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The before and after. As you can seem, the work was extensive but rewarding.

Anyone who has followed the gun scene over the past several years is most likely familiar with the "Scout" rifle concept. The idea of this type of rifle is primarily contributed to the esteemed gun writer, Col. Jeff Cooper.

The basic idea of a "scout rifle" is to have a rifle that, in essence, is capable of handling any task that a rifle could be

called into service for, from virtually any hunting situation to offensive and defensive combat.

There are several features that are associated with the scout rifle. The one that is most closely associated with this type of rifle is a low powered optical scope attached ahead of the rifle's action. In most cases, any rifle with optics mounted in this fashion is automatically called a "Scout" rifle, and in most cases, this is incorrect.



The full lists of features generally required for a "true" scout rifle are as follows:

The "completed" M44 scout.

1. Total weight, around 6.6-7.7pounds
2. Overall length, around 36 inches
3. Bolt action must be capable of accepting stripper clips or detachable magazine
4. Caliber must be .308 Winchester or equivalent
5. Primary sighting system consisting of forward mounted optics in the 2x to 3x range with backup iron sights
6. Sling
7. Onboard ammunition carriers
8. Bipod (not required, but recommended)
9. Must be capable of hitting "real world" targets at "realistic ranges"

While most so called "Scout" rifles do not fill the total number of these requirements, some do come very close. The closest true scout rifle is made by Steyr. The [Steyr Scout](#) was made under the direction of Cooper himself and has been used throughout the world for a number of years now in several hunting situations and (*in the Bosnian conflict on a limited basis*) combat. The only problem with this particular rifle is the cost. If you want one, save your pennies and buy one, by all means.

For the rest of us, the Mosin-Nagant can be a very economical alternative to the Steyr Scout and still fulfill about 80 to 90% of the total requirements of the scout rifle concept. This is where the subject of this article comes in. While this article will give you a general idea of the rifle's features and how the work was done, it is not a step by step article on how to do it yourself, as it would be a book. Instead it is a guide on the basic steps and some ideas on how such a conversion can be done for a minimum of cost and trouble. I would encourage anyone reading this article to consider this for your next project, as it is a rifle that is truly unique and "custom" not just another 10/22 with a bull barrel attached.



For me, the scout rifle has always been appealing for any number of reasons, among them the fact that it's unique (*I.E. Cool*).

My own personal rifle in this article has been a long time coming, with many pitfalls that can be avoided. The total cost to build this particular rifle is well under \$500.00 and that is including the base rifle and a one hundred dollar scope!

Note: Suggested retail on the Steyr Scout is \$2500.

Darrell Harrison Mosin Scout Scope Mount

It also should be noted that most of the modifications for this project can be non-permanent, though on my particular rifle, some are. I am a collector of the Mosin-Nagant rifle family and for me, this originally was somewhat important, however as the project progressed, I found the rifle much more useful and fun as a "Scout" and my plans for it became permanent.

So the question then becomes, why the Mosin-Nagant? Why not use a Mauser? The answer is two fold, first the Romanian M44 used here was in fair condition and, well, available to me. Second, as the project progressed, I noted that Mauser sporters are very common, while Mosin-Nagant sporters are not. The Mosin-Nagant doesn't look like a sporting rifle, the Mauser does. One of the great things about building your own rifle is that you don't have to follow all the rules. If you want to build a Mauser scout rifle, by all means do it. However the only real advantages to a Mauser over the Mosin-Nagant for a scout type rifle is that the Mauser can be converted to .308 Winchester relatively easily and the Mauser safety is easier to manipulate.

A note on the [7.62x54r](#) caliber should also be added here. As Mosin-Nagants continue to flood the market, more and more commercial loads are becoming available for it. Reloading components are also easily obtained. While you generally can't go to Wall-Mart to pick up a few boxes of cartridges for your Mosin-Nagant, you shouldn't have to go any farther than the local gun shop to get them. The cartridge is also ballistically similar to .308 Winchester, and easily meets the "Scout" caliber requirement.

So with the rifle selected, the first step is to get the optics mounted forward of the action. The Mosin-Nagant family of rifles have a straight bolt handle and as such, several companies are now offering "Scout Type" scope mounts for it that attach to between the rear sight "Ears" using screws. For this project, I literally went through three different scope mounts, two of which failed. I will not mention the ones that didn't work (*for me at least*) but will simply say this, buy a mount that will adjust for elevation, and that SECURES to the rear sight block. The one shown is hand made by a machinist named [Darrell Harrison](#). He has a website and can be E-mailed at M39scout@bellsouth.net; Harrison also makes mounts of this type for several other Military Surplus rifles.

I purchased the mount directly from him for around fifty dollars. It is milled from a solid block of aluminum and attaches securely to the rear sight block using EIGHT non-marring brass set screws. It uses a two piece Weaver-type base attached to the milled flat top of the mount and can be shimmed if necessary, rings are not included, however due to the mounts design, low or extra low rings are recommended by Harrison and me.



Looking down the rifle, through the scope. Note the access to

This is, in my opinion, the best scout type mount made for the M44, but it is not without its problems. The mount uses brass set-screws to attach it to the rifle, which is fine if one is a casual shooter who does not want to damage the original rifle finish, however for my particular rifle, which is shot a lot, I found a few problems.

The mount uses two of these screws in the top of the rifle to adjust for elevation, this generally requires a lot of turning to get the course elevation adjustment where you want it, and also requires removing the scope to re-adjust. The (*minor*) problem here is that the brass hex-type heads on the brass screws are relatively fragile and easily stripped out.

the top of the receiver.

After stripping out several, I replaced the brass screws with stainless steel ones. Luckily, Harrison used standard 10/32 screws on the mount, so a trip to Home Depot and \$1.25 was all it took to get the new screws. This allowed me to adjust more positively and also made the mount more stable in my opinion.

The other problem I encountered with this mount is that while I could get the rifle on target and shooting great, after about fifty to one hundred rounds of Wolf ammo, I would lose elevation zero.



The butt stock cuff, note the raised cheek piece. Also note the placement of the rear sling swivel, which anchors the whole system together.

I actually found that the mount had a tendency to work loose slightly, over time, due to the screws working loose. To alleviate this problem, I decided to drill two shallow holes into the sides of the sight leaf where the two front locking screws make contact and then securing them in place with a bit longer stainless steel set-screws. With this done, I have fired several hundred rounds through the rifle, as well as having the occasional hard knock come it's way, without further incident.

As for the scope itself, I chose a Bushnell Trophy 2x32mm pistol scope. Most authorities on this subject will say that one should use an actual "Scout Scope" with the eye relief set up for a scout rifle instead of a pistol scope. I have never encountered any real problem with using a pistol scope, though others might have eye relief issues relating to this. I chose a fixed power scope as opposed to a variable because I wanted to get as close as possible to the original scout requirements. Also in my opinion, fixed scopes are more durable. The Trophy line is Bushnell's "middle of the road" scopes and feature a one piece, aluminum main tube, multicoated lenses, positive click adjustments and a lifetime warranty. I have dealt with Bushnell's warranty department and found them to be very professional and willing to correct mistakes, either theirs or yours. I highly recommend them. Butler Creek "Blizzard" scope caps and Weaver LOW rings were also selected. The cost of the scope, rings and caps was around \$125.

This setup, once the bugs were worked out, works very well for me. Sighting in however, is to put it mildly, a learning experience. I learned that bore sighting at the range with all of the tools to disassemble the mount is very necessary.

I also learned that initial sight in should be conducted at 25 yards, with further adjustments at fifty and then one hundred yards. Once it is all locked into place, leave it be and be

happy with it. I also noted that with the scope setting forward of the action, it was easily brought to the eye, and the whole setup seemed very natural, like it should have been that way from the beginning.

So now that optics are mounted, on to the setting up the rifle stock. While the original Mosin-Nagant stock will work just fine with the optics setup and a raised cheek piece of some type, I wanted something more. I chose an ATI Monte Carlo type synthetic stock for this rifle. I chose this stock because it is more durable and MUCH lighter than a wood stock, again going back to the original scout rifle requirements; the weight of the completed rifle is an issue. Installation instructions and evaluations for this stock are elsewhere on this website.

With the stock installed, we move on to some type of on-board ammunition carriers. A butt stock cuff holding rifle cartridges will work fine. The one shown is a Koplín brand cuff made primarily of elastic and nylon. Installation required me to remove the rear sling swivel from the stock by unscrewing it and then, placing a small hole in the cuff once it was slid on to the stock, screwing the swivel back in. This was due to the cuff covering the swivel when properly installed. After almost three years of using this cuff, I have yet to have it tear at the swivel point. The only problem with this setup is that the elasticity of the cartridge loops themselves tend to get weaker. Luckily, these cuffs are commonly available and can be had for as little as \$10 at virtually any retailer that sells gun accessories.

The butt stock cuff also serves double duty as a raised cheek piece. The only thing I had to do here was go out to the Army surplus store and buy a used GI foam sleeping mat for five bucks, cut a few small pieces out of it, and stuff them under the cuff until the stock felt correct. The sling swivel holds the whole thing together very well and I have never had the pieces of foam fall out. Incidentally, most police and military snipers use the same foam sleeping mat and 100 mile per hour tape to get the proper cheek weld on their very expensive sniper rifles. I think my method looks better though.

Well, with all of the above mentioned modifications complete, I could have called it a day, and proclaimed to the world that my scout rifle was complete, but I couldn't do that and be truly happy.

The first thing I noticed while working with the M44 was that the front sight, bayonet and bayonet lug added a significant amount of weight to the rifle. Also, the original M44 was designed to be fired with the bayonet extended, which was fine for the Russian soldier, but might get a few odd looks from the Dept. of Natural Resources (*DNR*) officer who happens upon you as you stalk through the woods. Lastly, when the bayonet was folded into the side of the rifle, it had a



tendency to stab the fingers of my left hand while the rifle was recoiling. With all of this in mind, I removed it, again **instructions** for this procedure can be found elsewhere on this website.

One of my least favorite things about the rifle, the muzzle end.

The next task accomplishes was the bolt handle modification in photo to the right. The reasons for this was simply personal, I think that a bent bolt looks better on a rifle, and also find the Mosin-Nagant's bolt handle somewhat difficult to use with the sporter stock in place.

The stock used was originally designed for use with the ATI scope mount and as such the stock was inletted and fitted with a bent bolt in place.



Note the extensive modification to the bolt handle. The polish was done with 350 grit Sandpaper.

While several gunsmiths and shops specialize in making period correct Mosin-Nagant bent bolt handles for use in sniper conversions, I wanted a more "sporting" look. The bolt handle here was purchased from Brownell's for around twelve dollars. It comes as a completely unpolished and rough casting. The handle was filed for the proper look, the old handle cut off, and the new one welded in its place. Any gunsmith can perform this service if you have your reservations about it, but lucky for me I have a friend and shooting partner knows his way around a welder and did the job in about twenty minutes. Once complete, the handle was polished and filed for several hours with 350 grit sandpaper and a new single cut mill file until the proper shape was achieved.

A few things of note should be added on the bolt handle modification. First, disassemble

the bolt fully and work only with the bolt body when doing any kind of work that involves heat, also heat control paste, available from Brownell's or Midway USA should be used when welding or heating on any bolt component . The last thing that you want to do is work on the bolt assembled, as the firing pin and locking components can become brittle, this could ultimately cause the bolt to fail during firing, and blow the bolt components, hot powder and other shrapnel back in your (*or whoever is unlucky enough to be the shooter at the time*) face. Another thing to keep in mind is that, while the standard bolt handle can be heated up and bent down, it is way too short and is far from an advantage, trust me on this, I tried that first and found it worse than just having a strait bolt handle.

The bore on this particular M44 was excellent; however, the rifle's crown appeared to have been damaged due to cleaning from the muzzle end. I personally have always wondered why so many surplus rifles where the bolt can be easily removed show this wear. Because of this, I re-crowned the muzzle of the rifle.



This is generally a task that can be handled by an average do-it-yourselfer, but if you are unsure on how to proceed, take it to the 'smith. One note of caution here, the M44 barrel is already very short, and the Federal legal limit is 16 inches! Cut accordingly! I only took about the width of a hacksaw blade off the gun, and got away with just re-filing and cutting the crown.

Going back to the original scout requirements, we find that the total length of the gun should be around 36 inches. Mine measures around 39 inches, and is very close to that. If one were to undertake this project with a M91/30 (*Please don't do it to any Finnish rifle, Dragoon Convert, or anything marked "Remington" or "New England Westinghouse", if you want to build one of these rifles and are considering one those models, let me know and I will trade you a 91-30, M38 or M44 for it*), the barrel can be cut to the more appropriate length and then re-crowned.

The "Business end" of the rifle, not a great picture of the

details, but still cool looking.

The original M44's two stage trigger was perfectly serviceable, but I was looking for a better pull. I chose to do the trigger work myself, converting the two stage system to a single stage trigger with virtually no creep. This was done before I knew about the [Huber concepts anti-friction ball trigger](#), which I would have used instead. I will not go into the trigger work here and advise anyone interested in it to take a gunsmithing course, buy a video, or read up on how triggers work and how to modify them.

I have not worked with the Huber Concepts unit, so I cannot comment on it, but I will say that when the trigger work was complete for my rifle, it had a HUGE amount of over-travel. Over-travel is when the trigger has already "broken" but the trigger continues to move rearward. Any hobbyist can correct this relatively easily by adding an over-travel stop to either the trigger guard or the trigger itself. An over-travel stop is as simple as a screw that is threaded into one of these two components and is adjusted to the proper setting before being pinned or locked into place.

On my rifle, this was easily accomplished by simply drilling and tapping the rear of the trigger guard with a 10-32 hole and then inserting a screw. Turn the screw until the cocked (*and unloaded of course*) rifle will not dry fire. Now back the screw off until the rifle does dry fire. Dry fire a few times for good measure to make sure you have the right spot, and then mark the screw somehow (*I used my wife's lipstick and coated the end of the screw not threaded through the hole*). Back the screw out and cut it at the marked point leaving a little bit of extra screw. Now re-insert the screw into the hole and test again. If everything is OK, take a pointed punch and hit the area where the screw and threads meet on the cut side (*this is called "Peening"*).

Now use red Loc-Tite on the screw, on the inside of the trigger guard, to lock it in place and let it set up for about twelve hours. After this, file the outside of the trigger guard so that the screw and the trigger guard metal match and appear blended (*if the screw is locked in correctly it shouldn't turn*). Then re-peen the screw to the trigger guard and dip the end in cold blue. This worked pretty well for me, and anyone with a hand drill and a set of taps can do it.



A picture of the trigger over travel stop. It's really just a blued piece of 10/32 screw, but it sounds cooler to call it a "Over travel stop"

The last thing that I did to this rifle was add a three point sling system. This is a lesser-known type of sling setup but is commonly associated with the scout rifle. Essentially it involves an addition of a third swivel stud mounted just forward of the rifle's action.

Attached to this stud is a shorter piece of material that connects to the body of the conventional sling.

With this system, the sling is more than just a simple carry strap and becomes a valuable shooting aid. The shooter places his support arm within the large loop created by the third piece of material that hangs from the middle of the rifle, about up to the bicep and then brings the rifle into the shooting position. This stabilizes the rifle and aids in steadier shooting. While it is not as good as a conventional shooting sling, it takes less than a second to "sling up" and really helps in the sitting or offhand position.



The placement of the third sling swivel just forward of the action. The short sling is attached here.

One of the slings I connected to the rifle in a conventional manner and the other was connected to the third swivel stud. I then cut the one connected to the third stud about seven inches past where the two slings intersected.

The next step was to take one of the buckles off of the third sling and slip it over the longer piece with one half hanging loosely off.

Next the shorter piece was

I installed the third swivel stud by simply getting one designed to go into a wood stock and then drilling a pilot hole and screwing it in place. This was very simple as the stock was easy to drill. I did have to make the hole a little bigger than I would have if I had done this on a wood stock, as the ATI stock uses high quality reinforced polymer for its stock, and it is much stronger than wood. I then added the swivel.

The sling itself was a homemade unit. Again, a trip to the good old Army Surplus store produced three M16 silent slings, complete with the buckles for five bucks.

connected to the open part of the buckle.



A picture of the two slings connected, along with the sling stop.

The last thing I did was add a stop to the longer sling so that the shorter part would engage it. This was done by simply putting two screws through the nylon and then adding the appropriate nuts to them. I applied Loc-Tite to hold them in place and then ground off the excess screw. I also used a lighter to melt the nylon of the sling around the two screws, sealing them in place. The only real downside to this technique is that when the buckle and the stop make contact, they make noise. I suppose this will one day be corrected by either coming up with something else, or buying a three point sling.

With all that, the rifle is complete. I found it to be a very enjoyable project and consider it well worth the effort. Everywhere I have taken it, people have asked me what it was and how I did it. It may get the occasional odd look, but most people seem enthusiastic about it.

As I stated before, I tried to as close as possible to the scout rifle concept without breaking the bank with this project. Let's take a step back and see how I did.

1. Total weight, around 6.6-7.7pounds. (*Heavier, but pretty close, average shooter is more than capable of handling rifle. Requirement somewhat met.*)
2. Overall length, around 36 inches (*39 inches, requirement met*)
3. Bolt action, must be capable of accepting stripper clips or detachable magazine (*Action accepts stripper clips, Requirement met*)
4. Caliber must be .308 Winchester or equivalent (*7.62x54r Caliber, Requirement met*)
5. Primary sighting system consisting of forward mounted optics in the 2x to 3x range with backup iron sights (*Primary requirement met, perhaps backup irons in the future?*)
6. Sling (*Three point system, requirement met.*)
7. Onboard ammunition carriers (*Butt stock cuff, capable of holding a full stripper clip plus four rounds, Requirement met*)
8. Bipod (*not required, but recommended*) (*Bipod easily attached to front sling swivel, Requirement met*)
9. Must be capable of hitting "real world" targets at "realistic ranges" (*Capable of one to*

five MOA at 100 yards, accurate enough for hunting purposes, requirement met.)

As you can see, the rifle comes very close to the original concept. The only places where it truly falls short is in the weight department and that it has no iron sights. I could leave well enough alone, but may seriously look into the iron sights. The weight requirement however is a tougher nut to crack and probably cannot be solved without a milling machine and a lot of determination, both of which I am lacking.



Another picture of the complete rifle, note the scope, mount, stock, sling swivels, sling, raised cheek piece, butt stock cuff, bolt handle and over travel stop.

One final note here is that as you may have guessed the rifle is never really finished. You may have noticed from the pictures that the stock appears rough; this is because I intend to fill the checkering and bolt handle cut out with epoxy and re-finish it with crinkle type paint. Also I do not like the step in the front of the barrel and am considering what to do next. As you may have guessed, when you start a project, you find that it is never really finished. But that's OK, getting there is half of the fun.

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