

M-14 CARBINE DIY by Larry Z.

Since Y2K day, I've sold off all my M1A "Target" rifles. I had my eyes lased as a Millennium present to myself, and any pretensions of "target" shooting with iron sights has since evaporated. Besides, at my age, "Target" rifles are just too damn heavy for a gentleman to lug around in the field.

The rifle I kept is a Carbine/Bush rifle I built on a Polytech M-14S receiver. It has a NEW hand lapped TRW bolt, all GI parts, a chrome lined GI barrel cut to 19", one of Ron Smith's HK style gas ring front sights, and an AR-15 flash hider. This rides in a GI fibreglass stock, or GI wood stock that I've converted into a folder. With iron sights, the folding stock, and 7.62 NATO ball, it will hold 2 - 3" @ 100 yds., which is all my old lased eyes will give me these days. In the folder, it is no bigger than a Ruger Mini 14 that has been fitted with a Choate Front Sight/flashider and Choate folder, and it only weighs a pound or so more. In the GI glass stock, with a scope, a bipod, and good ammo, it shoots better than I can.

Over the years, I've built up several of these "shorty" M-14 Carbines, mostly because the Springfield Armoury "shorties" come with 18" barrels. [the minimum legal barrel length in Canada is 18 1/2"]. Through experimentation and experience, I have found that shortening the barrel on an M-14 is NOT as difficult as it looks. For those who like to do-it-yourself, or who want to save some money, I can give out some advice and instructions on how to shorten the barrel, and do the detail work required to end up with a professional looking "Carbine", that shoots as good as it did before shortening.

Depending on the tools and skill available, and the level of sophistication desired in the finished product, the job of modifying an M-14 into a "carbine" can be quick and easy, or NOT! The simplest method is to just remove the VERY long M-14 flash hider. If you are using a scope & mount, there is no real need for a front sight. If a front sight is required, the simplest to use is the Smith design, which adds an extra ring to the Gas Cylinder Lock, and looks very much like an H&K front sight. In my experience, for "rack grade" M-14 rifles, there will probably be more variation in individual guns, and

what loads that gun likes, than any accuracy changes that may result from leaving the flash hider off. But, if the flash hider was loose, cracked, or crooked, you may gain some accuracy as an unexpected bonus. This leaves the "Carbine" with a 22" barrel, which gives maximum ballistics, and can be returned to GI configuration if desired.

The next step requires whacking a chunk off of the barrel. Check on legal requirements as to minimum barrel length and min. OAL. 16 " or 18 1/2" will probably be the legal minimum barrel length, depending if you are Yankee or Canuck. If adding a folding stock, check for minimum legal OAL, and if a pistol grip folder is legal. If sticking to 7.62 NATO loads, you probably won't have lack of gas pressure at the port causing functioning problems, even with the shortest legal length. After all, the Garand takes gas off closer to the muzzle, and further from the action. Plus, most 7.62 NATO ammo is designed to keep the port pressure high [powder may have retardant/ pressure curve is standardized to bullet weight]. However, if using different bullet weights, reloading with different powders, or using commercial .308 Win ammo, you may find shorter barrels may cause some reduction in reliability with some ammo.

As for accuracy, there are a lot of conflicting theories that are probably not as important in the real world, as how carefully you do the conversion. For example, "barrel harmonics" is very interesting subject. Theoretically, a shorter barrel of the same diameter will be stiffer, and have less "whip". Also, dampening harmonics, or ensuring that each shot "harmonizes" THE SAME WAY, can give the ultimate THEORETICAL accuracy. So, chopping a barrel often seems to increase accuracy. This can hold true for one specific load, or all loads. [more likely though, is that the muzzle and crown were worn out from too much cleaning, and a new crown caused the improvements] However, with the M-14, proper stock bedding, trigger group tension, and gas assembly fit, will have a great deal to do with accuracy. Add to that a decent trigger job, good crisp sights, and barrel vibration plays a very small part in overall accuracy. Remember, this is a CARBINE, not a sniper rifle, so don't get too technical here. That being said, you may find that trimming back a bit at a time, will yield a "sweet spot" that does give you unbelievable

accuracy with your favourite load. If you have the time and patience, you might want to try trimming the barrel a bit at a time.

Again, the tools and skill available, and the level of sophistication desired in the finished product, determine what happens next. If restricted to hand tools, you want to watch out if cutting a GI CHROME lined barrel. With these, make the cut a bit forward of your desired finished length, and preferably plug the barrel with a bullet at the cut-off point . Otherwise, the chrome can flake off while being worked, and this would NOT be a good thing for accuracy. Use a rotary ball grindstone to break the chrome lining at the crown. A lot of rifles have been crowned with a file, a countersink, and a ball lap, and some of these shoot just fine. For those with more money than patience, Brownells sells special tools for "NO LATHE" squaring and crowning of rifle barrels. These tools are excellent, but expensive, and if used on chrome lined barrels, may not last too long.

If you have a lathe, a barrel vice, and an action wrench, you can pull the barrel off and do the job professionally. Access to these tools, or someone who will do this for you at a good price, opens up all sorts of possibilities. With the barrel off, cutting and crowning can take minutes. My favorite way of doing this job, is to cut the barrel to 19", then turn a 1/2" X 28 TPI shoulder at the muzzle, to fit an AR-15 Flash hider. If desired, one of Smith's "politically correct" AR-15/ .30 Caliber screw on muzzle brakes could be substituted here. [Note I said .30 Cal, not .22 Cal]. I use this setup with a Smith gas cylinder lock front sight, for the most professional look.

If you prefer a longer sight radius, or don't want to thread the end of the barrel for an AR hider/brake, I have fitted some of these carbines with Choate Mini-30 combination Front Sight/Bird Cage flash hidere. This requires turning the inside of the Choate part, to match the OD of your barrel at the cut-off point. I can't give exact dimensions here, as cut-off point and barrel OD variations will determine the final size. To get the open sights to work, this method also requires the rear sight aperture be trimmed as much as possible, to allow it to travel lower. Leave enough at the end, to prevent the rear sight from coming all the way out if raised too high. You will probably find that the Choate front sight is still way too low. If you have access to a milling machine, you can mill the top ears of the

Choate front sight, into an exact copy of the M-14 front sight mounting block. This gives a very professional appearance, which closely duplicates the original. With these, I've had several people ask me where I got my ".308 Mini-14".

However, any so called "Flash elimination" from either of these shorty setups is negligible. After ROing all day at a practical rifle match, I ended up shooting the match at dusk. Witnesses said the ball of fire from my 7.62 NATO ammo was about the size of a five gal pail, and when I disappeared into a gully, they could track my progress by the flashes of "lightening" that marked my shots!

Special flash hidere and front sights can be mounted, custom parts can be made, and different theories experimented with. For example, adding a lock nut at the back of the AR-15 Brake/ flash hider, could give you an "adjustable accurizing device" [turn in and out to tune]. Or, a handy man with a lathe could easily sleeve the existing M-14 front sight to fit onto a cutoff barrel. Or, you could simply cut off the front half of the GI flashhider, turning it into a pronged style rather than a cage style. I've always wanted to experiment with welding a tube with an ID of barrel OD + , to a Gas Cylinder Lock. Left a few inches longer than a cut off barrel, you could cut out different flash / brake designs into the overhang. Or, if the barrel was threaded at the muzzle, you could experiment with a tensioning device, bracing such a tube against the gas assembly at the back, and tensioning the barrel with an adjustable collar at the front. In theory, such an adjustable tensioning device could be tuned to dampen the vibration, and give heavy barrel accuracy with a light barrel. Or, you add some holes as barrel porting to [preferably non-chrome lined barrel] and forget about muzzle brakes and flash hidere all together. Or, you could combine the barrel porting with the tension tube, add another larger exterior tube, fill with ???, and call it a ?muffler?.

The possibilities here are limited only by your imagination, your skill, and the tools you have available. I would appreciate any POLITE, constructive criticism, or comments from those who have experimented in this area.

Good Luck, and straight shooting!

NOTE: No liability is assumed for any bad things that happen if you try to follow this advice, or are stupid enough to break any firearms laws. If you have more money than skill, ambition, or time, pay the professionals to do it!

Larry Z.