

East Germany's Phantom AK Reborn

Text and photos by Peter G. Kokalis

**I.O., Inc.
Recreates
the Mysterious
Wieger STG 940**

The GDR hoped to earn hard currency with a Kalashnikov knock-off, but the end of Communism meant its career was brief.

The Wieger STG 940 series of rifles represented an effort by East Germany (GDR—German Democratic Republic) to develop a small arms system independent of the Soviet Union, but loosely based upon the AK74. Although the AK74 was chambered for the 5.45x39mm ComBloc cartridge, the Wieger STG 940 rifles were designed to be chambered for the 5.56x45mm NATO round.

There were to be five different variants, to include both a standard (STG 941) assault rifle with a fixed stock and a version with a folding stock (STG 942) and compact, special purpose (STG 943) assault rifle, a sniper weapon system (PG 945) and a light machine gun (LMG 944). It has been reported, but not documented, that the STG 943 was briefly in service with the STASI. The acronym “STG” stands for SturmGewehr (assault rifle) in the German language.

Development of this little-known weapon system and preparation for its series production commenced in approximately 1985. Involved in this project were the Ministry for Foreign Trade (MAH), the department of armament and chemical services (BCD) of the ministry for public security (MfS). Manufacture was to take place in Suhl with an anticipated production capacity of 200,000 rifles per year.

The exact reasons for the development of the STG 940 concept remain unclear. Most likely, it was thought that selling it would improve East Germany's ever-worsening foreign trade balance with countries outside the Warsaw Pact. In 1981 East Germany had obtained a license to produce the AK74 without the right, however, to export them. The Wieger STG 940 was probably viewed as a means around this export prohibition.

It was thought that the fusion of the proven Kalashnikov system with the widespread 5.56x45mm NATO cartridge at an attractive price would be successful. It should be noted that Poland was selling AKM rifles to the Sandinistas in Nicaragua for \$89 each during that time frame.

Tests of the Wieger STG 940 series were conducted in September of 1988 by an NVA Erprobungsgruppe near the rock-

et testing facility in Brandenburg. Reliability and accuracy were of a high order and at the same level as the Kalashnikov series.

Two orders were obtained. In 1989 Peru ordered an unknown quantity for its police force. Peru's armed forces were already fielding Kalashnikov-type rifles. In 1986, the Peruvian paramilitary forces obtained 20,000 AKM Type 68 assault rifles from North Korea. Another 20,000 were acquired in 1988. India also placed a substantial order with the GDR for a substantial quantity of weapons of the STG 940 series.

However, the wall came down and the German Federal Republic cancelled both the Peruvian and Indian orders, paying penalties to do so. Accurate production figures of the Wieger STG 940 weapons series are not available. Some sources indicate that possibly 10,000 STG 941 and STG 942 rifles were produced. And thus ended the Wieger STG 940—until now.

I.O., Inc. (Dept. SGN, 3305 Westwood Industrial Drive, Monroe, N.C. 28110; phone: 866-882-1479; fax: 704-225-8362; website: www.interordnance.com) has recently introduced a semiautomatic-only version of the STG 941 called the STG-2000-C in caliber 7.62x39mm. The resemblance to the original Wieger STG 941 is really quite remarkable.

SHOTGUN NEWS was recently sent an STG-2000-C for test and evaluation. The overall length of the rifle is 36.25 inches (920.75mm). Without a muzzle brake, the barrel length is 16.25 inches (412.75mm). The specimen sent to us has an M16A2-type flash suppressor, which was attached to the 1/2-28 barrel threads by means of epoxy.

Subsequently, I.O., Inc. has gone over to the newer M16A2-type crush ring. This will eventually be replaced by the original M16A1-type birdcage flash suppressor with crush ring. The M16A2 flash hider is similar to the original M16A1 birdcage-type, except that the sixth port on the bottom was deleted to slightly reduce muzzle climb during burst-fire and diminish position disclosure when firing from the prone position in dusty, arid region environments. The flash signature remains the same.

The STG-2000-C is a remarkable semiautomatic-only recreation of the highly regarded East German Wieger STG 941 assault rifle. It's an absolute must for AK collectors.

The flash suppressor brings the total barrel length to 17.5 inches (444.5mm). The chrome-lined bore has four grooves, 1:12 right-hand twist (1:300mm). The weight of this rifle, empty and without a magazine, is only 6.6 pounds (approximately 3kg).

The rifle was made in Romania. I.O., Inc. had to reconfigure the rifle from its original thumbhole stock and single-column magazine to the Wieger-style furniture and a staggered-column magazine. Romanian WASR-type sheet-metal receiver bodies do not have the dimples on each side of the magazine well to guide the magazine. Instead, they have two spring fingers inside the magazine well to guide the single-column magazine.

I.O., Inc. machines away those fingers at the same time that they enlarge the magazine well to accept a staggered-column



The sheet-metal cup that retains the two-piece forearm, as well as its captive lock pin and spring are proprietary and derived directly from the original Wieger 940.



The black polymer pistol grip is a close duplicate of the one found on the original Wieger 940. It's more like the Galil grip than most other AK-type rifles.



The two-piece forearm assembly tapers forward in a manner unlike that of any other AK. The eyelet on the locking pin serves as the front sling attachment point.



The distinctive black polymer buttstock is quite peculiar in its outline, but Kokalis says that it's rock steady and offers the operator a secure firing platform.

magazine. In addition to these reconfigurations from its importable condition, the rifle must be brought into compliance with U.S. Federal Statute 922r. Those manufactured in the United States may now have folding stocks of any kind, bayonet lugs and flash hiders of all types (providing they do not modify the sound pressure level in any way, i.e., be determined to be sound suppressors by the BATFE). However, under U.S. Federal Statute 922r at least six of the following components for stamped receiver semiautomatic-only AKs and five for machined receiver weapons, must be made in the United States: 1) frames, receivers, receiver castings, forgings or stampings; 2) barrels; 3) mounting blocks (trunnions); 4) muzzle attachments; 5) bolts; 6) bolt carriers; 7) gas pistons; 8) triggers; 9) hammers; 10) disconnectors; 11) buttstocks; 12) pistol grips; 13) forearms or handguards; 14) magazine bodies; 15) magazine followers; or 16) magazine floorplates.

In the case of the STG-2000-C, the new Wieger-style, glass-filled furniture, together with U.S.-manufactured fire control and other components bring it into compliance with US Federal Statute 922r.

The STG-2000-C has an AK102-type gas block/sight base. The open U-notch, tangent-type rear sight, adjustable for ele-

vation only, features 100-meter elevation adjustments from 100 to 1000 meters. A battle sight setting, marked with a Cyrillic "P," indicates a target engagement range of zero to 300 meters.

I have said many times before that 1000 meters is well beyond the wound ballistics capability of the 7.62x39mm cartridge. The round post front sight is surrounded by a protective hood; and a hole in the top of the hood permits adjustment for both windage and elevation zero with the proper armorers' tools.

To move the point of impact upward, the front sight post must be rotated downward in its base. Likewise, to move the point of impact to the left, the sight must be moved to the right and vice versa. A Warsaw Pact side rail scope mount has been attached to the left side of the receiver body.

Be advised that the sheet-metal cup that retains the two-piece forearm, as well as its lock and spring are proprietary and derived directly from the original Wieger 940 series design. As a

consequence, the gas cylinder has a configuration different from most Kalashnikov-type rifles. Standard AK forearms and gas tube accessories cannot be installed on this rifle. Furthermore, to disassemble the two-piece forearm, you must pull out the steel locking pin holding the forearm assembly to the sheet-metal cup or front cap. This is not always easy to do.

The locking pin is pulled out to the left and is captive. Once it's withdrawn, the front cap can be moved forward enough to remove the forearm halves. In all other regards, disassembly procedures for the STG-2000-C are identical to those of any other rifle in the Kalashnikov series. An eyelet on the left

side of the locking pin serves as the front sling mounting point. The rear sling swivel is attached to the left side of the buttstock.

I.O., Inc. has a substantial number of reasonably priced accessories available for the STG-2000-C. They include a bipod with wire-cutting and can-opening tools that clamps on the barrel (\$19.95), a variable-power 3-9x50mm AO with red/green illuminated reticle (\$84.95), a laser sight (\$19.95), a Warsaw Pact side mount for optical devices (\$44.95), a clamp-on flashlight (\$39.95) and a rifle case with five magazine pouches (\$44.95).

Our test and evaluation of the STG-2000-C revealed the usual Kalashnikov series reliability. There were no surprises. Collecting semiautomatic-only versions of the AK series has become quite popular. The STG-2000-C has a fascinating and somewhat mysterious history. It is an absolute must for any AK collector/shooter.

It is anticipated that a caliber 5.56x45mm NATO version (STG-2003-C) and a sniper version (SSG-2000) in both calibers 7.62x51mm NATO and 7.62x54R will eventually be available. Personally, I would also like to see a folding stock version using the single-strut stock of the original Wieger Models STG 942 and 943 and East German MPiKMS-72 AK.

AKs—How They Operate

In spite of their unique appearance, the original Wieger STG 940 series and the new STG-2000-C are AK-type weapons. Almost all Kalashnikov series assault rifles are gas-operated, but have no gas regulator. I have never seen a Kalashnikov malfunction as a result of fouling. Two variants, the Polish PMK-DGN-60 and Yugoslavian M70B1/AB2 have gas cutoffs to permit firing rifle grenades with ballistite (blank) cartridges. AKs are locked-breech designs with rotary bolts and fire from the closed-bolt position.

Except for the locking pin that retains the two-piece forearm assembly, disassembly procedures for the STG-2000-C are identical to those of any other AK.





A side rail mount permits installation of all Eastern European scopes and night vision devices, including the 4x24mm and 6x42mm scopes available from Inter Ordnance.

They operate as follows: After ignition of the primer and propellant, gases are diverted into the gas cylinder on top of the barrel. The piston is driven rearward and the bolt carrier, attached to the piston extension, goes through the necessary amount of free-travel until the gas pressure drops to a safe level.

A cam slot milled into the bolt carrier engages the bolt's cam lug and rotates the bolt about 35° to the left to unlock it from its recesses in the barrel extension. Unlike many other designs, the Kalashnikov provides no primary extraction during bolt rotation. Thus, in any of its calibers, an exceptionally large extractor claw is required.

As the bolt travels back, it rolls the hammer over and compresses the recoil spring. The bolt group ceases its rearward travel when the carrier slams into the rear end of the receiver. The recoil spring then drives the bolt group forward, another round is stripped from the magazine and chambered, and the bolt then comes to rest. The bolt carrier itself continues onward for about 5.5mm after the bolt's two locking lugs have engaged their recesses in the barrel extension.

The long, single-strand recoil spring is wrapped around a guide rod consisting of two telescoping steel rods on Romanian AKMs. The front retaining cap permits user separation of the spring and rods. The rear end of the guide rod assembly slides into a notch on top of the receiver's end piece and serves to hold the stamped sheet-metal receiver top cover in place. Soviet and Romanian AKM top covers have a ribbed configuration for added strength.

The trigger mechanism is based upon that of the .30 M1 Garand. The hammer has two hooks, and there are two sears: a primary sear on an extension of the trigger and a spring-loaded secondary sear directly to the rear. When the hammer is in the cocked position, its left side hook is held by the primary sear. When the trigger is pulled, the trigger extension rotates forward

and the primary sear disengages, leaving the hammer free to rotate forward.

In semiautomatic fire, when the bolt rolls the hammer back, it is caught by the secondary sear. When the trigger is released, the trigger extension and primary sear move back to catch the hammer as it is released by the secondary sear.

In a full-auto rifle, a boss on the selector-lever axis pin forces the secondary sear back so that it plays no role in controlling the hammer. The trigger mechanism's mainspring is of the multiple-strand type, which lasts longer and offers better performance under adverse conditions.

On selective-fire AK rifles there is also an auto-safety-sear that protrudes through a slot in the right receiver rail. In full-auto, the auto-safety-sear holds the hammer back and it must be tripped by the bolt carrier in order to free the hammer to fire another round. The auto-safety-sear has been deleted by BATFE regulations on semiautomatic-only AKs.

The selector lever, a stamped sheet-metal bar on the right side of the receiver, is manipulated by the thumb and remains, in my opinion, one of the Kalashnikov's few defects. It is noisy, stiff and difficult to operate, but its firing modes have been located in a logical manner. The top position is "safe." In this position, the trigger is blocked, but the bolt can be retracted just enough to see if the chamber contains a loaded round.

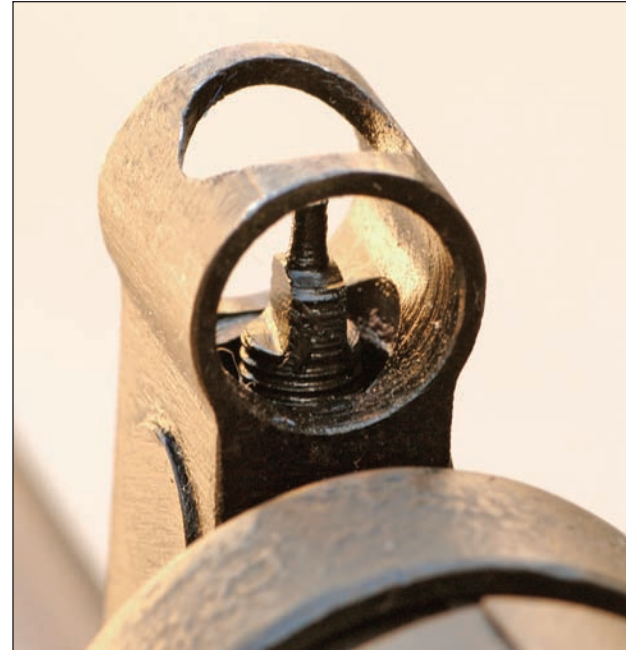
The middle position provides for full-auto fire in selective-fire models. The next position down is for semiautomatic fire. Under stress, the operator will invariably push the selector bar all the way downward into the semiautomatic position. That is exactly how the weapon should be employed in almost every instance. Thus, to obtain full-auto fire, the operator must consciously push the selector bar back up to the full-auto notch.

M43 Cartridge—History and Wound Ballistics

Attributed to designers Nikolai M. Elizarov and Boris V. Semin, Soviet historians contend that work on the M43 (model 1943) 7.62x39mm cartridge began in 1939, was temporarily suspended because of The Great Patriotic War and then re-commenced and finalized in 1943.

Others have stated that it was derived from the German 7.92x33mm Kurz Patrone (short cartridge) developed for the world's first assault rifle produced in significant quantities, the World War II MP43/44 (StG44/45). This latter scenario is highly unlikely, as the Soviets would have required specimens of 7.92x33mm Kurz ammunition at least a year or two prior to their adoption of the 7.62x39mm round in 1943—well before the MP43 was fielded on the Eastern front (first reported use was December 1942).

Whatever the case, the Soviet M43 cartridge is a true intermediate-size assault rifle round. First prototypes featured cases 40.29mm in length (thus: 7.62x41mm). The case was trimmed to



The front sight post is surrounded by a protective hood. The hole in the top permits adjustment for both windage and elevation zero with the proper armorers' tools.

38.6mm as the original projectile proved unsatisfactory and a new bullet was adopted that required a shorter case. (It has been proposed by writer J. Hartikka that the M43 cartridge was cloned from the Genschow & Co. [GECO] 7.75x39mm cartridge of 1935, but it cannot be demonstrated that this is anything other than internet chat room speculation.)

The following countries have manufactured ammunition in this caliber: Austria, Belgium, Brazil, Bulgaria, Cuba, Czechoslovakia, East Germany, Egypt, Finland, France, Hungary, Iraq, Israel, Netherlands, North Korea, Norway, Peru, Poland, Portugal, People's Republic of China, Romania, South Africa, South Korea, Sweden, Syria, United States, USSR, West Germany, and Yugoslavia. In addition to ball ammunition, it has been produced with hollow point, tracer, API (Armor-Piercing Incendiary), and IT (Incendiary Tracer) projectiles.

Special purpose loads include heavy subsonic ball (for use with sound suppressors), practice blanks, short-range loads and drill rounds. Ball ammunition will be encountered in two configurations. Most prevalent is a 123-grain boattail bullet that usually consists of a copper-washed steel jacket, lead and anti-mony sleeve, and a mild steel core (Soviet Type PS). Yugoslavia's M67 ball ammunition, as well as that of several other countries, uses a flat-based bullet of approximately the same weight, with a copper-alloy jacket and lead core. Muzzle velocity of both types is between 2330 and 2400 fps.

In its boattail configuration, the 7.62x39mm bullet travels point-forward about 10 inches in soft tissue before significant yaw occurs. At that point the bullet will yaw to less than 90°, then come back down to a point-forward position, and finally yaw 180° and end its travel in a base forward position. Bi-lobed yaw cycles of this type are commonly observed with pointed, non-deforming bullets. Total penetration in living tissue is almost 29 inches.

Abdominal shots usually exhibit no greater tissue disruption than that produced by a .38 Spl. pistol bullet since, after 10 inches of travel without yawing, the bullet has generally passed through the abdominal cavity. However, of course, this round is capable of inflicting such damage at far greater ranges than a handgun.

While I was working at the Wound Ballistics Laboratory at the Letterman Army Institute of Research in San Francisco, we tested the lead-cored, flat-base Yugoslav bullet and found it to be considerably more effective. It commences its yaw cycle after only 3 to 4 inches of penetration. Once again, the yaw cycle is generally bi-lobed. The bullet reaches its maximum penetration of 23 to 26 inches traveling base-forward, somewhat flattened and retaining almost all of its original weight (two or three small fragments are shed in the area of maximum cavitation).

Although the flat-based 7.62x39mm bullet is shorter (.930") than the more common boattail projectile (1.040"), it will be expected to cause more damage to the abdomen, liver, spleen or pancreas because the bullet passes through these organs at a



East German 30-round steel magazines with pouch, 30-round Inter Ordnance translucent magazine, and East German 40-round steel magazines and pouch for the RPK.



The rear sight is adjustable for elevation from 100 to 1000 meters. A battle sight setting, marked with a Cyrillic “P,” indicates ranges of zero to 300 meters.

large yaw angle. Remember, if we have neither mushrooming nor fragmentation, yawing is all that remains to maximize tissue disruption and enhance the bullet's performance—always provided we do not sacrifice adequate penetration.

The ammunition used in our test and evaluation of the Inter Ordnance STG-2000-C was imported by Wolf Performance Ammunition (Dept. SGN, 1225 North Lance Lane, Anaheim, Calif 92806; phone: 888-757-9653; fax: 714-632-9232; Email: info@wolfammo.com; website: www.wolfammo.com) and manufactured at Tula Cartridge Works in Russia. Headstamped “7.62X39 WOLF”, the lacquered steel case has a red case mouth sealant and primer annulus. This ammunition is Berdan primed.

Boattail projectiles in the standard weight, 122-123 grains, are available in either full metal-jacketed (FMJ) or hollow-point (HP) types. In this weight the muzzle velocity is approximately

<h2>STG-2000-C Specifications</h2>	
Caliber:	7.62x39mm.
Method of operation:	Gas-operated without a regulator, locked-breech with a rotary bolt, fires from the closed-bolt position.
Feed:	30- and 40-round, staggered-column, two-position-feed, detachable, box magazines.
Weight, w/out magazine:	6.6 pounds (approximately 3 kg).
Length, overall:	36.25 inches (920.75mm).
Barrel:	Four grooves with a 1:12 right-hand twist (1:300mm). Chrome-lined chamber and bore.
Barrel length:	16.25 inches (412.75mm); with M1A2-type flash suppressor: 17.5 inches (444.5mm).
Sights:	Front sight: round post with protective hood, adjustable for both elevation and windage zero with proper armorers' tools. Rear sight: sliding tangent with an open U-notch; adjustable for elevation only to 1000 meters in 100-meter increments. There is a battle sight setting (marked with a Cyrillic “P”) just behind the 100-meter mark. In elevation, it is the equivalent of 300 meters.
Finish:	Black oxide.
Manufacturer:	Manufactured in Romania for I.O., Inc., Dept. SGN, 3305 Westwood Industrial Drive, Monroe, N.C. 28110; phone: 866-882-1479; fax: 704-225-8362; website: www.ioinc.us, and altered by I.O., Inc. after importation in compliance with US Federal Statute 922r and to accept staggered-column magazines.
Price:	\$399.95—available from Maine Military Supply, Dept. SGN, 735 Wilson Street, Brewer, Maine 04412; phone: 207-989-6783; fax: 207-989-3463; website: www.mainemilitary.com, as well as AIM Surplus, S.O.G., and other distributors.
T&E summary:	A remarkable semiautomatic-only recreation of the highly regarded East German Wieger STG 941 assault rifle. The usual Kalashnikov reliability. An absolute must for AK collectors.

2400 fps. Testing of 7.62x39mm HP projectiles, designed originally to meet U.S. importation regulations, indicated that most often the bullets became frangible upon contact with the tissue simulant or else exhibited no expansion at all. A loading with a 154-grain soft-point (SP) bullet, designed specifically for hunting, is also available. This projectile features a muzzle velocity of approximately 2100 fps. For serious social purposes I prefer the FMJ load. In all calibers, Wolf ammunition has proven to be reliable, accurate and competitively priced. ©

Longtime *Guns & Ammo* columnist and practical pistol guru Jeff Cooper will be memorialized at a rifle and pistol match Sept. 1-2 at the Ben Avery range in Phoenix. Entry will be limited to 150 shooters at \$225 each. The match will be run by personnel who were instructors and students under Cooper during the original Gunsite days. For more information see www.coljeffcooper.com or call (928) 636-4664.