

Inspection

After switching setups, check the function of the bolt and trigger to ensure proper sear engagement in both semi auto and full auto. Make sure to hold the charging handle when pulling the trigger to prevent bolt damage from dry-firing. You may also use some dummy rounds to check feeding and chambering

Pressure Factors (PFs) *Factors that increase blow-back pressure*

Ammo

Different makes and types of ammo yield different pressures. The higher the pressure, the higher RF Setup should be used.

Barrels

The longer the barrel, the longer the pressure remains within the system and a higher RF Setup should be used.

Suppressor

The addition of a suppressor can significantly increase blow-back pressure depending on the suppressor's volume and baffle design. A higher RF Setup may be used with addition of a suppressor. Added resistance keeps the Bolt closed longer, thereby reducing port noise.

The overall quieting effect of the Suppressor will be improved by using the highest RF setting possible that still allows proper cycling. It is important to note that a 9mm setup in RF-2 that cycles properly with a suppressor, may not cycle with the suppressor removed.

With Blow-Back (BB) SMGs only high volume suppressors with ample pressure expansion area should be used. Volume and baffle design are significant factors in the amount of pressure reflected back into the BB SMG system. Smaller diameter and length suppressors typically used for pistols can increase the blow-back pressure to unsafe levels for BB SMGs.

Suppressor



For guidance on these configurations, contact BRP CORP at
info@brpguns.com or 678-425-9585.

Resistance Factors

Resistance Factors (RFs) are those that resist the movement of the cycling parts driven by blow-back pressure. This chart shows the different resistance setups available for the Adjustable Bolt System. Resistance Factor 0 (RF-0) is the weakest. It provides the least amount of resistance to the blow-back movement of the gun. This setup may only be used for 9mm. Higher RFs must be used when firing the higher pressure 7.62X25 loads, +P 9mm ammo, and 45 ACP. Higher RFs should also be used when a suppressor is attached to the muzzle. The mainspring should be held constant by using the BRP Mainspring for all setups unless significantly more **resistance** is necessary. Cycle properties can be further adjusted by substituting the longer A2 stock setup and adding the corresponding Bolt Extension Weight and Heavy Bolt Extension.

Weight Reference Chart

9mm Bolt: 1.32 lbs

45 ACP Bolt: 1.51 lbs

Aluminum Bolt Extension for CAR Setup: 0.17 lbs

Steel Hydraulic Buffer: .29 lbs (4.65 oz)

This system uses standard AR carbine length buffers. There are a variety of buffer configurations and weights that can be used with this system to make further adjustments.

COMPARISON

9mm

STEN: 1.41 lbs (500 RPM)

KP31: 1.25 lbs (850 RPM)

45 ACP

M3A1 Grease Gun: 2.01 lbs
(475 RPM)

Thompson 1928: 1.63lbs
(850 RPM)

Mainsprings

Replacing the Standard CAR Mainspring (Heavy) for the BRP Mainspring (Light) provides approximately 20% less resistance during the stroke. Typically the only reason to use the Standard CAR Mainspring is to further slow the gun in 45 ACP or 7.62x25. The Standard CAR Mainspring should not be used for 9mm.

BRP Mainspring (Light): more coils per inch + thinner wire = Less Resistance (Length: 12.5")

This is the mainspring installed in the system when shipped from BRP and can be used for all calibers.



Standard CAR Mainspring (Heavy): (Length: 10.7")

This mainspring should **only** be used with the more powerful and 45 ACP and 7.62x25 cartridges to increase **resistance**.



Choosing the Right Setting

The Stemple 76/45 has a shorter bolt stroke than a STEN or M3A1 so a similar resistance/bolt weight will cycle faster in this system given that the bolt is traveling less distance at the same speed. It is very important that the bolt moves with enough force to properly cycle the system. A bolt moving too slow will fail to feed as it will not move beyond the rear of the magazine to pickup the next cartridge. A bolt moving too slow will fail to eject a spent case as it will not contact the ejector with enough force to throw the spent case from the system. A bolt moving too slow will **RUNAWAY** as it may not travel far enough rearward to pickup the sear. Any of these failures can be very dangerous and users must be constantly aware of the RF/PF matrix when using this adjustable system.

9mm

There are tremendous pressure variations in commonly available 9mm ammo. For all common 9mm, the RF-0 and RF-1 setups will properly function. 9mm Stemple 76/45s (U9-SF) shipped from BRP CORP are tested with relatively weak Tula ammo in the RF-2 configuration (shown on the following page). If a different rate is desired, follow the testing procedure below:

Initial Test

1. **Set the selector to 'semi':** The 'semi' setting has the maximum amount of sear drag on the bottom of the bolt. If the system functions properly in 'semi,' it will certainly function properly in 'full' given the bolt 'drag' on the sear.
2. **Insert a drum loaded with 1 round of the specific ammo and barrel/suppressor setup you intend to use.**
3. **Fire the single round.** The bolt should be locked rearward by the sear and the spent case should be ejected a few feet to the right of the gun. If either of these conditions aren't met, there is too much resistance for the system to function properly. If these conditions are met, verify by the following procedure

Verify

1. **Set the selector to 'semi'**
2. **Insert a drum loaded with 5 rounds**
3. **Fire all 5 rounds in semi auto.** After each shot you should observe that the bolt locks rearward on the sear and the spent case ejects a few feet to the right of the gun. If the system fails to cycle properly in semi auto, a lower RF setting is necessary.

45 ACP

45 ACP Stemple 76/45s (U45) shipped from BRP CORP are tested with relatively weak Tula ammo in the RF-4 configuration (shown on page 14).

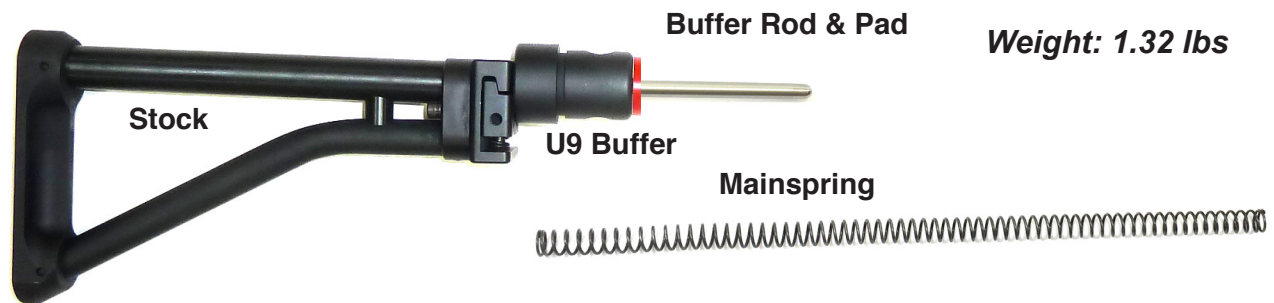
7.62x25

7.62x25 Stemple 76/45s (U7.62) shipped from BRP CORP are tested with S&B ammo in the RF-2 configuration (shown on next page). The RF-0 and RF-1 configuration should not be used with common or surplus 7.62x25 loads. For surplus 7.62x25 ammo, beware that old ammo may not fire reliably, yield excessive pressures, and possibly result in dangerous out-of-battery detonations.

**For guidance on these configurations, contact BRP CORP at
info@brpguns.com or 678-425-9585.**

Resistance Factor Setup Chart

U9 Pattern Buffer and Spring Setup



RF-0: 9mm

Moving Mass Parts:
9mm Bolt

Weight: 1.32 lbs

CAR Stock Assembly



RF-1: 9mm

Weight: 1.49 lbs

Moving Mass Parts:

9mm Bolt

Extension (Aluminum)

**The Mainspring is resting on the rear of the Extension and the Buffer is stationary at the rear of the Buffer Tube.*



CAR Stock Assembly



RF-2: 9mm

Weight: 1.78 lbs

Moving Mass Parts:

9mm Bolt

Extension

Buffer



CAR Stock Assembly

RF-3: 45 ACP

Weight: 1.68 lbs



CAR Length Bolt
Extension **Aluminum**

Moving Mass Parts:

45 ACP Bolt

Extension (*Aluminum*)

**The Mainspring is resting on the rear of the Extension and the Buffer is stationary at the rear of the Buffer Tube.*

CAR Hydraulic Buffer

BRP Mainspring

Bolt



CAR Stock Assembly

RF-4: 45 ACP

Weight: 1.97 lbs



CAR Length Bolt Extension
Aluminum

Moving Mass Parts:

45 ACP Bolt

Extension

Buffer



BRP Mainspring

CAR Hydraulic Buffer

Bolt

Switching Setups

When going between relatively weak 9mm to more powerful 45ACP ammo, the 45ACP bolt is significantly heavier than the 9mm bolt to compensate for the added power. Switching calibers can be quickly accomplished by changing the bolt, barrel, and mag housing.

'Flipping' the buffer as in RF-1 and RF-3 is somewhat time-consuming and typically not necessary for normal use. To reverse the buffer from moving to stationary mass, follow the procedure below:

- 1) With the Buffer Mount still on the Receiver, use an AR stock spanner wrench to unscrew the castle nut.
- 2) Unscrew the Buffer Tube from the Buffer Mount
- 3) Remove the Mainspring and Buffer assembly while leaving the Bolt Extension in place.
- 4) Insert the Buffer in the Buffer Tube first with the direction reversed.
- 5) Insert the mainspring and screw the Buffer tuber back into the Buffer Mount so the Mainspring is resting on the rear of the Bolt Extension.

Using the Law Tactical Side Folding System

An Adapter is threaded into the back of the Bolt Extension to work with the Law Tactical side folding system catch. When this folding stock system is used, the Hydraulic Buffer cannot be reversed to use the RF-1 and RF-3 setups. Ultra lightweight AR buffers can be used to simulate the RF1 and RF3 setups if necessary.

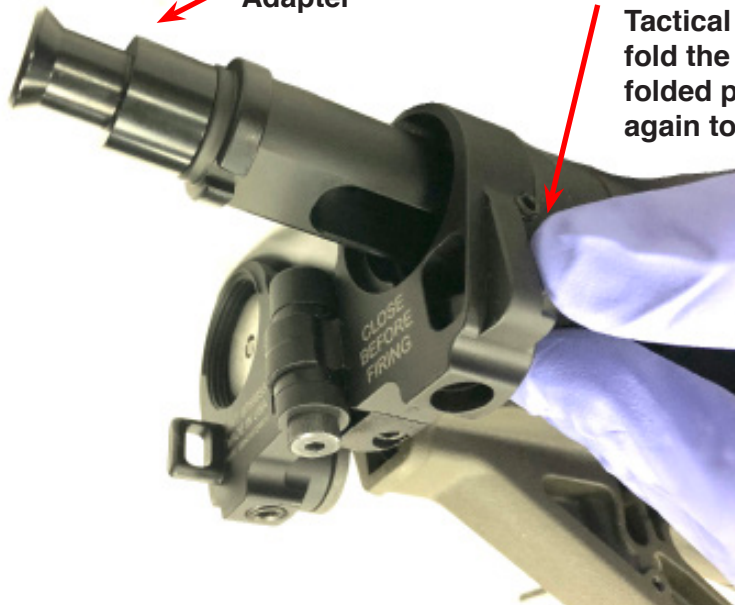


The gun can only be fired when the stock assembly is in the locked/unfolded position.



Extension Adapter

Push the button on the right side of the Law Tactical side folding adapter to unlock and fold the stock. With the stock in the open/folded position, you can push the button again to remove the Extension.



Buffer Detent Groove

Before installing the Rear Takedown Pin, make sure that the Buffer Detent Groove is facing *down* and the Extension inserts completely into the rear of the Bolt.



Buffer Detent