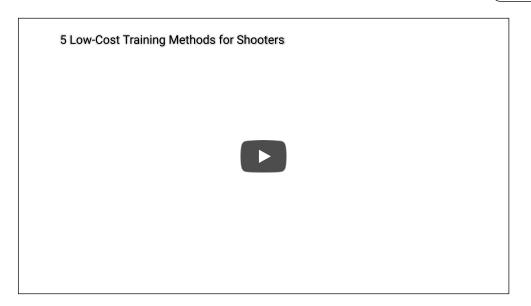
5 Low-Cost Training Methods for Shooters

posted on March 20, 2021

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Marksmanship isn't like riding a bicycle. It's a perishable skill that will deteriorate without constant practice. The current ammo shortage has put a damper on many people's range time. The ammunition you need to practice can be hard to find and, if you can locate some, expect to pay two or three times what you did a year ago. With no apparent end in sight, here are a few ways you can keep your skills sharp without resorting to smashing the piggy bank.

We will cover five methods of training that don't involve the currently high-priced and hard-to-find centerfire ammunition. For the purpose of this discussion, we will focus on the 9 mm Luger Glock G19 platform, as this is one of the most popular handguns currently being sold, but the options we offer apply to other handguns, along with rifles and shotguns.

Because the ammunition market is more volatile than gold these days, here are some assumptions we're making when we do our price comparisons. As of February 2021, a 9 mm Luger 115-gr. FMJ cartridge is running about 70 cents per round. Bulk plinking .22 LR ammunition is about 15 cents a round. We will use those numbers when comparing costs and "pay-off," or how many shots you have to fire before the savings over center-fire ammunition pays for the alternative method. Adjust accordingly to your ammunition of choice.

Dry Fire

NRA training defines dry-firing as "practicing every phase of the firing process using an unloaded firearm." Simply put, this means you cock your unloaded firearm, point it in a safe direction and pull the trigger. Click. Repeat. When it comes to frugality, dry firing is the winner. It doesn't cost a cent and can be done at any time in the privacy of your own home.

The first, and most important, consideration when doing dry-fire practice is safety. Follow all the rules of gun safety, especially the first one — ALWAYS keep the firearm pointed in a safe direction. If you live in an apartment or shared housing situation, be conscious of the fact that there may be other people above, below or beside you when choosing a safe direction in which to practice dry firing.

Dry-fire practice allows you to practice all of the fundamentals of shooting — grip, aiming, breath control, trigger control, hold control and follow-through (if you hold the trigger to the rear while re-cocking the hammer or cycling the action, you can also practice your trigger's re-set). You are experiencing your firearm's full weight, so you are building the muscles necessary to properly support it, grip it and pull the trigger (especially important if your firearm is double-action).

If you carry concealed, you can practice drawing from the holster and re-holstering while dry-firing. Consult your owner's manual before dry-firing to confirm that it is safe to dry-fire your firearm. Most modern firearms can be dry-fired without issues, but it does put wear and tear on your gun. An option to mitigate some of this wear is by using snap caps. Snap caps are dummy cartridges that have a rubber pad in the primer pocket to cushion the blow of the firing pin.



Dry firing is the most economical means of practicing the fundamentals of marksmanship. The use of "snap caps," such as these Lyman A-Zoom snap caps, save wear and tear on your firearm.

Snap caps also act as an additional safety feature by keeping live ammunition out of the chamber. Another advantage of using snap caps is that they can also be used to practice loading, magazine changes and reloads (or using revolver speedloaders), malfunction drills, etc. Most rimfire firearms cannot be dry-fired without causing damage without the use of snap caps. Because a rimfire firing pin is designed to strike the rim of the cartridge, when no cartridge is in place, it can strike the edge of the chamber and cause damage.

If you're using a firearm with an external hammer, you can manually cock the hammer after every dry-fire "shot." If your firearm has an internal hammer or is striker-fired, you will have to manually cycle the action each time to re-cock it. The best option when dry-firing striker-fired handguns with snap caps is using Lyman StrikerCaps.

Like a snap cap without a rim, striker caps are loaded into the chamber and stay there during dry-fire practice. You still need to cycle the slide, but you aren't ejecting and re-inserting a snap cap each time. The striker cap must be removed with a cleaning rod when your dry-fire practice is over.

One disadvantage of dry-firing is that you are not sending a projectile down range to quantify your skills or improvement. There is one way to evaluate your skills while dry-firing. Known as the "Dime" or "Penny Drill," it involves balancing a coin on your front sight. Aim at your target and dry-fire. If the coin doesn't fall off, you know you have clean and consistent trigger control. For more tips and instruction on how to get the most from dry-fire practice, see this article.

DRY FIRE

ADVANTAGES

- · You're getting all of the experience of shooting without the bang.
- You're experiencing the exact trigger pull, weight and sights of your chosen firearm.
- You can practice in the comfort of your home day or night.
- No range required, but treat dry fire like live fire be sure of your target and what is beyond it.
- You can incorporate drawing, re-holstering and magazine changes while dry firing. With snap caps you can also practice loading and unloading rounds and malfunction drills.

DISADVANTAGES

- You're not getting the bang.
- With striker-fired handguns, racking the slide each time to reset the trigger breaks concentration on the fundamentals.
- There is no target to quantify your accuracy or improvements in your skill.

ECONOMICS (based on 9 mm practice ammo costing \$0.70/round)

Cost of A-Zoom Snap Caps: \$18.50

Pay-off: 27 rounds

Subsequent cost per "shot:" O

Laser Trainer - LaserLyte Laser Training Systems

Laser firearm trainers combine the advantages of dry-firing with a system that quantifies the accuracy of your "shots." The LaserLyte company has been in the business for decades, making laser sights, laser-bore sighters and laser training aids.

LaserLyte makes three laser training options. The first is a standalone laser training firearm. The company makes three versions of these that closely mimic the size of a Smith & Wesson J-Frame, a Glock G43 and a Glock G19 (\$150 each). In addition to duplicating the external dimensions of each of these firearms, these laser trainers are also designed to reproduce the trigger pull and reset of each respective platform.



Known for their aiming laser, laser bore sighting and laser training products, LaserLyte makes both laser training cartridges and a universal laser trainer, along with targets, for indoor marksmanship practice.

The company's second option is caliber-specific laser "cartridges" that fit into the chamber of popular handgun calibers (.380 ACP, 9 mm Luger, .40 S&W, .45 ACP - \$105 each) and 5.56x45 mm NATO (\$105). These laser cartridges are activated by dry-firing

and also function as a snap cap to cushion the blow of the firing pin.

Finally, LaserLyte offers a universal laser trainer (\$110) that fits into the muzzle of a handgun, like a bore sighter, and its beam is activated by the impulse of the firing pin. The universal laser trainer is adjustable for any diameter bore between .35-cal. (9 mm) and .45-cal. LaserLyte recommends the use of snap caps with its universal trainer.

Each of these systems can be adjusted so that the laser's point of impact is the same as the firearm's point of aim. When using the latter two options, safety is the first priority. Because you are using a real firearm, follow the same precautions as when dryfiring by making sure your firearm is always free of live ammunition and pointed in a safe direction.



LaserLyte makes both a Universal Laser Trainier (top) which fits into the muzzle end of the bore of a firearm and a Laser Training Cartridge (bottom). The Laser Training Cartridge is available in .380 ACP, 9mm Luger, .40 S&W and .45 ACP.

With these two systems in your actual firearm, you are practicing with the exact same sights, weight, grip and trigger pull you'd have during live-fire practice. The cartridge trainer allows you to use your firearm's standard holster (the universal trainer works if the muzzle end of your holster is open), so that you can also practice the draw stroke of your firing sequence.

If you use a S&W J-Frame or a Glock G43 or G19, then the standalone laser firearm trainers are the best option. In the case of the Glock pistols, you can practice repeatedly without having to rack the slide each time to reset the trigger.

If your firearm of choice is not one of these three models then a LaserLyte training cartridge is a good option. For a handgun with an external hammer, you only need to cock the hammer (or pull the trigger, in the case of a double-action semi-automatic). For most striker-fired handguns or an AR-15-type rifle, you will need to cycle the action each time to reset the trigger, but the training cartridge stays in place in the chamber, like a striker cap.



LaserLyte laser training cartridges (foreground) come in .380 ACP, 9 mm, .40 S&W and .45 ACP sizes. The cartridges insert into the firearm's chamber and are activated by the firing pin. LaserLyte's universal laser trainer (background) can be adapted to fit into the muzzle of firearms with bore diameters between .35-cal. (9 mm) and .45-cal.

The universal laser trainer works great in revolvers, where you can insert the trainer, load a cylinder full of snap caps and fire away. It has the additional advantage of being able to be switched from firearm to firearm if you have a variety of firearms and calibers that you would like to train with.

These systems work in conjunction with LaseLyte's line of targets. These targets offer feedback on accuracy, from Rumble Tyme "cans" that move when "hit" (\$110), to a Steel Tyme target that replicates the "ding" of a bullet's impact on a steel plate (\$110), to Quick Tyme (\$200) and Score Tyme (\$350), more traditional-style targets that precisely record shot placement and have built-in shot timers.

These systems have the same advantages and disadvantages of the live-fire targets they are meant to duplicate. The score and timing targets give precise data on speed and accuracy but take a little longer to set up and reset the various modes. The can and steel targets give instant interactive feedback, and you set them up and forget them until your training session is over.

LASER TRAINER

ADVANTAGES

- · You can practice in the comfort of your home day or night.
- No range required, but be sure of your target and what is beyond it when using real firearms.
- Laser targets quantify your accuracy with instant feedback.
- When using the laser cartridge or universal laser trainer, you are experiencing your firearm's exact weight, sights, trigger pull and grips.

DISADVANTAGES

- You're not getting the bang.
- · You're not practicing the loading and unloading cycle.
- When using the laser cartridge with striker-fired handguns, racking the slide each time to reset the trigger breaks concentration on the fundamentals.
- The caliber of your firearm of choice may not have a laser trainer available for it.

ECONOMICS (based on 9 mm practice ammo costing \$0.70/round)

Approximate Cost of LaserLyte Trainer and Target (varies with exact system you use): \$300 Pay-off: 429 rounds

Subsequent cost per "shot:" cost of batteries

Airsoft or BB Replica - Umarex Glock BB Pistol

Airsoft or BB firearm replicas allow for indoor practice with a projectile to quantify your accuracy. Airsoft firearms shoot 6 mm plastic pellets and BB firearms shoot 4.5 mm steel balls. Air and spring-powered firearm replicas are *not* toys. They fire a projectile that can cause injury or death and should be treated as such. All of the firearm safety rules apply and when firing them, you must use a proper backstop. This can either be a homemade or commercially produced trap.



Umarex offers a line-up of factory licensed BB and airsoft replicas of full-sized firearms, such as this Glock 19 Gen 3.

Many companies offer exact replicas of centerfire firearms in BB or airsoft versions. <u>Umarex</u> makes licensed BB versions of the Glock G17, G19 and G19X, along with airsoft replicas of the Glock G17, G18, G19, G19X and G34. They also offer BB and airsoft replicas of Beretta, Browning, Colt, Ruger, Smith & Wesson and Walther handguns and rifles.

As our air-powered trainer, we tested a Glock-licensed Umarex Glock G19 Gen 3 BB pistol. Its size and heft duplicate a real Glock G19 nearly perfectly. The external dimensions of the Umarex Glock replica are almost exactly (see below) the same as a real Glock G19, and at 26.5 ozs. with a CO₂ cartridge and the magazine fully loaded with 15 BBs, it weighs only 4 ozs. less than a real loaded Glock 19.



The Umarex Glock 19 Gen 3 BB pistol is powered by a 12-g. CO2 cartridge that fits into the grip and holds 15 BBs in its magazine.

The trigger on the Umarex is a close facsimile of the love-it-or-hate-it Glock trigger, from its "two-stage" pull to the 6.5 lbs. required to break the shot. The BB pistol's magazine release is in the same location as the real thing. The replica also has a Glock-type sight arrangement, with a white front dot and white "U" outline rear. These factors combine for a realistic shooting experience.

The BB pistol's fixed sights shot right to their point-of-aim at 15 yds. and shots were slightly higher or lower as you got closer or further away from the target. The pistol has a fully functional frame rail. We attached a Glock light and laser combo to it, which did not affect the pistol's function. In fact, the BB gun shot to nearly the same point of aim as the laser, which was sighted in for a Glock G19.



The backstrap of the Umarex Glock 19 Gen 3 BB pistol contains a hex wrench that is used to secure the CO2 cartridge into place.

Unlike other Umarex pistols, the Gen 3 Glock G19 does not have a "blowback" action with realistic slide movement, but since we're talking economy, that means more shots per CO_2 cartridge. Umarex-branded 12-g. CO_2 cylinders cost 76 cents apiece and lasted, on average, for about 100 shots. The company's steel BBs are three for a penny, but steel BBs can be re-used if you use a target trap to capture them. Look here for instructions on how to make a BB capturing target and how to set-up an indoor BB range.



The 15-round magazine of the Umarex Glock 19 Gen 3 fits into the grip just like a conventional magazine and is released by a magazine button in the same position as that on a centerfire Glock 19.

We have two complaints about the Umarex Glock BB pistol. First, the slide width is slightly (0.16" to be exact) wider than a Glock G19 slide, which means that the pistol won't fit into holsters tightly molded for a Glock G19. Second, the crossbolt trigger-blocking safety is redundant, doesn't replicate a real Glock and would inadvertently get engaged by holsters whose retention devices work on the area of the trigger guard.

Air-powered firearm replicas are a viable and low-cost training option. If an air-powered replica of your particular model is not available, there are plenty of other models out there that will give you cheap and effective trigger time.

AIRSOFT/BB TRAINER

ADVANTAGES

- The cheapest way to shoot an actual projectile.
- Shoots a projectile to quantify your accuracy.
- You can practice in the comfort of your home day or night (when using a trap and adequate backstop).

DISADVANTAGES

- You're not getting the bang.
- You're not practicing the loading and unloading cycle.
- An exact airsoft/BB replica of your firearm may not be available.

ECONOMICS (based on 9 mm practice ammo costing \$0.70/round)

Cost of Umarex Glock BB Replica: \$74.95

Pay-off: 107 rounds

Subsequent cost per "shot:" about 1 cent

.22 LR Rimfire Conversion - Tactical Solutions TSG-22

Traditionally, reloading has been the solution to frugal practice, but with the scarcity and price of components these days, that's not much of an option either. So the next best thing is to go to a cartridge that uses less lead, less powder and less brass. Think .22 LR rimfire (if your firearm of choice is a rimfire, you're already here).

Conversion kits that allow you to shoot .22 LR rimfire in a centerfire firearm have been around for a long time. Even when ammo costs are not a consideration, they allow a shooter to familiarize themselves with a new firearm with less recoil and noise than a full-powered cartridge, and they allow practice on indoor ranges that cannot accommodate center-fire rounds.



The Tactical Solutions TSG-22 Glock .22 LR conversion kit consists of a complete slide and barrel assembly and magazine.

Some of the earliest .22-cal. conversions were used by the military, allowing a service rifle to be adapted to firing .22-cal. For handguns, one of the first .22-cal. conversions was the <u>Colt ACE</u>. Introduced in 1931 as a complete handgun, the ACE system was also offered as a conversion unit to allow a 1911 to be adapted to fire .22-cal.

Today, some manufacturers offer a .22 LR conversion for their firearms, including <u>Beretta</u> (<u>reviewed here</u>), <u>CZ</u> and <u>Kimber</u> (SIG Sauer has, unfortunately, discontinued its <u>line of rimfire conversion units</u>). Rimfire conversion units are offered for handgun models based on their popularity, so it follows that multiple companies offer conversion kits for the 1911 and Glock handguns, including <u>Tactical Solutions</u>, <u>Advantage Arms</u>, <u>Marvel Precision</u> and <u>Jonathan Arthur Ciener</u>.

In addition, aftermarket conversion units are available for the <u>Springfield XD</u>, <u>Browning Hi-Power</u>, the <u>Beretta 92/96</u>, Kel-Tec PF-9 and P11 and <u>Ruger LC380 and LC9</u>. For handgun rimfire conversions, expect to pay half, or more, of the price of the original pistol because you're buying half of the pistol.



The Tactical Solutions TSG-22 Glock .22 LR conversion kit (pictured installed on left) uses factory Glock sights (compared to a Glock 19 slide on right). This means that they can be replaced with aftermarket sights designed for a Glock dovetail.

Rimfire conversions are also available for <u>rifles</u>, the most notable being those designed for the AR-15. Since a 5.56x45 mm NATO AR has a bore diameter of .22-cal., all that a conversion needs to do is place an insert in the chamber to modify the barrel to

accommodate the smaller cartridge. An AR .22 LR conversion also includes its own bolt, recoil spring and magazines.

The popularity of these kits have waned over the past few years as complete "dedicated" .22-cal. rimfire uppers have become available (consult with your AR's manufacturer before using a rimfire conversion, as the blowback system can be harmful to certain types of hammer and trigger setups). Rimfire conversions are also offered for the Mini-14.

For our testing, we used a <u>Tactical Solutions kit for our Glock G19</u>. Swapping from centerfire to rimfire is easy. Just remove the original slide and slip the Tactical Solutions slide unit into place, swap the centerfire magazine for the rimfire one, and you're ready to go. The Tactical Solutions unit comes supplied with Glock factory sights, which means the slide will accommodate your aftermarket Glock sights of choice. It comes with one 10-round magazine with spares available for \$36.



The components of a Tactical Solutions TSG-22.22 LR conversion unit disassembled. The slide and magazine can be further disassembled to allow a thorough cleaning, a critical feature for a reliable .22 conversion.

The Tactical Solutions conversion has two advantages over other rimfire conversions. First, the slide is made of steel instead of aluminum, which keeps the weight and balance of your pistol similar. A Glock G19 with the Tactical Solutions conversion installed weighs just 4 oz. less than a stock Glock G19.

Second, the Tactical Solutions conversion has a functioning slide stop, which means the slide locks open after the last round is fired, a handy feature to keep you from dry-firing accidentally and damaging the chamber. This feature, combined with magazines that drop freely, makes for realistic reloading practice.

Tactical Solutions makes a one-size-fits-all magazine for their full-size and compact Glock conversions. When used with a Glock G19 the magazine protrudes beyond the grip. The external dimensions of the slide and magazines of the Tactical Solutions conversion are identical to the Glock, which means you can practice with your standard holsters and magazine carrier.



When installed, the steel slide of the Tactical Solutions TSG-22.22 LR conversion nearly duplicates the weight and balance of a centerfire Glock 19. Magazines are universal for both full-sized and compact Glocks, so they extend beyond the grip when used with a compact model like the Glock 19 pictured.

Rimfire conversions are known to be finicky when it comes to specific ammunition. Think about it. You're trying to stick a small cartridge into a mechanism that was designed to function properly with a much more powerful round. Many semi-automatic rimfire handguns use a fixed barrel and "bolt," instead of a full-sized slide with a barrel moving inside. There is a reason for this.

Most rimfire conversion manufacturers recommend certain type of ammunition for their unit to function reliably. Tactical Solutions recommends CCI Blazer and Mini-Mag ammunition for its conversions—the go-to ammo for .22 LR conversions and semi-auto rimfire handguns with full-size slides—along with other high-velocity 40-gr. round-nose cartridges. Beyond these two named recommendations we had mixed results. For example, Federal Auto Match 40 gr. failed to reliably cycle the slide, while the company's Champion 36 gr. ammunition worked just fine.

In my experience, rimfire conversions have a set number of rounds, usually a few dozen, before they get dirty and choke up. This was not the case with the Tactical Solutions kit. After a full afternoon of shooting, it was still running fine. The conversion unit and its magazines are designed so that they can be fully disassembled for thorough cleaning, which goes a long way to maintain reliability in a .22 LR conversion kit.

.22 LR RIMFIRE CONVERSION

ADVANTAGES

- Allows you to experience the exact trigger pull, controls, grips and any other modifications of your chosen centerfire firearm while firing rimfire ammunition.
- · You can shoot a more economical caliber without having to buy another firearm.
- Allows you to shoot your centerfire firearm on ranges where centerfire cartridges are not allowed.
- · You're practicing the mechanics of loading and re-loading.

DISADVANTAGES

- In times of shortage, even .22 LR rimfire ammo can be hard to find and expensive.
- Conversions can be finicky as to ammo that will function reliably.
- While getting the full experience of firing a cartridge, you're not experiencing the noise and recoil
 of a centerfire cartridge.
- You have to switch components back and forth.
- Shooting rimfire ammunition makes your firearm dirty with lead, bullet plating and lube and powder residue.
- Limited models that a conversion is available for.

ECONOMICS (based on 9 mm practice ammo costing \$0.70/round and .22 LR practice ammo costing \$0.15/round)

Cost of Tactical Solution Glock Conversion: \$380

Pay-off: 691 rounds

Subsequent cost per round: \$0.15

Dedicated .22 LR Rimfire Training Firearm - Glock G44

An alternative to a .22 LR conversion unit is a dedicated .22 LR training firearm. Several manufacturers make .22 rimfire versions of their centerfire handguns, including Beretta, Bersa, Colt, GSG, Rock Island, Ruger, Smith & Wesson and Walther (SIG Sauer, again, has unfortunately discontinued .22 LR versions of their P220, 226 and 229). Rimfire versions of high-powered rifles are also available, most notably in the AR-15 pattern.



The Glock 44 is a .22 LR version of Glock's compact line of handguns, designed from the ground up to function as a rimfire firearm.

Last year, Glock introduced a .22 LR rimfire version of its compact handguns line, with the Glock G44 (reviewed here). The G44 duplicates the size of Glock's G19, G23, G32 and G38 models. Not a "replica," it is a true Glock handgun in .22 LR that utilizes the Glock Safe Action System. The trigger and all controls are identical to a centerfire Glock handgun. The G44 is made in Gen 5 style, which means it includes features like a bilateral slide release and replaceable backstraps.



All controls and components of the Glock 44 exactly duplicate those of a centerfire Glock.

Building a .22 LR version of a centerfire handgun brings up the same issues detailed in our discussions of .22 LR conversions above. To make the G44 function properly, Glock went with a hybrid steel and polymer slide that is light enough to allow a .22 LR cartridge to cycle it. This results in a pistol that is about half a pound lighter than a standard Glock 19 and that has a different balance. Unlike the G44 used in our earlier review, the pistol we used for this test functioned perfectly with a wide variety of ammunition, without showing a preference for bullet weight or type.

A dedicated .22 LR version of your firearm of choice has all of the advantages of a .22 LR conversion — the controls are the same, and you are manipulating a full-sized slide. Since it is a true Glock handgun, the G44 can be adapted to aftermarket Glock parts like triggers, controls and sights. This means it's possible to set up a Glock G44 exactly like your personal centerfire Glock handgun. We even tried lights and lasers on the G44's accessory rail, and function wasn't affected.



At current ammo prices, the Glock 44 .22 LR (left) should pay for itself in less than 800 rounds with the savings of .22 LR ammunition over the price of 9 mm Luger, such as that used by the Glock 19 (right).

Because its external dimensions are the same, you can use it with any holster designed for the G19 class of pistols. The same is true of the G44's magazines, which fit in a standard Glock magazine carrier. From toppling tin cans to doing self-defense drills, the G44 functioned exactly like a centerfire Glock, except you are shooting about five rounds of .22 LR for the cost of every centerfire cartridge.

What if an exact copy of your centerfire firearm isn't available in .22-cal. rimfire? You're in luck. There are many great .22 LR training firearms out there, and while they won't duplicate the feel of your exact centerfire firearm, they will give you the opportunity to get trigger time with a bang while saving money.

DEDICATED .22 LR RIMFIRE TRAINING FIREARM

ADVANTAGES

- If your firearm of choice is a rimfire, you're already here.
- A dedicated .22 LR training firearm is always ready to go. No need to swap around components.
- Saves wear and tear on your centerfire firearm.
- You get to buy another gun (see below).
- You're practicing the mechanics of loading and re-loading.

DISADVANTAGES

- In times of shortage, even .22 LR rimfire ammo can be hard to find and expensive.
- While getting the full experience of firing a cartridge, you're not experiencing the noise and recoil
 of a centerfire cartridge.
- Finding a firearm in a gunshop these days can be as hard as finding ammunition.
- You have to buy another gun (see above).
- Limited models of firearms have an exact .22 LR version available.

ECONOMICS (based on 9 mm practice ammo costing \$0.70/round and .22 LR practice ammo costing \$0.15/round)

Cost of Glock 44: \$430

Pay-off: 782 rounds

Subsequent cost per round: \$0.15

The reality is there is no substitute for live-fire practice with your go-to firearm with full-powered ammunition on a range. But the competing reality for most of us, even when ammo was relatively easy to come by, was that we don't have the time or money to get out to the range as often as we should. Any practice is better than none.

Use the tools and techniques we've outlined above to keep your skills from rusting during the Great Ammo Shortage. Hearing the click of your firearm dry-firing beats hearing the click of your mouse as you repeatedly hit the refresh button to see if that box of ammo ever comes back in stock at an online retailer.