as possible to provide the best stability. Lay the level on the rings to verify that everything is right. Hand tighten the nuts on the rings to the base. Now, lay your scope in the rings and shoulder the rifle as you would when shooting. Make sure the ring placement on the rail works with your eye relief and that you are comfortable. Adjust as needed.



Once you have ensured that the rings are placed where they won't interfere with the scopes forward and backward movement to ensure proper eye relief, you may tighten them down. Beginning with the front ring, use the 65 inch pound torque wrench to tighten it to the rail. Repeat the procedure to the rear ring. Once the rear ring is torqued, re-torque the front ring.



Verify that the ring lowers are level and then place your scope in the rings. Remove the elevation adjustment knob and place the level on the exposed adjustment stud. Level the scope. Once again shouldering the firearm as you would while shooting, verify that the stadia in the scope are aligned in a strait up and down orientation to your eye. Due to slight variations in manufacturing, some stadia may not be perfectly level with the knobs.



When you are satisfied that the scope is level for you, place the tops of the rings in place and tighten the screws down. Make sure the top has equal space on each side between it and the lower. Begin with the front top first then go to the rear top. Torque the torx screws down as you would an automobile tire by tightening opposites. You will once again tighten these screws to 15 inch pounds. Check to ensure the stadia are still aligned properly. Adjust as needed.



Re-torque the rings to the base (front 65 inch pounds, rear 65 inch pounds, then the front again) and re-install the elevation cam. You are now ready for sighting in.

