

A Hunting Rifle

As the subtitle of this book implies, this book is about building a dedicated custom budget hunting rifle. Now, you are probably thinking – why build a custom .22-caliber rifle for hunting, when the factory 10/22[®] will do the job? Well, that is absolutely true. Any of the 10/22[®] models is all you need for hunting. So then why build a custom rifle for this specific purpose? The answer is simple: Because you can! It is like a person building his or her own hotrod instead of buying a factory-made car from a dealership. The custom 10/22[®] builder is looking for better than factory performance, better accuracy, something for specialized use, and/or something different from a factory production rifle. Basically, it is the same reason why some people customize their trucks or build their own hotrods.

When you build your own personalized rifle, it will be one of a kind. You can brag to friends and family, and you can look them straight in the eye and say, “I built it myself.” When you take your masterpiece to the range and shoot it, you will get goosebumps, because it is something you built. The self-satisfaction you get when you build an accurate rifle – unique and cool looking – is priceless.

Since this book is about custom 10/22[®] builds and customizing, let’s set aside the thought of using a standard Plain-Jane ordinary factory production rifle for hunting, and focus on building a custom rifle.

The Project

When I started thinking about building a lightweight hunting rifle, the Ruger[®] Charger pistol crossed my mind as well as the Takedown (TD) rifle. As far as building a custom rifle or Charger pistol there is little difference between them. It comes down to personal preference, and the same thing can be said for the Take-down rifle and Charger. Aftermarket accessories are not really any cheaper for a TD or Charger. For me, I prefer a rifle instead of a pistol for rabbit hunting. I always come home with more rabbits when using a rifle.

This is my current rabbit slayer, but sometimes this little jewel accompanies me to the range as well. It is basically a factory rifle with several upgrades and enhancements. There is nothing wrong with this setup. When hunting I use the BX1 ten-round magazine, remove the bipod, and add a sling. This 10/22[®] folder has served me well for years, but now it is time to build a more specific rifle.



This is a list of upgrades done to this rifle:

- Factory customized bolt
- Kidd bolt buffer
- Kidd charging handle w/spring/rod
- Power Custom hammer and sear kit
- Power Custom auto bolt release
- Kidd Magazine Latch Plunger w/spring
- Kidd extended magazine release that was cut down and shortened
- Power Custom red trigger blade
- Butler Creek folding stock wrapped with paracord
- Burris Timberline 4.5-14 x 40mm scope
- Weaver Quad silver extended medium-high scope rings
- Butler Creek lens caps
- Magpul 11 slot Picatinny rail
- Folding vertical forend grip
- UTG 6.1-7.9" bipod

To establish a baseline, I weighed my rabbit slayer using a fish scale. It may not be the most accurate such, but it was good enough for me.



This rifle weighs 7 lbs. 2 oz. without the bipod and magazine. My goal is to build a new hunting rifle that weighs around 4 lbs.

Setting the Criteria

Before starting my new build project, I had to establish the build criteria. The plan is not to slap a rifle together just to build yet another. What I'm looking for is a custom lightweight walk-in-the-woods or truck-gun rifle. My current rabbit hunter weighs 7 lbs. 2 oz. The plain factory Ruger® 10/22® carbine, without a scope, weighs 5 lbs. The goal is to build a custom dedicated hunter that weighs around 4 lbs. with optics. I'm also looking for a rifle that will not break the bank and has a decent trigger pull. The most challenging task about building or customizing a 10/22® is staying within a modest budget. If you don't watch yourself, you can easily rack up the cost fast. Personally, I don't want this build project to cost so much that I will freak out if it gets scratched up while hunting. More about that at the end of the book.

My established criteria with a max budget on the major components:

- Lightweight - around 4 lbs.
- Low budget - receiver \$100, barrel \$100, optics \$180, stock \$100
- Decent trigger - \$65

If you are an experienced builder, you're probably thinking I'm setting the cost of this project too low, or that I'm nuts. Well, to a certain point you are correct on both counts, considering a quality ultra-light barrel costs around \$300, and a target grade trigger assembly another \$300. This is not a target rifle, so I don't have to buy high-end components.

Indeed, I might go over my established budget, but I will do my best to keep it. With some luck – and selective shopping – I hope to build a walk-in-the-woods custom hunting rifle for around **\$545**, hopefully, less. I already have a few parts on hand, however, and I will note them as I continue, to give you a more accurate picture of the total cost of the project.



The Receiver

The first purchase will be a receiver. Personally, I think the receiver is the heart of the rifle because it holds everything together such as the barrel, trigger group, stock, optics and sights. There is half a dozen or more vendors offering 10/22[®] aftermarket receivers.

Here are two of my favorite receivers:



Feddersen

NOTE:

The receiver is the only part/component you cannot have delivered to your home. You can buy receivers online, but they must be shipped to a Federal Firearm License (FFL) holder such as your local gun shop. The receiver is treated the same as a firearm purchase. You must complete

the Alcohol Tobacco and Firearms (ATF) form 4473 and meet all the requirements before taking possession of the receiver.

Remember that besides the cost of the receiver, you will also pay a registration fee, shipping, and maybe Tax. The registration fees can range from \$20 up to \$65. It depends where you live – and how greedy the FFL license holder or the gun shop is. In Texas, most of the gun shops average \$40 for registration. Some gun shops offer a registration fee discount to seniors, military, or law enforcement officers.

For this project, I didn't have a receiver on hand, so I did a little internet surfing. Since I'm striving for a low budget build, I didn't bother looking at any of the aftermarket receivers because I know they cost more than a factory new receiver. With that in mind, I started looking for a Ruger® used or new receiver.

NOTE:

I was wrong about my last receiver comment. More about that later.

These are my receiver options:

- **Factory Used**
- **Factory New**
- **Aftermarket New**

Factory Used

My first stop was my favorite forum, www.rimfirecentral.com. The Classifieds section didn't list any factory or aftermarket receivers the few days I visited the forum. Over the years I have bought several receivers from forum members. But of course, now that I was looking to buy one, there were none available.

Buying a used rifle is not cost-effective, especially if all you want is the receiver. I've done that in the past and ended up selling the stock, the barrel, and the trigger group at gun shows. It was too much of a hassle.

Factory New

I decided it was best to go with a new Ruger® factory receiver. A good place to buy one is at S&P Outfitters LLC, www.sapoutfitters.com. This business specializes in factory parts. At the time of this project, the new blue receiver was selling for \$69.99 and the silver finish for \$79.99. That is a good price for new Ruger® 10/22® factory receivers. I knew I would still have to pay for shipping, Tax, and registration.



Image provided by S&P Outfitters

Aftermarket

This is where I have to eat my words. I wrote earlier, “I didn’t bother looking at any of the aftermarket receivers because I know they cost more than a factory new receiver.” I stand corrected, I was wrong. I discovered Brownells at www.brownells.com/ offers two aftermarket receivers at an attractive price. I’m glad I kept researching.

It appears Brownells introduced their receivers a few years ago. The good folks at Rimfire Central have reported great results with them. The nice thing about these receivers is that you have an option for railed or standard (flat) top. Both receiver types have their advantages and disadvantages.

With a railed model, you will never have to worry about stripping the threads when installing or removing a scope base. Another plus is that the scope base will never come loose. For this hunter build, it did not really matter, but after some thought, buying the railed receiver was cheaper. The reason is that I then didn’t have to buy a quality scope base to go with the receiver. Installing a

good scope base to the standard receiver would have jacked up the overall cost. Well-made scope bases can be had from around \$25 up to \$50.

These are two of my favorite scope bases:



EGW Picatinny Rail 46110



NOTE:

A word on inexpensive scope bases. I have seen some problems with inexpensive aftermarket scope bases costing between \$6 and \$12. At a glance, they look well-made and even fit, but you get what you paid for. Often the screws provided are cheaply made, the metal is too soft, and the threads are slightly undersized, which is one of the factors that cause stripping of the receiver holes. Another thing I noticed is that once installed the base may be slightly off-centered. It is no big deal if you are shooting at 25-yards or less, but at 50-yards and beyond you will have problems with windage adjustment on the scope. I have seen people blame their \$200 scope when the problem was the \$9 scope base.

One advantage of a flat-top receiver is that you can use different types or heights of scope bases. Another advantage is that you can install iron sights such as these on the receiver.

Williams WGRS-RU22



XS Ghost Ring



All aftermarket receivers differ slightly from each other, not by much, but there are differences. The Brownells BRN-22 railed model does not extend out over the barrel. I prefer the scope rail/base to extend out an inch or so over the barrel, but for this project, it does not matter.



Brownells BRN-22 railed



Brownells BRN-22 standard

I'm glad I kept looking because when I was ready to order a new Ruger® factory blue receiver from S&P Outfitters for \$69.99, Brownells had their BRN-22 railed receivers on sale for \$64.99. Not only is the Brownells receiver less expensive, it also has an integrated rail. Take a wild guess which one I ordered for this project. You got it: I ordered the BRN-22 railed receiver. Ordering online was a breeze. Sadly, the only gun shop in my small town went out of business so the receiver was shipped to the nearest Academy Sports.

Receiver Cost	
Receiver	\$64.99
FFL processing fee	\$10.00
Shipping	\$0.00
Tax	\$0.00
Registration:	\$40.00
Total:	\$114.99

This chart shows the itemized cost of the receiver. As you can see, I went over my established budget of \$100. Luckily, there was free shipping the day I placed the order, or it would have been even higher. My first purchase for this project was over my budget by **\$14.99**. The FFL processing fee, \$10, was charged by

Brownells. That is something to look out for when buying on-line.

Overall, I think I came out okay because I would have spent \$33.00 plus tax and shipping for a Kidd scope base. This chart will give you an idea of the receivers available. The items highlighted in green are my first choice, and the ones highlighted in orange my second.

The following is my receiver research information:

Make/Vendor	Feature	Finish	Price
Brownells	Railed	Blue	\$64.99
Brownells	Standard	Blue	\$62.99
Feddersen	Railed	multi	\$275.00
Kidd	w/detachable base	Blue/silver	\$172.00
Volquartsen	Railed	SS	\$395.00
Tactical Innovations	Railed	multi	\$159.99
Tactical Innovations	Standard	multi	\$149.99
Custom Shooting Technologies	Railed	Blue/silver	\$154.95
Tactical Solutions	R w/bolt and hardware	Blue/silver	\$570.00
S&P Outfitters factory	Standard	Silver	\$79.99
S&P Outfitters factory	Standard	Blue	\$69.99



In case you are wondering which receiver I would have bought if I was not working on a budget, check out these two:

I like this receiver for several reasons.

First, I like the color selection Tactical Innovations offers. Second, when it comes to rifle shooting, I'm ambidextrous, and this receiver has the charging handle on the

left side. Third, I'm assuming – but it is an educated assumption: The receiver and bolt will not get as dirty because the blast will port out from both sides.

This one also got my attention. It reminds me of my AR with the rear charging handle. It does not have a protruding charging handle sticking out the side. A few years ago, I had an issue with the charging handle gouging my back. I'll talk more about that later.

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Tracking the Project Cost

Project Cost			
Component/Part	Vendor	Description	Cost
Receiver	Brownells	BRN-22 Railed black	\$114.99

