

## *Terms of Purchase*

We agree to sell this firearm to you only if you agree to our terms of purchase and waiver of liability. If you cannot agree to these terms, return the gun to your dealer within 10 days of purchase in an unused condition. We will refund the dealer's purchase price and he will refund your purchase price. If you use this firearm for even one shot or keep it for longer than 10 days, you are indicating your agreement to our terms of purchase and waiver of liability.

We refuse to sell this firearm to anyone who may use it in a State, County, District, or City where firearm manufacturers may be held liable for misuse of a weapon.

You must agree that you are responsible for the safe handling, loading, and secure storage of this firearm. We have no control over where this firearm points or whether it is loaded in an unsafe manner. We can fix a defect but a defect can't hurt anyone unless you happen to be pointing this firearm at someone or handling it in some other unsafe manner. For this reason, you must agree not to hold us liable for any injuries or property damage resulting from your ownership of this firearm and any intentional or accidental discharges. If you cannot agree to these terms of sale, we refuse to sell you this firearm. By purchasing this firearm and not returning it within 10 days or by firing it even once you indicate your acceptance of these terms.

E. Arthur Brown Company, Inc.  
4088 County Road 40 NW, Garfield, Minnesota 56332  
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# Model 97D Rifle & BF Falling Block Pistol

## Instruction Manual



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## ***DO NOT BREAK THIS GUN***

- ✓ **Never** force the action open with the hammer cocked. This will damage (break) the polished surfaces of the trigger/hammer sear engagement.
- ✓ **Never** force the action open with the trigger in the rearward position. This will drag the firing pin across the face of the breech. Always push the trigger to the forward (safety) position before opening the action.
- ✓ **Never** dry fire a .22LR gun. The hardened firing pin may shatter when it hits against the steel rim. Or, it maypeen the edge of the chamber making it hard for cartridges to fit.
- ✓ **Always** push the extractor forward to seat it before chambering a 22 LR round. This assures that a cartridge cannot get wedged around to the front of the extractor. 22LR extractors damaged from prying rims out of this predicament are not covered in the warranty.

*Now for the fun part...*

In such a case, you may not be able to close the action or, if you can close the action, the gun may not fire reliably. Make a cleaning rod part of your shooting/hunting kit. If a cartridge gets stuck and won't eject, you'll have to clear it with the cleaning rod. Be sure to protect the crown with the rod guide and KEEP THE GUN POINTED IN A SAFE DIRECTION.

### *One Year Limited Warranty*

Unlike mass production firearm companies, the vast majority of our pistols/ Rifles are used heavily by competition and target/ varmint shooters. They don't sit in a closet and take one deer hunting shot per year. We warrant the parts and workmanship of the actions of our 97D/BFs for one (1) year from the date of purchase. This excludes damage you may cause to the gun yourself. (See "Don't Break This Gun" - page 1). We also warrant the match barrels on pro-rated basis. If you discover a non-cosmetic flaw in the chamber or bore within two months of purchase, we will re-barrel the gun at no charge. If the flaw is not reported until 2-12 months after the purchase, we will pro-rate the cost of the re-barrel job discounting the number of months use you have received out of the original barrel. We do not warrant cosmetic aspects of our guns. A lot of hand work goes into them and the idea of throwing away a perfectly good barrel or other part simply because of an obscure machine mark or scratch has not been factored into the price you paid. We do not guarantee satisfaction with regard to trigger pull or let off. We do our best to deliver a good trigger that is safe. If your trigger is not safe, we'll fix it free inside the one year warranty. If you don't like the way it feels, you'll have to have a qualified gunsmith do a trigger job. If your gun needs repair during the first year of ownership, call us at 320-834-3000 for a return authorization number. Then pack your gun carefully and send it postpaid via insured carrier to:

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We will repair and return your gun to you FOB Garfield.

So, avoid neck sizing and full length resize your brass all the way down so that the shell holder makes firm contact with the base of your sizing die.

- Seat your bullets deep enough. Some reloaders like to seat bullets far enough out to engage the rifling. If your bullet engages rifling before the cartridge is completely seated in the chamber of you 97D/BF, your action may not close. If it does close, your cartridge may not fire because the impact of the firing pin will be cushioned as it drives the bullet into the rifling. You can surely seat your bullets to close proximity of the rifling. Just be aware if you try to get to close, you may sabotage your gun's functionality.
- Check the Trim Length of Brass Regularly. Brass that is too long will not chamber reliably and will fire with excessive pressure.. causing extraction problems.
- Set Your Primers Properly. High primers will cause the block to hang up. Keep primer pockets reamed to the proper depth and take the time to be sure primers are seated completely. Incompletely seating primers can cushion the impact of the firing pin as it drives the primer deeper....causing a misfire.
- Keep your ammunition clean. A speck of sand or dust can keep a cartridge from chambering completely and cause a jam. Keep extractor slot clear of debris. Reliable firing can be jeopardized by dirt under you extractor. If your extractor cannot rest completely against its slot, it may prohibit your cartridge from chambering fully.

## Preliminary Instructions

By Eben Brown

Congratulations on your purchase of a Model 97D Rifle or BF Pistol. It is a unique firearm with its own set of peculiarities and special capabilities. These considerations are especially critical to shooters who load their own ammunition. Spend a few moments reading here and you may avoid having problems!

### *How To Open the Action*

First, make sure the hammer is not cocked and push the trigger to a full forward position. This is your safety and also moves the trigger mechanism out of the way of the trigger guard. NEVER open the action unless these two conditions are correct! (*NOTE: Actually the trigger will snap forward without pushing when the hammer is drawn slightly rearward NOT COCKED - to relieve spring tension.*) The action opens with a swiveling motion rather than a straight pull. Wrap your index finger around the lever and brace your thumb against the front of the trigger guard. Using your thumb for a fulcrum, twist the lever down and forward. Neat, huh? Observe the action of the extractor/ejector at the left of the chamber. This extractor is not a heavy leverage affair so it serves well to warn you when your handloads are too hot. If your spent cartridges stick, you should check *immediately* to see that they're loaded within safe limits.

### *The Safety Mechanism*

Your 97D/BF is equipped with a transfer bar safety mechanism. When the hammer is un-cocked and the trigger is all the way forward (toward the muzzle) the firing pin is protected and cannot be accidentally impacted...such as what might happen if you were to drop the gun on the hammer. This is your safety. Once you cock the hammer, the safety is no longer operable and the gun will fire. In effect, the act of cocking the hammer takes your 97D/BF "OFF SAFE". NEVER cock the hammer until you are ready to shoot. NEVER carry your 97D/BF in a holster or in your hand with the hammer cocked. NO safety will work unless it is used; in the 97D/BF, the safety is having the hammer down/un-cocked and the trigger forward.

### *How To Chamber A Round*

**\*22 Long Rifle** - It is important to push the extractor forward so that it is seated before inserting a 22LR cartridge. Having the extractor forward avoids the possibility of getting the rim of a cartridge wedged in front of the extractor. Extractors damaged from prying a rim out of this condition are not covered in the warranty.

**\*Rimmed Centerfire** - It is not so critical to push the extractor in before chambering, but it does help.

**\*Rimless Centerfire** - With the new "rimless" version extractor, you should leave the ejector extended when chambering a rimless cartridge (like .223 Rem).

Insert a loaded cartridge so that it is seated flush with the face of the breech. Be sure the cartridge is seated completely forward before closing your action.

We recommend well shaken TetraGun L as a lubricant and protectant. Drip a drop on the sides of the falling block and into the bottom of the block onto the trigger bearing surfaces. Cock the hammer and drip a drop of TetraGun L onto the firing pin, transfer bar and hammer. Wipe the excess TetraGun L off with a rag.

The original Hoppes #9 is a good bore solvent. And, we recommend RustePrufe as a good exterior coating to protect from moisture and rust. Our website contains many more advanced products for gun cleaning... go to [www.eabco.com](http://www.eabco.com).

### *Special Consideration of a Fall Block Firearm*

The Falling Block action is nothing new, but most people aren't familiar with its special requirements for proper function. The number one consideration in this type of firearm is that the ammunition must fit easily into the chamber in order for the action to close. Unlike a bolt action rifle, there is no camming, leveraged capabilities to push an ill-fitting round into the chamber. The block merely slides up behind a cartridge that is already fitted into the chamber. Likewise, there is no camming, high leverage capability to pry an ill-fitting round back out. So, those who load their own ammunition need to be aware of a few tips:

- Neck Sizing is most often a No-No. Neck sized cartridges will not fit reliably back into your 97D/BF chamber. You will have chambering problems and extracting problems if you neck size. Since many 97D/BF cartridges head space on their rims, neck sizing serves little purpose.

Cock the hammer and use an allen wrench to turn the overtravel screw in to the point where pulling the trigger doesn't release the hammer. Now, while pressing the trigger rearward, turn the overtravel screw back out until the trigger is able to push far enough to release the hammer. Turn an additional 1/4 turn and your overtravel is adjusted properly.

To lock the overtravel adjustment, we recommend a thread locker such as Loctite set overnight. Degrease the threads of the overtravel screw and the hole in the trigger (acetone and a pipe cleaner work well for this) and apply the Loctite. Adjust the overtravel to where you want it and let the Loctite set overnight.

In the event you adjust too tightly and your trigger and hammer lock up, **KEEP THE GUN POINTED IN A SAFE DIRECTION.** Hold the hammer from releasing with your thumb. And simply turn the overtravel screw further until the trigger can travel far enough rearward to release the hammer. Use the Loctite procedure above to lock your overtravel screw in the proper adjustment.

### *Sights and Sight Adjustment*

Your new 97D/BF has several sight options which are extremely precise and delicate pieces of machinery. Please take a moment to learn how to use them properly to avoid damaging them.

The Champion/Bond sight packages for silhouette guns need to be set up properly to suit the cartridge you are firing.

First, adjust the rear sight elevation for 15 clicks: Turn it all the way down and then adjust it back up 15 clicks.

Second, use an allen wrench to loosen the screws holding the front sight hood to its base and slide it off the base. Loosen the lock screw that secures the sight post.

Third, fire at a target at 50 yards. Use the up and down adjustment of the front sight post to zero in on the 50 yard target. This sets your sight up so that from now on, all the proper amount of elevation adjustment can be accomplished with the rear sight adjustment screw.

Fourth, set the front sight post so that the viewed width through your rear sight is clearest for your eyes. You need to see the squareness of the edges first and then as close a fit as possible to the sides of the rear notch. When you're satisfied with the sight picture, set the lock screw gently so that the post will stay on this setting.

Fifth, re-install the front sight hood and proceed to use the rear sight for windage and elevation adjustments.

### *Scope Mounting*

Your 97D/BF is already drilled and tapped for scope mounting and may have come with a scope mount already installed. If it didn't come with a mount, all you have to do is remove the plug screws on top of the barrel and install any standard Contender style scope mount. Or, install one of the stronger and straighter Interlock Scope Mounts custom made by EABCO.

### *Cleaning and Maintenance*

Remember, this is a close-tolerance, match quality firearm. Protect the crown of the barrel, bore and chamber with proper cleaning rod technique. Aluminum or brass cleaning rods are recommended as they are softer than steel and less likely to scratch. A cleaning rod should regularly be wiped with a rag to insure that it does not have sand or other abrasive debris clinging to it. If you clean from the muzzle end, you should use a cleaning rod guide to keep the rod from touching the bore and crown. One method is to insert the rod guide into the crown (muzzle) and then to the rod through to the chamber end. Attach patches or brushes at the chamber and pull them through to the crown...always making sure the rod guide is protecting the crown.

We prefer to clean from the chamber end, pushing the cleaning rod through to the muzzle. Remember that cleaning rods will always rub against the bore and the crown. Use a rod made of something softer than barrel steel...such as aluminum or our stainless steel rods from ProShot. ALWAYS wipe the rod clean before inserting it into your barrel.

Your new 97D/BF has been treated inside and out with a special fluoropolymer lubricant call TetraGun. This not only enhances performance, it makes fowling less likely to stick. After a shooting session, we recommend that you simply run a few cleaning patches through with TetraGun SLC to clean our residual Hoppes and re-treat the fluoropolymer. Finally , run a patch through with light coating of TetraGun L lubricant/protectant. Brush/wipe any debris out of the action and lubricate with well shaken TetraGun L.

Once or twice a year, you may want to clean the action more extensively. Remove the stock (or grips and forend and soak the mechanism in Hoppe's #9. Work it open and closed to loosen grime. Work the hammer and trigger as well. Rinse thoroughly with a cleaner-degreaser solvent. Birchwood Casey or KG Products have aerosol degreasers. Allow the clean action to drain off this solvent before applying fresh TetraGun L lubricant. Lubricant must be applied to the front axis of the lever, the firing pin, the transfer bar slide slots, the pivot and the sear points of the hammer and trigger, and the main spring and guide rod which sockets into the rear face of the hammer. These are the lubrication points for proper function. You should also apply a thin coat of Ruste-Prufe protectant to all other surfaces.

Traditional lubricants are quite often made up of a slippery part and a solvent. If the slippery part settles out, all you're using is solvent...which is a poor lubricant. The block of your 97D/BF is fit to close tolerances to insure proper head spacing and will seize or bind with inferior lubrication. Be sure to shake lubricants well before using.

### *How To Close The Action*

Holding the pistol by its grip, push the front of the lever rearward until spring tension takes over and the action snaps shut. If it hangs up, drags, or stops before the chamber is completely closed, something is wrong. DO NOT squeeze or bump the lever to close the chamber. WHEN THE GUN IS CLEAN AND THE AMMUNITION CORRECT, THE CHAMBER SHOULD SNAP SHUT WITH LITTLE OR NO PHYSICAL ASSISTANCE. If this is not the case, read the suggestions in the special "Falling Block" sections of these instructions.

### *Adjusting the Trigger OverTravel*

Your 97D/BF is equipped with an overtravel adjustment screw through the middle of the trigger. This screw is adjusted by the gunsmith that fitted your gun together at our factory and should not need additional adjustment. The idea behind this screw is to end all movement of the trigger finger and hand at the moment the gun is fired...it's an accuracy enhancement. However, if the overtravel is adjusted too closely it can defeat the cocking engagement and even jam the trigger and hammer in an unsafe, almost firing condition. This can also happen if the adjustment screw is not locked properly and vibrates to a too close adjustment. Here is how to adjust and lock it correctly as well as how to un-jam the trigger and hammer if you over adjust.

Make sure our 97D/BF is unloaded and pointed in a safe direction. Cock the hammer and observe how the trigger moves rearward and how close the overtravel screw comes to the rear of the trigger guard. Hold your thumb over the hammer and squeeze the trigger until you feel the hammer release. Observe how far the trigger traveled after the release. If you feel you'd like it to travel less, then here's how to adjust it....