

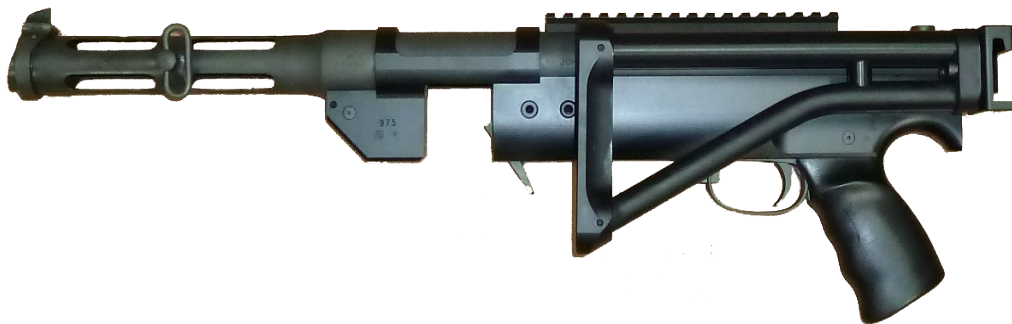
# STG

## Stemple Takedown Gun Owner's Manual STG-76

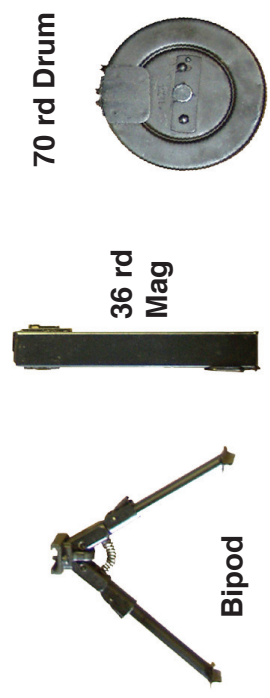
### 2010 Pattern



### 2011 Pattern



# Breakdown View: Stemple 76/45 with STG-76 Parts



- Caliber: 9mm
- Barrel Length: 12.875 in., 8 in.
- Capacity: Suomi 70-rd & 40-rd drums, and 36-rd mags;  
Swedish M37/M45 25-rd and 50-rd mags
- Sights: Picatinny compatible
- Cycle Rate: 750-950 (3 position fire control: Safe/Semi/Full)
- Finish: Black

# Stemple Takedown Gun (STG) Manual

The STG is a 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 and 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.

## Spare Parts Manufactured by BRP:

- Select-Fire Trigger Packs
- Ejectors
- Bolts
- Lock Nuts
- Short or Long Barrel Setups
- Buffer Pads
- Ejectors

## The following Suomi parts and accessories will work with the STG:

- Magazines and Drums
- Slings
- Internal Trigger Housing Components
- Mainsprings
- *Extractors are AR-15/M16*

The STG is a complete accessory package for a Stemple 76/45 machine gun. These are built using newly-manufactured parts, Suomi components, and unmodified pre-86 transferable Stemple machine gun receivers. For ATF compliance, the gun has been constructed as a 'takedown' system that utilizes interlocking subassemblies.

## The Essentials of Running The STG:

Following these steps will help you use this system reliably, 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, especially from the double-feed magazine.
- 3) Correct Mags & Drums:** Drums and mags are not always dimensionally consistent. Make sure that your drums and mags are not too loose to ensure proper feeding.
- 4) Lubrication:** Use a light amount of lubricant to prevent binding and/or wear.
- 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. Once fully reassembled, check for proper sear and safety function. You may also use some dummy rounds to check feeding.

## **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, then you should seek supervised instruction. Such personalized instruction is often available from gun dealers, gun clubs or 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 user 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 or 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 cartridge chamber is empty.
- Thoroughly clean the firearm to prevent corrosion.
- Wear eye and ear protection.
- Firearms Safety Course is recommended.
- Handle it with respect not fear.

# History and Design of the Weapon

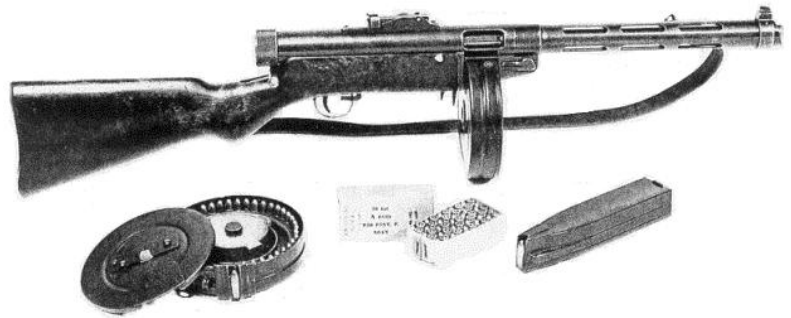
The Stemple 76/45 is best described as a .45 cal. version of the 9mm Swedish K (Carl Gustav). The Stemple 76/45 was originally developed and produced by John Stemple of Ohio.



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 w/ the Suomi 31 & 37. Similarly, the Stemple 76/45 shares a limited compatibility with Suomi M31 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 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 a '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).

# Operation

## 1. Loading the Magazines and Drums

### a. Magazines

- There are numerous magazines manufactured for the Suomi 31&37. Make sure that the magazine fits properly and test its ability to feed using dummy rounds.
- When filling the magazines, make sure that the rounds are firmly pressed against the rear of the magazine.

### b. Drum

- You may fill the drum to capacity or only load 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 as it rapidly unwinds.**
- Once full, press the ratchet release button and make sure that there is sufficient force pushing the rounds toward the feed lip to feed the gun during cycle. Place the cover plate over the drum body. Press the ratchet release pin and rotate the locking arm toward the retaining shoulder.

## 2. Loading the Gun

- With the bolt forward insert the drum or magazine into the magazine housing and smack into place making sure that the magazine catch lever engages the magazine. Pull down on the magazine to make sure that the magazine or drum is properly engaged.
- Be careful to not press the magazine catch lever when holding the gun.

## 3. Firing the Gun

- Retract Bolt to the end of the cocking track where it engages the sear
- Pull Trigger

## 4. Unloading the Gun

- With rounds still in magazine.** The bolt is the 'open' position. Set the selector is set to the rear (SAFE). Push the magazine release lever forward and remove the magazine.
- With empty magazine.** The bolt is the 'closed' position. Push the magazine release lever forward and remove the magazine. Retract the bolt to verify that there is no round in the chamber.



### Fire Control Selector

(Shown in Full Position)

Fully Forward: **Full Auto**

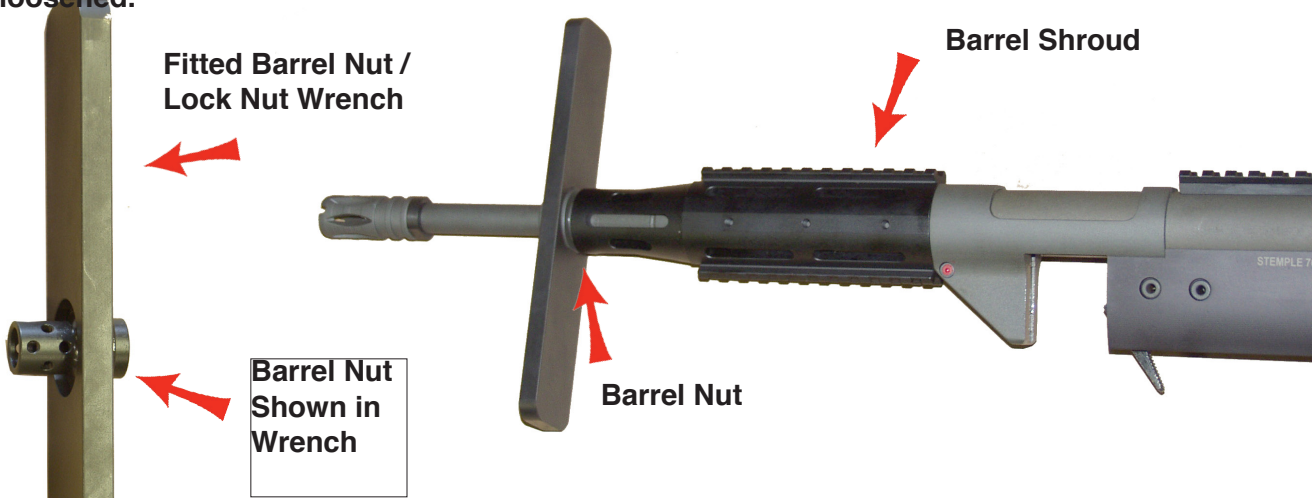
1 Click Rearward: **Semi Auto**

Fully Rearward: **Safe**

# Disassembly Procedure

## Step 1 (2010 Pattern): Remove the Front Barrel Nut (short-barrel setup pictured)

• Use the STG Lock Nut / Barrel Nut Wrench to unscrew the Barrel Nut. Unscrew the flash-hider assembly (long barrel setup only) using an M16 multi-tool or 3/4" wrench. If there is a suppressor in place of the Barrel Nut, unscrew the suppressor. These parts shoulder into the front of the Barrel Shroud thereby tightening the entire assembly. **You can only unscrew the Rear Takedown Screw when the Front Barrel Nut is loosened.**

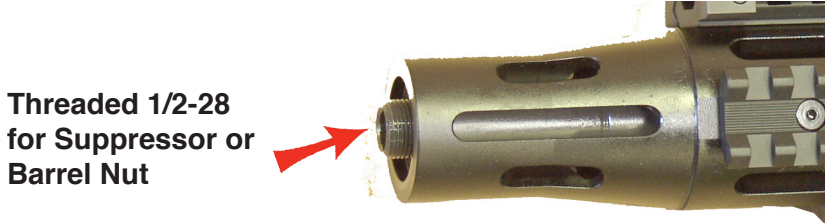
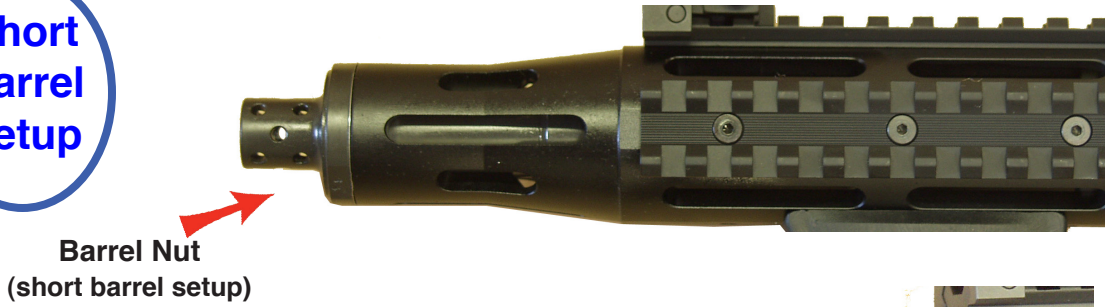


Barrel Front Thread Profile 1/2 - 28 & 15mm X 1mm. This can be removed with an M16 combo tool or 3/4" wrench. This parts must be unscrewed before the shroud can be removed.

Long Barrel Setup



Short Barrel Setup



## Step 2 (2010 Pattern): Remove The Barrel Shroud

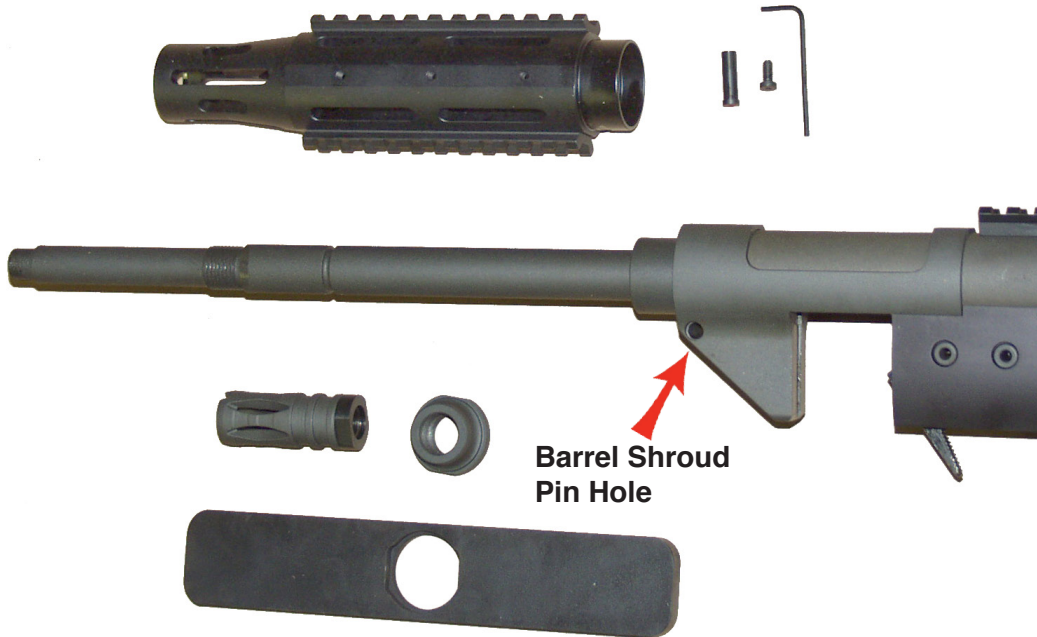
• Use the 5/64 hex key wrench in your kit to remove the socket screw without the red in-fill at the front of the magazine housing. Push the Barrel Shroud Pin through the opposite side and pull the Barrel Shroud forward.



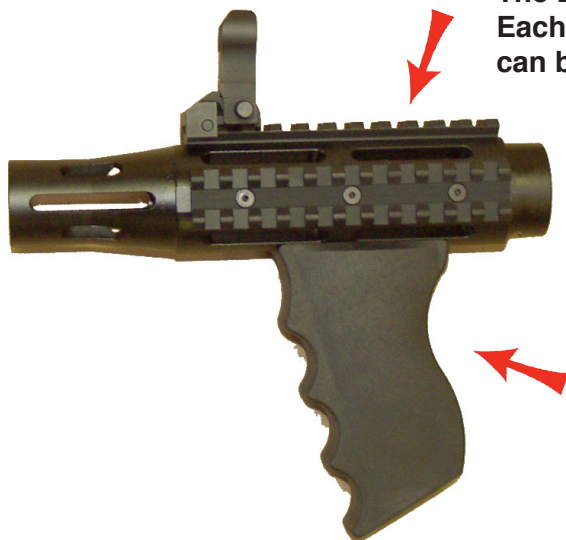
**Barrel Shroud Pin Retaining Screw**



**Barrel Shroud Pin**



**Barrel Shroud Pin Hole**

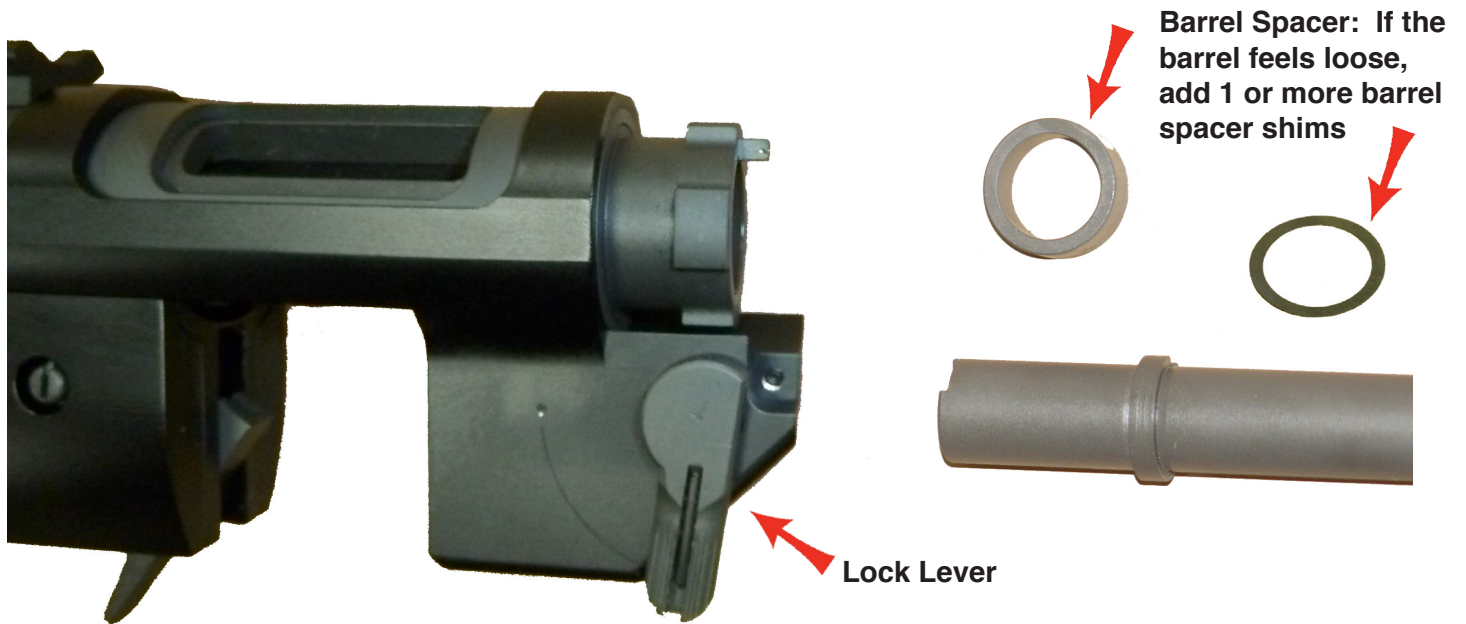


The Barrel Shroud can mount Picatinny rails at 90° increments. Each Rail is held to the Barrel Shroud by three 8-32 screws that can be removed using the 5/64 hex key (supplied with gun).

The bottom section of the Barrel Shroud has a hole pattern that may accommodate a Picatinny rail or the BRP Foregrip.

## Steps 1 & 2 (2011 Pattern): Remove the Barrel and Shroud

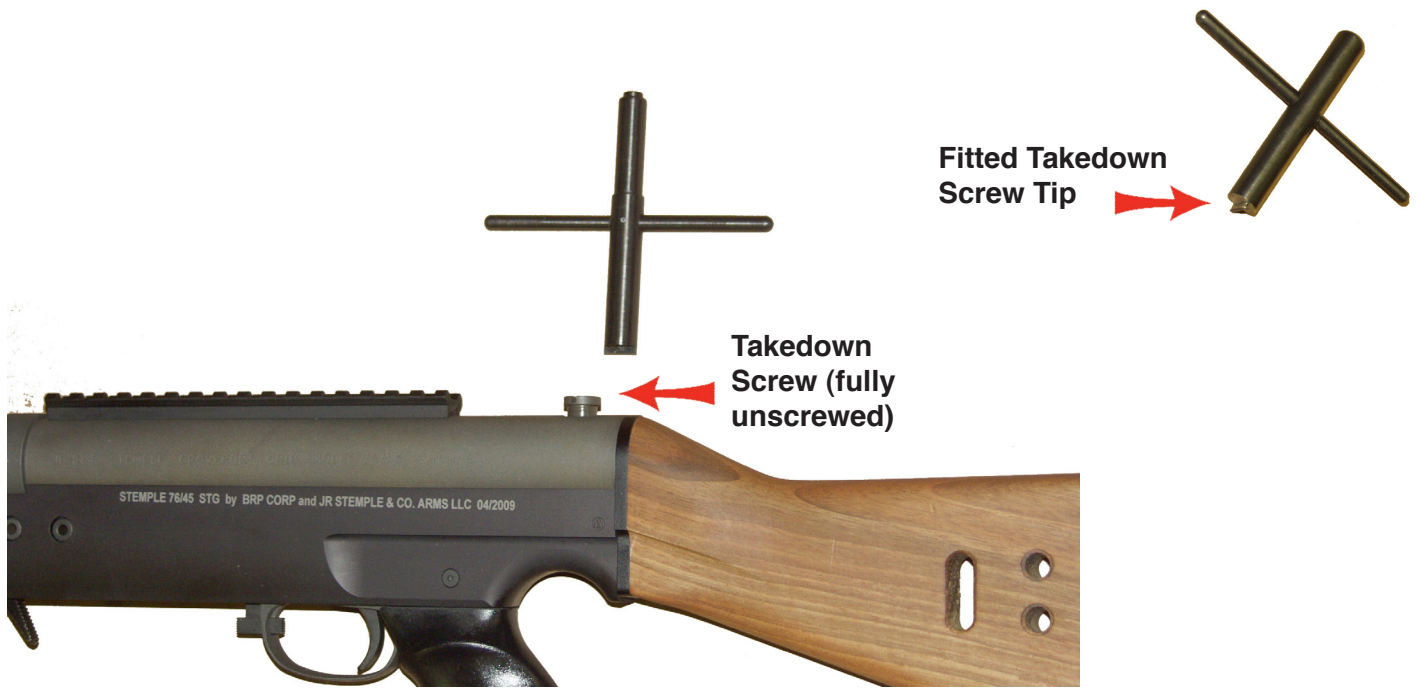
- Rotate the Lock Lever, rotate the Barrel Shroud 45 deg counter-clockwise and pull forward to remove
- Pull the Barrel with Barrel Spacer forward and remove



### Step 3: Remove the Takedown Screw

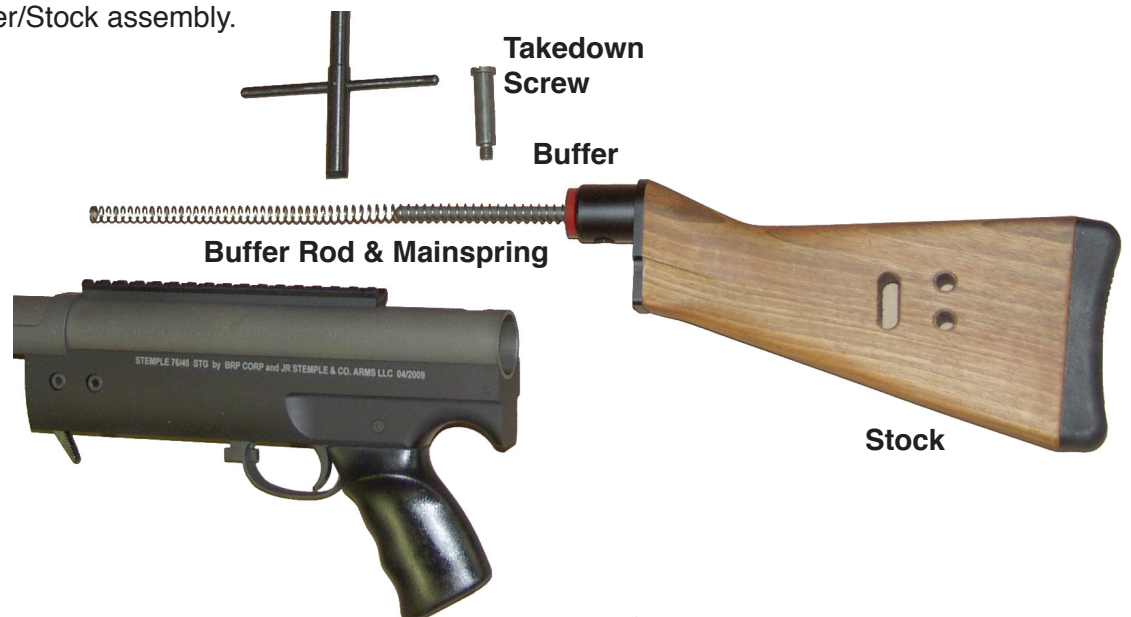
- Use the STG Multi-Tool to unscrew the Takedown Screw (approx. 6 rotations)

**STG Multi-Tool**



### Step 4: Remove the Buffer

- Once the Rear Takedown Screw stops rising from the receiver, hold the Stock and pull the screw upward from the receiver. You may also push up on the bottom of the Screw through the Lower Housing.
- Remove the Buffer/Stock assembly.



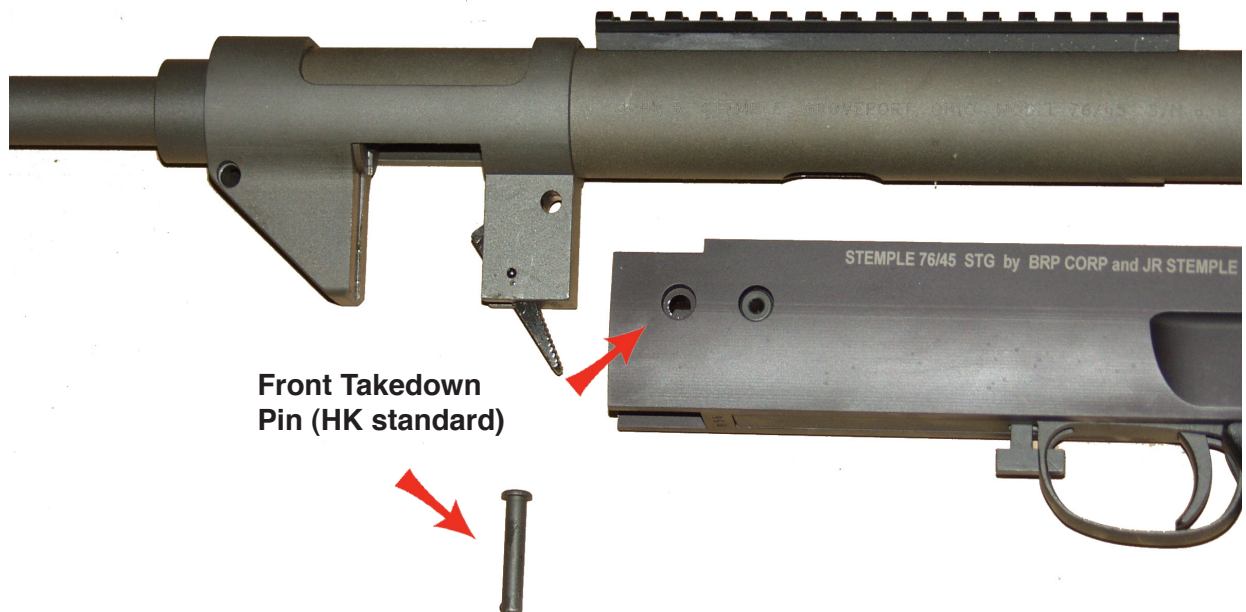
## Step 5: Remove the Bolt and Cocking Handle

- 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 pull the bolt out from the Receiver rear.



## Step 6: Remove the Front Takedown Pin

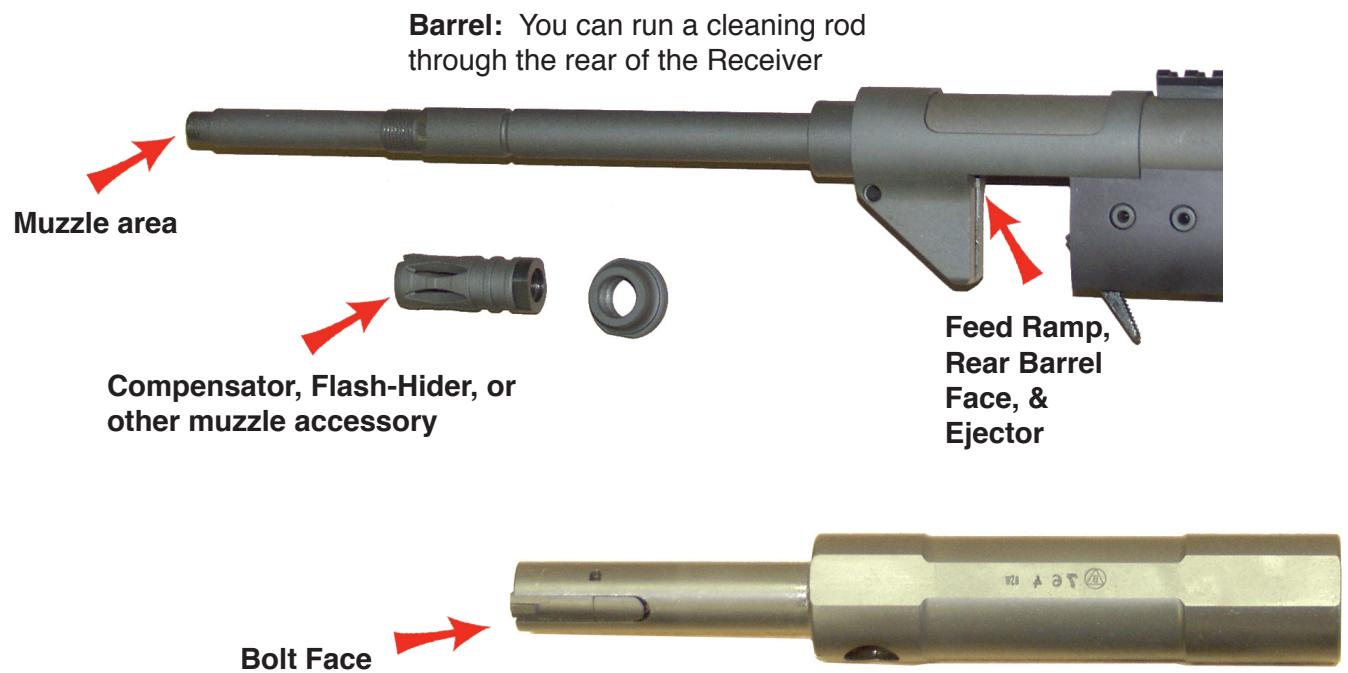
- Use the STG Multi-Tool to push the Front Takedown Pin through the Lower Housing, from left to right. The Lower Housing can be separated from the upper assembly, and the Magazine Housing may be pulled forward and removed. Do not twist this assembly as you pull it forward — it will scratch the front of the receiver.



**At this point, no further disassembly is required for regular cleaning.**

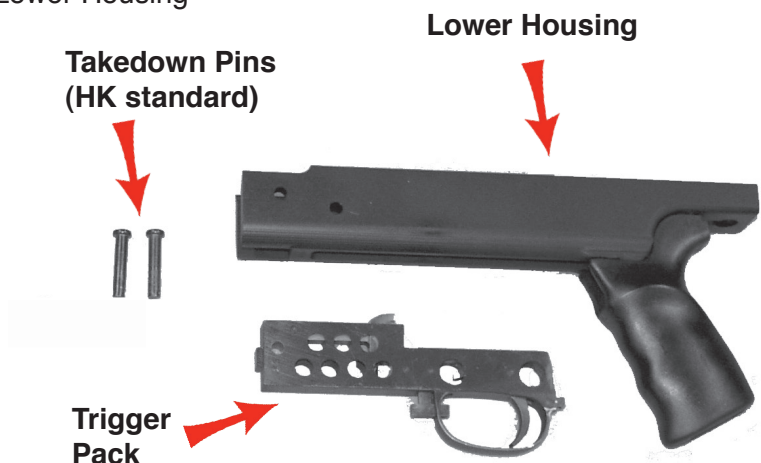
## Parts to Thoroughly Clean After Any Shooting

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



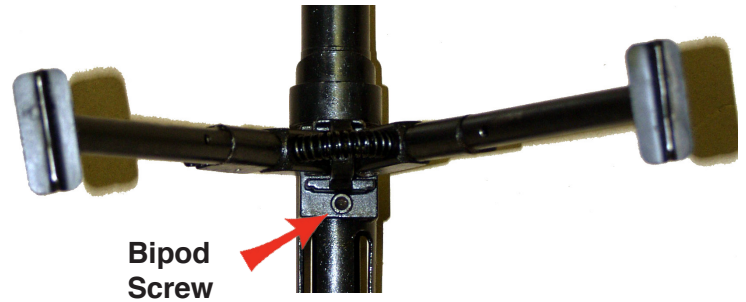
## Step 7: Remove the Trigger Pack

- This is not necessary for regular cleaning.
- Use the STG Multi-Tool to push the Rear Takedown Pin through the right side of the Lower Housing.
- The Trigger Pack removes through the top of Lower Housing Assembly.



## Step 8: Remove the Bipod

- Loosen the Bipod Screw using the hex wrench supplied with the STG until the bipod can come off of the Picatinny rail.

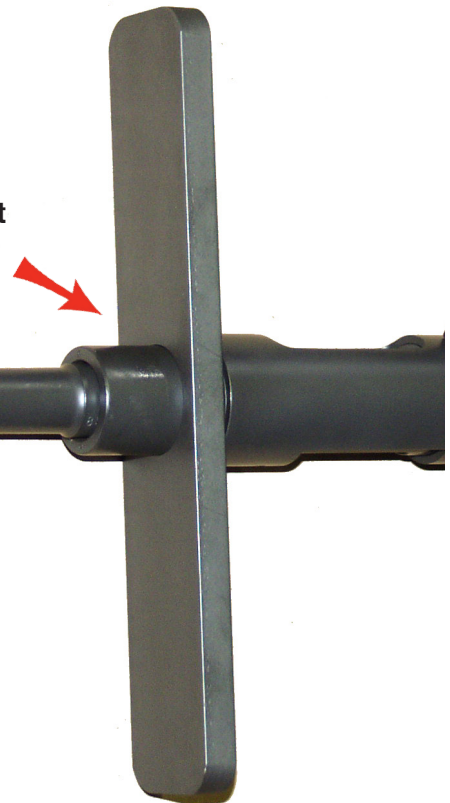


## Step 9: Barrel Removal

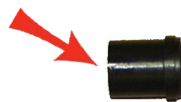
- Unscrew the Barrel Lock Nut with the Barrel Nut / Lock Nut Wrench and pull the Barrel from the Receiver.
- You may add a drop of Lock-Tite (blue/non-permanent) to the threads of the trunion to prevent the Lock Nut from vibrating loose during use.



Lock Nut



Lock Nut

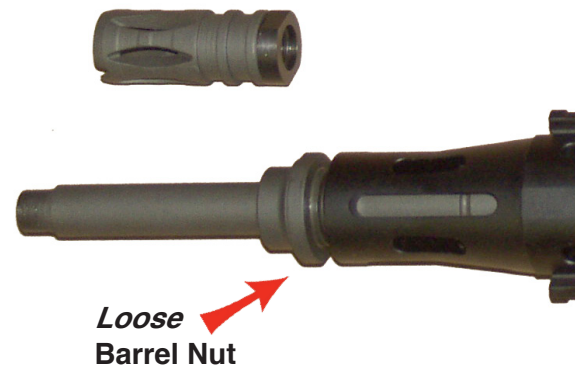


# Assembly Procedure

## Step 1

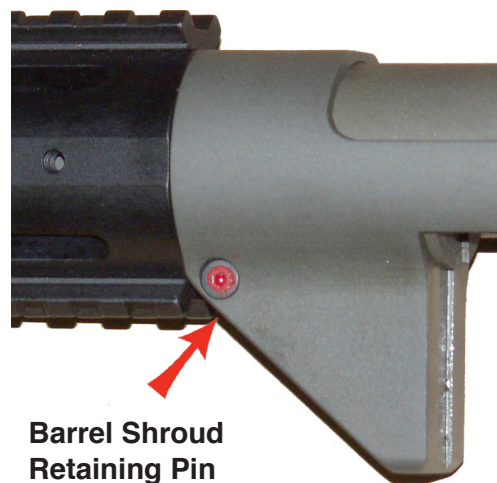
- Reverse operations 9 (Barrel), 7 (Trigger Pack), 6 (Magazine Housing), 5 (Bolt and Charging Handle and 2 (Barrel Shroud)

At this point, you have the STG as pictured. Make sure that the Barrel Nut is loose. You must install and tighten the Rear Takedown Pin, before you can tighten the Front Barrel Nut.



## Step 2: Barrel Shroud Retaining Pin Assembly

- Install the Barrel Shroud Retaining Pin using the 5/64 hex key



**Barrel Shroud Retaining Pin**  
(locked side in red, key side is clear)

### Step 3: Attach the Lower Housing

- Attach the Lower Housing to the Magazine Housing in the upper assembly by means of the Front Takedown Pin



### Step 4: Install Mainspring, Buffer, and Buttstock Assembly

- To install the Mainspring, Buffer, and Buttstock Assembly:

**Be careful to follow these instructions, otherwise, you may bend the mainspring**

- Pull the bolt back to the sear catch.
- With the Mainspring, Buffer, and Buttstock Assembled; install the Mainspring into the rear of the Bolt making sure that it guides into the opening in the rear of the Bolt.
- While pulling back on the Mainspring against the Buffer Rod, push the Buffer and Buttstock Assembly forward making sure that the Mainspring continues to guide on the Buffer Rod and rear of the Bolt, and the Buffer Block guides into the rear of the receiver.
- Once the Buffer Body is at the rear of the Receiver, pull the Trigger and guide the Bolt forward.
- Grasp the Lower Trigger Housing Assembly and squeeze it to the Receiver.



- Push the Buffer and Buttstock Assembly forward until the holes in the Buffer and Receiver line-up.
- Push the Takedown screw through the Receiver and stop before the screw reaches the Lower Housing (pictured left).
- With the muzzle down you can tighten or loosen the Front Barrel Nut to align the Receiver/Buffer holes with the threaded counterbore in the Lower Housing. These holes are in alignment when the Lower Housing is parallel and snug with the rear plate of the Buffer Assembly. Only use your fingers to get the Takedown Screw started in the Lower Housing threads.
- Use the STG Multi-Tool to tighten the Takedown Screw. (There is no need for excessive torque)



## Step 5: Tighten the Front End

- Lastly, use the STG Barrel Nut/Lock Nut Wrench to tighten the Front Barrel Nut. \*Attach and tighten the flash-hider or suppressor if present.

Once fully reassembled, check the function of the bolt and trigger to ensure proper sear engagement. Make sure to hold the charging handle when pulling the trigger to prevent bolt damage from dry-firing.

