

# REMINGTON 870 SHOTGUN GUIDE

**REM870.COM**  
BLOG ABOUT REMINGTON 870



DISASSEMBLY, REASSEMBLY, CLEANING, SHOOTING, UPGRADES, REPAIR

*"This is exactly what I needed  
when I first got my 870!"  
-Rick Lynch*

VITALY PEDCHENKO, REM870.COM

Dedicated to my father.

**Before cleaning, disassembling, making any modifications to a shotgun, or installing any accessories or upgrades, make sure that your shotgun is UNLOADED.**

**Check the chamber and magazine tube, making both visual and touch verifications.**

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## Preface by Chris Costa

Shotguns are not for everybody. Just because you can buy one, it doesn't mean that it's right for you. Just because they sell a 44 Magnum in a gun shop, it doesn't mean that you are the guy who can actually shoot and handle it.

Bring enough gun to the fight, but bring to the fight what you can actually control and handle. And shot placement is extremely important. Don't ever think that there is a magic bullet out there. Your ability to drive the gun, control the recoil and get round on the target, and actually move the gun from location to location will be more important and vital than any type of magic bullet or ammunition that somebody is trying to guarantee you. At the end of the day, shit gets in the way; there's clothing, there are chairs, walls, and there are mediums in between you and your threat that the bullet is going to encounter that you have to take into account. This means that something might deflect, or the penetration might not do what you thought it was going to do.

You need to be able to control what it is that you're shooting. The shotgun may be a little too complex for you, especially if you don't train on it consistently. And by train consistently, I mean that every few weeks you should run through a training session with that particular gun. If you are putting it in a closet and 6 months later you are going to grab the thing and shoot it – that's not devotion. You are not going to do well when something bad happens if you're not familiar and well-practiced with your gun.

Keep it real and keep it practical. And don't be sad if the shotgun is not for you. I certainly would recommend handguns to the average male or the average female for home defense. I would rather someone shoot a 9mm handgun and control it and have 18 rounds that they can surgically place on a target. I would rather they can move from one location to another and clear their house extremely fast and wield their weapon that much easier. I would rather they can shoot it and employ it, even if they get injured, extremely quickly.

Employing a shotgun one handed in a home defense role is very, very difficult. Picture your wife trying to hold your shotgun one handed, when she could have employed her handgun one handed a lot easier.

At the end of the day – it's not for everybody.



## Introduction

The purpose of this guide is the same as the purpose of my Rem870.com blog – to gather useful information about the Remington 870 shotgun in one place. My blog grows extremely fast and contains more and more useful information. Each month I add new and interesting posts, and often readers can't find the old ones. It became obvious that there was a need to gather information from previous posts in a more convenient format. The best solution for this was an electronic book, which every reader can open on their PC or print out and always have at their fingertips. You will find everything you need to know about the Remington 870 shotgun in this eBook.

All the information in this book is structured to make searching and use of said information as convenient as possible. This is the first edition of the guide, which contains information from Rem870.com blog, and unique content that cannot be found anywhere else.

The Remington 870 shotgun is a whole new world, which I have just begun to explore. I want to share everything I know. Each day I receive lots of questions; the answers to all these questions are in this book.

The Remington 870 Shotgun Guide has the advice and information you need to know, from the purchase to zeroing, shooting, cleaning, upgrading and repair.

Thank you for buying this eBook, if you have any questions or suggestions, please send them to the author: [info@rem870.com](mailto:info@rem870.com)

### *About the Author*



Vitaly Pedchenko, the author of this eBook is firearms instructor, practical shooter and Range Officer, and participates in many shotgun competitions. He is interested not only in sport application, but also in tactical and home defense use.

His passion is the Remington 870 and its upgrades, which he tests and describes on his blog: <http://www.rem870.com>.

Vitaly's blog became very popular and so he decided to write an eBook compilation to have all of his information in one place.

## General Information

The Remington 870 is a legendary, USA-made, pump-action shotgun that was first introduced in 1951. It is currently the most popular of its class, with over 10 million copies produced, and is known as the most reliable shotgun in the world. There are hundreds of accessories and upgrades available for the Remington 870. This shotgun is very versatile and it is possible to set it up for any purpose, from hunting to military use.

The main purposes of the Remington 870 are hunting, home defense, and police and military use. This shotgun can be used with several types of ammunition: birdshot, buckshot, slugs and special rounds such as bean bag or rubber.

The Remington 870 is available in many different variations (police, tactical, marine), but buying the basic Express model will allow you to set it up for any purpose.

This shotgun is effective on the range up to 110 yards (100 m) when used with slugs, birdshot is effective at about 45 yards (40 m) and buckshot can be effective up to 75 yards (70 m).

### Remington 870 Shotgun Specifications

<b>Weight</b>	From 7.0 lbs. (3.2 kg) to 8.0 lbs. (3.6 kg)
<b>Length</b>	From 37.25 inches (946 mm) to 50.5 inches (1,280 mm)
<b>Barrel Length</b>	From 18 <sup>1</sup> inches (460 mm) to 30 inches (760 mm)
<b>Magazine</b>	From 3 to 8 rounds

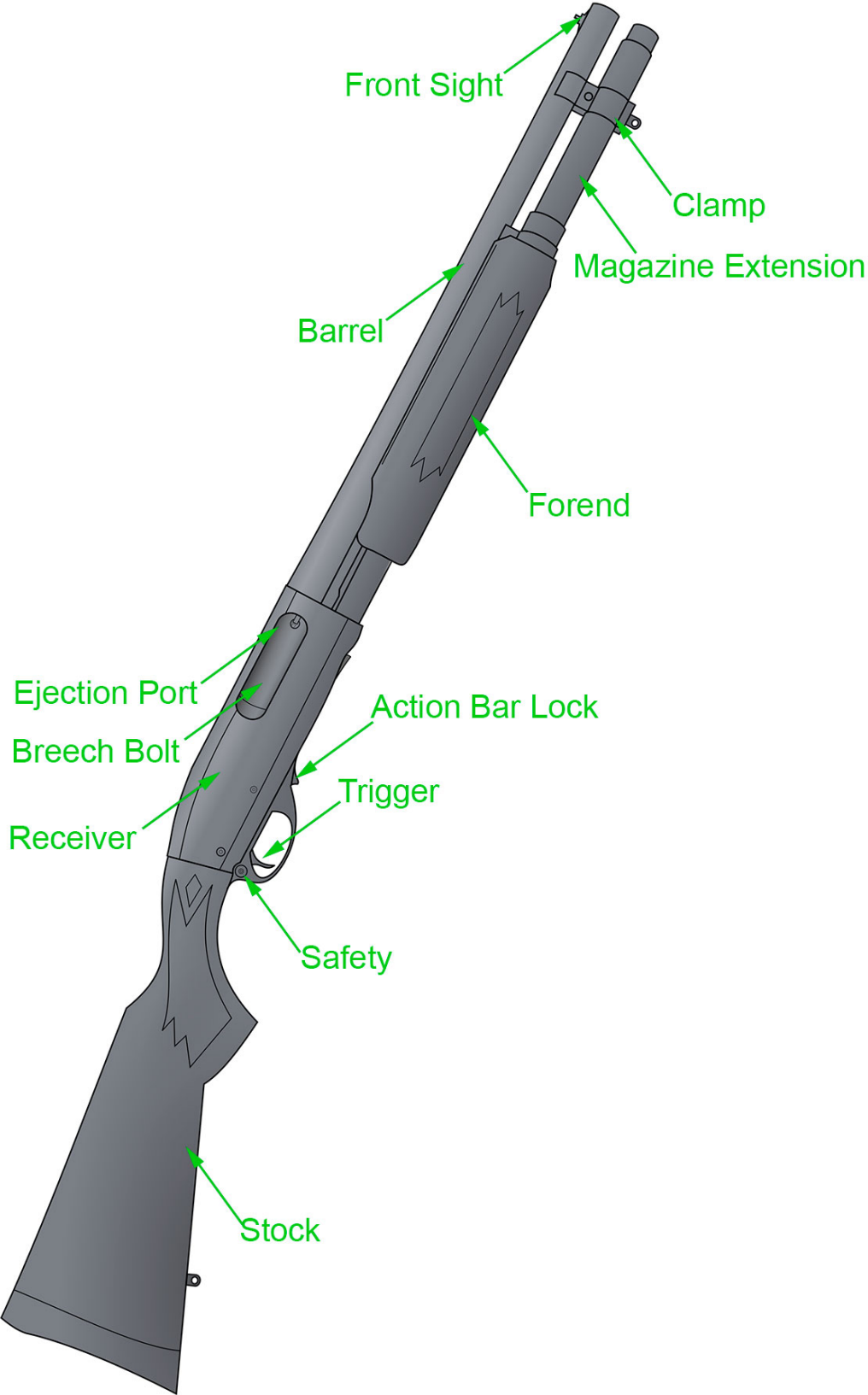
The Remington 870 is a pump-action shotgun, which means you need to pull the forend rearward and then slide it forward to reload.

The shells are loaded into a magazine tube.

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<sup>1</sup> There are shorter, military barrels available.

Remington 870 Parts



## *Gun Safety*

Safety is very important when handling your Remington 870. It is critical to know and understand gun safety rules. I recommend using the gun safety rules by Colonel Jeff

# 4 Universal Laws of Gun Safety

by Rem870.com



Cooper.

### **Gun Safety Rules by Colonel Jeff Cooper:**

1. All guns are always loaded.
2. Never let the muzzle of a gun cover anything you are not willing to destroy.
3. Keep your finger off the trigger until your sights are on the target.
4. Be sure of your target and what is beyond it.

**Remember that all firearms are potentially dangerous.**

- Always wear eye and ear protection when shooting.

- Never give your shotgun to a person without first instructing them about safety rules.
- Never leave your loaded shotgun unattended.
- Keep your shotgun away from children.
- Never assume that a shotgun is unloaded.

## Important Advice

Remember: if you experience a flat report or low recoil, stop shooting immediately and check your barrel for an obstruction. If the gun fails to fire when the trigger is pulled, wait 30 seconds before unloading keeping the gun pointed in a safe direction; this is important because you may experience a “hang” fire, and the cartridge may go off after the pause.

If you think that a slug, birdshot, buckshot or anything else is obstructing the barrel, immediately unload the firearm, disassemble it and check barrel. It is not sufficient to only look in the chamber.

**WARNING!** If there is snow or dirt inside the barrel of your shotgun, do not shoot; safely clean your barrel first.

**WARNING! Never** look into the barrel of a shotgun if it is not disassembled. Hang fire is a very real danger. It is safe to look into the barrel **only** after the following steps: wait 30 seconds if the gun fails to fire when the trigger is pulled, unload the magazine tube and chamber, and then disassemble the gun.



Here is good illustration of what can happen to the Remington 870 when shooting with an obstruction inside of the barrel.

This barrel was blown out because the shooter hadn't checked the barrel after the strangely quiet sound of a shot.

**Always** check your shotgun when you experience a strange sounding shot.

Always be extra careful when using reloaded ammunition. Reloaded ammunition can be more dangerous than factory ammunition.

Be very careful when reloading ammunition, and always check everything twice.

## Disassembly and Reassembly

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The Remington 870 is easy to disassemble and reassemble; you will only need these instructions the first few times. With enough practice, you will be able to disassemble and reassemble your shotgun with your eyes closed.

You may need to disassemble your shotgun in the following cases:

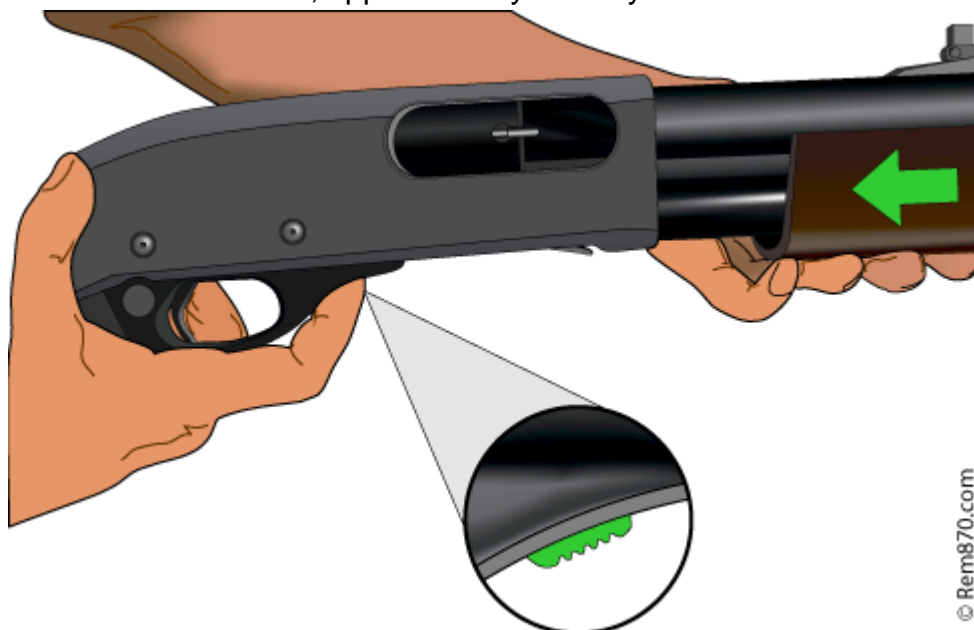
- For the first cleaning of your Remington 870, due to the preservation grease, right after purchase.
- For regular cleaning and maintenance of your shotgun.
- When checking your shotgun's barrel to see if there are any obstructions inside.
- For transportation of a shotgun, disassembled in a case or small bag.
- For storage of a shotgun, disassembled in a case or small safe.

### *Disassembly*

Never forget about the safety rules when disassembling a shotgun. There are known cases when carelessness during the disassembly of a gun was the cause of accidents.

**WARNING!** Check the ejection port, chamber, and magazine tube to make sure that there are no shells in the shotgun prior to disassembly.

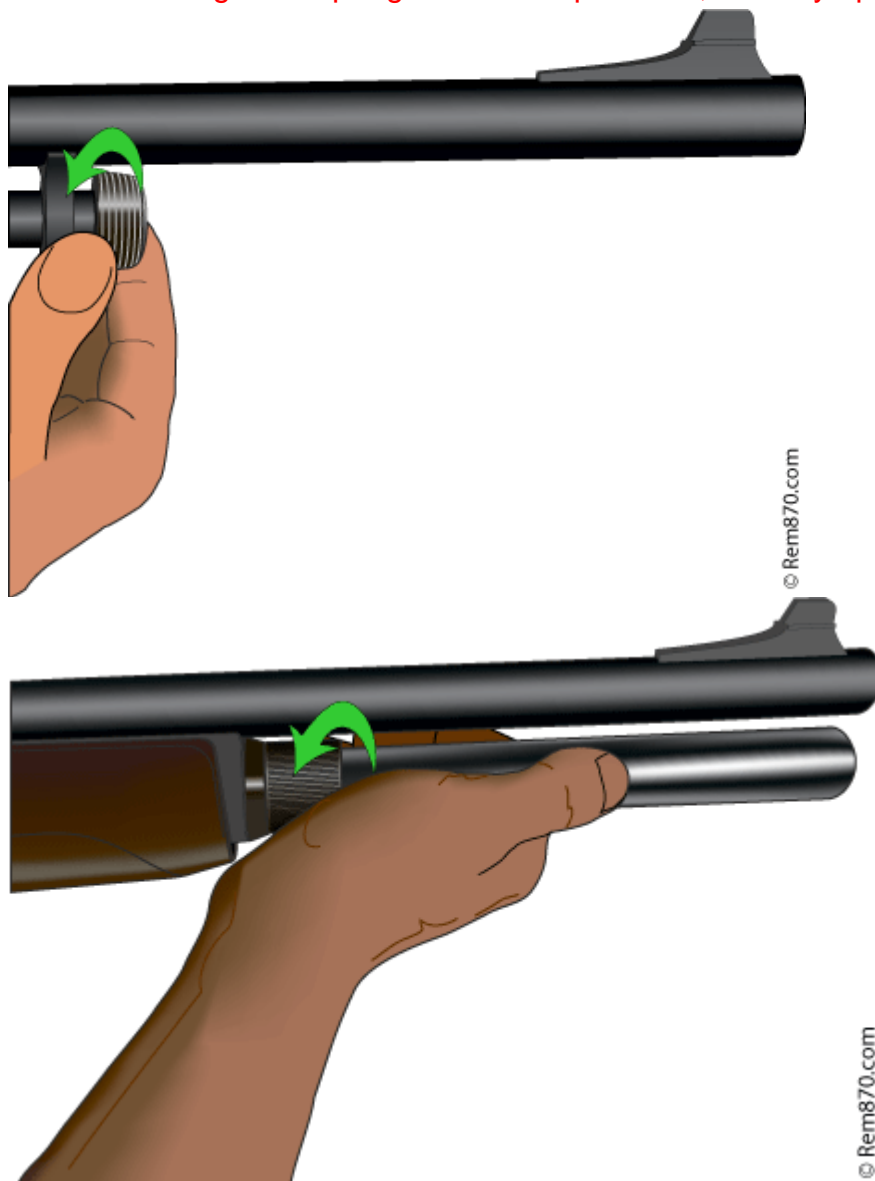
1. Engage the safety.
2. Push the action bar lock upward and pull the forend back to open the action. Slide the forend back, approximately halfway.



© Rem870.com

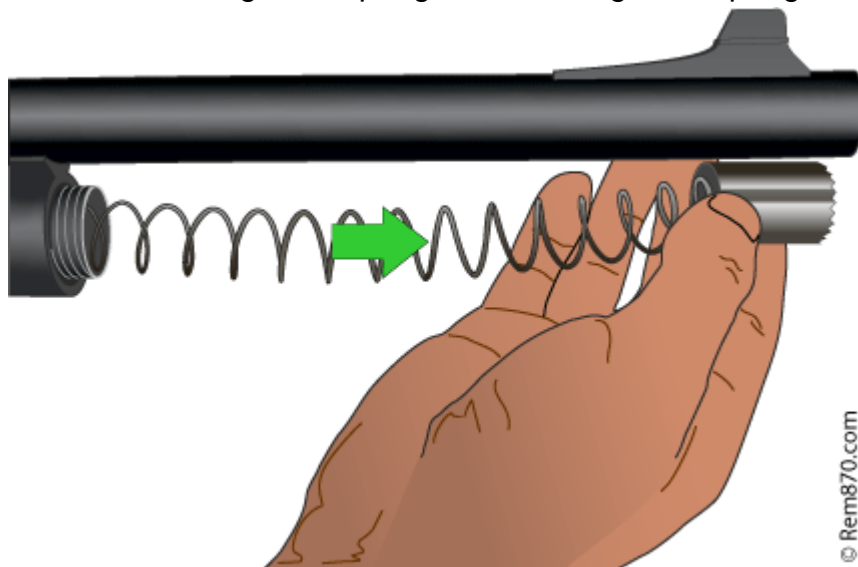
3. Unscrew and remove the magazine cap (magazine extension).  
If you have a magazine cap, the spring is held in place by a magazine spring retainer; if you have a magazine extension, the spring is held by the extension itself, and will fly away when the extension is removed. Be careful to hold the magazine extension firmly and decompress the magazine spring slowly.

**Attention!** Magazine springs are under pressure; wear eye protection.

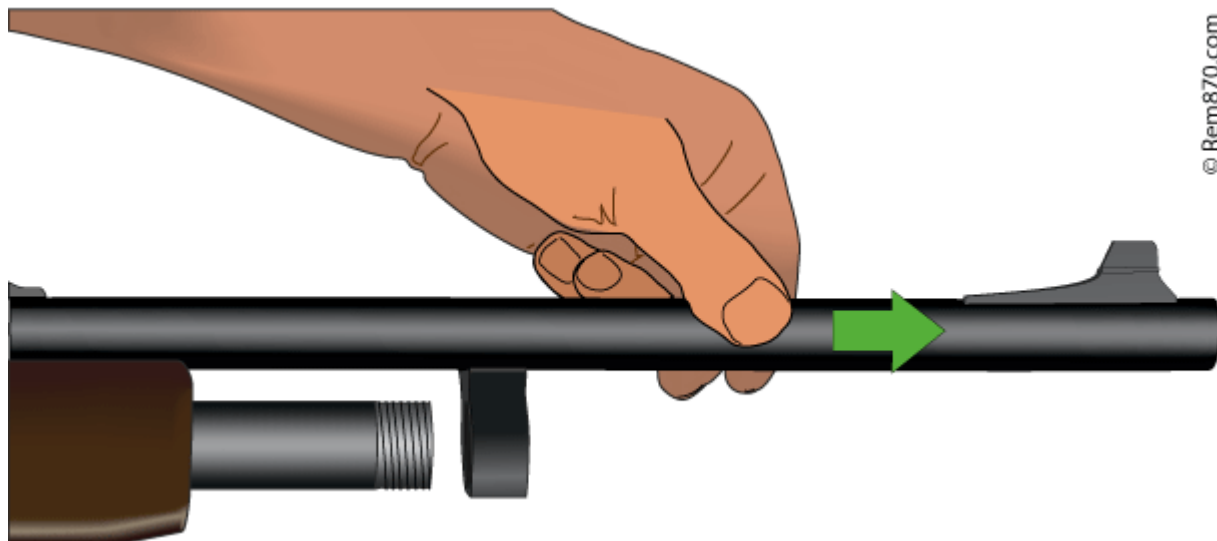




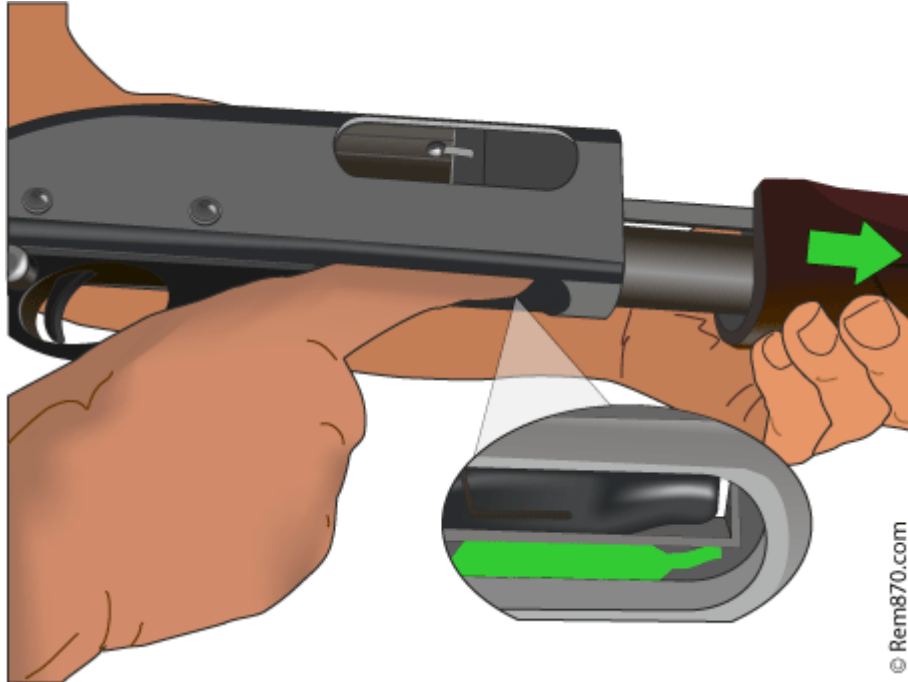
4. Take out the magazine spring retainer, magazine spring and follower.



5. Pull the barrel from the receiver.



6. Compress and hold the left shell latch.



7. Slide the forend forward and off the magazine tube. Hold the bolt and the bolt carrier, because they will fall off from the action bars.
8. Take out the bolt and bolt carrier from the rear of the action bars.
9. *This step is for the Remington 870 that doesn't have a magazine extension, with the spring kept in place by the magazine spring retainer.*

**Attention! The magazine spring is under pressure; wear eye protection.**

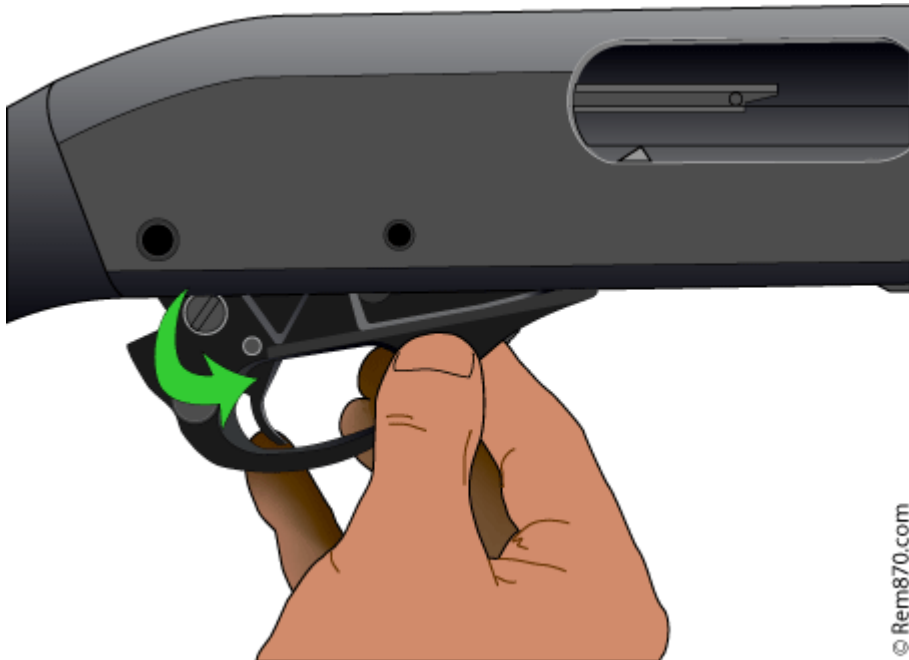
Insert a flat head screwdriver into the slot in the magazine spring retainer. Push the magazine spring retainer into the magazine tube and rotate it. This will allow you to take it out.

10. Push out and remove the two pins from the receiver.



© Rem870.com

11. Take out the trigger group. If you have a pistol grip stock, you may experience a problem removing the trigger group from the receiver. There is no need to remove the stock; push the carrier forward to the magazine tube and then pull out the trigger group.



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## ***Reassembly***

Reassembly is simple; it is the reverse process.

1. Insert the trigger group assembly into the receiver.
2. Align the trigger group with the holes in the receiver. Insert the pins and push them in.
3. Put the bolt assembly in; set it on top of the notches on the action bar assembly.
4. Slide the action bar assembly onto the magazine tube. Line it up with receiver.
5. Push the left cartridge stop, and slide the action bar assembly into the receiver.
6. Push the action bar lock upward, and pull the forend back to open the action.
7. Slide the forend forward approximately halfway.
8. Put the barrel on.
9. Put the follower and spring into the magazine tube.
10. *This step is for the Remington 870 that doesn't have the magazine extension, with the spring kept in place by the magazine spring retainer.*  
Install the magazine spring retainer. Insert a flat head screwdriver into the slot in the magazine spring retainer. Push the magazine spring retainer into the magazine tube and rotate it.

## *Accessories*

### **Remington 870 Forend Wrenches (S&J Hardware, UTG, Brownells)**

It is possible to remove the Remington 870's forend using pliers, but if you want a better tool you can select one of the specialty wrenches available on the market today:

1. S&J Hardware Forend Removal Tool
2. UTG Deluxe Universal Shotgun Forend Wrench
3. Brownells Remington/Mossberg Forend Wrench

It is recommended to have a special forend wrench to prevent damage to the forend or the forend nut.

Let's start with the cheapest and simplest tool – **S&J Hardware Forend Removal Tool**.



This tool is inexpensive and straight forward. The forend removal tool is small and compact, and can be easily carried with you. One side of this tool is used to remove the forend on Remington shotguns, while the second side is for Mossberg shotguns.

The tool has a hole, which allows you to insert a bar that you can turn in case your forend nut is stiff.

This is an entry level tool.

The next tool is the **UTG Deluxe Universal Shotgun Forend Wrench**.



This tool is good, and can be used to remove/install a forend on both the Remington and Mossberg shotguns. It has handles, which are handy. It is not possible to fix the handles in an open position, but that's not a big problem.

This is an intermediate level tool.

And last, but not least – **Brownells Remington/Mossberg Forend Wrench**.



This gunsmith level tool is solid, comfortable, and well thought out. It is the most convenient tool currently available on the market. It is long, which enables you to have a good grip. It has fixed handles, allowing you to remove even the stiffest nut.

The material is solid and has a black coating.

One of the nice features about this wrench is that you get two sets of the wrench teeth; if one should ever break you can use the second set.

The only disadvantage of this tool is its high price.

**External Links:**

Brownells Remington/Mossberg Forend Wrench: <http://tinyurl.com/nskgote>

UTG Deluxe Forend Wrench: <http://amzn.to/TO7dNu>

## **Brownells 870/1100 PIN PUSHER**

I didn't have a special tool to remove receiver pins for a long time. In the beginning it seemed like there was nothing wrong with pushing out pins with a screwdriver or allen key. After several years, however, I now see scratches on my receiver and am not happy about it.



There is a simple and inexpensive tool from Brownells to fix this situation– the 870/1100 Pin Pusher. The price is low, the tool is handy, and it will save your receiver's coating from scratches.

This tool is very useful if you want the coating to look new for as long as possible.

Brownells Remington 870 Pin Pusher is a high-quality product made in the USA, and I highly recommend it.

### **External Links:**

Brownells 870/100 Pin Pusher: <http://tinyurl.com/oak2blc>



# Zeroing

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Zeroing is one of the first procedures you need to complete to use your Remington 870 efficiently. The best ammunition for zeroing is slugs. Zeroing should be performed with your shotgun on a gun rest; this will enable you to hold the shotgun still and will make the zeroing more reliable.

Take several shots (3 is enough) at a target that is located at a distance of approximately 30-50 meters away. Check your results and make adjustments if needed.

**Advice:** If you have a bead sight, you can't adjust it; you just need to remember what correction you should do when aiming. For example, if you have a group on the left, you need to aim to the right from the target.

If you have rifle sights or aftermarket adjustable sights, you can adjust them both horizontally and vertically.

Zeroing of electronic sights is similar to the adjustment of iron sights. Usually you will find instructions for zeroing included with your electronic sight.

**All sights should be zeroed before use; this is one of the first procedures you need to complete after buying a shotgun.**

**Windage is the horizontal adjustment of your sight.**



If you see the above group on your target, adjust the windage to the right.

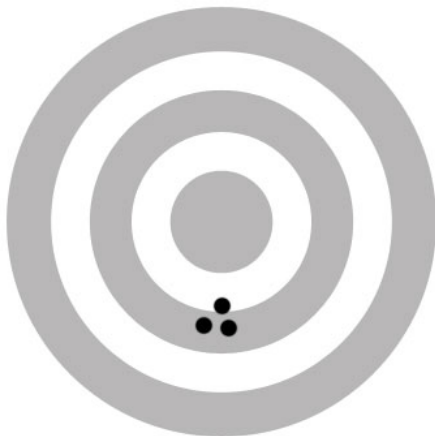
If you have an adjustable rear sight, move it to the right.



If you see the above group on your target, adjust the windage to the left.

If you have an adjustable rear sight, move it to the left.

**Elevation is the vertical adjustment of your sight.**



If you see the above group on your target, raise the elevation.

If you have an adjustable rear sight, raise it up.



If you see the above group on your target, lower the elevation.

If you have an adjustable rear sight, lower it down.

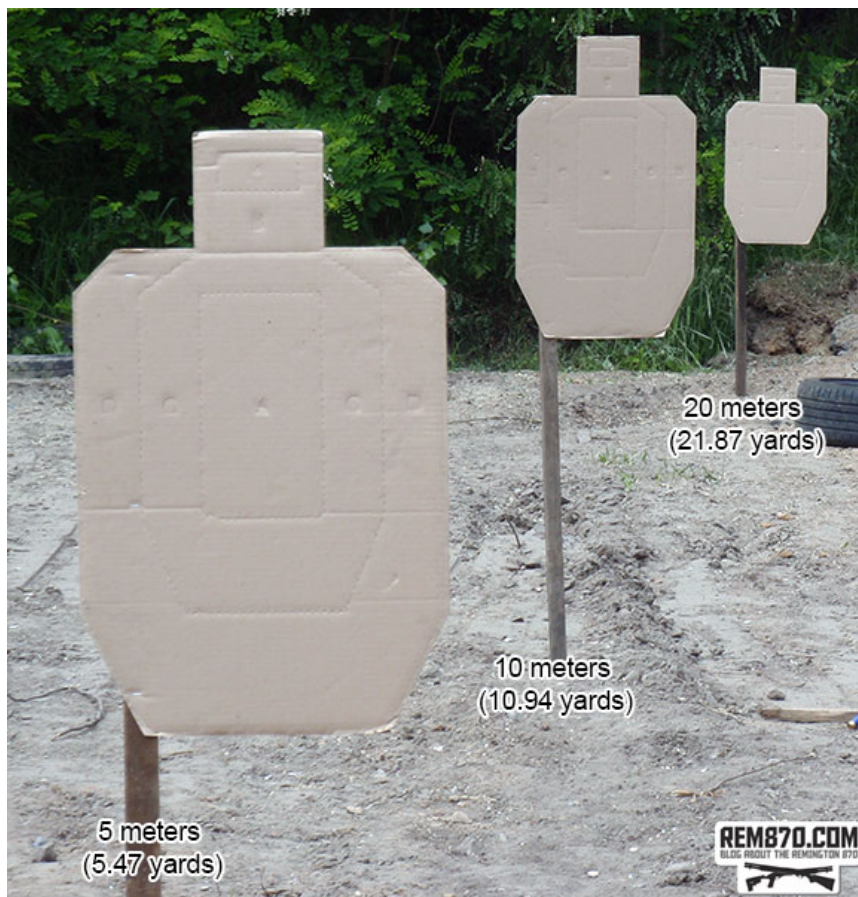
## Patterning

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It is very useful to check what spread your shotgun has on different distances. This way you will have a clear picture of how big your pattern of birdshot or buckshot is.

Usually the longer the distance, the wider the pattern. Also, it can be different with specific ammunition or when using chokes.

Try shooting at different distances to better understand your shotgun; this way you will know the strong sides and limitations of your Remington 870.



It is very important to check the pattern of your shotgun, especially if you have a fixed choke. This is important for both home defense and for competition shooting.

If you don't know the pattern of your shotgun you might end up hitting the penalty target during a competition or even worse, hit the wrong person during a home defense situation. During testing it is also important to figure out how you need to aim at different distances; the longer the distance the less you need to aim using buckshot.

Following are sample buckshot tests, done using Rio Royal Buck and a Remington 870 with a 20 inch barrel and a fixed improved cylinder choke.



As you can see, at 5 meters the pattern is pretty tight. You need to aim at this distance, even though it seems close.



At a distance of 10 meters the pattern is not as tight, and you can hit the target easily.



It is important to be extremely accurate at longer distances because it is easy to hit the wrong target with several pellets.

## ***Chokes***

Some of the Remington 870 shotguns have interchangeable choke tubes, allowing the shooter to change the spread of shot that comes out of the gun. In some cases the shotgun might have a fixed choke. The spread of the shot can be altered by changing the characteristics of the shell.

### **A choke is a constriction.**

Many shooters are puzzled with shotgun chokes. A choke is a tapered constriction of the gun barrel's bore at the muzzle end. Some shotguns have fixed chokes, while some can be equipped with one. The exit end of the choke is smaller than the actual bore of the barrel. Chokes tighten the pattern of your shot and enable you to shoot at further distances, which is useful for trapping or hunting. It is recommended to use a cylinder or improved cylinder for home defense.

The following illustration shows the difference between chokes and how they control the pattern.

## Choke Types



Cylinder Bore



Improved Cylinder Choke



Modified Choke



Full Choke



## Cylinders and Improved Cylinders

Cylinder bores don't have a restriction. An improved cylinder has a minimal restriction, and is recommended for short distances using birdshot and buckshot (20-30 yards) and self-defense. The shot pattern is much more spread out, and your chances of hitting a target are better.

It is recommended to use slugs with a cylinder or improved cylinder for better accuracy.

## Modified Choke

A modified choke has a moderate constriction. It is good for medium distances of up to 30-40 yards.

## Full Choke

A full choke has the tightest constriction, and is best used for distances beyond 40 yards.

## Chokes and Slugs

Cylinders and improved cylinders are recommended for use with slugs for better accuracy.

## Purpose of chokes

A choke is designed to alter the distribution of the shot as it leaves the firearm. For shooting most game birds and clay pigeons, a desirable pattern is one that is as large as possible while being dense enough to ensure multiple hits on the target. Shotguns intended for defensive use often have cylinders or improved cylinder chokes for the widest shot pattern possible at a typically short defensive range.



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## Interchangeable Chokes

Shooters are able to change chokes on some shotguns. Remember to check chokes often because they can become loose!



## **Vang Comp System**

This choke system is designed specially for combat and home defense shotguns.

Some of the Remington 870 shotguns have interchangeable choke tubes to allow the shooter to change the spread of shot that comes out of the gun; in some cases the shotgun might have a fixed choke. The spread of the shot can also be altered by changing the characteristics of the shell.

Chokes are a very interesting accessory; they enable you to change the characteristics of your shotgun without making any irreversible changes. Chokes can easily be installed and removed as needed.

Most chokes are used by hunters. Hunters choose different chokes for different types of game. There are also tactical chokes, usually called breaching chokes, which are used for door breaching.

Breaching chokes are very popular on tactical shotguns. Many shooters install them just for looks. The main purpose of these chokes is to hold the shotgun steady and aligned for the shot on a hinge. The side holes on the choke enable gas pressure to be relieved to prevent damage of the barrel.

There are a lot of chokes available on the market and it is important to carefully choose a choke based on its purpose. For example, if you use your shotgun for self-defense you may want to use a choke for a tighter pattern.

Don't forget that certain ammunition cannot be used with particular chokes.

In my opinion, the built-in Improved Cylinder choke on the Remington 870 Express shotgun is the most versatile and all-purpose choke available.

**Table of Shotgun Chokes for a 12 Gauge Shotgun Using Lead Shot**

<b>Constriction (micrometres)</b>	<b>Constriction (inches)</b>	<b>American Name</b>	<b>Percentage of shot in a 76 cm (30 inches) circle at 37 m (40 yd)</b>	<b>Total spread at 37 m (cm)</b>	<b>Total spread at 40 yds (inches)</b>	<b>Effective range (m)</b>	<b>Effective range (yd)</b>
0	.000	Cylinder	40	150	59	18	20
127	.005	Skeet	45	132	52	21	23
254	.010	Improved Cylinder	50	124	49	23	25
381	.015	Light Modified					
508	.020	Modified	60	117	46	32	35
635	.025	Improved Modified					
762	.030	Light Full		109	43		
889	.035	Full	70			37	40
1143	.045	Extra Full					
1270	.050	Super Full					

## Shotgun Buckshot Ammo Test

It is useful to check the pattern of your own shotgun. Check the spread of the shot at different distances.



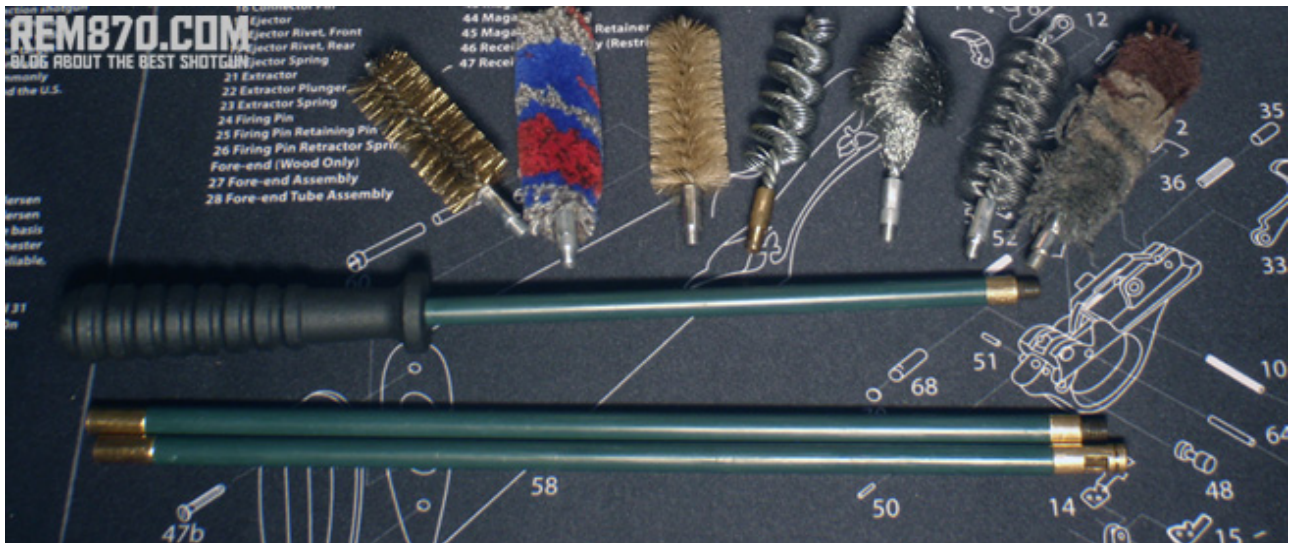
Here are the results of the buckshot ammo test done by Jonathan Paul, one of the readers of the Rem870.com Blog.

He tested different types of buckshot and was able to find the one that suits his needs.

The shotgun used was a Remington 870 with a 20" improved cylinder barrel. The following table shows the results of firing one round of each type at each range and measuring the extreme spread:

Load	7 Paces	14 Paces	25 Paces
<b>Federal Ammunition – Buckshot</b>	4 inches	6.75 inches	14.8 inches
<b>Rio Ammunition – Royal Buck Low Recoil</b>	4 inches	9.5 inches	10.6 inches
<b>Rio Ammunition – Royal Buck</b>	4.8 inches	10.8 inches	16.25 inches
<b>Remington – Buckshot</b>	3.3 inches	9.3 inches	14.2 inches
<b>Federal Premium Ammunition – Personal Defense</b>	1.5 inches	3.1 inches	5.75 inches

# Cleaning



Experienced shooters realize that a dirty weapon can and will let them down. Your shotgun needs maintenance to keep it accurate and dependable. Regardless of the bluing or plating, the metal parts on a shotgun will rust from neglect. Moisture is everywhere, and unprotected metal will rust. Your shotgun case is also important in preventing rust. You can put gun oil your weapon and put it in a cloth or nylon case and in a matter of days; the oil has wicked into the material of the gun case leaving your weapon unprotected. It is recommended you use a hard-shelled case with quality foam protection.

First, ensure the weapon is cleared, in other words it is unloaded. Then read your manual carefully on the proper way to dismantle your weapon.

Cleaning kits essentially perform all the same functions and in many cases, the kit is based on personal preference. All kits should contain the proper tools and materials for your weapon. The cleaning rod must be long enough to clean the entire inside of the barrel. Your kit should contain a bore brush, patches; bore solvent, toothbrush and gun oil for rust prevention and lubrication. Some like to have steel wool on hand to help remove rust. Use quality cloth to apply oil to exterior metal parts. You do not want to use paper towel or cloth that leaves lint or threads behind.

The bore solvent is to loosen fouling in the barrel and from the receiver. Patches are for cleaning and applying solvent and oil. The bore brush is stiff wire usually made of brass for essentially scrubbing the barrel. You would not typically use the bore brush on any metal other than the inside of the barrel. The wire bore brush can damage the bluing or other plating on the exterior metal parts of your weapon. Remove surface rust promptly using fine steel wool or even scrubbing with cheesecloth and oil.

If you had cleaned your weapon previously and have not fired it since the last cleaning you can check for rust in the barrel using your rod and a clean dry patch. Run the patch through

the barrel and check for rust colored residue on the patch. If there is evidence of rust, run a small piece of steel wool down the barrel or use the bore brush to remove it. Swab the barrel several times with a clean patch, then oil a clean patch and run it down the barrel.

To clean the barrel of fouling use a patch dipped in the bore solvent and let the excess drip back into the container before pushing it down the barrel. Let the solvent work for several minutes before using the bore brush. You may have to run the bore brush through five or six times, depending on how much residue has built up. You may not have cleaned your weapon after the last shooting so of course the weapon will require more effort to clean it. Swab after running the bore brush through the barrel several times to see how much residue remains. Inspect the barrel for shine, and if you do not see any dull spots, you can now oil the inside of the barrel.

Once the barrel and receiver is cleaned, you can oil the exterior metal components. You do not want oil dripping from any parts after oiling so always apply oil using an absorbent cloth. You want a protective sheen and not have oil pooling. Inspect the weapon periodically if you store it for long periods between shootings. Excessive oiling without firing the weapon will gum up the works so to speak. Oil will collect dust over time and this must be removed. Reapply fresh oil after touching up.

Use the solvent and a toothbrush to clean the weapons receiver. Making sure to oil the receiver, after swabbing up the solvent with clean patches and be careful that you do not leave any brush bristles behind. Build up on the receiver can cause a malfunction.

Follow the manufactures recommendations to clean and protect your wooden stock. Otherwise, you can treat it like any fine wood, using quality wood cleaners and preservatives. Do not use gun oil or gun solvent on a wooden stock. The solvent will remove any wood preservatives and protective coatings, causing the wood to dry out, shrink and crack.

## **How to Clean Your Shotgun**

Regular cleaning of your shotgun ensures proper functioning and a long life. Remember that the finish of the Remington 870 Express easily rusts when not cleaned immediately after coming in contact with water.

Always clean your shotgun after shooting it. This guarantees proper working order of all mechanisms, including reliable feeding and ejection of fired shells.

Cleaning should always be performed as soon as possible. A shotgun that is not cleaned for a long period of time will require more efforts when you finally do clean it out.

**WARNING!** Check the ejection port, chamber, and magazine tube to make sure that there are no shells in the shotgun prior to cleaning.

**Attention!** This instruction is for smooth bore shotguns.

1. Disassemble your Remington 870 shotgun.
2. Spray the barrel with gun oil and leave it for 3-5 minutes.
3. Use a bore brush of a proper gauge, and insert the cleaning rod in the barrel. Push it forward and pull rearward several times.
4. Remove the bore brush and attach the patch. Push it through the bore.

Repeat steps 2, 3 and 4 until the patch is not dirty.

5. Spray the magazine tube and the magazine extension with gun oil, and push a patch through them.
6. Spray gun oil on the trigger group and then wipe it.
7. Spray gun oil inside the receiver and then wipe it.
8. Wipe the external finish with a piece of oiled cloth.
9. Reassemble your shotgun, **making sure that there is nothing inside of the barrel.**

**Advice:** Usually, you will see condensation on a shotgun that has just been out in the cold. Be sure to clean all moisture from a shotgun to prevent it from rusting.

## **Bore Brushes**

### **1. Classic Brass Bore Brush**

This is good for cleaning your shotgun's barrel. It removes the lead fouling that can accumulate in your barrel.

### **2. Nylon Bore Brush**

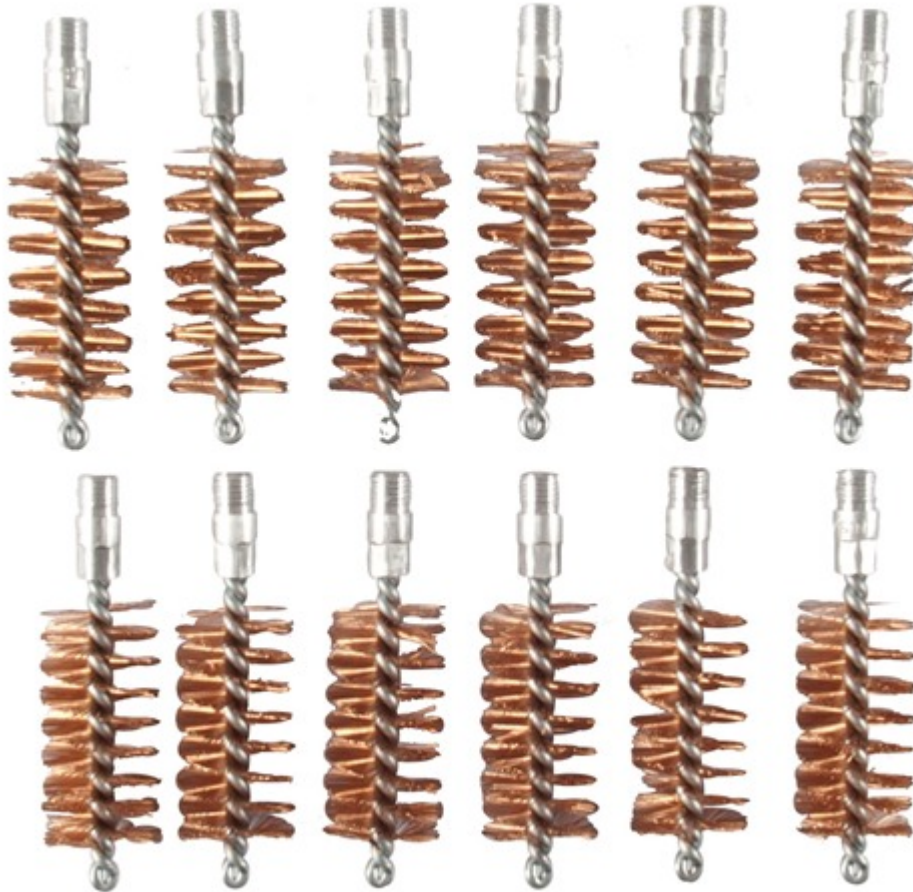
This can be used to clean the barrel of a shotgun that was stored for a long time without being fired.

It is also good to use a nylon brush when working with special solvents, such as copper or lead remover.

### **3. Spiral Bore Brush**

This brush is ideal for cleaning of your shotgun's barrel, especially after shooting slugs.

## ***Brownells Heavy Weight Nylon Bore Brush and Standard Line Bronze Bore Brushes***



Most shooters find the need to use bore brushes in other areas of their weapon and do, at times, use steel brushes only to then find they have scratched the finish. With tough nylon bristles you can rest assured that you will not scratch the finish of your shotgun when used for other, odd cleaning jobs.

Nylon bristles are tough enough to clean even the toughest, fouling deposits and yet will not wear down the barrel's rifling. With a smooth bore, of course, you do not have this worry, but several models of shotguns allow you to switch out barrels rather easily from a smooth bore to a rifled barrel and you will need the proper cleaning tools if you wish to practice proper maintenance.

Some users are concerned about nylon bristles not being tough enough for embedded fouling. If you use a quality solvent and allow it to soak long enough to soften the fouling, nylon brushes will work. Even with bronze or stainless steel brushed finishes, you need to let the solvent do all of the heavy lifting. **Allow the solvent to soak.** Wearing your rifling down using a wire brush is not the answer to tough deposits. Following the directions on

the back of the solvent will ensure you get the job done with minimal effort. In some cases, if the fouling is heavy, you may have to allow the solvent to work for several hours or even overnight. This is a prime reason for proper weapon maintenance. Allowing a weapon to get to the point where cleaning is more than a simple chore, means your weapon is likely one that is not well cared for in other areas as well.

Bronze is softer than your barrel material, but stainless steel is another matter and can wear your rifling down over time. Once again, the proper use of solvent and a little patience will make your job considerably easier and less destructive to your barrel.

Always use a wet brush, even though patches of your weapon may be soaked in solvent, because friction is problematic with dry brushes and will increase your cleaning time.

Clean your brushes after each use, particularly the nylon ones. Even though nylon is designed to withstand the solvent, allowing solvent to remain on the bristles for an extended period is not ideal.

**External link:**

[Bore brushes](#)



## *Shooter's Choice Barrel Wizard*



The Barrel Wizard cleans 12, 16 and 20 gauge shotguns and because the Barrel Wizard rod telescopes, you can use it to clean a barrel of any length (up to 40"). It is compatible with most standard barrel cleaning tools and accessories, so you can switch back and forth to suit any situation as needed. The Barrel Wizard gives you options; no matter where you find yourself you will have the tools to clean your shotgun barrel quickly and efficiently each time.

At first glance the exclusive paper towel holder may not seem very important, but once you use it you will understand why the Barrel Wizard surpasses other cleaning rods.

Loose patches are just that: loose patches. When cleaning the barrel with patches it takes multiple patches and swipes to get the job done; one swipe will miss portions of the barrel simply because the patch cannot make contact with the entire barrel at one time. A paper towel, however, can be wrapped 360 degrees around the holder so that it makes contact with the entire barrel with one swipe. Paper towels are inexpensive and absorbent, and have just the right texture for scrubbing your shotgun barrel, and are therefore a great alternative to using patches.

To use paper towel, fold a full sheet in half and fold again, then fit into the slot. This makes sure that the paper towel has expanded around the rod to fit snug in the barrel to push fouling and other debris out.



Another good feature is that you can use the Snap Cap Handle together with the Paper Towel Holding Device as a chamber cleaning tool.



The snap-cap handle has an oil reservoir built in so you always have oil. This is ideal for competition shooting or when simply getting in some time on the firing range.



The rod can be stored in the shotgun barrel for easy transport, and with the proper gauge snap cap handle installed you can also dry fire your shotgun safely. Keep in mind, with the Barrel Wizard stored in your barrel you know there are not any shells loaded, so look at it as an additional safety feature. The Barrel Wizard can be stored in Remington 870 but it will stick out from the 18" and 20" barrels.



Once the fouling has been loosened, use the paper towels to collect the solvent and loose debris. Then simply remove the dirty towel and wrap a clean one for next time.

The Shooter's Choice Barrel Wizard will make shotgun cleaning fast and easy. It saves you time and gives you many additional features. This product is highly recommended!

### **Manufacturer's Description and Specifications**

- Works with all break-open, auto and pump, along with bolt action shotguns
- Made using aircraft grade aluminum, Delrin® and is nickel plated with an anodized finish
- Telescoping rod adjusts from 27" to 40"
- Spring loaded snap-cap handle has an oil reservoir
- There is a paper towel grip tooled in the rod
- The grip also doubles as chamber cleaning rod
- The tool is threaded to accept all universal 5/16x27 standard cleaning accessories, 12 gauge snap-cap handles are available separately
- 16 and 20 gauge interchangeable snap-cap handles will soon be available

**External Link:** [Shooter's Choice Barrel Wizard](#)

## *Shooter's Choice Quick Scrub III for Shotgun Cleaning*



I have previously tried Shooter's Choice and really liked it. Recently I bought another product by Shooter's Choice: Shooter's Choice Quick Scrub III.

I really like this cleaner/degreaser. When trying this product I first cleaned the barrel with Shotgun and Choke Tube Cleaner and then used Shooter's Choice Quick Scrub III to additionally clean and degrease it. It cleaned everything very fast and dried quickly.

Shooter's Choice Quick Scrub III is also good to clean the trigger group without disassembling it.

External link: [Shooter's Choice Quick Scrub](#)

## *Gun Oil*



There are many types of gun oil available on the market today. You can really choose any brand of lubricant and you will not have any problems.

One type of gun oil can even help heal wounds; good old Ballistol invented in 1905!

Cleaning foam can do a good job too. It is very easy to use and effective.

Care about your shotgun and your shotgun will work without any problems or malfunctions.

**External Links:**

Gun Cleaning Supplies and Chemicals: <http://tinyurl.com/m7xs4>

## Upgrades

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One of the reasons why you should get a Remington 870 is that there are hundreds of upgrades available for this shotgun. There is no other shotgun that is so easy to upgrade and is ideal for any purpose.



© Rem870.com

This shotgun enables you to easily change almost any part, from sights to stocks to trigger groups.

Experiment with the setup of your shotgun to find the best and the most comfortable configuration for you.

### ***Sights***

Some of you may have seen your grandfather or older shooters lick their finger and touch the bead sight on their shotgun. Why was this done? There are many explanations, some even created by Hollywood, but the one that makes the most sense is that the moisture puts a little shine on the sight. Some shooters might say the opposite, and claim they do not need shine and instead need the sight blackened with a smudge pot. This simply proves that everyone has their own techniques and style. The soot from smudging was normally a flat black and did not give off any reflection, or in other words, glare. If the color of the front bead was the same as your target you might have a hard time distinguishing between the two, and on occasion would require contrast for better accuracy.

Shotguns can have bead sights, double bead sights, sights with a ventilated rib line, ghost ring sights, red dot scopes, blade sights, rear notched sights with a front post and magnifying scopes.

Typically, scopes are used when firing rifled slugs because of the extended range. Scopes are for stationary targets because it is very difficult to track a moving target through a scope. The shooter is forced to look up from the scope to use their peripheral vision to help find the target. Bead sights are usually for moving targets because the target can be

followed rather easily with the bead. Bladed sights are used for stationary targets such as deer and turkey.

Double beaded sights usually have a ventilated rib running along the length of the barrel. The larger bead is at the end of the muzzle and the smaller bead sight is halfway back. Some experts claim that having the two beads and a ventilated rib helps to maintain sight alignment because some shooters tend to look over the top of their sights immediately after depressing the trigger. Forcing the shooter to line up both beads along the rib will keep their cheek welded to the stock. Double beaded sights are used for flying birds and other moving targets.

Red dot scopes may or may not have magnification. The dot is not projected onto the target; there is simply a red dot illuminated inside the scope tube. The dot is used to line up the target through the scope. A red dot sight is for stationary targets.

Rear notched sights, sometimes called “v” sights, are lined up with the front post. This ensures the weapon is lined up, and once the front post is on target the trigger is pulled. This type of sight helps the shooter maintain their natural point of aim better.

Ghost ring sights can be mounted on tactical shotguns for close combat shooting. The shooter’s sight picture through the ghost ring is more pronounced at short distances. If using shot in your weapon you can adjust the spread to correspond to the sight picture at various ranges. The ghost ring sight is not ideal for moving targets.

Obviously, there is more to shooting than lining up on a target. Different shooting environments require different types of sights. You would not use a scope for skeet shooting or duck hunting because you cannot track through a scope. Open sights or beaded sights are ideal for skeet or bird hunting. As with anything, it will take practice and experimentation to find out what works best for you.

Sights are very important because you use them every time you fire a shotgun. Of course, there is intuitive shooting, but if you want to shoot more accurately you will need to use a sight.

There are many different types of sights; some of them allow quicker aiming, and some offer additional features such as tritium or fiber optics (light gathering) inserts.

Shotgun bead sights are very popular, but they are not very convenient or accurate because there is no rear sight.

I would recommend getting a shotgun with rifle sights that you may modify later, or installing ghost ring sights, which are very quick to aim. Replacing or upgrading rifle sights is very easy; installation of ghost ring sights requires drilling and tapping of your receiver if there is no picattiny rail installed, such as with the Remington 870 Express Tactical model.

Let’s take a closer look at each type of sight.



## Rifle Sights

Rifle sights enable you to shoot accurately. There are front and rear sights, which can both be upgraded. Light gathering, tritium, and even ghost ring sights can be installed on the standard Remington 870 barrel.

Having tried several types of rifle sights for the Remington 870, here is my review of each one. This information will help you choose the ones that fit your needs.

### Tritium

Sights with tritium inserts glow in the dark, enabling you to aim without any source of light. This gives you an advantage during the night. Tritium sights require no batteries and will glow for years.

#### Ameriglo Night Sights for the Remington 870



One of the best sets of night sights for the Remington 870 is manufactured by Ameriglo. They use tritium elements from Trijicon in their sights.

This set is very sturdy and well made. I have tested them in daylight and they were very good and easy to use. Of course they don't glow in the daylight like light gathering sights, but they are still easily identifiable thanks to the white ring around the tritium tubes.

Ameriglo sights glow in the dark because of the tritium elements; they are guaranteed to glow for up to 12 years. You can choose several colors for your sights; for example, you can have green dots for the front and yellow dots on the rear sight, or you can choose all green elements if you want. These sights are little higher than the standard ones, but they allow for more comfortable aiming.

### External Links:

Tritium Night Sights for Remington 870: <http://tinyurl.com/kx99goc>

## XS Sight Systems Shotgun Big Dot Tritium Front Sight



The XS sight system fits the Remington Pedestal model with a stepped bottom. It also fits Remington shotgun barrels with a front sight pedestal, vent rib models with a flat bottom and ones with ventilated ribs. The sights are designed to fit over existing bead sights from .125 to .140-inch diameters. The sights come with an adhesive that is used to fill in the gaps and to secure the sight to the barrel. The adhesive must fully cure before the shotgun is handled.

The manufacturers state that some barrels may require drilling and tapping of existing holes. Some people who have purchased the XS sight system have indicated that they had problems with the glue curing. The manufacturers state that you must follow the directions carefully when applying the glue and that there are steps that must be taken to ensure the adhesive cures properly.

The XS sight system enhances bead visibility in daylight, and shooters have stated that the bead is also easily seen in the dark. People that have bought this sight system use their shotguns for hunting, home defense/tactical and target practice.

The sights are aesthetically pleasing, easy to install, are tough and a good value.

Hunters can see the green glow of the bead even in complete darkness; however, artificial or ambient lighting from a full moon may make the bead less obvious. The XS sight system is ideal for hunters who may find themselves in heavily forested areas that have little light

even during the daytime. The bead sight, as stated by some, can be seen in direct sunlight thanks to the white ring around the Tritium element.

Some shooters today still blacken their front sights with soot so the reflection from the sun does not interfere with their aim. The XS Big Dot Tritium Front Sight does away with the need for sight blackening. Overall, the XS system gives shooters an improved sight picture, allowing them to achieve their natural point of aim more easily.

In years past, the front bead was all a shooter had, and in some cases there was no bead at all. The sight picture is critical when hunting or shooting trap or skeet. Experienced hunters know that the eye can only focus on one thing at a time, and you must be focused on the target and not the front bead. This means the front bead must register with the eyes so you can line it up with a moving or stationary target. The XS sight system allows your eyes to register the bead as your eyes focus on the target. You usually do not focus directly on the bead so it must be such that it registers with the eye.

Sighting with a bead is similar to navigating a vehicle; you do not stare directly in front, but down the road, and are aware of the hood's center and fenders. You know when you begin to drift without having to look at the hood. The same applies to using a bead sight, and the XS sight systems certainly make a much better sight picture.

**External Link:**

XS Sight Systems Shotgun Big Dot Tritium Front Sight: <http://tinyurl.com/ltp7a7y>

## Fiber Optic (Light Gathering)

Fiber optic inserts increase the brightness of the sights by collecting light and directing it to the shooter's eye. Shooting with light gathering sights is very comfortable during the daylight.

### Remington Ghost Ring Fire Sight Set from Williams Gun Sight Company, Inc.



I have tried Williams Fire Sights for the Remington 870. This set can replace standard sights. Installation is easy because they are installed in place of the standard sights. The only disadvantage is that you need be careful with the rear sight because it doesn't have protective ears, and can be easily broken if hit.

### Williams Gun Sight Company: Remington 870 Fiber Optic Sight Review

Thanks to Tommy Geraci, one of the blog readers for making this review!

#### ACE IN THE HOLE

Williams Gun Sight Co. has a variety of sights for shotgun, rifle and handgun platforms. I will begin this review with the W.G.S. Co. Ace In The Hole fiber optic ghost ring with an integrated 1913 picatinny rail for the Remington 870 shotgun. The Ace In The Hole is designed for drilled and tapped receivers. This ensures a rock solid fit which further helps to maintain a constant zero. Gunsmithing is required to drill and tap the receiver unless the Remington 870 has already been drilled and tapped. Ensure that the screws included will work with a previously drilled and tapped receiver by calling Williams Gun Sight Co. and asking them directly.



The Ace In The Hole is very well designed. It has 4 screw holes for use with magnum and standard Remington 870 models. The bottom of the picatinny rail is contoured to fit snug to the top of the 870's receiver and the ghost ring sight sits on an integrated adjustable riser mount for elevation adjustments. Windage can be adjusted directly from the ghost ring aperture mount. Of course the 1913 picatinny rail gives the shooter an option to attach their favorite hunting or tactical optic as well. The ghost ring houses a uniquely placed fiber optic, W.G.S Co. calls them their Fire Sights and I would have to agree that they deserve

that name. The slight angle at which the Fire Sights are placed really makes these fiber optic sights glow. They are extremely bright and gather light exceptionally well even in low light situations.





The Ace In The Hole is made out of aircraft grade aluminum using the precision manufacturing method known as CNC (Computerized Numerical Control). The CNC process and quality of the metal play an important part in the production of extremely precise and high quality parts. I like to think about it like this, if we expect our shots to precise then the methods and material in which they are manufactured must be as well. I mention this method because the CNC process is top of the line and contributes greatly to the outstanding design and overall quality of the Williams Gun Sight Co. Ace In The Hole ghost ring sight. The Ace In The Hole offers extremely quick target acquisition and can be used for hunting, target practice and tactical applications.



## **UNIVERSAL “GHOST RING” FIRESIGHT SET**

Thanks to Tommy Geraci, one of the blog readers for making this review!

Next up for review are the W.G.S. Co. Universal Ghost Ring Firesights. These sights offer a large amount of flexibility since they incorporate a universal design they can work on just about any vent rib shotgun with no gunsmithing required. They are made out of aircraft grade aluminum and manufactured through a CNC process. The color combination of a red front sight and a green ghost ring rear sight really compliment each other well and only help increase a shooters target acquisition. The Universal Ghost Ring Firesights attach to a vent rib barrel via the placement holes with a combination of two latches per sight that are held in place with a set of screws that are provided.





Weighing only .05 Oz the shooter will feel almost no weight increase. The rear ghost ring is fully adjustable so changes can be made to the elevation and windage according to the

shooter and the environmental demands they face. Originally the universal ghost ring firesights were designed for turkey hunting however they will also do exceptionally well while hunting deer. Fiber optics, have become very popular with shotgun shooters. This means all realms of shotgun shooters must be catered to when creating a sight. Self--defense and tactical applications are among the demands that the Universal Ghost Ring Firesights can meet if the need arises. Aside from the ultra precise methods and quality materials used to manufacture the Universal Ghost Ring Firesights, I always appreciate an American made product forged from ingenuity.





**External Links:**

Williams Fire Sights: <http://tinyurl.com/l6ncg7f>

## HiViz Magnetic Front Sight



This is a very good sight from HiViz. This is a magnetic base sight, which is easy to install on a ventilated rib barrel. It doesn't move under a heavy, 12 gauge recoil.

It can be installed on any shotgun (there are different versions for different ribs). The best thing is that there is no need to unscrew the existing sight; you can simply attach the HiViz magnetic sight in front of the factory sight.

### External Links:

HiViz Magnetic Front Sight: <http://tinyurl.com/lwoqm9u>

## HiViz Comp Sight



This is one of the best sights for vented rib barrels. The Hiviz Shotgun CompSight will work on the Remington 870 and many other shotguns.

Installation is very simple if the sight isn't depressed. Different screws are included, so you just need to unscrew the factory sight and use the correct screw to install the HiViz Comp Sight.

Its base is made of steel instead of plastic, unlike other aftermarket sights. This means that it will withstand hard use and will not break, even if you hit something (which I have personally tested several times).

You will receive eight interchangeable light pipes of different diameters: three red, four green, and one white. This is a fantastic set for competition shooting. I don't know the purpose of the white light pipe, but the others are all very useful. Usually I use the smallest, green light pipe. Big pipes will be good for birdshot/buckshot, and smaller ones are better for shooting slugs.

Also included is a rotary carrying case to store the light pipes and spring release key. The carrying case is very handy; it holds 8 pipes and the key, allowing you to have interchangeable light pipes of all sizes and illumination levels with you so you can change them as needed.

This is a highly recommended product, which is used by many competition shooters and particularly useful for vented, rib barrels.



HiViz Shotgun CompSight is highly recommended upgrade for vented rib barrels.

**External Links:**

HiViz Comp Sight: <http://tinyurl.com/mr5av7u>

## Ghost Ring Sights



Ghost ring sights are easy to use and very fast to aim, especially on shotguns. They are very popular on home-defense and combat Remington 870 shotguns.

There are many variants of the ghost ring sights available on the market. The most popular are from: Vang Comp Systems, Scattergun Technologies, and XS Sight Systems.

**External Links:** <http://tinyurl.com/k8pfl83>

## Remington 870 Trak-Lock Ghost Ring Sight Set



Ghost ring sights are believed to be one of the best choices for a shotgun. They enable shooters to aim really fast.

The Remington 870 Trak-Lock Ghost Ring Sight Set is one of the best sets available on the market. It is reasonably priced, being two times cheaper than the alternative ghost ring sight set from Vang Comp Systems. The Tritium Trak-Lock Ghost Ring Sight Set is also

available, but for a higher price.

The Trak-Lock Ghost Ring Sight Set is high quality, sturdy and a reasonably priced product.

**External Links:**

Trak-Lock Ghost Ring Sight Set: <http://tinyurl.com/mug9wda>



## Holographic (Reflex) Sights



Holographic sights are an alternative to classic iron sights. They allow faster aiming, showing just one red dot on the target. They also have some disadvantages, which may make the use of a holographic sight on a shotgun questionable, including additional weight, additional picatinny rail, and a high price.

Remember that the shotgun is effective at a maximum distance of 110 yards (100 m), and there is no need to use electronic sights on such a distance. If you want, you can get this type of sight from Eotech, Aimpoint, and other manufacturers.

### External Links:

Eotech Holographic Sight: <http://tinyurl.com/mm72uzv>

### EOTech XPS2-0 Holographic Weapon Sight Review

Typically this sight is designed for fast target acquisition, usually within a 100-yard range, which is suitable for most hunting situations. Many shooting experts recommend that you shoot with both eyes open, especially in a tactical situation. The EOTech XPS2-0 allows shooters to keep both eyes open because of the dedicated focusing of the sight. The shooting eye is not strained when using the sight.



#### Manufactures Specifications:

- Lightweight, holographic weapon sight with 1X magnification
- Employs a laser light to illuminate the holographic red reticle
- Increases accuracy, allows for rapid target acquisition and improves target discipline
- Small enough that when mounted it leaves room for rear sights and other optional equipment
- Measures 3.5 x 2.4 x 2 inches (W x H x D)

This optic sight is battery operated using a CR123 lithium battery. The sight can help shooters find and maintain their natural point of aim because of the way the EOTech is designed to help you find the target if you have to readjust your position. Anyone that uses a scope understands the problem of acquiring the target when looking through a scope and then focusing, which takes precious time.

New and experienced shooters alike sometimes tend to focus on the red dot when shooting, instead of the target. This problem is solved with the EOTech XPS2-0. Shooters find it is natural to be able to focus on the target and at the same time maintain target discipline.

Also, you can find a target in full sunlight, where otherwise the glare would obscure the sight picture. The XPS2-0 is not designed for night shooting, but in low light I find it to be more than adequate for target acquisition.

It is recommended that you do zero your weapon after mounting this sight for best accuracy. Once zeroed, the sights do not deviate even after several thousand rounds have been fired.

Do you need the EOTech XPS2-0 for your weapon? You do if you want increased accuracy and if you want to teach yourself how to maintain your natural point of aim. Targets are found much quicker, and when hunting for food this is important because a missed shot may mean someone goes hungry. Typically you would not use a scope in a rapidly developing combat situation, but the EOTech XPS-0 is ideal for this type of scenario. Scopes are used when in a stationary shooting position where return fire and multiple target acquisition are not as critical of an issue.

With the XPS2-0, you can engage multiple targets without having to fan the weapon to find the target, which is something you simply cannot do in a combat situation. The sights are such that you can shoot with both eyes open, which is necessary for peripheral vision when keeping track of other shooters that may engage you.

Even though many have stated that zeroing is not needed, once you have the sights mounted find your cheek weld and begin zeroing the weapon. It is recommended that you bench shoot when zeroing your weapon for best results.

#### **External Link:**

EOTech XPS2-0 Holographic Weapon Sight: <http://tinyurl.com/mm72uzv>

#### ***Laser Sights***

Laser sights are an option that is often seen in Hollywood movies; however, they are not that effective. If you want to have one on your shotgun there are a lot of different laser sights to choose from; one of the best is the Streamlight TLR-2.

Remember that each time you decide to shoot with a laser sight, you will have to search for a dot from the laser on your target.

#### **LaserLyte Center Mass on Remington 870 Shotgun**

LaserLyte Center Mass projects a ring of eight green or red laser dots with one laser dot in the center and many smaller dots. The circle grows at one-inch per yard and you can see the approximate pattern of shotgun shots with birdshot or buckshot.

LaserLyte Center Mass is very compact, lightweight and easy to use.

It is very interesting tool when you want to show newbies how shotgun patterns become wider with distance. Also, it will help newbies to aim a shotgun. But I recommend to train more and to become familiar with your shotgun, so you don't need a laser.

It is difficult to see laser dots during the daylight, only on very close distance. So the best time to use the LaserLyte Center Mass Laser is when it becomes dark.

Here is photo with quarter, so you can see how compact the LaserLyte Center Mass is:

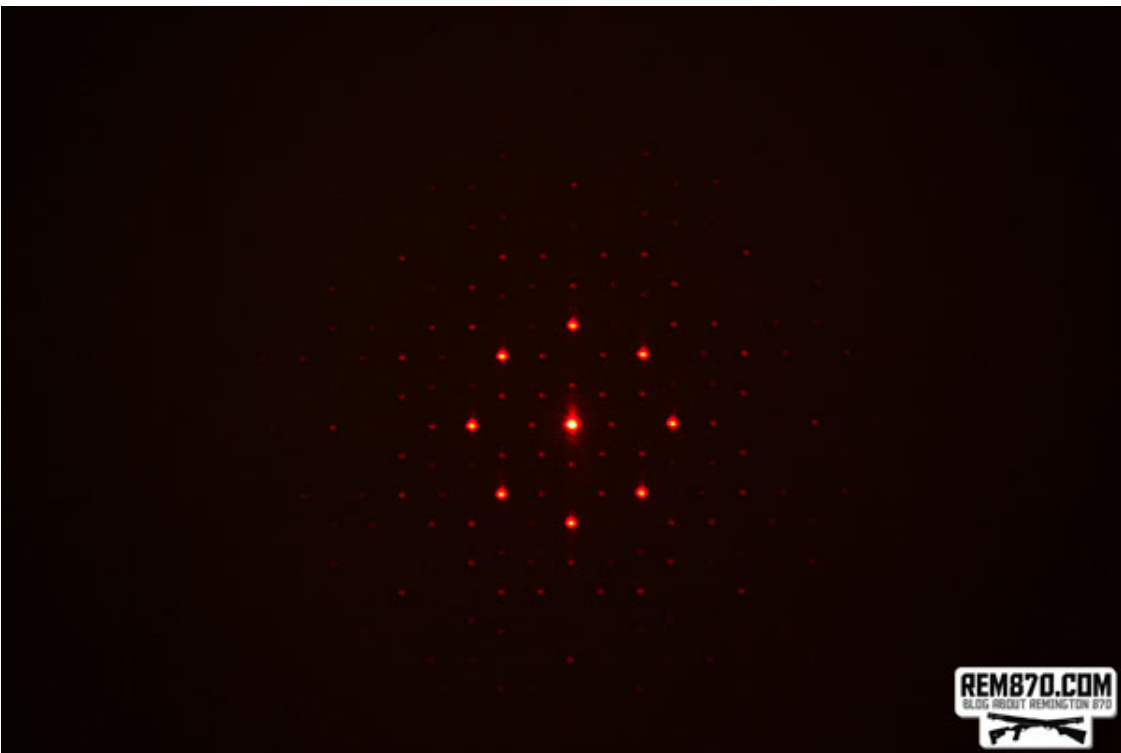
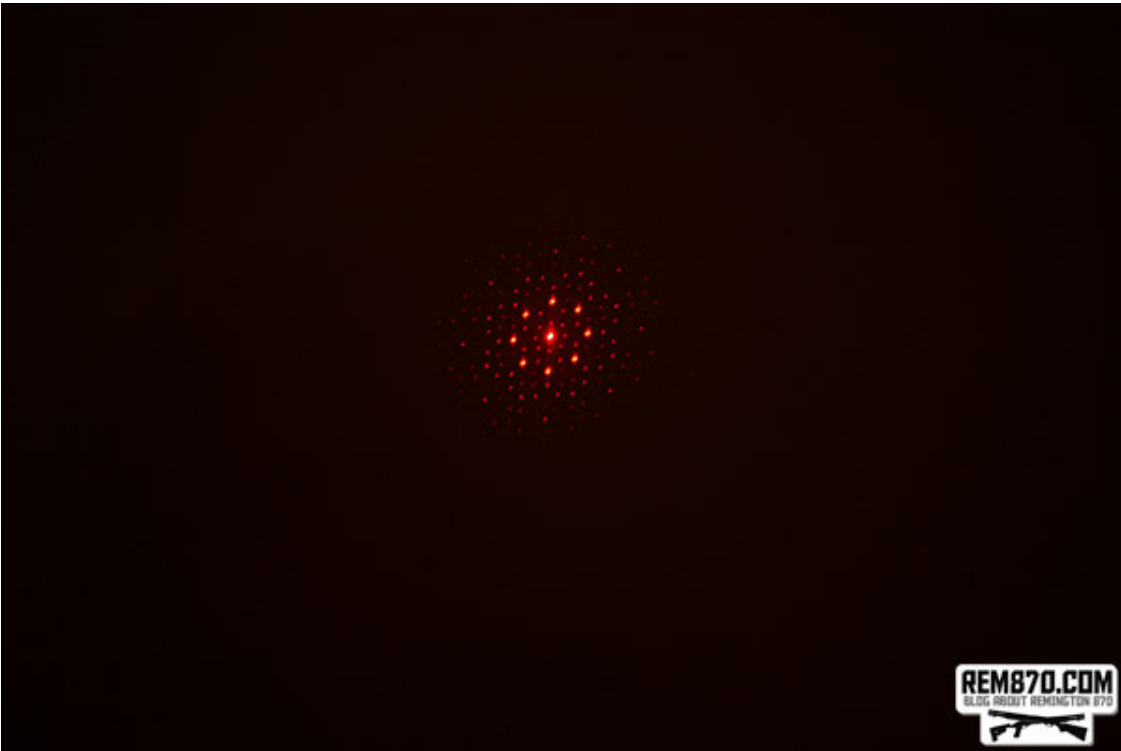




LaserLyte Center Mass Laser installed on CDM Gear BMT Clamp:



Here is what the LaserLyte Center Mass Laser pattern looks like on different distances:



**External link:**

LaserLyte Center Mass: <http://goo.gl/k4cvlu>

## ***Bead Sights***

Bead sights on a shotgun are a bead on a post on the front of the barrel. It is rather difficult to aim with bead sights for newbie and they are not very user-friendly. Also, they are not a very accurate type of sight.

Bead sights are popular on shotguns because they are very cheap.

## ***Light***



Light is one of the most important upgrades for a home-defense shotgun. A flashlight will enable you to see your target, and even temporary blind the enemy. If you don't have a flashlight on your Remington 870 you can use it just half of the day, during the daylight; with a flashlight you can defend your home 24 hours a day.

There are several ways to install a flashlight on your shotgun.

## ***Clamps***

Clamps serve several purposes. First of all, they hold together the barrel and magazine extension. This ensures that even if you hit something with your magazine extension, it will stay in place and will not be broken.

If a shooter hits something with his magazine extension, the extension will be broken and fall off from the magazine tube. The magazine spring will fly away, allowing shells to fall from the magazine tube, and the shotgun will no longer be functional.

## ***CDM Gear***



The CDM Gear MOD-C Flashlight Mount for the Remington 870 is the best there is on the market today. I have personally tested it during competitions, flashlight tests, and training, and it has always performed very well.

I have the CDM Gear MOD-C Flashlight Mount installed on my shotgun all the time.

It works both as a magazine extension clamp and a flashlight mount.

The MOD-C holds the magazine extension tube and flashlight securely, even after numerous shots.

The finish of this mount is also very good. It still looks like new after a long time of use. I haven't had any problems with this flashlight mount. All its parts are well thought out, and are made to last for years.

It is by far one of the best looking upgrades for the Remington 870.

I highly recommended tactical accessories for your Remington 870 shotgun.

#### **External Links:**

CDM Gear MOD-C Mount: <http://amzn.to/T7odgC>

#### **iProtec NEBO 5598 Universal Long Gun Light Mount**



iProtec NEBO 5598 Universal Long Gun Light Mount is an affordable mount which can be installed on Remington 870 shotgun, 12 gauge and 20 gauge. It installs in seconds and is also very easy to remove. It is made of Aircraft Grade Aluminum, which is sturdy and light weight.



Rubber inserts protect the coating of your shotgun and your flashlight, and it also ensures that the clamp will stay in place under heavy 12 gauge shotgun recoil.

It is very easy to use. You don't need any tools to install it or remove it from your shotgun.



I tested it on the shooting range and made 12 shots of it on video, and even more during the training. iProtec NEBO 5598 Universal Long Gun Light Mount stays in place and holds your flashlight reliably. It doesn't move under recoil, so you can be sure that it won't fall off after several shots.

This flashlight clamp can be used for home defense Remington 870 shotgun, it is inexpensive, lightweight, compact, and easy to install or remove.

## Tactical Flashlights

### Nebo 6109 iProTec RM190 Firearm Flashlight



The Nebo 6109 iProTec RM190 Firearm Flashlight can be installed on rail without any tools; it attaches securely. The Output Power is 190 lumens, which is enough for the home defense shotgun flashlight. It has two modes: constant on and strobe.

### Surefire G2 LED

The Surefire G2 LED is a very popular 1 inch flashlight that can be used with any 1 inch light mount. Surefire is a well-known manufacturer of tactical flashlights.



This model is powerful (80 lumens) and easy to use. The Surefire G2 LED is powered by two 123A batteries.

The tactical tail cap switch is very convenient for home-defense use; simply press for momentary-on, or twist for constant-on

### External Links:

Surefire G2 LED: <http://tinyurl.com/maxb8sl>

### FAB Defense Speed Light



FAB Defense is another well-know manufacturer of tactical upgrades and accessories.

The FAB Defense Speed Light is very powerful (100 – 120 Lumen LED output), light, and compact. It is a 1 inch flashlight that can be used with many mounts.

This flashlight is one of the smallest tactical flashlights you can find.

#### External Links:

FAB Defense Speed Light: <http://amzn.to/X4doS8>

## ***Elzetta Tactical Flashlight and Mount***



A reliable and powerful flashlight is a must have upgrade for any home defense shotgun. You must be able to identify a target before you shoot.

Elzetta is a well-known manufacturer of flashlights and flashlight mounts for shotguns and rifles.

### **ZSM Elzetta Tactical Shotgun Mount**

ZSM Elzetta Tactical Shotgun Mount can be mounted on Remington and Mossberg shotguns thanks to spacers. The mount is made of plastic, which means that it may be not as sturdy as metal mounts but it won't scratch your barrel and magazine extension.

This mount is low profile and light-weight, but it is not as low profile as the CDM Gear clamp.

Installation is very easy and simple; the mount attaches to the barrel and magazine tube. You can attach your flashlight in just 5 minutes.

This flashlight mount reliably holds a flashlight in place under recoil. I have tested it using many different types of rounds, including buckshot and slugs.



## ZSM Elzetta Tactical Flashlight

This flashlight is powerful (235 lumen) and reliable. The ZSM Elzetta Tactical Flashlight is made of metal, it sturdy and waterproof.



You can choose a 2-battery or 3-battery version, different lenses, heads (low profile, crenellated), tailcaps (strobe, rotary) and even have it custom laser engraved.

A flood lens makes the beam very wide, which is important for home defense.

The Elzetta tactical flashlight and mount can withstand a heavy 12 gauge recoil, as per my testing with birdshot, buckshot and slugs.

The Elzetta mount with Elzetta tactical flashlight (especially with flood lens) is highly recommended for home defense use.

**External link:** [Elzetta Mount](#)

## *Inforce Weapon Light on Remington 870*



The Inforce Mil LED Light can be used for military tactical weapons, self-defense weapons, or on any weapon where a dependable, easily activated and bright light is needed. The light would be highly effective for a home self-defense weapon because target recognition is extremely important when confronted in your home. You must have the ability to identify your target in low light, or no light at all depending on your situation.

Advantages to this product are easy installation, bright light, easy to adjust and easy to operate. The light is securely attached, does not wobble and can take some banging around and still stay securely mounted.

On high, the bright light can be used to blind an adversary temporarily and the strobe feature can be used to confuse and disorientate. This is extremely important in a personal/home defense situation. There can be times where you simply need a quick look around a room to identify any obstacles but do not want the light on constantly so you can avoid detection. The light can be set up for momentary activation without having to click off again. The fewer moves you have to make in a tactical situation, the better. Once in shooting position, you can operate this light with limited hand movements.

This item is solid, easy to install and works as advertised; there is no point in trying to “cobble up” a light to fit your home defense weapon when you have an add-on like this available. Taping a light to a barrel is never recommended because the tape will dry out and eventually will cause your light to fall off. If you use lights not made to mount, then you may be putting yourself or your family in an increasingly dangerous situation. Always use quality products when your survival depends on it.

My light is attached to my Remington 870 using a CDM Gear clamp. I highly recommend it!

### **Manufacture's Description Specifications**

- The Inforce-Mil LED Light is compact and provides a powerful beam that is mounted on the Picatinny rail
- An IR option is available
- The light attaches quickly to a Mil-Standard 1913 Picatinny rail for a brilliant light for close and mid-range applications
- The activation switch is rear facing for easy access and can switch between on-momentarily to on-continually, strobe and high/low
- The IR white model has the same LED but with an infrared light option with 75mw on high and on low offers 25mw
- Fiber-reinforced hard polymer composite, Black or Desert Sand at 4.1" (10.4cm) OAL. 1" (2.5cm) bezel O.D. 3 oz. (85g) wt. uses one CR-123A battery, included.

**External link:** [Inforce Flashlight](#)



## ***Streamlight TLR-2 Flashlight/Laser***



The Streamlight TLR-2 Flashlight/Laser combo is a very good tactical upgrade for the Remington 870 shotgun. I have installed it using a CDM Gear BMT clamp with a picatinny rail; I think this is the best way to attach the Streamlight TLR-2 or Streamlight TLR-1 to the Remington 870.

I really like this flashlight/laser combo; it is lightweight and easily attaches to a rail. The TLR-2 is low profile and doesn't stick out much, while the Streamlight TLR-1, which doesn't have a laser, is even smaller.

Some good features of the Streamlight TLR-2 include:

- An ambidextrous momentary/constant switch, which is very convenient to use with even one finger on your weaker hand.
- A switch, which allows you choose one of the three modes: flashlight only, laser and flashlight, or laser only.
- Shock-proof C4 LED, which means that you can use it on your shotgun. Also, the LED doesn't need much energy, so you can use it for several hours on two CR123 batteries.
- A built-in mount, which mounts directly to the rail without additional accessories, keeping it low profile.
- An integrated laser sight, which enables you to shoot from hip level

### **Flashlight**

The Streamlight TLR-2 flashlight is very powerful and bright and the manufacturer guarantees that it is shock-proof, so you can use it on your shotgun. The power of this flashlight is enough to handle most situations.

It has a unique switch, making it very easy to use with your weak hand. You can switch it on/off using just one finger.

### **Integrated laser sight**



The dot is so big and so easy to see that it must be very easy to use it even under stress. The laser sight is a good addition to the Streamlight TLR-2, but it makes it rather expensive.

Having a laser sight enables you to shoot from the hip, which is almost impossible with iron sights or even holographic sights, but remember: bad guy sees the dot too!

The Streamlight TLR-2 Flashlight/Laser combo doesn't stick out much when mounted, making it low profile.

### **External Links:**

Streamlight TLR-2 Flashlight/Laser Combo: <http://tinyurl.com/lp2jpkk>

## Forends with Integrated Lights

Forends with integrated lights are expensive, but are still a very good addition to any home defense or tactical shotgun. When we use a pump-action shotgun we must remember that each time we reload a shotgun we move the forend to the back. That means that we won't be able to operate the flashlight located on the clamp when we cycle the action.

That is why it is a good idea to have a forend light, which enables you to switch it on or off in any moment without taking your hand off the forend.

The price for the EOTech Integrated Forend Light for Remington 870 Shotguns is about \$249, and the price for the Surefire Forend is about \$400; EOTech IFL is more affordable. It is good to see competition on the market for tactical accessories because in the end this benefits the users.

Both of the forends have a constant-on/off switch and a momentary-on pressure switch. Also, they have similar LED sources of light that will withstand heavy shotgun recoil. EOTech and Surefire are both powered by CR123 batteries.

You can't go wrong with either of them because they are both produced by well-known manufacturers of tactical equipment.

### Eotech IFL



The integrated flashlight has a 120 lumen output and uses one CR123 battery, which is enough for an hour and a half of runtime. It is waterproof to 1 meter and can handle 3,000 rounds with 12 gauge slugs. It is low profile and doesn't stick out much like the Surefire forend.

### **Surefire Forend Light**

The Surefire Forend Light is one of the popular choices for light for a tactical shotgun. It is well-known, time-proven, is reliable and compact.



This forend has a rubber insert, which makes it more comfortable to hold and work the action, however, it does stick out more than the EOTech forend.

There are different versions with different powers (100-200 lumens) for the flashlight. You can choose a brighter version but it will cost more.

#### **External Links:**

Surefire Forend Light: <http://tinyurl.com/lapt79v>

## ***Shell Holders***

The receiver mount shell holder is a necessity for home-defense; it enables you to carry shells with your shotgun. A good reason to have a shell holder on your Remington 870 is if you store shotgun unloaded for safety reasons; this way when you have to use your shotgun, you already have 4 to 8 shells available immediately.

Ammunition carriers don't require any modifications to your Remington 870 shotgun and are mounted directly to the shotgun receiver. They hold shells securely and allow for faster reload.

**Attention:** Please note that if you have a standard long forend, you can only install a 4-round shell holder. Shell holders for 6 or 8 rounds require modification of your forend, or replacement of it with shorter one. To use side saddle with a standard forend you will need to cut down the left side of the forend.

**Attention:** Do not over-tighten the screws, as this may bind your receiver and jam up the action, or your action may be stiff.

## **Mesa Tactical**

Thanks to Tommy Geraci, one of the blog readers for making this review!



Mesa Tactical offers by far the most options for tactical shotguns. They make 3 versions of the Sureshell ammo carrier for the Remington 870. Mesa Tactical offers a 4 round, 6 round and an 8 round sidesaddle. With other options like right side shell holders, saddle rails and stock mountable sidesaddles just to list a few. However, all of which are available for the Remington 870 platform.

It features some very different designs. For example, on the inside of the shot shell holder there is an elastomer tube made of Santoprene thermoplastic. This elastomer helps to keep the shot shells snug while inserted in the shell carrier. All of the Mesa Tactical sidesaddles are sold with a backup white elastomer tube that can be swapped out by unscrewing the screws found in the back plate of the sidesaddle. All Mesa Tactical sidesaddles also come with an adhesive backed rubber gasket, this gasket will help prevent the sidesaddle from making surface contact with the receiver. The gasket acts as a protective layer between the back of the sidesaddle and the surface of the shotguns receiver thus protecting the shotguns finish and preserving its market value.





One of the important aspects to include in a quality sidesaddle is the accessibility to be able to visually see the shotguns serial number. The Mesa Tactical sidesaddles are all designed around the serial number. It also incorporates a closed back plate with several Phillips screws. Since these screws were designed in the back of the sidesaddle and not in the front, odds are that if they were to ever start coming loose the receiver would prevent them from unscrewing enough to be able to fall out.



Aside from all the positive attributes and designs there is one down fall I'm aware of. The front trigger pin is the replaced by a set of Chicago screws. These screws have been known to be a problem for some shooters. If they are over tightened they will snap from the middle, and in some cases extended heavy use has been known to cause this problem as well. I have personally never had this issue but I did lose the small flat head Allen screw for the rear fastener during assembly. Mesa Tactical sent me a new one in the mail a few days later. So at that point it's just a matter of contacting Mesa Tactical and requesting new hardware.



Every shooter must identify their needs and demands for their firearm. Once the shooter has figured that out, then this review will certainly come in handy in aiding the process of selecting which side saddle may be right for you.

I highly recommend the Mesa Tactical sidesaddle lineup to every realm of shooter looking for a high quality, dependable and rugged yet light weight sidesaddle.

**SPECS:**

6065 T6 Aluminum

Weight- 3.6-4.2oz

Stainless steel fasteners and Chicago screws

Satoprene Elastomer tubing installed in black and a backup in white



Adhesive backed rubber gasket

Shells held in place under satoprene elastomer thermoplastic tension

Hard anodized matte back coating

Mesa Tactical 4 shell Suresaddle: MSRP: \$65.00

Mesa Tactical 6 shell Suresaddle: MSRP: \$70.00

Mesa Tactical 8 shell Suresaddle: MSRP: \$85.00

### **External Links:**

Mesa Tactical Sidesaddle: <http://tinyurl.com/lmuduqm>

### **TacStar**

Thanks to Tommy Geraci, one of the blog readers for making this review!



TacStar has been known as an inexpensive alternative to some of the more expensive sidesaddles currently on the market for a variety of shotgun platforms. But does the price really determine the potential quality and dependability of a product? I hope to answer that question later in this segment.

The TacStar sidesaddle is comprised of 2 pieces, the aluminum sidesaddle receiver mounting plate and a nylon plastic 6 round shot shell holder mounted to the shotguns receiver using two large Allen screws. The nylon plastic shot shell holder is held into place on the aluminum mounting plate with 6 flat head Allen screws. When I first purchased my Remington 870, the very first sidesaddle I installed onto it was a TacStar 6 round

sidesaddle. It was identical to the one seen in this review. The first problem I had with the TacStar sidesaddle was that a few of the 6 flat head Allen screws would come loose due to the recoil of my shotgun. Because of the open design, once the small flat head Allen screws start coming loose they will fall off into the dirt, grass and so on and the shooter will most likely never see them again. Applying a bit of Loctite to all of the screws might help prevent this from happening.

The second problem I had was that over time the two large sidesaddle mounting screws (that screw in through the receiver and into the aluminum mounting plate) had actually ripped the threading out of the mounting plate. Upon inspection, the only hypothesis I could come up with was that once again the recoil and frequent use had something to do with it. I called TacStar and had them send me another mounting plate and screws free of charge. My customer service experience with TacStar was exceptional. Not everyone will experience the same issues but since I'm a fairly avid shooter I will assume I'm not the only one who has experienced similar malfunctions with the TacStar 6 round sidesaddle.



I was out shooting awhile back and I got pulled over by a Ranger while in the desert outskirts of Las Vegas. The Ranger asked to run the serial number on my Remington 870 while the TacStar sidesaddle was attached. Well, the TacStar sidesaddle covers the serial number of the shotgun and if you don't have the necessary tools to remove it on hand, it can lead to an even stickier situation. Luckily I had several other guns that the Ranger was able to verify as "clean" and he let me go. My point is, due to the poor design of the TacStar sidesaddle it may pose further problems when pulled over with it installed on your shotgun.



I recommend this sidesaddle for a budget build and people who don't anticipate shooting frequently. As there are many people who don't mind looking past the design flaws for the justifiability of the low price. That's not my area of concern as that's a decision left in the hands of the shooter and their demands. Due to it's poor design I would not be able recommend this to anyone in search of a high quality and dependable sidesaddle.

**SPECS:**

Weight: 5.3oz

1 Nylon black plastic shell holder

1 Matte black (type of finish unknown) aluminum mounting plate

Made in the USA

Shell holder works with shell tension

TacStar 6 round sidesaddle MSRP: \$34.99

Price seen as low as \$24.50

**External Links:**

TacStar Sidesaddle: <http://tinyurl.com/mo93r4b>

## Detachable ShotShell Carrier from S&J Hardware



The idea of this side saddle is very simple; you can attach the ShotShell carrier when you need it and remove it when you don't. Perhaps the best feature is that you don't need to disassemble your Remington 870 to remove or install the detachable ShotShell carrier.

Another advantage of the ShotShell carrier is that you can always have fully loaded shell carriers on your vest or in your pocket. This allows you to remove an empty carrier and attach the loaded one in seconds!

Installation is very easy; you just need to degrease the receiver of your Remington 870 using an alcohol swab (included) and attach a heavy duty stick on Velcro strip. That's all!

Of course, a metal shell holder is sturdier, but the Detachable ShotShell Carrier is easier to use, install and remove, and overall is more flexible.

## Vang Comp Systems Detachable Side Ammo Carrier

Thanks to Tommy Geraci, one of the blog readers for making this review!



The Vang Comp Systems DSAC is truly unique and original. It is comprised of an matte black anodized aluminum side mounting plate layered with Velcro to attach a 6 round elastic ammo carrier. The aluminum mounting plate has a serial number cutout. That is a very helpful design, which will speed things up when getting pulled over by the police.

The Velcro design is excellent. If the shooter has a few extra removable elastic ammo carriers, they can be attached to tactical vests, bags for quick swap outs. Literally anything that has female Velcro will aid in holding extra carriers. The only aspect I question the durability of, is how well the Velcro will stay attached to the aluminum plate after extended periods of time and hard use. Since I do not have months or years to test the Vang Comp DSAC I cannot be certain that this wouldn't be a problem for some users.



I have one minor aesthetic issue with the DSAC. My problem is in regards to the two trigger pin screws that run through the receiver and into the aluminum mounting plate. The two trigger pins are shiny stainless steel (silver in appearance, see picture below). The Remington Marine Magnum is the only 870 shotgun that's silver in color, the great majority of Remington 870's are either cerakoted black or are blued. This is a very minor complaint I have, but I can't rule it out since aesthetics play a big roll in the customer's decision to purchase. The positive aspect about the two mounting screws is that Vang Comp went with an enlarged flat head design for the DSAC and used stainless steel for the screws, so no more stripping threads. Allen keys can be hard to find but with this design the shooter can use a flat head screw driver, quarter, knife and so on to remove the mounting screws if need be.



Ultimately the design of the Vang Comp DSAC is excellent, it has unique attributes that only further enhance its versatility. I would recommend this to shooters in need of versatility. I would also recommend this to more frequent shooters for tactical applications and competition shooting. The DSAC appears to be high quality and has great design features. The DSAC has a good chance of standing the tests of time while under hard frequent use and to top it all off the Vang Comp Systems DSAC is 100% made in America.



**SPECS:**

Weight: 3.5oz

Remington 870 Shotgun Guide from Rem870.com, version: 2015-final

1 Aluminum matte black anodized mounting plate

2 Stainless steel mounting screws

Elastic wed shell carrier

12 gauge only

Made in the USA

Shells are held in place under elastic tension

Vang Comp Systems DSAC: MSRP: \$80.00

### **External Links:**

Vang Comp Systems Detachable Side Ammo Carrier: <http://tinyurl.com/k7uznbn>

### **Shell Shield Sidesaddle**

It looks like a very good alternative to Mesa Tactical Sidesaddle This sidesaddle has two rubber tube inserts (Mesa has one) and holds shells reliably.

ATTENTION: Shell Shield 6 round shell holder is little longer than Mesa sidesaddle and it will not work with some forends, like a Hogue, for example. But it will work with Speedfeed forend.





Installation is very simple and straightforward. It was installed on the receiver by replacing the two take pins with screws. But I had to cut my Hogue forend to install it. The sidesaddle is made of metal and looks very reliable. The Shell Shield sidesaddle doesn't hide the serial number of your shotgun.

I have tested it on the range and really liked it. It holds shells reliably but enables you to reload your shotgun fast.

It is highly recommended for home defense or tactical shotguns. The Shell Shield sidesaddle is durable and holds shells reliably but enables you to make reloads fast.

### **Mesa Tactical 20" Rail with 6 Shot SureShell Carrier**

I decided to do a review of one of my favorite upgrades to my Remington 870 Marine Magnum pump-action shotgun. The Mesa Tactical 20" 1913 Mil-Spec Picatinny Rail with a 6 shot SureShell side saddle and front barrel/extension clamp also comes with different options such as a singular barrel clamp model, a 5" Rail Model, or the 4 and 8 shot models with most options being interchangeable on each model.



A surprising quality about this attachment is that it acts as a heat shield; for you 870 owners out there, you know how quickly you can heat that barrel up at the range or while taking a class! Using the Mesa Tactical 20" Mil-Spec 1913 Picatinny rail as a heat shield is a great option because many of the other heat shields on the market are geared towards the Mossberg 500/590's and must be adapted and modified to fit an 870. Not only does this install simply through your trigger group pins (essentially upgrading you to anti-walk style pins) and barrel/extension mount, but once installed it is rock solid! The 20" Mil-Spec 1913 Picatinny rail is perfect for mounting optics (especially Dot & Reflex types) because it doesn't force you to mount on the 5 inches of receiver space that a normal shotgun rail usually covers. It also opens you up to a huge market of aftermarket picatinny BUIS (Back-Up Iron Sights) in case your primary optic goes down.



As far as Side Saddle goes, they are amazing but a bit steep at \$64.99 for the basic 6 shot SureShell Carrier. They come with a secondary neoprene tube to adjust how snug your rounds are in the saddle by replacing the stock diameter black rubber tube with the slightly larger OD'd white rubber tube (although I don't see a need for the white tube as I have never had a round fall out and wouldn't want them to have too much resistance when I need to get them out in a hurry). Also, as a side note, if your rubber tube is ever misplaced, damaged, or worn out, Mesa will ship you a replacement free of charge if you call and speak with a representative.

The Barrel Clamp, which also acts as the front rail mount, is versatile and strong. This aftermarket barrel/extension clamp is the same model that's sold for over \$60 separately from Mesa Tactical, and for \$84.99 with the 2" picatinny and hardware. Not only does it have a great fit and finish, but either side is adaptable with Mesa's QD sling attachment or a 1913 Mil-Spec Picatinny (2"-5" depending on preference). As with any other Mesa Tactical product I can think of, I would have no problem recommending this product to someone who's looking for a well-built accessory rail for the 870, which also happens to be made in USA!



Any downside is really only relative to the shooter. This item is fully CNC machined from billet aluminum and is **extremely** well made. It is not overly heavy, weighing in at about 7 ounces without shells. It certainly does add a fair bit of weight, especially with the 4, 6 or 8 extra shells, so keep in mind that you may not always have time to put on a chest rig and/or to prepare for this change. If you're a person of smaller stature the extra weight and bulk may make your weapon tougher to manage, though it does help tame recoil by adding weight and mass towards the front of the firearm. Regardless of body size, ounces equal pounds and pounds equal pain, so remember that before ordering any add-on for your firearm.

A lot of times with a shotgun (especially HD or Law Enforcement scenarios) what you have in and on it is what you have to work with. That measly 100 meters back to your cruiser may not seem like its far now, but it's a different story once bullets are whizzing by your head. Needless to say, the tradeoff for the weight of the saddle specifically is fairly easy to justify.

Note: I have a Magpul Ladder-style rail cover on in the photos of my actual 870MM.



External link: [Mesa Tactical Sidesaddle](#)

## LoadMaster Systems



This ammo carrier is made of high quality and durable materials. Though it appears bulky, it is lightweight and easy to use. Installation takes some time, but it is not difficult. As always, be sure to check that all the screws are tightened. Predrill small holes for the screws in the stock so it will be easier for you to attach the shell holder.

Masten Machine & Plastics manufactures several versions of this tactical upgrade. There are versions for the stock with a pistol grip and the traditional stock. Another interesting version is a removable one that enables you to install and remove the LoadMaster Systems side saddle when needed.

Thanks to the hook & loop system of shell holders, you can have several spare shell holders with ammo on you any time. It is very easy to replace an empty shell holder with one that has shells. Other shell holders (except for the VCS Detachable Side Ammo Carrier) don't have this advantage. The loop loader holds shells tightly, but also allows you to take them out easily.

When you have your LoadMaster loaded, the balance of your shotgun changes. If used correctly this will not be a problem because the shells will be located under your strong arm.

It can be very handy to have additional ammunition ready to use, and this new tactical upgrade for the Remington 870 shotgun does just that, and it looks great too.

## Blackhawk! Knoxx PowerPak



Installation of the Knoxx PowerPak is not difficult, and only takes about 15-20 minutes. The only problem is that its screws are very small. Once it's assembled, it is easy to snap the cheek on the stock.

This cheek has a nice appearance, and the shells are held reliably in place. In my opinion, the Knoxx PowerPak is a good alternative to receiver mount shell holders.

High cheeks will be useful for people that have a holographic sight or scope installed. It also has a watertight storage compartment that can be used to store earplugs and spare batteries.

### External Links:

Blackhawk! Powerpak: <http://tinyurl.com/jvvcxlz>

## ***Magazine Extensions***

A magazine extension is one of the first upgrades shotgun owners usually buy and install. This is understandable, as shotguns have a very limited number of rounds. There are a lot of different magazine extensions available on the market.

You will see advantages and disadvantages of each of the following extensions:

- Nordic Components
- Remington
- TacStar
- Choate

### **Nordic Components**



The Nordic Components extension is the best magazine extension I have ever seen, and is highly recommended for a number of reasons.

**Bundle:**

Extension (consists of 3 parts)  
Spring

This extension is made of aluminum and comes with a high-quality spring, and black coating.

A lot of shooters use this type of extension and are happy with its performance.

This extension is lightweight. If you compare it to others, you will see a great difference in weight. The Remington 870 is a heavy shotgun and it is nice to have a lightweight extension.

It consists of 3 parts: the tube, tube end cap, and tube nut. This allows you to have one +5 tube for competitions and one +3 tube for home-defense. The +5 tube enables you to have more rounds but it sticks out quite a bit; it is better to have a shorter tube for use in close quarters.

The spring is very good, and is arguably the best spring for a magazine extension you can find. I have seen many of them; the best one is from Nordic Components, and in my opinion the worst one is made by Choate.

## The new ATI 7 Shot Fluted Magazine Extension

*Special thanks to Tactical887 for this review of the new ATI 7 Shot Fluted Magazine Extension.*



The new ATI 7 shot fluted magazine extension is not just all about aesthetics. It is constructed of military type 3 anodized 6061 T6 aluminum. The standoff cap is designed for breaching doors; however, the 7 shot extension runs fairly flush with the bore of an 18.5" barrel (see the first picture below). If one were anticipating using this extension as a breaching tool, then I would recommend you purchase the 8 shot extension. The 8 shot extension will protrude past the bore further than the 7 shot, making it easier to jam into door wedges. ATI makes an assortment of different end caps. If the standoff end cap (shown in the picture above) is not your style, ATI makes plain and swivel stud end caps as well.



ATI incorporated a ratchet base for a tight fit. This is a nice feature because there is no need for a magazine clamp, which is commonly found on the factory Remington 7 shot



extension. I have fired about 100 rounds through my 870 with the new ATI 7 shot fluted magazine extension, and it did not loosen from the recoil.

Another advantage is that the extension runs flush with the shotgun barrel lug (see picture below). This gives the 870 a mean, yet unified look. The barrel lug would also supply extra support to the extension during the breaching process.



The ATI 7 shot fluted magazine compared to the Remington factory 7 shot magazine extension are like night and day.

#### **Cons of the Remington 7 shot magazine extension:**

- A magazine clamp is needed in order to keep the extension from coming loose during recoil. The magazine clamp will scratch the barrel, as well as the extension, upon removal and reassembly. The magazine clamp is added weight and prolongs take down time.
- The bayonet mount creates a smaller internal diameter, which shortens the magazine spring and creates more tension, only allowing for six 2 ¾" shot shells to be loaded in the magazine tube and one in the chamber. This technically makes the 870 have a 6+1 capacity, but when you think about it, it really is only a 6 shot extension even though it's marketed as a 7 shot extension.

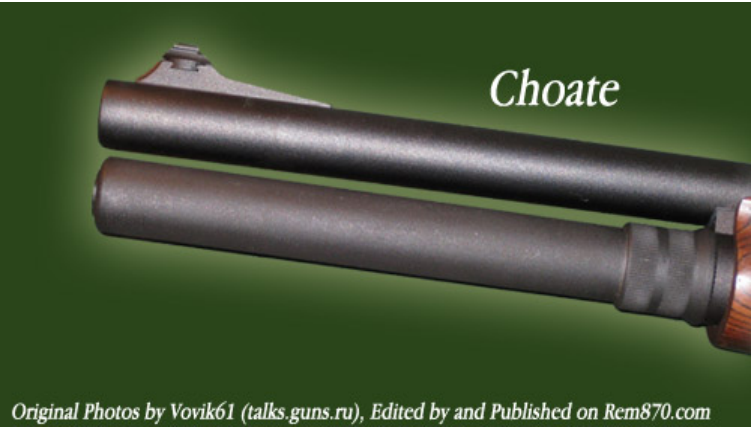
#### **Pros of the ATI 7 shot fluted magazine extension in regards to the Remington factory mag ext.**

- ✓ No magazine clamp.
- ✓ Military type 3 anodized 6061 T6 aluminum construction.
- ✓ Fast take down time.
- ✓ Allows the magazine spring to have proper tension; the magazine tube will hold seven 2 ¾" shot shells and one in the chamber for a total of a 7+1 capacity.



ATI is stepping up their quality and their attention to detail. The new ATI 7 shot fluted magazine extension comes in a nice foam padded box. At the bottom of the box are the installation instructions and the 7 shot magazine spring. For the small price of \$50.00, with 2-day shipping and \$50.00 insurance, you can expect this magazine extension to arrive quickly. ATI has changed their designs, has quality, packaging, and provided 2-day shipping with insurance and customer service to provide a better experience for the consumer. With all of these details to consider, the new ATI 7 shot fluted magazine extension is a fantastic choice and a great addition to any Remington 870.

**Choate**



This extension is known to have numerous problems with feeding and installation.

- Bundle:**  
 Extension  
 Spring  
 Clamp (with swivel)  
 Mounting screw for clamp  
 Orange follower with tail

This is a one-piece extension made of metal. It is available in a polished blue or matte blue finish. There are several known problems with the Choate magazine extension:

1. The spring needs to be cut to the proper length prior to installation.
2. Its follower is too big, and the diameter needs to be reduced to be able to slide freely in the magazine tube.
3. It is difficult to thread fully onto the existing magazine tube, and fits very tightly.
4. There are problems with feeding follower sticks. This can be fixed by polishing the inside of the extension tube.

It looks like this extension was stamped and not made of a solid piece of metal.

## TacStar



There are a lot of happy customers that recommend this extension.

**Bundle:**  
Extension  
Spring

This is one of the most popular magazine extensions for the Remington 870 shotgun. You can select a polished blued or matte parkerized variant. The tube is made of a solid piece of metal. Some of the users of this magazine extension complain about the non-durable parkerized coating. Other than that issue, it works perfectly and does not need any modifications.

## Remington 870 Wilson Combat Magazine Extension

Thanks to Synchronizor for this review.

Wilson Combat, through the Scattergun Technologies brand that they acquired in 2000, produces and sells a line of aftermarket +1 and +2 magazine extension kits for Remington shotguns. Intended specifically for duty and defensive use, they can be found on Wilson Combat's own high-dollar custom combat 870s, as well as guns from other custom builders such as AI&P Tactical. Competitively-priced and proven in law enforcement applications, these extensions have become quite popular, and are often among the first kits to be considered by 870 owners planning a build.

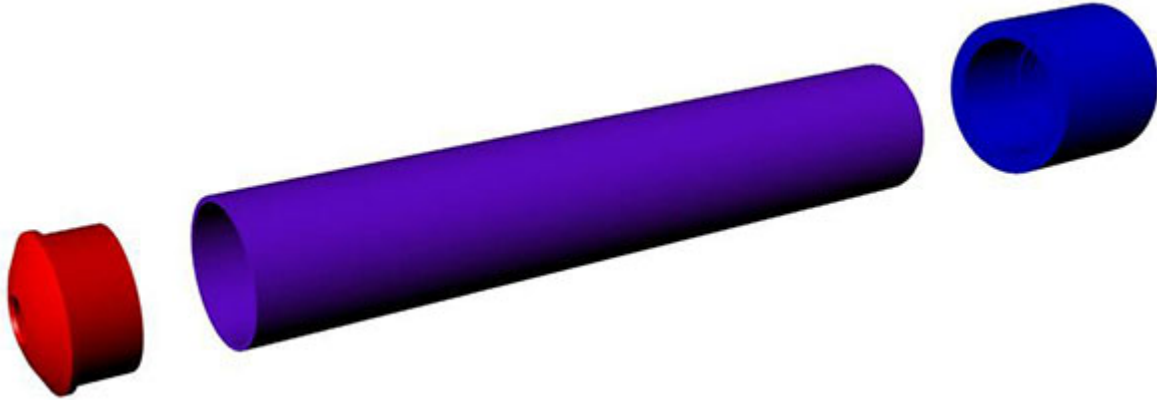


I've owned and used a Wilson Combat +1 extension for some time now, and was eager to evaluate the +2 since it's intended to be paired with the 18/18.5" barrel lengths that are by far the most common on combat/defensive 870s.

### **Extension Design & Construction:**

The Wilson Combat extensions are single-piece designs, meaning the extension is a single, rigid part that installs just like an elongated magazine cap. This makes it simpler to install than two-piece designs, and there's no need to use a clamp that can mar the finish on the barrel & extension (though a clamp can still be used for added reinforcement or to mount accessories if desired).

The core of the magazine extension tube is constructed from separately-manufactured base, tube, and end cap parts that are permanently attached to form the single-piece unit. Some competing single-piece magazine extensions are machined from a single piece of stock for added strength and durability; but the Wilson Combat extensions seem to be put together very securely, with plenty of surface area involved in each joint. In the event of extreme abuse, I would expect the threaded joint between the extension and magazine tube to fail long before any of the joints in the extension itself.

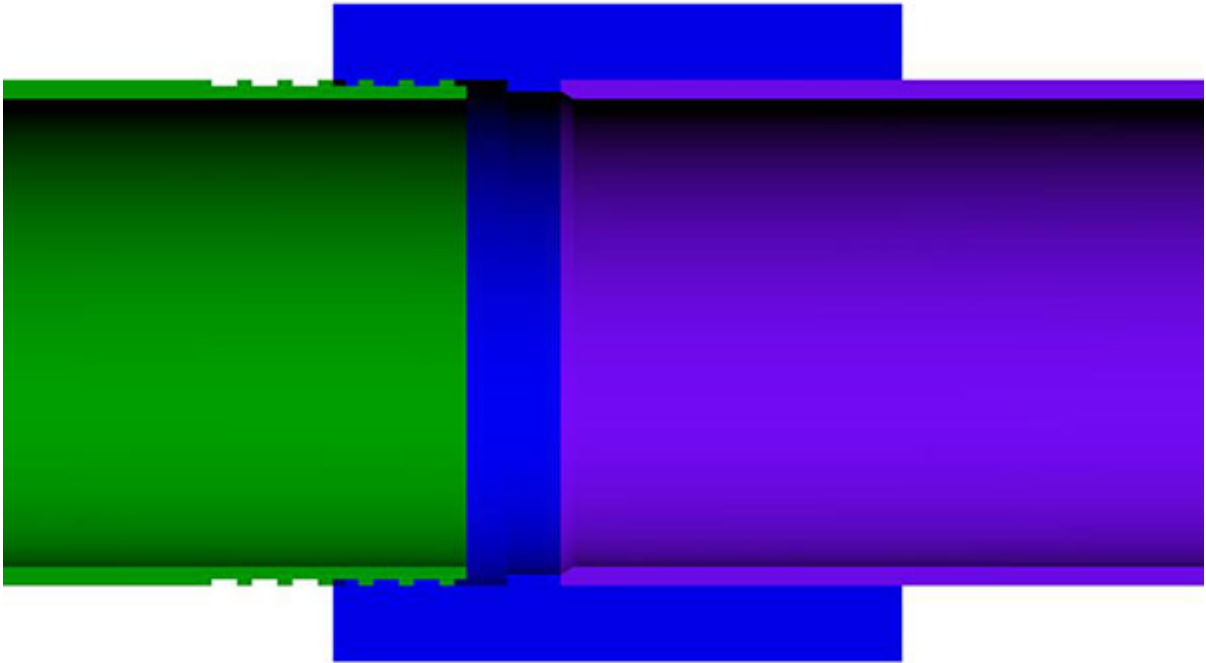


The extension's cylindrical base is 1.125" long and just under 1.3" in diameter. Most of the base features very well-done knurling that is deep, sharp, and provides an excellent grip for removal and installation by hand. This knurling is one of my favorite features of the Wilson Combat extensions; a big advantage of single-piece magazine extensions is their simple and straightforward installation, and having to pack along a wrench or pair of pliers because you can't get enough of a grip to properly tighten or loosen one of these extensions kind of ruins that. Any magazine extension can potentially get stuck and require tools to break loose, of course, but with the Wilson Combat extensions, you'll practically take skin off before your fingers start slipping. I wish all my magazine caps and extensions featured such a positive grip surface.



The base is dimpled on the bottom to engage the magazine cap detents on barrels that feature them. These dimples are placed at the correct radius to align with the detents (on my barrels, at least) and they engage very positively. Radial dimples like these are also used by factory 870 magazine caps, so credit to Wilson Combat for sticking with a proven concept rather than trying to reinvent the wheel.

Inside, the magazine extension's base can accommodate  $1\frac{1}{32}$ " (.34375") of the threaded end of a magazine tube, plenty to allow the extension to be properly tightened down against the barrel guide ring on properly-made 870s and clones, though in most cases there will be some extra space left over. In addition, there is a small amount of space between where the female threaded portion of the base ends, and the actual extended tube section begins. This machined lip inside the extension's base has a larger internal diameter than that of the extended tube, effectively widening the gap between the two tubes.



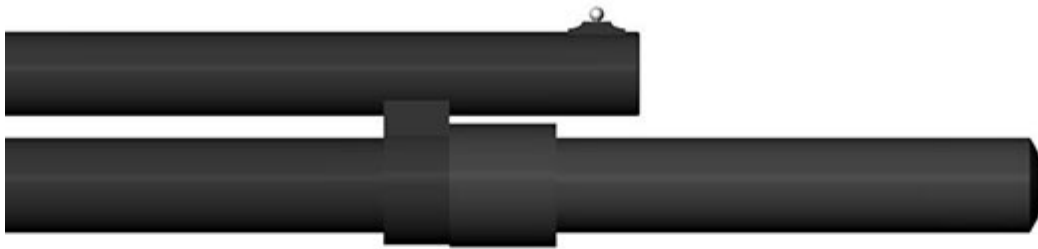
Forward of the base, the extended tube section has a standard 1" outer diameter, making it compatible with a wide variety of clamp-on accessories, and is closed off at the front end by a slightly rounded cap. In the center of the end cap is a quarter-inch vent hole that allows air to move in and out of the tube to reduce pressure drag, provides a point where any water (or other liquids) can quickly and easily drain out, and allows a dowel or rod to be inserted to control and align the magazine spring during assembly and disassembly. Alternatively, this hole can be plugged with a sling stud or a cap screw.



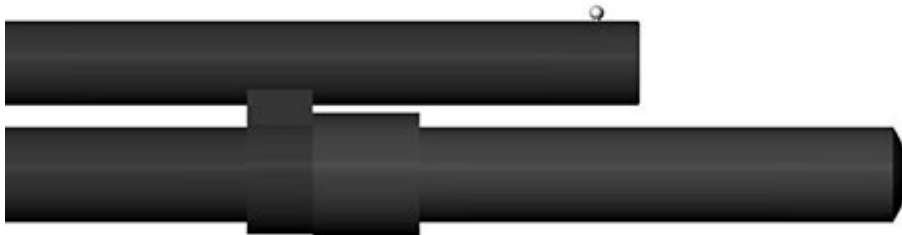
Overall, the magazine extension tube is just a hair under 6.25" in total length, meaning its end will line up with the muzzle of an 18" barrel – or will be a half-inch back from the muzzle of an 18.5" barrel – when installed on a standard 870 with a 4-round base magazine tube (barrels for which should have 11.75" between the breechface and the front of the barrel guide ring). Since this is a single-piece extension, it indexes from the front of the barrel guide ring, and installing any under-cap accessories beneath the extension will shift it forward by the thickness of the accessory.

As a single-piece design that requires no reinforcing clamp or bracket, a Wilson Combat +2 can be readily installed on 870s with nonstandard magazine tubes. The H&R Pardner Pump 870 clones with 5-round magazine tubes have barrel guide rings about 15" from the breechface, and the newer 870 Express Tacticals with 6-round magazine tubes have barrel guide rings located 16.5" from the breechface. So, if installed on a Pardner Pump Protector or long-mag 870 Express Tactical – both of which have 18.5" barrels – a Wilson Combat +2 will extend roughly 2.75" or 4.25" past the muzzle, respectively (note that these measurements don't account for extended choke tubes).





## Express Tactical

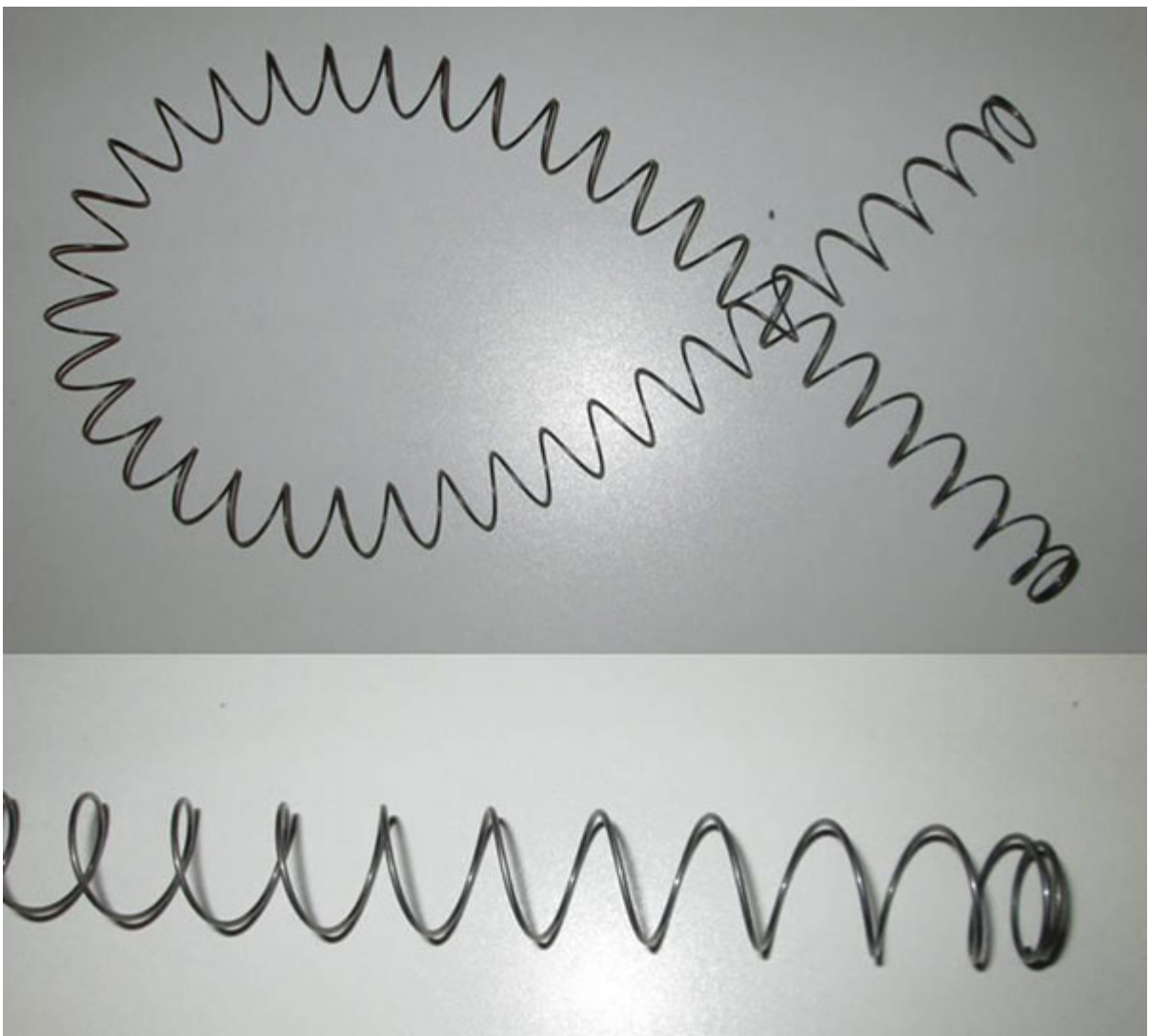


## Pardner Pump Protector

Some folks might be turned off by the look, but allowing a magazine tube to extend a handful of inches past the muzzle should cause no functional problems – it's quite a common sight on competition shotguns, in fact. Normal shotgun shot doesn't spread fast enough to actually strike the tube (though the end of the tube will tend to pick up powder residue), and the sling plates available on Wilson Combat extensions only need about 1.25" of barrel length ahead of the guide ring to engage properly.

### Spring:

All Wilson Combat magazine extension kits include a new magazine spring sized for the longer-length magazine tube, and replacement springs can be ordered on their own from Wilson Combat's website for \$8. These spring are variable-diameter or "beehive" types; starting at .65" in diameter at the ends, the coils quickly grow to a larger OD of .76" in the middle.



27" long when relaxed, The Wilson Combat +2 spring can be compressed to as little as .75" for a high solid length ratio of 36. This impressive compressibility is possible because the narrower end coils can recess into the larger central coils, while the central coils are large enough to easily stagger and overlap.



The trade-off is that this spring will not function properly with most cup-style followers. The central coils are too wide to fit inside such followers, and will tend to stack up on the rim of the cup instead, cutting down on capacity and dragging noticeably on the inside of the magazine tube. A solid-bodied follower with a spring-centering tail will function best with this spring. If you want to put together a maximum-capacity setup with a cup-style follower, you should probably replace the spring as well (though in a pinch, the spring seems strong enough to overcome the added drag).

With the Remington 870 magazine extension tube installed on a standard 4-round magazine tube with .3" of thread engagement, the Wilson Combat spring produced an empty force of 2.625 pounds with the included follower. This should be plenty of force to ensure reliable function; it may even be a bit high for some. With the spring's long relaxed length, you have room to trim it if you find it to be overly stiff. If you do shorten it though, I'd recommend removing coils from one end only, and installing the spring with the cut end toward the muzzle. This will preserve the narrower-diameter coils on the other end to properly center the spring on the tail of the follower.

If the Wilson Combat +2 is installed with the included spring on a 5-round Pardner Pump or a 6-round Express Tactical, I estimate that the empty spring force will be reduced to roughly 1.5 lbf or 1 lbf, respectively (based on compressing the spring to the approximate length it would be in those magazines). This would likely be enough force for proper feeding in most cases, but because the Wilson Combat extensions have constant internal diameters, there should be no issues with using any alternate magazine springs to increase spring force with a longer magazine tube.

**Follower:**

The followers included in Wilson Combat extension kits are of the tailed variety, with solid bodies. The tail is intended to center the spring and stabilize the follower, and is just under 1.1" long, and about .54" wide at the base. The body is .9" in diameter and .53" thick, with a filleted front edge and a sharp rear edge. In the center of the follower is a raised post that makes it easier to tell by feel when the magazine is empty.



The follower is constructed from a high-visibility green polymer that stands out sharply as a clear visual cue when the magazine is empty. I was unable to find any information on the exact polymer used on Wilson Combat's website. Brownells describes it as nylon on their page for full Wilson Combat extension kits, but then claim it's made from ABS on the page for the follower itself. Whatever it is, it seems reasonably sturdy, though not as smooth or slippery as the materials used in some other aftermarket polymer followers.

Before obtaining the +2 extension for this review, I had purchased a used Wilson Combat +1 extension, and I was not impressed with the follower that came with it. The tail was overly long for the +1 spring and noticeably crooked. The post in the center could crack open shallow shell crimps with repeated loading & unloading, and its attachment to the body of the follower was structurally weak. With no center hole or side cuts, the tight-fitting follower experienced significant pressure drag if the extension's vent hole was plugged. Finally, while Wilson Combat's site claims that these followers are fully-machined, there are clear mold marks on the outside, and a substantial internal void where the tail meets the body. When I received the +2 extension kit for this review and saw that it had the same follower with all the same problems, I was less than excited.



However, it's not all bad news. The tail's length is a much better fit in the +2 extension, coming to rest against the end of the extension just as the spring is about to reach full compression, thus preventing the spring from being crushed if the user loses count while loading, or intentionally tries to force an extra shell in. The tail's diameter is a good match to the spring's narrower end coils, so the spring stays centered where it can't hang up against the tube wall or impart a torque on the follower; and the fact that the tail is slightly crooked is less of an issue thanks to the spring's wider central coils. And though it's not as strong or slippery as other aftermarket polymer followers, the Wilson Combat part does not drag too severely, and seems perfectly capable of standing up to the minimal friction and very specific forces it'll experience inside a magazine tube.

As for the problematic center post, its weak structural support makes it quite easy to simply snap it off and be rid of it. The hollow area that remains still makes it easy (easier, in my opinion) to tell the follower apart from a shell by touch; and with the post gone, a passage is opened up through the hollow tail that helps to relieve pressure drag if the extension's vent hole is closed off.



At the end of the day, I would consider this follower to be quite serviceable – especially with the center post removed. Though there are probably better-made alternatives on the market, they don't really do anything the Wilson Combat follower can't do well enough. You can certainly upgrade if you like, but if you just need something that works, I wouldn't consider it necessary to spend additional money on a separate follower.

## Capacity:

The Wilson Combat +2 has about 5 5/8" of internal tube space as measured from its bottom face to the internal end of the tube. When installed on a standard 4-round magazine tube with a typical amount of thread engagement, the result is a total internal tube length of right around 17.5" from the forward shell latch to the end of the extension. With 5- and 6-round magazine tubes, the total internal space should be about 20.81" and 22.25", respectively. Fully compressed, the spring and follower (not counting the follower's center post) take up about 1.65" of the space in the extension. That leaves about 15.85", 19.16", and 20.6" of space for the shells with 4, 5, and 6-round magazine tubes, respectively.

## Approximate Maximum Crimped Shell Lengths for Various Magazine Capacities

Base Tube Size	5 Shells	6 Shells	7 Shells	8 Shells	9 Shells
4-round standard (15.85" usable space)	3.17"	2.64"	2.26"	1.98"	1.76"
5-round H&R clone (19.16" usable space)	3.83"	3.19"	2.74"	2.40"	2.13"
6-round Express Tactical (20.60" usable space)	4.12"	3.43"	2.94"	2.58"	2.29"

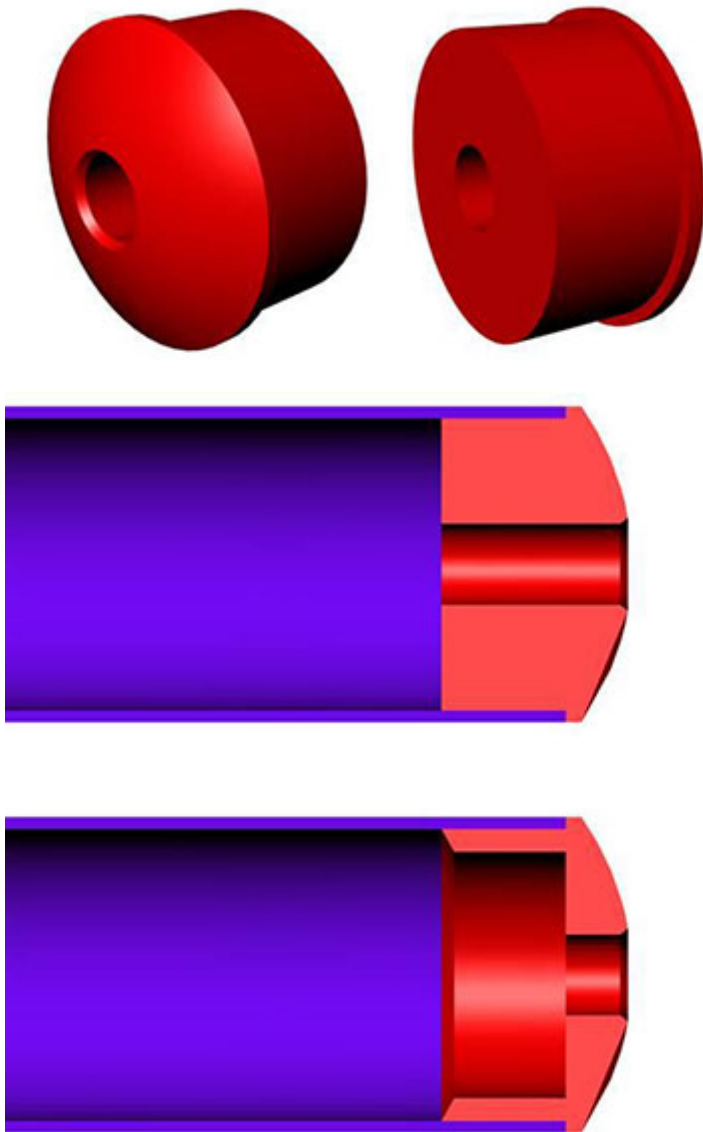
So, whether it's installed on a standard 4-round 870, a 5-round Pardner Pump, or a 6-round Express Tactical, this extension should easily provide enough space for two additional SAAMI-compliant 2.75" shells, which would conform to a maximum crimped length of 2.45 inches. It should also be a +2 with 3.5" shells (which have a SAAMI-specified 3.155" maximum crimped length) if installed on an 870 SuperMag, increasing capacity from 3 shells to 5 shells. With 2.5" or short-crimped 2.75" shells, this extension can even act as a +3 without changing the spring & follower.

That's all good news, but things get a bit more complicated when it comes to 3" magnums. SAAMI specs allow a maximum crimped length of 2.76" for 3" shells, and magnum 870s can even handle slightly longer ammunition. However, a Wilson Combat +2 extension will not be able to fit six of any shells longer than about 2.64" when installed on a standard 4-round magazine tube. The maximum allowable crimped length for a +2 capacity increase with a typical 6-round magazine tube is even shorter at about 2.58". So with some 3" shells, the Wilson Combat +2 extension will just be an oversized +1.

I'll emphasize that 2.76" is a maximum length, and many 3" loads will be short enough to allow a +2 capacity increase. Remington's 15-pellet magnum 00 buckshot shells, for example, have average crimped lengths of about 2.52". It's also not at all unusual for +2 magazine extensions to have trouble accommodating long-crimped 3" magnums. So why am I dwelling on this with the Wilson Combat?

Well if you've been paying attention, you may have noticed that this extension's 5 5/8" of internal space is significantly less than its 6.25" external length; 5/8 of an inch less, in fact. This is due to the extension's almost comically thick end cap, which is a solid (apart from the central vent hole) plug of steel extending almost 7/16" into the front end of the tube section. I cannot imagine any valid engineering reason for this end cap design; all it does is reduce capacity and add unneeded mass. I understand that the interior portion of the end cap needs to be long enough to bond securely with the tube, but hollowing out the center of the cap would have reduced weight and freed up more space while providing the same contact area. Yes, such a part would be slightly more complex to machine, but not by much. Besides, my Wilson Combat +1 (which uses the same basic design as the +2) has this style of end cap, so assuming the +1s are still made that way, why not just produce that single end cap variant for use in both +1s and +2s?





To be fair, this magazine extension tube is intended primarily for combat/defensive builds, and will provide a +2 capacity boost with the 2.75" shells that are best suited for those applications. It may be a +1 with certain long-crimped 3" shells, but it will be a +2 with many others, and there is room to experiment with alternate springs and followers if you want to try to squeeze in longer magnums. Still, the engineer in me can't help wondering about nonsensical design aspects like the thick end cap, which only reduces the capabilities and effectiveness of the product.

A final note regarding capacity. Exact numbers can be hard to predict with single-piece magazine extensions since the combined internal space of the extension & magazine tube is directly influenced by how far the extension is threaded onto the end of the magazine tube. I've compiled measurements for a variety of different shotguns and found .3" of exposed magazine tube thread to be about typical, but due to differences between individual factory & aftermarket barrels & receivers, this number can vary quite a bit. I've measured guns with as little as .23" and as much as .32" of magazine tube ahead of the

barrel guide ring, and adding sling plates or other under-cap accessories can cover up an additional tenth of an inch or so of tube thread. If you want to know exactly how much space you'll have to work with, you should measure your own shotgun and do the math.

### **Sling Attachment Hardware:**

In order to provide a front sling attachment point, Wilson Combat +2 extensions are available with integral sling plates. These plates are held in place just forward of the extension's base by a retaining ring welded to the extended tube section, and rotate freely about the extension so that they don't interfere during installation or removal. When the extension is installed on the gun, the plate is held in its intended orientation by a radiused cut-out that engages the barrel.



Four out of the five Wilson Combat +2 extensions come with sling plates (the fifth version just has a bare tube ahead of the base). Three sling plate versions feature simple loops located in bottom (called “vertical” by the manufacturer), right side, or left side locations for direct attachment of a sling. The names for the right- and left-side sling loops can be a little confusing; the loop on the “Right Hand” sling plate is located on the left side of the gun (intended for right-handed shooters), and the “Left Hand” loop is on the right side of the gun.



The fourth type of plate – which came on the extension evaluated here – has a bottom-located hole through which a sling stud attaches with a polymer-insert locknut. Wilson Combat describes the sling stud as a “Quick Detach Stud”, but it shouldn’t be confused with push-button or clip-on quick-detach sling mount points, it’s just a standard sling-swivel attachment stud like those you’d find on most hunting shotguns and rifles. Because it attaches with a locknut, you can position the stud on either the front or back of the plate (I prefer the front, as it helps to space the sling out and away from the fore-end); and either tighten it, or leave it loose enough to rotate in place.



The loop-style plates are best used with more-permanent slings that will not need to be quickly or frequently removed and reattached. The version with the bottom sling stud will accept the swivels that come on typical hunting slings, and pairs well with the sling studs built into the bottom of most factory 870 stocks. While it's not as simple as a sling loop, it does make it faster and easier to attach or remove your sling as needed, and I'd tend to recommend it for hunting or defensive applications where you don't want a sling swinging around when you're actually shooting. The version without a sling plate would be the obvious choice if you don't need a forward sling attachment point, or if you want to use an under-cap or clamp-on sling mount from another manufacturer.

The concept with these sling plates is essentially the same as under-cap sling plates, which center on the magazine tube and index on the barrel the same way. The key difference is that instead of sitting between the barrel guide ring and the magazine cap or extension, these plates are built into the extension. Thanks to this, these sling plates don't complicate take-down & reassembly or reduce thread engagement (which weakens the joint and can potentially contribute to function problems) like under-cap sling plates do. However, they do retain some of the other issues associated with under-cap sling plates.

A big one is barrel fit. There are a wide variety of barrels made for 12ga 870s, with differing outer diameters and spacing (center-to-center distance between the barrel and mag tube), so there's no way to manufacture a plate that is a perfect fit to every 870 barrel right out of the box. If you make it too tight in an attempt to avoid a loose fit, it won't be able to be used with many barrels without being modified. If you intentionally make it loose-fitting it'll be compatible with a wider variety of barrels, but it'll have a significant amount of free play with most. The Wilson Combat sling plates are apparently designed to fit standard-profile Police and Express barrels. When paired with my 18.5" bead-sight HD barrel or the 28" vent-rib Express barrel I use for trap shooting, the plate fits quite well with minimal free play. The same goes for the Pardner Pump and Express Tactical barrels I've tested this extension with.

The fit is looser with my lighter-profile, higher-spaced 20" Wingmaster slug barrel, and the extra play makes the plate very rattle-prone. If you want to fit one of these plates under a heavy-wall barrel, on the other hand, you'll probably need to do some grinding. If I was looking to regularly pair a Wilson Combat +2 with anything other than a standard Express/Police barrel, I'd probably go with the one that doesn't have a sling plate.



Another downside to these plates is that they're permanently attached to the extension, and can only be oriented one way. Other manufacturers such as S&J Hardware and Vang Comp market extensions with similar sling plates, but theirs can be reoriented or removed for different applications. With the sling plates on the Wilson Combat +2, you're stuck with just one orientation, and the only way to remove the plate is to permanently grind off the welds on the retaining ring. While allowing for easy removal would make the design of the extension more complicated, Wilson Combat could easily modify these sling plates to allow for different orientations by giving the plates multiple barrel cut-outs.

It's also worth noting that these sling plates can potentially interfere with fore-end-mounted lights, and the metal-on-metal contact can mar the barrel's finish – especially if the plate has a lot of free play with that barrel. Finally, because the extensions are apparently finished after the sling plates have been installed, some users report issues with the plate sticking and refusing to rotate, thus preventing the extension from threading onto a shotgun. If this is the case with your extension, it should be easy enough to tap loose.

All that said, I was more satisfied than I thought I would be with the QD stud sling plate on my Wilson Combat +2. The plate fits and functions quite well with standard barrels, and I really appreciate how the concept complements the single-piece design by keeping the extension just as simple and easy to remove or install as it would be without a sling plate. If a single sling attachment orientation meets your needs, and your barrel has the proper profile, these sling plates will work just fine. And if not, there's always the option of purchasing the Wilson Combat +2 without a sling plate.

### **Finish:**

These magazine extensions feature a matte grey finish that isn't specified on Wilson Combat's website, but is described as Parkerizing on MidwayUSA. Parkerizing is a metal phosphate conversion coating that is popular on military firearms. Its matte appearance, decent wear resistance, and good corrosion protection (when kept oiled) makes it a good choice for this extension, and it can be used as a base for other gun paints or coatings if desired.

The appearance of Parkerizing can vary depending on the exact process used, and the finish on the Wilson Combat extension is slightly lighter in color than Remington's Express oxide finish or current factory Parkerizing. The difference isn't major, but it is noticeable, especially under certain lighting. I have no problem with this slight color mismatch, and I doubt many will, but if you want an exact out-of-the-box match to a factory finish, you may want to look elsewhere. Color aside, the extension's exterior Parkerizing is very smooth and uniform, absorbs and holds oil well, and so far seems to be fairly durable.



The finishing on the inside of the tube is not as nice-looking, but still seems perfectly serviceable, and will obviously not hurt function or appearance in the slightest once the extension is installed on a gun. Also, since the sling plates are apparently installed before the extension is finished, there's some question as to how well the unexposed surfaces there are finished. I didn't grind off the welds to check, but my Wilson Combat +1 has had its sling plate removed, and the underlying metal was clearly not finished like the rest of the tube was. If you choose a Wilson Combat extension with a sling plate and you're working in a wet or cold environment, I would recommend working some oil into the spaces between the sling plate, retaining ring, and extension base to help displace moisture.

**Cost:**

Regardless of the version, Wilson Combat sells all of their +1 and +2 extension kits for a standard price of \$45 (USD) each on their website. That price tag is a major selling point of the Wilson Combat extensions; \$45 is near the bottom of the price range for Remington extension kits, but unlike many similarly-priced extensions, Wilson Combat kits are full-featured and have a good reputation for durability and reliability.

These magazine extensions can also be obtained from 3rd-party online retailers such as Brownells and MidwayUSA, or found on the used market. The +2 extension reviewed here was purchased from Brownells to take advantage of a promo code on a combined order. At the time of this writing, both Midway and Brownells sell Wilson Combat extensions for (essentially) the same standard price as the WC site, but they do not stock all versions. If you're in the market for one of these, I would recommend visiting Wilson Combat's website first to identify the kit that best meets your needs, and then check 3rd-party sellers if you want to try to find a better deal on that particular kit.

Wilson Combat is currently holding a holiday sale in their website, with \$4.50 or \$9 discounts available for certain extension kits. These discounts will reportedly run through Christmas 2014.

**Weight:**

Combined, the Wilson Combat +2 extension tube, spring, follower, and sling plate with sling stud weigh in at about 9.2 ounces. I didn't grind off the welds to weigh the sling plate on its own, but based on the dimensions of those parts and the density of typical steel alloys, I estimate that the plate, sling stud, nut, and retaining ring add roughly 1.5 ounces to the total. The simpler loop-style sling plates appear to be somewhat lighter than the QD stud version evaluated here, and the extension without any plate should be the full 1.5 ounces lighter. If any readers have a different version of the Wilson Combat +2 that they can weigh, I'd appreciate it if you could relay that weight in the comments below.

	<b>Extension (with QD sling plate)</b>	<b>Follower</b>	<b>Spring</b>	<b>Wave Washer (optional)</b>	<b>Total</b>
<b>Weight (oz.)</b>	8.2	.28	.64	.05	9.17

Assuming you're replacing a typical magazine cap, spring retainer, 4-round spring, and factory polymer follower, expect these extensions to increase your gun's unloaded weight by between 7 ounces for the QD stud version and (roughly) 5.5 ounces for the version with no sling plate. This figure can obviously vary slightly depending on the specific parts you're replacing, and a handful of other variables.

The Wilson Combat +2 extension kits are hardly featherweights, and keeping the mass down was clearly not a design priority. I will admit that the extra heft is somewhat appealing, but the engineer in me can't help but realize that the extension's chunky cylindrical base, wide QD sling plate, and overly-thick end cap could all have been



lightened considerably without meaningfully reducing the strength of the magazine assembly, or harming function in any way. Still, few would call an extra ounce or two a deal-breaker, and if the simplified part design is what allows Wilson Combat to offer these extension kits at that very appealing \$45 price point, I would consider it a reasonable trade-off.

I'm sure someone will point out that a heavier firearm will kick less, and while it is true that free recoil energy is inversely proportional to the gun's total mass, adding or removing an ounce or two will have a negligible impact on the total mass – and thus the recoil – of an 8- or 9-pound gun. Besides, even if you did want to add mass to your 870 to soak up recoil, a defensive/combat gun will tend to handle better if that mass is added to the receiver or stock, rather than out near the muzzle.

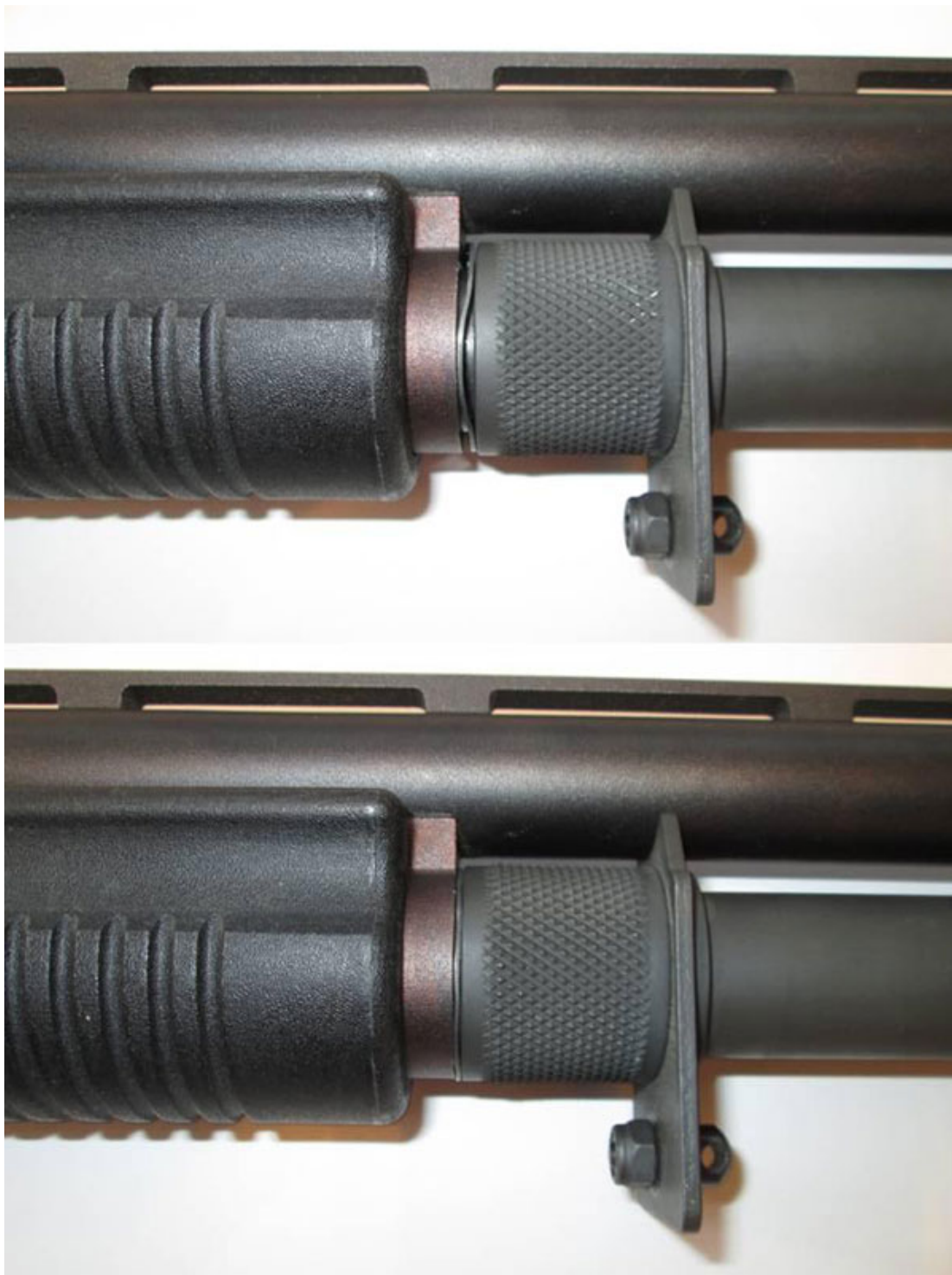
### **Additional Features & Accessories:**

#### **Wave Washer:**



As an extra plus, Wilson Combat magazine extension kits come with a wave-style lockwasher that can be placed between the magazine extension and barrel guide ring to help secure the extension on barrels that don't have magazine cap detents. By functioning as disc springs, these washers significantly increase the friction in the joint, and can maintain that friction even if the extension backs off slightly. This is a very nice bonus since many newer 870 barrels lack the magazine cap detents that single-piece extensions

usually rely on to stay in place under recoil. Compared to a reinforcing clamp, a wave washer is much simpler, lighter, and more in-line with the advantages of single-piece extensions.



For hunting or sporting shotguns that are being converted to pull double-duty as HD weapons, the included wave washer has another benefit. Most current-production hunting or competition 870s, as well as the Pardner Pump clones and long-mag Express Tacticals,

have switched to the new-style internal-ratchet cap retention system with plastic spring retainers that lock into stamped dimples in the end of the magazine tube. Once the dimples have been removed to allow a magazine extension to function properly, the new-style spring retainer can no longer secure the magazine cap. In this situation, the wave washer can be used to keep the magazine cap tight when the gun is switched back to its original configuration.



These washers are just .03" thick when compressed flat, so they don't contribute much to the length of the extension, or to its internal gap. They do add another thing to keep track of when you take your gun apart though, so for that reason alone, I wouldn't recommend using this washer on barrels that have magazine cap detents (unless you're using the washer with some other flat-bottom magazine cap or extension that can't engage the detent).

If you need replacements or want to use one of these washers with a different cap or extension, they can be purchased separately from Wilson Combat's website for \$3 each.

### **Installation:**

Before installing any magazine tube extension kit, you must first remove the gun's magazine cap (or extension), spring retainer, magazine spring, follower, and magazine plug (if present). If the gun has dimples in the magazine tube, these will have to be drilled or pressed out for the extension to have its full capacity.

If your extension has a sling plate, make sure it is able to rotate freely in place before trying to install the extension. If it's stuck, tap it loose with a non-marring object like a plastic hammer or a scrap piece of wood. If you want to remove the follower's center post, place the follower against the side of a tabletop or other sharp-cornered item with the end of the post on top of the corner, and apply steady downward pressure to the follower to snap the post off.

To install the magazine extension tube, ensure that the barrel is properly seated in the receiver, and insert the new follower and extension spring into the magazine tube. Place the extension over the end of the spring, make sure the sling plate (if your extension has one) is properly aligned with the barrel, then thread the extension onto the magazine tube. If you're having trouble controlling the rather long Wilson Combat spring, you can insert a thin rod through the hole at the end of the extension to keep it aligned. Finally, tighten the extension down firmly against the barrel guide ring.



Remington 870 Shotgun Guide from Rem870.com, version: 2015-final

If your barrel does not have a magazine cap detent in its guide ring, install the included wave washer between the barrel guide ring and the base of the extension (this is best done before inserting the magazine spring), and tighten the extension down until the washer is pretty much flat. If there is a detent in the barrel guide ring, or you're securing the extension to the barrel with a reinforcing bracket or clamp-on accessory, you do not need to use the wave washer.

### **Function, Reliability, & Common Problems:**

The function of any magazine extension revolves around its ability to reliably accept and feed shells. I tested the reliability of the Wilson Combat extension/follower combination by threading the extension onto a spare magazine tube with .2", .25", .3", and a maximum 1 1/32" of thread engagement, inserting the spring and follower, and working the follower back and forth across the internal transition using a 7/8" wooden dowel with one end cut about ten degrees from square. The angled end of the dowel serves to cant the follower inside the magazine tube, giving the best possible chance for the follower to snag at the internal gap between the magazine tube and the extension.



Initially the Wilson Combat follower functioned almost flawlessly, only experiencing a bit of very minor snagging with a short .2" of thread engagement. This was suspiciously good performance considering the less-than ideal interface of the single-piece design and the sharp rear edge of the follower's body. Further investigation revealed that the follower's raised center post was the only contact point between the follower and the angled end of the dowel, so the follower was not actually being canted in the tube (most shell crimps are recessed in the middle, which would negate this effect).

Repeating the test using a follower with the center post removed produced more realistic results. During simulated loading and feeding with the angled dowel, the follower had a tendency to snag firmly at the transition, and this propensity increased as thread engagement was reduced. With a minimal .2" of thread engagement, it became very difficult to get the follower past the gap and into the extension without hanging up.

Another potential problem was revealed when I tested function with actual hulls. Unless the magazine tube was threaded as far as possible into the extension (which will not normally be the case when the extension is installed on an actual shotgun), the rim of the foremost shell would occasionally catch on the edge of the magazine tube, halting feeding until it was shaken loose.

So does this mean the extension or follower isn't reliable? I wouldn't say so. Yes, I was able to cause hang-ups with an angled dowel in a simulated magazine setup, but while cycling and shooting actual shotgun shells with the extension installed on an actual shotgun, I never experienced a single hiccup. My dowel test has caused hang-ups of some kind with every extension/follower combo I've tested so far, especially when the extension was a single-piece. This test is more focused on examining the nature and severity of hang-ups than it is on predicting their likelihood or frequency. I'll also point out that the worst hang-ups I was able to cause occurred during loading; feeding hang-ups were considerably less common and severe even during worst-case testing. If they do occur during real-world use, these feed jams probably wouldn't even be noticed, as the mechanical perturbation of firing or cycling the gun would likely be enough to shake things loose. Realistically, for a defensive or combat shotgun, it's feeding that really needs to happen reliably in life-or-death shootings; a rare, minor snag when loading poor-quality shells can be tolerated. Finally, while I feel they could be improved, the Wilson Combat follower does fit well and show a good ability to stay aligned in the tube, and the extension does not have an excessive engagement length or an especially abrupt internal transition – as is the case with some other single-piece extensions.

I would advise against using under-cap accessories with this extension to help keep the internal gap to a minimum, and recommend avoiding deformed or poorly-crimped shells when maximum reliability is desired (which is really a no-brainer, if we're honest). With those steps taken, hang-ups of any kind should be practically non-existent during normal loading and cycling, and I feel I could trust this extension to do its job reliably even when the stakes are life-and-death.

Another major reliability consideration for any magazine extension is whether or not it can stay in place under recoil. Single-piece extensions also start out with a bit of a handicap here compared to two-piece designs, as they are generally expected to be able to stay in place without the aid of a clamp.

Shooting both standard 1 1/8-ounce, 3 DE target loads and full-power buckshot loads, I tested the Wilson Combat +2 with two different barrels; one with a magazine cap detent, the other with no detent. With the latter barrel, I tested the extension both with and without the wave washer. As expected, the extension's factory-style detent dimples kept it very secure on the barrel with the magazine cap detent, and the wave washer seemed to do its job quite well on the other barrel, with no apparent movement of the extension.



The real surprise came when the extension stayed put on the detent-less barrel without the wave washer. I chalk this up primarily to the barrel expanding as it heated up, but it certainly didn't hurt that the excellent knurling on the extension's base let me tighten it down very firmly before shooting. I may have seen some loosening if I had let the barrel cool down between shots or fired a much larger quantity of shells, but that's not terribly realistic given what this extension is intended for. In home/woods defense, law enforcement, and security roles, shootings tend to happen fast and end fast, with small numbers of shells fired and little time between shots for things to potentially cool down and loosen up. For hunting or recreational shooting where shots may be higher in number and less frequent, it's no problem to occasionally reach up and make sure the extension is still tight. While I would recommend using the included wave washer if your barrel doesn't have a magazine cap detent, I would have no problem trusting this extension to stay in place well enough without it for most real-world applications (high-volume competition shooting being a possible exception, but I would recommend a lightweight, higher-end extension kit for a competition build anyway).



Now, I didn't have the time or money to give each setup a robust 1000-round torture test, but between my encouraging results and the excellent reputation these extensions have in hard-use law enforcement roles, I have little doubt about a Wilson Combat extension's ability to stay in place in action.

## **Conclusions:**

### **Remington 870 Wilson Combat Magazine Extension Tube Pros:**

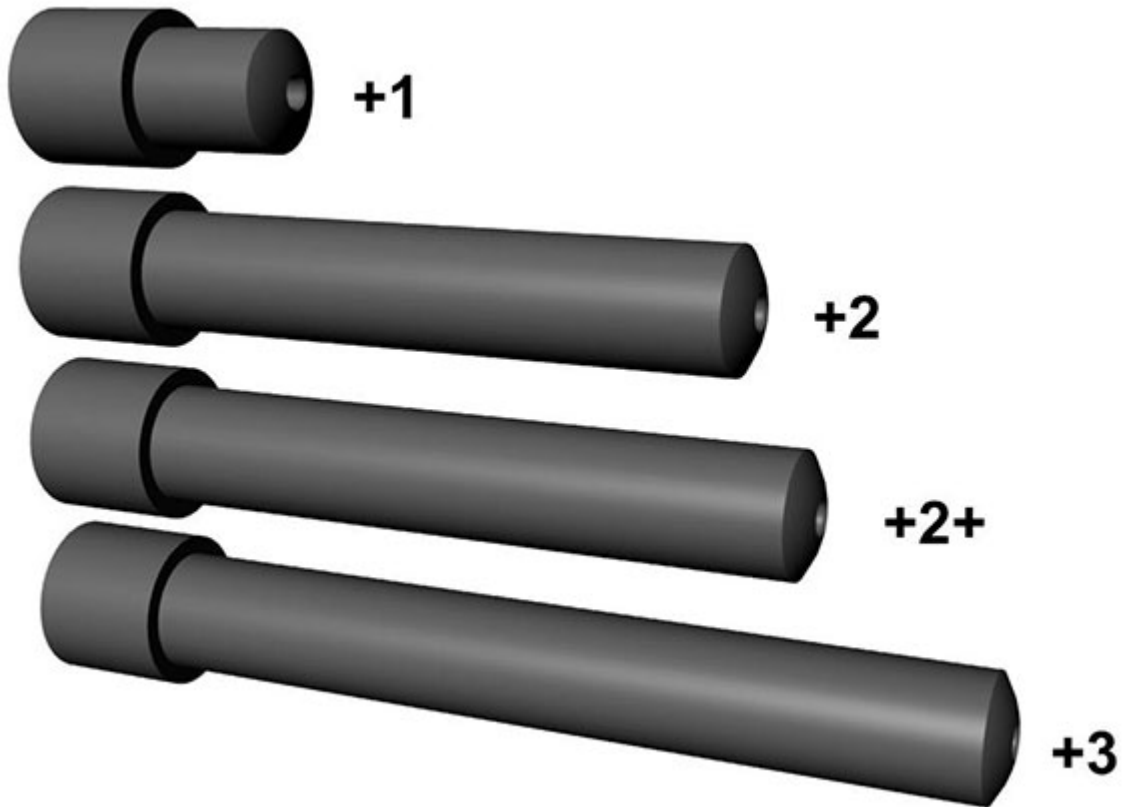
- Sturdy all-steel construction
- Single-piece design is simple & easy to remove or install in any setting, and does not require a clamp
- Sharp knurling on base provides excellent grip for tool-less installation & removal
- Vent hole in end cap serves several beneficial functions
- Follower tail helps to stabilize follower, and its length is a good match for the included spring
- Dimpled base borrows from factory magazine cap design to secure extension on barrels with magazine cap detents
- Included wave washer helps to secure extension on barrels without magazine cap detents
- Standard 1" outer tube diameter is compatible with most clamp-on accessories
- A variety of options for sling plates, including a lack thereof.
- +2 with pretty much any SAAMI-compliant 2.75" or 3.5" shells
- Potentially a +3 with the right spring, follower, and/or shells
- Will not extend past any standard barrel longer than 18"
- Rear-mounted sling plates can be paired with any barrel with a muzzle at least 1.25" ahead of the guide ring

### **Remington 870 Wilson Combat Magazine Extension Tube Cons:**

- Follower's manufacturing quality leaves something to be desired; best to remove center post before it can cause problems
- Internal tube gap and sharp-edged follower can lead to hang-ups with damaged or poorly-crimped shells
- Use of under-cap accessories can negatively affect reliability
- Overly-thick end cap limits capacity, may only be a +1 with longer 3" shells
- Sling plates are permanently-attached and can only be oriented one way
- Sling plates will not fit properly with some barrels
- Extension is somewhat overbuilt and heavy, with unnecessary mass in the base, end cap, & sling plate
- Extension's finish is not an exact match to factory 870 finishes

If I'm being honest, the Wilson Combat +2 is not terribly refined. With its slightly short length, chunky construction, and thick end cap, this isn't a great choice if you're looking to build a maximum-capacity magazine configuration that matches an 18.5" barrel, or if you're after a really lightweight kit for hunting, packing, or competition. Its single-piece design and permanently-attached sling mounting hardware is not terribly versatile, even compared to other single-piece extensions. Both of these areas could be improved upon with some very simple design tweaks.

I also would like to see Wilson Combat expand their lineup. A slightly-extended +2 (a +2+, if you will) that is a half-inch longer to line up with 18.5" barrels would be great; with the right spring and follower, it could easily be a +3 with many 2.75" shells. A full +3 sized to match 20" barrels would also be welcome. Both of these additions would be as simple as attaching the same base, cap, and sling plate parts to a longer length of tube.



But while I could probably triple this review's word count going into all the ways I think these extensions could be improved, as they are now, they work. They're sturdy, fairly reliable, easy to install, give you a decent number of options for attaching slings and other accessories, and come with everything you need included in the kit. They'll give you a +2 capacity increase with most shells, work with just about any 870 or 870 clone, and allow you the freedom to experiment with alternate springs and followers if you so desire. And they do all that for a very competitive price.

If someone came to me looking for a way to boost the capacity of their home defense or truck shotgun with minimal expense and headache, a Wilson Combat kit would probably be the first thing I'd suggest; and it would likely be the last thing I'd have to. With the single-piece design and included wave washer, I'd also be quick to recommend this extension and a basic 18" or 18.5" barrel to anyone who wanted a quick and easy way to convert a sporting 870 into a defensive shotgun when they weren't hunting or competing with it.



The Wilson Combat +2 extension is an excellent bang for the buck, and my favorite single-piece +2 so far. It's simple & easy to use, does what it's supposed to, and I don't have to treat it like glass or worry about it falling apart under recoil. Though I have some other higher-priced +2 extensions I could use, I predict that the Wilson Combat is going to be spending the most time on my 870 for the foreseeable future.





## **Remington 870 Vang Comp Systems Magazine Extension Tube**

*Thanks to Synchronizer for this review.*

Founded in 1990 by gunsmith Hans Vang, Vang Comp Systems, Inc. offers a variety of gunsmithing and refinishing services, but is perhaps best known for the system of barrel

modifications that they offer for combat shotguns. The company also produces a handful of tactical shotgun parts and accessories, including a line of magazine extensions. Vang Comp's shotgun accessories have an overall positive reputation across the shotgunning community for quality and durability, and their Remington magazine extensions, offered in +1 and +2 varieties, are popular choices for combat and defensive 870 builds. They are also notably used on Nighthawk's extremely high-dollar custom combat 870s.



### **Cost:**

I'll start with price, because that plays into much of what follows.

Vang Comp sells their +1 and +2 Remington extension kits for \$75 (USD) each on their website. These extensions are also currently carried by online shooting retailer Brownells. The extension reviewed here was purchased while on sale at Brownells for \$60, but they normally sell the kits for the same \$75 price as the manufacturer's website.

\$75 is a mid-range price as far as 870 extensions go. It's less than some high-dollar kits that cost \$90 – \$100 or more, but still a fair step up from budget-priced kits in the \$40 – \$50 neighborhood. Since there are good, reliable, & durable kits in that latter category, one would expect the Vang Comp's increased price tag to be reflected in added functionality, a more refined design, or enhanced parts & construction compared to the lower-priced competition.

### **Extension Design & Construction:**

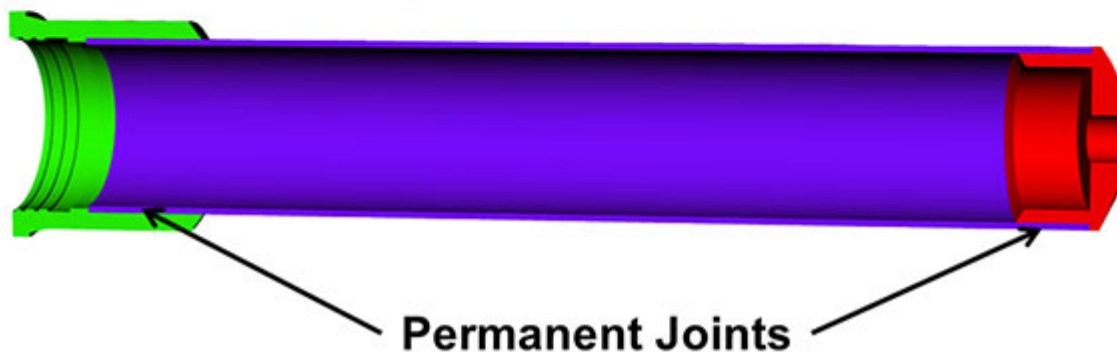
The Vang Comp extensions are single-piece designs, meaning that the extension is a single, rigid assembly that installs just like an elongated magazine cap.

Further, these are monolithic single-piece extensions, meaning the entire extension is machined as a single part. Many other single-piece extensions are composite designs, constructed from multiple components that are then permanently attached. Some lower-quality composite extensions – often ones that combine steel and aluminum or metal and polymer parts using sub-par bonding techniques – have been known to come apart under recoil or heavy use. Now, there are many other well-designed and properly-made composite extensions on the market that have proven to be very strong and durable enough for even the most demanding applications. However, there is still something to be said for monolithic designs like the Vang Comp. With no joints at all, even the very remote possibility of failure due to manufacturing defects, severe impacts, or extreme corrosion is entirely eliminated. And without the need for different parts to overlap and provide enough surface area for a strong joint, the extension can be lighter and more streamlined.

## Monolithic Extension



## Composite Extension



Of course, the benefits of monolithic extensions are often over-stated. For one thing, no matter how durable an extension is, there'll still be a weakness where the extension threads onto the magazine tube. This is far more likely to become a failure point during rough handling than a brazed-on end cap or coupling, especially for single-piece extensions, which are often not installed with reinforcing clamps. I've also heard it claimed that the Vang Comp's monolithic construction makes it more dent-resistant than others, but since its extended tube section has the same wall thickness as other 12ga extensions with standard inner and outer diameters, the structural limits of the tube will obviously be very much the same (in fact, brazed-on end caps like the one shown in the above image can actually help to further reinforce a small portion of the tube).



Monolithic construction is a nice feature, especially if it's taken advantage of to refine other attributes like weight or capacity. However, it's certainly not a guarantee of superiority, nor does it result in an extension that "simply has no weaknesses", as Vang Comp's website claims.

The overall length of the Vang Comp +2 is slightly under 6 1/8", meaning it will end at about the 17 7/8" mark along the barrel when installed on a standard 870 with a 4-round base magazine tube (standard 870 barrels should have 11.75" between the breechface and the front of the barrel guide ring). I generally prefer to see extensions take full advantage of the space under the barrels that they're intended to match, but this will likely be a positive feature for those who dislike the look of a magazine that's longer than the barrel. With its slightly undersized length, this extension is pretty much guaranteed not to stick out past the muzzle of a defensive barrel, even if the barrel is a minimal 18" long, and even if an under-cap accessory (which should be less than 1/8" thick) is installed beneath it.



The H&R Pardner Pump 870 clones with 5-round magazine tubes have barrel guide rings a hair over 15 inches from the breechface, and the newer 870 Express Tacticals with 6-round base magazine tubes have barrel guide rings located 16.5" from the breechface. If installed on one of these non-standard 870s, the Vang Comp +2 will end 21 1/8" and 22 5/8" from the breechface, respectively. All current-production long-mag Express Tacticals have 18.5" barrels (not including extended choke tubes), so the Vang Comp +2 would extend 4 1/8" past the muzzle on one of these. If installed on an 18.5" Pardner Pump Protector, the Vang Comp +2 would extend 2 5/8" past the muzzle. Neither arrangement should cause any functional problems, aside from the extension tube requiring a little extra cleaning after shooting.



## **870 Express Tactical**

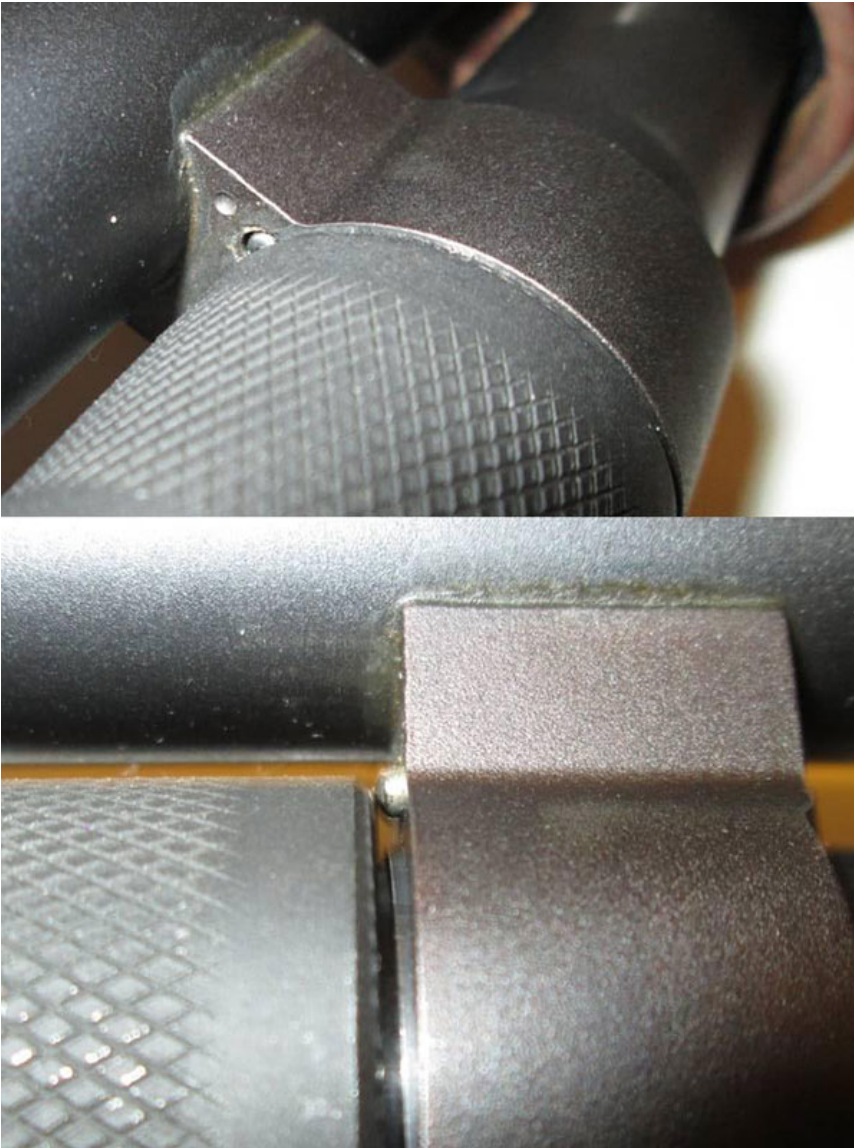


## **H&R Pardner Pump Protector**

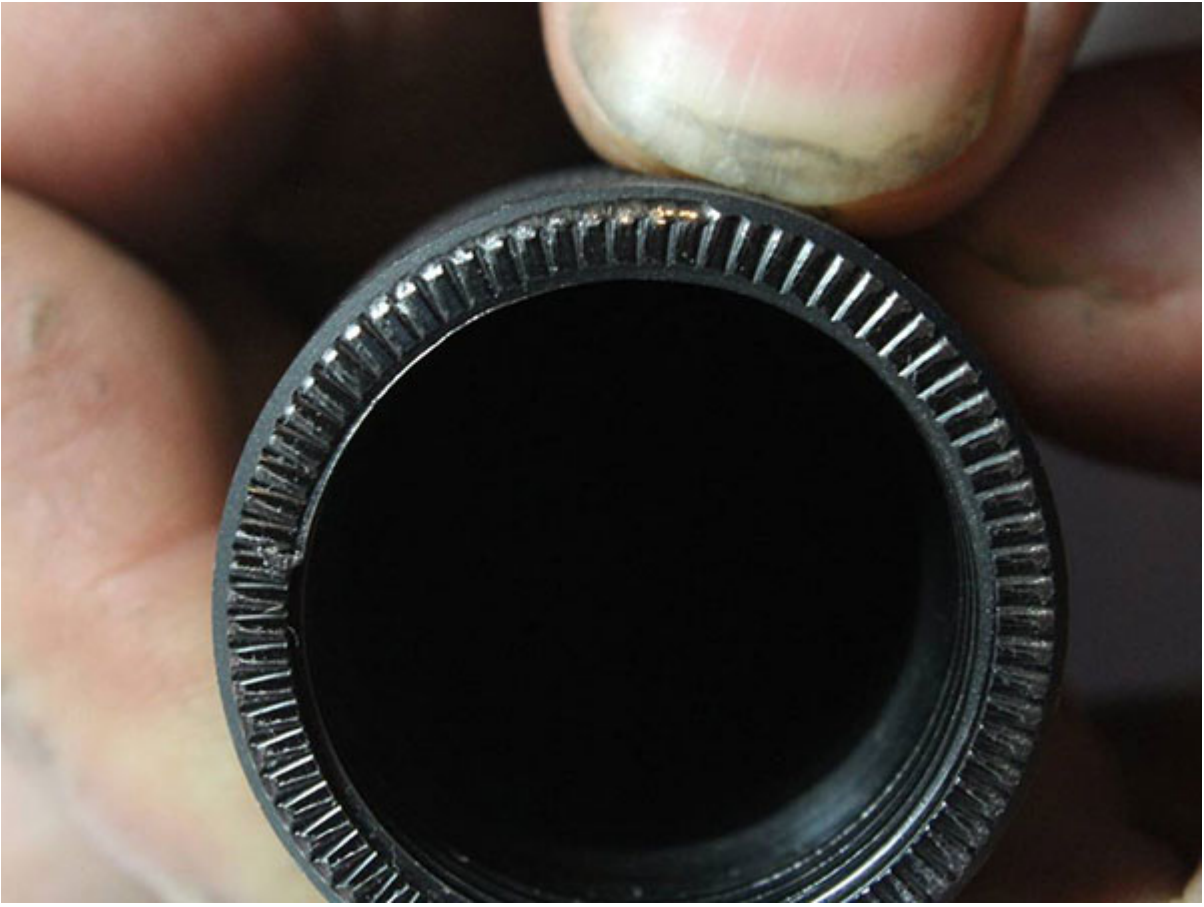
The base of the extension is about 1.25" in diameter, and features diamond-pattern knurling for added grip. This knurling is less than impressive, however. It's rather shallow and flat, more a set of criss-crossing lines than a pattern of raised points. It adds a little texture, but doesn't provide nearly as much traction as full knurling would have. I have to use both hands on the extended tube section to get enough grip to properly tighten the extension. You may find yourself having to use pliers if you have a wave washer or an under-cap accessory with a detent ball underneath it.



The base of the extension has ridges cut into the bottom that are meant to engage the magazine cap detents on barrels that feature them. These ridges are fairly narrow and shallow, and while they do engage magazine cap detents, the base of the extension is barely wide enough to reach the detents (the detents on my barrels, at least), especially since the base of the extension is chamfered, keeping the ridges from extending out to the base's full diameter. When the extension is installed, about half of the detent is still visible, and wear marks show that only the very outside ends of the ridges are engaging it.



As a result, the Vang Comp extension is noticeably easier to turn against the detent than other extensions or magazine caps with deeper, wider notches or dimples; and the relatively delicate ridges seem far more prone to wear with repeated installation & removal. This goes especially for the hard detent balls used in some under-cap sling plates; hand-tightening the Vang Comp +2 onto a GG&G sling plate with a detent ball only once left a deep gouge completely through the ridges.



I can appreciate the weight savings of a slim extension base, and there's some aesthetic appeal to having the extension match the outer diameter of the barrel guide ring, but I don't consider those benefits to be worth such tenuous detent engagement. If Vang Comp really felt they needed to keep to this 1.25" maximum outer diameter – perhaps to avoid interference with very heavy-walled barrels – they should have put more effort into achieving a positive engagement with magazine cap detents. It could be that these ridges are faster or cheaper to machine than factory-style dimples or slots, or maybe Vang Comp just wanted to do something different.

About 1.5" up from the base, the extended tube section has a standard 1" outer diameter that should be compatible with a wide variety of clamp-on accessories. The forward end of the tube features a wide, shallow chamfer and a flat front face. Many magazine extensions have a central vent hole here, but the Vang Comp extensions have a solid end with no hole. Some may prefer this solid tube end, as it ensures that foreign material cannot enter the magazine tube if the gun is dropped muzzle-first into mud, water, or snow. It also gives the front of the extension a nice, clean appearance, at least to my eye.

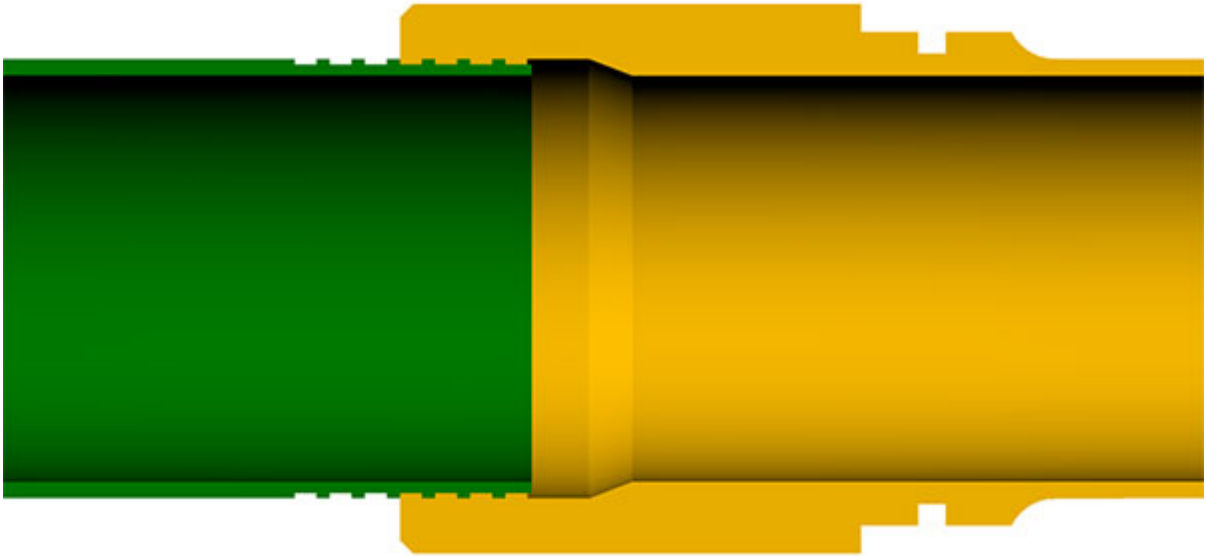


On the other hand, the lack of a vent hole means that if any water does make its way into the magazine, it will not be able to easily drain out (remember, whether its muzzle end is sealed or not, an 870's magazine is always open at the other end). A vent hole also reduces mass slightly, helps to limit pressure drag, and allows a dowel or rod to be inserted to control and align the magazine spring during assembly and disassembly. So there are certainly trade-offs to sealing the end of a magazine tube. Personally, I'd rather have a vent hole, but I'll admit it's a fairly minor nit-pick, and one that could be addressed in minutes on a lathe.

Moving inside, the interior of the extension is fairly rough, almost as if the machinist forgot to make a final finish pass during the boring process. This had a noticeable effect during loading, I could clearly feel and hear when the metal follower & shell rims reached the extended tube and started scraping along the uneven surface. Considering Vang Comp's good reputation and the price of this extension kit, I was quite surprised to see such sub-par machining.



In addition, the female threaded area in the extension's base can accommodate up to  $15/32$ " (.46875") of the threaded end of a magazine tube. This is excessive to say the least, as 870s typically only have about .3" of exposed magazine tube thread with the barrel in place. Some guns will have a hundredth of an inch or two more than that, but I've also measured guns with as little as .23" of magazine tube ahead of the barrel guide ring, and adding sling plates or other under-cap accessories can reduce the amount of tube exposed by another tenth of an inch or so.



With over half an inch of space before the interior of the extension shrinks down to the standard mag tube inner diameter, there will be a substantial gap between the two tube sections with pretty much any 870. Between this wide gap and the abrupt transition from the threaded area to the narrower extended tube, very careful follower selection will be needed for the Vang Comp +2 to run reliably.

**Follower:**

On that subject, Vang Comp's magazine extension kits come with the company's own replacement stainless steel magazine follower. This follower is also sold separately on Vang Comp's website for \$22.





This is a cup-style follower with a body that's .9" in diameter and .63" long, and an internal cup that's .75" wide and half an inch deep. The body is broken up by two wide grooves that leave three raised bands for the follower to slide on. Running through the center of the follower is a .47"-diameter hole that saves a little weight, and should help to relieve pressure drag in the sealed Vang Comp extension. But the main purpose of this hole, according to the follower's page on Vang Comp's website, is to make it easier to feel when the magazine is empty. This it does very well; the hole is immediately and positively apparent to the touch, and clearly distinguishes the follower from the base of a shotshell.

Unfortunately, the same cannot be said for visual checks of the magazine. The bare stainless steel could very easily be mistaken for a steel shell cup or vice versa, especially for rushed and/or distracted users. Painting the visible end a bright color is a recommended

safety step for anyone using this follower; though for such an expensive – and supposedly top-end – aftermarket part, this really should have already been done by the manufacturer.



I'll state right here that I am not a fan of metal magazine followers. I'm fully aware that the 870 and many other shotguns have used metal followers in decades past. However, today's modern polymers are more than strong enough to handle the minimal stresses experienced by a magazine follower, and compared to steel alternatives, quality polymer followers are lighter, less expensive, inherently high-visibility (as opposed to paint or other surface treatments that can wear off), lower-friction, immune to corrosion, far easier to modify if needed, and cause less wear to other parts in the gun that are not as easy to replace. The only real downside to polymer followers is their shorter operating life, but with good design and material selection, appropriate replacement intervals should still be measured in years, if not decades. As with virtually any firearm, the 870 has a number of components that should be replaced periodically to ensure reliable function, so also replacing the follower occasionally is not that big of a deal. I personally have no problem with buying and installing a new polymer follower every once in a while in order to get all the other advantages of the material – especially since even high-end polymer followers are not all that expensive.

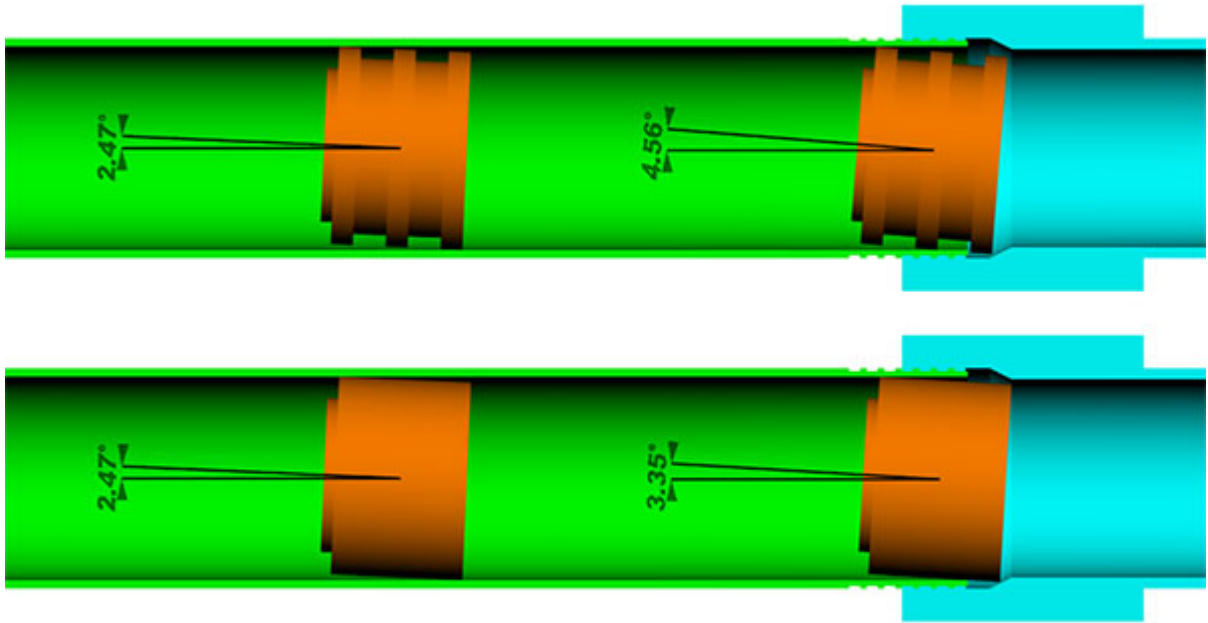
But with that said, I'm going to set the issue of material aside because this follower's biggest problems are a result of its triple-bearing-band geometry, not what it's made from. This same design in aluminum or polymer would have the same functional problems.

Vang Comp's website claims that the follower's reduced bearing surface makes it travel smoother in the magazine tube, which doesn't make much sense. Sliding friction is dependent on two things: the coefficient of friction between the two surfaces in question, and the magnitude of the force pressing those surfaces against each other. Reducing the contact surface area will not directly affect the total friction between non-deforming surfaces.

It's also claimed that the grooves between the rings will collect debris that ends up in the magazine tube, making the magazine easier to clean. I can't really refute or confirm this, but either way, I don't think it's much of a consideration. In my experience, the 870's magazine isn't that prone to collecting powder residue to begin with. The only route by which smoke or soot can get from the chamber & receiver into the magazine is pretty well blocked by a shell or the follower. My live-fire testing of the Vang Comp extension included one long range session where I ran hundreds of shells – mostly inexpensive target loads & cheap buckshot with fairly dirty powders – out of an 870 that had already gone months without a cleaning. By the end of the day, the inside of the receiver was pretty well gummed up, and there was noticeable added resistance when cycling the action, but when I pulled the gun apart for cleaning that evening, the interior of the magazine tube just needed a quick wipe, and the stainless follower was virtually spotless.

One thing I can say about this bearing-band design is that it significantly reduces reliability with magazine extensions that have any kind of internal gap. A couple fundamental aspects of magazine followers are at play here. In order to move freely, any magazine follower must be slightly smaller in diameter than the interior of the magazine tube, and this difference in diameter allows the follower to tilt slightly inside the tube. The greater the diameter difference, the more extreme the follower's maximum tilt. The extent to which the follower is able to tilt also depends on the follower's length; the longer the follower, the less it can tilt before its opposite edges make contact with the wall of the magazine tube.

In a seamless tube, a triple-bearing-band follower would theoretically have the same maximum tilt as a constant-diameter follower with the same outer diameter and effective body length, since the very front and rear edges of the body are going to be the only points of contact in both cases. But if one of the outer bands on a triple-bearing-band follower becomes unsupported – as it would in the gap between a magazine tube and a single-piece extension – the constraint on follower tilt shifts immediately to the outer edge of the central bearing band, effectively making the follower's body much shorter. This trait allows the Vang Comp and other similar followers to tilt much further than a constant-diameter follower would in the same situation, getting the leading edge of its body deeper into the gap between the two sections of the magazine.

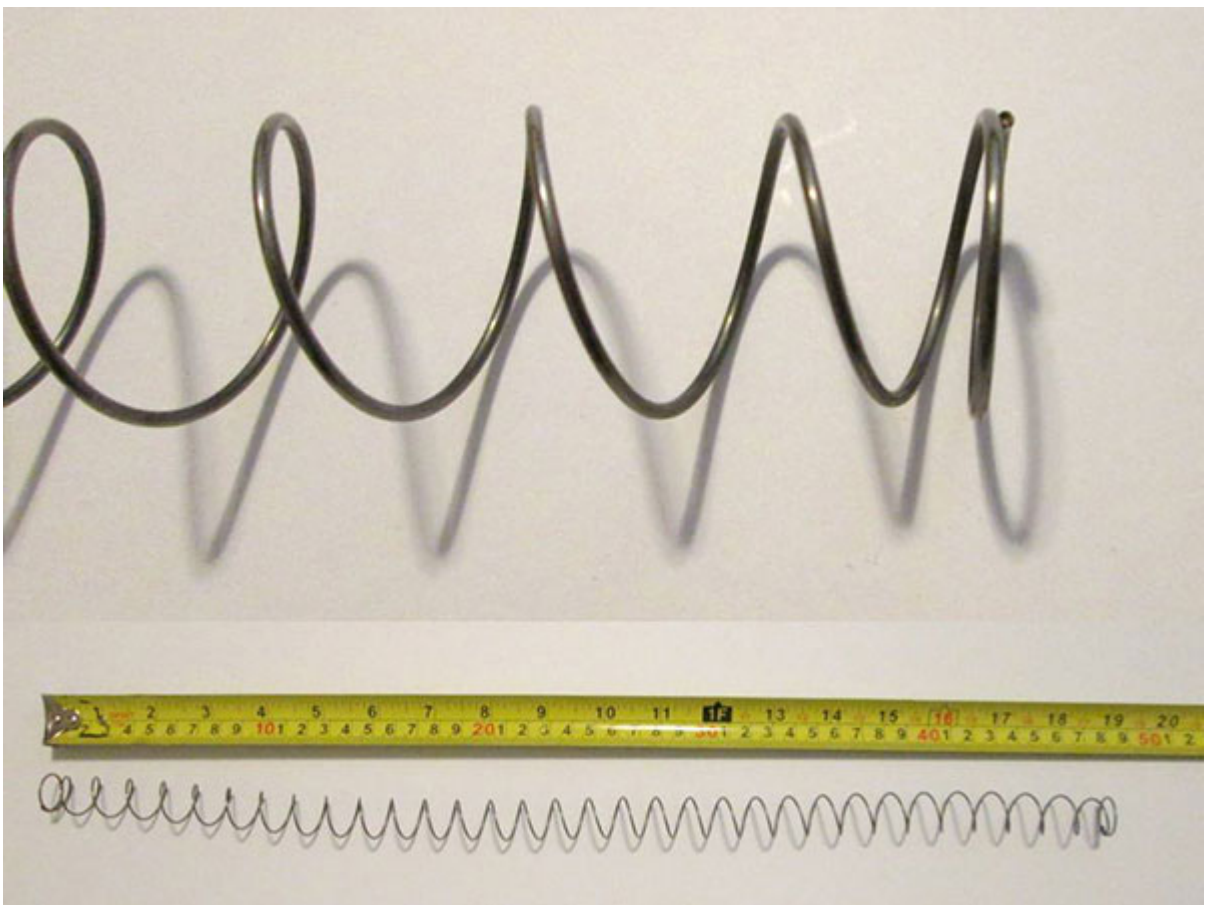


In addition, the Vang Comp follower has fairly abrupt leading and trailing edges, with only a very slight chamfer to break the corners. This makes it prone to hanging up at the joints of two-piece extensions as well as those of single-piece designs. To be frank, I would only recommend using this follower in single-piece, non-extended magazine tubes (more specifically, single-piece magazine tubes without spring retainer dimples, as the Vang Comp follower is not slotted). It might also be usable in a +1 extension if it's paired with a spring that's long enough to keep the follower inside the base magazine tube. For +2 or longer extensions though, especially single-piece designs with gaps at the transition, this is not the most reliable follower design.

What makes this worse is that the official description of the Vang Comp +2 extension kit lists the included follower as a \$22 value. If almost 30% of the kit's cost is going toward something that should just be replaced, that's an issue.

### **Spring:**

The Vang Comp +2 extension kits include a new, "extra-power" (their words, not mine) magazine spring. This spring's design is fairly unremarkable; it's a simple straight spring with a constant .726" outer coil diameter, squared ends, a solid length of .58", and a solid length ratio of about 33.



What is noteworthy is that this spring is only about 19" long when relaxed (this is after its initial break-in, it measured at 19.5" out of the box), less than two inches longer than the total interior magazine space. When tested with the Vang Comp +2, the spring exerted a very low empty force – so low that I couldn't get an accurate reading from the scale I normally use to test spring force. Best as I could figure using a digital postal scale (which is not the best instrument for this type of measurement), the empty spring force in new condition was around 10 ounces (0.625 pounds), and only 8 ounces (half a pound) after break-in.

That's less force than I get with a magazine cap and my factory 4-round magazine spring (the standard 4-round spring, not the longer police 4-round spring). I've owned and used my 4-round spring for years, and even cut a couple coils off of one end, but it'll still give me about 1.25 lbf (or 20 ounces) at empty without a magazine spring retainer. If my used, shortened factory magazine spring is twice as strong as the Vang Comp spring in out-of-the-box condition, Vang Comp has no business marketing it as an "extra-power" spring.

During quick cycling, extremely weak magazine springs can obviously lead to feed malfunctions if the shell isn't pushed all the way out of the magazine before the carrier starts trying to lift it. This will jam the gun and prevent the bolt from going into battery until the slide is brought to the rear again. Another issue with a weak magazine spring can arise when the gun is cycled under recoil. When a tube-fed shotgun recoils rear-ward, the shells in the magazine will tend to shift forward relative to the rest of the gun due to inertia. If the magazine spring is not strong enough to limit this reaction and get the shells back against

the rear-most shell latch in time, the next shell may never leave the magazine and the bolt will close on an empty chamber. This malfunction is more likely to occur in extended magazines, as having more shells in the tube increases the amount of inertia that the magazine spring must work against. Either of these problems could be deadly in a defensive shooting, which is why it is imperative that extensions marketed for combat use include a robust spring.

On its own, this doesn't seem like a bad spring. With its short solid length and ability to fit into cup-style followers, I could see it working well for maximizing capacity in a +1 extension on a hunting shotgun. Perhaps Vang Comp wanted to use one spring in both their +1 and +2 extensions, but if that's the case, instead of using an intermediate-length spring in both kits, it would have been far better to size the spring for the longer +2 extensions, and let those who buy the +1 kits trim it if they find it to be too long and stiff for their needs. In a +2, this spring is extremely underpowered, and should probably be replaced (adding another \$5 – \$10 to the cost of this kit). I would not trust it to feed shells reliably in anything but the most laid-back shooting – and I'd even be less than confident there, given how fast the spring lost stiffness during my testing (more on that later).

Using this spring with the Vang Comp +2 on a 5-round 870 clone or a 6-round Express Tactical is hardly worth talking about. If the Vang Comp +2 is installed on either of these long-mag variants, the total magazine tube space will be greater than the spring's relaxed length.

### **Capacity:**

The Vang Comp +2 extension has about 5 15/32" (5.46875") of internal tube space as measured from its base to the internal end of the tube. I arrived at this figure by inserting, marking, and measuring a flat-ended 7/8" wooden dowel, but I'll note that the forward end of the tube is conical rather than flat, due to how these extensions are machined. This means that the effective internal space of the extension may differ by a fraction of an inch depending on the specific spring and/or follower you're using. And of course, as with any single-piece magazine extension, the magazine's total internal space is directly influenced by how far the extension is threaded onto the end of the magazine tube. I've found .3" of exposed magazine tube thread to be about typical for 870s, but this number can vary, especially with 870 clones, or if under-cap accessories are used. If you want to know exactly how much space you'll have to work with, you should measure your own shotgun and do the math to adjust the following numbers as necessary.

That said, with a typical amount of thread engagement, installing the Vang Comp +2 on a standard 4-round magazine tube results in a total internal tube length of right around 17.3" from the forward shell latch to the internal end of the extension. At full compression, the spring and follower included in the kit reduce this available space to right around 16.08". With 5- and 6-round magazine tubes, the total internal space should be roughly 20.6" and 22", respectively. The amount of that space available for shells depends on the specific spring being used, since the included spring will not function in these longer magazine tubes.

Number of Shells	5	6	7	8
Maximum Crimped Length	3.13"	2.68"	2.30"	2.01"

\*Table assumes extension is installed on a standard 870 with the included spring & follower, for 16.08" of space available for shells.

When the Vang Comp +2 is paired with a standard 4-round magazine tube, there is easily enough space for six SAAMI-compliant 2.75" shells, which would conform to a maximum crimped length of 2.45 inches. It's not quite enough space to ensure the same capacity with longer-crimped 3" shells (SAAMI specifies a 2.76" maximum crimped length for them, and magnum 870s can even feed slightly longer shells), but most 3" magnums will be short enough that you won't see a loss in capacity. This extension should also be a +2 with 3.5" shells (which have a SAAMI-specified 3.155" maximum crimped length) if installed on an 870 SuperMag, increasing capacity from 3 shells to 5 shells. The Vang Comp +2 can even act as a +3 with many shorter-crimped 2.75" or 2.5" shells. During my range testing, I could load seven Federal bulk-pack target shells into the magazine without excessive difficulty when using the included spring & follower.

However, if you replace these parts with a more reliable spring & follower set, such as those from Wilson Combat (about \$12), S&J Hardware (\$20), or Remington (\$10 for both, though probably half that since most 870 owners will already have a factory follower), capacity will be reduced somewhat because the spring will be longer and the follower may have a thicker body. This will likely prevent loading seven in the magazine with typical 2.75" shells, and also more meaningfully affects capacity with 3" shells. I have some roll-crimped 3" Sellier & Bellot 15-pellet magnum 00 buckshot shells that are crimped to around 2.65 inches long, and with a Wilson Combat follower & +2 spring in the Vang Comp extension, I can only barely fit the sixth shell past the first shell latch (which would technically allow the magazine to hold & feed the shells, but prevents certain shooting techniques and greatly increases the likelihood of slip-ups or jams during rapid loading). With a Remington extension spring and follower, there isn't even enough room for six quite typical fold-crimped Remington 3" magnum buckshot shells (about 2.52" crimped).

Now, it's not all that unusual for 3" magnums to be a tight fit in +2 magazine extensions, but if we stop to think about that fact, it seems a bit odd. Six 3" shells with typical fold crimps only take up around 15.5 inches when placed end-to-end, and rarely more than 16" even with shallow roll crimps. So why is it that we can't get this much space out of magazines that are 18 -18.5 inches long externally?



Well, in the case of the Vang Comp +2, it's because the extension's interior is what I can only describe as incomplete. Remember that the Vang Comp extensions are machined from a single piece of bar stock, and part of that machining process is boring out the inside of the bar to form the extended tube. For whatever reason, this boring process was stopped well before the end of the extension, with about half an inch (depending on where you measure from) of solid metal remaining between the internal and external ends.



This is similar to an issue with the Wilson Combat +2 extension that I called out in a previous review. However, that extension is not machined as one piece; it has a separate end cap that is permanently attached to the extended tube section. Because the Wilson Combat extensions are relatively low-cost kits, I can recognize a benefit to an end cap with fewer machining steps. The Vang Comp +2, on the other hand, is a monolithic design, so I cannot think of any valid reason for only partially boring out its interior. The machining step is already there, so why not take it three-eighths or half an inch deeper and have a lighter, more capacious extension? To those who claim this thick end improves durability, half an inch of solid steel on the end of the extension does nothing to reinforce the much thinner tube walls just behind it, or the shallow threads that attach the extension to the gun.

I will step back and recognize that even with a longer spring & solid follower, the Vang Comp +2 can be counted on to live up to its rated capacity with the 2.75" shells that are best suited for use in fighting shotguns. Since this extension is designed and marketed for tactical applications, that's the significant criteria it needs to meet. The limitations with



longer 3" shells are not unique to Vang Comp extensions, but in the context of this extension's price tag and construction, I can't help but hold this less-than-optimized capacity against it.

### **Sling Attachment Hardware:**

The Vang Comp +2 extension incorporates a side-loop sling plate that allows for the direct attachment of slings up to 1 1/4" wide. This plate is able to rotate freely about the extension so as not to interfere with installation or removal, and is held in place just forward of the extension's base by an external retaining ring. Because this retaining ring is relatively easy to take off with simple retaining ring or needle-nose pliers, the sling plate can be reversed or removed depending on the needs and preferences of the user. When the extension is installed on the gun, the plate is held in its intended orientation by a radiused cut-out that engages the barrel.



The concept here is essentially the same as under-cap side-loop sling plates, which center on the magazine tube and index on the barrel the same way. But instead of sitting between the barrel guide ring and the magazine cap or extension, this plate is mounted farther forward on the extension itself, with the front face just short of 1.2 inches ahead of the barrel guide ring. This keeps the sling plate from complicating take-down & reassembly or reducing thread engagement (weakening the joint and potentially contributing to function problems) like under-cap sling plates. This basic concept of extension-mounted sling plates is a solid one. Unfortunately, there are a number of issues with this particular execution of that idea.

A big disadvantage with the Vang Comp sling plate is its poor barrel fit. There are a wide variety of barrels made for 12ga 870s, with differing outer diameters and center-to-center spacing between the barrel and mag tube, and there's simply no way to manufacture a plate that is a perfect fit to every 870 barrel right out of the box. Sling plates from most manufacturers are generally designed to fit standard-profile barrels. While this can lead to some play with certain light-profile or high-spaced barrels, or require modifications to be used with heavy-profile barrels, the fit will be good and tight with the majority of

hunting/sporting 870s as well as nearly all defensive/combat models, so it's a good compromise.

The Vang Comp sling plate, on the other hand, is very loose-fitting. The idea seems to be that it can be paired with any 870 barrel, even heavy-profile ones, without requiring any modifications. The consequence is that with the majority of 870 barrels, this sling plate will have a severe amount of free play, rattling in place and potentially marring the barrel's finish over time.



While I can imagine a reason for this design, I don't think the decision was thought through very well. The only barrels I'm aware of that this sling plate might actually fit are either fully-rifled slug barrels, or high-dollar custom barrels intended for "outlaw" turkey/card-shooting events. Even if someone did want to run an extended magazine for these applications, they probably wouldn't have a need for a tactical/competition-style side sling loop. I feel it would have been much wiser for Vang Comp to equip their extensions with a sling plate that was a better fit with the more common barrel profiles used by Police & Express 870s, and perhaps offer this heavy-barrel-profile sling plate for purchase separately if they felt there was actually a market for it.

Another downside to these plates is that the sling loop can only be oriented to the left or right. Other manufacturers such as S&J Hardware and Wilson Combat market extensions with similar sling plates, but theirs can either be oriented both vertically and to the sides, or are available in different versions with those orientations. With the Vang Comp sling plate, you're limited to the sides only. The problem with this is that nearly all factory 870 stocks – and many aftermarket ones – only come with bottom-mounted sling attachment points. While it is possible to run a sling from the bottom of the stock to the side of the extension, it makes for a rather awkward setup. To properly match the sling loop on the Vang Comp +2,

most users will either have to add a side sling attachment point to the other end of their shotgun, or add a separate vertical sling attachment point to the front of the gun (replacing the Vang Comp sling plate).



Also, the sling loops, while simple, are not conducive to quickly attaching & detaching slings. Each time a sling is installed on or removed from the sling loop, it will have to be partially taken apart; it cannot be unhooked the way carry slings with quick-detach hardware can be. While some folks do prefer to leave a sling on their fighting or competition shotguns at all times, there are many other situations where an easily-removable sling is an advantage. A sling is often considered a liability on a home defense shotgun that is intended to be used indoors, for example, but it's nice to be able to quickly throw one on to investigate suspicious activity or deal with animal threats outdoors. Hunters chiefly use slings only while traveling to and from their hunting area. Once there the sling is of little use, and fumbling with straps and buckles – especially while wearing gloves in cold weather – is an unwelcome and unnecessary added headache.

What makes these issues worse is that avoiding or fixing them would have been as simple as adding another barrel cut-out to these sling plates so that they could be oriented vertically as well as to the side, and manufacturing and offering alternate sling plates with different attachment styles. A sling plate with a vertically-oriented stud for standard quick-detach sling swivels is a sorely-needed option, and a multiple-orientation plate that could accept push-button sling swivels would be welcome as well.

I am aware of one pair of alternate sling plates for Vang Comp extensions offered by Mesa Tactical. These plates feature round loops for clip- or hook-type quick-detach sling hardware. The standard sling plate has one hook loop, and barrel cut-outs for orienting that loop to either the right, left, or bottom of the extension. The ambi sling plate version has a pair of hook loops that sit to the left and right of the extension when installed. I can't speak for how well these aftermarket plates function, but in the images on Mesa Tactical's website, the barrel fit of these aftermarket plates also appears to be quite loose.



There is always the option of custom sling plates, which to Vang Comp's credit are fairly straightforward to design and manufacture for these extensions. Aside from the barrel cut-out, which will obviously depend on your specific barrel, the critical dimensions for custom sling plates are a .1" thickness and a 1 1/8"- diameter center hole. If you don't want to make your custom sling plate from scratch, under-cap sling plates from other manufacturers could likely be adapted and installed on Vang Comp extensions as well, since the plates would still be centered on the axis of the magazine tube. As long as the plate is .1" thick (plates thinner than .1" could also potentially be adapted with the use of shims), all you'd need to do would be to open up its center hole to 1 1/8". Unfortunately, many 870 owners will not have the skills and/or equipment to make custom sling plates without the (usually paid) assistance of someone else.



In a nutshell, the sling plates on this extension are rather lacking. Barrel fit, sling attachment options, and compatibility with factory rear sling attachment points are all misses on Vang Comp's part. Most 870 owners who buy the Vang Comp +2 should expect to have to purchase and install additional accessories if they want to be able to properly

mount a sling on their shotgun. The only well-done element here is the method of attachment, which allows for easy removal & replacement of the stock sling plate or straightforward design of custom sling plates. However, this feature is not unique to Vang Comp extensions.

### **Finish:**

The Vang Comp +2 has a matte black finish that matches Remington's current factory Parkerizing and Express matte black oxide finishes quite well, though it appears most similar to the deeper, less reflective Parkerizing. Based on this, along with the extension's price and some misinformed claims I came across online, I operated under the assumption that this extension was Parkerized (a metal-phosphate conversion coating) during my initial evaluation. But after reading up on it for this review and observing how it stood up with use, I eventually figured out that it was actually a black oxide finish.



Black oxide finishes are the result of a passivation process that forms a thin layer of magnetite (black iron oxide, or  $\text{Fe}_3\text{O}_4$ ) on the surface of steel alloys. When treated with an after-finish (usually an oil for firearm parts, with waxes and lacquers preferred in some other applications), this oxide layer does reasonably well at protecting the underlying steel. However, it tends not to be as effective or durable as phosphating/Parkerizing, which is thicker, tougher, and not completely reliant on oil or some other after-finish for corrosion protection (though it is enhanced by them). This is the reason Parkerizing is a preferred finish for steel gun parts in military applications.

While highly-polished black oxide finishes (AKA traditional gun bluing) can be preferred over phosphating for aesthetic reasons, matte black oxide finishes are frequently used in the firearm industry as a lower-cost alternative meant to mimic the appearance of

phosphating. With cost-effectiveness usually prioritized over performance, these oxide finishes tend to be rather thin and easy to wear off.

The finish on the Vang Comp +2 is a prime example of this type of oxide finish. Though it hasn't seen all that much actual shooting, my extension is already festooned with scratches and wear spots that show bare metal, just as a result of me handling it, installing & removing it on my 870 multiple times, and removing & replacing its sling plate. This is, frankly, a very light-duty finish; rather disappointing considering that even some \$40 – \$50 extensions can be had with Parkerized finishes. With this extension kit's higher price tag, and the fact that it's clearly designed (or at least marketed) for combat applications, I'd expected it to have a finish that could better hold up to heavy use or harsh conditions.



For a home defense shotgun that's well cared-for and primarily kept indoors, this light-duty finish isn't really an issue. Oil it just like you would Parkerizing, and it should be fine. But if you're building a combat or sporting gun that will see a lot of rough use, it probably wouldn't be a bad idea to hand this extension off to a gunsmith for stripping and refinishing – or to do it yourself if you have the proper equipment and chemicals. Thanks to the monolithic construction of the Vang Comp extensions, refinishing should be fairly simple and straightforward, though once again, it'll add to the kit's cost.

### **Weight:**

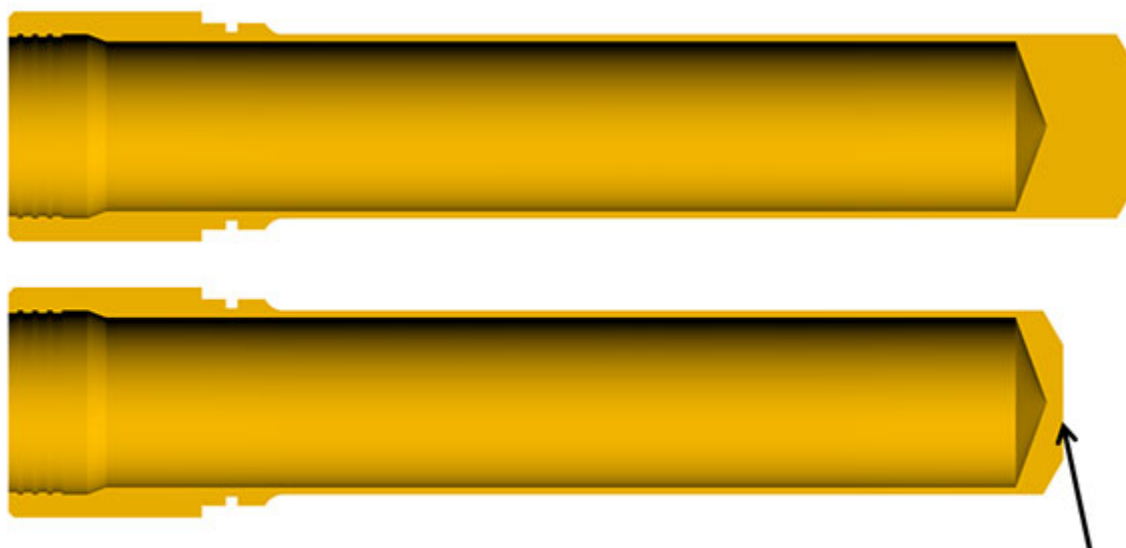
The Vang Comp +2 extension, spring, follower, and sling plate with retaining ring have a combined total weight of about 8.9 ounces. A typical 870 magazine cap (with sling stud), 4-round spring, metal spring retainer, and factory polymer follower weigh about 2.2 ounces total, while the equivalent parts for a new-style internal-ratchet 870 total at about 1.75

Remington 870 Shotgun Guide from Rem870.com, version: 2015-final

ounces (without a sling stud); so expect this extension to increase an 870's unloaded weight by something in the neighborhood of 6.7 – 7.15 ounces, depending on the specific parts you're replacing. That's assuming you use everything that comes in the box, however. Together, the sling plate and stainless steel follower account for about 1.5 ounces of the kit's total weight. With the rattle-prone sling plate removed, and a lighter polymer follower swapped in, the total installed weight of the kit can be reduced to around 8 ounces even (give or take an ounce or so, depending on which follower & spring you go with).

	Extension	Follower	Spring	Sling Plate (installed with retaining ring)	Total
Weight (oz.)	7	.55	.42	.91	8.9

The extension tube by itself weighs 7 ounces, which is not too flattering even for a steel extension. The solid nose is an obvious contributor to this. By my math, fully boring out the interior as discussed earlier could have made the extension at least an ounce lighter, with no meaningful structural or performance disadvantages. Even if there was some valid technical reason that Vang Comp couldn't get a drill bit or boring bar any deeper into the part, they could have just used a shorter piece of bar stock to begin with, reducing weight & inertia for the shooter, and materials costs for themselves.



**Shortening the extension by .4" requires up to 6% less steel stock per unit, and reduces the mass of the final product by roughly 20% while maintaining the same internal capacity.**

Now, I can step back and recognize that the Vang Comp extension kit is not unusually heavy compared to competing kits from other manufacturers, and that shaving off an extra



ounce or so won't have a major effect on an 870's handling – most users probably wouldn't even notice it, honestly. But if I can take a hacksaw and cut more than 3/8" of dead weight off the end of an extension without any negative functional effects, and there's no conceivable economic or logistical justification for it being there, I have to call that extension out as a flawed design.



### Installation:

Ensure that the gun is completely unloaded, then unscrew the magazine cap (or extension), magazine spring, and follower (if you plan on replacing your current follower). Remove the magazine spring retainer and magazine plug, if present. If the gun has dimples in the forward end of the magazine tube, these will have to be drilled or pressed out for the extension to have its full capacity.

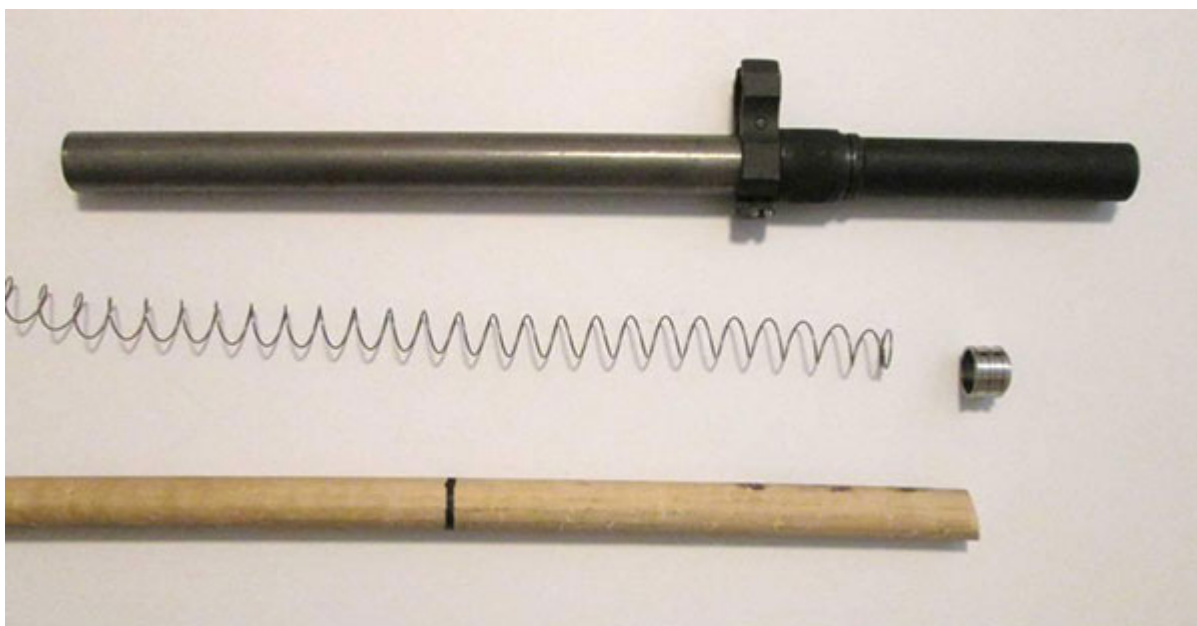
If you will be using the sling plate, make sure it is able to rotate freely in place. If you want to remove or reverse it, use a pair of snap-ring or needle-nose pliers to spread and remove the retaining ring, then slide the sling plate off. To replace the sling plate, slide it over the extension in the desired orientation, and use your pliers to replace the retaining ring. Make sure that the retaining ring is completely seated in its groove before proceeding.

To install the extension on the gun, ensure that the barrel is properly seated in the receiver, and insert the magazine follower and extension spring you wish to use into the magazine tube. Place the extension over the end of the spring, make sure the sling plate (if you are using it) is properly aligned with the barrel, then thread the extension onto the magazine tube and tighten it down firmly against the barrel guide ring.

If you cannot get a good enough grip to properly hand-tighten the extension, use a strap wrench or a pair of channel-lock pliers (preferably with a piece of leather placed in the jaws to avoid damage) on the base of the extension to snug it down. When using tools to tighten a magazine cap or extension, be very careful to avoid over-tightening, as doing so can strip the magazine tube threads or bend the barrel's guide ring out of alignment.

## Function, Reliability, & Common Problems:

The function of any magazine extension revolves around its ability to reliably accept and feed shells. I subjected the Vang Comp +2 kit to my usual acid test of threading the extension onto a spare magazine tube with various amounts of thread engagement, inserting the spring and follower, and working the follower back and forth across the internal transition using a 7/8" wooden dowel with one end cut about ten degrees from square. The angled end of the dowel serves to cant the follower inside the magazine, giving the best possible chance for it to snag at the internal gap between the magazine tube and the extension so that I can examine how the system behaves when a worst-case hang-up occurs.



The results were not encouraging. When canted by the dowel, the Vang Comp follower would lock up solidly at the joint every time – and I do mean every time. When performing this test, I normally write down results for both simulated loading (follower moving from the magazine tube into the extension) and feeding (follower moving from the extension into the magazine tube), but with the Vang Comp +2 kit, I actually have no data for feeding because I simply couldn't get the follower past the transition while it was being pushed by the dowel.

Now, this dowel test is intended to examine the nature and maximum severity of hang-ups; it doesn't say much about the likelihood of those hang-ups since the angled dowel intentionally sets them up. However, I was readily able to replicate these hang-ups using real shotshells instead of the dowel in the above testing setup, and this persisted with the Vang Comp kit installed on an actual 870. While I didn't experience jams every time I loaded the magazine with shells, they were frequent enough that I would have trouble trusting this magazine & follower combo to function reliably in critical situations. I found this magazine setup to be especially sensitive to the quality of the first shell's crimp. Shells that had even slightly flared or asymmetric crimps significantly increased the frequency of both loading and feeding hang-ups compared to the occasional jams I experienced with well-

crimped factory-loaded ammunition. With some shells that I intentionally made up with very misshapen and uneven crimps, the extension was nearly as unreliable as it had been with the angled dowel. Now, for liability reasons, reloaded shotshells are admittedly not the best choice for home or personal defense against two-legged varmints, but for most other applications including hunting, woods defense, competition, and recreational shooting, it's nice to have a gun that can cycle handloads with at least decent reliability.



The excessive gap in the base of the extension and the tilt-prone geometry of the follower I discussed earlier are clearly behind these problems. If you purchase a Vang Comp +2 extension, I would strongly recommend not using the included follower. If nothing else, I've found the plastic factory 870 followers to be more reliable in this extension than the Vang Comp part. But if you don't trust the factory follower, there are plenty of other alternatives – both metal and polymer – that do not feature this troublesome triple-bearing-band design. This still leaves the extension's wide internal gap though, so whatever follower you choose, make sure to test it for reliable function. I would also avoid under-cap accessories with this extension, as I've observed that widening the internal gap increases the likelihood of hang-ups even with improved followers.

The weak Vang Comp magazine spring also caused multiple problems. The first arose during rapid shooting, when I rapidly cycled the action immediately after firing. It was not difficult for me to cycle the action quickly enough that the next shell ended up on the forward shell latch before slide finished its travel and the rear shell latch moved aside, thus failing to feed. Now, a shooter can intentionally replicate this no-feed malfunction even with a heavy magazine spring if they know what they're doing and are really trying to make the

malfunction happen, especially with hard-kicking loads and a full, extended magazine (the more shells in the magazine, the more inertia the spring must overcome). But with the Vang Comp spring, I was able to repeatedly cause no-feeds even with relatively mild (3 DE) target loads, and even with a nearly empty magazine.

While I won't be worrying about minimizing my split times during a defensive shooting, I do plan on cycling my 870 fast and hard so that it ejects & feeds reliably and is ready to fire again as soon as I'm back on target. I've worked to make that a habitual part of my shooting, and I want to have a magazine spring that I can trust to keep up while I'm slamming the slide around in the heat of the moment. For me at least, this spring could not meet that requirement, even in like-new condition.

And then, after running a couple hundred shells in and out of the magazine (between a handful of shooting sessions and many function & capacity tests at home), the spring broke in some more and would no longer reliably feed the last shell in the magazine during fast cycling – even when there was no recoil involved. The shell would still be partially inside the magazine tube when I began to bring the slide back forward, jamming the action when the shell carrier wasn't able to lift the shell up to the chamber. To clear the jam, I had to bring the slide back again to allow the shell to come the rest of the way out onto the carrier.



While I initially figured this spring might be acceptable for a hunting or recreational shotgun, the fact that I'm experiencing feed malfunctions even when cycling the gun after the recoil event demonstrates that the spring is simply not suitable for use in a +2 extension at all. While all magazine springs will wear out eventually, it should not happen anywhere near this quickly. A very casual shooter might take a while to get through several hundred

rounds and start seeing these problems, but that kind of round count is just a function test for a competition shooter or a law enforcement professional. Even a civilian attending a training course can easily go through a couple hundred shells in one weekend.

Another major reliability consideration for any magazine extension is whether or not it can stay in place under recoil. Single-piece extensions tend to be at a bit of a handicap here compared to two-piece designs, as they are generally expected to be able to stay in place without the aid of a clamp.

Shooting both standard 1 1/8-ounce, 1200 FPS (3 DE) target loads and full-power 00 buckshot loads, I tested the Vang Comp +2 with two different barrels; one with a magazine cap detent, the other with no magazine cap detent.



With the detented barrel, the extension did not come loose under recoil after emptying the magazine several times. However, it was noticeably easier to unscrew after the gun had been fired. This suggests that the extension's engagement with the detent is not entirely positive, and that the extension may eventually work loose during very high-volume shooting. This should not be an issue for most real-world defensive or combat applications, where shootings tend to start and end fast with rarely more than one or two magazine's worth of shells fired. But during competition shooting, intensive training courses, or law enforcement qualifying sessions where hundreds of shells may be fired in one session, I would recommend checking this extension occasionally and re-tightening it if necessary.

On the barrel without a magazine cap detent, the Vang Comp +2 would not reliably stay put under recoil, and there's nothing included in the kit to help with this. In a pinch, the extension will probably not launch itself downrange before the magazine runs dry, but if you have a detent-less barrel and want to be able to rely on your shotgun for longer than that, I would highly recommend adding something to positively keep the extension tight. You could have a gunsmith install a magazine cap detent in the barrel guide ring, place a wave washer under the extension, or add a reinforcing clamp. Either way, it's at least one more extra part you'll need to make the Vang Comp +2 work reliably.

### **Conclusions:**

#### Remington 870 Vang Comp Systems Magazine Extension Tube Pros:

- Extremely sturdy all-steel monolithic construction
- Single-piece design simplifies installation & removal
- Sealed end cap prevents ingress of any foreign material from the front end
- Standard 1" outer tube diameter is compatible with many clamp-on accessories
- Sling plate can be reversed, removed, & replaced with basic tools
- +2 with pretty much any SAAMI-compliant 2.75" or 3.5" shells
- Potentially a +3 with the right spring, follower, and/or shells
- Will not extend past any standard barrel longer than 18", even if under-cap accessories are used
- Sling plate location compatible with any barrel with a muzzle at least 1.2" ahead of the guide ring

#### **Remington 870 Vang Comp Systems Magazine Extension Tube Cons:**

- Stainless steel follower is heavy, jam-prone in extensions, and the same color as many shell cups
- Weak magazine spring loses stiffness rapidly with use, and causes multiple different feed malfunctions
- Flat, shallow knurling on extension does not provide much grip
- Excessive internal gap can lead to hang-ups, especially with the included follower
- Use of under-cap accessories can negatively affect reliability
- Extension's interior is not fully bored-out, limiting capacity & adding extra mass
- Roughly-machined internal tube surface causes noticeable additional drag
- Included sling plate will fit very loosely with most barrels
- Sling plate can only be oriented to the left or right, no vertical option to match the sling studs on most factory stocks
- Ridged cuts at the base are shallow, soft, and do not engage magazine cap detents very positively
- Kit does not include anything to help secure extension on barrels without magazine cap detents
- Light-duty black oxide finish rubs off easily
- Price is high compared to other kits with similar features & functionality, and fixing out-of-the-box issues will require additional effort & expense

It's not a stretch to say that I was disappointed with the Vang Comp +2 extension kit. While I had had no previous personal experience with Vang Comp extensions or other products, I was well aware of their overwhelmingly positive reputation, and when Vitaly suggested this extension for this review series, I was looking forward to seeing if it lived up to that reputation. But after discovering the cheap finish and rough machining, after having the follower hang up at the range with the very first loading, after pulling the trigger on an empty chamber multiple times while shooting clays, I've come to the unavoidable conclusion that this extension does not live up to Vang Comp's reputation. I think many of the favorable opinions about this kit are made by folks who were impressed by its brand name, and its attractive-sounding features like the stainless steel follower and monolithic construction, but did not actually test their extensions very thoroughly to verify their performance & reliability.



Proponents of the Vang Comp +2 are sure to suggest that I simply got unlucky and received a bad unit. While this might account for some issues like the incomplete boring, rough tube interior, or shallow knurling; other problems like the less-than-positive detent engagement ridges, wide internal gap, and loose sling plate are clearly design flaws. It's a shame, too. With some quality improvements to the machining and finish, a better thought-out spring & follower, and a handful of minor design tweaks to the extension itself, this kit could be a very good product deserving of its price tag. But as reviewed here, this is simply not the case. If you're considering this extension, you would almost certainly be better off with one of the many other single-piece +2s on the market. The Wilson Combat +2 extension kits I reviewed previously offer essentially the same functionality as the Vang Comp +2, but they have a more reliable tube interface, a combat-ready spring & follower, much better knurling, a wave washer for use with non-detented barrels, a higher-end Parkerized finish, and a significantly lower price tag.

If you're already committed to the Vang Comp though, its function can be made acceptably reliable with a replacement spring & follower, and there are a number of options for keeping it in place under recoil. That more or less takes care of the major issues. More minor things like the light-duty finish are also addressable if desired, and improved sling plates are easy to make if you or a friend have access to the right tools. Thanks to this extension's monolithic construction, a bit of lathe work could even take care of its extra weight and limited capacity. In fact, if you're a tinkerer with a machine shop at your disposal, a Vang Comp extension might actually be a good starting point for some serious customizing.

But for most folks, unless you get a really good deal on it, I don't see much of a reason to pay out for a Vang Comp +2 kit – and then spend even more time and money getting it to run reliably – when you could get something better for the same price or less.



## Remington



The original Remington extension is a good one, and has some unique differences.

**Bundle:**

Extension  
Spring  
Clamp (without swivel)  
Mounting screw for clamp

The Remington magazine extension is a little longer than the other ones. There are many theories about the purpose of the nose cap in the end of the tube, but the truth is that it allows attaching a bayonet (such as a M7). If you want to add a bayonet to your shotgun you will need an additional bayonet adapter. S&J Hardware sells one for approximately \$80-100.

The original military U.S.M.C. M870 MK1 Bayonet Adapter/Magazine Bracket (which is no longer manufactured) is difficult to find, and will cost you about \$250.

This extension has a groove around it that provides an interlocking connection for the mounting screw of the barrel clamp. It positions the clamp on the extension and locks it into place. This is one of the advantages of the Remington extension, because the clamp can't move under recoil. Some shooters say that other barrel clamps are not as reliable as the one by Remington.

**Attention:** This groove may cause a follower from the Vang Comp Systems to stick inside the magazine tube.

This extension consists of two parts, allowing for smooth feeding. Some other extensions (TacStar and Choate) are made from a solid tube, and have a small "step" inside the tube that can cause jamming of the spring or follower.

### Remington 870 +2 Magazine Extension Tube Review

*Thanks to Synchronizer for this fantastic review!*

One of the attributes that makes the venerable Remington 870 so flexible is the fact that its magazine can easily be expanded without having to change out the barrel or the base magazine tube. It's not surprising then, that magazine extension options abound for the 870, and an extension is often one of the first things to be considered when planning a build.

Remington factory +2, one of the most popular and widespread extensions for the 870, and one with which I happen to have years of hands-on experience.

### **Introduction:**



The factory Remington +2 and +3 870 extensions are old designs, dating back at least as far as the 1960s. Initially developed for use on military and law-enforcement 870s, these extensions remain some of the most popular 870 extensions today for soldiers, officers, and civilians alike. The kits by themselves are widely available, and are also factory-installed on many Police, Tactical, and Special Purpose 870 models.

### **Extension Design & Construction:**

The Remington factory extensions use a basic two-piece design, with a separate coupling and extension tube comprising the core of the extension.

The Remington extension coupling is just under .73" long, with external ridges that provide a good grip during installation and removal. The rim at its base is about 1.4 inches in diameter, which may interfere with extra-heavy 1"-diameter slug barrels, but should fit without a problem on pretty much anything else. Its base has rectangular notches that engage the magazine cap detent on barrels that have them. The coupling is fully-threaded inside with female threads that match those of both the receiver's magazine tube and the extension tube.



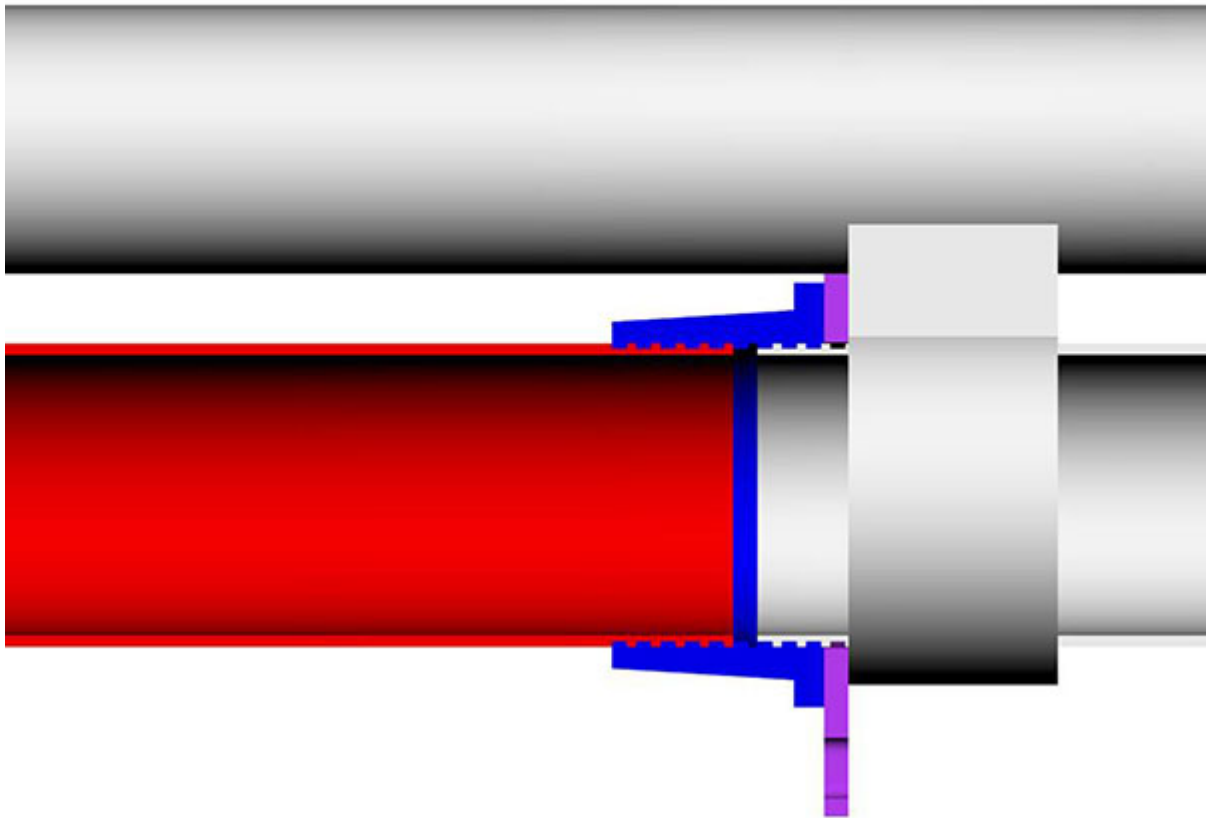
The magazine extension tube has a standard 1" outer diameter, making it compatible with a wide variety of clamp-on accessories. Its front end features a stepped-down, permanently-attached cap that is slightly over half an inch long and 7/8" in diameter. In the center of the end cap is a vent hole that allows air to move in and out of the tube to reduce pressure drag, provides a point where any water (or other liquids) that may have made its way into the magazine can quickly and easily drain out, and allows a dowel or rod to be inserted to control and align the magazine spring during assembly and disassembly. Alternatively, this hole can be plugged with a sling stud or a simple button-head cap screw.



The reduced-diameter end cap is a feature that speaks to the original military application of these extensions. The 7/8" diameter matches the mounting rings of standard M16 bayonets, and older military 870s were equipped with reinforcing brackets that provided the rear lug for these bayonets.



At the base of the magazine extension tube is about .45" of thread, which leads to a bit of a shortcoming. Since the extension tube can only thread .45" into the coupling, the magazine tube has to make up the other .28" of thread, or else a gap will be left inside the tube (be aware that these measurements are for the specific extension parts I have on-hand; thread length is subject to some variance, so you may see slightly different numbers with your particular kit). This is not a problem for most barrels & receivers if the coupling is installed directly against the barrel guide ring, but if something like a sling plate is placed between the guide ring and coupling, or if this extension is installed on an 870 clone with less exposed thread than a genuine 870, the extension tube may not be able to thread in far enough to compensate. An extra quarter-inch of thread on the extension would have gone a long way toward allowing the extension to maintain a good internal mate when used with under-cap accessories or clones. As it is, I would recommend skipping under-cap sling attachment points, rails, or light mounts, and sticking with clamp-on alternatives when using this extension. Removing the first couple thread turns from the forward end of the coupling can allow the extension tube some extra travel, but this is a rather advanced modification that will be outside the comfort zone of most 870 owners (although replacement couplings are not terribly expensive if you screw yours up).



The extension tube is around 6 7/16" in total length, meaning its end will line up with the muzzle of an 18.5" barrel, and extend about a half-inch past the muzzle of an 18" barrel. Though some may find this undesirable for aesthetic reasons, it will not cause any functional problems, and is actually an intentional design feature relating to its bayonet mounting function. The half-inch of extra length keeps the bayonet's hilt in front of the muzzles of 18" barrels (the Remington +3 extension tubes similarly extend a half-inch past the muzzle of 20" barrels).



As is typical of two-piece magazine extensions, a reinforcing bracket should be used to secure the extension tube. If it is not locked down, the extension tube will quickly work loose under recoil, leading to unreliable function. Thankfully, a bracket is included in Remington extension kits. Not quite as large or complex as the original military brackets, these modern .75"-wide brackets are of basic yet functional all-steel construction, and some feature a standard sling swivel stud at the 6-o'clock position (more detail on that later on). The bracket is clamped to the barrel and extension by a single screw, so you will need a screwdriver or multitool on-hand to be able to take the gun down. I always have a Leatherman on my belt, so this isn't a big deal for me, but it's something to keep in mind. You can install the bracket with the screw head facing either left or right – whichever meets your preferences or works best with the rest of your build.





The screw is intentionally low-set, and passes through a groove in the extension tube located about 2.5" back from its front end. Once installed, this groove positively and securely locks the bracket in place against recoil, impacts, and sling forces. The exposed screw can cause minor cosmetic wear to the edge of the groove with heavy use or repeated removal and reinstallation, but I for one would take a little cosmetic wear over clamp movement any day. The downside to this security is that the bracket can only be installed at this groove. This might limit your options for other barrel- or tube-mounted accessories, prevents you from using this bracket with most other extensions, and means you can't use it on any barrel with a muzzle more than about two inches back from the end of the installed extension (extended choke tubes don't count).

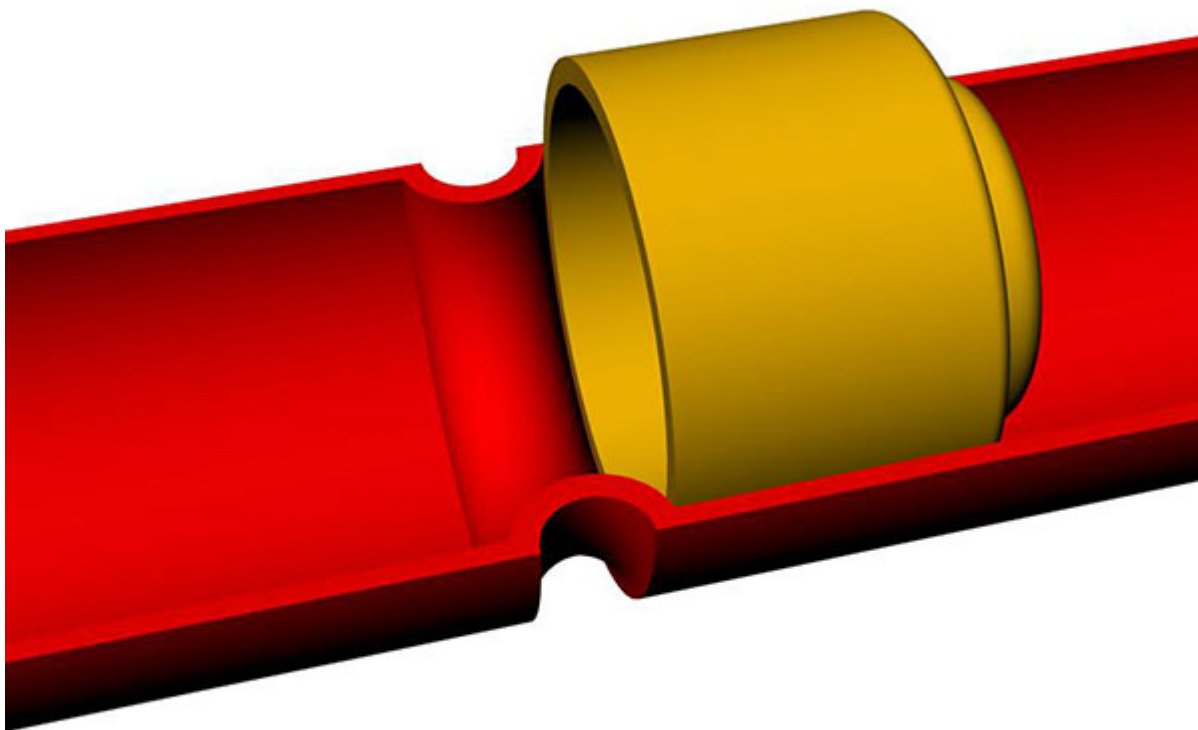


Another potential issue is that these brackets are designed for standard barrels with a normal outer diameter and spacing (center-to-center distance between the barrel & magazine tube). I have an older Wingmaster barrel that has a lighter profile and a slightly higher spacing, and when I try to use my bracket to secure Remington extensions to it, the extension tube is pulled up out of alignment, usually resulting in unreliable function. I've been told that Remington makes (or perhaps used to make) brackets intended for these taller barrels, but I'm not sure on the details. If you have a heavy-profile barrel, you'll probably need something aftermarket or custom-made.

### **Capacity:**

The groove that accommodates the bracket's mounting screw has a second purpose. It creates a constriction inside the extension tube that results in a hard maximum follower travel of about 3.9 inches. After adding the 12.125 inches of space in a standard 4-round base magazine tube (this measurement will be different for 870s or 870 clones with nonstandard magazine tubes) and subtracting the length of a factory magazine follower, there's only about 15.3 – 15.4 inches of space available for shells (depending on how the front of the follower fits into the crimp of the foremost shell). This is enough space to fit six of any SAAMI-compliant 2.75" shells (which would conform to a maximum crimped length of 2.45 inches), but capacity will be limited to five rounds with 3" shells and out-of-spec

2.75" shells crimped longer than 2.55" or so. Capacity may even fall to four rounds with some longer-crimped 3.5" super magnum shells.



It should also be pointed out that a follower stop makes capacity directly dependent on the length of the magazine follower's body (although follower tails should be able to pass through the constriction without affecting capacity). The above numbers were measured and/or calculated assuming that the factory Remington follower takes up .7" of space; if you're planning on using an aftermarket follower with a different body length, you'll need to take that into account.

Many other +2 magazine extensions have enough internal space to accommodate 3" magnums, and careful spring and follower selection can free up extra room for longer magnums or even allow an additional 2.75" shell to be loaded. Not so with the Remington +2, and this may be an undesirable characteristic for some users. However, there are some positive trade-offs to this limitation. In magazine configurations without follower stops, the magazine spring can become over-compressed during loading if the user loses count and tries to jam in one round too many. This over-compression can shorten the life of the spring and even cause jams if the coils overlap enough to hang up on each other. By stopping the follower at a predetermined point before the spring can be over-compressed, a follower stop can provide more reliable function and extend the life of the spring. These are clearly the priorities of the Remington +2 extension, which was designed to hold the

2.75" combat loads used by military and law enforcement organizations. Capacity with 3" hunting magnums was pretty much irrelevant in those applications; from what I've heard, the early combat 870s that first used these extensions only had 2.75" chambers anyway.

If you really want 6+1 capacity with 3" magnum shells, the Remington +2 isn't for you. But for competition, combat, or defensive applications where 2.75" short-magnum loads are the most powerful thing you'll realistically need, this extension's capacity is sufficient, and the benefits of the follower stop have definite value.

### **Finish:**

Remington offers +2 magazine extensions in a variety of finishes that will match most 870s in their current lineup. Complete extension kits are offered with either a Parkerized finish, or polished bluing that matches blued Police & Wingmaster shotguns. Remington also finishes +2 extension parts in a matte black oxide for 870 Expresses and some Special Purpose models, electroless nickel plating for Marine Magnums, and their proprietary extreme-conditions black TriNyte coating for the 870 XCS (though XCS parts may not be in current production). Remington's 2014 catalog does not list complete extension kits with these finishes, but the individual parts are listed on their website and in their parts documentation.



The +2 magazine extension reviewed here came factory-installed on an 870 Express, so it has the matte black oxide finish. This finish is a bit basic, and while it protects the underlying metal reasonably well if kept oiled, it is not as effective as higher-end finishes and is prone to rubbing off under the bracket or other metal clamp-on accessories (though it touches up nicely with a little cold blue). If you're looking at installing one of these extensions your 870 Express, and you're not too worried about having an exact visual match, I would recommend ordering the Parkerized kit rather than piecing together a matte black oxide version. The Parkerizing is still a fairly close match to the Express finish, and seems to resist wear and hold oil better than the budget-level black oxide.



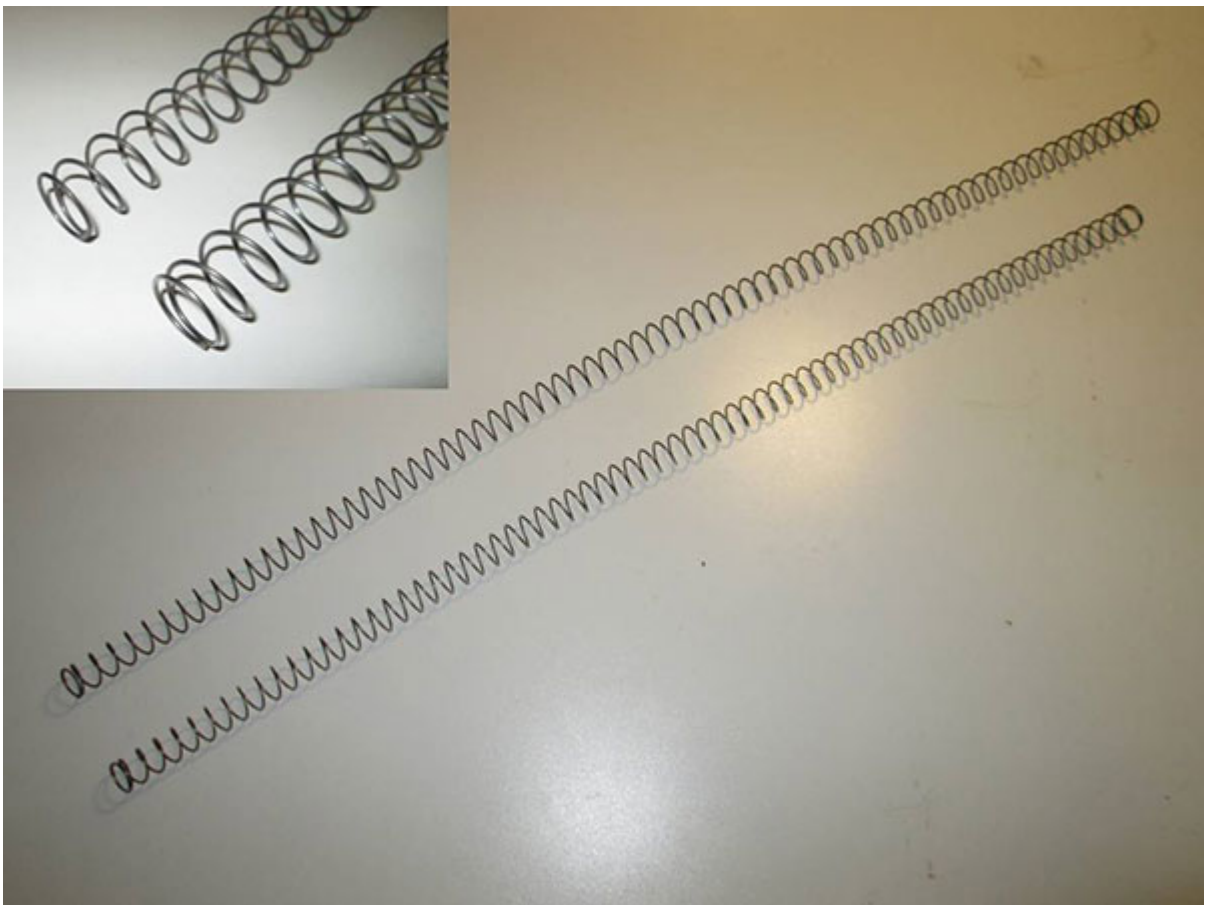
Under the finish though, all extension parts are exactly the same, and so long as you don't mind the look, there's no harm in mixing & matching differently-finished parts to come up with a complete extension.

### **Spring:**

An interesting fact about the Remington +2 extension spring is that it's actually the same spring as the one used in Remington +3 kits (Remington does make a special spring for use in the Marine Magnum & XCS +2 extensions, but I wasn't able to obtain one at the time of this writing to see if it is also sized for use in +3s). The original 870R Riot Grade and 870 Mk 1 military shotguns had 20-inch barrels, and (at least in the latter case) +3 extensions. Parts commonality being favorable for both cost-effective manufacturing and military logistics, Remington engineered their +2 and +3 extension tubes with the clamp groove/follower stop the same distance back from the extension's front end so that they could both use the same springs and bayonet mounts.

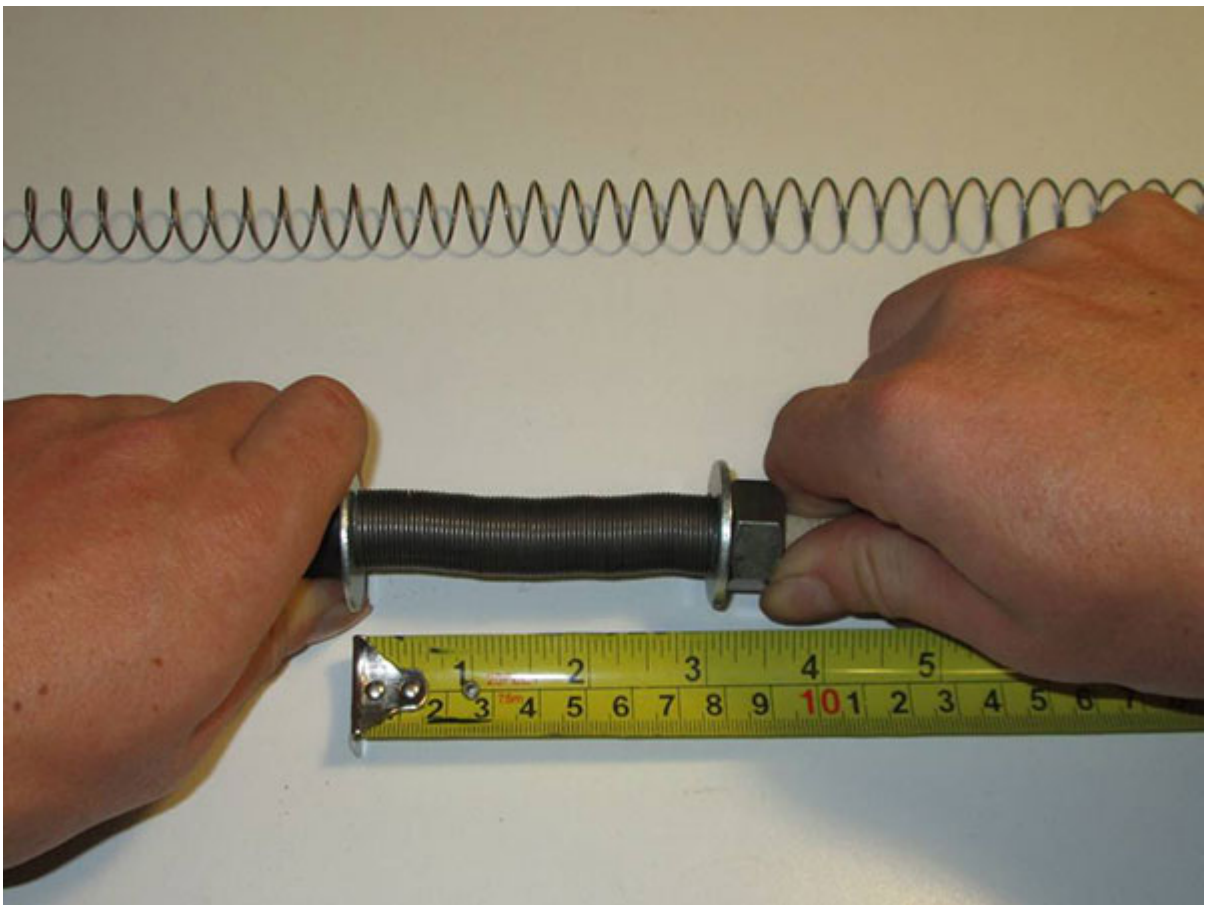


I've had my Remington +2 magazine extension tube as long as I've had my 870, and though the magazine spring is still working fine, I decided to order a new one so that I could evaluate the spring in both well-used and out-of-the-box conditions. The new replacement spring was somewhat stiffer and longer than my original one, which is to be expected when comparing a brand new spring to one that's seen years of use, but there were some additional differences such as a more matte appearance and an extra coil or two on the newer spring that suggest that these are not exactly the same part.



Both are simple constant-diameter springs with squared ends and relatively narrow diameters to allow them to fit into cup-style followers and pass through the constrictions of the extension tube's follower stop and bayonet end cap with minimal resistance. With outer diameters measured at .665" for the old and .670" for the new, these springs should have no problems fitting into most cup-style followers, but they also have enough space inside for typical tailed followers. You can use aftermarket springs in these extensions, but be aware that wider springs may have trouble moving smoothly past the follower stop.

The used spring had a relaxed length of 25.25", and the new spring measured in at 28.25" when fresh out of its packaging. It's hard to say how much of that dissimilarity is due to wear and how much is due to differences in the coil count & pitch between the two springs. I did note that after being compressed to its solid length several times, the new spring's relaxed length was reduced to about 28" even. The actual wire diameter of the two springs was about the same though, and both had solid lengths of right around 3" (without forcing the coils to overlap) for solid length ratios (relaxed length/solid length) of about 8.4 and 9.3 for the used and new, respectively. This is fairly low compared to other magazine springs, which can have ratios of 15 to 25 or more. With the follower stop dictating the extension's total capacity, this low compressibility isn't really an issue, but I wouldn't recommend using these springs in magazines that don't have follower stops.



To test the strength of the spring, I installed my Remington +2 extension on a spare magazine tube, and used a scale to measure the “empty force”, or the force exerted by the spring with the follower just inside the end of the magazine tube (as it would be in an unloaded shotgun). This is the metric I use to compare spring force in different magazine configurations and evaluate whether or not the spring is strong enough to feed reliably, as problems with weak springs tend to first appear when feeding the final shell from the magazine.

With the factory cup-style follower, the used spring produced an empty force of 2.375 pounds, and the new one exerted a force of 3 pounds. This should be plenty of force to ensure reliable function – it’s even a bit on the stiff side. Trimming the spring is an option here, but unless you’re really put off by a stiff spring, I’d leave it be. For the heavy-use combat applications the Remington extension kits are designed for, a little extra spring force is not necessarily a bad thing. In addition, the long spring allows you to add a +3 extension tube to your standard 870 or use the +2 on 870 clones with 5-round base magazine tubes without having to buy a different spring.

#### **Follower:**

Unlike many aftermarket magazine extension tube kits, The Remington kits don’t come with new followers. They are intended to be used with the cup-style factory magazine



followers that are installed in all 870s, including 870s that are factory-equipped with a magazine extension or extended magazine tube. The current-production blaze-orange factory polymer followers are lightweight, high-visibility, inexpensive, and are a good match for the Remington +2 and +3 extensions. Older factory followers have been made of stamped steel or non-high-visibility polymer, but share the basic design, and should work equally well in these extensions. Though for just \$4.12, you may want to consider upgrading to the current-production high-visibility part as an extra safety feature.



Folks like to call these polymer followers cheap or unreliable, but I've tested several different followers in the Remington +2 extension, and out of all of them – including a very high-priced machined stainless steel follower – the “cheap” factory part proved to be the most reliable and trouble-free. There are countless heavily-used police and military 870s out there that are running these same exact followers with no problems at all.

If you do want to replace the factory follower though, I would recommend sticking with cup-style followers, as they provide more space for the spring when the follower is against the follower stop. Forcing a solid-bodied follower against the stop will tend to over-compress an untrimmed Remington extension spring, forcing the coils to overlap and potentially hang up on each other.

#### Sling Attachment Hardware:

To enable the use of a sling, Remington magazine extension brackets have a squared-off section at the bottom with a hole through which a sling stud can be mounted with a separate collar and snap ring. This stud can rotate freely, so it won't bind up or damage itself if the sling is twisted. And with the bracket locked into the groove in the extension tube, it'll stay in place no matter how hard you jerk the sling around.



However, the stud's attachment to the bracket is a little on the loose side. This doesn't cause any functional problems or affect its strength, but the stud does have a tendency to rattle, and the free-spinning can lead to twists in slings that have a lot of slack. And because the bracket can only be installed in one place on the extension, you'll have limited options if it interferes with some other accessory you want to install. The stud (with or without a sling attached) could also potentially provide an improved handhold for an attacker who managed to grab the end of your gun.

If you just want to secure the extension, and you don't need to be able to attach a sling, the stud will come off if you can get the snap ring out. This will make the bracket lower-profile and rattle-free. These brackets can also be ordered separately without a stud installed, though they still have the hole to accept one if you order the parts. If you want both, I'd suggest ordering one of each type rather than trying to remove & reinstall the stud for different applications, as the snap ring that holds it all together is not very easy to get to.



**Weight:**

Combined, the Remington +2 coupling, extension tube, spring, and bracket (with sling stud) weigh in at about 7.7 ounces total. Assuming you're replacing a typical magazine cap, 4-round spring, and spring retainer, expect this extension to add something in the neighborhood of 5.75 ounces to the unloaded weight of your gun. This figure can vary somewhat depending on the specific spring, retainer, and cap you're replacing, whether or not your bracket has a sling stud, and a handful of other variables.

	<b>Extension Tube</b>	<b>Coupling</b>	<b>Spring</b>	<b>Bracket (with stud)</b>	<b>Total</b>
Weight (oz.)	4.08	.95	.93	1.72	7.68

If you're comparing this extension to single-piece alternatives that don't come with brackets, note that the Remington extension bracket (the version with the sling stud, to be precise) counts for more than 1.7 ounces of this total figure. If you're planning on installing other clamp-on accessories and leaving the factory extension bracket off, a Remington extension would only effectively count for about 6 ounces total.

This makes the Remington +2 fairly light for an all-steel extension kit; coming in an ounce or more below other steel +2 kits I've examined even with its bracket. It's not a huge difference, but if you have to pack your 870 long distances or hold a home intruder at gunpoint for an extended period of time while waiting for the authorities to arrive, you'll appreciate even minor weight savings – especially when that weight is located out at the muzzle end.

### **Cost:**

When ordered directly from Remington, complete extension kits are priced at about \$90 – \$120, and ordering the individual parts (as you would need to for certain finishes) will cost about the same (2014 pricing). This is a bit on the steep side, considering that there are a number of alternative aftermarket extensions in the \$50 – \$60 neighborhood. Fortunately, complete blued or Parkerized +2 kits or the equivalent individual parts in other finishes can often be found from 3rd-party sellers or online auctions & for-sale listings in the \$45 – \$70 dollar range, so these extensions are fairly competitively-priced, you just have to be willing to shop around.

### **Additional Features & Accessories:**

#### **Additional Extension Tubes:**

As mentioned earlier, the Remington factory +2 & +3 870 extension kits share the same couplings, brackets, and even springs. This means that if you have a complete Remington +2 kit, the only item you'll need to buy to also have a Remington +3 is the +3 extension tube (or the +2 extension tube if you already have the full +3 kit). Additional +2 & +3 extension tubes can be ordered from Remington's parts department for \$27.81 each at the time of this writing (some special versions or finishes may be more expensive).



The +3 magazine extensions are virtually identical in design and construction to the +2 extensions in fact; the only difference is that the +3 extension tubes have an extra two inches or so of tube space between the tube's open end and the bracket groove/follower stop. So if you want a review of the Remington +3, take this review, replace "+2" with "+3", add two inches to the overall length and internal capacity numbers, and subtract roughly 5/8 of a pound from the spring forces.

Remington also manufactures a +4 extension tube for a handful of competition/tactical Remington 1100 semi-auto shotguns, which reportedly installs using the same bracket and coupling as +2/+3 extensions for 870s, and is listed for the same price as +2 & +3 870 extension tubes. You will need a longer spring with the +4 however, and it has been reported that some minor modifications to the coupling may be required to let the extension tube thread in far enough to achieve a proper internal mate on an 870.



But the options don't stop there. Since Remington extension tubes use the same thread as the base magazine tube, you can easily make your own custom-length extension tubes out of extra magazine tubes. Magazine tubes can be ordered in the bright from Remington's parts department, or you can cut them off of donor receivers. Since they come with thread already machined into one end, all you have to do is trim them to whatever length you desire, add a cap of some kind, finish or paint them, and install them in any Remington extension coupling with an appropriate-length spring and a compatible clamp (though not

the Remington extension bracket, since magazine tubes don't have bracket grooves). If you're clever, you can even build lights, lasers, or other gizmos into the ends of these. Another advantage here is that magazine tubes have a good deal more thread than Remington's pre-made extension tubes, so even with a thick sling plate or other accessory under the coupling, these custom extension tubes should have no problem threading in far enough to mate properly.



### **Bayonet Lug:**

Another thing you can add to your Remington +2 or +3 extension is a clamp that provides a rear bayonet lug. This will allow you to mount any M16 bayonet – such as the US military M9 or M7 – on your 870. The original U.S. military clamps are expensive and difficult to find these days, but aftermarket alternatives are offered by S&J Hardware, and I've seen some other custom-made bayonet lugs pop up on auction sites from time to time.



One thing to be aware of is that you can't mount a bayonet on your extension with the extension bracket installed, as the bracket's base and sling stud will interfere with the handle of the bayonet. The old military clamps incorporated a bayonet lug, sling ring, and usually a front sight into one unit, but the current S&J Hardware clamps only provide the bayonet lug. If you want to mount a bayonet and use a sling at the same time, you'll need to find an alternate front sling mount.



### **Installation:**

Before installing a Remington two-piece extension kit, you must first remove the gun's magazine cap (or extension), spring retainer, magazine plug (if present), and magazine spring. If the gun has dimples in the magazine tube, these will have to be drilled or pressed out for the extension to have its full capacity.

To install the extension, make sure the barrel is still seated in the receiver, and thread the extension coupling onto the magazine tube by itself, tightening it against the barrel guide ring as you would a magazine cap. Insert the magazine follower (if it isn't already in the tube) and the extension spring through the coupling. Place the extension tube over the end of the spring and screw it into the coupling, making sure it can thread in far enough to tighten against the base magazine tube. If you're having trouble controlling the spring, you can insert a thin rod through the end hole to keep it straight. Finally, slide the extension bracket over the barrel and magazine tube, line up its screw holes with the groove in the extension tube, and insert and tighten the screw.

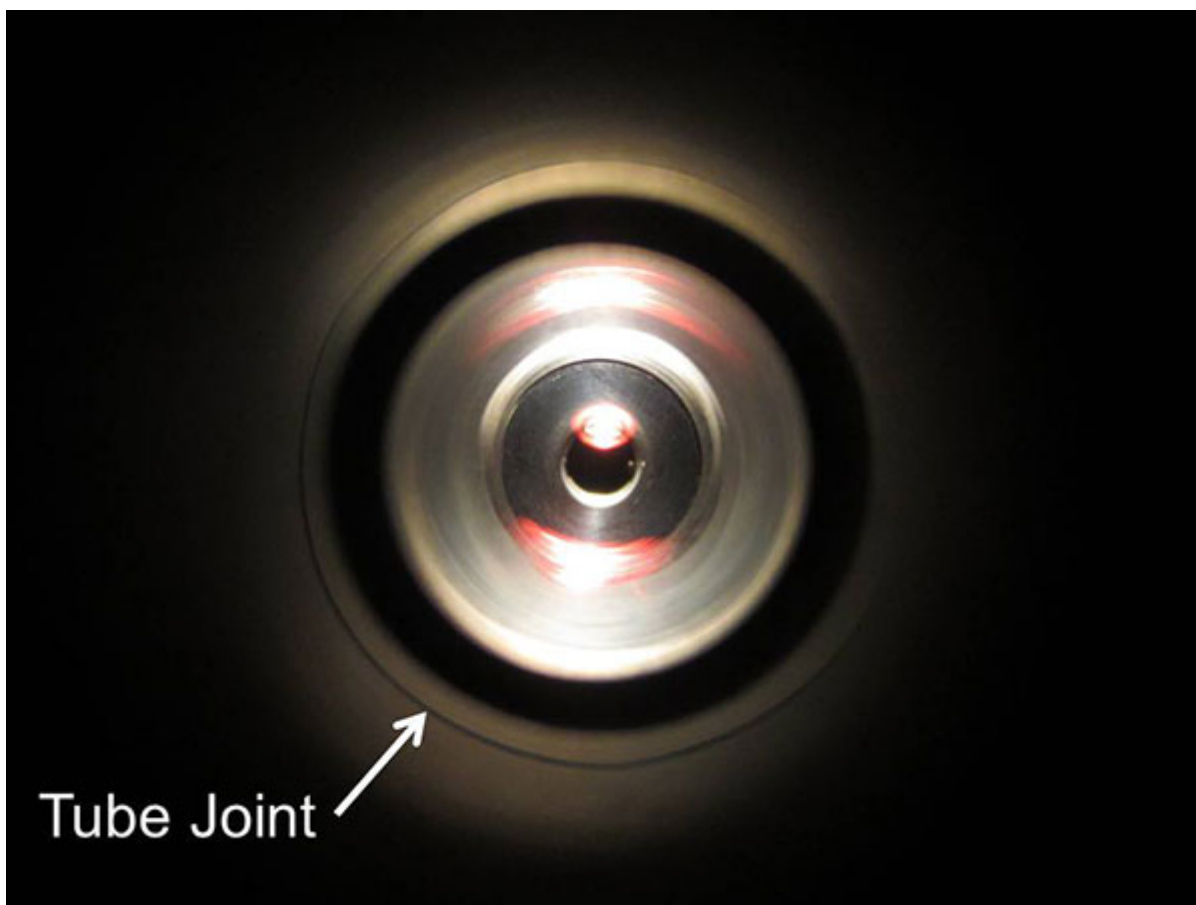




You can leave the bracket off if in an emergency, or if you're just checking the fit or doing some non-firing testing, or you're using some other add-on that secures the extension tube to the barrel. Otherwise, expect an unsecured extension tube to come loose under recoil in pretty short order.

### **Function, Reliability, & Common Problems:**

The function of any magazine extension revolves around its ability to reliably accept and feed shells, and the Remington factory extensions have a bit of a reputation for being finicky in this area. This is true to some extent; it's not unusual for users to report hang-ups during feeding and loading with these extensions. These tend to occur when trying to load the 6th round, or after feeding the first round, as this is the point where the follower is at the transition between the magazine tube and extension tube with typical 2.75" shells. For this reason, the follower tends to be the first thing to get blamed for malfunctions (often by the folks trying to sell you an expensive replacement follower). However, the follower can only hang up at this joint if there's a gap or misalignment between the two tube sections for it to catch on; everywhere else, the interior of the extension tube is no different from the interior of the magazine tube. Changing the follower obviously won't do a thing to fix a bad joint, and many aftermarket followers are actually more sensitive to internal tube discontinuities than the Remington factory follower.



A poor internal mate can usually be traced to improper installation, such as trying to install the coupling and extension tube together, letting the extension tube come loose before installing the bracket, or not using a bracket at all. If the extension is installed properly, with the extension & magazine tubes properly aligned and butted against each other and secured against recoil, these loading and feeding issues are rare due to the nature of the two-piece design. If they do persist though, a little light sanding to take down any sharp corners in the mouths of the magazine and extension tubes and the leading edges of the follower should resolve things.

I simulated a worst-case feeding and loading scenario by installing the Remington extension on my spare magazine tube, inserting the spring and follower, and pushing them down into the tube using a 7/8" wooden dowel with one end cut about ten degrees from square. When I used the dowel to move the follower back and forth across the interface between the magazine and extension tubes, the angled end jams the follower against one side of the magazine tube. This test is a harsh one that virtually guarantees some sort of hang-up will occur, the question is simply – how bad could it be? Well, in the case of the Remington extension with the factory follower, so long as the two tube sections had a good mate inside the coupling, I was only able to produce minor hang-ups – the follower would catch if I got it in just the right position, but a little extra force would push it through nearly every time. For such an extreme, absolute worst-case test, this is a very good result.



Finally, function and reliability with proper installation means little if the extension will just work itself loose under recoil once you start shooting. Thankfully, in my years of shooting with Remington extensions, I've found them to be very solid, with the magazine cap detent securing the coupling and the bracket securing the extension tube. I do have one barrel that doesn't have a detent in its guide ring, but if tightened down firmly, the bracket alone seems to do a pretty good job of keeping everything in place. I have seen the occasional report of these extensions working loose, but it's hard to say how accurate or indicative those anecdotes are, as the extensions in those cases could have been damaged, defective, or improperly installed.

## **Conclusions:**

### **Remington 870 +2 Magazine Extension Tube Pros:**

- Solid, well-proven design that has successfully served in military, law enforcement, and civilian applications since the 1960s
- Kits & parts manufactured in the USA by Remington themselves
- Multiple finishes available to handle different environments and/or match the look of your gun
- Durable all-steel construction, yet relatively lightweight compared to other steel extensions
- Modular design with the ability to add extension tubes for more capacity options
- Bracket reinforces extension against impacts & rough handling, and keeps extension in place even on barrels without locking detents
- Bracket groove locks bracket & sling mount securely in place
- Follower stop helps to prevent spring over-compression, improving reliability and extending spring life
- Spring sized for use in +3 extensions ensures strong and reliable feeding in the +2, even when worn
- Vent hole in end cap serves several beneficial functions
- 7/8" end cap allows standard M16 bayonets to be attached with the addition of a bayonet lug
- Standard 1" outer tube diameter compatible with most clamp-on accessories

### **Remington 870 +2 Magazine Extension Tube Cons:**

- Reliability & function highly dependent on proper installation
- Relatively high factory price tag means you'll probably have to do some searching to find good prices

- Internal tube joint sensitive to even minor gaps or misalignment
- Effectively a +1 with longer magnum shells
- Follower stop fixes capacity, changing or trimming the spring will not increase space
- Solid-bodied followers can over-compress the low-compressibility stock magazine spring
- Need for a clamp or bracket complicates take-down & reassembly, and can make it difficult to use this extension with some barrels
- Factory bracket & sling stud can only be installed at one location; may interfere with other accessories
- Free-spinning sling stud rattles, and can allow slings to become twisted
- Limited thread length on extension tube can lead to internal gaps & function problems with some under-cap accessories

The Remington factory +2 extension's two-piece design and relatively complex installation means it may not be the best choice if you take apart or reconfigure your 870 frequently. I wouldn't necessarily call this a deal-breaker, but if quick & tool-less take-down is really important to you, or if you're using a non-standard barrel, you're probably not going to be a fan of the Remington extension bracket. If you want something fast, tool-less, and hard to install wrong, a well-designed single-piece extension may be a better fit for you. There's also the issue of 3" or longer magnum shells, which the Remington extensions weren't designed for. If you want to have a full 6+1 capacity with these longer magnums but you don't have the means to build a custom extension tube without a follower stop, you should probably look elsewhere.

However, this extension's all-steel construction, included reinforcing bracket, and excellent reliability with 2.75" shells make it well-suited for the application for which it was originally designed – a dedicated combat or defensive 870 build that won't be kept loaded with 3" magnums and will not be taken apart or reconfigured every day. If you're looking for a +2 to build a simple & dependable personal/home defense or duty weapon, the time-proven Remington +2 is an excellent choice. And because of its ability to accept alternate factory and relatively easy-to-make custom-length extension tubes, a Remington extension is also a solid option if you want to be able to have a variety of capacity options without paying for multiple complete extension kits or an expensive multi-capacity competition setup.



## Others

There are other magazine extensions for the Remington 870 but I have not tested them yet and can't tell you how good they are. You can send me an e-mail if you want to write a review for the Rem870.com blog and ebook: [info@rem870.com](mailto:info@rem870.com)

Some of the magazine extensions from other manufacturers:

- Sage International
- S&J Hardware

**External Links:**

Nordic Components Extension: <http://tinyurl.com/lqgz6b2>

Remington Extension: <http://tinyurl.com/lyccept>

TacStar Extension: <http://tinyurl.com/n6fm4l9>

Choate Extension: <http://tinyurl.com/mcvao09>

Advanced Technology Extension: <http://tinyurl.com/mbywmnl>

Scattergun Technology Extension: <http://tinyurl.com/l7hrrmb>

## ***Stocks and Forends***

It is important to have a good stock that fits you well. The best two variants are the classic stock and the pistol grip with stock. Both of them allow reliable and comfortable use of your Remington 870.

You can choose the one you like more; it is good to try both types to see what is more convenient for you.

## **Remington Length of Pull Spacer Kit**



### Specifications and Description

- Allows you to adjust to three different lengths
- Screws and spacers are included

Installation is straightforward and only takes several minutes to accomplish. Because the Remington Length of Pull Spacer Kit gives you three different settings, it can adjust quite easily to body armor and bulky clothing.

It is recommended that you carry the various tools needed (Phillips head and/or flat head screwdriver) to make the adjustments, so if you are at a firing range you can adjust as you remove armor or clothing.



This item is ideal for adjusting youth shotguns as the shooter develops; in the past, the only option was to take the shotgun to a gunsmith and have a custom stock fitted. You can purchase adjustable stocks, but they are an additional expense. Even once you have a custom stock fitted, you will still have to account for changes in your body, if you wear armor and for heavy clothing for cold weather shooting.

Once installed, the spacer kit should look like it is naturally a part of your firearm and it should not be obvious that it is an add-on. The spacers allow for a 1", ½" and ¼" adjustments for precise fitting. As your situation changes you can add or remove spacers to suit your particular needs.

Having the correct length of pull is important for accurate shooting. If the pull is too short it will be difficult to stabilize your weapon because your weak arm will be positioned incorrectly at the elbow, making it difficult to accommodate for the short pull.

Having too long of a pull, according to some shooters, means the stock is catching under the arm or body armor as you raise the weapon because your trigger finger is naturally seeking the trigger guard. You do not move your finger to accommodate, so you are left trying to fit the stock to your shoulder, which is cumbersome when the pull is too long. According to some shooters, too short of a pull means you will feel the recoil more.

Some shooters like to measure the distance between their thumb and nose when in a firing position. They do not measure the actual pull, but through experience realize the pull does not matter as long as the thumb and nose are between one and two fingers apart. The two-finger measurement allows for bulky clothing.

Have a friend measure the distance for you when you are in the shooting position. Two inches is generally considered a rough starting point and may be the correct length between the thumb and nose for shooters that range in height from 5'8" to 5'10".

Once you have this measurement, add or remove spacers from the Remington Length of Pull Spacer Kit to get the precise pull length needed. You also have to consider sight picture because that will change depending on the length of pull as well. Straining down the barrel to the sight because the pull is too long makes for poor shooting; a short pull will force your neck into a very uncomfortable position, which will affect your sight picture.

Proper length of pull is very important, and Remington offers special kit that enables you to change lengths of pull if needed. If you have longer hands, this kit allows you to easily make the stock longer. This is a useful and inexpensive upgrade.

#### **External Link:**

Remington Length of Pull Spacer Kit: <http://tinyurl.com/mur5ezc>

## Magpul SGA Stock



Magpul SGA Stock and Magpul MOE Forend quickly became one of the most popular aftermarket sets for Remington 870.

It is not surprising because Magpul has a solid reputation as a manufacturer of innovative and quality accessories for firearms.

At first the Magpul SGA Stock looks unusual, but it is actually very interesting. This is because Magpul is not afraid of experiments and has the will to design innovative products

The Remington 870 looks very good with this set, as you can see in the photo below. I especially like the Flat Dark Earth color.



The Magpul SGA Stock and Magpul MOE Forend are high-quality products that are made in USA. They come in standard Magpul boxes with instructions and installation tools.

The Magpul MOE Forend is a simple but well thought out product. It is made of thick plastic and looks sturdy.



I was afraid that the plastic Magpul MOE forend might be slippery, but it turned out that it is made of a plastic that enables you to have a firm grip. Special grooves and hand stops on the forend make it extremely easy to use.

I have tested it on the range and it was easy to rack a shotgun using the Magpul MOE forend. It enables you to position your hand comfortably and have a reliable, positive grip.

The Magpul MOE forend is little longer than other tactical forends, but still can be used with 6-round sidesaddles.

This forend has slots that enable you to install different MOE accessories such as rails, grips, etc.

One of the good surprises with this piece is a plastic forend wrench supplied with the Magpul MOE forend. This means that Magpul cares about customers and doesn't want them to spend money on installation tools.

**ATTENTION: The Magpul MOE forend has a longer front end, which makes it impossible to use with front sling attachments installed between the magazine tube and magazine extension.**

The Magpul SGA Stock looks very unusual and some might even call it ugly, but it is very comfortable. This stock is going to become one of the most popular upgrades for the Remington 870. It gives a lot of advantages to the end user and enables you to customize it easily.

Ergonomics of this stock are great. The unusual form of the pistol grip incorporated into a classic stock enables you to hold it comfortably, and it doesn't hurt your wrist under recoil as ordinary pistol grips do.

Another advantage of this stock is that Magpul SGA comes with 4 additional spacers to adjust the length of pull. They enable you to find the length of pull that fits you.

Overall performance during tests on the range was great. It is very comfortable to hold, reload and shoot.



The Magpul SGA Stock offers users multiple options for installing a sling. The first way to install a sling is attaching it to the left or right sling loop.

The second way to have a sling is to install a Sling Mount Kit Type 1, which enables the ability to use push-button QD sling swivels (not included).

The third way is with the Magpul Receiver Sling Mount for the Remington 870 SGA Stock. It is not included; you need to buy it separately. Installation is easy and it replaces the front SGA stock spacer.

Another example of the well thought out design of the stock are the Magpul SGA Stock Cheek Risers.



They will become handy for Remington 870 owners who have holographic or high iron sights.

The SGA Stock recoil pad from Magpul is thick and works well, but many Remington 870 users like aftermarket recoil pads. That is why Magpul created the Remington SGA Butt Pad Adapter, which enables you to install any aftermarket butt pad for the Remington 870.



The Remington Supercell Butt Pad for Synthetic stocks fits the Remington 870 SGA Butt Pad Adapter perfectly. If you are buying a Remington Supercell Pad, remember that it comes without screws; you need to purchase them separately.

The Magpul SGA stock and Magpul MOE forend look and work extremely well. Their price is affordable and there are a lot of different accessories available for them. Of course, they look unusual but I think that this is just because Magpul is not afraid of experiments and is ready to offer something new to the market of firearms accessories.

The best thing is that you can install a huge number of upgrades from Magpul on your Magpul SGA stock and Magpul MOE Forend.

This set is highly recommended; without a doubt, you will love it!.

**External Links:**

Magpul SGA Stock: <http://tinyurl.com/nujpef6>

Magpul MOE Forend: <http://tinyurl.com/odl5smj>

## Hogue

Hogue is a well-known company that produces unique gun upgrades with a non-slip rubber texture



The Short Hogue OverMolded stock with a 12" length of pull and OverMolded forend for the Remington 870 shotgun is highly recommended.

The Short Stock is very handy, and increases mobility in close quarters. Hogue Short Stock is shorter than standard, and makes your shotgun compact and easier to handle.

A short LOP stock may not suit shooters with longer hands. You need to find the proper position of your strong hand; otherwise, you might hit your nose with your thumb.

When you become familiar with this stock, you will absolutely love it.

The manufacturer of this stock and forend suggest using this set with body armor or winter clothing.

© Rem870.com



Hogue stocks and forends are very easy to install; installation takes just 10-15 minutes.

The material and texture of the Hogue stock and forend are unique and ensure an excellent feel and a non-slip, positive grip.

This set is a good upgrade for any tactical, competition, or home defense shotgun.

### External Links:

Hogue Stock and Forend: <http://tinyurl.com/lmsdwpm>



## Mesa Tactical Telescoping Stock



The Mesa Tactical Telescoping Stock is the best choice for those who own a M4 carbine and want to have a similar stock. This stock is adjustable; you can adjust the length of pull when needed. The stock is very reliable, and the receiver adapter is made of aluminum.

One more advantage of this stock is the Hogue over-molded rubber pistol grip with palm swells and finger grooves, which enable you to have a better grip.

There is a recoil-reducing version of the Mesa Tactical Telescoping Stock available.

The only disadvantage of this stock is its high price.

### External Links:

Mesa Tactical Telescoping Stock: <http://tinyurl.com/kwk7ol8>

## Mesa Tactical Urbino Stock

*Many thanks to Theodore from Greece for his instructions and photos.*

For some time now I have been looking to “tac-out” my Remington 870 and lose the OEM Remington Monte Carlo furniture.

As the Rem870.com fans are probably aware, some time back I installed a Fab Defense “AGRF 870 FK SB” M4 Folding Butt Stock with Shock Absorber, and a “PR-870” Forehand Rail System on another 870. However, I was looking for a fixed stock (not folding) with a pistol grip, and I had my eyes on the Mesa Tactical Urbino Stock for some time, so I finally decided to try it.

I went with the version that came with the cheek riser & limb saver butt. The wooden forehand I replaced with a Fab Defense “PR-870” Forehand Rail System.



The Mesa Tactical Urbino Stock with cheek riser & limb saver butt is a very good quality product with a perfect fit. If you plan to get this product, get the version with the limb saver. It is astonishing how soft the limb saver butt is – it is almost jelly-like, but is still tough enough not to be damaged.

Also, even if you don't plan on using a red dot and you think that you don't need the cheek riser, get the version with the cheek riser. The cheek riser has 5 pre-set positions. In the photos I have set mine to position 4. Position 1 aligns the cheek riser completely flat on the butt. This is a nice option to have, and you never know when you will need it. Keep in mind

the Urbino stock comb is much, much lower than the Rem OEM stock, so you will never have the problem of having to scrunch down into these stocks to get on target (fantastic tactical sight picture), and you will also not keep getting smacked on the cheekbone with the stock every time you pull the trigger. However, there might not be enough stock for your liking, which is why I advise you get the cheek riser. Assembly is exactly the same as the OEM stock – just 1 long screw – you can even use the OEM screw, they are identical.



I also decided to add the Mesa Tactical Sureshell Shotshell carrier for the Urbino Cheek Riser – the 6 shell version. It has a fantastic fit and quality, and is simply outstanding. Mesa offers more Shotshell mounting options than you can imagine - check their product manual.



Photo by Theo, Published on Rem870.com

The stock also comes from the factory with an ambidextrous butt sling plate. It is very practical, but if you don't like that option Mesa also offers other sling mount options for their stocks – check their product manual for more options. The stock greatly resembles the Benelli M4 stock, as it was originally developed for Benelli M4's, but with a shorter LOP. Much has been written about its pistol grip being too “boxy” and such. I have big hands and I really like it. The texture is also rubbery and slip-proof.



Now let's check out some specs of the stock. The Rem 870 OEM stock (regular wooden, Monte Carlo wooden, or synthetic) has a LOP of 14". The Urbino stock has a LOP of 12.5". Initially I was worried that it might be too short for me, as I am quite tall; that is not the case. The LOP is perfect. In conjunction with the pistol grip, the gun becomes more controllable and maneuverable. Sight picture is great!



Photo by Theo, Published on Rem870.com

Despite the Urbino stock comb being much lower than the Rem OEM stock with a greater angle, the stock pitch angle is also steeper than the Rem OEM stock, offsetting / neutralizing the increased comb angle and making sure that the shotgun butt stock fits to your shoulder properly. It is very important to have a proper fit, otherwise when you fire the shotgun it flips the muzzle up or down if the pitch is wrong. With a proper pitch, the shotgun will recoil straight back into your shoulder as it does with all the OEM stocks. I must say that I have NOT fired the gun with the new stock yet - I will reexamine this issue once I have an opportunity to test it at the shooting range next weekend. Confirmation on muzzle flip coming shortly...



I also exchanged my parkerized Remington +2 mag extension, for a parkerized Remington +3 mag extension. Note the +3 OEM Remington mag extension protrudes approx ½ inch past the 20" IC fixed choke barrel.

The stock was worth every cent; it does exactly what the producer advertises. I strongly recommend it for anyone looking for a quality, versatile tactical outfit for their Rem870.

**External Links:**

Mesa Tactical Urbino Stock: <http://tinyurl.com/kvu83pf>

## Knox and Knox NRS



This stock became very popular because it has many advantages. The stock and the length of the pull are adjustable, allowing it to be comfortable for both people with longer or shorter hands. For example, you do not need to install a youth stock on your home defense shotgun and then change it to a standard one when you go hunting.

The installation of this stock is simple and all tools are included.

Knox's stock is made of high-quality materials, and there are thousands of users that use them for years. It can be used in all weather conditions. The pistol grip is a very good option for home defense and tactical shotguns.

There are several important things you should know about the Knox SpecOps stock for the Remington 870. If you know your equipment's weaknesses and strengths, you can use it better and avoid making mistakes and having injuries.

**Attention:** When we talk about the Knox stock, be sure to check which one you have. There are two types of the Knox stocks: one has a built-in recoil suppression system, and



the other one doesn't. The Knox stock which doesn't have the recoil suppression systems is the "Knox Adjustable NRS Stock". The NRS stands for "No Recoil Suppression".

First of all, let's see how the Knox Adjustable Stock reduces recoil. This stock has two recoil compensating systems, one in the pistol grip and the second in the stock itself. During recoil, the shotgun moves rearward over the pistol grip; this is the moment when systems work to reduce recoil.

When using this recoil suppression stock for the Remington 870, there are several things to keep in mind.

### **Use of Scope with Knox SpecOps Stock**

Due to the roughly 1 inch movement of a shotgun when shot, a scope without proper eye relief will come back and hit your head, potentially causing injury. Be sure to have enough space between your eye and the scope, and always warn people about this before allowing them to use your shotgun.

### **Use of Oversized Safeties on the Remington 870 with Knox Stock**

The manufacturer of the Knox SpecOps stock recommends only using a Wilson Combat Safety (Tactical Response Jumbo Head Safety by Scattergun Technology). This is because other big safety buttons (for example, the Vang Safety), stick up further; when the shotgun moves rearward, the button will hit the stock and damage it, and may even cause injury.

### **Spacer between the Receiver and Stock on the Remington 870**

Some people fail to read their installation instructions carefully or simply forget to remove the metal spacer, which is needed for the factory stock. Remember that you need to remove it when installing the Knox SpecOps stock; otherwise, you will have a gap between the stock and receiver.

### **Does it Reduce 95% of Recoil?**

In my opinion – no, it doesn't reduce that much recoil. BUT, it reduces recoil significantly, and I highly recommend it.

### **How Can I Disassemble the Knox Stock?**

Do not attempt to disassemble the Knox SpecOps stock, because you will destroy the internal mechanisms.

### **The Stock Hits Me When Fired**

There is a shooting tips page in the owner's manual that has some recommendations on how to avoid a "cheek-slap." It says that you need to be several inches back from the flare.

The Knox Tactical Forend is a really good additional bonus. The Knox forend is built of a light-weight polymer and has integrated texture grooves. It is much more convenient than a standard Remington forend.

Another advantage and useful feature of the Knox Tactical Forend is that even if it is pulled back, you still have access to the magazine tube.

Its ergonomic texture grooves guarantee that you will be able to reload your shotgun even if your hands are wet.

**Attention:** You will not be able to use a 6-round or 8-round receiver mount side saddle with Knox Forend.

Some shooters say that they don't like Knox stock because it has moving parts that can be broken, but Blackhawk! guarantees that the internal springs have a 30,000 round life expectancy, and knowing that you don't need to worry about anything.

#### **External Links:**

Blackhawk! Knox Stock: <http://tinyurl.com/m5gktv9>

## Enidine Shot Shock Hydraulic Recoil Reducing Stock Tube and Magpul Stock and Grip



This is a very interesting product. The hydraulic buffer really works and reduces how much recoil is felt. The 36 gram birdshot still kicks hard, but it is less painful. I would recommend using the Magpul Enhanced Rubber Buttpad™ with this stock, as this will make for an even better upgrade.

I like the adapter and the idea of using the Magpul stock and grip on the Remington 870. The Magpul stock and grip are good, useful accessories that give you a lot of additional features and advantages.

The installation is fast and easy; it took me only 10 minutes to install everything. The adapter is made of plastic, but looks reliable.

The dark, flat, earth color of the Magpul CTR stock and grip fits the Magpul forend perfectly. The CTR stock is rock-solid and eliminates movement between the stock and tube. It is adjustable, so it fits shooters with short or long hands.

The Magpul grip is very comfortable thanks to its rubber coating. Also, it has a container inside. This product is highly recommended. It is a very good kit and an excellent alternative to the Mesa Tactical recoil reducing stock.

### External link:

Enidine Shot Shock Hydraulic Recoil Reducing Stock Tube and Magpul Stock and Grip  
<http://tinyurl.com/mcg63re>

## **Remington 870/1100/11-87 Adjustable Combo Stock**



You can quickly change the height of the cheek weld and offset it so that it will fit any type of shooter or shooting position. It is considered a drop-in replacement for factory stocks, and they let you adjust left/right positions that provide a solid cheek weld to fit any shooter. The stock is made of 30 percent fiberglass-reinforced polymer, which is impact resistant, and is impervious to water and resists scratches and chips.

The stocks have a non-reflective surface. They come with a one-inch thick recoil absorbing rubber butt plate. The Remington model 1100/11-87 comes with an adjustable recoil plate with an exclusive recoil system. There are eight different adjustments. They all are sold as a set with a matching forearm with molded checkering. The 1100/11-87 models have an adjustable pull from 14 to 15 inches.

Shooters state that the stock installs easily without any needed adjustments, and some have said they can add length by using shims if needed. This stock is ideal for shorter shooters or those with heavy clothing or armor on that would interfere with the pull.

Buyers have stated that the stocks are easily changed out and look good, and are impressed with the ease of changing the cheek weld positions.

What is cheek weld and why is it important?

Cheek weld is where your cheek naturally meets the stock, where your eyes are lined up with the sights. Shooters that shoot often with the same weapon know instantly when they have failed to achieve the proper cheek weld; they can feel the difference and their sights will look inconsistent.

Having a strong cheek weld helps ride or recover from the recoil so that you do not lose the sight picture. Each shooter will have a different cheek weld, and each time they pick up and aim any shotgun they will attempt to find their natural position. Having a stock that lets you adjust the cheek weld is ideal. New shooters have made the mistake of resting their chin on the stock and have gotten a real jolt to the chin from the recoil. Having a height and angle adjustment helps stop shooters from resting their chin on the stock.

Each person has different sized necks, and some shooters may not find a natural, comfortable position. The Remington 870/1100/11-87 adjustable combo stock allows you to bring your natural cheek weld closer if the position is awkward because of an injury, because you have a shorter neck, etc.

Adjustable stocks are ideal for home defense weapons where more than one person will be using the weapon. Because the stock also reduces recoil, it can be fitted for smaller people in the home. This allows you to keep that 12-gauge handy and stop using lighter loads because of the recoil. People with shorter arms can still fire the weapon with accuracy and confidence if they have installed the Remington 870/1100/11-87 adjustable combination stock.

Many shooters that have purchased the stock combo indicated that they wanted to improve their sport, clay pigeons and skeet shooting, and reported a substantial improvement with this add-on. Shooters from 6'4" to 5'10" indicate the stocks work well with their heights.

**External Link:**

Remington 870/1100/11-87 Adjustable Combo Stock: <http://tinyurl.com/mz8oxdf>

## Phoenix Technology Remington 870 KickLite Stock



Field test of the Phoenix Technology Remington 870 KickLite Stock was pretty interesting. It hasn't changed my mind about pistol grips on shotguns; I don't like them, even if it is a recoil-reducing pistol grip stock.

The Phoenix Technology Remington 870 KickLite Stock has a spring-in tube, which means that all recoil hits your wrist, and only after does it get compensated by a spring. The Blackhawk Knoxx stock has better construction because a shotgun with an adapter travels above your wrist and all recoil goes into the shoulder.

Even with the recoil-reduction feature, the Phoenix Technology KickLite stock hits your wrist each time you shoot. It does, however, enable you to shoot pretty fast. I still feel a little pain in my hand (between my thumb and index finger) after just 50-75 rounds yesterday. This stock may be a choice for home defense when you need to only make several shots, but I still prefer Hogue and Magpul stocks.



The design is very simple; it is adjustable and is handy if you want to be able to change your length of pull when wearing winter clothes (armor) or when the shotgun is used by a shooter with short arms. The stock comes with a shell holder (5 rounds on the stock) that is made of rubber, holds shells reliably and enables you to take them out fast. I prefer sidesaddle because it makes reloads faster, while having the shell holder on the stock requires more time. The ventilated butt pad is very nice.

### **Phoenix Technology Remington 870 KickLite Forend**

This forend has grooves and ensures a positive grip. It is very short and it doesn't cover up the forend tube nut.

### **Phoenix Technology Remington 870 KickLite Stock Installation**

Installation is very simple and straightforward. I have installed this stock and forend in less than 10 minutes. The forend removal tool is included.

This set is inexpensive and simple. I didn't like it much because of the pistol grip, which hits your hand each time you shoot. Also, the forend design is strange; it is too short. The Phoenix Technology KickLite Stock does have some good features, however, such as recoil-reduction, a shell holder and a ventilated buttpad.

Despite its few positive attributes, I do not recommend it.

**External link:** [Kicklite stock](#)



## Pistol Grip Only



Pistol grip only stocks make your shotgun very short and compact, but it can become difficult to aim the shotgun and control the recoil.

It is important to be very careful with such stocks because shotguns under recoil can injure your wrist or even hit a shooter in their face.

Try to start using it with a low recoil ammunition to get used to the new stock.

Remember that even experienced shooters spend time to become familiar with pistol grip only stocks.

It is good idea to start with the Knoxx recoil reducing pistol grip only stock.

## Hogue Tamer Pistol Grip



The Hogue Tamer Pistol Grip is one of the best pistol grips available for Remington 870. It is very comfortable to hold the stock thanks to the special texture. It is slip resistant and ergonomic. I must say that this coating performs very well, even during very cold weather; it is not as cold as general plastic.



Installation is very simple, and takes just several minutes. It fits the Remington 870 shotgun perfectly. An allen wrench is not included, so you will have to find one that fits. The shape of the Hogue Tamer pistol grip continues the shape of the 870's receiver, and it looks very nice.

This pistol grip makes your shotgun very short and maneuverable, which is very important in close quarters. Remember that the Remington 870 with a pistol grip can never be as accurate as when it has a stock. You will need to learn how to use it and deal with the recoil.



A Hogue Tamer pistol grip can be useful during backpacking or fishing in places where there are a lot of wild animals.

Shotguns with pistol grips are very compact and you can easily take them with you.

Sidesaddle with 8 rounds will be more than enough for this purpose.

A sling can be attached to the top or the bottom using existing sling mounts and strap loops. You can use a one-point or two-point sling.

This product is very well made, and I highly recommended it.

**External Links:**

Hogue Tamer Pistol Grip: <http://tinyurl.com/n7gurl8>

## FAB Defense Forend

FAB Defense Remington 870 Forend is a high-quality forend which has several nice features. It has a full length fixed rail on the bottom side and two small rails on left and right sides. I recommend removing one of them or else it will smash your finger after each shot under recoil (small rails can be easily removed).

This forend is lightweight and solid. Ribbed texture of FAB Defense forend provides positive grip.

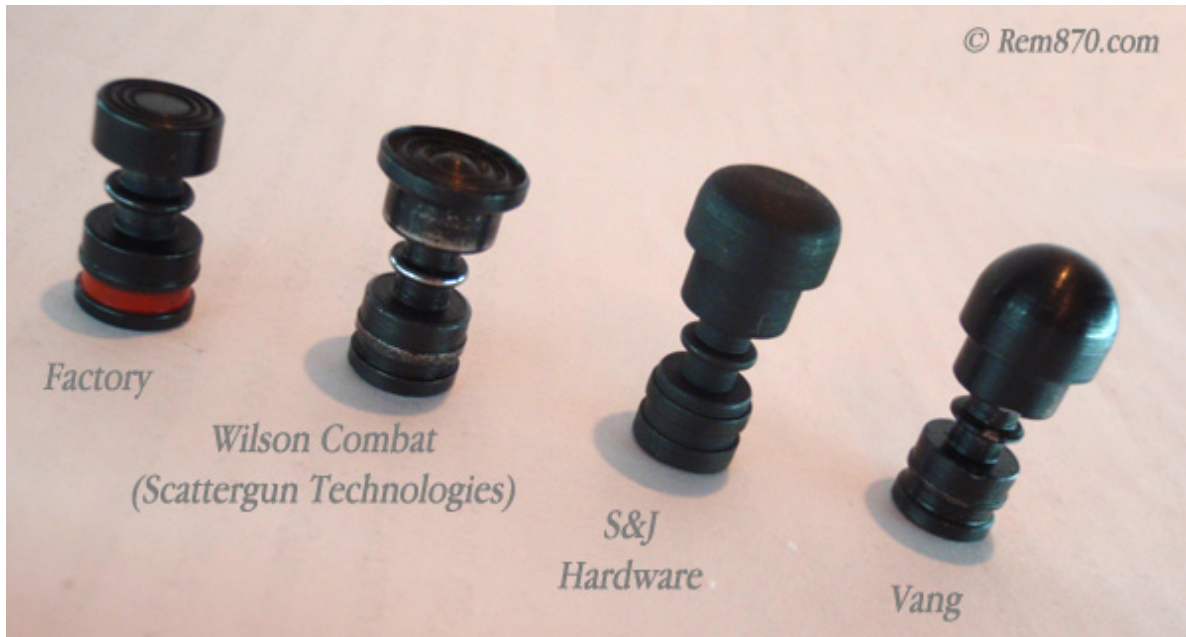
It is recommended for any home defense or tactical shotgun.



## ***Safety Button***

The standard safety button works properly and does what it was designed for, however it is too small for a quick disengagement. This is why some shooters prefer to have it disengaged all the time, causing the shotgun to become dangerous for the shooter himself and for the people around him.

An oversized safety button fixes this problem easily.



Quick safety disengagement is very important during competition, tactical, or home-defense situations, and that is why upgrade of your factory safety button is highly recommended.

There are a lot of oversized safety buttons which allow you faster disengagement in a stressful situation. They are inexpensive, and add a lot of comfort and safety to your Remington 870.

### **Scattergun Technologies (Wilson Combat)**

This safety is nice and very popular. It is the only safety button that is compatible with the Knoxx stock, so if you have a recoil-reducing version of the Knoxx stock installed on your Remington 870, it is your only option.

The only disadvantage of the Wilson Combat safety button is its sharp edges.

### **S&J Hardware**

The S&J Hardware button is a safety that is highly recommended. After many tests, this is my choice for competition and home defense. This safety button has a rounded profile, and

doesn't snag on equipment. It doesn't stick out much, and allows for extremely fast disengagement.

### **Vang Comp Systems**



This is a popular safety that is used by many shooters. It enables you to disengage your safety quickly, but does have several disadvantages. Its material is soft, and you can see clear signs of wear and damage after time. It also sticks out too much, even when disengaged, which is not comfortable for your trigger finger.

Vang Comp Systems Remington 870/1100/11-87 Big Speed Safety is a reputable product; I have heard positive feedback about it from many shooters. Due to many requests, I decided to make an updated review.

There are two issues that might stop you from buying this safety button:

1. Sticks out too far.
3. Cannot be installed with the Knoxx recoil reducing stocks.

#### **Manufacture's Specifications**

- Steel blue
- Polished finish
- .960 Inches (24.4mm) long
- Head is .350 Inches tall (8.9mm), .433 inches (11mm) in diameter

The safety is large and dome shaped, allowing it to be quickly located. A quick push with the side of your trigger finger operates the safety. Because of its unique design it will not snag on clothing, branches, or gun cases. It is a drop-in installation, and currently only made for right-hand use.

The Big Speed Safety can be operated if you are wearing shooting gloves or gloves for cold weather. The factory safety is not one that can be easily (or at all) operated with gloves on; this could create a hazardous situation, particularly with new shooters. The location combined with the size means that you do not have to move your head or fumble with your trigger finger to operate it.

The standard safety on the Remington is difficult to operate under stress and cannot be operated with a straight finger, whereas the Big Speed Safety can operate with a straight finger.

I would have liked a red line indicator for when the weapon is hot, but you can simply paint a red line on the Big Speed Safety for added safety. As you know, the safety must be on at all times until ready to fire; this product makes it easy to disengage while slipping your trigger finger in the finger guard.

Vang Comp Systems Remington 870/1100/11-87 Big Speed Safety is easy to install, pleasing to the eye, tough and provides an additional degree of safety.

The safety is ideal for home defense weapons because it can be easily operated under stress; there is no fumbling for the safety and wondering if the weapon is hot. Shooters that have never been in a tactical situation may have convinced themselves they would know whether or not their weapon is hot when the time comes, but once engaged in action things change quickly and wondering is not an option - you need to know. Once you have the Big Speed Safety installed you will never have to guess whether or not you are ready to fire; you will always know.

The safety can be operated with the middle of your finger as the tip of the trigger finger slips over the trigger.

The only problem with this product is that you can feel the safety “bump” while your finger is on the trigger, though this is only a minor inconvenience and does not take away from the shooting experience.

Transition from safety on to off can be completed as you slide your trigger finger inside the guard. This gives any shooter a tactical advantage, because home defense weapons are not typically in the hot or ready to fire position; as a homeowner you need every advantage possible in a home defense situation.

This is a good safety, and is used by many Remington 870 owners.

**External Links:**

Scattergun Technology Button: <http://tinyurl.com/ln9vv2f>

Vang Comp Systems Button: <http://tinyurl.com/lfnoh3t>



## ***Follower***

I receive many complaints about the factory magazine follower from Remington 870 owners; it is cheap and easy to break. This is the number one cause for feeding problems. Initially, Remington 870s had metal followers which were strong and reliable.



Changing your factory magazine follower is extremely important to ensure reliable feeding. Remember that a broken extractor can stick inside the magazine tube and you will have to disassemble your shotgun to fix that; if we are talking about a self-defense situation this is the worst case scenario!

The factory follower is junk; remove it as soon as possible!

**Attention:** New Remington 870 shotguns have two “dimples” in the magazine tube and followers without slots in the sides will not work with them. You will need to drill out the dimples or modify a follower.

**The factory Remington 870 follower is the most common cause of loading/feeding problems.**

This article is about various magazine followers available for the Remington 870 shotgun.

One of the good things about the Remington 870 is that it is extremely popular and different manufacturers release new products for this shotgun each year. The more choices we have the better!

There are many aftermarket magazine followers available for the Remington 870 shotgun:

- Remington
- Scattergun Technologies
- Choate
- Vang Comp Systems
- Brownells steel follower
- Brownells aluminum follower
- S&J Hardware
- Nordic Components
- SBI Precision
- GG&G

### **Magazine Spring**

Don't forget that a good magazine follower is just half of the upgrade and you need a good magazine spring as well. In my opinion, there is no better spring than the one from Nordic Components. It will fit any magazine tube (you will need to cut it to the proper length) and also it has a black coating.

The cost of a better magazine follower spring is less than ten bucks.

### **Aftermarket Followers**

Let's start with the best of the aftermarket magazine followers for the Remington 870 shotgun. Vang Comp Systems, S&J Hardware, Brownells and Nordic Components followers are all the best followers on the market today. I have chosen the best followers after an extreme number of tests on the range and several thousands of rounds.

You can't go wrong with one of these followers! I have highly recommended followers that are used by myself and thousands of shooters worldwide.

## Vang Comp Systems Follower

### Recommended

It turned out that the stainless steel follower from Vang Comp Systems works perfectly, even without a tail, which is believed to prevent the spring from kinking. I think that the reason for such good results is the metal on metal contact, which enables the VCS follower to slide freely inside the magazine tube. Also, it takes less space in the magazine tube.

This follower has a hole on the front side, which enables you to check the magazine with your finger.



This is one of the best followers I have ever used. It is sturdy, reliable and virtually indestructible.

**Advice:** It requires a small modification – you need to polish the sharp edges on the front of the follower.

**Attention:** The only one known problem involves the use of a Vang Comp Follower with the original Remington magazine extension. Shells can move the follower to the groove inside the extension, and it will stick.

## Nordic Components Shotgun Follower

Recommended



This follower is really good; it is Teflon coated, which makes feeding smooth. I have tested it and it works perfectly. Feeding with the Nordic Components follower becomes much better and smoother because it is polished and Teflon coated.

## Brownells Stainless Steel Magazine Follower

### Recommended

When you hold it in your hands you can feel that it is heavy and reliable; it is thick and made of stainless steel, and is even thicker than Vang Comp Systems follower. Looks good and works well! I didn't have any malfunctions during the tests. Brownells Magazine Follower has grooves and will work with Remington 870 shotguns that have dimples but don't have an extension.



The Brownells Stainless Steel Magazine Follower is a very good alternative to the Vang Comp Systems follower. It is machined, is stainless and is thicker than the Vang Comp Systems follower. It will last forever.

## Brownells Aluminum Follower

Recommended



Here is another follower from Brownells, but this one is made of aluminum and has a bright green color.

It is a good follower and is lightweight and bright. I like the green color because it is highly visible and you can easily see that the shotgun is unloaded.

Brownells followers are good and you can choose whether you want a heavy, stainless steel follower or a lightweight, bright aluminum one. Followers are available in different colors.

## S&J Hardware Follower

Recommended



The S&J Hardware follower is a well thought out follower that has very good features and is made of a good material. There are several version of this follower: you can select one with the raised bump in the middle, or one with a hole that enables you to check the magazine by touch.

Also, followers are available in orange or green colors. This follower is not hollow inside and doesn't have weak points (like the Scattergun follower). It will not break down with cleaning products and hard use.

The S&J Hardware follower for the Remington 870 is CNC machined from 2" thick piece of DuPont Delrin® material, which is a type of Teflon impregnated plastic. Delrin is hard enough to machine, soft enough for use and is very slippery, making it ideal for a shotgun follower. This follower has a tail, which is believed to prevent the spring from kinking.

**Attention:** One of my readers informed me that their S&J follower stuck in a factory magazine extension of their Remington 870 shotgun.

## Scattergun Technologies (Wilson Combat) Follower

**Not Recommended**



This follower was one of the first aftermarket followers and became very popular. It is easily found almost anywhere. There are a lot of positive comments about it.

This is a high-visibility, fluorescent green follower, has a tail that is believed to improve feeding, and has a projection in the head that allows users to check the magazine by their finger. It is made of ABS nylon.

**Attention:** This follower has a weak point. The middle part (projection) of the follower is not solid, and I was able to break it loading a magazine (it stuck and I had to use force on it).



## Choate Follower

**Not Recommended**



This follower is orange, made of plastic and has a very long tail. The tail is too long and takes up too much of a magazine tube space. Also, it doesn't allow you to check a magazine by your finger. It is, however, a highly visible orange color.

I didn't have problems with this follower personally, but I know shooters who have. The follower is too big and its diameter needs to be reduced to slide freely in a magazine tube.

### External Links:

Brownells Followers: <http://tinyurl.com/m2zfvhr>

Vang Comp Systems Follower: <http://tinyurl.com/msmbchk>

Nordic Components Follower: <http://tinyurl.com/laabr4h>

Nordic Components Magazine Spring: <http://tinyurl.com/kono5kg>

*Others*

**Remington 870 Bullpup Unlimited**

*By: Harry Sweigart*



*Photo by Oleg Volk*

Remington 870 Shotgun Guide from Rem870.com, version: 2015-final



*Photo by Oleg Volk*



*Photo by Oleg Volk*



This is a 20" barrel 870 Remington Magnum express 12 gauge shotgun. This is a 7+1 shot shotgun with the magazine extension installed. I also added a Hogue grip to it for comfort of shooting. ([www.rottiarms.com](http://www.rottiarms.com))

These shotguns take around 1 hour for your first build if you just build a plain black gun.

If you decided to do different colors or paint schemes, it adds to the build time. One nice thing about these builds is that you can revert back to your old shotgun in no time at all as you are not altering the original shotgun receiver or barrel.

These shotguns are a blast to shoot; they have very little recoil and can be shot one-handed with ease. The way they are balanced also makes them easier to shoot and maneuver in tight quarters. These guns are ideal for home defense, military applications, police, executive protection, vehicle deployment and room searches because of their size.

Don't let their size fool you, however. These shotguns have a full size barrel and extra rounds in it to get the job done. These guns do not require a tax stamp and they are only 28" in length overall. The sawed down 14" entry 870 is still longer and holds less rounds than this conversion. These guns are only slightly longer than a 12" barrel pistol grip shotgun and you do not have as great of control with the pistol grip gun as you do

with the Bullpup gun.

These guns are also nice for hunting because they take up less room when moving through brush and do not get snagged as easy as a full size 870 does. If you are in a deer stand, this gun takes less room to swing and shoot.

This build is also nice because you are able to take the well-respected 870 Remington 12 gauge shotgun that everyone is familiar with and use it for the conversion. Almost every police department has carried the 870 shotgun for years because of their reliability and ease to shoot. The Bullpup conversion requires very little training to convert a shooter from the longer gun to the shorter, more compact shotgun.

Additionally, this conversion will accept almost all AR-15 accessories and you can put on any AR-15 grip that you want. They also have AR-15 safeties and a safety trigger set up like a Glock for added security.



Shown above is an 18" barrel 870 Remington Express 12 gauge shotgun with an 18 ½" barrel and a Hogue grip. Behind it is a Hawk full length gun the 870 clone with an 18" barrel for comparison to the size reduction by doing a Bullpup conversion on your shotgun.

Below is the other side of the shot gun, showing the AR-15 safety, lower trigger and grip. As you may note, this shot-gun comes with upper, lower and two 45 degree side rails. In this picture you can also make out the slide release.



Below is a picture of the kit before you start. I use the Bullpup Unlimited kit to build my Bullpup Shotguns with.



## Timney Remington 870/1100/11-87 Trigger Fix Review and Installation



The Timney Rem 870/1100/11-87 Trigger Fix is designed to provide a light, adjustable and smooth trigger pull/depression. It is a “drop-in-kit,” with a fully adjustable trigger pull that will help you maintain proper trigger control. The kit includes three different weight springs that lower the factory trigger pull to two, three or four pounds. The replacement kit also allows for fine-tuning adjustment using the adjustment screw and the included hex-head wrench. The springs are color coded for easy identification.

- Steel sear
- One 2 lb blue spring
- One 3 lb white spring

- One 4 lb red spring
- Fits Remington 870, 1100 and 11-87 shotguns, all gauges, also designed for 740, 742, 760, 7400 and 7600 rifles
- Hex-head wrench is included

“Jerking” the trigger is a very common problem, especially with new shooters. A heavy trigger pull may cause you to exert so much pressure that the weapon actually moves off target. Re-engaging the target is also another problem; when the trigger is jerked not only do you miss the target with the shot but maintaining your natural point of aim is difficult. Having more control over the trigger means better accuracy and, in some cases, accuracy can make a substantial difference in the outcome.

The trigger fix is ideal for home defense weapons, waterfowl and big game hunting. Use the Timney Rem 870/1100/11-87 Trigger Fix to improve your shooting and to break the habit of jerking the trigger.

Shooters, especially new ones, will anticipate recoil, and having poor trigger control on top of flinching means they may never become an advanced shooter. Make sure to have a trigger fix installed if you are a firearms instructor or are passing along shooting skills, so your students can find the right weight and can learn proper trigger control. Who wouldn't want more control over their weapon, especially when it comes to the trigger?

\$89.99 looks like a high price for a sear and three springs, and I was rather skeptical about the Timney Remington 870/1100/11-87 Trigger Fix initially. Now I think this is a very interesting and useful upgrade, which enables shooter to become more accurate.

Timney Remington 870/1100/11-87 Trigger Fix installation is easy and takes just 10-15 minutes. The Timney sear and spring replace the original factory pieces for a smoother and more adjustable trigger pull.

Three different weight springs included:

- Blue – light pull weight
- White – medium pull weight
- Red – heavy pull weight

There is also a wrench included to fine-tune the pull.

The Timney Remington 870/1100/11-87 Trigger Fix will be very useful for most shooters. It is important to easily control and to adjust trigger pull. This is an especially useful upgrade for those who often shoot slugs and for competition shooters. It improves shot grouping



and accuracy because of a more controlled trigger pull. It is also recommended for use with shotguns designed for skeet shooting.

I am very satisfied with the Timney Remington 870/1100/11-87 Trigger Fix. It is rather expensive, but works perfectly. Installation took me 10-15 minutes initially, but with my video you will be able to install it much faster. The Timney Remington Trigger Fix also works on the Remington 1100 and 11-87 shotguns. This product will work with the 870 express left-handed models.

Shotguns are designed for various shooting situations, and commonly many hunters find themselves shooting at moving targets, whether they are clay pigeons or real ones. This means timing is important. You are anticipating where the target will be by the time you have fully depressed the trigger, and if you do not have proper trigger control your shot will come after the target has moved. Practice and find just the right trigger weight, and you will find your accuracy has improved and those fast flying pigeons will not be in the trees by the time you have fully dressed the trigger.

This is a recommended product. It is an upgrade that is not visible, but is still highly effective.

**External Link:**

The Timney Rem 870/1100/11-87 Trigger Fix: <http://tinyurl.com/nymrtxu>

## Sims Vibration Laboratories LimbSaver Recoil Pad



### Manufacture's Description and Specifications:

- Uses energy absorbing NAVCOM material and elastic motion to reduce recoil shock up to 50 percent over factory pads
- The pads provide greater protection, allowing for more shooting and reducing discomfort at the end of a long day
- The pads also include an anti-muzzle jump technology that reduces muzzle rise. This makes it easier to reacquire your target after firing
- The pads do not include mounting screws
- Buyers must ensure that the pad will fit their wood or synthetic stock
- Made with NAVCOM synthetic material, black and ribbed faces
- Screw on replacement for guns with a factory recoil pad

This pad makes shooting more enjoyable; while the push from the recoil is still present, the jolt is reduced significantly. The Sims Vibration Laboratories LimbSaver Recoil Pad helps control recoil. There will still be some recoil, but for those that were not able to tolerate the recoil from certain weapons or ammunition, recoil will be more manageable.

The shock will be very mild compared to what it was, and even magnum rounds could be fired without fear of the recoil.

One of the main deterrents to practicing for some shooters is the recoil, so after only a few hours of practice the weapon is put away only to collect dust. Practicing with your weapon is critical; without practice you will never be a proficient shooter.

Some shooters may have been forced to use lighter loads because they, or others in their family, could not tolerate the recoil. In some cases, especially with home defense weapons, people may have even had to purchase another weapon.

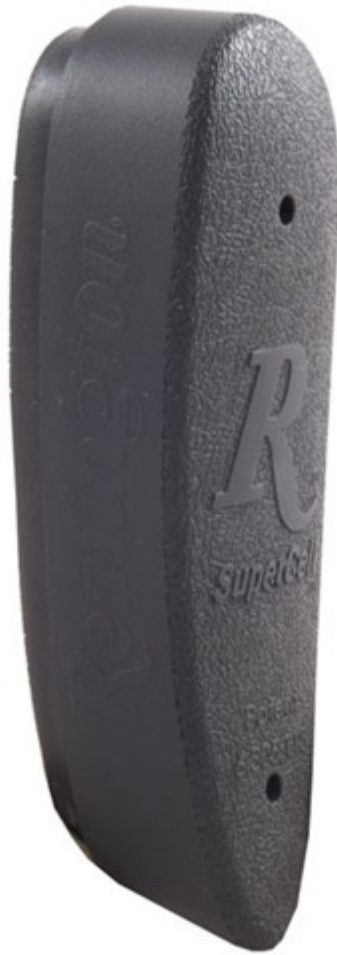
The recoil will be much easier to handle, especially on lighter weight weapons.

The Sims Vibration Laboratories LimbSaver Recoil Pad will reduce the recoil without increasing the weight of the weapon. This is ideal for home defense weapons where more than one person may be firing the weapon. In most cases, it is not practical for everyone in the family to have their own weapon, so it is important that each person be able to fire the available weapon.

**External Links:**

Sims Vibration Laboratories LimbSaver Recoil Pad for Remington 870:  
<http://tinyurl.com/mb6dkhb>

## Remington 870 Supercell Recoil Pad



This recoil pad from Remington Company is one of the most popular upgrades for the Remington 870. This recoil pad is much softer than a standard one and reduces felt recoil by 54%.

I am not sure about the 54% reduction of recoil, but it really does make a difference! The installation was easy. The pad is not sticky, and it is very comfortable.

**ATTENTION:** There are two versions of Remington 870 SuperCell recoil pads: one for synthetic stocks and one for wood stocks.

### External Links:

Remington 870 Supercell Recoil Pad: <http://tinyurl.com/ll6pooB>

## Non-MIM Extractor



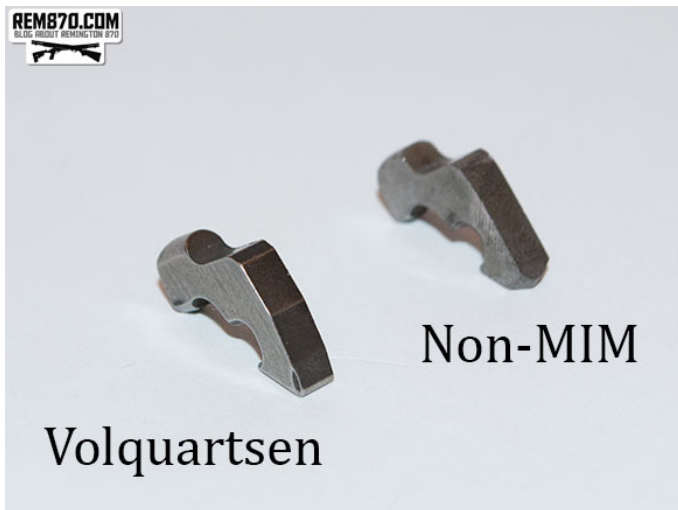
One of the simplest ways to improve your shotgun's performance is to change a standard MIM (metal injection molded) extractor for a non-MIM (solid steel) extractor.

Steel extractors are used on the Remington 870 Police shotguns because they are more durable and allow for heavy use.

### External Links:

Non-MIM Extractor: <http://tinyurl.com/lqmazob>

## Volquartsen Remington 870 Exact Edge Extractor



It looks like a very good and reliable product. Volquartsen Remington 870 Exact Edge Extractor looks like a very good aftermarket extractor. I really like that all edges are polished when compared to the Remington extractor.

### External Links:

Volquartsen Extractor: <http://goo.gl/N9QWvR>

## Anti-Walk Trigger Housing Pins

This is a small and inexpensive upgrade for your Remington 870 shotgun.

If you use standard trigger housing pins, you may want to replace them with anti-walk trigger housing pins.

They are inexpensive, easy to install, and more reliable. These pins will not work with receiver mount shell holders.



### External Links:

Anti-Walk Trigger Pins: <http://tinyurl.com/mfjjab4>

## Sear Springs

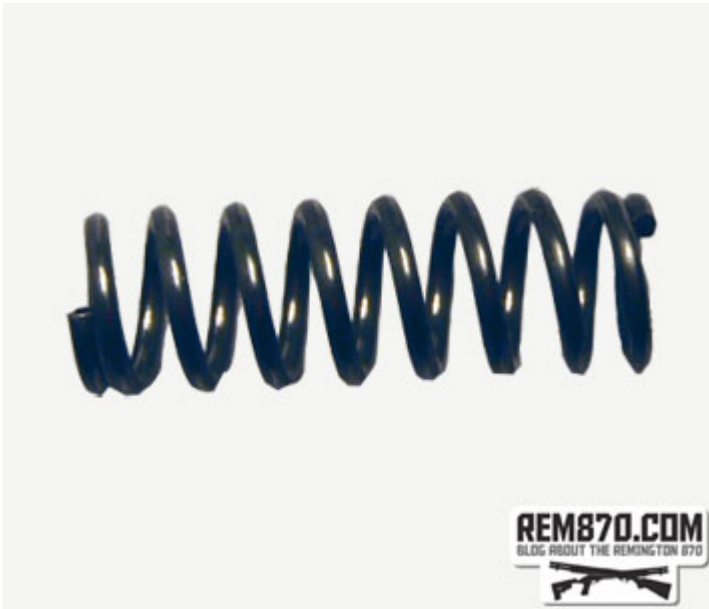
There are three types of sear springs for Remington 870 shotguns:

- standard (4 to 5 lbs)
- competition (light pull, 3 lbs)
- police (heavy, trigger pull between 5 and 8 lbs)

### Standard Sear Spring

Let's start with a standard sear spring. It has a silver color and the trigger pull is between 4 and 5 lbs. It is installed on all Remington 870 Express shotguns. There is nothing wrong with it; it works perfectly.

Remington part number: F17518



### Competition Light Sear Spring

The second sear spring for the Remington 870 is a competition light pull sear spring. It provides you with a light pull, only 3 lbs. It is used for competition shooting. It has a noticeable difference on the trigger pull.

This sear spring is good for competition or trap shooting, when you need to make numerous shots fast.

Remington part number: F91771



### **Police Heavy Sear Spring**

The police sear spring is heavy, and the trigger pull is between 5 and 8 lbs. It provides a reliable, positive trigger pull. The difference is noticeable. I think that the Police sear spring is safer because it requires more effort to pull the trigger.

Remington part number: F97642

### **External Links:**

Standard Sear Spring: <http://tinyurl.com/mb7f8v6>

Light Sear Spring: <http://tinyurl.com/kfs7lw9>

Heavy Sear Spring: <http://tinyurl.com/mhfy6fo>



## **Weaver No-Gunsmith Shotgun Mount Remington 870, 1100 and 1187 (12-20 gauge)**



Instead of taking your shotgun to a gunsmith to have sights or mounting brackets retro fitted, you can now install the Weaver No-Gunsmith Shotgun Mount yourself and add or remove the attachments as needed. This addition mounts easily if you follow the instructions carefully. The mount comes with Allen wrenches, washers, mounting screws and setscrews.

My friend purchased this mount with the intention of adding a red dot scope. The scope and the mount fit snugly, even after repeated firings. The mount stays tight and does not seem to be affected by recoil. Receiver pins are replaced by the included mounting screws.

### **Manufacturer's Specifications:**

- No gunsmithing mount
- Has multiple slots, allowing the user to mount various optics, scopes, lasers and red dots while providing optimum eye relief
- Is form fitting, so you do not have to change your shooting style or position
- The Converta Mount is made of a rugged polymer composite material suitable for extreme weather conditions and temperature ranges

This mount is designed in such a way so that when it is mounted and you have installed a scope, red dot or otherwise, the view is natural and you do not have to “find another cheek weld position.” Shooters that have been using iron sights and the front bead may be hesitant to change the angle of their view as they look down the barrel, and the so-called after-market attachments in some shooters mind’s will do just that. Once mounted, the Weaver No-Gunsmith Shotgun Mount enhances shooter’s vision; eyestrain caused by trying to focus on the target and still trying to keep the front bead in line, is reduced.

The No-Gunsmith Shotgun Mount is durable, lightweight and fits snugly. It takes less than three minutes to install this mount. The design and color fits cosmetically with most weapons, and actually enhances the look. Some shooters have concerns about stripping out the nuts that are used to replace the pressed pins on their shotgun. You should tighten the screws snugly, and make sure they have been started correctly so there is no chance of cross threading.

Place the mount over the pins you are replacing before removing any pins to make sure the holes line up. One user stated that they removed the pins first, and the trigger itself shifted out of alignment. Remove the pins one at a time and replace with the mounting screws only if the mount holes match up correctly.

Because the mounting rail is a polymer composite, there is no metal-to-metal contact and less chance of scratching the shotgun’s finish. Additionally, the mount will not rust, which could cause further damage to the shotgun’s finish. According to the manufacturer, this mount is operational between -40F and 150F. Some composite materials can become brittle at very cold temperatures and may soften somewhat when exposed to high heat.

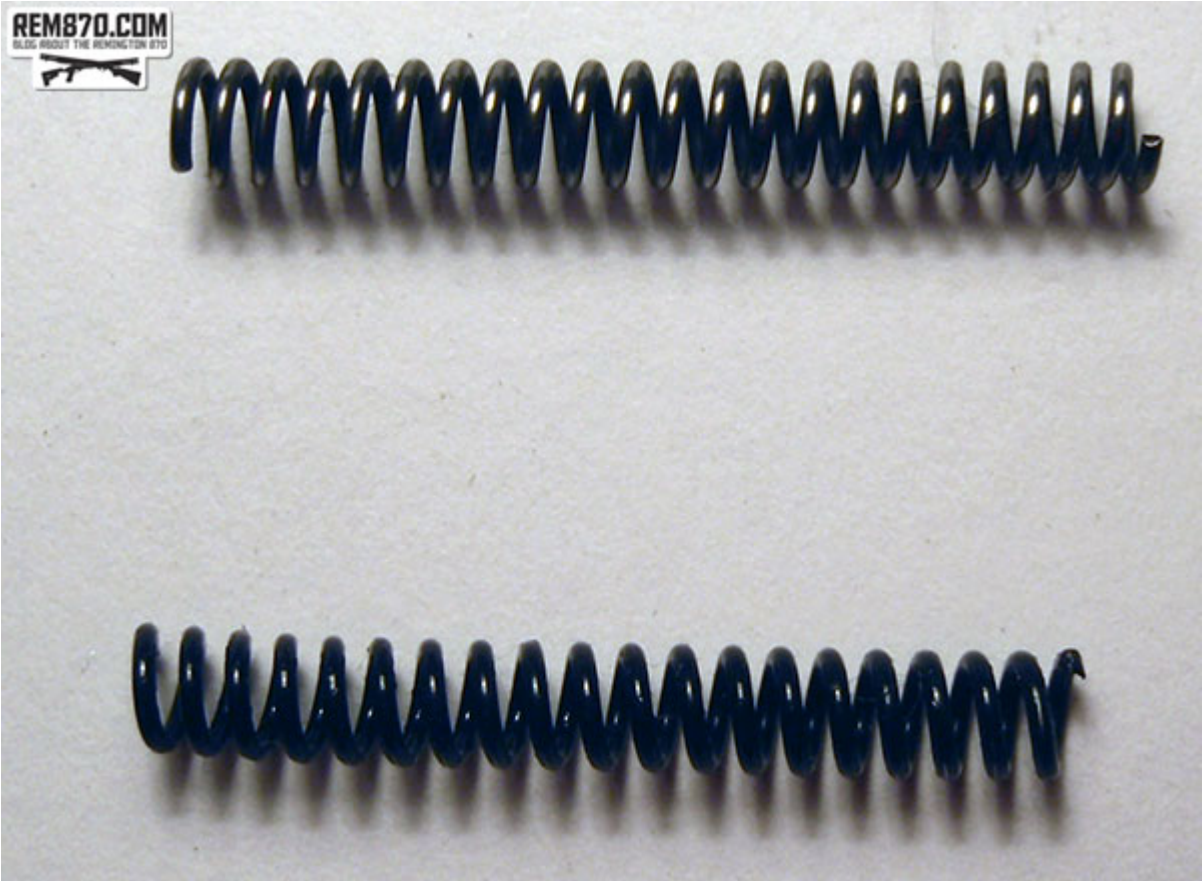
#### **External Link:**

Weaver No-Gunsmith Shotgun Mount Remington 870, 1100 and 1187 (12-20 gauge):  
<http://tinyurl.com/nxheorn>

#### **Carrier Latch Spring**

You can improve the reliability of your Remington 870 easily and for just five bucks. Remington 870 Police shotguns have a different Carrier Latch Spring. It is from model 1100, and the Remington part number is F16966.

The standard Carrier Dog Follower Spring is silver, while the Remington 870 Police spring (from model 1100) is black:



A heavier carrier latch spring improves reliability and may fix feeding problems if you have them. The main purpose of this spring is to lift the next round that comes out of a magazine tube; the Remington 870 Police carrier latch spring (1100) will do this much better.

**External Links:**

Police Carrier Latch Spring: <http://tinyurl.com/mff929s>

## **Barrel Shrouds (Heat Shields)**

In some cases you can literally melt a barrel down on a firearm. The heat caused by firing multiple rounds in a short period will create intense heat in the barrel. Certain automatic weapons that are not typically shoulder-fired usually have an extra barrel included because the barrel can get hot enough to warp, which would greatly affect the accuracy of the weapon; barrels may be changed out quite frequently. In years past certain weapons had water jackets to keep the barrel cooled, but today most are air-cooled and may have a baffling system that allows airflow around the barrel. Shotguns do not typically come with a heat shield or any type of baffling around the barrel. Air-cooled barrels will get hot, which can be particularly agonizing for a shooter in a combat situation. A hot barrel can cause serious burns to the hand.

There is an option, however, called a shotgun heat shield that attaches to the shotgun barrel. Along with protecting your hands, some heat shields will come with sights already mounted. Typically there will be silicone pads that can take intense heat between the shield and barrel to prevent damage to the barrel.

The shields are easily attached and removed. Setscrews are included but the package may not include the needed Allen wrench, so keep this in mind. Many shooters will make sure they have a wrench in their cleaning kits and carry one while in the field so they can remove the shield to clean underneath it.

### **Who Needs a Shotgun Heat Shield?**

Some people might think that they do not shoot enough or never touch the barrel, so they do not need a heat shield. If you have ever been in the hot sun with your shotgun, then you know how hot the barrel can get from the sun alone. Once you have fired a dozen rounds downrange while out in the sun, you will have a very hot barrel that can burn you. There are any number of reasons why you would handle the barrel, and in some cases you might grab it without thinking, especially if a shotgun is handed off to you.

In a tactical or hunting situation you do not want to grab or touch the barrel because this will cause you to jerk your hand back; this can have deadly consequences depending on your situation. You may also scare game off by doing this while hunting. Not only does the shield protect your hands, it also adds to the look of the weapon, and some shooters start out with this in mind. Once you have the shield attached you will also realize the protective benefits. It is quite easy to make contact with the barrel while reloading, and some of you likely know what it feels like to have touched the barrel with your forearm accidentally during this process.

When deciding on what heat shield to get, make sure that it is of good quality. Ensure it has pads that protect the barrel finish and prevent metal-to-metal contact. The shield needs space between it and the barrel for airflow to keep it cool; you need the air space between

the metals or heat may conduct from the barrel to the shield, defeating the purpose for the heat shield.

Heat Shields on your shotgun have advantages and disadvantages. First of all, they protect your hands from heat; this is important because the barrel becomes very hot when you fire a lot.



Another good thing is that it gives your Remington 870 shotgun a tactical look. Shotguns look fantastic with a barrel shroud. They make them look so tactical that gun control enforcement even wanted to ban barrel shrouds!

A disadvantage of the heat shield is that it scratches the barrel during installation and during use. It moves a little under recoil, and you will see clear marks on your shotgun.

Also, use of a heat shield requires modification when installed on a barrel with rifle sights. Another disadvantage is the additional weight on your shotgun.

There are several types of heat shields available on the market; you can choose different manufacturers and materials. There are metal and plastic heat shields for the Remington 870. Plastic heat shields generally don't scratch the barrel.

### **External Links:**

Remington 870 Heatshield: <http://tinyurl.com/l35wvjl>

### **Sling Attachment Plates**

Most shooters like to install a sling on their shotgun. Slings allow you to carry a shotgun in different ways, and also have some tactical uses. For example, it is very easy to switch to a secondary weapon if you have a sling on your shotgun.

There are several types of slings, but most of them require installation of a sling attachment plate.

## Rear Sling Attachment Plate

This sling attachment plate is installed between the receiver and stock.



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The S&J Hardware rear sling plate is a high-quality product that is easy to install and use. It can be installed in 5 minutes.

This sling plate has a lot of advantages. It is ambidextrous; you can attach a sling from the left or from the right side, and quick detach swivel is included. This sling plate will be convenient for both left handed and right handed shooters.



© Photo by Eros, Published on Rem870.com

This is the best choice for a shooter who wants to use a one-point sling on a shotgun. It is a very well made product, all edges are rounded, and its coating is well finished. Quick detach swivel works perfectly.

The GG&G Sling Plate is another good product

This is a very useful tactical accessory for your Remington 870 because it allows you to have a sling and quickly remove it if needed.

### External Links:

GG&G Rear Sling Attachment Plate: <http://tinyurl.com/kk6j5s2>

Magpul Sling Mount (Works Only with Magpul SGA Stock): <http://tinyurl.com/n8thb48>

## GG&G Shotgun Sling Mount



This mount is especially designed for tactical operations. The mount places the rear sling attachment in front of the user, allowing shooters to shoulder their weapons quickly and without becoming tangled. The mount also allows a single point attachment, or it can be used with a front sling mount for a two-point sling installation. The loop on the mount allows you to attach up to a 1 ¼ inch wide sling. The rear mount is installed directly behind the receiver in front of the butt stock.

The material is hard-coated anodized in matte black. The right-handed model HK-style clasps are for the Remington 870 and 1100, and the 11-87 positions the sling on the left side of the stock. The Ambi model for the Remington 870, 1100 and the 11-87 accepts other clip-on sling fasteners. The “Rem Front Mount” positions the sling on the right side for Remington shotguns with external-retention type magazine caps.

The mount is designed for tactical use, but can be used in any shooting situation. Control of the weapon and preventing tangles is important in a combat situation. Many shooters do without slings for various reasons, but most commonly because their design causes them to become tangled easily. With the GG&G Shotgun Sling Mount, tangles are not a problem.

Why do you need a single point sling attachment? You can mount your shotgun in a tactical situation on either shoulder, so when making fast entries you can swing through doorways and around corners much easier and faster. This helps prevent other people

from knowing your position because of your weapon barrel sticking out around corners. This mount works well when wearing body armor.

The mount attaches in minutes, is rugged and does not snag on objects. Once mounted it adds to the look of the weapon, and after tests in tactical training catching on objects is not a concern.

Many shooters simply cannot get used to a sling because they find it takes critical time to shoulder the weapon or to bring the weapon to bear from the shouldered position. In hunting or in combat situations you cannot always carry the weapon at port arms; you must be able to sling the weapon at various times. Slings are critical, and having the right mount is important when transitioning from your shotgun to a sidearm. Without a sling you would have to abandon your weapon to bring a sidearm into use; this is unacceptable in most cases.

Some shooters may not want a sling or claim it is a hindrance simply because they do not fully understand the need for one or do not know how to utilize a sling and mounts properly. Having both hands free and still being able to control your shotgun in a tactical situation is crucial.

**External Link:**

GG&G Shotgun Sling Mount: <http://tinyurl.com/kk6j5s2>



## Front Sling Attachment Plate

This sling attachment plate is installed between the magazine extension and magazine tube. It enables you to attach a sling to the front side of your shotgun.



There are front sling attachment plates from different manufacturers. I have tested S&J Hardware sling plates and they worked great. They have several types to choose from.

### External Links:

Scattergun Technology Front Sling Attachment Plate: <http://tinyurl.com/krvkwq8>

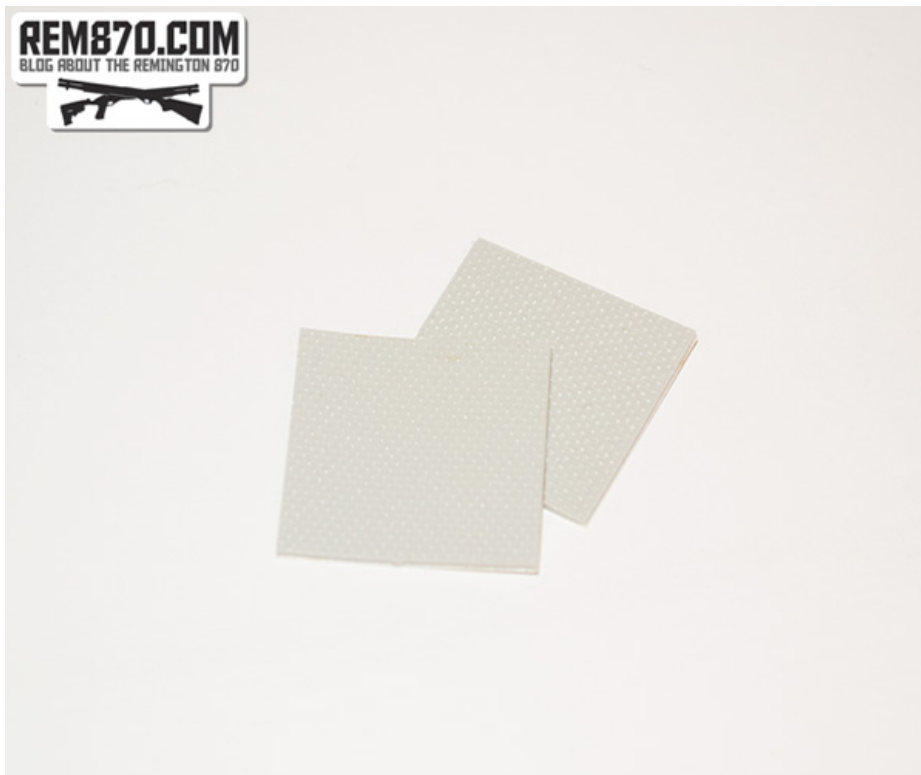
## Remington 870 Forward Sling Mount by Magpul



The times when barrel clamps were ugly are finally gone. When I saw the new sling mount by Magpul I thought that it was made of plastic because the design was extremely good. The Magpul forward sling mount for Remington 870 looks great and is made of metal!

This design is well thought-out. You can change the direction and choose a right/left position of the sling loop easily.

Special silicone pads are included to protect your barrel and extension:



If you use clamps without pads you will have scratches, as pictured above. Only the Magpul Forward Sling Mount and CDM Gear clamps come with pads to protect the barrel and extension.

The Magpul Forward Sling Mount for the Remington 870 is a simple and reliable upgrade. It is highly recommended!

**External Link:**

Remington 870 Forward Sling Mount by Magpul: <http://tinyurl.com/p4ughua>

## Repair Kits

It is good to have a supply of parts most often required for repairs. Here is list of parts to have for an emergency repair:



- Trigger Plate Pin Detent Spring, Front
- Trigger Plate Pin Detent Spring, Rear
- Extractor Plunger
- Extractor Spring
- Extractor, 12/16/20, Non-MIM
- Firing Pin Retractor Spring
- Firing Pin
- Firing Pin Retaining Pin
- Ejector Spring
- Ejector Rivet, Front
- Ejector Rivet, Rear
- Sear Spring

## External Links:

Remington 870 Repair Kit: <http://tinyurl.com/q5uhl8p>

## Types of Ammunition

### *Introduction*

# Shotgun Ammo Explained



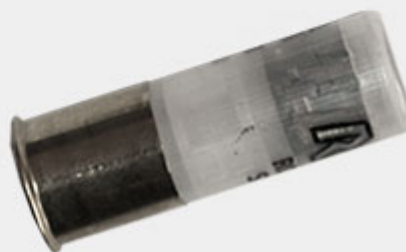
Birdshot



Buckshot



Slug





The extremely large caliber of shotgun shells has led to a wide variety of different ammunition.

You can even reload shotgun shells yourself and set them for any purpose or change the spread.

### ***Smooth and Rifled Barrels***

Your ammunition choice depends on what you are shooting at. A shotgun shell or sometimes referred to as a “shot shell” is loaded with either shot or a slug. Most shotgun loads are designed to be fired from a smooth bore, in other words the barrel is not rifled. There are however, dedicated shotguns with rifled barrels that are more accurate, but making it unsuitable for firing shot. Shot would simply wear the rifling away and this of course will defeat the purpose of the rifled barrel. There are shells for self-defense and various shells for hunting game. Shot is traditionally for bird and small game whereas slugs and buckshot are for larger game.

### ***Shotgun Ammunition for Hunting and for Home Defense***

BB or birdshot is obviously for birds, while #4 is much larger shot and the 00 or double-aught is considerable larger still. The slug is for large game and it can be used for home defense, as well. With home defense, you have to consider over penetration. You want stopping power yet do not want the slug penetrating and exiting (through and through) an intruder and striking someone else. Therefore, the #4 and 00 are the most popular for home defense. You must also consider your choke setting. The tighter the choke the less spread you have, which is ideal for short range, but if you have multiple targets and want to disable two intruders at once of course loosen the choke to allow more spread as the shot exits the barrel. One pellet of 00 will certainly disable a person if fired from close range.

The object regardless of what you are shooting at is stopping power. When hunting birds you want range, yet you do not want excessive damage to the bird. When hit you want penetration and knock down. You do not want to wade for miles hunting an injured bird. You want the bird to drop immediately when hit.

## ***What shot for what game?***

Turkey for example can be hunted with BB and # 2 and 4 shot, with full or modified choke. Duck hunters prefer # 1 and 2 shot using a modified or full choke. Pheasant are typically hunted with # 6 with a modified choke.

Squirrel and rabbit can be hunted with # 5 and 6 with modified choke, keep in mind the damage to the animal and distance from it when deciding on choke. Larger animals such as deer can be hunted with a rifled slug or 00 buck.

Some are of the mind that any round out of the barrel toward an intruder works. This of course is true in a situation where you simply grab any available weapon. However, when will you be in a situation where you simply grab whatever is available? Typically, you will have the opportunity to choose your ammunition for home defense. Some prefer rifled slugs, because of the range, but home intrusions by their very nature are close quarters so range is not important unless you are defending a large estate where the firefight is taken outdoors or you are defending yourself in a survival situation.

Some may prefer birdshot because in the back of their mind some people while, they want to stop an intruder they do not necessarily want to cause a fatality. Birdshot however at close range is devastating but not as guaranteed as a rifled slug would be at close range. The other option of course is buckshot, which will stop an intruder and create enough damage to ensure the intruder stays on the ground and is no longer a threat. Your number one objective is to neutralize the threat by any means possible and as quickly as possible.

## ***Effective Ranges for Buckshot Birdshot and Slugs***

### **Buckshot**

The effective range, or kill range, is not the same thing as the actual range of the round. When out hunting you certainly do not want to waste rounds firing at targets too far away. If you are using buckshot, it may only wound the animal you are firing at and the animal may not ever bleed out. You should always make sure you know what your pattern is at various ranges. Buckshot at 35 yards is an effect range for deer hunting. You can, of course, strike the target at greater distances, but you are not as likely to have a kill shot.

Some shooters use buckshot for their home defense weapons. At close ranges buckshot is devastating, but it may penetrate doors and walls causing injuries to others in the home. Effective range is typically not an issue when using buckshot in your home defense shotgun.

### **Birdshot**

Most hunters use the 40/40 method, which is a 40-inch spread at 40 yards. Forty yards is likely the maximum effective range for birdshot, depending on the choke setting, steel or Remington 870 Shotgun Guide from Rem870.com, version: 2015-final



lead shot and so forth. Beyond 40 yards you can make a kill, but you will not have full impact on the bird. You also have to consider the size of your bird, and you want to avoid spreading shot where it injures other birds as well.

Birdshot is also used for home defense because at close range it will put anyone down. The shot is not as likely to penetrate walls and doors causing injuries to others. At very close range, however, birdshot will penetrate certain doors and walls. Once again, for home defense effective range is usually not an issue.

## **Slugs**

A smooth bore slug barrel is usually capable of 3 to 4 inch groups at 50 yards with standard manufacturer's ammunition, providing you have practiced and know your weapon. This means the effective range is probably somewhere around 75 yards. This range is more than adequate, particularly in areas that ban high-powered/longer range hunting rifles because of population density.

Rifled barrels will have a much greater effective range because of the rifling. The 3 to 4 inch group is easily accomplished at 100 yards with a rifled barrel. The effective range is somewhere around 125 yards. Some .45 caliber and .50 caliber Sabot rounds claim to have an effective range of up to 200 yards.

The effective ranges are only averages, and much depends on weather conditions, ammunition and your shooting skill. Keep in mind the effective range is not how far the round will travel but how effective it is at a particular range. Any round can travel a significant distance and injure someone depending on terrain and other conditions.

Always know your target before shooting and know what is beyond the target. You have to assume for the sake of safety that you may miss, so you need to know where your round is likely to travel.

Slugs are not a typical home defense load because of their penetration. A slug can easily travel through doors and walls to injure someone else in the home or even in the neighborhood.

## **External Links:**

Shotgun Ammo: <http://tinyurl.com/l3ohpwa>

## Slugs



A shotgun slug is a heavy lead projectile, which may have pre-cut rifling. It is intended for use in a shotgun, and is often used for hunting larger game. The first effective shotgun slug was introduced by Wilhelm Brenneke in 1898, and his design remains in use today.

Most shotgun slugs were designed to be fired through a smoothbore barrel, which meant that they must have been self-stabilizing and capable of passing through a choked barrel.



Less lethal shotgun ammunition is available in the form of slugs and is made of low-density material, such as rubber.

Rubber slugs or rubber buckshot are similar in principle to bean bag rounds.

Composed of flexible rubber or plastic and fired at low velocities, these rounds are probably the most common choice for riot control. Shapes range from full bore diameter cylinders to round balls of varying sizes.

## ***Buckshot***

Buckshot is very common and the most commonly produced buckshot shell is the 12 gauge 00 ("double-ought"). Buckshot is used for large game and home defense. Double-ought buckshot, having nine pellets, is also ideal for self-defense because there is no question of stopping power and penetration.



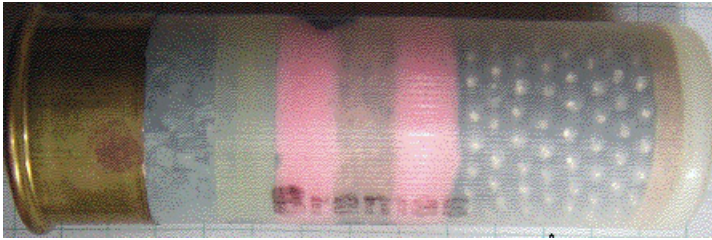
Larger sizes of shot, large enough that they must be carefully packed into the shell rather than simply dumped or poured in, are called "buckshot" or just "buck." Buckshot is used for hunting larger game, such as deer, and also in riot shotguns and combat shotguns for defensive, police, and military use. Buckshot size is designated by number, with smaller numbers being a larger shot; sizes larger than "0" ("ought") are designated by multiple zeros. "00" ("double-ought") is the most commonly used size.

A standard 00 buck shell holds 7-9 pellets. Two types of 00 buckshot are commonly available from suppliers: regular 00 buckshot shells and reduced-recoil shells, favored by law enforcement and for home defense use. Low-recoil 00 buckshot allows the shooter to make fast follow-up shots, which may be needed in a combat situation but are not typically required in hunting (where the main goal is to cleanly take out the game with a single shot). It's also useful as a stepping stone for shooters who are not yet used to the recoil of full-power shells.

**Buckshot Size Table:**

<b>Size</b>	<b>Nominal diameter</b>	<b>Pellets/oz</b>
0000 ("quadruple-ought")	.38" (9.7 mm)	5
000 ("triple-ought")	.36" (9.1 mm)	6
00 ("double-ought")	.33" (8.4 mm)	8
0 ("ought")	.32" (8.1 mm)	9
1	.30" (7.6 mm)	10
2	.27" (6.9 mm)	15
3	.25" (6.4 mm)	18
4	.24" (6 mm)	21

## ***Birdshot: Lead, Steel, Bismuth and Tungsten***



Birdshot sizes are numbered similar to the shotgun gauges; the smaller the number, the larger the shot. Birdshot is typically called "shot" or "BB shot", such as "number 9 shot" or "BB shot."

Because of environmental concerns steel, bismuth and tungsten is replacing lead shot, for bird hunting. The problem with steel shot is the hardness, which can cause damage to the bore and choke in older shotguns. Unlike lead there is no give to steel and it can damage the bore especially if the choke is on full. Tungsten is also very hard, but it is often alloyed with other metals making it softer causing less damage in older models shotguns. Bismuth falls in between tungsten and steel, being the softer of the two by far.

A useful method for remembering the diameter of numbered birdshot is simply to subtract the shot size from 17. The resulting answer is the diameter of the shot in hundredths of an inch. For example, a number 2 shot gives  $17-2 = 15$ , meaning that the diameter of number 2 shot is  $15/100$  or  $0.15$ ". B shot is  $.170$  inches, and sizes go up in  $.01$  increments for BB and BBB or Pellets.

**Birdshot Size Table:**

Size	Nominal diameter	Pellets per oz (28 g)		Quantity per lb.
		Lead	Steel	
FF	.23" (5.84 mm)		35	
F	.22" (5.59 mm)		39	
TT	.21" (5.33 mm)			
T	.20" (5.08 mm)	36	53	
BBB	.190" (4.83 mm)	44	62	550
BB	.180" (4.57 mm)	50	72	650
B	.170" (4.32 mm)			
1	.160" (4.06 mm)	72	103	925
2	.150" (3.81 mm)	87	125	1120
3	.140" (3.56 mm)	108	158	1370
4	.130" (3.30 mm)	135	192	1720
5	.120" (3.05 mm)	170	243	2180
6	.110" (2.79 mm)	225	315	2850
7	.100" (2.54 mm)			
7½	.095" (2.41 mm)	350		3775
8	.090" (2.29 mm)	410	686	5150
8½	.085" (2.15 mm)	497		
9	.080" (2.03 mm)	585	892	7400

## ***Molding Your Own Shotgun Slugs, Birdshot and Buckshot at Home***

It is important to note that lead is a toxin and must be handled properly to prevent poisoning. Always wear protective gloves, a face mask and eye protection when handling molten lead or lead bars.

### **Shot Making**

Years ago when making shot artisans poured molten lead through a sieve, and as the shot dropped through the small holes air pressure or surface tension formed it as it fell. The shot then fell in to water to cool. It cooled quickly, allowing it to be able to hold its shape. The size of the shot was determined by the size of the sieve used.

Machines that make shot today have the same basic concept, except you normally place lead bars into a chamber to be heated up by heating elements. Once the lead is liquefied it begins to drip through holes into a cooling liquid. You need to use a cooling liquid higher in viscosity than water. You can mix water and liquid soap, or use flame retardant hydraulic oil for your cooling bath. You are essentially tempering the shot; using only water tends to deform the shot. The “drippers” are what determines the shot size, so you would need to have several sizes unless you wanted to make just one size of shot.

Pure lead is too soft for shot, so you will have to use an alloy. Some people use what is called “wheel weight lead,” which has other minerals in it that make the shot harder.



An essential component for the shot shell hand-loader who wants to save money and produce shot pellets customized to specific hardness requirements is a shotmaker. The original Littleton Shotmaker was legendary among serious shotgunners; this model incorporates improvements that make casting your own shot easy and repeatable. It's like having your own shot tower in a compact package that takes up less than one cubic foot of space. It produces up to 45 lb of No 7½ shot per hour. You can easily experiment with different lead alloys to produce harder shot for less deformation, uniform patterns and more hits. Simply place at least 6 lb of clean lead, impurities removed, in the Shotmaker's aluminum alloy ladle and flip the switch on. When the lead reaches its melting temperature and liquefies, it will begin pouring out of the Shotmaker's drippers in little streams that are actually individual lead balls. As they drop into a pan of coolant that you must provide (ordinary motor vehicle anti-freeze works best) you've cast your own No 7½ lead shot. This has a durable, steel and aluminum construction with heavy-duty electrical components that ensure years of trouble-free service.

The lead is melted in the trays from heating elements located on the underside of the shotmaker. The molten lead then drips through the shot holes into the cooling bath. Once liquefied, the lead will drip quickly through the drifter into the cooling liquid.

**External Link:**

Burgess Bullets Littleton Shotmaker: <http://tinyurl.com/m5o9fst>

**Buckshot Mold**





Lee 18-Cavity Buck shot molds are available in 3 sizes: 000 Buckshot, 00 Buckshot and 4 Buckshot. Precision-machined molds produce 18 linked pellets per cast, allowing one to easily cast over 2000 pellets an hour.

**External Link:**

LEE Buckshot Moulds: <http://tinyurl.com/knuxejq>

**Slug Mold**

Aluminum slug molds are inexpensive and you can purchase one practically anywhere for less than \$50USD.

Mold for shotgun slugs; note the hollow core, which helps the slug maintain its balance by putting the weight on the end of the slug.

What you will need to make slugs using the pictured device is lead, welder's gloves, facemask, a heat source, vessel to melt lead in and a small metal ladle that has a small slot for pouring. Make sure the vessel is large enough so you can dip a ladle in. You can purchase lead specifically for making your own ammunition or you can collect wheel weights from any junk yard or ask your local parts store.

You will notice once the lead begins to melt that junk will be floating on top, this is all of the impurities in the lead, such as dirt, and other contaminates. Ladle this to the side and scoop out. The liquid lead will be slight thicker than water in a molten state.

Close the mold tightly, place the slag cutter over the hole on top, and lock in place. You will be pouring the lead through the hole on the slag cutter, which will be lined up with the mold chamber. Dip some lead and make sure you have your gloves, facemask and safety goggles on. You have to move quickly so the lead does not cool. Pour into the hole until lead comes back out the hole, while pouring slightly jiggle the mold to remove air bubbles. Once full, slide the black bar away to cut off the slag. Open the mold and tap on the backside to knock the slug loose.

**External Link:**

Lyman 12 GA, Slug Mould: <http://tinyurl.com/lnqbleg>

Lee Shotgun Slug Mould: <http://tinyurl.com/nx9m7lz>

## How to Use Lee Slug Mold (Smoke, Lube, Cast Slugs)



Reloading is an interesting hobby that saves your money and makes you independent. You can even cast your own slugs.

**1. Remove oil from the Lee Mold before use.**

Remove all traces of oil using white gas or lacquer thinner.

**2. Smoke the Lee Slug Mold.**

Use the flame of a match held in the cavity of the mold to leave a thin film of carbon to eliminate any wrinkles.



### 3. Preheat Lee Slug Mold.

Dip the corner of the mold into molten lead and hold for 30 seconds.

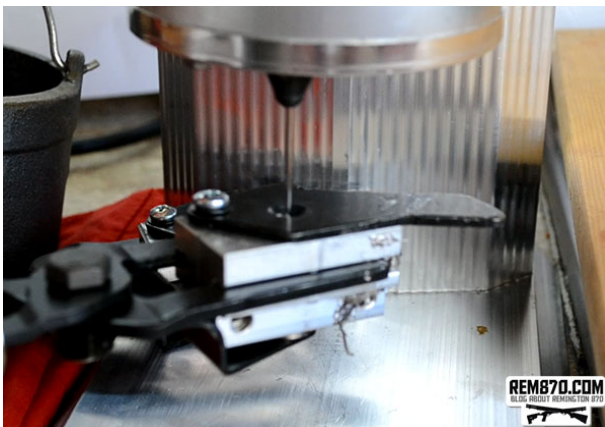


### 4. Lubricate mold.

Lubricate mold using beeswax.



### 5. Fill lead into Mold Block through the sprue plate.



### 6. Strike sprue plate with a wood dowel.



### 7. Open handles, tap handle hinge bolt.

Open handles, tap handle hinge bolt to shake bullet onto cloth.



## Lead Melting, Lee Production Pot IV



Large, deep pot holds approximately 10 pounds of lead. Melt time is less than 20 minutes. Pour spout up front where it belongs so you can see what you're doing. Infinite heat control. Uses only 500 watts of power during heat-up and a lot less to maintain temperature. Large, stable base for safety. 4" of clearance under the spout is high enough to accept all brands of bullet molds and most sinker molds. Melter is capable of reaching 900 degrees Fahrenheit.



### External Link:

Lee Production Pot IV: <http://tinyurl.com/l8lpwdc>

## Exotic Ammunition

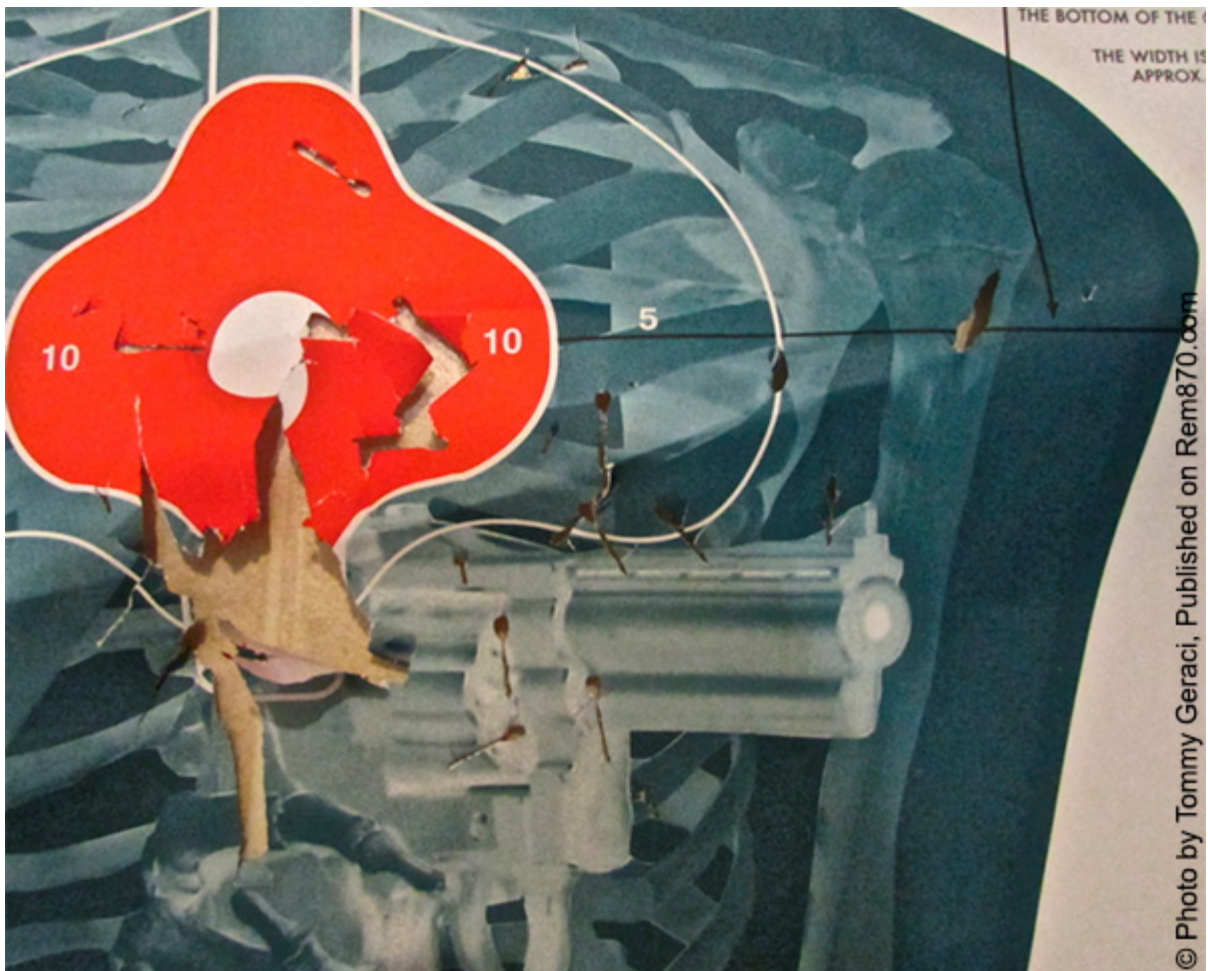
Thanks to Charles Wolf from Wolf Hill Trading Co. for the ammunition provided for tests.

Special thanks to Tommy Geraci, for making these review!

### Flechette Shotgun Rounds



The flechette round carries about 30 1 inch steel dart shaped projectiles. Flechette is French for “little arrow” or “dart”. Flechettes have been used in taking out snipers hiding in thick brush or trees. This round was dispersed into action in the Vietnam War era. With the thick brush and guerrilla warfare the probability of hitting your target was greater. Flechette’s are also known for their light body armor piercing abilities. Some also refer to this round as “The Beehive”. The 12 gauge flechetterounds are chambered in 2 3/4” 12 gauge shot shells. Flechette’sare recommended to be fired using an improved cylinder bore barrel rather than a barrel equipped with a modified or tactical choke.



The Flechettes have an overall spread of 19X10" at 15 feet. Other than the enormous amount of spread, off camera the Flechettes pierced through a phone book proving it has tremendous penetrable capabilities.

## Dragon's Breath Shotgun Rounds



Dragon's Breath is a magnesium-based pyrotechnic shotgun round that emits sparks and at times flames. These exotic 12 gauge rounds are similar to a short-range flamethrower, which can produce flames up to 100 feet. It can be used as a flare in distress situations.

There is little to no combat record of dragon's breath being used in the field. At close range this round can be very effective however dragon's breath rounds are not relied on in tactical scenarios. It is not practical to use an incendiary round when there is a risk of catching a house or building on fire, which could possibly cause civilian casualties.

These rounds offer great fun for recreational shooting. Just ensure there are no flammable materials in the general direction that the round is fired.



Pictured above is me shooting a Dragons Breath round. This round is great fun to shoot at night, but fires can break out so be sure to have a fire extinguisher handy or have the fire department on standby. Because this round is an incendiary round and the chance of not fully eliminating a target is high. It would cause severe burns and would catch light clothing on fire. However it's just not practical to use for anything other than a novelty round and or for a nice pyrotechnical display at nighttime.

## Ball and Chain Shotgun Rounds



Some refer to this round as the Bolo round. It features two .58 Caliber musket balls connected by a 4 inch seven strand wire cable, some refer to the cable as piano wire. The ball and chain causes massive devastation to the impacted area.





The Ball and Chain caused an impact area of approximately 2X3" at 15 feet. Off camera I was able to slice through two 600-page phone books like a hot knife through butter. If you want a fun powerhouse of a round look no further.

## Buck and Slug Shotgun Rounds



The buck and slug features a 1oz sabot slug followed by 9 / 00 buck shot balls. This powerful round has plenty of knock down power, and would be devastating to anything you put in front of it.



The overall spread of the Slug and Buck is approximately 4X6" at 15 feet. I was aiming center mass, I would not recommend this round in a situation where accuracy is key.

## Armor Piercing Incendiary Shotgun Rounds



This exotic round features a 500-grain heat-treated alloy slug with an incendiary exploding tip, packed on a magnum charge. This surprisingly light recoil load bursts out around 1,700 feet per second or fps and can produce a 3000-degree flash upon impact of a hard surface. This round is claimed to pierce ¼" steel as well as body armor.



The Armor Piercing Incendiary round failed to pierce through ¼" steel. I shot two rounds at the steel target and both times it was unable to puncture the steel. The incendiary tip did in fact work and ignite upon contact of the steel plate.

But since this round is specifically advertised as an armor piercing round that can pierce through ¼" steel, but was unable to do so I would call this round a fail.

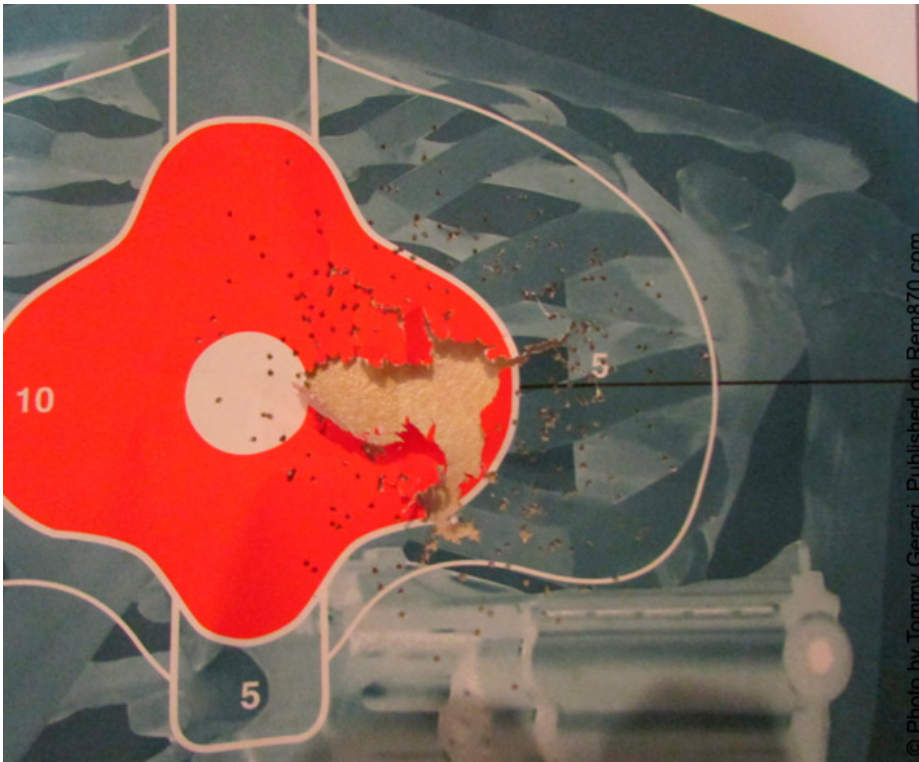


Here is the Incendiary Armor Piercing tip in action. Upon impact to the steel plate it did have ignite a flash followed by yellow and white smoke.

### **Super Rhodesian Shotgun Rounds**



The Super Rhodesian features nearly 400 #8 birdshot bb's stacked on top of 9/ 00 buck shot balls. This round has massive spread and takedown power, talk about adding insult to injury.



The Super Rhodesian round has a nice tight grouping of approximately 7X8" at 15 feet. This round packs a powerful concentrated punch strong enough to take out most anything that would regrettably cross its path.

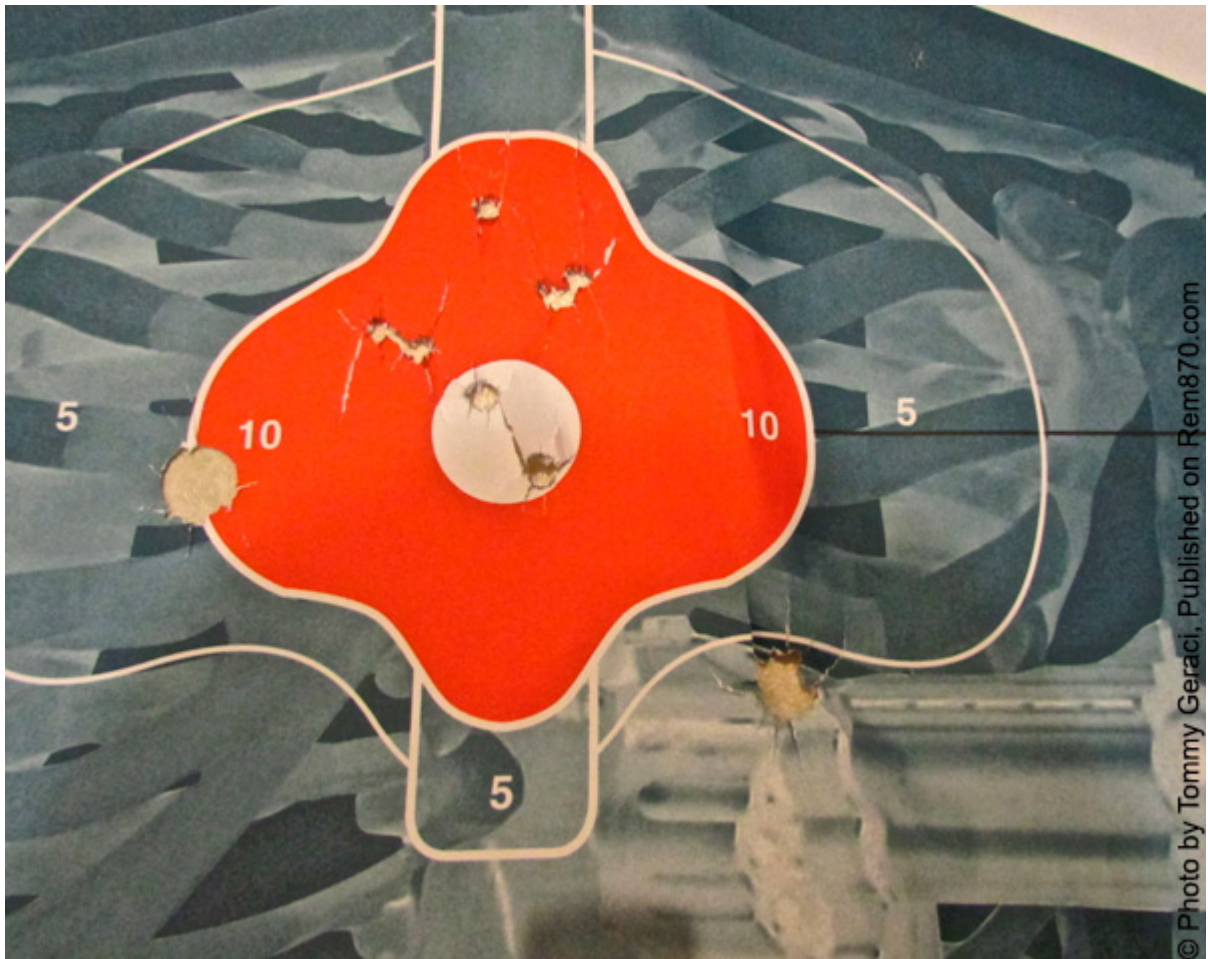
### Ultra Buck Shotgun Rounds



Wow! The Ultra Buck utilizes 8 quadruple-ought or (0000) buck shot balls packed on top of a magnum charge. Lets clear this up, one 0000 ought buck ball has the diameter of a .380/9mm projectile.

That's equivalent to shooting a target 8 times with either a 9mm or .380, in one shot. The 0000 buck is fairly hard to find on the market and most shotgun shooters don't know it

exists. Due to the massive size of the quadruple ought buck as well as being placed on a magnum charge, this round will cause an enormous amount of damage to a target or foe.



The Ultra Buck had a devastating spread of approximately 7X7" at 15 feet. This is a very uniquely designed round that has a similar force to that of a freight train (figuratively speaking that is).

## **.50 BMG/M17 Tracer Shotgun Rounds**



Truly one of the most unique exotic 12 gauge rounds on the market. The .50 BMG Tracer round is effective from 0-400 yards which is 1200 feet. Though accuracy should not be expected at great distances, coming from a shotgun platform which famously known for close range devastation.

This round is pure insanity and clearly revolutionizes the overall situations in which a shotgun could and should be used. This awesome round emits a trace that will last about 3 to 4 seconds after the round is fired and can burn out to about 400 yards.

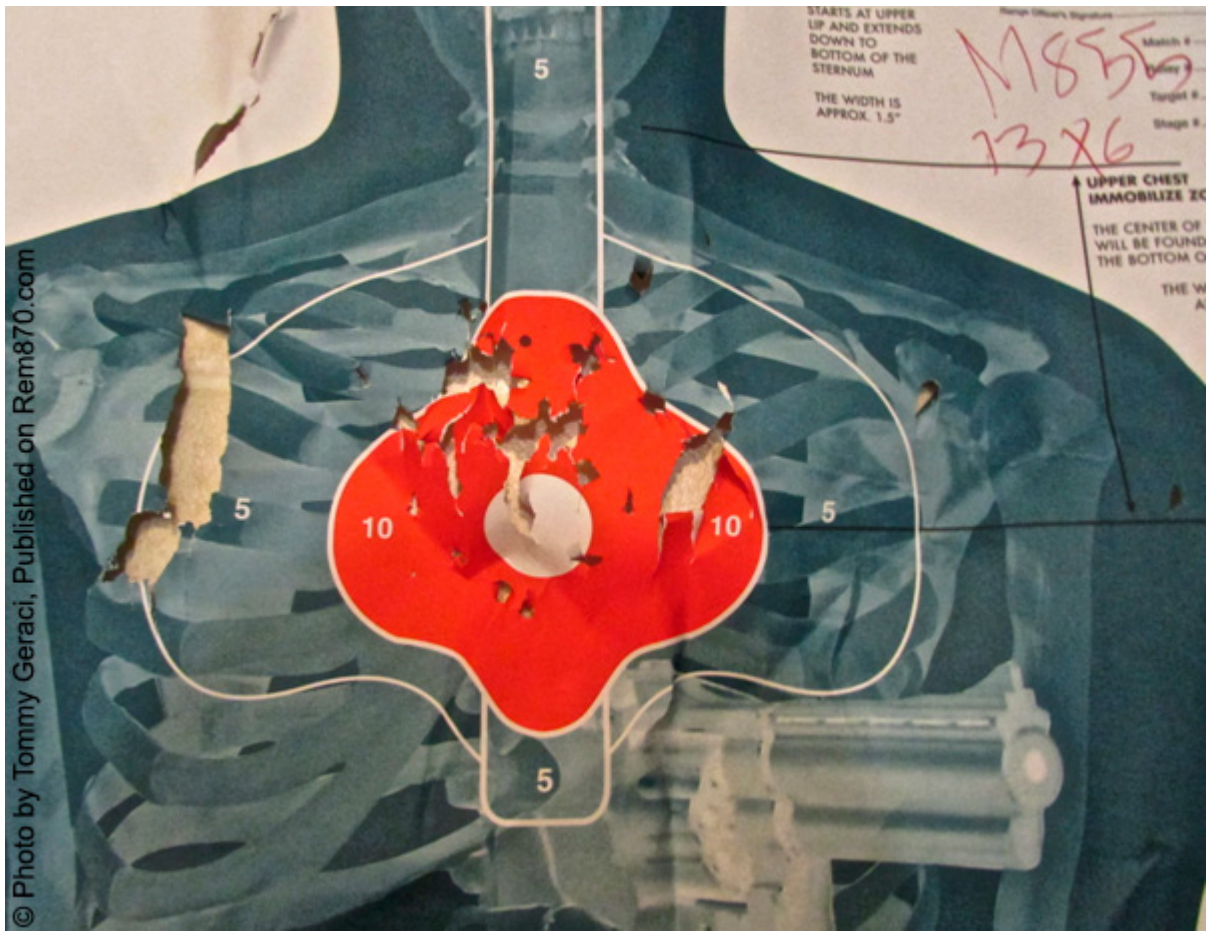
This round can be fired out an improved cylinder, modified and tactical choke barrels. These rounds have to be loaded and fired one round at a time due to their length. Place these rounds directly through the receiver into the barrel. When I tested the .50 BMG tracer, the round worked great but the trace did not work. I took two shots in the dead of night and both times I could neither see a trace nor catch it on my camera. I give the round a pass but the trace a fail.

## 12 Gauge M855 Shotgun Rounds



The M855 utilizes 40 tungsten steel cores out of the SS109 5.56 round. This is a lighter load with minimal wall penetration and nice spread. This round can stop any intruder while also being somewhat home defense friendly. If you're looking for a home defense round check into the M855.





The M855 has a spread of approximately 13X6" at 15 feet. This round I would consider using for home defense, due to the fact that the M855 cores are designed to tumble upon impact slowing them down substantially and further reduces the possibility for over penetration.

## Incendiary Slug Shotgun Rounds



The incendiary slug also known as dragons slug, makes use of a lead slug topped with an incendiary tip.



A flash from the tip of the Incendiary Slug could not be seen upon impact. However, this shot was taken around dusk so I can't rule it a total failure. It could have been that it wasn't dark enough outside to see any of the pyrotechnics. I will have to conduct another test on it at a later time.

### Afterword

These rounds are not legal in all states be sure to check out <http://www.wolfhilltradingco.com> to learn more.

All the exotic rounds reviewed above are chambered in 12 gauge 2 3/4" shot shells and can be shot out of a barrel equipped with an improved cylinder, modified, or tactical choke.

NOTE: It is highly recommended that the flechette round be fired out of an improved cylinder for greater performance. For any further questions you may have please contact [wolfhilltradingco.com](http://wolfhilltradingco.com). (The barrel used to create this review is an improved cylinder factory Remington 870 barrel).

## Accessories

There are a lot of accessories that you can get for your shotgun. Some of them help you carry a shotgun and ammunition; while others help you handle your shotgun more comfortably.

### *Bandoleers*

According to most experts, bandoleers (sometimes spelled “bandolier”) came about in the 1600’s because back then weapons required the shooter to put their cartridge together each shot by adding their own powder, wad and shot. The materials were carried in little pouches attached to belts slung across their chests. Each pouch carried the shot and wadding needed to fire one round. Of course, as years went by the cartridges became self-contained, and this new ammunition was also able to be carried in the bandoleers for easy access. The ammunition is literally at your fingertips when crossed over your chest. This makes combat reloading more efficient.

Typically when reloading your shotgun it is at waist or chest height, and having your rounds already at this level makes the job more streamlined. The military adapted bandoleers to carry already loaded ammunitions clips to increase the amount of ammunition a soldier could carry. Belt pouches are still used, but they have a limited capacity. Shotgun bandoleers can hold up to 50 cartridges, and in some cases they may hold even more. The cartridges are all secured facing the same direction, making loading much easier than grabbing them from a belt bag or pouch.

Some shooters may have receiver mounted and/or stock mounted cartridges carriers, which can be replenished quite easily from bandoleers.

Bandoleers can be made of heavy canvas with stretchable holders, heavy-duty nylon and even leather in some cases. They can be worn across the chest or at the waist.

One advantage to a cross-chest shotgun bandoleer is that it keeps bulky pouches that can get in the way in tight spaces off the waist. When clearing a building or moving through heavy brush you do not want items at your waist catching in small openings or on vegetation. Additionally, when crouching behind cover a bandoleer gives you much faster access to your shells. The biggest advantage, particularly in a combat situation, is the number of shells you can carry on you. You always want to have too many shells, because not having enough is never a good situation. The weight is not significant when carrying ammunition across your chest because your shoulders can take additional weight better than your waist and you do not have the sag that some shell holders cause at a lower level.

Using quick-connects allows you to remove the bandoleers one handed for easy loading of the belt. Once loaded, connect the buckles and then place across the chest, because it can be awkward trying to connect the buckles after you have it over the shoulders. You should always carry them across the chest so they do not slip off the shoulders.

You may see movies where people are carrying ammunition belts over one shoulder; what they are carrying is not a bandoleer. Typically those clips are for a 60 or 50 caliber machine gun. The belt clips are fed into the loading port on the sides of the weapons and the metal clips are ejected as the shell enters the loading port. These ammunition belts would not be defined as bandoleers.

There are many ways to carry extra ammunition for your shotgun; one of them is a shotgun bandoleer. A lot of companies produce them.



BlackHawk!'s shotgun bandoleer holds 15-55 shells.

Cabela's bandoleer sling holds 50 shells.

There are other tactical shotgun bandoleers, which hold from 20 to 55 shotgun shells.

Bandoleers will not allow you to load your shotgun as fast as some other ammunition carriers, but they hold a lot of shells and allow you convenient placement of them. You can wear a bandoleer over your shoulder or on your waist; if anything were to happen you could grab your shotgun and place a shotgun bandoleer across your chest, and have 20-55 spare shotgun shells instantly.

### **Blackhawk! Shotgun Shell Sling**

As most experienced shooters know, in a tactical situation you do not have time to grab this and that. All you have time for is only grabbing just your weapon in most cases. How many rounds are in your magazine? Did you top it off last time? These are some of the questions that will be running through your mind. As you know, practically speaking, you can never have too many rounds available in any combat situation. One way of ensuring that you always have enough shells at your fingertips is to purchase a Blackhawk! Shotgun Shell Sling that holds up to 15, 12-20 gauge shells securely.

You will need to have the swivel mounts already on your shotgun. The sling comes with standard swivel spring hooks for attachment to the shotgun. The sling is easily adjusted for carrying or shouldering the weapon. Some shooters have stated that a sling gets in the

way in a combat situation, particularly in tight spaces; however, having extra rounds readily available is an excellent trade-off against the possibility of the sling getting in the way. As with anything, practice will help you overcome any objections you might have to using a shotgun shell sling.

The shells are positioned on the sling so they are close to the weaker hand for fast combat reloads (top offs).

- Fully adjustable shotgun sling that holds 15 shells, color black
- Attaches to standard swivels with spring hooks
- Material is made from high quality nylon/elastic webbing

Users have stated that because the Blackhawk! Shotgun sling is wide, it does not dig into the shoulders like a more slender sling would.

Other comments include that the swivel clips sometime swing the weapon in an awkward way and it may take some getting used to. The hooks, however, are designed so that the sling can move with the weapon so it does not become caught and possibly break under pressure.

Some users have stated that they have reversed how the sling is mounted to put the shells closer to the stock, because the swinging of the heavy shells closer to the barrel causes the muzzle to move. To help prevent the sling/shells from swinging and causing the barrel to move, try taking the slack out of the sling. Use your own judgment as to whether you want the shells closer to the stock or the forearm.

Tape can be used to secure the swivels to restrict movement and reduce noise. Elastic shell holders may stretch out over time and cause the shells to fall out. Making your way through heavy brush might cause the shells to fall out as well. When the shotgun is shouldered, the shells would be close to the body; unless you are thrashing through the brush with no regard, the shells should be held securely in place.

My friend has had this sling for some time and told me that there he has had no problem with keeping the shells secured, even after repeated loading and unloading of the elastic shell holders.

You have to keep in mind that when loaded to capacity or even half-full with shells, the sling will add weight to the shotgun. When shouldered, however, the sling is designed for comfort, and the extra weight on the shoulders is insignificant.

#### **External Link:**

Blackhawk! Shotgun Shell Sling: <http://amzn.to/1ag31h3>

## Slings

A sling enables you to use your hands, switch to a secondary weapon, use a phone, grab your children, and so on. A two-point sling is a classic sling, which can be seen on many shotguns; it has some basic features and is easy to use.



The two-point and three-point slings have to be attached using both front sling attachments and rear sling attachments. The one-point sling is easier to use because it is attached using just one sling plate. Pictured to the left is a one-point sling.

### One Point



The one-point sling is the most compact and easy to use, but it doesn't hold your shotgun firmly when you run or move.

One-point slings allow you to be very comfortable, carry your shotgun, and have quick aiming.

This is one of the best choices for home-defense, because it will be easy to carry your shotgun and you will have nothing hanging off of it, so there is no chance it will get snagged on a doorknob or on furniture

### Three Point



A three-point sling allows you to carry your shotgun in multiple ways. It is versatile and easy to use. This type of sling holds your shotgun firmly, allowing you to run, change positions, or use a secondary weapon. One of the three-point slings that I recommend is the Giles Wilderness Tactical Sling.

### External Links:

Slings: <http://tinyurl.com/lqpxfd>

## Grovetec Sling for Remington 870



I often hear questions about slings for the Remington 870. The cheapest and the easiest way to attach a sling to your Remington 870 is to get sling swivels, front sling attachments (Magpul, S&J Hardware, Choate etc.) and a Grovetec Utility 48x1 Nylon Sling.

A sling is handy during hunting or when you need to carry a shotgun for long periods of time. Whether or not to use slings for home defense is a rather controversial question; everybody must decide themselves whether or not they want to use a sling at home.

For the people who prefer to have a sling on their Remington 870 shotgun, this section is for you.

The Grovetec 2-point sling is very simple and cheap. It costs just \$9.99; you can't beat that price. It is a one inch sling that looks reliable and has buckles made of metal. This is a very simple solution for those who want a 2-point sling.

If you don't have a magazine extension you can get a Grovetec magazine cap sling swivel set. It is cheap and looks like a high-quality product. This add-on comes with clear instructions that are easy to follow.

A 2-point sling is a classic sling for those who like simplicity.

I really like the Grovetec sling because it is simple, inexpensive and is a high-quality product for Remington 870, or any other shotgun.





External link: [Grovtec Sling](#)

## Blackhawk Inc. Shotshell Sling Review



Blackhawk Inc. is a company that is well known for their quality tactical clothing and equipment. Shotshell sling is made of sturdy 2 inch nylon and is very well made. This product combines shotgun bandoleer and sling. It holds 15 rounds tight and reliably. But it is easy to take them out of the loops.

The idea is the same as when using sidesaddle. When you grab your shotgun in the night, you only have the ammo that is in your shotgun or on your shotgun. Sidesaddle enables you to have 4-8 rounds; sling enables you to have 15 rounds on your shotgun.

But there are several disadvantages when using Blackhawk shotshell sling. First, it is very heavy and your muscles are going to be tired when holding your shotgun with shotshell sling installed for a long time. The only way to use it comfortably is to have the sling over your shoulder. You will need to practice with it to use it effectively.

Another disadvantage of a sling on a home defense Remington 870 shotgun is that it can be hung up on doorknobs and furniture. I often see how 2-point and 3-point slings can become uncomfortable when loading a shotgun, when walking through an imitation of a building or when they come in the way of sights.

You can use standard sling swivels (not included) with very easy to use steel spring hooks. It is easy to attach and remove this Blackhawk shotshell sling.

It is a great shotshell sling for the money. It costs only 19 bucks. It looks good and works good, but it is rather heavy with 15 shotshells loaded so you will need to get some practice to use it effectively.

## Specter Gear CQB Sling



I bought the Specter Gear CQB Sling for Remington 870 with Magpul SGA Stock. The coyote color of this sling matches the color of Magpul SGA Flat Dark Earth (FDE) stock. The forward sling mount adapter included. It installs between magazine extension and magazine tube. It's kind of ironical that you can't use the Specter Gear CQB Sling for Remington 870 with Magpul SGA Stock with the standard Magpul forend. Magpul Remington 870 forend is a little longer and you won't be able to slide the forend forward with the front sling adapter installed. So if you want to use Specter Gear CQB Sling for Remington 870, then you have to choose a different forend.

This sling is ambidextrous and easy to install. It has GG&G front sling adapter included. It can be used as a 2-point or 3-point sling.





Specter Gear CQB Sling for Remington 870 with Magpul SGA Stock looks like a high-quality product which will last for years. I recommend it for Remington 870 owners with Magpul stock. However, just remember that you won't be able to use the Magpul forend with this sling.

## ***Tactical Shell Holders***

Tactical shell holders are often used by competition shooters because they are compact and allow for very fast reloads of a shotgun.

The secret here is that they enable you to grab 4 or 6 shells at a time. Speed strippers allow loading a shotgun much faster than any other shell holder I know of. Of course, you need to practice loading a shotgun using the shell caddy, but they are not difficult to use.

### **California Competition Works**



California Competition Works Speed Strippers work well and allow you to reload your shotgun very quickly. They are made of plastic and connect to the belt using metal attachments. They come supplied with a set of spacers for use with shorter shells.

They are sturdy, reliable and inexpensive.

There are 4-shell and 6-shell versions of the California Competition Works Speed Strippers

### **External Links:**

California Competition Works Speed Strippers: <http://tinyurl.com/la584g4>

## AP Custom USA 4x4

This shell caddy saves space on your shooting belt, allowing you to have 8 shells in one place. It requires some training, but once mastered, you will be loading your shotgun very quickly.



The AP Custom 4x4 Shell Carrier is an innovative product. I have tested it using dummy shells during several hours and with 150 shells on a shooting range.

It is really good and enables me to load my shotgun very fast. It is extremely easy to use and adjust. The AP Custom 4x4 Shell Carrier is very easy to attach to the belt because it has a customizable lock on the back. It can be customized to fit wide or narrow belts.

The AP Custom 4x4 Shell Carrier is constructed of CNC machined aluminum; it is very sturdy and reliable.

The only problem I have found with this is that the 4x4 shell carrier will not work with European made 2 3/4" shells, which are a little longer in size than US made versions. I have also tried RIO (Spain) buckshot and slugs with 2 3/4" shells and they did not fit the shell caddy.

The AP Custom 4x4 Shell Carrier is a high-quality product, and I highly recommend it.

### External Links:

AP Custom USA 4x4: <http://tinyurl.com/kg7dplu>

## ***Shooting Gloves***

Good gloves are very important when you use a shotgun. A shotgun gets hot when you fire it, and also has sharp edges. It is easy to grab a hot barrel or scratch your hand under stress. You need to have a good grip to be able to load a shotgun quickly. Good gloves should fit tightly to allow you to hold and load shotgun shells comfortably.



© Rem870.com

CamelBak Vent shooting gloves are lightweight and breathable. I have tested the CamelBak Vents, and found out that these gloves are much more comfortable than any other gloves I have previously used.

CamelBak Vent gloves allow you to handle a shotgun comfortably, for a long time. These gloves have a vented air mesh top that transfers heat away from your hands, allowing you to wear it for hours.

Other shooting gloves that I can recommend are ones made by Hatch, 5.11, and Original Mechanics.

### **External Links:**

Tactical Gloves: <http://tinyurl.com/k83qq3o>

## ***Hearing Protection***

All shooters should be very careful when shooting, as loud sounds can damage hearing permanently.

The noise level of the shotgun shot is more than 150 dB. The threshold of pain is considered to be 140 dB. This means that shooting without hearing protection can cause sudden hearing loss with complications.



There are several ways to protect hearing: earmuffs, electronic earmuffs, earplugs and combat earplugs.

### **Electronic Earmuffs**

The first earmuffs in the above picture are electronic earmuffs by Peltor. They are great, allowing you to hear everything and to even adjust your volume control. When you shoot, electronic earmuffs block loud sounds. It is a little difficult to wear them all day, but they do work very well.

### **Earmuffs**

The second earmuffs in the above picture are made by Peltor as well, but they are simple earmuffs without electronics. They block all sounds, so it is difficult to hear what is happening around you.

### **Combat E-A-R Plugs**

These earplugs allow you to hear all sounds and block loud ones. They are better than ordinary earplugs but not as good as electronic earmuffs.

### **Earplugs**

Lastly, we have shown regular earplugs, which block all sounds. They are small and easy to use.



I recommend using electronic earmuffs because they offer the best hearing protection possible and enable you to hear everything that happens around you. There are a lot of different models of electronic earmuffs available.

#### External Links:

Ear and Eye Protection: <http://tinyurl.com/lvzuq33>

### *Shooting Glasses*

**Attention:** Regular eye glasses will not help to protect your eyes when using a shotgun, and even can cause worse injury when fragmented. **Always use proper ballistic glasses.**



Always wear eye protection when shooting a shotgun. Modern ballistic glasses are very comfortable to wear, and can protect you from most of the threats on the shooting range, including direct shot of buckshot from 10 meters (10,94 yards) as advertised by ESS.

There is always a chance of a ricochet when shooting, and even small fragments can injure your eye.

Wear glasses yourself, and always have spare glasses for your friends; never go to the range without them.

Remember that a ricochet may even come from the other shooters, so wear protection all the time.

Eye injury is very easy and cheap to prevent, but very difficult and expensive to cure once it has happened. **Always wear eye protection.**

Other ballistic glasses that I can recommend are ones made by Revision, Oakley, Wiley-X and Bollé.

#### External Links:

Ear and Eye Protection: <http://tinyurl.com/lvzuq33>

## MSA Sordin Supreme Pro Shooting Hearing Protection Review

Instructors generally recommend you use the same earmuffs all the time because you get used to them. You should never change earmuffs before a competition because unusual equipment becomes an irritant and may cause you to lose focus. When you wear the same equipment day after day, you get to a point where you don't feel it and even forget that you have your glasses and ear protection on.



MSA Sordin Supreme Pro are electronic earmuffs, which enable you to communicate with other people, but reduce impulse noise from firearms; this way, you don't need to take them on and off. Anyone that has fired a weapon without ear protection knows the discomfort and pain caused by the noise.

The biggest disadvantage of this hearing protection is that it isn't cheap. These earmuffs are very expensive, but surprisingly popular. In comparison to all the other earmuffs I have tested (including Brownells Pro Series Hearing Protection, Peltor Tactical 6 Electronic Hearing Protection and Howard Leight Impact Sport Electronic Earmuff) these are much sturdier and are very solid.

These are very comfortable for all day wear thanks to their leather headband and are slim enough that you can wear them under a helmet. These shooting earmuffs will work for more than 200 hours on 2 AAA batteries, and come with an auto shut-off function.

The controls on these earmuffs are simple and some of the best I have come across; there are only 3 buttons needed to control this product and a tone is used to indicate when

they have been turned on or off. They provide stereo sound, so you can easily understand where sounds are coming from, and can amplify sounds if needed. There is also an auxiliary input port that you can use to listen to music or connect to the radio with.

Their slim, low profile cup design makes shouldering of long guns easy. I've never had a problem shouldering a shotgun or rifle when wearing the MSA Sordin Supreme Pro earmuffs. Also, they are fairly compact when folded, though they cannot be folded completely because of the design of the battery compartment screw. Additionally, MSA Sordin Supreme Pro are waterproof and windproof, so you can wear them even when it's raining or windy.

My personal opinion is that these are arguably the best shooting earmuffs ever! You won't regret buying the MSA Sordin Supreme Pro earmuffs; they are well worth it!



External link: [MSA Sordin Supreme Pro Earmuffs](#)

## ***Shooting Timers***

If your goal is to continuously enhance your shooting skills, you need to know how to measure them. If your goal is not measurable it doesn't exist. The best way to test shooting skills is to measure them with a shooting timer.



**It is good to use the IPSC ready conditions of your shotgun during training:**

1. Magazine loaded, chamber is full, and safety is on.
2. Magazine loaded, chamber is empty, and safety is off.
3. Magazine empty, chamber is empty, and safety is off.

**Here are few things which can be measured with shooting timer:**

- Ready Condition 1, first shot.
- Ready Condition 2, first shot.
- Ready Condition 1, first shot, load 4 shells, second shot.
- Ready Condition 1, first shot, load 8 shells, second shot.
- Ready Condition 1, "Bill Drill", putting 6 shots on target as fast as possible.
- Ready Condition 1, Shotgun on the desk, first shot.

- Ready Condition 1, four shots, time of the split.

### **CED7000**

CED2000 is one of the most popular shot timers in the world. It is standard equipment used during the IPSC, IPDA, 3-Gun, and other competitions.

These shot timers are very durable and will work for years. They are very simple to use.

The price of a shot timer is about \$100.

### **Surefire Shot Timer for iPhone**

Surefire Shot Timer for iPhone is a completely free application that will help you during your training.

It is a very good alternative to standard shot timers.

### **External Links:**

CED7000 Timer: <http://tinyurl.com/keb2nI9>

## *Other*

### **5.11 Tactical Shotgun Ammo Pouch**

A Handy piece of equipment, the 5.11 Tactical Shotgun Ammo Pouch is sized to hold one standard size box of shotgun rounds. Zippered access compartment enables you to have fast and easy access. You can get shells out of the pouch using an overlapping elastic top. It doesn't allow quick reloads but it can be easily attached to your belt or vest. The more ammo you have the better.



5.11 Tactical Shotgun Ammo Pouch can be attached to any piece of equipment using MOLLE.



Overlapping elastic top ensures that shells remain inside of the pouch.



This product is made of high-quality materials and you can be sure that it is going to last for a long time.





# Shooting

This section of the eBook will help you to shoot faster and more accurately.

## *Proper Sight Alignment and Sight Picture*

This info can be applied to shotguns when shooting slugs:

“Rifle Sight Alignment - Alignment of the rifle with the target is critical. It involves placing the tip of the front sight post in the center of the rear sight aperture. Any alignment error between the front and rear sights repeats itself for every 1/2 meter the bullet travels. For example, at the 25-meter line, any error in rifle alignment is multiplied 50 times. If the bullet is misaligned by 1/10 inch, it causes a target at 300 meters to be missed by 5 feet.” - Four Fundamentals of Marksmanship

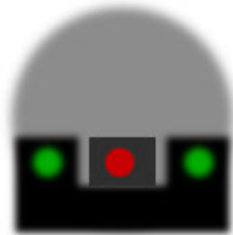
## Proper Shotgun Sight Alignment



Bead Sight



Rifle Sights



Proper Sight Alignment and Sight Picture  
Focus on Front Sight



Proper Sight Alignment and Sight Picture on Clays  
Focus on Target

## **Sight Alignment**

Shooter needs to line up the front and rear sights both vertically and horizontally. Top of the front sight is level with the top of the rear sight; front sight should be centered in the rear sight notch. There should be an equal amount of space on either side of the front sight.

## **Focus**

Focus must be on the front sight, not on the target and not on the rear sight. It should be on the front sight. Target and rear sight are blurred.

Please note that when you are shooting at moving targets, like birds or clays, then the focus is different and the focus is on target with sights blurred.

## **Dry Fire Drills**

Dry fire drills will help you to master the proper sight alignment and focus.

## ***The Mid Bead on Shotguns***



There is a lot of debate in shooting circles about mid beads. Do they enhance a shooter's capability? To some extent, just believing they help can increase your confidence and, of course, increase your ability.

Some go as far as to say that if you are looking at the bead then you are not shooting at the target, and having one more bead only gives you even more distractions. Every shooter has habits and even so-called rituals or superstitions. Change comes hard to some because they were brought up to believe in one way, and their way works, for them. However, you may never know how well your way works unless you do some comparisons. Do what all advanced shooters do; explore new ways to increase proficiency. Soldiers do not train for a few weeks and then declare themselves as soldiers while never exploring new training techniques or stop practicing.

Older shooters may have experienced mid beads on firearms that are designed for target practice. In many people's minds, it was a training tool. The mid bead allows for better alignment because over time your body changes and your sight picture will change. You may position your neck differently and your cheek weld changes. You may only think you have lined up the front bead on target. You think you are focused on the target with your eye when in fact your body is not positioned properly. You would know if your sight picture is off if you could use the mid bead to verify alignment.

With practice, after getting into a shooting position, you will naturally verify bead-on-bead and on target then blank out the mid bead. Essentially, you are shooting over the mid bead. Having a mid bead for some people means they know the barrel is leveled.

As any shooter knows, the bead is not there for the shooter to stare at. But if you do as a shooter then you will likely miss your target. Once the bead is lined up, it should blur into the background and your eyes should register it so you can always tell if you have "drawn a bead." Your eyes can only focus on one thing at a time and you must be focused on the target. The bead is a flag waving in the background to let you know that all is ok.

A mid bead can help you learn your natural point of aim and to maintain it. The natural point of aim is that point you always come back to. You may close your eyes for a few seconds and then when you open them, the sight picture will not have changed. The mid bead will tell you when you had your eyes closed if you moved your weapon from its mount/shooting position. If you find yourself suddenly looking over the mid bead or cannot see the front bead then something has changed. Once positioned correctly, you will see only one bead because the mid bead fades and then the bigger front bead will fade as you focus on target. It will take some practice but once you shoot using a mid bead you may find yourself finding your true and natural point of aim more easily each time.

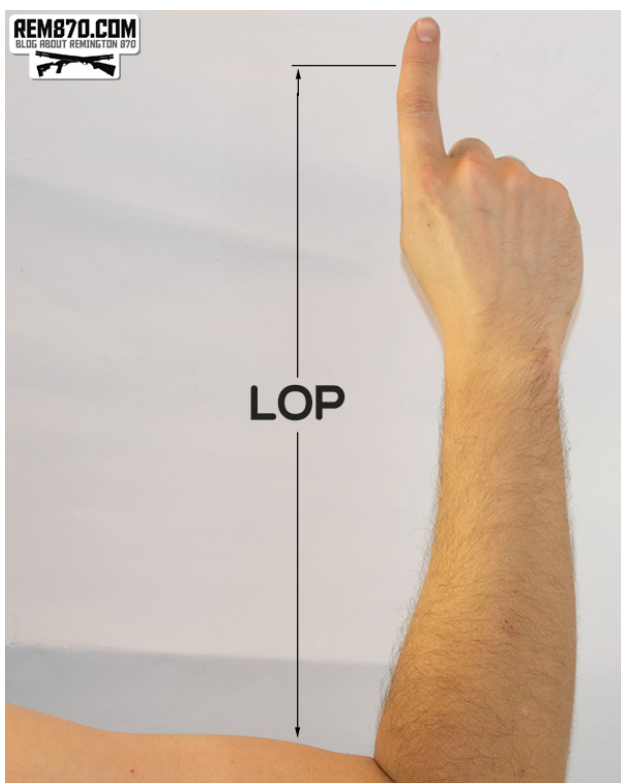
### ***Proper Length of Pull (LOP)***

There is length of pull and there is **your** length of pull. Length of pull is the distance from the trigger face to the butt plate when nestled or "socked" into your shoulder. The standard

length from the factory on most, but not all, shotguns is between 13.25" and 13.5". Youth and certain tactical models will have a shorter pull length right out of the box.



*LOP Measurement: 11 ½" from center and end of plate to trigger face.*



The photo depicted above is usually considered the standard way to measure your own pull length. Some experts recommend this and others say it is not an accurate depiction of actual pull length because of muscle mass in shoulders and biceps that will have an effect. Some people even recommend holding your weapon in this position with the trigger finger on the trigger and butt plate resting on the bicep - this is not recommended, however,

because the weight of the weapon will depress the bicep unless heavily muscled, and may cause a misrepresentation of actual pull length.

### **You know your pull length, now what?**

You bring the weapon up and it still feels wrong. Your elbow is supposed to provide bone-to-bone support for more accurate shooting versus allowing muscle to hold the weapon steady. Muscles will tremble when weight is applied no matter how strong or developed they are. Your accuracy will suffer if your elbow joint is not tucked in tight where it can be supported by the body. Having a pull length that does not suit your particular body style will affect your shooting. You will never achieve your natural point of aim unless you can find the proper pull length for your body.

Heavy clothing and body armor *will* affect the pull length, so if you routinely wear armor or padding in the shoulder area (heavily muscled) your pull length will be roughly  $\frac{1}{4}$  to  $\frac{1}{2}$  shorter.

Improper pull length can result in neck cramps and eyestrain. You must be comfortable when shooting, and you must be able to find your cheek weld each time you raise the weapon to a firing position. If you have to squirm and adjust every time, you will never become an advanced shooter. In some circumstances, having to play around with positioning can have dire consequences.

To adjust pull length you can either change out your butt plates to either increase or decrease the pull length or fit a custom stock to the weapon that allows for pull adjustment. An adjustable stock is ideal because you can then adjust for armor and heavy clothing. If you only target practice or sport shoot, and never expect to have on armor or heavy clothing, fitting different butt plates would be a less expensive fix.

Some people may recommend that you cut your stock to decrease the pull length. This is *not* recommended unless you have experience with this type of procedure. The angles have to be precise, and you only get one opportunity to cut it right.

Seek help from a friend so your measurements can be verified, and measure with the weapon shouldered using the provided illustration above as a guideline.

### ***Remington 870 Malfunctions Clearance***

Remington 870 is the most dependable shotgun in the world, but it also can have malfunctions. The faster you fix malfunctions the better. This is extremely important in home defense situations, when every moment can cost a life.

Knowing and being familiar with common Remington 870 malfunctions is priceless and extremely important. This will help you understand what can happen with your shotgun and will help you fix malfunctions fast.

## Stove pipe



When you rack the shotgun after a shot and an empty shell hangs from the ejection window.

You just need to hit it backwards with your wear hand.

## Double feed

This is not a common problem. It happens when the shell latch allows two shells to come out of the magazine tube and you have two shells stuck on a carrier.

When you see two shells on a carrier like this:



This is easy to fix; you just need to take one of the shot shells out. You can grab it yourself, or use this simple method:

1. Turn the Remington 870 upside down, so that the shot shell will fall off due to its own weight when unblocked.
2. Push the forend forward. This will push one of the shells into the magazine a little.
3. Pinch the carrier down to block one of the shells inside of the magazine tube.
4. Pull the forend back while holding the carrier. This will free one of the shells while the second will be held in place by the carrier.
5. Let one of the shells fall off from the receiver. You don't even need to actually take it out; it will go off the receiver when you rotate the shotgun.
6. Release the pinch pressure on the carrier to free the second shell and load it into a chamber.

This may sound complicated but it is really easy once you've tried it several times.

### **Failure to extract**

When you try to reload a shotgun after the shot and you cannot do this because the fired shell was not extracted.

What you need to do when you see that your shotgun fails to extract:

1. Push down the carrier.
2. Take out the shot shell from the carrier.
3. Try racking the shotgun again.

Usually that helps.

### **Failure to extract and rim of the shell is ripped**



This failure to extract is worse than the previous one because you cannot fix it by racking the shotgun. You need to use a knife or something to take it out of the chamber.



## Failure to feed

When you try to fire and you hear click but nothing happens. This means that you could have just short stroked a shotgun (if you are sure that there are shot shells in the magazine), or that the magazine is empty.

You can just cycle your shotgun again if you are sure that you still have shot shells inside the magazine tube.

## Extractor stuck

This will look like the extractor is pressed inside of the bolt. This is one of the worst problems! Fortunately, this is a very rare problem and has happened to me only once in 4 years with thousands of rounds fired.

You need something to pull the extractor up. During a competition (if tools are not allowed) you can just unload your shotgun and try racking it several times.

## Broken ejector



This is very serious problem. I hope that you will never have it happen in a home defense situation!

This cannot be fixed without a gunsmith, but you can still fire your shotgun with the understanding that you will have to extract your shot shells manually.

#### **4 Ways to Fix Remington 870 Failure to Extract**

Newer Remington 870 shotguns often have failure to extract problems. Let's see why they happen and how can we fix this.

Failure to extract happens when we cannot extract a fired shell. This prevents the shotgun from loading a new shell into the chamber. This is bad, especially during home defense situations.

There are several ways to fix Remington 870 failure to extract situations.

##### **1. Rack harder, rack faster!**

Give your Remington 870 to a more experienced shot-gunner for tests. Is everything ok? Does he have failure to extract problems as well? If no, then something is wrong with your skills and not the shotgun.

Try to rack your shotgun faster and harder. Believe me, the Remington 870 is a very strong shotgun and you don't need to be gentle when reloading it; this may fix the failure to extract problem.

##### **2. Polish the Chamber**

Check the chamber of your Remington 870 - is it rough? After a shot, the shell hull extends in size, and if your chamber is rough it becomes difficult to extract the fired shell. You will need to polish the Remington 870 chamber to fix failure to extract problems in this situation.

##### **3. Change the Extractor**

Check the extractor of your Remington 870. Is it old? Does it look damaged or can you see that it has wear and tear? Is it a factory MIM extractor? Replace it with a non-MIM extractor, as this may fix the failure to extract problem.

##### **4. Check the Ejector**

Check the Remington 870 ejector and ejector spring - do they look ok? If not, replace them. This is one of the most common problems that cause failure to extract problems.

## Light primer strike



This occurs when you pull the trigger and you hear a click but nothing happens. When you extract the shell you will see a light primer strike as in the above picture. This can happen if something is wrong with the firing pin spring.

You will have to replace the firing pin spring to fix this.

**WARNING! Don't touch a shot shell after a light primer strike for some time because it may still detonate after a few seconds.**

## ***Shotgun Shooting Drills***

Practice is what makes anyone proficient in anything. You have to have training to the point where movements become natural, where your hands, fingers and eyes will know what to do without hesitation.

Always practice with the weapon that is most likely to be used in a confrontation. In the middle of the night, when it is dark and your stress level is high is not the time to be handling an unfamiliar weapon.

It is recommended for shotgun practice drills you use “snap caps”. Snap caps cannot be mistaken for live ammunition, and they allow you to dry fire your weapon without putting stress on the firing mechanism. They also allow you to practice handling ammunition and are an excellent way to practice loading your weapon without handling live ammunition. Practicing loading live ammunition anywhere other than a certified firing/practice range can be dangerous.

Practical drills are typically done at a firing range, where you get used to the sound and recoil from live ammunition. Practical drills allow you to focus on the weapon to become familiar with it. You will practice loading live ammunition using a belt or stock/receiver carrier. Fast loading is the key to containing and putting down any aggression against yourself or your home. You want your ammunition close to your hands while engaging an aggressor. A belt carrier/caddy is not recommended for a tactical situation.

During practice drills, you will fire a series of rounds down range at a fixed target, and reload using your eyes and then you reengage the target. Normally you will not practice tactical shooting unless the range is designed especially for that. One day of shooting will not make you proficient; it will however introduce you to the noise, the recoil, feel of the ammunition and the range and accuracy of your weapon. Practice and know your weapon inside and out.

Know your field of fire. What can you see from your bedroom door, your front door, and every room and doorway in your home? Keep in mind you may have to engage outside of the home, as well. Never conduct tactical shotgun drills with live ammunition. That is why it is important you use snap caps. Load the snap caps in your ammunition carrier as if you would live ammo to practice loading. It is important you pull the trigger in tactical shotgun drills.

You cannot use your eyes to load in a tactical situation. Your eyes must always engage the target. You cannot look down to check your footing or to look for ammunition; it must all be done by feel. You must be able to load while moving your weapon to engage additional targets, and to be able to engage any target your eyes must be on it. Hours of practice are what it takes to be able to load your weapon by feel as you move your weapon. Your hands must naturally seek ammunition as you move your body and weapon to seek cover or to reengage the threat.

You are defending your home but also remember you are defending yourself so you must also practice seeking cover. Do not confuse cover with concealment. Cover is protection from rounds whereas concealment means the aggressor cannot see you. You must practice engaging the aggressor from a covered position. You must begin loading as you seek cover, and then reengage. Your eyes must always be on the target, you simply cannot look down to load, or to seek footing. Your weapon must always be topped off with one in the chamber.

Set up tactical shotgun drills in your home. Some may suggest setting up barriers to practice cover and concealment, inside your home, which is fine but unless you expect the furniture is going to be moved around by the aggressor you should practice using the current configuration. Once you step out of your bedroom door at three in the morning, you must have eyes on the target. Your weapon must be loaded to capacity as you step out of your bedroom and as you fire, you must instinctively reach for ammunition as you move your weapon to engage.

The article mentions eyes on the target a lot. Failing to know where the threat is coming from means, you have lost, and you are now the target. You do not control the situation if you lose sight of the aggressor, and you cannot fire and contain any threat without a target in sight. That is why it is extremely important you practice loading with your eyes on the threat.

## ***Stance***



Above is depicted a frontal shooting stance, which is used by most competitive, law enforcement, and military shooters.

1. Lean forward. This is very important and enables you to control recoil, even after numerous shots.
2. Cheek weld. Put your face down on the stock. The shotgun should be placed between your eyes and the target. That means that you need to learn how to put your shotgun exactly on a target when lifting it up.
3. Bring your shotgun tightly to your shoulder. If it is loose, the stock will hit your shoulder shot after shot, and you will come back from the range covered in bruises.
4. Flex your knees, this way you will be able to control recoil with your body.
5. Don't stick your right elbow out. Hold your elbows tucked in close to your chest. This will minimize your silhouette, which is very important in a home defense situation. Also, this ensures better maneuverability in a close quartered environment.
6. Stand with your feet about shoulder width apart to have a stable position.
7. Don't put your left hand too far forward on the forend. Remember that the forend on the Remington 870 is located far from the shooter, so you will need to find a comfortable position or install a longer forend.

Practice often and you will have a proper shotgun shooting stance, which will help you to shoot fast and accurately.

### ***Tips***

Here are some tips which will help you in shotgun shooting:

- Proper shooting stance. It is very important to train a proper shooting stance. Train every day with dry fire; this builds your muscle memory. Dry firing will improve your results dramatically.
- Control your breathing when shooting slugs. It is not that important when you shoot birdshot or buckshot.
- Control your trigger finger. This is important when shooting slugs. Pull the trigger smoothly.
- Don't anticipate recoil. This is very easy to test, ask your friends to load your shotgun with several rounds; one of them will be a dummy shell. If you are anticipating recoil you will notice how you push a shotgun forward when pulling the trigger, thinking that it is going to fire.

- Keep both eyes open. This is very important. Using both eyes when aiming will give you better depth perception and a peripheral vision. This is a very good habit for defensive shooting.
- Choose a stock of a proper length.
- Test the ammunition and find one that works best with your shotgun.
- Push the trigger with the pad of the your joint.
- Aim at the center of a mass, the biggest part of a target.

## *Shooting Range (Gunshot) First Aid Kit*



Safety on the shooting range is very important. Having a shooting range (gunshot) first aid kit is a must too.

What I recommend to have in your Shooting Range (Gunshot) First Aid Kit:

1. Tactical Tourniquet (SOF or CAT). This tourniquet saves lives. It was tested in Iraq and Afghanistan and used by the US Army. It is a very simple and effective way to stop bleeding from limbs.
2. Celox Gauze Roll. Celox is effective but it is much easier to use a Celox Gauze roll. Very simple application, and is very effective when you need to stop bleeding.
3. Med pouch with enough room for a tourniquet and gauze.

Tactical tourniquet and Celox gauze rolls are very effective when you need to stop bleeding; I highly recommend them for all shooters.



## Advanced

This section describes advanced upgrades and modifications of your shotgun.

**ATTENTION:** You need to be 100% sure that you can complete all the required modifications before attempting anything. Although they can be performed by most shotgun owners, be very careful not to break or damage your shotgun. These advanced upgrades require additional skills and tools.

If you need help you can always send a message to the author of the eBook at [info@rem870.com](mailto:info@rem870.com), or ask a question on the blog at <http://www.rem870.com>.

**ATTENTION:** Make sure that your shotgun is unloaded and the safety is engaged before attempting any modifications.

## ***Adding a Warning Ring to a Wilson Combat Jumbo Head Safety***

Many thanks to Tommy Geraci for his instructions and photos.

Step 1. Buy an assorted box of shrink tubing that has 1/4" colored tubing.



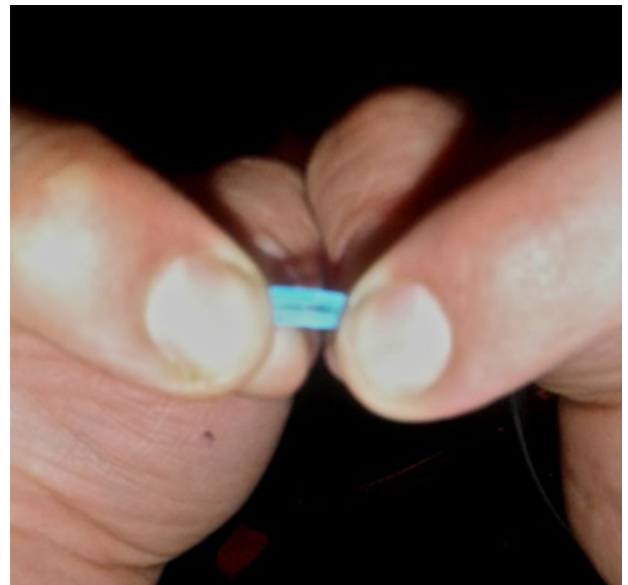
Step 2 - Select what ever color you want of 1/4" tubing.



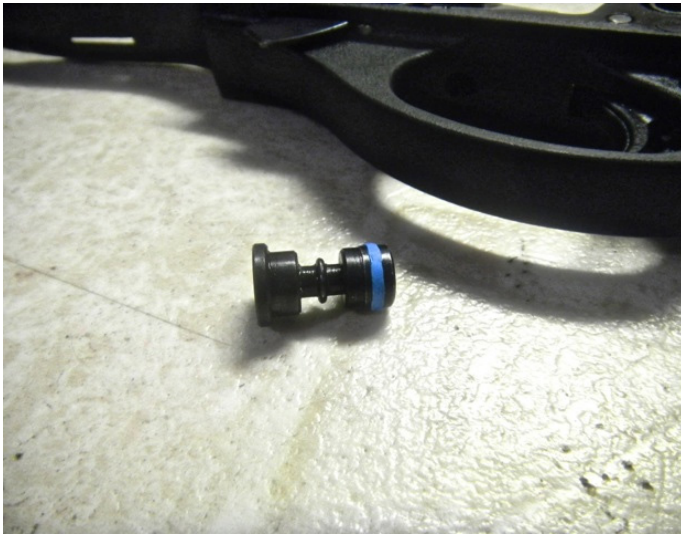
Step 3. Measure 1/4 of a quarter of an inch then precisely cut.



Step 4. Stretch it out with a little with your fingers.



Step 5. Pull over and set your new warning ring into the warning ring groove



Step 6. Heat shrink tubing while turning under a flame in an even circular motion to shrink tubing into the groove.



Step 7. Ensure none of the tubing protrudes past the metal so there is no interference with the smoothness of the safety. Take a little lube and rub the tubing clean then reinstall safety in the trigger group.



## *Installation of the XS Remington 870 Pedestal Big Dot Tritium Sight*



The installation of the XS Remington 870 Pedestal Big Dot Tritium Sight is simple, taking approximately 10 minutes to complete.

You will need epoxy to attach the site and alcohol to degrease the sight and bead.

- 1. Use the alcohol to degrease the sight and bead.**
- 2. Fill the cavity on the underside of the sight with epoxy.** Try: Brownells Acraglas Gel (recommended by manufacturer).



**3. Press the sight over the bead.**



**4. Remove excess epoxy using rubbing alcohol while the epoxy is still soft.**

**5. Allow epoxy to set.**

I've used a few of the XS beads and have recommended them to others. A frequent complaint I hear is that people say there isn't a good way to clamp them. Sometimes you have to be creative; you don't need a lot of force, just something to help keep the sight from moving and keep it from floating from the hydraulics of the adhesive when you put it together. A few plain, old rubber bands should suffice.

When prepping for adhesive use, always clean your surface with isopropyl alcohol or acetone. Wipe it wet once and then immediately again with a clean cloth to catch any residue that is floating while it is wet. Do this to both the surface and the sight; I do it at least twice. It is also a good idea to rough the bead lightly with some course sandpaper to give it "tooth" for mechanical adhesion.

When using JB weld or other two-part adhesive, it's always advisable to make a test batch and make sure it cures before you use it. Also, when mixing, put equal amounts onto your mixing surface (I use paper plates) and mix with the end of plastic fork or knife. Mix very thoroughly and apply with a toothpick; never apply with the mixing item, as you risk getting uncured adhesive on your shotgun part.

Lastly, always coat both of your surfaces lightly. It's easier to get 100% coverage when both parts are coated lightly than having one heavily dripping all over. Scrape whatever minimal squeeze-out overflow you have with subsequent toothpicks or another square or round edged item of your choice. If you choose to clean with a solvent saturated cotton swab be very brief, as you don't want to compromise your bond with the solvent. I rarely clean around anything bonded with solvent; either tape it off or be more careful.

Video, Installation of the XS Remington 870 Pedestal Big Dot Tritium Sight:

<https://www.youtube.com/watch?v=iQZPosILPfU>

**External links:** [Acraglas Gel](#)

[XS Big Dot Tritium Sight](#)

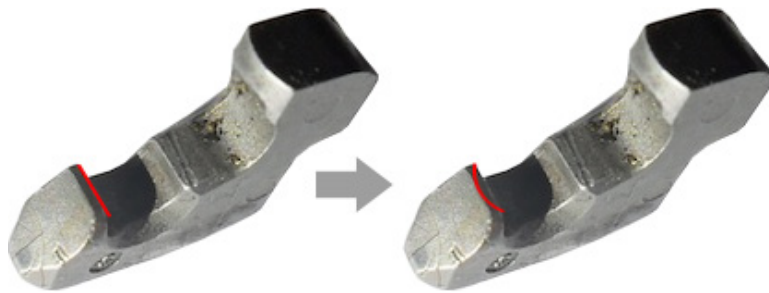
## Modification of the Extractor



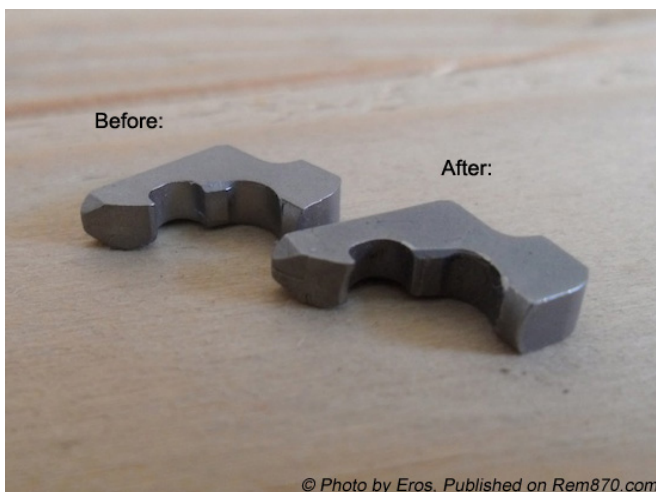
One easy method to increase the reliability of your Remington 870 shotgun is to put a small radius on the extractor to allow for better extraction of the fired shells.

It is very easy to do this wrong, so this modification is no longer recommended.

You will need to put on a small radius to receive more reliable extraction of fired shells. Here is picture showing where you need to put the radius:



And the result:



### External Links:

Non-MIM Extractor: <http://tinyurl.com/k7sehri>

## ***How to Change the Forend***

1. Disassemble the Remington 870 and take out the forend.
2. There is a nut on the front of the forend. You need to unscrew it using a forend removal tool or pliers (insert them in the two notches on the nut). You can use some oil to make this process easier. This procedure is very simple on brand new shotguns and may be problematic on old ones, especially if the forend nut was there for ages.



Use pliers or a forend wrench to unscrew the forend nut. Sometimes it may be difficult, especially on old wooden forends. Sometimes it is not possible to remove the nut without breaking the forend, but this usually happens only when the wrong tools are used to remove the forend nut.



1. Unscrew the forend nut.
2. When you have the forend nut unscrewed you can just slide the forend off:



3. Slide on the new forend and reverse the process.

**Video by Rem870.com:** <http://youtu.be/jaskPlze1xl>



## How to Change the Safety Button

1. Disassemble your shotgun and take out the trigger plate assembly.
2. You need to push out the pin, which you can see in the picture below:



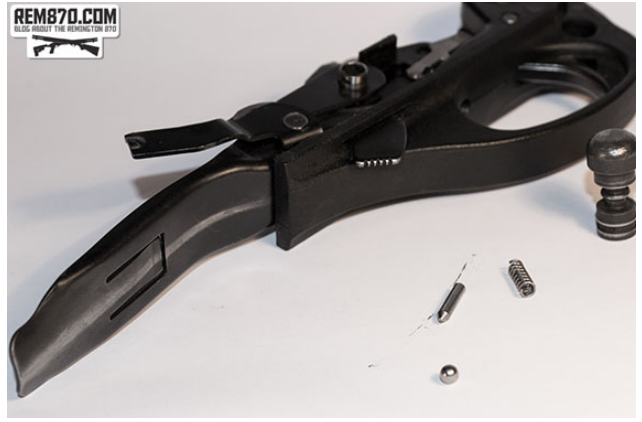
3. Place a finger over the safety detent spring hole and push the push out safety switch retaining pin using a 1/16 inch pin push or something that fits.



**ATTENTION!** The detent spring is under pressure and it may jump out of the hole if you don't place your finger over the detent channel. You will never find it if it flies away. One of the readers told me that their safety replacement took 31 minutes: one minute to change the safety, and 30 minutes to find the spring!



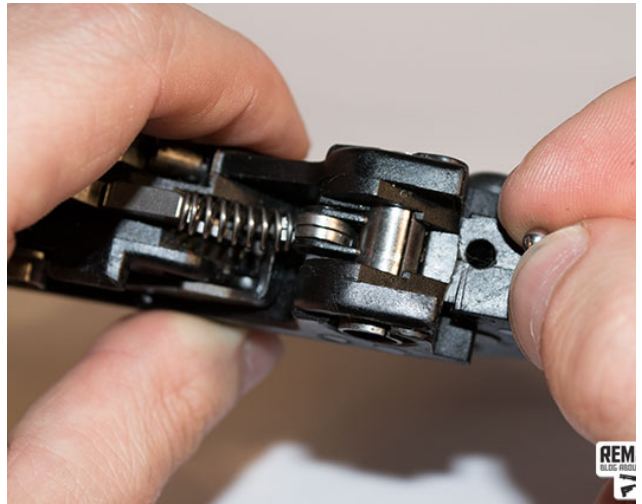
4. Take out the safety switch retaining pin.



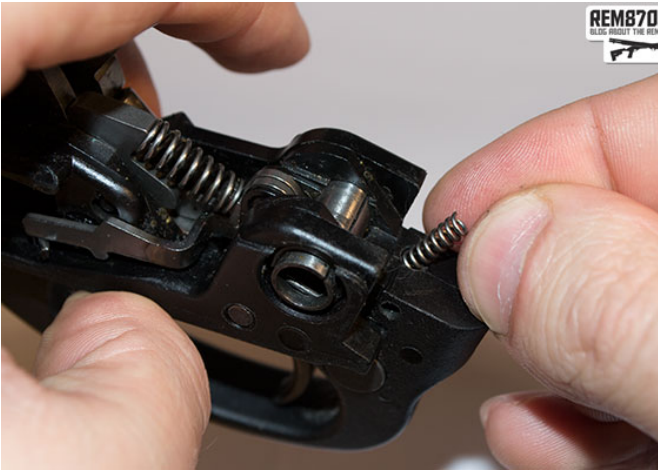
5. Carefully allow the safety detent spring and ball to drop from the safety detent channel.



6. Remove the old safety button and install the new safety from the right side.



7. Reinstall the safety detent ball



8. Insert safety switch spring.



9. Insert safety switch pin with the pointed end first.



10. Depress the safety detent spring into the safety detent channel and insert the retaining pin.

11. Test the new safety button.

12. Reinstall the Trigger Group Assembly.

**Video by Rem870.com:** [http://youtu.be/kpq\\_sdSMmc4](http://youtu.be/kpq_sdSMmc4)

## ***How to Change the Extractor***

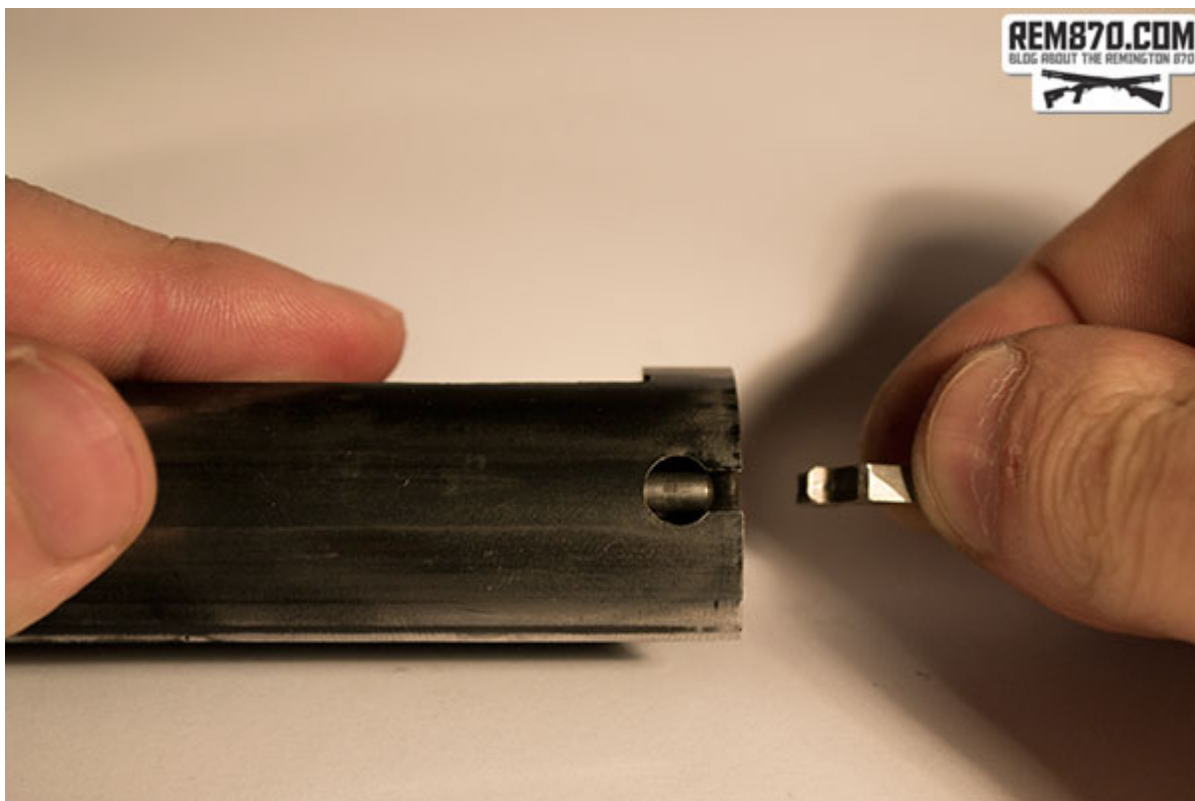
1. Check that your shotgun is unloaded. Check both the magazine tube and the chamber.
2. Disassemble your Remington 870.
3. Take out the bolt.



4. Put a flat head screwdriver between the plunger and the extractor.



5. Pull the extractor plunger back to depress the spring that is located behind it. Lift the extractor out, rotating it.



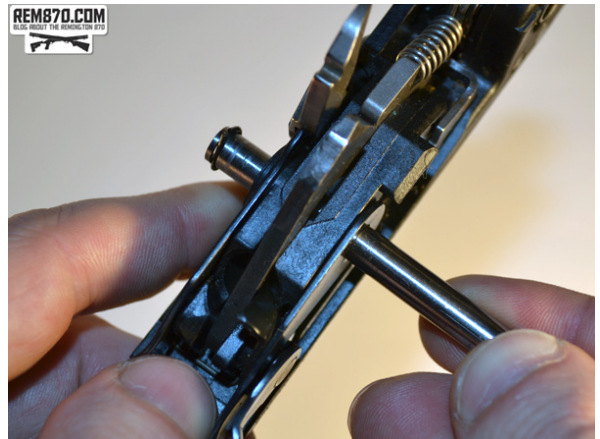
6. Take the new non-MIM extractor and push it, rotating inward until it snaps into place with a click. **Video by Rem870.com:** <http://youtu.be/tN5Zs0xa1t8>

**External Links:**

Non-MIM Extractor: <http://tinyurl.com/k7sehrj>

## How to Replace Carrier Latch Spring

The easiest way to replace a carrier latch spring is to use Brownells 870/1100 Carrier Pivot Slave Pin. You can use a screwdriver if you don't have that tool.



1. Push the carrier tube out using Brownells 870/1100 Carrier Pivot Slave Pin or a screwdriver.



2. Pull the Carrier Pivot Slave Pin out and take out the carrier.



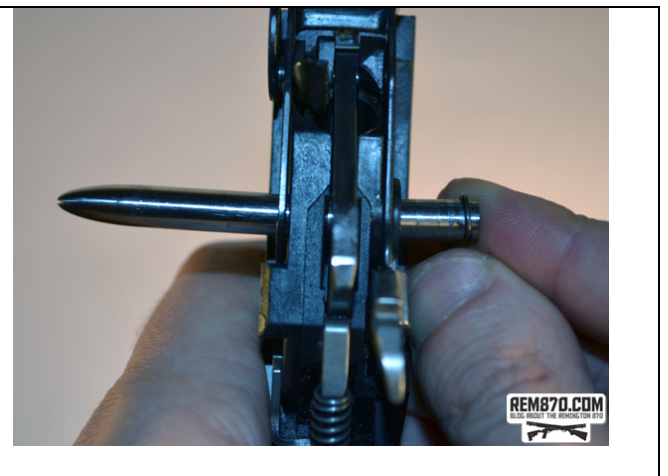
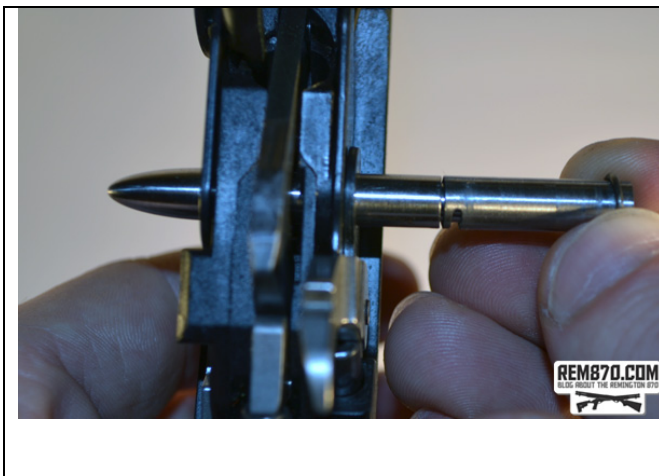
3. Take out the Carrier Dog Follower and remove the Carrier Dog Follower Spring.

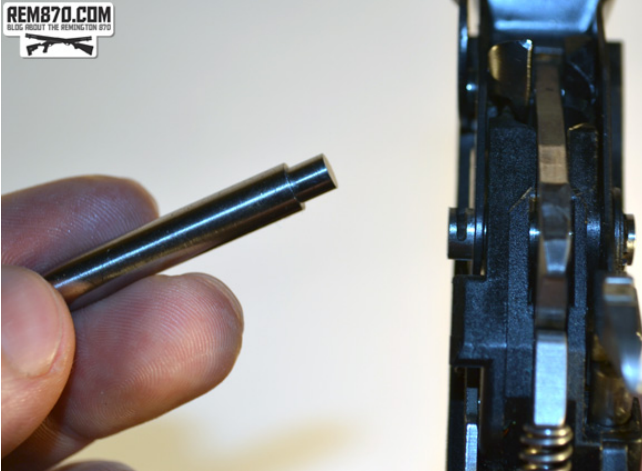


4. Insert the new Carrier Dog Follower Spring and reverse the process



5. Use the second side of the Carrier Pivot Slave Pin to insert the carrier tube back into place.





**External Links:**

Brownells 870/1100 Carrier Pivot Slave Pin: <http://tinyurl.com/lsv5mh8>



## ***Drilling and Tapping Remington 870 Receiver to Install Rail (or Ghost Ring Sights)***

*Thanks to Andrew and Bill for help and comments. Thanks to S&J Hardware for the rail.*

A rail can be used to attach a scope or red dot. If you have a Remington 870 Express and want to add a rail or ghost ring sight you will need to drill and tap your receiver. Drilling and tapping of the receiver is also required for installation of ghost ring sights, so this post is going to be very useful for all Remington 870 owners who want to upgrade their firearm.

Drilling and tapping is often considered a very difficult procedure. You can order drilling and tapping from a gunsmith for your weapon, but this can cost anywhere from \$25 for one hole and up.

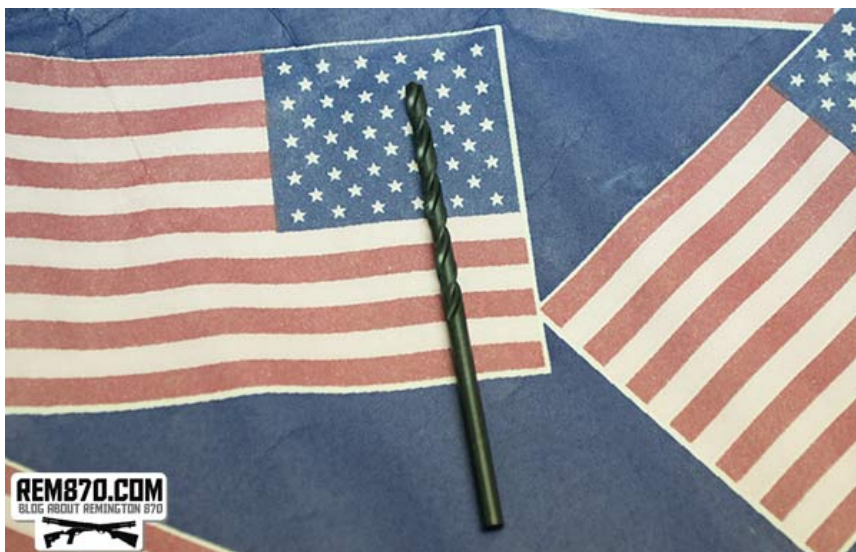
I received an S&J Hardware rail for Remington 870 and decided to drill and tap the receiver of my Remington 870 to show you how to do this.

### **Equipment Required for Drilling and Tapping**

**ATTENTION!** Safety first! Use protective equipment when working.

**NOTE:** This modification **cannot be undone**. If you are unsure about how to perform this modification, please see a trained professional.

High quality drill bits and taps are very important. If one snaps off during the process, your will have wasted your equipment and your weapon. Using cutting oil during the process of both drilling and tapping helps reduce the heat and provides smoother cutting. You will need a drilling machine to make accurate holes in the receiver. It is also important to have high-quality drills and tap.





Most sights and rails come with standard screws, but it is better to ask the manufacturer what drill and tap they recommend to use. With S&J Hardware I bought the following items:

- #31 Drill
- 6-48 Plug Tap

You will need to drill and tap 4 holes in the receiver of your Remington 870. After this, your shotgun will have a rail, which both serves an aesthetic purpose and enables you to attach additional equipment.

### Drilling and Tapping Instructions

**1. Use a ruler and pencil to find and mark the center of the receiver.** My shotgun is Dark Flat Earth, so I used black pencil; if you have a black shotgun, you will need a white pencil.



2. Frame the drill target with duct tape for easier use of your center punch and to protect the adjacent area.



3. When you have found the center line, mark the places where you want to make holes.



4. Use a center punch to mark the target.



5. Secure the Receiver under the Right Perpendicular Angle.



**6. Drill the hole in the receiver.**



**7. Tap the hole in the receiver.**



I recommend drilling and tapping the first hole on the beginning of the receiver to check the rail alignment. Then drill and tap the hole in the end of the receiver and check the alignment again. Then drill and tap the two other holes.

The Remington 870 receiver is very thick, but there is one place where it is thinner and your screw will need to be sanded down, as per the following picture:



Final result:



Drilling and Tapping Remington 870 Receiver (Video):

<https://www.youtube.com/watch?v=gU3dBpKesQw>

## ***Painting Remington 870 Shotgun with Gun Kote***

This is step by step instructions on how to paint your Remington 870 using Gun Kote:

### **1. Disassemble your Remington 870 shotgun.**



### **2. Protect internal surfaces of the magazine tube, magazine extension and barrel using plugs.**

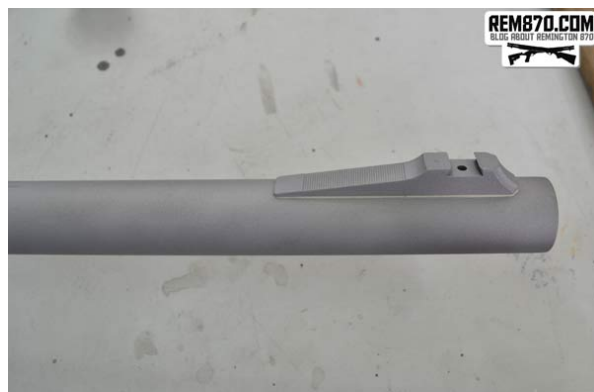




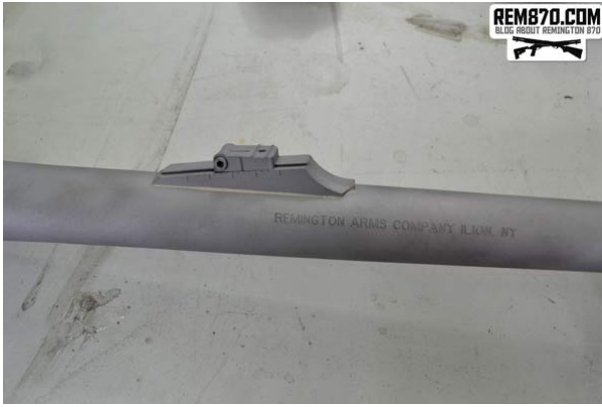
### 3. Remove sights.



**4. Remove old coating using sandblasting.** Here's how your Remington 870 parts are going to look after sandblasting.







**5. Degrease parts and put into the oven for 30 minutes.**



**6. Let them cool.**



**7. Degrease parts one more time before painting.**





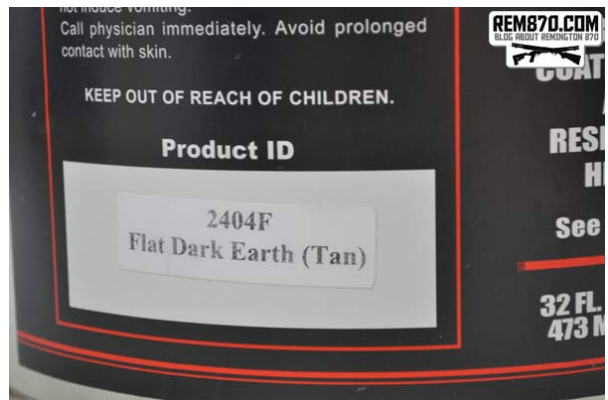
## 8. Paint stock and forend with KG Stock Kote.



## 9. Paint moving parts with KG Gear Kote.



## 10. Paint other parts with KG Gun Kote.



11. Put parts into the oven for an hour and a half.

12. Remove, let parts cool.



Final Result:





## Sear Spring Replacement



1. Compress the sear spring with your fingers or a screwdriver and remove it.

**ATTENTION: Hold it, because it will fly away!**



2. Install a new sear spring; it just snaps into place.

## ***Removal of Dimples in the Magazine Tube***

There are two known methods to remove dimples in the magazine tube:

1. Drill them out using a dremel tool.

Drill out the dimples. You will have two small holes in the magazine tube.

2. Socket method, using a 16-17mm socket:

Hammer the socket inserted in the magazine tube to press out the dimples.

The next two chapters are written by readers of the Rem870.com blog to show how they removed dimples in their magazine tube.



## ***Removal of Dimples in Magazine Tube, Method 1***

***Many thanks to Theodore from Greece for his instructions and photos.***



This is Theodore, and after following your holiday poll on shotgun gift ideas, I too decided to buy myself one of the most sought after shotgun X-mas presents: a +2 Rounds Magazine Extension. Being loyal to the Remington brand I purchased an original Remington +2 mag extension (SKU. 19420), which was in stock from my country's official Remington importer.

This is a quality extension and has a great fit, and I strongly recommend it.

The reason I was weary of installing such a product until today is because I could not find it in my heart to use a drill, dremel, or file on my gun to remove the dimples in the magazine. It gave me the impression of damaging my gun. Of course, hammering a socket inserted in the magazine tube to force out the dimples is out of the question – and should NOT be attempted. You will only damage your gun!

Reading the comments from the Rem870.com blog posts, a reader named Ken posted on November 10, 2009 an alternative “dimple curing” method, using a combination of the socket method and then a basic metal working method (such as auto body work) for a smooth final finish.

After some thought, I decided to attempt to remove the dimples from my gun without the use of a drill or dremel. I decided to modify Ken's method, and replace the hammer and socket method of the first phase of his procedure with a vise built to fit exactly around the inner (~23mm) and outer (~25.5mm) surface of the magazine. I initially wrapped a single layer of paper masking-tape around the outer front of the magazine tube to protect it from scratches. Tightening the vise initially flattened the dimples 80-90% of the way. You will be surprised at just how hard and strong the magazine tube metal is. You will need to apply as much pressure with the vise as you can, to make sure the dimples pop out as far as possible. Too much pressure is not possible – just make sure your inner and outer guides fit your magazine tube flush on both the inner and outer side.

Then I inserted an oiled socket (approximately a 23mm diameter), which fit snugly in the magazine tube, and applied a basic metal working method (such as auto body work) for a smooth final finish. Make sure you have a good handle on the socket and that you can easily remove it if required. Do NOT force or hammer the socket into the magazine tube. It should fit snugly – if not, it is the wrong size. The secret is to use a metal working hammer (soft metal and light weight) and GENTLY tap on the OUTSIDE of the tube (over dimples) until the “dimples” blend in with the rest of the tube. The use of the socket in this instance

in NOT to force out the dimples the remaining 10-20%, but to act as a counterbalance to the gentle tapping action you are going to be applying on the outer area of the dimples and to make sure that your magazine tube remains perfectly round in the process.

It really does work very well and you do get a perfectly round finish. Done properly, the magazine will retain its finish. If not, a little gun-blue will mend any markings.

The method I described above, if done properly, results in minimal modification and no damaging of the original part. However, I think that you need to feel very confident about how good of a handyman you are. If you are not, I recommend that you use the drill or dremel method instead, which quickly gets you the required result every time!

Here follows some pictures, steps, and parts required if you wish to try this out.



This is a simple 2-piece water hose connector. The reason I chose it was that it had the correct diameter required for the outer guide of my vise (~25.5mm). Copper is also a soft and easy to work with metal, that won't damage your magazine tube.

Cut it and retain the part you need. As long as you get the diameter right, use what you find.



Pictured to the left is a copper hose nozzle used to make the outer vise guide



To create the inner guide of my vise I used a spanner bolt bit that was the correct diameter (~23mm); it also acted as a socket.

After cutting it, one piece acted as the vise guide (note the one ended is grinded to allow it to fit in the magazine tube as initially the dimples will stop it from entering), and the other longer piece acts as your socket.





This is the vise I used.

You will require some nuts & bolts.



This is what you are trying to make and assemble.



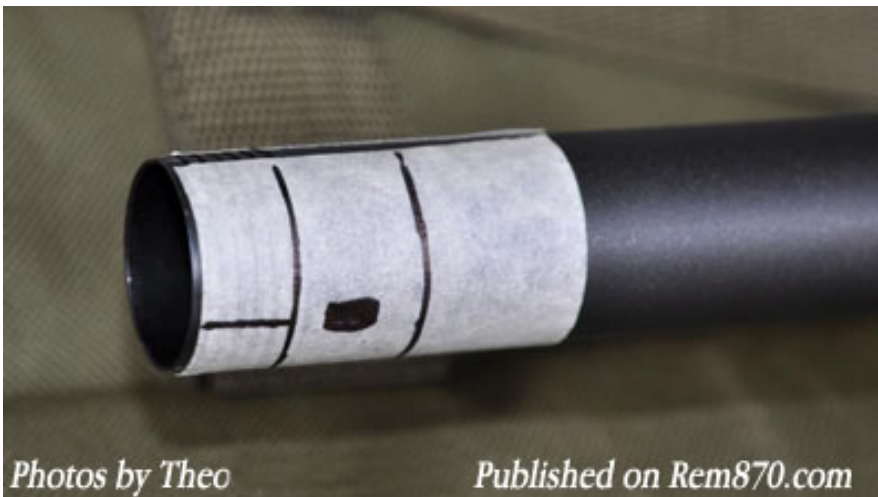
This is how you need to assemble your vise. Note the inner guide is grinded down on the bottom end so that it will initially fit into your magazine tube over dimples.

This is everything you will need to remove dimples in your Remington 870 magazine tube:



Photos by Theo

Published on Rem870.com

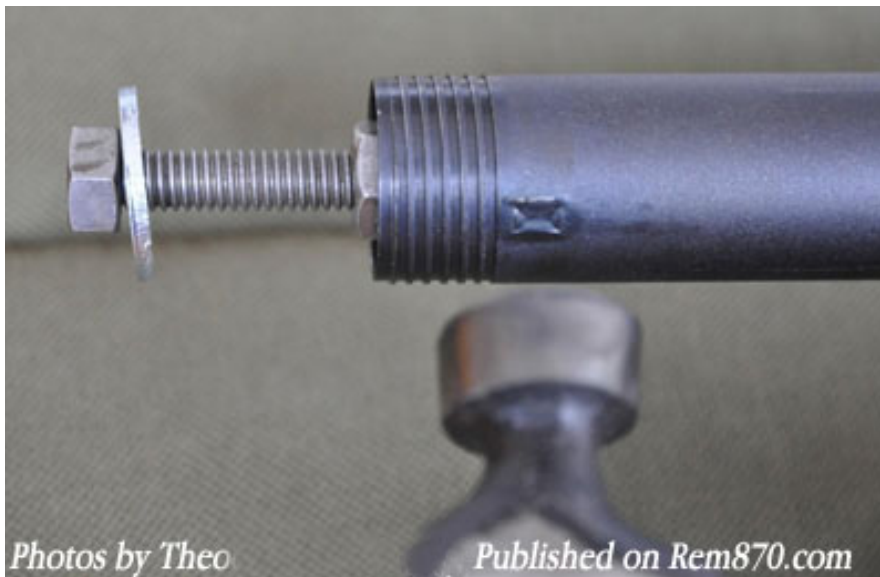


Photos by Theo

Published on Rem870.com

Prepare your magazine tube for the procedure. The paper tape protects the tube from any markings and allows for a nice tight fit – no slack. It is very important to mark the areas you are going to be working on.

Insert the vise and apply as much pressure as you can. If your inner & outer vise guides are the correct size, there is no way you can damage the tube. Be sure you carefully align the application of pressure exactly on the dimple. This should pop 80-90% of the dimple out. Apply on both dimples.

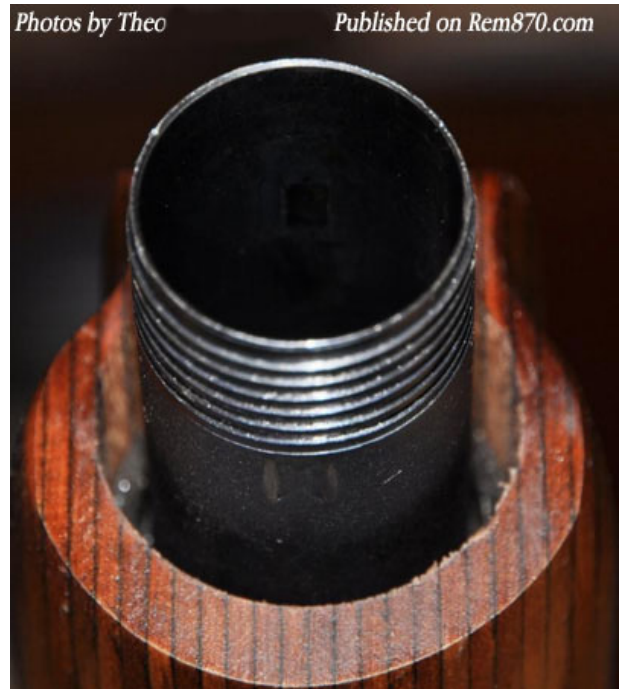


Now you can insert the socket and gently start tapping out the remaining dimple. The secret is to use a metal working hammer (soft metal and light weight).

You will end up with the dimples completely removed. If you insert your finger you will not be able to feel them at all.



Un-blued finished tube Inside (after dimple removal).



Blued finished tube Inside.

Gun Blue the area where the dimples used to be – inside & outside.

Even though the inside of the tube has no dimples, you will still be able to see a mark on the outer side of your magazine tube created by the factory punch.



To the left is the outside of a blued finished tube.



Here is the finished product. I am very happy with my Remington +2 Rounds Magazine Extension. It really looks sexy.



*Photos by Theo*

*Published on Rem870.com*

I never added the original Remington magazine clamps, as it is much easier to clean and service your weapon without it on. Furthermore, the clamp is such a tight fit that it will scar your barrel and magazine extension. The magazine extension is such a sturdy fit that you also don't need it – apart for mounting a sling. Therefore, I am planning to use a front and endplate sling mount instead (many manufactures to choose from, I'll keep you posted).

Having successfully cured my “dimple problem,” I am extremely happy with my original Remington upgrade, knowing that my magazine tube has retained its factory finish with no visible modifications.

## ***Removal of Dimples in the Magazine Tube, Method 2***

***Many thanks to Eros from Italy for his instructions and photos.***



Pictured to the left is the Remington 870 shotgun with a magazine extension



I used a 25,5 mm inner diameter cut tube in order to prevent damages to the external surface of the shell magazine tube, which is fixed to the body of the Remington 870.

After this, I took an L wrench (or tube wrench, as we call it in Italy) and smashed the dimples inside the magazine tube with a hammer.



When I tried to put the muzzle back, I realized that the magazine tube's external surface was slightly deformed. I had to press it a bit to put the gun together again easily, like before the procedure of removing the dimples.

After this experience, my advice to anyone trying to do this is that you have to be very careful and gentle with the hammer, and you will be luckier than me. At that point I used my dremel, with a tool on it, to file the excess material without creating holes in the magazine tube.



Pictured here is the removal of dimples using a dremel.

The inner surface of the magazine tube, previously worked on by the dremel, was cleaned and smothered by sandpaper, and mounted on the dremel tool.



## ***Polishing the Chamber***



Polishing the chamber on your Remington 870 is a good idea if you want to make it even more reliable. This simple, one-time procedure will make the chamber as smooth as possible and will guarantee that you will not have problems with the extraction of fired shells.

You will need a polishing compound and a dremel felt polishing wheel. Add polishing compound on the felt wheel and polish the chamber accurately. Choose a felt polishing wheel, to ensure you do not overdo this procedure.

**Video by Rem870.com:** <http://youtu.be/gumB5bAROX4>

## ***Changing the Ejector Spring***



Replacement of the Remington 870 ejector spring is easy if you have an ejector spring rivet cutter. You just need to complete the following steps:

1. Use the hollow-end ejector spring rivet cutter to cut off the head of the front rivet.
2. Check the rivet after several revolutions.
3. Remove the broken ejector spring and clean the ejector.
4. Insert the new ejector spring and re-peen the existing rivet.
5. Repeat the re-peening as needed.
6. Check how the shotgun works using dummy shells.

This process is fast if you can re-peen the existing front rivet; if not, you will need to have more tools and will have to spend more time and effort to remove the old rivet completely to use the new one.

Re-peening should be done using small punches or punches from the Brownells Remington 870 Rivet Staking Tool Set.

**Video by Rem870.com:** <http://youtu.be/bdA1tFQpJRo>

## ***How to Install Ghost Ring Sights (Drilling and Tapping)***

***Special thanks for this instruction to Eros from Italy.***

Ghost ring sights that require drilling and tapping are rather hard to install the first time around. These instructions will help you during installation.



The track-lock tritium combat sights kit from Wilson Combat contains a little plastic bag of epoxy glue for the front sight, two 6/40 inch screws for the receiver (you need to tap and drill the receiver completely), and the allen wrench to fix them; there is no pin to cross-pin the front sight.

If you would like to mount the front sight with a pin, you will need an extra 2mm pin that you will have to buy yourself.



I drilled the front pedestal where the bead was placed (after removing it completely), and the front sight (2mm hole). Then I degreased and grinded the surface of the pedestal. I mixed the Loctite FixMaster (1 part hardener and 4 parts resin), and then put all parts together and cross pinned the front sight.

The picture to the left shows a front sight drilling preparation (bead removed).



© Photo by Eros, Published on Rem870.com

The picture to the left shows front sight drilling.



© Photo by Eros, Published on Rem870.com

To the left we can see Beading removed with the front sight drilled.



At this point the process isn't as simple as it seems; you will need patience to complete the job. This is a difficult, precise task, and you may experience some trouble working on a modification like this one. You must plan the process carefully.



Here we see receiver drilling.



This shows the final drilled receiver.

I have broken a tap (6/40 of inch UNF tap that is used for Scattergun rear sight) inside the hole on the Remington 870 receiver (about a 2.7 mm hole on the rear sight mounting  
Remington 870 Shotgun Guide from Rem870.com, version: 2015-final

point). The Remington 870 receiver it is machined from a thick and strong steel block. You'll need a good drill and a drill press to work with this, and a good 6/40 inch tap. This will be a major help; trust me!

Another problem I experienced was that the glue inside the Scattergun sights kit was unusable because it was damaged. I asked for some help via email from Wilson Combat, and they replied to me promptly. Wilson Combat said that if I hadn't been located in Italy they could send me another glue kit for free, but due to my country's restriction they couldn't. They helped me find a replacement for the epoxy and we discovered that the Loctite FixMaster is similar and works perfectly. It is a good replacement of epoxy if you find yourself in this situation.



To the left we can see receiver tapping.

© Photo by Eros, Published on Rem870.com



More receiver tapping.



A rear sight installation.



© Photo by Eros, Published on Rem870.com

When you reach the end of this process, your final results will be well worth your time.

## ***How to Restore a Shotgun (Rust Bluing)***

***Special thanks for this instruction to Rich Lynch from New Zealand.***

“Brilliant. I’ve just bought 3 kilograms of rust, with a lump of wood on the end,” I said to myself as I opened up the bundle that’d just been handed to me, wrapped up in an old dirty bathroom towel.



I’d been keeping an eye out for a restoration project for myself for a while now, and when I was offered a 1954 Remington 870 WingMaster for next to nothing, I had jumped at the chance. It was sold as “old, beaten up, put away wet, and rusted to hell.” That sounded a little like me after a heavy night on the town, but for its price, I was keen to give it a go.



As I opened up the gently clanking package I was really rather shocked. I'm the first to admit that I'm a little strict about my gun cleanliness, and what I was presented with almost made me sob. All I could see was rust. Reddish-brown, rust-pitted metal.



My first job was to take the parts down to bare metal to see how bad it was. A 30 minute soak in a tub of malt vinegar, followed by a scrub with a wire brush, repeated as necessary, took the rust off in no time. It literally fell away from the gun, leaving a clean grey metal. A little pitted, but evenly so, giving the surface a not unpleasant texture. I then rinsed it off with water, and let it dry in front of the fire. Then I prepped the metalwork with 400 grit wet & dry paper.

Next, re-bluing. Yes, I know that there are a lot of great methods out there for coating your gun in this day and age. Hot-Bluing dip, baked-on-Duracoat, and various milspec coatings, but these methods just didn't seem right for this piece. I looked into the age old method of rust-bluing. Not to be confused with the modern methods of bluing metal that a lot of

gunsmiths use these days, this was the 'original' method of bluing and browning guns throughout the centuries. It's described as taking a lot longer and being much trickier than the new types of bluing, but the finish was prettier, and if done properly it would last a lot longer. The idea of 'protecting my shotgun from rust, by using a layer of rust' was a rather interesting one.

There are plenty of products available for Rust Bluing: Brownells Classic Rust Blue, Pilkington Classic American Rust Blue, and Laurel Mountain Forge: Barrel Brown and Degreaser are a few of the better selling ones available in the United States. To begin, you wipe a thin film of the acid-mixture onto the metal work, and actually encourage the rust crystals to form by putting it somewhere moist. Shower rooms full of steam are a quick and lazy way to do this if you want to speed this step up, just be careful not to over do it. Yes, you're purposely rusting your own gun; it's gives you a strange, nervous feeling deep down in the pit of your stomach. What you're trying to achieve is near 95% surface rust. Any more and you risk the rust going too deep into the metal. Once this thin surface layer has formed, you then boil the metal part for 10-20 minutes in distilled water or rainwater. This will convert the rust to a black rust or 'ferro-ferric oxide'. A lot of town tap-water will not have a good conversion effect. Latex gloves are a must – grease from fingerprints on the metal will not help rust to form, and I have a healthy paranoia about what may be used in rusting solution.



Finding a container big enough to boil a gun barrel isn't an easy task, and walking into your local restaurant and asking them if they'd mind you using their kitchen to boil your shotgun isn't likely to be met with much understanding. Luckily though, pouring boiling water over the parts in a tub is enough. 10 minutes of pouring a repeatedly boiling kettle and 3 pans of water over the metal resulted in a deep black color. 'Carding' the surface smooth with 0000 wire wool then takes off any excess, and smoothes out the finish. Wipe

the parts down with nail polish remover to remove dust and any grease, and repeat the Acid-Solution-Rust-Boil-Card cycle. Care must be taken when re-applying the solution as it will actually strip off some of blue that you just carefully put onto the metal if you wipe over a patch you've already wetted. Use smooth, single wipes with a cotton bud, and don't be tempted to go back for any small spots you've missed – you'll get them in the next coat.

In each cycle, the color of the bluing will get darker and deeper. Different metals will react differently of course – the old soft shotgun metal on this WingMaster only took 5 cycles before it was noticeable that it was very reluctant to form any more surface rust. I've been told harder steel may take up to 8 cycles. If your gun refuses to rust when coated in acid, that's a pretty good indicator that you're headed in the right direction. A long soak in hot water and baking soda to neutralize any acid and stop further rusting is the final step to this stage.



The final stage is oiling. Apply a very generous amount of Boiled Linseed Oil (great for wooden stocks as well) onto the metalwork with a rag, and let it sit for a few hours before wiping it down well. The residue should then be baked into the metal – 150 °C for an hour. Once cooled and wiped down, do the same with mineral oil, 120 °C for an hour. A big gas BBQ with a temp gauge worked perfectly for this, although a larger kitchen cooker would be fine. **Note:** It is vital to ensure that your wife is out for the day before attempting this, otherwise you risk unwelcome side effects.

The finish came out a very even, deep black. When out in the sun, there's a slight blue tint, which adds a depth to the finish. To go with its new coloring, I bought a new stock from Remington, along with a new sight-bead. The trigger guard polished up to a dull silver.



And that is how to classically rust blue a shotgun, with a baked in oil finish. A regular wipe down with your favorite gun oil will be enough to keep it looking good for decades to come.



## ***Shortening Shotgun Barrel, Finishing Muzzle***

***Special thanks for this instruction to David from Springfield, Illinois.***

I needed to shorten the 28" barrel to 18-20". I marked and sawed off the barrel, at 20", using a hacksaw. I squared up the muzzle, using a table belt-sander, which left the muzzle fairly rough, with deep scratches.



I thought that you might be interested in seeing some photos of the finishing of the muzzle, to smooth and crown the muzzle.

I used "sanding sponges," cheaply available from Harbor Freight (medium grit, equivalent to 100-150 grit.) Because of the soft, flexible backing provided by the sponge, I could press the muzzle into the foam, while spinning the barrel, producing a smooth, crowned muzzle shape. The photos depict the progression.





Photo by David Price, Published on Rem870.com



Photo by David Price, Published on Rem870.com

I used a Scotch green sanding pad, of finer grit, to gently remove any remaining fine scratches, and produce a more-polished finish.

Very easy to produce professional results, in my workshop. I wouldn't hesitate to recommend this finishing method to your readers.

## **Bonuses**

### ***Common Firearms acronyms***

FTE – Failure to Extract (Fired Shell)

LOP – Length of Pull

CQB – Close Quarter Battle

CQC – Close Quarter Combat

SD – Self Defense

CYL – Cylinder

IMP CYL – Improved Cylinder

VCS – Vang Comp Systems

HD - Home Defense

SBS - Short Barrel Shotgun

M - Magnum

WTB - Want to Buy

KISS - Keep it Simple Stupid

PGO - Pistol Grip Only

SXS - Side by Side

NIB - New in Box

BBL - Barrel

FFL - Federal Firearms License

O/U - Over and Under

QD - Quick Detachable

VR - Ventilated Rib

SHTF - Shit Hits The Fan

## ***Range Bag Checklist***

### **Must Have**

Gun  
Ammunition  
  
Eye protection  
Ear protection  
Magazines  
Documents  
First aid kit  
Keys for cases, trigger locks  
Holster, gun belt  
Shooting gloves

### **Good to have:**

Binoculars or spotting scope  
Shooting journal, pen  
Timer  
Open chamber flag  
Staple gun and staples  
Targets  
Extra batteries  
Magazine loader

### **Recommended:**

Clothes to keep you warm and dry or protect from sun  
Water and food  
Burn cream in summer, warm packs in winter.  
Insect repellents

### **Additional**

Tools  
Field repair kit with spare parts  
Cleaning kit

## ***Interview with Massad Ayoob***



**Rem870.com:** What do you think about the Remington 870 shotgun?

**Massad Ayoob:** Excellent gun, time-proven for some 60 years. The most popular shotgun in the American police armory. At the top of my recommended list for 12-gauge pumps.

**Rem870.com:** What advice would you give for shooting faster and more accurately?

**Massad Ayoob:** I recommend a very aggressive stance, shoulders well forward of hips, forward elbows pointed down (strengthens arm for holding gun on target and operating slides alike). Forward leg bent at the knee to better support body weight, and rear leg “digging” into ground, its knee slightly flexed, to drive the whole body against the recoil and bring the gun back on target more quickly. Lots of practice, vigorously and reflexively racking the slide.

**Rem870.com:** What do you think about the use of a shotgun for home defense?

**Massad Ayoob:** Excellent in the role of “artillery” once a family has been gathered in one spot. If the user has to move to gather up children, go to the front door, etc., I recommend a handgun instead of shotgun.

**Rem870.com:** What accessories or modifications do you recommend?

**Massad Ayoob:** Ghost ring sights if slugs are to be used at intermediate to long distances. Certainly a Sorbothane recoil pad. Extended magazine. Side saddle shell carrier. For vehicle carry, folding stocks make sense.

**Rem870.com:** When to use?

**Massad Ayoob:** As noted above, the shotgun comes into its own in an ensconced home defense situation. When one hand has to be operating lights, coordinating a telephone, etc., I would recommend the handgun instead.



**Rem870.com:** What drills would you recommend?

**Massad Ayoob:** Police type qualification shoots. Rapid fire drills, trying for five hits in two seconds from seven yards. Multiple target drills; bowling pin matches are fun and useful for this.

**Rem870.com:** Any other self-defense advices?

**Massad Ayoob:** Only staying familiar with self-defense law, getting training, and maintaining familiarity with the weapon.

## *Interview with Brian Hoffner*



**Rem870.com:** Readers of the Rem870.com blog are owners of Remington 870 shotguns. Brian, what do you think about this shotgun?

**Brian Hoffner:** The Remington 870 is my choice of pump shotgun. It is well-built, and proven dependable through nearly a century of law enforcement and military use. It is a compatible sister weapon to my Benelli M1/2, because the forend release is in the same location as the shell release on the Benelli.

The safety is the same location and configuration as both, therefore; the indexes and reactive skills are the same. I can count on the 870 to work when I need it. It is a great defensive weapon and is my choice of pump shotgun. This is a weapon that, in my training program, you can learn to hit the target from 15 yards and closer with five shots in less than 2 seconds. Consider every shot firing nine 32 caliber pellets, that's 45 hits in less than 2 seconds. Impossible to do with any other weapon system at that distance.

**Rem870.com:** What type of shotgun ammunition would you prefer in a home defense situation?

**Brian Hoffner:** It is important that you included the word "situation" in your question, as home defense is indeed situational. If there are children in the home bird shot would be highly recommended. Birdshot does not have the level of penetration as buckshot, but will make a mass of flesh and bone at close range.

Angles of fire, where children's beds are positioned, and how the family is trained are all factors to consider. If there are no children in the home, then buckshot would be a good choice as long as your spouse is in a safe place.

**Rem870.com:** What dry fire drills do you recommend to do at home?

**Brian Hoffner:** Two things are very important when dry firing. First, make sure both the chamber and magazine tube are unloaded each and every time you touch the gun. Never take safety for granted. The same safety rules for pressing the trigger in live fire are applied to dry fire. Do not press the trigger in dry fire without having sights on the target you've decided to hit. Otherwise, we can create an arbitrary trigger press in our reactive mind. Dry fire is extremely important. Proper manipulation and rhythm are learned with good dry fire disciplines.

**Rem870.com:** Could you please describe several common mistakes of beginners that have just started to use a shotgun?

**Brian Hoffner:** It is important to operate this shotgun both with dry and live fire properly from the get-go. If not, we reinforce bad and potentially unsafe habits. Like all other shotguns, the 870 is built with a safety. Beginners tend to disregard the safety and not train with it. The manufacturers put the safety on the shotgun for one reason only: safety. If you choose not to use the safety, not to train using the safety, and something bad happens, you will likely not be able to pursue legal action. The manufacturers will show up in court with their high-powered attorneys, and will explain why the safety is on the gun, and you will lose.

More importantly, if you do not practice utilizing the safety and indexing the safety, you are training to fail. Indexing the safety with your finger keeps your eyes on the scan while feeling that the safety is on and buttons or gear will not discharge the trigger from the rear. At the same time we are prepared to knock off the safety on presentation of threat, and ensure that the gun will not fire if we don't want it to.

Another common mistake is improper body indexing. New shooters tend to put the stock of the shotgun on the shoulder. The rotator cuff has a high level of nerves that pass over it. When you pound those nerves with the shotgun it is very painful and shooters have an unpleasant experience. Instead it is important to learn the proper body index that allows the stock to plant in the pocket as the shoulder wraps around to hold it in place. This provides a relatively painless experience while shooting, and at the same time creates an extremely effective fighting platform. Beginners must practice the proper indexes, and manipulations from the very beginning to get very good at creating less pain for themselves. At Hoffner's Training Academy, we take the time to ensure a positive shooting experience for all shooters.



**Rem870.com:** What shotgun(s) do you own? Which is your favorite one?

**Brian Hoffner:** I own many firearms, including many shotguns, but I only operate using one of two shotguns: either the 870 or the Benneli M1/M2. Because of the common manipulation features it is easy for me to go from one to the other. My primary gun is my 870. I keep it with me, ready to go at all times. It is my home gun and my car gun, secured in my vehicle in vehicle mode, and ready at home in vehicle mode as well.

**Rem870.com:** How can a shooters test their skills? Could you recommend any tests?

**Brian Hoffner:** A shooter should be very comfortable, smooth, and confident with dry fire before moving on to live fire. This is true with every drill. Because the shot round allows the shooter to hit with a pattern spread, a target at 15 yards is much easier to hit with a shot round versus a single projectile.

A shooter should work on presentation from low ready with the safety engaged, finger indexed on the safety, and muzzle lowered slightly. On presentation the shooter should combine movements to economize motion so that the sight is on, the cheek is weld, slack is up, and muscles are engaged, all in the same micro-moment. All that is left to do is hammer the trigger. But we are not done. The bad guy decides whether we have to shoot again or not; therefore, we must follow through at maximum speed to a second "sights-on, slack up." No drill is completed successfully without the hit and second sight. As simple as it may seem, a one-shot drill is critical to practice properly.



Once we have reached consistency, we may then start timing ourselves. The test time on this drill is one second, which is quite simple. The target time for this drill is a half second. With practice, a half second hit at 15 yards is no problem. Remember that you are potentially hitting with nine shots at the same time versus trying to hit the target with just one bullet from your peashooter.

Once mastered, the shooter should work on a five shot drill. This drill will tell the story: the shooter is either able to hold body index to control the shotgun and keep it in the fight, or the shotgun will rule the shooter and send the shooter to another zip code. The key here is to learn how to keep the body index, our foundation, in the fight, so the shotgun also remains in the fight.

Once learned we can start applying time to the drill. Remember that we start the drill in low ready, with the safety on and indexed. It won't be long before you are achieving times of less than 3 seconds for 5 shots. Shoot for consistency under 2.5 seconds, and then under 2 seconds. It's now that you are becoming one bad dude or dudette, and having fun.

At Hoffner's Training Academy, we are passionate about building sheepdog warriors. We train with hands, knife, pistol, rifle, and shotgun. I believe we have the best system in the world for learning these weapons to defend self and family. We offer a full schedule of

training in Houston, and we travel to other venues as well. I am very passionate about the shotgun because it is so effective and versatile. The Remington 870 is the workhorse for fighting, and is unmatched by any other small arms, close quarters, or battle weapon.

**Rem870.com:** Are 3-Gun and IPSC competitions useful for shooters?

**Brian Hoffner:** Competition shooting is useful for operators primarily because it provides stress inoculation and repetition. It is important that the shooter maintains the proper disciplines while shooting these matches, understanding that there may be rules that do not comply with proper tactics but must be enforced.

Life is a Battle, train to win,  
fight with a vengeance, never quit.



**DOMINATE LIFE**  
  
Hoffners Training Academy

**Rem870.com:** What tactics would you recommend to use in a home defense situation?

**Brian Hoffner:** First of all, my wife is a disciple of all my training. When searching or defending the home, she has my back. Home defense is a family affair. Children need to know how to react, where to go, and what to do. As they grow older their roles will change.

As for the operator of the home defense shotgun, they must learn good search tactics, such as slicing the pie and threshold evaluation while using strobe and search lowlight techniques. Because of extreme close quarters and tight situations, a high underarm mount may be required to utilize these techniques while keeping the shotgun leveled at the search area and potential threat. Again, training is paramount to properly defend the home and family with a shotgun.

**Rem870.com:** How important is a flashlight on a home defense shotgun?

**Brian Hoffner:** As I mentioned earlier, the light on a defensive long gun is very important. You must be able to search at night and see the dark holes, while having the shotgun at ready. I teach ways to do this with a hand-held flashlight, but ultimately a weapon mounted light is more effective.



**Rem870.com:** Brian, you have several shotgun courses available. What course would you recommend to a beginner? And which one for a skilled shooter?

**Brian Hoffner:** Though I have several shotgun classes in my training academy, I start all shooters with a tactical shotgun one. This is the foundation of my shotgun training. Everyone must learn (and in many cases relearn) the proper indexes, manipulations, presentations, and follow-throughs, all while operating within the fight cycle.

This means scanning for the threat, finding the threat, stopping the threat, and finding the next one. There is a lot of work to be done in the first level, and this is done in a static fight cycle. I am careful not to put the cart before the horse.

During the first level the student learns how to coach themselves through dry practice and live fire to master skills, and create a strong foundation. We then move on to the next level, which includes the tactics of movement, alternative positions, use of cover, selecting slugs, and more. My system of learning and operating provides a high level of structure presented in a logical manner, which assures a positive learning curve to provide a level of skill, ability, and confidence unmatched by any other training program.

## *Interview with Peyton Quinn*



**Rem870.com:** Peyton, I really like approach and professionalism of your Rocky Mountain Combat Applications Training school. Could you tell how it is different from other self-defense and firearms schools?

**Peyton Quinn:** All RMCAT training is based on the key concept of “Adrenal Stress Conditioning Through Scenario Based Training.” This means that the attendants of our classes are placed in scenarios so real that ‘physiologically’ it will elicit the full adrenal rush in them that an actual ‘life and death’ situation does.

In this way they learn to deal with the ‘adrenal dump’ effectively rather than being impaired or ‘frozen up’ by it.

After just a few such scenarios, and often in the very first one, the student immediately discovers the real problem in using a gun or even their bare hands effectively in a self-defense situation. And that it is not what they imagined it was before at all. They discover that it the ‘adrenal dump’ is the real problem and not ‘marksmanship’, ‘accuracy’, their weapon or the accessories on it, their load or anything else.

They experience for themselves that when the adrenal dump hits them:1. They lose fine motor control and are suddenly very ‘clumsy’ and may fail to operate the weapon properly.

2. Their hearing shuts off or very nearly so.

3. They see everything as if looking through a ‘long tunnel’, this is called ‘tunnel vision’.

4. They just can’t make decisions easily or quickly and yet time seems to move in slow motion.

Now these ‘performance negative’ adrenal affects will occur with anybody whose amygdalate (the lower non-self aware part of the brain) has been triggered and then causes the release the adrenal complex.

This adrenal release is not a ‘voluntary’ phenomenon at all either. The adrenal dump is not anymore a ‘voluntary action’ than your ‘heart beating’ is a voluntary action or the fact that you ‘bleed when you are cut’ is a voluntary action. The adrenal dump should not be confused with fear either. It needs to be truly and properly understood or you have left yourself tactically and fundamentally unprepared for a real life self-defense encounter.

On the other hand, the adrenal dump can actually serve a good survival purpose for us once we learn to manage it. Indeed, it has been of great survival value for our species for hundreds or thousands of years and that is why we all have it ‘hard-wired’ into us and is involuntary too.

But since most people have never been in a 'life and death' situation they are most often overcome by the unfamiliar and disorienting adrenal dump, that is rather than being able to make use its great life saving power.

My guess is that an automobile accident is the most common 'adrenal dump' experience that perhaps most people can relate too.



If you have been in such an accident can you remember how things seemed to move in "slow motion"? But can also you recall your hearing shutting down too? Did it not all seem somewhat 'unreal'? Understand that this is what will happen to you under the life threatening circumstances of an assault too.

OK though, the good news is that since we are indeed dealing with 'involuntary actions' with the adrenal dump, a properly constructed and executed scenario can engage (and with about 99% reliability) that full adrenal dump in anyone. We have been doing this at RMCAT for almost 25 years now so I know I can make that statement with the highest level of confidence. Since we can elicit this biochemistry try in training, we can also learn to handle it effectively through such training as long as that training truly does engage that adrenal rush in us.

The hard fact is that the adrenal rush and how you are able to both handle it and use it in a crisis will be the most decisive element in the outcome of any self-defense or combat situation. This is exactly why learning to perform correctly 'the skill set' needed in a self-defense situation in an 'adrenal stress driven scenario' has proven itself the most effective way to train for the 'real thing'.



How you handle the adrenal dump will almost directly depend upon your previous experience with it. That previous experience can occur in 'real combat' or in a correctly conducted 'scenario base training'.

The biochemistry is the same really in either case, that is a real assault or one that your lower brain has determined is an actual assault as the 'body does not know the difference'.

In a correctly executed 'scenario based training' that adrenal reaction will reliably occur because it is involuntary and thus it can be elicited by the visual and auditory elements of that scenario.

Then, you can experience it and learn to perform correctly in that biochemical environment and in that mental state.

However, 'target shooting' or even target shooting competition' or 'traditional martial arts' instruction can not train one to deal properly with that adrenal dump because that adrenal rush simply does not occur during such training. A person can be fast and accurate on the range or in competition; he or she may be a good 'fighter' in the tournament ring, but neither of those skills will necessarily transfer over to an actual attack and the accompanying adrenal rush of same.

Now this is not to say that such training as martial arts or target shooting has no value, it does have value. It is simply that such training is missing this essential adrenal stress conditioning component and is thus, by itself alone, critically incomplete preparation for a real encounter.

**Rem870.com:** You teach your students both aimed and intuitive fire. What is the difference? When to use aimed fire and when to use intuitive fire?

**Peyton Quinn:** This is a very good question and I want the readers to really 'get this' too. Most of our firearms scenarios are done in low light since most actual 'shooting incidents' occur in low light. In the final set of scenarios they have real guns firing low velocity soft rubber bullets at the instructors who might be shooting back or attacking with clubs or edged weapons.

Using the low velocity rubber bullets from real guns we always know when and where we are hit in a scenario and we respond accordingly. If we are hit in a leg we might fall but we also may keep shooting from the ground too. If we are hit in the non-gun arm we react but we might still keep firing.

The instructors use 'Hollywood blank gun's only. But they are very loud and very real as the student sees the muzzle flash and hears the report just as if he or she was being fired on. This is very important too and here is why.

If someone is trying to kill you, be it with a gun, hatchet or whatever, your brain will not allow you to look at anything but the threat itself and you will have tunnel vision too.

Everyone who takes then course, no mater what they think or believe when they first come in here about 'aimed fire' vs. 'point shooting' discovers they can't use the sights of the pistol or shotgun when under the stress of the scenarios. They can only keep both eyes wide open and on the attacker and not on any weapons sights at all.

They often say to me "Dam, I wasn't even conscious the gun had sights on it... it just did not occur to me". This is all just human physiology really.

After 23 years of doing this training there have been so many students discover this and some of them arrive here as totally dedicated 'aimed fire only' thinkers, and many have taken courses very large and celebrated 'aimed fire only' training schools too where "point shooting" is considered 'strictly taboo', and "blasphemy" and useless and even 'dangerous'.

But there has yet to be even one exception in those two decades plus of any attendant here that that was able to use aimed fire, or the sights at all in the main, low light adrenal stress driven gun scenarios.

So it is not just my academic study of human physiology that tells me that you need to develop confidence in your 'point shooting skills'. The fact is that 'point shooting' is likely all you will ever have in a crisis.

Most real shooting happen at every closer range too as in 5 feet or so. But after we run them through the point shooting drill sequences everyone can draw and fire in low light and not use the sights or pause even an instant to do so and still hit center of mass on a moving attacker with the handgun out to 25 feet or so. And I mean everyone.

This is partly through using the 'tunnel vision' affect that the adrenal rush of the scenario elicits too.

## AIMED FIRE HAS A PLACE TOO AND MUST ALSO BE MASTERED

Now does aimed fire have a place? Yes, of course it does and that place is precisely when you are able to use it too. And that is when you are not under the direct threat of death yourself but you must kill someone who is threatening to or actually killing others.

Now since you have an obligation to not hit bystanders so you have an obligation to aim your shoots too. We do 'hostage' and 'mad gunman in a public place' scenarios too.

In the hostage scenario, such as the home invader has a knife or gun to your wife's throat demanding you drop you weapon, people can often aim their shots since they are not under the threat. We work through an 'opening negotiation' moment and 'plea' to engage the higher brain centers of the hostage takers and simultaneously we move to shoot him in the head with aimed fire.

When the 'Madman Gunman' suddenly appears shooting all the students at random who maybe sitting in chairs for example, then the video shows pretty much that if the 'madman'

is not shooting directly at the student who draws and kills him, then aimed fire is used or partially used. But if the 'Mad Gunman' is shooting at the student too or about to shoot him then 'point shooting' is all we see from the student.



**Rem870.com:** I know that you teach your students to deal with adrenal stress. Why is it important? How it is done? Do you have any special drills?

**Peyton Quinn:** Well, it is thing to be able to punch neat holes in a paper target on the range or blast clay pigeons out of the sky or throw or 'submit' your martial arts opponent in a match.

But these things do not really prepare one very well at all for facing a real human being who is attacking or moving to attack you. That hostile human being may be talking 'at you', maybe threatening or acting like an EDP (emotionally disturbed person) or maybe he is distracting you for an accomplice's blindside attack, etc.

Mr. Vitaly you mentioned to me how much just the "performance stress' on targets in competition' negatively affected so many otherwise good shooters that you have observed. Please consider that this is nothing but 'performance stress' too and where there is nothing on the line but the 'match' and maybe some 'ego and pride'.

Now I ask you to imagine that level of stress jacked up 100 times and that's' what its like when its real and its a another human being about to kill you. This is why we do not have the people who come to train with us just shoot at paper targets. They shoot at real people, with real guns, under real adrenal stress just not using real and lethal ammunition of course.

For example, they are given a scenario like this: “You are going home from work and you blow a tire, you discover you don’t have a spare and can’t fix it there. But you know or think you remember that there is a gas station a mile and half down the road. You also know this is not a neighborhood you would ordinarily want to be ‘on foot’ in. Your possession of the gun is lawful, but you will have to justify any display or use of the weapon ‘at law’ based on the previous case studies we examined discussed” Then anything might happen, the student can’t know what the scenario will be. He or she does not even know if the circumstances will develop where they are lawfully justified in even displaying their gun much less using it.

What so many people fail to appreciate is that the to even display your weapon as a deterrent are only a small fraction away from the same circumstances that would make it lawful for you to fire that weapon and shoot and kill. That is a very, very challenging decision to make and execute under stress, especially without any real training and range training or ‘competitive shooting’ isn’t going to help there at all is it?



I can tell you that there are people in prison now who never fired a shot but are serving hard time because they did not appreciate this aspect of our legal system. The charge varies from state to state and so it might be called ‘Felony Menacing’ or “Brandishing’ but it’s a felony that can send you to prison even if you never fire a shot. Even if you beat the charge in court it will cost you many thousands of dollars.

Now target shooting training or sparring in the martial arts school training alone are just not going to help you stay out of prison from a ‘choice’ you made under stress on a dark night. This is precisely why we use scenario based training. This is why we create that same biochemical state in the person being trained in the scenarios and then they must

make the decision there, under confusion and stress whether to draw, or whether to fire or not fire.

The whole idea of training is to have you rehearse what you must do in the real thing right? Well sir I have to point out that the one thing you might have to do for sure in a real home invasion or other attack is draw your gun, point it at another human being and pull the trigger and do all that under real stress.

Now you can go to the most celebrated firearms training schools in the US and guess what? Pointing a gun of any kind at another human being and pulling the trigger is something you will never practice even once at any of those schools! So can they really be said to be providing 'firearms for self-defense' training if their students do not even practice even once the thing they must do in crisis of a 'home invasion' or other such encounter?

At RMCAT training they do practice exactly that and under real stress, low light and under a lot of confusion too, such as the instructor/assailants shooting at them with blanks at the same time.

We start out with 'clearer cut' situations with most people (it depends on their experience). I mean we have people who have never handled a gun in their life in the same class as a Navy Seal or Israeli Commando sometimes. There is a very good reason for this instructionally too.

It is the same in the 'hand to hand' armored assailants course too. In the same weekend class there are people who are high ranking black belts and own a chain of karate schools and people who have had no previous self-defense or martial arts instruction at all.

This way everyone gets to see just how in just a weekend of training anybody can be made into a 'very dangerous' person to try to assault. The un-experienced get to see that 'we are all basically made of the same clay' too, in that even 'experienced' people can make similar mistakes as they did in the scenarios.

## THE TWO TYPES OF DRILLS AT RMCAT: EXPERIENTIAL and TECHNIQUE based drills

There are two types of drill we do at RMCAT. These are 1- Experiential Drills and 2- Technique Drills. An Experiential drill is designed to allow you to 'experience' and 'feel' something. A technique drill teaches you how to 'do something'.

An example of an Experiential Drill is one we call the 'Portal Of Safety Drill'. An example of a Technique Drill is one we call the 'Knife Versus Gun Drill'.

Let's start with the Portal of Safety drill which allows the student to experience the affects of how even low adrenal stress affects their hearing, peripheral vision and motor control functions. This is the lowest intensity experiential drill we do and it is often the very first drill we do too.

The student has a plastic bat, the instructor 'woofer' has a shiny, large steel Bowie knife. The student's only job is to walk from one corner of the mat to other and through the portal of safety. A distance of about 40 feet.

They are told they will encounter a person and that the person may draw a knife and try to stick them with it. They are thus to be conscious of how close they let the person come and they are not to use the bat until the 'assailant' displays the bowie knife.

But when he does draw the knife then they are to shout as they strike the knifer with the bat with full force. Then they are to get past the knifer and pass through the two orange safety cones (the Portal of Safety) but they should never turn their back on the knifer even after he is beaten down with the bat.

It is such a simple drill and yet most everyone engages some or all of the adrenal affects listed before. Then it all starts to become 'real to them'. This is the way we instruct mostly too, we might tell them, but mostly we let them experience and discover these truths for themselves. By this I mean things like that their hearing is 'shut off' or very much impaired in the portal of safety drill, such that even though the rest of the class is shouting 'hit him! hit him' very loudly, they do not hear this as a rule.

Many times they are so 'tunneled into the face' of the knifer who maybe acting like an EDP or is threatening them verbally and graphically and so realistically that they do not even notice him pull out the giant bowie knife at first. Then when they do see it and swing the bat at the knifer's hand many shots miss the knifer all together.

Everyone is videotaped and then we watch that video. Many people then realize that they have only very 'sketchy memories' of what even happened in their scenario. Some discover they have false memories too.

They may see the knifer pull the knife on the tape but then they do not immediately respond. They see themselves miss the knife with the long giant bat when they do respond and they see themselves turn their back and run through the portal of safety. But they do not have any clear memory of doing these things really.

Now they see and understand what we are talking about is real, that it can happen to them and it is the problem they need to overcome to be prepared for an emergency situation. Nobody looks for the solution to a problem until and unless they realize that problem exists. That is the purpose of this experiential drill.

Now let's look at the "Gun vs. Knife" drill. While this is primarily a 'Technique Drill' that teaches them how to avoid being stuck with a knife wielded by a madman, it has an Experiential Drill sub-component too.

In this drill the student has a pistol in a non-concealed carry holster, very close to 'quick draw cowboy' holster. I often use a revolver here, a Smith & Wesson 586 with a 4 inch barrel. There is a reason for this too. Most people carry auto' these days .

So I also want them to experience as we change from revolvers to auto's in the scenarios that they are often 'unaware of the difference'. That is they are unaware if it is a revolver or auto in their hand in the later, higher adrenal stress scenarios. This is an experience that teaches something to them important in terms of 'mind set' and gives them a new 'context of thinking' in terms of weapons as tools. Again, this helps them dismiss things they 'once thought were so important' and focus on what really is 'critically important'.

Words and lectures can't do this very well, experiencing it for yourself always does it though.

In the "Gun Versus Knife Drill" the student's job is to draw and fire on the center of mass of the rushing attacker with the knife as soon as he sees that he or she is under attack. The knifer may start his attack from as far as 24 feet away.

We have been doing this drill for more than 23 years at RMCAT and only about 2 or 3 people out of 10 can manage to draw and fire on the knifer before being stabbed repeatedly with the stiff rubber knife. The knifer first starts out at distance of 23 feet away in the first drill. But after we show them the solution (the Technique), the knifer may start as close as 12 feet away.

Again part of the instructional method is that there is little or no motivation to finding a solution until you discover, and in this case 'experience' the problem. Most people think they should have no problem drawing and firing on a guy rushing them from 23 feet away but they all do, even the 2 or 3 who survive this scenario. Again we watch the video so they see their performance.

Then we teach the 'Technique' to avoid being killed by the rushing knifer. Any technique to be used in a real self-defense situation can not be physically complex or demand much if any fine motor skills as you likely won't be able to have those under adrenal stress.

Here the technique is to step off the attack line once that attack vector has been established and can't be altered. This demands no great "speed" or any fine motor control at all. What it does demand though is high brain function to allow him to 'commit to an absolute rush' then step off that attack line. I generally demonstrate this three times, once at full speed where my co-instructor tries his best to stab me. Then in a slow-motion demonstration, then full speed again.



They now see that I am not moving especially fast yet I have enough time to leisurely draw and fire on the attacker. About half of them will be able to do this just having seen it so demonstrated. The other half may take 2 or 3 more trials at it. But everyone gets it. I can't accept anything but 100% success for the people who come here to train.

This means their survival potential must be raised at least 100% in weekends training. This depends of course on where they 'start out from though'. A person who has just been target shooting or even done some competitive shooting, or a person whose only 'hand to hand' fighting training is martial arts training alone, then the challenge is not that great to raise their survival odds by 100%.

But we get some well trained and very 'real life' experienced people here too. Former elite military or other combat veterans and even Prison Guards or other LEO's. These people take a bit more to challenge of course. Yet they contribute a great deal to the class as having also 'been there and done that' too they lock onto the theme and reality of the instruction immediately. Further they can often share a story to re-enforce a point made in the instructional methodology we use. Sometimes one we ourselves were not aware of either.

So after we do the 'Gun Versus Knife Drill' we have a situational attack where 25 or 35 minutes earlier only a few would have survived, but is now fairly easily dealt with by all of them. They now see further that it is their 'mind' that is the weapon that allows and affords them the opportunity to use any other weapon: shotgun, pistol, knife, stick, bare hands etc.

If they step off the line too soon the knifer 'tracks them' and gets them. Too late and they get stuck too. They see the need to allow the adrenal rush to switch them into that a resolute



and focused and yet strangely relaxed mind to survive. Most often real combat is the same way too.

With each scenario they get another adrenal pump and they learn to handle it even better and ultimately use its speed and power to their advantage too. This is as true in the firearms course as it is in the 'hand to hand' fighting course.

**Rem870.com:** You told me that it is important to train self aware and non-self aware centers of the brain. Could you describe how they work during the combat situations?

**Peyton Quinn:** There are two theories here. One school of thought believes we can 'multi task' like a computer. I do not think this is true except for a True Master perhaps. Indeed this might be a good definition of what a True Master really is too.

What we do is switch from a high brain to the lower brain, from what is self aware to what is non self-aware. The speed or frequency that we can do that is a function of both our experience and training. Training through scenarios that elicits that adrenal reaction most quickly develops that ability to switch between these two high and low brains centers as demanded. The tactical necessity for this should be self-evident.

This is most especially true when dealing with the use of firearms where our high brain 'shoot/don't shoot' discretion must be employed in a high stress situation that tends to throw us into the lower 'frog brain'.

**Rem870.com:** Peyton, you use "repetition and drill" and scenario-based training in your school. Could you describe why scenario-based training works so well?

**Peyton Quinn:** Scenario based training is a form of "simulator training". Airline pilots must re-qualify in 'training simulators' to stay current on their pilot's license. In Desert Storm our soldiers performed with near miraculous precision and success, yet hardly any of them had been in combat before except in 'scenario based computer simulators'.

The methodology of simulator training, that is 'scenario based training' has long been proven and known to be superior to repetition training. It is just with large groups such as in a full sized military units 'repetition drill' and developing 'muscular memory' is the only practical way to train a large group both expense and time wise.

But virtually all elite, that is numerically smaller units like Navy SEALs, some Federal Marshals (Air Marshals in particular), the Israeli Massad, and virtually every small, specialized military or LEO unit is trained through scenario based and simulator methods. Its just work better as it re-creates the problems, including adrenal management, better than any other form of training.



**Rem870.com:** Peyton, you published a translation of the 15th Century Samurai Musashi's classic book "A Book of Five Rings". Could you tell what this book is about and why it is important?

**Peyton Quinn:** I think more importantly is what this 16th Century Samurai's book was about itself because it is often misunderstood in my view and widely so too.

Now many readers here may have no knowledge of Musashi, but he was a 16th Century Samurai in Japan who was victorious in more than 20 and perhaps many more individual 'duels to the death' with other samurai. He was of course never defeated. His book is a 'book of strategy' and 'how to train for victory'.

But for most people due to the English/Japanese translation where some concepts are not present in both languages, and the tendency for Musashi to speak in extended metaphors etc, his book seems somewhat 'mystical' or even in places 'incomprehensible'.

But imagine if one truly can the tremendous adrenal stress involved in facing another samurai with 3 foot razor sharp piece of steel in his hands which he has been trained to kill with since puberty or earlier.

Musashi pokes fun at other schools and their training methods because he knows from actual experience with the real thing that 'technique' with the sword in real killing is not a fraction as complex as the commercial 'sword fighting schools' in his day made it seem like.

I have studied Asian Martial arts system most of my life and I am 61 years old now. I have advanced black belts in three different Asian martial systems: Karate, Judo and Aikido and a good grounding in other systems too.

In fact I was inducted into the Black Belt Hall of Fame in 2008. But also, I was a bouncer and 'cooler' in a very wild and rough New Mexico bar in the early seventies. I know real fighting hand to hand combat, or dodging beer bottles and pool cues and the occasional blade is not nearly as complicated as martial arts makes out with its obsession on 'techniques'.

I know Asian martial arts are very much worth anyone's dedicated study for their many benefits too. I surely have received so many benefits from this training. But I do not consider Asian Martial Arts training as 'self-defense training, certainly at least not comprehensive self-defense training. Asian systems are mainly or even exclusively about physical techniques and 'technique' is only a small part of self-defense training in my view and not the most important part either.

Indeed most Asian martial arts techniques have no place or relevance or are even 'safe or possible to execute or try' in a real fight. The true problem is what Musashi's whole book is about too, and that is dealing with the adrenal stress so you can move quickly and intuitively when someone else is trying to slice and cut you down with their razor sharp Katana.

This is not widely understood at all though. Consider this statement by that grim swordsman "Think neither of victory or of yourself, but only of cutting and killing your enemy".

I have yet to see this statement explained properly to my satisfaction as to what he meant by it. It is not samurai 'machismo' it is not as some mistakenly think, about his samurai 'acceptance of death' either. Musashi was only concerned with making the opponent die.

What he means is "If you're thinking of victory or of yourself then you are in your higher self-aware mind. In this case you will have difficulty 'cutting and killing your enemy' and he may cut you down first. This is because if you are thinking of 'victory or yourself' THEN you are in your 'training and practicing. Self-Aware mind', but this is not the mind that controls and wields the sword in an actual life and death combat".

I think I can get this idea across through an example we are all familiar with. You are driving your car and a child's ball rolls in front of your car. Your foot hits the brake immediately and without self-aware thought. It is only after you have hit the brake that you are aware that you did it!

That automatic response of hitting the brake was paired with the cue of seeing the child's ball roll in front of you and made 'non-self aware' by your previous driving experience where under an adrenal dump you hit the brake in an emergency to stop the car. Now your self-aware mind is taken 'out of the decision loop'. It is automatic, much faster than if you had to 'think about hitting the brake' first before doing so.

Musashi is telling us that your sword has to move the same way, without conscious thought. Having lived through as many sword duels as he did this became very clear to him. He became like that 15% of the pilots that shoot down 85% of the enemy planes.

At RMCAT it is the adrenal stress under which the people train that makes their responses with a gun or their 'knee to an attacker's groin' or the edge of their hand to the attacker's carotid artery' automatic precisely because it was learned in an adrenal state.

Now that adrenal cues of an attack elicits the needed motor response without real self awareness 'slowing it all down'. Very much like your hitting the brake in your car when you see the cues of a collision.

**Rem870.com:** Peyton, you have several courses available in your school. Please describe them.

**Peyton Quinn:** The core course is on conflict de-escalation and avoidance and 'hand to hand' fighting. Here we use special armor that the instructors (who play the assailants) wear in the scenarios. We call it 'Predator Armor' and my associate and close friend Bill Kipp (FASTDEFENSE.COM) has trademarked it as such.

It is to learning 'hand to hand fighting' what perhaps Simunition was to firearms training years ago. But to be frank, it is even a more powerful and effective as a training method.

In martial arts you never learn to knock somebody off their feet by knocking them off their feet. You do not learn to knee somebody in the groin so hard their feet come off the ground by doing that either. Of course not as it just was not safely possible. But with Predator Armor it is safe and possible and it works amazingly well and quickly to train people to do these things effectively in a crisis and automatically too..

People learn to do these things better and faster than is otherwise possible using this training tool and the adrenal stress driven, scenario training methodology. It is just that simple on the most important level too.

I really am sincere when I say a weekend of scenario based, adrenal stress driven Armored Assailant training can make one a better real world fighter, with both the ability to strike down an attacker or drive them off, as well as to spot the potential conflict and avoid it in the first place, than even years of traditional Asian martial arts training can.

I feel a lot of firearms training has gone the way of 'Traditional Asian Martial Arts Training' too. It has become ritualized and somewhat divorced from the reality of what the person is supposed to be training for. This in what Musashi meant as well speaking of his own time and commercial fencing schools.

He saw from his real world experience that they were making something more complex out of it (using the sword in battle) than it really is and yet they were ignoring training for the real problem of adrenal stress.

Let's look at this in terms of most of today's firearms training then. How much do 'targeting shooting skills' mean in a real gunfight ?. I would say very little if any.

If the students in our gun courses can't really know if they have a revolver or auto in their hand under the adrenal stress driven scenarios at RMCAT then how important is 'trigger pull' or 'breath control in shooting to live incident? Neither is even possible or relevant really to a really using a gun to save your live or your wife or family's lives.

If virtually nobody can even use the sights of any weapon in the shooting scenarios we do here, regardless of their previous training, is it reasonable to think they could do so somehow under the stress of an actual gunfight? No, I flatly say it is not reasonable to think or expect that.

Just as most of the Asian martial arts training is based on "Tradition" so to is most (not all) civilian Firearms Training today is based on 'Tradition' for the most part. Further, just as in Asian martial arts training many of the 'techniques' of traditional Firearm training and target shooting are not relevant to an actual gunfight anyway.

Which do you think is going to be more life saving for you 1- Being able to change your auto pistol magazines very quickly? Or 2- Drawing and firing and moving and stopping the threat before you even finish one magazine?

Also can that student who has learned to the 'quick magazine change' have much hope of changing magazines fast under stress? I have seen many people actually fumble and drop their guns on the mat due to 'loss of fine motor control' here in their scenarios at least the first time out here at RMCAT.

Also a few times people have racked the slides of the shotgun, and jammed it in doing so in the scenario when on the practice range they likely had never even experienced a jam of any sort with their shotgun.

With double action revolvers I have seen people under scenario based stress somehow skip a cylinder and fire the round before and right after that loaded rubber bullet round between those other two cartridges! I have tried to make this happen deliberately and can't do it. It occurs as the person's finger goes 'spastic' and that is alone is what somehow makes it mechanically possible.



**Rem870.com:** What firearms do you use in RMCAT School?

**Peyton Quinn:** We teach the use of the revolver, semi auto pistol, pump shotgun and at times the open-bolt submachine gun. The Ak-47 is so ubiquitous around this whole planet how could we not teach how to use that weapon?

It is the 'McDonald's of assault weapons' globally speaking and its used everywhere in the world.

The M-16/AR15 family is covered as well. Military pattern weapons are easy to learn to use really as far as loading, charging and firing are concerned anyway. If you think about it military weapons really have to be. I feel it so quick and easy to teach people how to handle all basic shoulder fired and hand fired weapons that we cover most all types of firearms action types here in our Weapons Familiarization Module.

**More specifically our main weapons are :**

**HANDGUNS:** 1-SW-586 , 357 Magnum Revolver, 2- Berretta 92F, 3- 1911 .45 ACP, 4- Walthers' PPK

**ASSAULT WEAPONS:** 1-AK-47/MAK 90 2-M16/AR15

**SHOTGUNS:** 1-Remington 870 2-Mossberg 500, 3- Break open Short barreled shotgun.

## *Interview with Chris Costa*



Rem870.com: The Rem870.com blog is all about the Remington 870; Chris, what do you think about this shotgun?

Chris Costa: I like the versatility of the 870. It's an older gun but it works really well, especially when manipulating ammunition. You have the tendency to at least have one more round than you typically do with the Mossberg. And while the Mossberg is a good shotgun, I find it a little clunky.

In my opinion, the older 870s are some of the best. On those you could actually touch the trigger and pull to the rear on the pump at the exact same time, allowing you to place pressure to the rear on the pump.

You could pull the trigger, collapse the gun, and cycle the gun a little bit faster. The newer 870s don't allow you to do that. On the new 870s you have to be more limber on the pump, pull the trigger, and then cycle the gun really fast; if you don't, you lock the breach up.

The 870 is a versatile gun. When it comes to pumps, you can run low recoils, slugs, less lethal rounds, and breaching rounds as well. And, of course, since you are dealing with the pump, you can cycle it.

### **“My home defense gun is a handgun”**

**Rem870.com:** What upgrades would you recommend having on a home defense shotgun?

**Chris Costa:** Well, here is where it can get a little controversial and complicated.

My home defense gun is a handgun. It's got an X300 Surefire on it and is equipped with a DG Grip switch, which allows me to light and shoot with one hand. I also run a suppressor on it.

Imagine waking up in the middle of the night and trying to clear your house with an 18" barrel gun – that's what a shotgun is! You also need to be able to work a light on it while being stealthy and efficient.

If I wake up in the middle of the night, half naked, needing to defend my family and my home, I can shoot and employ my handgun one-handed while I grab my children and

maneuver around my house extremely quickly, all the while knowing that I have 17 rounds at my disposal. If you have to grab one of your kids because they've popped out in between you and a threat, then you're stuck trying to fire a 12 gauge one-handed; it can be done (I do it all the time in my demonstrations), but not without a lot of practice, and it's certainly not ideal.

I also believe that trying to deal with a threat that you can't see is a much greater concern than one you can see. If there's an intruder in my house that is visible, then I am actually in the process of solving that particular problem. If there's someone in my house that I can't see, that scares me much more. So imagine that you have someone in your house that you can't see, you don't have ear protection, and you don't have a suppressor and are not using a handgun (handguns naturally being quieter than a shotgun) – if you fire that shotgun it's going to be extremely loud, and you will probably lose your hearing for a few minutes. Those few minutes can be vital, because the intruder now knows where you are and you're unable to be as alert as you normally would. Having that suppressor addition is very important to me; using a handgun with a suppressor means if it fires a foot and a half from my ears, my hearing is still protected.

So to sum it up, if I clear my house during the night with a handgun, I can shoot suppressed, I can white light, I can work one-handed if I need to grab one of my kids, and if push came to shove I could pistol-punch an intruder with the muzzle of my gun. I can't do any of that with a shotgun.

When I think of my shotgun as a home defense gun, I imagine that I'm up and alert, waking around the interior of my house or outside the perimeter. I imagine my family is somewhere safe and that I don't have to worry about shielding them or grabbing them back. When I think of a 12 gauge as a home defense gun, I imagine I'm anticipating an attack and am preparing for whatever chaos may ensue.

Unfortunately, and especially in America, men have a tendency to buy their women 870 shotguns, 12 gauge shotguns, or 20 gauge – any shotgun really. And they tell them, "This is for home defense. If you rack it, you'll scare the intruder away." But, it just doesn't work that way. So now you have a woman on the phone with 911, your children behind her, and she needs to pull and manipulate a shotgun while keeping track of her family and talking to the emergency service line. It would be much easier for her to pull out a handgun with a light already integrated onto it, take cover behind the bed to protect herself and the children, and save her family.

And in regards to 'racking the pump to scare an intruder' I'm not there to scare the intruder, nor would I want my loved ones to just scare an intruder; I want to shoot the intruder. If someone steps into my home with malicious intent, they get smoked. A pump shouldn't be used to scare somebody; it should be used to show them that you mean business.

So that's how I approach the home defense role, and where I see the shotgun and handgun fitting in.

**Rem870.com:** Could you please tell us about your Shotgun Employment (SE) courses?



**Chris Costa:** In America's law enforcement you typically find favoritism towards the carbine because of its 28 round capacity. It is a gun that can be manipulated easily and reloaded very quickly.

Most officers prefer a 28 round capability, while on most shotguns the standard is 5 rounds plus maybe one in a pipe or 4 + 1 in a pipe unless you get an extended tube.

Shotguns are great, however, because they are extremely versatile tools that are very effective. The drawback to shotguns, especially the 870, is that you have to manipulate it in a very particular manner to utilize its effectiveness. The Shotgun Employment course focuses on shooting the shotgun properly, loading it, and changing the ammo from 00 buck to slugs. I pay attention to the hand movements that really bog down students, noting what actions should be taking place during every single moment when you are firing that gun. This prepares my students for when you are dealing with a pump that you have fired, teaching them how to replenish their supply immediately, working on how to be combat-ready by being as quick as possible at reloading the tube. If they need to do a slug changeover, they understand what condition their gun is in, and understand exactly what's taking place.

So yes, as far the Shotgun Employment course goes – a lot of it is hand movements and a lot of understanding mentally where your gun is at every moment in time. The shotgun is a very complicated weapon system to operate, but we break it down step by step.

### **“Center the gun up into your chest as much as possible”**

**Rem870.com:** What advice would you give to help people shoot faster and more accurately?

**Chris Costa:** Center the gun up into your chest as much as possible; don't rest it on the collarbone – that won't help you stabilize your weapon. To shoot the gun properly when it's centered up into your chest, you back the gun up and become as rigid as possible, keeping from being pushed back. Be as symmetrical to the platform as you can to help manage recoil.

On all of my guns the stock of the weapon has been chopped down, so that I only run about a 12.5 length of pull, measuring from the rear of the receiver to the end of the actual rubber. This shortens it into a configuration where I can put it as centerline as possible, helping me keep the gun on target so I can keep pulling on the trigger. If the gun goes off target you have to slow down, readjust, and then fire – this saves you precious time.

Also, it's worth noting that during my courses or when I shoot in my DVDs, every time I shoot I'm firing law enforcement rounds of 1600 feet/second slugs, or 1500/second 00 buck. I'm not going out there running birdshot; you know if we went out there and ran birdshot #7 or #8 I could actually employ the gun much faster. My whole goal is to demonstrate and teach what's very realistic.

So, if you have proper placement of the gun and a proper build on the gun, you can really work down the recoil management, which is extremely important; be as symmetrical as possible.

**Rem870.com:** Are there any drills you would recommend for shotgun owners?

**Chris Costa:** I would say if a shotgun owner actually carries a variety of 00 buck to slugs, doing slug changeovers are extremely important with the gun fully loaded. I would work on doing one to two slug changeovers and then with the gun starting off, empty the chamber (which is the way I carry my gun most of the time).

If I do carry a shotgun and I have it in my car, or if I have it in my house, the tube's loaded but the chamber is not. And that's a great way to ensure safety with your gun – I really don't want a round in a chamber unless it's go time. If something bad happens, you can always chamber a round really quickly.

Now, at the moment during which I chamber a round, the dynamic of doing a slug changeover is completely different depending on whether the chamber is empty or whether the chamber has already got a round in there. Also, whether you do it with one or two slugs is also going to make an impact. There's a lot of hand manipulation going on there, a choreography, so to speak, or a dance with your hands, that you actually have to perform so that you can really build-up an understanding of what needs to happen.

A lot of instructors will tell you that muscles have muscle memory, but the fact is muscles don't have a memory in the way we tend to think of the term. There is no brain in your muscle. However, you can compare your brain to a hard drive, and if you upload good practices into that hard drive, you should see good results from your muscles. As they say, if you put in good information, you will get out good information – if you put in shit, you get out shit.

In my opinion, the most important thing to practice with a shotgun is the manipulation of it.

**Rem870.com:** How is Costa Ludus different from other training companies?

**Chris Costa:** You know it's hard to stretch and say that one training company is grossly different than another.

There's only so many ways to clear a malfunction and there's only so many ways to speed reload a gun.

Fundamentals in trigger control, sight alignment, and picture are going to be taught by everybody across the board in pretty much the same way.

I think one of the differences that Costa Ludus brings to the table is its ability to diagnose the shooter. One of the most important aspects of what we do, at least in my opinion, is to help a person figure out what areas they need to improve on. If I'm there for three days, by the time I'm done, you know how to fix and identify your own problems. And I'm not talking machinery malfunctions – I'm talking about if you are trying to put a bullet from point A to

point B and you blow the shot. The difference between practicing on your own and not receiving any training or what other instructors teach is the fact that I am going to give you the understanding of how to make a correction, how to identify what you did was wrong. Then we'll actually solve that problem and get that bullet back on track!

The thing that a lot of people don't understand is that we will all make mistakes. I will go out and blow shots, and I will do things wrong. We're all human, right?

The difference between, say, a novice shooter and an advanced shooter, are the practices of the fundamentals that allows you to duplicate results faster and faster based your foundation and your understanding. When you understand the fundamentals, you are able to practice them more efficiently and effectively.

**Rem870.com:** Chris, tell us about other courses you offer.

**Chris Costa:** Ultimately, the basic courses are the ones I get a lot of enjoyment from. The handgun courses are great because we can carry handguns in most states legally. People carry guns on them, which means that they need to understand how to use them properly, and how to protect their families.

We teach them how to be prepared in any situation, from home invasions to being out having dinner, being at a mall, or just hanging out with friends and enjoying their time – anywhere! The handgun is probably the most practical for civilians because it's most likely the gun that they are going to shoot a target with.

I also really enjoy the Critical Infrastructure Assault course we offer – that is when I work with military and law enforcement. These courses are like playing chess for me; you don't get to play complicated games all the time, but when you do get to start taking down buildings or performing ship boarding's and taking over the vessels, it's a nice change of pace. Dealing with problems and solving them on the fly is extremely important. It's a mark of a good operator if you can process a problem and solve it extremely quickly. I enjoy being mentally tested in these situations, and helping other people improve their problem resolution reactions and skills. This course is awesome because it involves a lot of CQB, a lot of people movement, and extremely quick problem solving; I have a lot of fun.

Realistically, most of the people that I work with carry guns on them, specifically handguns. Whether you are a military professional conducting a low profile operation overseas or a security officer working close to home, your choice of weapon to carry on you is probably going to be a handgun. Your handgun is usually your first line of defense, at least until you can get to your carbine or get out of whatever situation you're in that is compromising your safety. For a police officer, for example, a handgun is typically the first line of defense chosen until they can fight their way back to something bigger, such as a shotgun. Unless they roll up on the scene knowing exactly what environment their walking into, a handgun is often their first choice.

Consistently across the board, I find that the handgun is probably one of the most utilized weapon systems because it is the most wieldable and concealable, meaning you can always carry it on you.

One of the courses that I had this year was the 7.62 Heavy Course – and that is at 400 and in. The reason why we keep it at 400 and in is because most engagements are very close. When you look at going beyond 400 yards you're getting into long range shooting, which at that point it gets little bit out of my expertise. If you're going to get into long range shooting, that's a completely different shotgun lifestyle. It involves complete devotion and understanding of shooting. I find there are a lot of rated rifle courses for 50 or 100 yards and in, but not much is taught in the full 0 – 400 yards range. 400 yards is actually pretty far away in regards to shooting, but most people don't know what they can get away with in regards to a 400 yard shot. This course was just added this year, and it revolves around all the 7.62 guns that are on the market right now.

**Rem870.com:** Any other advice on upgrades for the Remington 870?

**Chris Costa:** The Vang Comp System is a very cool system.

While it does assist with the recoil of the weapon, its most important feature is the way it chokes the gun down, meaning that it really tightens your pattern. Typically with a shotgun you want a wide pattern; however, a tighter pattern can be much more devastating.

Think about that fortified cone going into a target at a high rate of speed – it's going to destroy much more mass when it's as centered as possible.

When you have nine 8mm projectiles spread out on a person it's going through flesh, it's causing an effect. But when you have that Vang Comp System or if you have a shotgun that's got a choke on it, that pattern is much tighter. It ends up being like shooting a person nine times with a 9mm in a very close proximity; you're going to destroy a lot more of that target, and the pattern is going to be much more focused. When you've cycled a gun a few times, you're probably going to be able to run the guy three to four times. Now you've got these really tight groups of nine projectiles times three to four total rounds fired; you're dealing with a lot of rounds that the target actually observed in a small amount of time.

Without a choke you are limiting your capacity; you can't obtain the same amount of violence without one unless you're firing a carbine full auto onto a target – there's no way to make up that difference. With the Vang Comp System, with one pull of a trigger I'm essentially firing nine projectiles at you. With two pulls, I'm firing eighteen. When you start to look at that math, the person is getting hit by a lot of projectiles, and that Vang Comp System (or any choke, for that matter) becomes very important.

And that's not even talking about having the ability to run the red dot on your gun, stretching out your ability for more precise shots when you're shooting at a distance!

**“Shotguns have limitations, but don't underestimate the role you play in making your gun perform to the best of its abilities”**

**Rem870.com:** Do you have any general advice for shotgun owners?

**Chris Costa:** I think it's all a matter of practicality. I find a lot of guys in America, in a competitive world, walk around with 40 rounds on them. That's extremely unrealistic.

Nobody should walk around like that. You shouldn't go out in public like that unless you're trying to get shot or arrested.

When you're going around with a shotgun, you should really only have what's in it loaded, and what it carries as backup ammunition with a 12 gauge – yes, that means you end up being extremely limited. Even so, there are still pros to the shotgun and the way it works. If you're dealing with a surrounding made of steel structures or certain types of hardened walls, you can actually bounce 00 buck off them. You can even bounce it off the ground, shooting people's feet out from underneath a car if you skip your shot off the concrete at the right angle.

There's a lot of versatility to what the gun can do. What you typically find is that the limiting factor of the gun isn't just related to the gun, but also to its user. The gun is low capacity in regards to how many rounds it carries; it's a pump, so it doesn't work as fast because it requires you to actually do some work. The thing about this, and what it ultimately comes down to, is how the user employs that particular system under speed. It's all about manipulating that weapon properly and how trained and practiced a person is. People need to work on their shotgun skills consistently to make sure that when they do find themselves in a situation where they need to use their gun in the face of a threat, they know how to perform and they can do so promptly and accurately.

So, shotguns have limitations, but don't underestimate the role you play in making your gun perform to the best of its abilities.

### **Rem870.com Blog Readers' Questions**

**Rem870.com:** What kind of slugs would you recommend using out of a smooth bore barrel?

**Chris Costa:** Remington has some really good slugs. Federal has some really good slugs. I think they make a BRI Sabot Slug and some of the Remington ones are almost like hollow points – they are really devastating rounds.

The important thing to remember is you shouldn't just be getting something that looks pretty on a box. You need to make sure the shot you purchase shoots and functions properly out of your gun. Just because it says Remington on the box, it doesn't mean that it's going to group well out of your gun. It may group well out of my gun, but Federal may actually group well out of your gun – every gun is a little bit different; know your weapon.

When you are dealing with 00 buck or slugs it's extremely important to buy a box of each from different manufacturers and to look at your pattern and what your groups are with the rounds. And that's not standing up, shooting at the offend – you should be benching a gun, laying down, bagging a gun, and taking your time to try shooting in a really tight group, or trying to shoot a really tight group with that particular load that you are trying in that moment of time.

It's hard to tell you what you should run out of your gun because they are all slightly different. For the most part, I would say that any of the Federal Tactical loads seem to be

extremely consistent from one gun to another, whether it's an 870 or a semi-automatic Benelli.

**Rem870.com:** Would you recommend using optic or a red dot sight on a shotgun?

**Chris Costa:** I like red dot sights. If nothing else, running a fiber optic front sight is definitely going to help you, but make sure it's something more tactical, meaning not a typical 3-Gun style Ameriglo that's going to break at the first sight.

You need to make sure that if you do run a fiber on your gun, it's protected. Secondly, the red dot does allow you to stretch out your zero; it allows you to get a little bit further and to be more precise. So, if shooting the shotgun at longer ranges is something that you think you are going to want to do, then a red dot is definitely going to assist you with that.

**Rem870.com:** What is the most important thing to remember in any tactical situation?

**Chris Costa:** It's important to understand that if you practice with your firearm (shotgun, handgun, carbine), then you should be able to shoot on a more subconscious level. A lot of practice is extremely important.

By not having to worry about whether or not you are manipulating your firearm correctly, you can focus on your environment and what is changing and unfolding around you. The last thing you want to do in a dangerous situation is to have to be worrying about the complexities of what's happening with your gun; if you're already comfortable solving those types of particular problems, your mind is free to pay attention to the most important thing – the threat, and how you need to react and counterattack in your situation.

I would say, shooting starts in a mind first – be comfortable with your equipment so you can focus on your surroundings.

### **“The focus now is to try to do something bigger than the DVDs”**

**Rem870.com:** Do you have any exciting projects or products you can tell us about?

**Chris Costa:** Right now I've got a couple of media projects that I'm working on. I think that the focus now is to try to do something bigger than the DVDs. A lot of people ask me if I'm going to do my own DVDs or not.

What a lot of people don't realize is that when I first got hired on by Magpul, Travis wasn't on board yet, he hadn't been hire. And that was when the company asked me what I thought about doing basic training videos. One of the things about the training videos that I saw was it was always one on one, and after a while it just kind bored me. And what I told them was, “You know, I don't know whether you can do it or not, but if you could film a class that would be really cool.” But then I wasn't sure if the student at home could actually learn from the class. So when we did the SWAT trailer – that was a test. And then after the Carbine 1 (I believe it was on the second disc), when we were in Georgia, Travis wasn't there yet – that's because he wasn't hired by Magpul at that moment in time.

It all was done as a test, to see if we could film an entire class and incorporate three main ingredients:

- We wanted it to be entertaining.
- It needed to be educational.
- And, ultimately, we wanted it to be motivational to the shooting community. Whether people decided to go take someone else's course or ours, it didn't matter. We just wanted people to start training period, and to take it extremely seriously, like we did.

So, since I've been out a lot of people are like, "Hey Chris, are you going to do your own videos?" And the thing about it is, as far as videos go, the Magpul's videos are actually pretty good. And at their cost of \$49 – \$59 for 2-10 hours of content it's kind of hard to compete against that.

Now, I know some people like the one on one approach, but that's not what I ever wanted. I liked when it was on me, and then on the students, then back to me, and finally on the students again. Then it went back and forth to where the entire video wasn't just about me. And then Travis came aboard, and what it did was it created a bit more of an atmosphere. By the time a little bit of time had passed, you wanted to see one of us again because you hadn't seen us for a while.

I think to try to duplicate that, well; it's already been done before. I think it's time to move on to other styles of projects. There are a couple projects that I'm just waiting on right now; I've got my fingers crossed, so we'll see how it all unfolds.

**“You can either fight or push against a system, or you can get out on your own and do your own thing”**

**Rem870.com:** Why the departure from Magpul?

**Chris Costa:** Magpul was recently bought out by an investment group. To a certain degree, there's going to be some changes to the beneficiaries and its overall structure; in general, there's going to be changes made within that organization.

And a lot of people think that both Travis and I got royalties from the DVDs and the theory based products. The fact of the matter is that when I first joined Magpul, it was a huge risk to start the training division. I was openly promised only a one year contract. They told me one year is what they would offer me, and if it didn't work out we would shake hands and part ways. It was a risk, but that was the way the deal was structured.

After that, as the program grew and the DVD collection became larger and larger, nothing was changed within my contract. There were discussions about obtaining some ownership over Magpul Dynamics, but in the end nothing ever happened. Nothing could be agreed

upon. So what I found was that you can either fight or push against a system, or you can get out on your own and do your own thing.

I appreciate everything that those guys have done for me, and I think I we did a lot of good things for Magpul as a company together. But now it's time to do my best to capitalize on opportunities for myself.

The thing about it is it's not a matter of being greedy, it's just a matter of being fair. If you are making millions of dollars on the theory based products and on the DVDs (and yes, they made millions of dollars), then pay me what's fair. At the end of the day, there's no staking a gain for me, no ownership, or nothing in writing anywhere that entitled me to a fair share of what was being accomplished and actualized.

It's just one of those things. Based on the position I was in at the time with the company, I should have pushed for more. I don't know how to describe it – you always think people are looking out for your best interest, but really, no one's going to look out for you but you! It comes with the job, so to speak. It's just one of those things.

**Rem870.com:** What do you like and what you don't like about the Remington 870 shotgun?

**Chris Costa:** The stock Remington's – they're good guns! I like them. But, I definitely prefer the ones manipulated by Nighthawk, because the actions are worked over a little bit.

That roughness that you get with the typical 870, is already taken out of the equation.

The barrels are Vang Comp-ed and the sights are different on the gun, so you run more of a ghost ring, and you can either run a Tritium front sight or a fiber optic if that's what you choose. You can have a rail system embedded into it to where you can attach a red dot, if that's something that you would like to do. And then, generally the controls are enlarged, such as the safety mechanism.

You can get them pre-setup with the right configuration as far as the stock. Now, typically I like running a standard stock because I can spin it in my hand fast; when I need to spin it, throw a shell in, and do a combat reload or spin it and actually feed the tube it makes a difference. To me, believe it or not, the ergonomics of a pistol grip with my wrist, especially running it back and forth, binds me; I feel I can spin a gun a lot faster with a standard stock.

I personally feel that the Remington 870 stock needs some work done to it.

**Rem870.com:** What would I learn from the Shotgun Employment course?

**Chris Costa:** Generally, you'll learn a lot of recoil management. How to employ the gun, how to feed the gun, and how to actually manipulate it when it comes to slug changeovers whether it's a cruiser safe configuration (which basically means empty chamber), fully loaded tube, or whether the tube is fully loaded and there's one in a pipe (which means cruiser ready).



What you definitely find in a course, is that by the time you are done you can quickly manipulate the gun and feed it very, very quickly. And you can shoot it and employ it fast without it kicking your ass. I can run a 3-day shotgun program firing nothing but law enforcement ammunition and I can tell you I won't have any bruises on my shoulder and I'm not going to be fatigued at the end of those three days. If I do everything correctly, if I stretch the gun every time I break that shot, I am going to mitigate the amount of recoil that's actually going into my body, especially in my shoulder area.

I think what a lot of people do is they show up shooting the way their dad taught them how to hunt. And by the time they are done, one of two things are going to have happened: they are either going to understand what it is that I am talking about in regards to mitigating recoil and manipulating the gun, or for three days the gun's going to kick their ass the entire time out there on the range.

**Rem870.com:** Do you plan to make training available abroad?

**Chris Costa:** The State Department, really heavily regulates instructors going overseas and legally conducting training courses.

There are a couple of negatives with going overseas. If I'm in America and I've got to travel to California or somewhere, you figure it's about \$500 for a plane ticket, and a hotel is probably \$80 a night to stay somewhere, and I need to rent a car.

Typically for overseas travel, some of the airplane tickets (even flying coach) can be upwards of \$800 to \$2,000. So that's a pretty big cost right there. And then you have to deal with hotels overseas, and car rentals overseas. And there are the State Department and lawyer's costs and legal fees, which are generally going to run about \$3,500 to \$4,000 for the State Department approval to take place. And if my lawyer submits all my paperwork and I get declined then I'm just out all that money!

If you think about what I just said, between the plane ticket, the lawyer fees, and the hotel and car rental, you're likely spending at least triple the cost to go overseas compared to traveling throughout the United States. So, as far as course costs, I'd have to charge an extreme amount of money to ensure the trip was a wise business choice, assuming all my authorizations went through. And as far as profit margin goes – it's a lot easier to make a profit within the United States because of the way the travel system works.

I tell people that if they are a military unit or a law enforcement unit, you can probably get it to where I can come over. There's going to be a cost associated with that and it's not going to be the same cost as a course in America; it's going to be much more expensive, for the reasons I've already listed. I don't have to worry about all those high costs when I travel in America like I would if I went overseas.

If a government or that agency solicits through the State Department and says, "We want Chris Costa come over and train our guys," then a lot of times we'll get the green light a lot faster. It's never denied if the request comes from a country that is friendly with the United States.

There's just a huge cost associated to all that.

**Rem870.com:** Do you have any dry fire drills you could recommend for shotguns?

**Chris Costa:** As far as dry fire drills go, you can dry fire combat reload, you can obviously speed reload, and you can also work in slug changeover drills. All of those are dry fire drills, and they're all done with manipulating rounds in and out of the actual gun.

At the end of the day though, you're going to have to fire that gun. A lot of times people get very relaxed when they dry fire. They're not in the stance they normally would be in, because there's no recoil, the gun's not going to kick them, and there's not big explosion. Dry firing, as far as the weapon manipulation and ammo in, ammo out, feeding the gun and also combat reloading a gun, all of those things can be drilled. Just make sure you practice live firing, and not only dry drills.

**“When you're in a close gunfight you need to be 100% focused on the threat”**

**Rem870.com:** What are your thoughts about shoulder to shoulder transitions using a shotgun?

**Chris Costa:** I actually don't do that.

First, whenever you're running iron sights, you're going to have to close an eye to actually see down it. When you're running an optic, the way your eye takes in that information is a lot different, because an optic is something dead center in the middle of your gun. You don't have to try to line up objects, meaning the rear sight and the front sight.

For people to just shift from one shoulder to another running optics – it's a lot easier. However, you also have to deal with the coordination of now running a pump, feeding the gun, and shooting it off your left shoulder. Accurateness generally decreases extremely.

On a carbine it's a lot more forgiving because of the way it recoils. And then you're typically dealing with a red dot. When we have a student show up with a carbine with iron sights it gets difficult to teach because they have to close one eye. The reason why I'm a bit against irons is because you shouldn't be closing an eye during a gunfight. When you're in a close gunfight you need to be 100% focused on the threat. That means that you're not going to be able to shift your focus back to the rear sight, line up the front sight, and then line everything up on a target and fire. With the red dot something floats between you and the other person that requires no lining up other than putting the dot on the target's chest, and then you can pull the trigger.

When you talk about the typical, average shotgun, it doesn't come equipped with an optic. You start off right away learning to close an eye, which isn't necessarily good. I know that you won't be able to see down the gun sight the way you need to whether or not you have irons because of the recoil management and awkwardness of the platform.

With a carbine, all you have to do is hold it still and pull the trigger; control it and cycle the gun.

I don't usually recommend on 12 gauges, or shooting big 7.62 guns, and I generally don't advocate switching shoulders.

**“I have a Nighthawk Remington 870 and my semi-autos include a Benelli M1 and a Benelli M4.”**

**Rem870.com:** What shotgun do you have?

**Chris Costa:** I have a Nighthawk Remington 870 and my semi-autos include a Benelli M1 and a Benelli M4.

The M1 is a lot lighter because you're dealing with an aluminum receiver; it's probably one of my favorite guns. The receiver's been cut out to have an RMR Trijicon placed on top of it, so it's extremely low, and I believe it holds 10+1 in a pipe, so 11 rounds in that gun, which definitely helps for not having to load as much.

The Benelli M4 is a beefier gun. It's going to take a lot more abuse and has more of a military and law enforcement capacity as far as dropping it, jumping it, or getting it wet, but it's also a heavier gun.

As far as semi-autos, I love the Benelli because of the way I can manipulate it and change my load out. And as far as pumps go, I prefer the 870.

**“If I want to buy something based on looks, the stock definitely meets that requirement”**

**Rem870.com:** What do you think about stock and forend for the Remington 870 by Magpul?

**Chris Costa:** I was brought into that project by the time the mold was just about fully complete. When they showed it to me my input was very minimal on it. I prefer the Surefire integrated weapon light forend to the Magpul forend. The Magpul forends are a little slippery, so as far as cycling a gun I don't really care for it.

As for the stock, it has its ups and downs. It has an easy integration of the cheek pieces, and the ability to change the length of the pull on the actual stock of the gun. The drawback to it is that it's freaking heavy. Weight doesn't really seem to concern engineers for some reason, but when you have to start carrying this gun around, running with it, that weight is an extreme problem to the user. What I find is that the ability to change the cheek and the length of pull are both a huge positive on that stock, and the weight is non-negotiable for the average person.

If I want to buy something based on looks, the stock definitely meets that requirement. As far as functionality goes, there's part of there, but a huge part is missing. It simply needs to weigh less. The shotgun is built out of steel as it is; it's a freaking heavy gun, which can make it hard for people to shoot, carry, and employ. Adding weight is definitely not something that I really want to do.

I was little disappointed by the time I was able to implement changes, just before I left Magpul. They pretty much already had the mold done, and there wasn't much as far changes I could recommend. Unfortunately, that was poor integration between Dynamics and Magpul. In a lot of cases you would think that in the early stages of them starting a new product we would be brought in really early to understand who the user was and what we were actually trying to achieve as a company to make sure everything stayed consistent all the way throughout the entire project. In many cases what happened is we would be brought at the very end when it was almost virtually, in many cases, too late to change things because it had gone so far down the line and a lot of money was already spent on getting it there.

That was an unfortunate disconnect between Dynamics and Magpul.

So, do I like the stock? There are attributes that I like about it, but the weight has got to go. It's a tank!

**Rem870.com:** Please tell us more about Costa Ludus.

**Chris Costa:** Primarily, Costa Ludus is trying to build more efficient shooters that can problem solve and also self-diagnose their shooting abilities.

The other side of it is marketing. We definitely try to market for a lot of companies because we are able to, and we do have a little bit of push within the industry. I'm pretty honest about things; I think most of the people know that

I'm pretty humble. If I haven't shot it or if I don't know, I'm not going to act as if I did. If I've shot it, if I seen it, if I see it over and over in a class, then I'm going to comment on it.

I think people understand as far as the marketing side of the house goes, it can be a pro and a con. If your product does really well, then Costa Ludus is a great marketing tool; if it doesn't, Costa Ludus probably isn't the greatest marketing tool for your company, especially if somebody asks about it. That can be a problem. But, remember that the most important person out here isn't the company, it's the shooter. And making sure that that a shooter is getting their money's worth from whatever product they decided to buy, whether it's a gun to an optic, to an accessory or a piece of plastic or a magazine, it doesn't matter. That's a lot of hard earned dollars from the shooter, so it's extremely important.

Then there's the media side, which is in regards to some of the other media projects that I have going on right now, which will hopefully be finished by the end of this year.

**Rem870.com:** Do you think that there will ever be a rifle that will reach the same level as the AR in the US?

**Chris Costa:** I had a lot of hopes with the MASADA when Magpul had it, and when it got licensed to Remington.

They changed the charging handle from the middle of the receiver to the front end of the gun. I know this was in order to prevent dirt and different things from entering the receiver

area, but the AK-47, the M14, and the FAL seem to have no problems dealing with a charging handle located in the middle of the gun and being exposed to the elements. I thought that was a very poor decision that was made by more engineers than actual shooters; by the time I'm trying to get a normal grip on the gun, the charging handle is in the way of not only the laser but where I put my optic. I don't put my optic in the back end of the gun; I put it up towards the middle of the gun, as center-lined as possible. Simply put, the charging handle gets in the way of how you shoot, your laser, and the damn optic. You couldn't put more in the way for the user!

I actually thought with the interchangeability and the light weight of that particular platform that it was going to be a show stopper, but I only see a 60% success rate with the current ACR out in the market in my classes. Good ammunition – and the gun runs 60% of the time.

I am very eager to see the new enhancement that they did to the ACR, to see if that actually performs better than the existing ACR.

The ergonomics on the ACR, except for the charging handle, are really good. The ergonomics are much better than the FN SCAR. The FN SCAR is not the most ergonomic piece of equipment out there, but the reason why I would run a SCAR before an ACR right now is because the god damn thing works every time I pull the trigger. No matter what ammo I put in – the damn thing works! Whether I shoot on the ground or off the ground, it doesn't matter. That gun works every single time from what I see when it comes through my courses over an extended period of time. And it's not just one gun; it's a multitude of guns, constantly, every single time in class. And every time I see an ACR, the student ends up having some type of problem, malfunction, or headache with it.

It does sadden me, because I truly thought that gun was going to be the one that replaced the AR15. Maybe it's still can, but I'm not sure anymore.

**Rem870.com:** What ammunition would you recommend for shotgun home defense?

**Chris Costa:** I like the Federal Flight Control.

**“Most people can't even handle shooting a 12 gauge under normal conditions”**

**Rem870.com:** Is there any use for magnum rounds with 12 gauge buckshot in a round?

**Chris Costa:** Most people can't even handle shooting a 12 gauge under normal conditions. Running larger, like 3.5 in it, it's like, “Goddamn, they better hit the target!” But, I really don't see utilizing that particular round unless you are going out and hunting something that's a lot bigger than you. I've never really used 3.5. Not to say that you can't – I'm just not sure what you'd actually be going after that's going to require that big of a cartridge. Plus, it does limit the capability and capacity of the gun in regards to how many rounds you can carry.

You definitely have to worry about controlling the gun more in regards to recoil management, even more than what you do with a standard 12 Gauge. And not only that,

but you're limiting your round capability; you literally end up with a gun that holds 4 rounds, and 4 rounds runs out very, very quickly.

**Rem870.com:** Do you apply any pressure to the forend in a backward direction prior to pressing the trigger for faster follow up?

**Chris Costa:** This is something that you learn over the course of time. When shooting, you stretch the gun when you fire it, and then you have to collapse the gun, cycle the gun and then stretch it and fire at the exact same time. It definitely becomes a little bit of a musical dance so that you can mitigate how much recoil you feel to your shoulder area when employing the gun.

You have to have a technique to stretch the gun and collapse it, and it takes time to learn that. There's a large timing issue that you need to master. That's one thing that's hard to do with dry fire. You can practice a little with dry fire, but where you really notice it is when you actually have live ammunition coming out, because you know what feels wrong very quickly.

## Interview with Jansen Jones from Noveske Team



Jansen Jones (Noveske) and Vitaly Pedchenko

**Rem870.com:** What firearms do you use during competitions?

**Jansen Jones:**

For the 3 Gun Nation Pro Series I run the following set up:

Rifle: Noveske Rifleworks N4– Pro Series rifle build which consists of a 14.5” premium stainless barrel with SureFire MB556K, Noveske NSR 13.5” rail, Noveske Gen II Lower with Geissele Automatics Super 3 Gun Trigger and Magpul MIAD grip, URB stock and enhanced trigger guard. I use magpul Pmags and SureFire 60 round mags.

Shotgun: Benelli M2 21” barrel fully customized by Taran Tactical Innovations.

Pistol: Glock 17L with custom work done by Glock Worx and basepads by Taran Tactical Innovations (both companies are out of California).

If I’m shooting an outlaw 3 gun match, it depends on which division I am shooting.

If I am shooting “Heavy Optics” which requires a scoped 308 rifle, I shoot the following:

Rifle: Noveske Rifleworks N6 308 rifle: 18” premium stainless barrel, SureFire 762 Brake, MagPul PRS stock, MIAD grip and enhanced trigger guard and ArmaLite 20 or 25 round mags depending on if the match.

Shotgun: Either a Benelli M2 21” barrel fully customized by Taran Tactical Innovations.

OR if I need to use a pump shotgun, a Benelli SuperNova with 24” barrel and custom work done by myself and my team mates Rob Romero and James Casanova.

Pistol: depending on the match, I may use a Glock 17L with custom work done by Glock Worx and basepads by Taran Tactical Innovation, or a Glock 21 fully customized by Glock Worx.

**Rem870.com:** You use semi-auto shotgun in 3-Gun shooting and pump-action in Practical shooting, why?

**Jansen Jones:** The majority of divisions in 3 gun (tactical optics, tactical irons, open, heavy optics most of the time) require a semi-auto to be competitive. The only consistent division in 3 gun which requires a pump gun is heavy metal. My team mate Rob Romero has a Noveske N6 rifle set up for Heavy Metal Irons so he usually shoots that division while I shoot Heavy Optics.

I love shooting a pump gun and for me, the only true opportunity to do so on a regular basis is the dedicated practical shotgun matches.





**Rem870.com:** What upgrades/modifications would you recommend to competition shotgun?

**Jansen Jones:** At a minimum I like to have my lifter welded to prevent any thumb injuries while loading weak hand. I also have my loading port enlarged and smoothed out. Lastly, I add a magazine extension and aftermarket low drag follower. Beyond that, depending on the shotgun, I will have the grip and stock stippled, a trigger job performed and if it is a Benelli M2, the bolt lightened by Taran Tactical Innovations out of California.

**Rem870.com:** What upgrades/modifications would you recommend to home-defense shotgun?

**Jansen Jones:** My personal home defense shotgun is a Benelli M2 and wears a SureFire Shotgun forend weapon light and has a side saddle with slugs and buckshot. Other than that, I leave the shotgun pretty much as I bought it.

**Rem870.com:** Do you have any new firearms accessories in development?

Myself and the Noveske Shooting Team (“NST”) are always working on new products, in addition to testing items for other companies we shoot professionally for. Right now I cannot release any information on anything other than to say we have several very interesting items coming out in the next 6 months.

**Rem870.com:** What is your secret of winning?

**Jansen Jones:** Pre-match preparation. This is the primary concept we focus on at our dedicated 3 gun classes that we teach all across the USA. The time you put in before the match, whether at the reloading bench, dry firing, working on your shotgun reloads, or simply working out at the gym, all plays into your pre match preparation. The more prepared you are before you go to a match, the better your chances are of achieving your goals when you step to the line and make ready at the match.

**Rem870.com:** What live fire shotgun drills would you recommend?

**Jansen Jones:** I have been shooting a lot of plate racks lately with both shotgun and pistol. I have two plate racks set up side by side at approximately 15 yards, so a total of 12 plates. On the buzzer I engage the first plate rack with my shotgun, drop those first six plates, dump a safe shotgun, draw my pistol and engage the next 6 plates. I start this drill off with a par time of 8 seconds and then drop it to 7.5, then to 7 seconds, then to 6 seconds. I've found myself shooting plate rack drills every practice session and have seen the results paying off big time at both pistol matches but also in the 3 Gun Nation Pro series.

**Rem870.com:** What dry fire drills do you do?

**Jansen Jones:** I will set a par time of 1 second and just work on my draw stroke first. After working on my draws, I will do various drawing and reloading drills just to keep my reloads sharp and as quick as I can be.

**Rem870.com:** Do you reload ammunition for competitions?

I actually do not. I have been shooting Freedom Munition's 124 grain Xtreme Action Pistol load. Freedom Munitions loaded the ammo exclusively for their sponsored shooters and it is so soft shooting I have been very happy with it. Additionally, the accuracy from the bullet has been excellent.

**Rem870.com:** Any advice for shotgun owners on how to shoot fast and accurate?

**Jansen Jones:** Practice, practice and more practice. But most importantly, go out and compete. I found that one of the things that helped me improve the most was watching shooters better than me. You can learn so much from them. If you don't have any people locally who you compete with on a regular basis, there is always YouTube. It's excellent as you can watch shooters from all over the world and see different techniques and learn different things you may not see in your home region.

**Rem870.com:** Please tell us about Noveske 3-Gun Hero DVD and 3 Gun Outlaw Instructional DVDs

**Jansen Jones:** The two DVD's released by the Noveske Shooting Team, 3 Gun Outlaw & 3 Gun Hero really complement each other.

In our first disk (3 Gun Outlaw) we discuss 3 gun from our point of view, reloading techniques for the shotgun, stage break down and more. After 2 years of hearing from people who bought the first DVD, Rob and I decided we had enough material to create another DVD and thus 3 Gun Hero came out. 3 Gun Hero focuses more on tips and techniques but also discusses gear and modifications shooters can make to existing equipment to help improve their 3 gun game.

Also included in 3 Gun Hero is 4 episodes from 3 Gun Nation Season 2 featuring Rob Romero & Jansen Jones.

The DVD's are available from Noveske.com as well as Brownells.com

**External Link:**

3-Gun Hero DVD: <http://tinyurl.com/nxeqrcu>

## Recommended Videos

**Magpul Dynamics - The Art of the Dynamic Shotgun** – One of the best video courses about shotguns. The DVDs contain lots of useful information about all types of shotguns. Instructors show how to use your shotgun effectively.

External link: <http://tinyurl.com/l5awdpq>

**AGI - Building The Fighting 870** – The American Gunsmithing Institute is well known for educational videos. This video will show you basic and advanced techniques for upgrading your Remington 870 shotgun.

**AGI - Remington 870 Armorer's Course** – This is a very good video that shows in detail how your Remington 870 works.

**Lewis Awerbuck – Shotgun** – This is an excellent video, with lots of useful information about shotguns, shooting techniques, shooting stances and shotgun accessories.

**Shotgun Gun Fighting – Suarez** – An overall good video that is worth watching.

**Tactical Shotgun For Self Defense** – A strong video with lots of information about shotguns, upgrades, and tactics.

## Afterword

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Thank you for buying this ebook!

Feel free to contact author at: [info@rem870.com](mailto:info@rem870.com) with any questions or suggestions you may have.



See you on the Remington 870 forum: <http://rem870.com/forum/>



Recommended website for shotgun parts, accessories and upgrades: [Brownells.com](http://Brownells.com)

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