

AR Accurization Course Tools, Equipment & Scope

This course is intended to show you some of the techniques used to tighten up AR accuracy with existing rifles, pistols and SBRs. The methods I'll demonstrate are not the only ways to do it, but they're the ones that have worked for me. In order for the class to both flow and benefit all students, it's important that you bring a fully-functional AR. While the goal is to see some amount of measurable accuracy increase, it's important to understand that results will vary based on several factors. The firearm's component quality matters and it, the shooter, aiming system and ammunition all have to work together well.

Prior to having you shoot to establish your system's baseline accuracy at the beginning of the week, I'll conduct a mini precision shooting clinic that covers best practices for rifle setup, followed by hands-on instruction at the range and approximately a half day of shooting. This is simply intended to cover the basics of precision shooting and is not intended to talk down to anyone. If you're already a fantastic shooter, great, it will be a refresher for you. For everyone else, I'll draw from my 15 years as a Tier 1 [Army] SOF Operator and Sniper, as well as the past 17 years' worth of accuracy testing every firearm I've built or worked on.

While I can't make you into a sniper in a few hours, I'll do my best to ensure that everyone has a common understanding of the basic skills necessary to shoot accurately at 100 yards, as well as a chance to practice before shooting record groups. Since the goal is to see an improvement in your firearm's performance, you'll shoot your firearms again at the end of the course to gauge the effects of your work.

While I don't specify which types of ARs may be used in the course, I recommend that you bring something that can at least hit somewhere on a 24" x 36" target at 100 yards so that we don't lose time just trying to get you on paper. On the other hand, if your rifle is already capable of shooting sub- $\frac{1}{2}$ MOA, 5-shot groups, it may not be the best candidate for accurization. It's ultimately your call in that case, but you're less likely to see a significant improvement with an already-tight shooter.

Lastly, it's important to ensure that your sighting system is up to the task. Iron sights are perfectly acceptable—so long as you can shoot consistently with them. The same goes for non-magnified optics: If your eyes are good enough to aim a large "dot" type reticle at a 1 or 2 MOA circle at 100 yds, it will work just fine. But if you're using an optic with a fuzzy blob that obscures 4 inches of target, it's going to be difficult to use in assessing your AR's accuracy.

In addition to a fully functional AR that is ready to test fire, each student will need to bring the following tools, parts and supplies:

- Freefloat forend and barrel nut (if the barre is not already freefloated)
- Drop-in trigger assembly such as Geissele, CMC, Timney, RRA, Midwest, ALG & etc., (only needed if firearm currently has a stock or problematic trigger)
- Steel punch set (1/16, 3/32 and 1/8 at a minimum)
- Roll pin starter punch set (1/16, 5/64 at a minimum)
- Driver and bit set (Allen, Torx, hollow-ground flat)
- Brass and Delrin/rubber/rawhide hammer, 1 oz. or 2 oz. preferred
- Upper and lower receiver vice blocks (can be a combination unit or separate blocks)
- Bench block
- Armorer's wrench (Brownells, Midwest Industries, MagPul & etc.)
- Standard Allen wrench set, such as Brownells part# 749001004
- A bright, handheld flashlight
- Cleaning kit with rod, solvent, lubricant, Q-tips, nylon bristle cleaning brush or toothbrush, bore brush, patches and jag appropriate for your AR's bore size
- Shop rags
- Disposable gloves (latex, nitrile & etc.)
- Eye and ear protection
- Optic or sights suitable for accuracy testing at 100 yards
- 2 or more magazines for your AR
- Any other range gear you need for test firing, such as soft bag rests or a bipod, a spotting scope or binos and rain gear.
- At least 100 rounds of factory ammunition for training, as well as pre and post accurization testing. If possible, bring the same type and lot. Match ammo is recommended, but not mandatory. If your AR likes a particular load better than others, that's the one to bring. We may not shoot it all, but having it gives us more flexibility.

Suggested Tools & Supplies (I will have some of these available for common use):

- Dial or digital caliper
- Jeweler's visor (Optivisor or similar)
- Wrench for your muzzle device, if non-standard
- Barrel nut wrench for your freefloat forend
- Needle files
- Delrin takedown pin punch
- 6-inch machinist's rule
- Feeler gauge set
- Roll pin holders (1/16, 5/64, 3/32 & 1/8)
- 1" micrometer
- Barrel extension support tool (aka Reaction Rod), such as those offered by Geissele Automatics, ACME Machine, KZ Barrel, or Wheeler Engineering
- Rotary tool with ¼" coarse, medium and fine grit polishing drums
- Torque wrenches (inch-pound and foot-pound)
- Layout fluid (Dykem or similar)
- Lapping compound (220 or 320 grit)

I will have some of the needed and recommended tools on-hand for loan, but students are encouraged to bring their own and any other AR tools or fixtures that they have. If you have a proprietary barrel nut or muzzle device, you must either bring the requisite tools to fit them or verify with me (well in advance) that I have them.

I will also have a limited supply of "blem" and factory new freefloat forends for large and small-frame ARs, as well as a few Geissele drop-in triggers and critical spare parts that may be needed if student parts are unserviceable or out of spec. These will be available for purchase from Citizen Arms as long as supplies last. Contact me ahead of time if you need to reserve a component for the class.

Check back periodically between now and the course date in case I update the tool list. Any changes will be highlighted to save you from having to compare lists. If you have any questions or concerns about the AR you plan to bring, tooling or parts, please contact me via email at: steve@citizenarms.com

I look forward to meeting and working with you all.

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