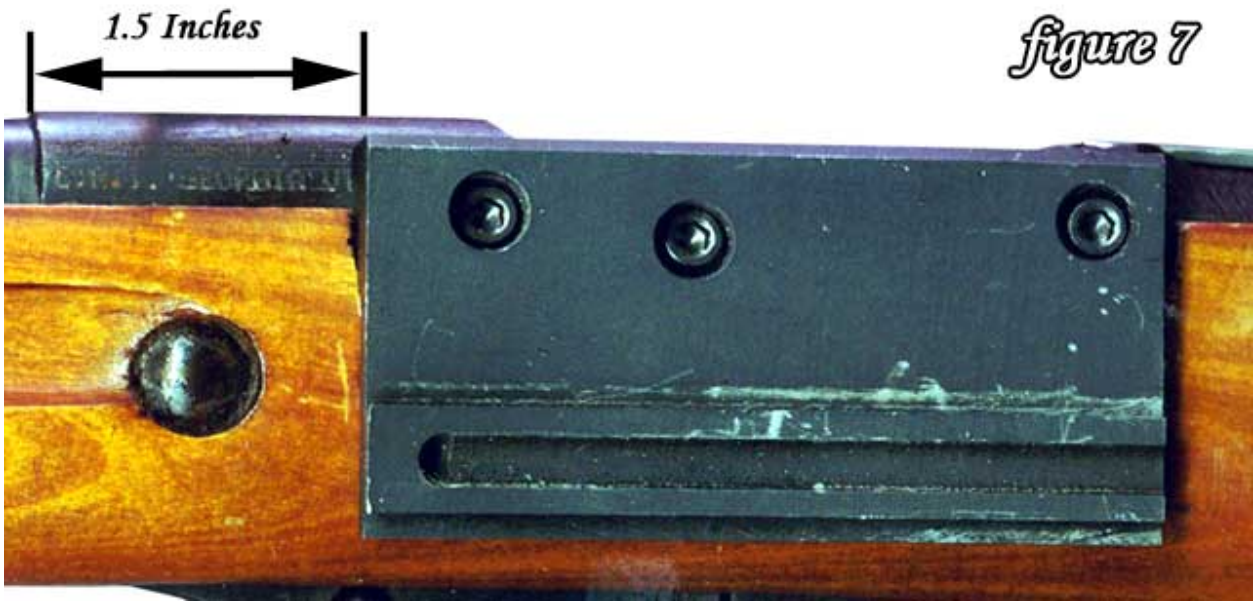
This is the instruction on how to install the SKS side rail mount onto a Mosin-Nagant rifle written by Jamie Mangrum. This exceptional guy is a brilliant specialist in rifle modifications. Below is a shorter version of his article.
For the project you'll need a POSP sniper scope with the SKS/SVD type of mount, the side rail for Mosin-Nagant and a bent bolt for Mosin-Nagant rifles.
The bent bolt is needed to avoid cutting the stock.

figure 5

Mosin-Nagant Sniper Project

The mount comes with three hex screws. It is good to know what size drill bit and tap you need. There are no supplied instructions that come with the mount. I found that if you go to Home Depot they have this great steel plate/panel in the screw and fastener isle (at least they did at two that I have visited). The panel helps you determine what size screw and thread you have. The three screws that came with the mount fit perfectly in the 10-32 hole and fit like a charm. I tried the next size larger hole and it was too loose. I tried the next size smaller hole and it was too tight. I picked up a Hansen 10-32NF Tap and #21 Drill Bit combo for the job.

figure 6



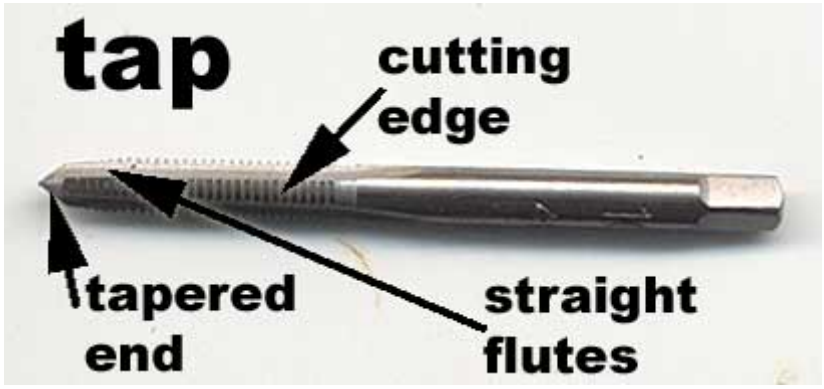
I installed the mount 1 1/2 inches back from the front of the receiver.

Placing the mount is the task in the project where you want to take your time and make certain that it is level with the lines of the receiver/barrel and sits perpendicular to the side of the receiver. Basically use a level and your eye sight to find the best place. You do not want to drill additional or unnecessary holes in your rifle. Remember you could take the parts to a gunsmith if you do not feel comfortable making this alteration.

I found that it was difficult to hold the mount on while I attempted to drill. I tried all my bag of tricks including large rubber bands. Any clamp I installed blocked the motion of the drill press. I would rate this project high on the skill level for difficulty. I was able to clamp the mount in place at the rear end of the mount and then was able to drill and tap the front hole. One I installed the front screw I removed the clamp and used the screw to hold the mount in place while I drilled and tapped the next two holes.

The 10-32 tap bit is what you use to cut threads in the receiver's drilled holes. You will have to purchase a tap handle similar to the one shown in figure 9. The prices of a tap handle ranges from $5 and up depending on the quality. Oddly enough I have found the inexpensive $5 handle to work best for me.

The MIT machinist reference describes tapping as:



A tap has cutting edges to cut the threads and straight flutes to allow chips to be expelled. The end of the tap is tapered slightly to help the tap get started. Taps are hard and brittle so you should be careful working with them (try not to drop them or force them into a hole when stuck). Be sure that the hole you drilled is the correct size for the tap you're using or it may break inside.

Put the tap in place and apply moderate pressure as you turn the tap. It's good practice to back the tap up a bit for every quarter turn of thread you cut.

Loctite Threadlockers

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Next, I tightened the three screws. I did not use Loctite at this point yet because I wanted to make any adjustments needed at a later time.

I installed the action into the stock and found I would need to inlet a small amount of wood for the mount to fit properly. I marked off the sides with a cutting blade.

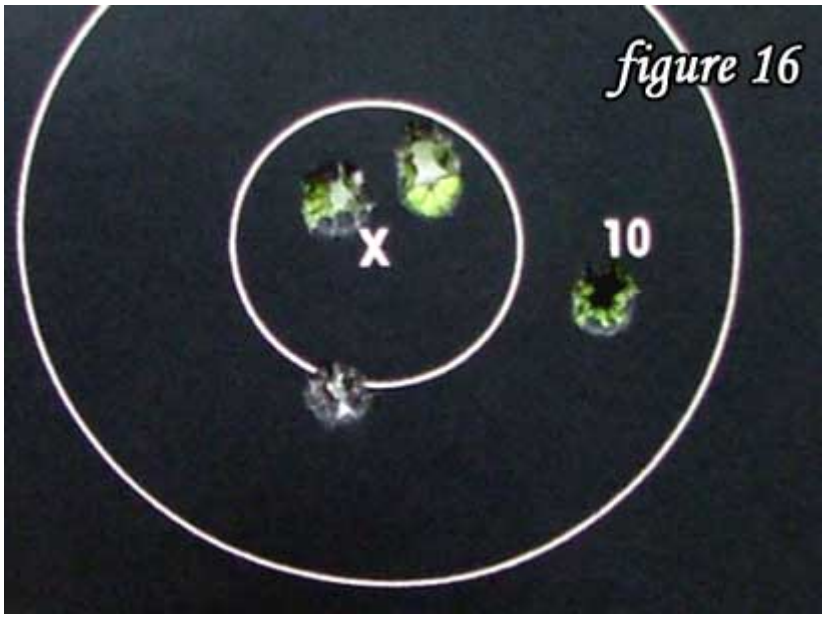
I used a rotary tool cutting disc and cut the wood out a little bit at a time until the mount fit snuggly. Figure 12 shows the amount of wood I removed.

Last I installed the new bolt handle and scope and was ready to go. Figure 13 shows the completed project from the right side.

I took the rifle to the range and also took my tools in case I needed to make any adjustments or tighten anything down. I found once I placed holes on the paper target that my windage adjustment has bottomed out and I was still not centered. I was too far to the right. I made shim washers using a soda can and cutting snips. I got this idea from Mark Trope. I placed the shims one layer at a time between the mount and the receiver. I would then tighten and reassemble everything and would fire some test shots. I ended up placing three shims (layers) thick until the scope was placing bullets in the center of the target and

I had left and right windage adjustment capability available to me. I was within proper specifications. I applied Loctite to the screws and tightened everything down snuggly.

I took a leather cheek pad to install on the stock if I could not get a proper cheek weld. Unlike the Mauser project I completed with the same scope I found the Mosin Nagant stock provided a very adequate weld and the leather cheek pad was not necessary for me. This may be different for you. I guess I finally benefit from having chubby cheeks. Figure 15 shows how the new bolt handle easily clears the scope scope.



I used late 1970's Soviet made surplus ammo for the testing. Figure 16 shows my best and typical 100 yard 5 shot grouping. The 1891/30 I was shooting had a couple modifications to it already and it was a great shooter to begin with. I had modified the front sight so I could adjust for elevation. I also had a great Mojo micro click sight installed as the rear sight. I like the fact also the I can remove the scope or leave it on and still use the open sights.
If my shoulder and ammo did not give way I could shoot all day long with this setup. It is accurate, looks great, and is a blast to shoot.