STG 34k
Stemple Takedown Gun (STG)
Owner’s Manual

2011 Pattern
(quick change barrel & shroud)

2008-2010 Pattern
The Stemple Takedown Gun (STG) setups are complete new parts packages installed on unmodified transferable Stemple 76/45 machine gun receiver tubes. This setup is assembled using Swedish M37 components, newly manufactured Stemple-compatible parts, and MG34 select-fire trigger system. Selecting semi or fully-automatic fire is simply done by moving your trigger finger to the top or bottom of the W-shaped trigger. Pulling the upper ‘E’ position on the trigger enables semi-automatic fire; pulling the lower ‘D’ position enables fully-automatic fire.
Breakdown View 2008-2010 Pattern Shroud

- **Weight:** 10 lb
- **Magazine:** Suomi KP31 25 rd, 36 rd, 60 rd magazines and 40 rd & 70 rd drums
- **Rear Sight:** Finnish KP31 500M Tangent or Picatinny Rail
- **Barrel Length:** 8.5 in. or 12.75 in. (threaded 1/2 - 28)
- **Cycle Rate:** 750 rpm
- **Stock:** AK Underfolding or Short/Fixed
The STG is an open-bolt / blow-black submachinegun that requires knowledgeable operators. Full and complete adherence to the following instructions is an absolute necessity for safe and responsible use of the STG. This system is NOT meant for anyone other than individuals knowledgeable in the safe operation of machineguns who have a thorough understanding of automatic firearms. If you are not such an individual you pose a danger to yourself and those around you by using this system.

The 2011 pattern features the Suomi-type lug-mount trunion for a quick-detachable barrel assembly. The following parts are different between the two patterns:

- Trunion
- Barrel Shroud
- Magazine Housing

**The Essentials of Running The STG:**

Following these steps will help you use this system reliably and prevent malfunctions, dangerous operation, and damage.

1) **Following Loading Protocol:** Do not retract the bolt until you intend to fire.

2) **Correct Ammo:** Use full metal jacketed ammo only to ensure proper feeding.

3) **Correct Mags & Drums:** Drums and mags are not dimensionally consistent; contact BRP CORP for fitting if necessary. Make sure that each Magazine or Drum locks on the Magazine Latch and does not rock back and forth in the Magazine Housing.

4) **Lubrication:** Use lubricant sparingly on the outside edges of the Bolt.

5) **Cleaning:** When cleaning the STG, pay special attention to cleaning the bolt face, barrel, and feed ramp.

6) **Inspection:** After cleaning, fully inspect and reassemble the STG.
Safety – Your Responsibility

SAFETY MUST BE THE FIRST AND CONSTANT CONSIDERATION OF EVERY PERSON WHO HANDLES FIREARMS AND AMMUNITION. This manual is designed to assist you in learning how to use and care for this system properly.

Only when you are certain you fully understand the manual and can properly carry out its instructions should you practice loading, unloading, etc. with live ammunition.

If you have doubts about your ability to handle or use this particular system safely, seek supervised instruction. Such personalized instruction is often available from gun dealers, gun clubs, and police departments. If none of these sources can help you, contact the National Rifle Association. You are also encouraged to contact BRP CORP for assistance.

The person with a gun in his possession has a full-time job. He cannot guess; he cannot forget. He must know how to use his firearm safely. Do not use any firearm without having a complete understanding of its particular characteristics and safe use. Remember: There is NO such thing as a foolproof gun.

Basic Safety List

• A loaded firearm has the potential to kill. Intelligently handled, it is safe.

• An accident is always the result of basic safety rules neglect.

• Accident prevention is the user’s responsibility.

• Never point a firearm at anything you don’t want to shoot.

• Before handling a firearm, be sure to use correct and undamaged ammunition.

• Be sure your firearm is clean – before loading, inspect the barrel to insure it is perfectly clean and free of foreign objects. Shooting with an obstruction in the barrel such as dirt, mud, grease, lodged bullet or jacket, residues, etc, can cause barrel bulging and/or rupture.

• Never assume that the chamber is empty – visually inspect it every time you handle the gun.

• Avoid alcoholic beverages and drugs before and during shooting.

• Avoid hard-hitting or dropping of a loaded firearm.

• Store firearms and ammunition separately, beyond the reach of children. Be sure the cartridge chamber is empty.

• Thoroughly clean the firearm to prevent corrosion.

• Wear eye and ear protection.

• A Firearms Safety Course is recommended.

• Handle your firearm with respect, not fear.
History and Design of the Weapon

The Stemple 76/45 is best described as a .45 cal. version of the 9mm Swedish K (Carl Gustav). The Stemple 76/45 was originally developed and produced by John Stemple of Ohio.

This design also shares many characteristics of the Smith & Wesson 76 9mm, which is more or less a copy of the Swedish K. The Swedish K was an updated replacement for the Swedish-Suomi/Husqvarna 37. The Husqvarna 37 is a Swedish-made short-barrel clone of Finnish Suomi 31. Most parts are interchangeable between the 31 and 37. The Swedish-Suomi/Husqvarna 37 barrel was used in the Swedish K. In fact, many of the parts from the Swedish K are compatible with the Suomi 31 & 37. Similarly, the Stemple 76/45 shares a limited compatibility with the Suomi parts. Namely, the bolt diameters as well as the feed and ejection locations are similar for the Stemple 76/45, S&W 76, Swedish K, and Suomi M-31/37.

Stemple has produced the 76/45 in numerous configurations. The main differences are in the 3 parts that are typically welded to the receiver: rear grip / stock mount, mag housing, and trunion. Given that these parts are permanently attached to the receiver, it is difficult to make accessories that are compatible with all of Stemple’s guns. Pictured above is one of the newer versions of the 76/45 that uses a compensated barrel, telescoping stock, M-16 grip, and ‘pull-button’ magazine release.

Caliber conversions for the 76/45 have been available in .22 and 9mm. The 9mm conversion uses either Sten mags or Suomi mags and drums, depending on the magazine well that was welded to the receiver. Stemple’s latest innovation on the 76/45 is an ultra-slow-firing ‘match-grade’ version with a refined MP-40-style trigger group, AR plastic stock, and Picatinny rail base.

Preliminary Remarks

The terms “right-hand” and “left-hand” used in the following description of the assemblies and of the functioning apply to the position of the weapon in firing direction (seen from the gunner).
1. Loading the Magazines and Drums
   a. Magazines
      • There are numerous magazines manufactured for the Suomi 31 & 37. Make sure the magazine fits properly and test its ability to feed using dummy rounds.
      • When filling the magazines, make sure the rounds are firmly pressed against the rear of the magazine.
   b. Drum
      • You may fill the drum to capacity or only load a small amount of ammo. The drum operates on a constant force spring otherwise know as a clockwork spring located in a spring cage in the center of the drum. The spring causes the cage, pusher arm, and base plate to rotate clockwise.
      • Open the drum by pressing the ratchet release pin and rotating the locking arm away from the retaining shoulder.
      • Charge the drum by winding the cage counterclockwise. The ratcheting mechanism will ‘click’ as you wind the cage. Each ‘click’ is approximately 10 rounds and represents a locking point for the ratcheting mechanism. Only charge the drum to the point you want to load it. At a certain point, approximately 5 ‘clicks,’ the base plate will start rotating with the cage and pusher arm.
      • Once the cage and base plate cannot rotate any further, start loading the drum bullet-tip-up. You will need to do this on a flat surface so the rounds do not tip over. Be very careful not to press the ratchet release button. It will release the full force of the spring and possibly crack the feed lip of the drum.
      • Once full, press the ratchet release button and make sure there is sufficient force pushing the rounds toward the feed lip to feed the gun during cycle. As you are pressing the ratchet release button, hold the cage assembly to control the release of the drum spring. Place the cover plate over the drum body, press the ratchet release pin and rotate the locking arm toward the retaining shoulder.

2. Operation

Re-tensioning the Drum

If you have a loaded drum and the bolt closed on an empty chamber, this means that the constant-force spring did not provide enough force to push the cartridge up into the feed lip before the bolt came forward to push the round into the chamber. This situation requires that you re-tension the drum by following these instructions:

1) Unload the Drum:
   • Open the drum by pressing the ratchet release pin and rotating the locking arm away from the retaining shoulder.
   • Charge the drum 1 ‘click’ by winding the cage counterclockwise. This removes the tension from the cartridges and allows you to ‘dump’ them from the drum.

2) Re-tension the Drum Spring:
   • Use an extra-small regular screwdriver to remove the pusher arm retaining screw.
   • Remove the pusher arm and be careful no to allow the base plate to rotate.
   • Wind the cage counterclockwise 360 deg.
   • Reattach the pusher arm in exactly the same spot it was removed.
2. Loading the Gun
   • With the bolt forward insert the drum or magazine into the magazine housing and push into place making sure the magazine catch lever engages the magazine. Pull down on the magazine to make sure the magazine or drum has properly engaged the magazine catch lever.
   • Be careful not to press the magazine catch lever when holding the gun.

3. Firing the Gun
   a. Retract the Bolt to the end of the cocking track where it engages the sear.
   b. Pull the Trigger.

4. Unloading the Gun
   a. With rounds still in magazine: The bolt is in the ‘open’ position. Set the selector to the ‘S’ (SAFE) position by pushing the safety button and rotating it toward the rear of the firearm. Push the magazine release lever forward and remove the magazine.
   b. With empty magazine: The bolt is in the ‘closed’ position. Push the magazine release lever forward and remove the magazine. Retract the bolt to verify there is no round in the chamber.

Safety & Selector
Shown in F (FIRE) Position

Pulling the upper ‘E’ position on the trigger enables semi-automatic fire; pulling the lower ‘D’ position enables fully-automatic fire.
Disassembly Procedure

Step 1: Remove the Front Barrel Nut (2010 Pattern)

- Use the STG Lock Nut / Barrel Nut tool to unscrew the Barrel Nut. If there is a suppressor in place of the Barrel Nut, unscrew the suppressor.
Step 2: Remove The Barrel Shroud
Use the Allen wrench in your kit to remove the socket screw without the red in-fill at the front of the magazine housing. Push the barrel jacket pin through the opposite side and pull the barrel jacket forward.

Step 3: Remove the Front Takedown Pin
• Use the STG Multi-Tool to push the Front Takedown Pin through the Lower Housing, from left to right. The magazine housing may be pulled forward and removed. Do not twist this assembly as you pull it forward — it will scratch the front of the receiver.
Steps 1 & 2 (2011 Pattern): Remove the Barrel and Shroud

• Unscrew the flash-hider or suppressor from the end of the barrel. You may need to use a tool on the wrench flats as it’s very important that the muzzle attachments are screwed tightly to the shroud.

• Rotate the Lock Lever, rotate the Barrel Shroud 45 deg counter-clockwise and pull forward to remove
• Pull the Barrel with Barrel Spacer forward and remove
Step 3: Remove the Front Takedown Pin

- Use the STG Multi-Tool to push the Front Takedown Pin through the Lower Housing, from left to right. The magazine housing may be pulled forward and removed. Do not twist this assembly as you pull it forward — it will scratch the front of the receiver.
Step 4: Remove the Rear Takedown Pin

• Make sure the Bolt is in the forward position.

• Gently lift and pull back the Takedown Pin Retainer to expose the Rear Takedown Pin.

• Be sure to grasp the Receiver and Lower Housing, then use the Multi-Tool to push the Rear Takedown Pin up through the bottom of the stock cutout.

• Once the Rear Takedown Pin is removed, continue to hold the Receiver. Pull the ‘D’ position on the Trigger and gently pull the Receiver forward. The Trigger should ‘trip’ into full depressing causing the Sear to drop to its minimum height. Continue to pull the Receiver forward and away from the Lower Housing while gently lifting up on the barrel end of the receiver. Do NOT twist the Receiver while pulling forward as this will cause unnecessary scratches. Once the Receiver clears the Buffer and the Sear, it will separate easily.

• Be careful not to let the Mainspring fall off of the Guide Rod.
Step 5: Remove the Bolt and Cocking Handle

• Retract the Bolt and Cocking Handle to the end of the Cocking Handle Track, pull the Cocking Handle out of the right side of the Receiver, and remove the Bolt from the rear end of the Receiver.
At this point, no further disassembly is required for regular cleaning.

Parts to Thoroughly Clean After Any Shooting (2010 Pattern)

All parts listed should be soaked, then brushed and/or wiped with CLP until free of residue.

Bolt Face

Bolt Body

Compensator

Barrel: You can run the cleaning rod through the rear of the Receiver

Feed Ramp, Rear Barrel Face, & Ejector

2011 Pattern
Barrel Removal for 2010 or Earlier STG34k

- Unscrew the Barrel Lock Nut and pull the Barrel from the Receiver. You should use the Fitted Barrel Lock Nut Wrench or other suitable tool to apply enough force to remove and tighten the Lock Nut without marring.

- You may add a drop of Lock-Tite (blue/non-permanent) to the threads of the trunion to prevent the Lock Nut from vibrating loose during use.
Lower Housing Disassembly

- Use a rounded punch on the Multi-Tool to gently push-out the ‘male’ side of the Trigger Housing Takedown pins.
- Use the Multi-Tool to push-out the ‘female’ Trigger Housing Takedown Pins.
- Pull the Trigger Pack down and away from the Lower Housing.
- Rotate the Safety fully rearward and pull it out of the Lower Housing, from right to left.
- Use the Multi-Tool to push the Sear Pin out of the Lower Housing and remove the Sear and Sear Spring.

Use a 5/64 hex keys to unscrew the dog point retaining screws. Once retracted, the Sear Pin and Sear Lever Pin can be pushed out to remove the Sear and Sear Lever.
Trunion and Ejector Removal

- Use a 5/32 pin punch to drive out the trunion retaining pins. These can be either solid pin or roll pins. When re-installing be sure to maintain the orientation of the pin to ensure the magazine housing can ‘sleeve’ over the receiver.

- Use a 1/16 pin punch to drive out the Ejector Retaining Pin.
Buffer Retaining Pin

• For the purpose of disassembling the Receiver from the Lower Housing, the Buffer Assembly must be able to ‘rock’. For the AK under-folding stock, one 5/32 roll pin should be used to retain the Buffer Assembly.

AK Under-Folding Stock

5/32 Roll Pin

Empty Hole

• With the Short/Fixed Stock, two 5/32 solid dowel pins are used to retain the Buffer Assembly. Since the Short/Fixed Stock conforms to the shape of the Lower Housing, they cannot fall-out during use.