Zeroing the AK47


By James Tarr

Getting the most from any rifle, AK included, requires a good zero. The Soviets had a set pattern for ensuring it was done properly.
ur family has dinner together most every night. While I have a job so I can put food on the table, and gas in the Hemi-powered SUV, my number-one responsibility is raising my two sons. That’s with the help of my wife, of course. Part of that responsibility is doing my best to make sure my sons are well spoken and well read. So I do not shy away from using “big” words during conversation. Unfortunately (or perhaps not), my boys frequently ask, upon hearing such words, “What’s that mean?” More often than not I find myself saying, “Umm, well...here, let me get the dictionary and I’ll read you the definition.” The most recent instance of my mouth outrunning my brain involved the word “ubiquitous.” Webster defines ubiquitous as “present everywhere; being everywhere, esp. at the same time; omnipresent.”

I used the word “ubiquitous” to describe the AK47, and while I was a little fuzzy on the exact wordage, I had the general definition right. If there is any weapon that is more omnipresent in the world than the AK47 (and its variations), I don’t know what it would be. The Avtomat Kalashnikova was designed more than 60 years ago and has been made in the Soviet Union, most of its Eastern European satellites, China and at least 16 other countries at last count. Nearly 50 countries issue the AK as their military arm. People have earned Ph.Ds studying subjects less complex than the family tree of the AK47. My boys (one of whom is 6) know what an AK47 looks like, not because we live in a Third World dictatorship (although I do work in Detroit occasionally), but instead because they play video games. And nothing else looks like it. Whether they have fixed stocks or folders, either underneath or to the side, or are chambered in the original 7.62x39mm or newer 5.45x39mm, all AKs are nearly identical in operation and very distinctive in appearance.

American soldiers are once again in conflict with an enemy armed with the ubiquitous AK. Accounts of our grunts using seized AKs to defend themselves, because their own rifles either jammed or ran out of ammo, are numerous. Gunsite, the U.S. Shooting Academy and many other firearms training facilities offer courses to U.S. soldiers to familiarize them with the weapons of the enemy. Knowing how to operate the AK laying on the ground in front of you when your M4 seizes up is something every U.S. soldier should know. Knowing how to zero that AK when the dust has settled is just as important, considering how many AKs are in U.S. stores in Iraq and Afghanistan.

The basic design of the AK is 60 years old, and Mikhail Kalashnikov was more interested in creating a reliable rifle than
one with tack driving accuracy. Gaston Glock had the same idea. This is why I can read a newspaper through the gap between the slide and frame in my Glock 34, but it goes bang every time I pull the trigger. The AK has the same reputation that the M1911 .45 used to. Namely, that it was reliable, but horribly inaccurate. In the case of those .45s, most of those pistols suffered from age and neglect and were relatively inaccurate, as far as pistols go. But the design itself, as we all know, is not inherently inaccurate. The same is not exactly true for the AK family of firearms.

Manufacturing tolerances, or the lack thereof, are as responsible for AK inaccuracy as anything. These loose tolerances were designed into the weapon to allow it to work even after being buried in sand or frozen solid. Compounding the problem is the fact that many of these rifles are being built on machinery as old as the design itself and in places where you’d be foolish to drink the water.

The original Official Soviet AKM Manual issued by the Ministry of Defense of the USSR, a copy of which I obtained from Paladin Press, is a must for any AK owner. It states that a “normal” four-shot group, when sighting-in at 100 meters, should be 15 cm or smaller in diameter. That’s six inches, folks. Not exactly benchrest-level accuracy. But even with that worst-case scenario, an issue AK is more than accurate enough to hit a man-size target out beyond 200 yards—providing it’s properly zeroed and the shooter is doing his job.

In researching the proper way to zero a 7.62x39mm AK-47, I discovered two different methods. The first I’ll cover is the by-the-book Soviet military method.

**Old Official Soviet Procedure:**

1. Place a confirmation target at 100 meters (109.4 yards) with a spot or edge you can aim at precisely. The control point, or required point of impact, shall be 25 cm (approximately 10 inches) above the point of aim.

2. Set the rear sight at 300 meters. Set the rifle for semiautomatic fire.

3. From the prone position, with the forearm supported on a sandbag, fire four aimed shots at the center of the bottom edge of the black portion of the confirmation target. Do not move or break the chekedweld between shots.

4. The group shall be no larger than 15 cm (5.9 inches). One called flier is permitted, optionally.

5. The center of the group shall be no farther than 5 cm (1.97 inches) from the control point. If the group is not within this distance, adjust the sights and repeat until the center of the group is within 5 cm of the control point.

6. Set the rear sight at 100 meters. The rifle is now zeroed.

The Soviets issued a specific target for zeroing in this manner, and it is important to use a target of these dimensions for best results. It consists of a black rectangle 35 centimeters high by 25 centimeters wide (14x10 inches) centered in a white background one meter high by a half-meter wide (39.3x19.6 inches). The aiming point is the middle of the lower edge of the black rectangle. This target is specifically sized for the width of the AK front sight at this distance and provides enough contrast for easy sighting. The reasoning behind having the Point of Impact (POI) 10 inches above the Point of Aim (POA),
with the sights set at 300 meters, is to match the trajectory of standard M43 ball ammunition. The result is a true 300-meter zero. By placing the rear sight on 100 meters, POI should now be the same as POA at 100 meters.

**New Method:**

This method seems to have been developed in the U.S. to simplify zeroing, especially for those locations where 100-meter ranges were not available:

1. Set the rear sight at 100 meters and the sight-in target at 25 meters (82 ft.).
2. Sight-in so the bullets are hitting exactly to point of aim. With that, the rifle is sighted for any range.
3. After sighting in, if you set the sight on the Battle Sight setting (the lowest on the sight scale) you can hit a man-size target at any range from zero to 400 meters without changing the sight setting.

The problem with this method is that it does not take into account cumulative error in the tangent rear sight. Although it works well for short-range use, a rifleman using this method may find considerable error in his POI when firing at extended distances. Due to this, this method is best reserved for when you only have a 25-meter range available.

**Adjusting the Sights**

The AK's front sight is screwed into a round steel piece that is set sideways into the triangular front sight base. Windage adjustments are made by drifting the block left or right. Numerous companies make an AK47 front sight adjustment tool, which acts like a C-clamp with a screw to adjust windage. This is a handy item to have, but it's not absolutely required; a field-expedient method, otherwise known as a hammer and an empty cartridge case, will suffice. Place the spent case on the round sight base and tap gently, because one millimeter of lateral movement will adjust the point of impact 26 cm (approximately 10 inches) at 100 meters.

Elevation adjustments are made by screwing the front sight in and out. A front sight tool specifically made for this purpose is included in the cleaning kit normally stored in the rifle's butt trap. One complete revolution of the front sight will move the point of impact 20 cm (approximately eight inches) at 100 meters. Screw it down and the point of impact goes up; move the front sight up and the point of impact goes down.

While I first fired an AK47 back when Reagan was president, the past few years I've spent most of my tactical long-gun time on the M4. My first thought upon picking up an AK was, "What a dinosaur." AKs look like they were designed in the 1940s. They're heavy and blocky, and many models sport wood furniture not seen on military arms anymore. Well, guess what—they were designed in the 1940s. That said, in many ways it's a very ergonomic design. It balances well, the pistol grip puts the finger on the trigger in just the right spot, and the buttstock is short enough to use while wearing body armor.

For this article I used a ubiquitous (there's that word again) Chinese-made Norinco Type 56 with a stamped receiver. This one happens to have an excellent trigger, which broke at just under four pounds. With no stacking and a surprise break, this trigger helped immensely when we were zeroing the rifle. While most of our soldiers currently in harm's way see more sand than snow, the AK47 was designed in the country that gave us Siberia. So I had no problems when zeroing the rifle in Michigan with several inches of snow on the ground. At least, no problems with the rifle—hands and feet and noses were another matter. I could have used a nice Russian sable fur hat.

When zeroing the rifle using the official Soviet method, I decided to go "old school." For a rifle rest I used a half-frozen sandbag, cradling the forearm in my gloved hand. Test firing was done in weather Muscovites would find positively balmy, and I hardly felt the cold under my five alternating layers of cotton, wool and polar fleece. Ammo was steel-cased Russian 7.62x39mm with red sealant around the case mouth and primer to help keep out the elements.

The sub-four-pound trigger on the test gun helped to keep the sights on target during sighting in. But with less than a tight grip on the gun I discovered it was possible to float the trigger. Two-round bursts can be exciting when you're not expecting them.

Premature-ignition issues aside, I can't think of a target that would work better for zeroing an AK than the old official Soviet one. At 100 meters, the 35x25-cm (14x10-inch) rectangle was the exact same size and shape as the front sight post. Lining up the top of the front sight with the bottom of the sighting rectangle is a very natural thing to do. Plus, with the prescribed white background, any movement off center immediately reveals itself.

Using the Russian steel-cased ammo, the test gun was capable of sub-five-inch groups at 100 meters. That's good enough to hit a man in the chest at 300 meters, which is what this rifle was designed for. Properly zeroing an AK, such as outlined here, will allow a rifleman to get the most out of it. If you are looking for a zeroing method for your AK, consider how the Russians teach it. They have been using them longer than anyone, and they know a thing or two about it.