



AR-ESSENTIAL

Binary Firing System®

For Milspec AR Platforms

Installation and Operation Manual

V2 - 05.12.2025



**Patent # 9,952,012 | 9,952,013 | 10,107,580 | 10,393,461 | 10,480,881
10,480,882 | 11,085,724 | 11,226,165 and other patents may apply.**

FRANKLIN ARMORY® PATENTED BINARY FIRING SYSTEM® WAIVER AND RELEASE**1. STATEMENT OF OPEN AND OBVIOUS DANGER REGARDING THE BINARY FIRING SYSTEM®**

Firearms, by their very nature, can be lethal. The Franklin Armory® Binary Firing System® (BFS™) may inadvertently cause INJURY or even DEATH if improperly installed or misused. The BFS™ is a unique multi-mode Trigger system that requires proper installation and user training for safe operation. Improper use, misuse, or untrained use of the BFS™ may lead to the unintentional discharge of the firearm which may cause the following: **PROPERTY DAMAGE, PERSONAL INJURY TO SELF OR OTHERS, OR DEATH!** It is imperative that the BFS™ only be installed, adjusted, and/or repaired by a certified Franklin Armory® armorer. Failure to use a Franklin Armory® armorer to install your Trigger may expose you to serious liability including PROPERTY DAMAGE, PERSONAL INJURY TO YOURSELF OR OTHERS, AND/OR DEATH!

Improper installation, use, or tampering with the BFS™ will void the warranty and MAY LEAD TO UNINTENTIONAL DISCHARGE OF THE FIREARM THAT MAY LEAD TO INJURY OR EVEN DEATH. NEVER ALTER ANY COMPONENT OF THE BFS™ AND NEVER OPERATE THE BFS™ IF ANY OF THE COMPONENTS ARE MISSING, DAMAGED, OR WORN. AFTER THE BFS™ HAS BEEN PROPERLY INSTALLED, IT IS IMPERATIVE THAT ALL USERS SEEK QUALIFIED TRAINING ON HOW TO USE THESE PRODUCTS.

WARNING: THE FRANKLIN ARMORY® BFS™ HAS THE ABILITY TO FIRE UPON THE PULL AND THE RELEASE OF THE TRIGGER. PLEASE READ THE INSTRUCTIONS THOROUGHLY BEFORE OPERATING THE BFS™ IN YOUR FIREARM.

WARNING: FRANKLIN ARMORY® RECOMMENDS THAT ALL USERS SEEK QUALIFIED TRAINING PRIOR TO OPERATING A BFS™ TRIGGER OR BFS™ EQUIPPED FIREARM. IMPROPER UNDERSTANDING OF HOW THE TRIGGER OPERATES MAY LEAD TO UNINTENTIONAL DISCHARGE OF THE FIREARM AND MAY LEAD TO INJURY OR EVEN DEATH.

WARNING: NEVER USE THE BFS™ WITH ANY ACCESSORY THAT MIGHT CREATE A SAFETY HAZARD. SOME SLINGS, STOCKS, OR OTHER ACCESSORIES MAY NOT BE SAFE FOR USE WITH THIS PRODUCT.

WARNING: NEVER RELY ON MECHANICAL FEATURES. IT IS YOUR RESPONSIBILITY TO ENSURE SAFE HANDLING OF ANY FIREARM INCLUDING ANY EQUIPPED WITH THIS BFS™ TRIGGER.

WARNING: IT IS THE BUYER'S RESPONSIBILITY TO ENSURE THAT THEY ARE IN COMPLIANCE WITH ALL APPLICABLE LAWS AT ALL TIMES WHILE USING THIS PRODUCT. SOME STATES WILL NOT ALLOW CIVILIANS TO OWN AND USE THE BFS™.

2. COMPREHENSION OF RISK

The BFS™ Trigger has the ability to fire on the pull and the release of the Trigger. By purchasing and/or using the Franklin Armory® BFS™, YOU COMPREHEND THE INHERENT RISK, including without limitation, of LIABILITY, INJURY, LOSS, DAMAGE or DEATH as a result of improper installation, use, misuse, tampering, and/or abuse of the BFS™.

3. ASSUMPTION OF RISK

By purchasing and/or using the Franklin Armory® BFS™, YOU ASSUME ALL INHERENT RISK AND PERSONAL RESPONSIBILITY, including without limitation, of LIABILITY, INJURY, LOSS, DAMAGE or DEATH as a result of improper installation, use, misuse, and/or abuse of the BFS™.

4. WAIVER OF RIGHTS

By purchasing and/or using the Franklin Armory® BFS™, you waive and release any claim for damages, indemnity, or reimbursement against Franklin Armory® for any claims, fines, or damages imposed upon you for use of the BFS™. In addition, you agree to release Franklin Armory® (including its independent contractors, affiliated entities, parent companies, subsidiaries, present and former employees, owners, officers, members, managers, partners, contractors, insurers, shareholders, and directors) from any and all claims, actions, damages, liabilities, losses, costs, and expenses (including, without limitation, attorney fees) for death, injury, loss, or damage of property in any way arising out of the purchase and use of the Franklin Armory® BFS™. By purchasing and/or using the Franklin Armory® BFS™, you agree to limit liability to actual damages arising from gross negligence or willful misconduct of Franklin Armory®. In no event shall Franklin Armory® be liable for any special, incidental, punitive, or consequential damages or other indirect damages.

5. INDEMNIFICATION

By purchasing or using the Franklin Armory® BFS™, you agree to accept responsibility for your use of the product and any consequence or fine imposed upon you by any government entity or third party and to indemnify and hold harmless Franklin Armory® for any claims made resulting from your use of the BFS™.

6. TRANSFER OF PRODUCT

If you should sell, lease, let someone borrow or use, or in any way transfer the BFS™ to any other individual, you agree, as a condition of acquiring this product, to accept the responsibility of ensuring that the transferee is fully aware and agrees to the conditions set forth herein. Failure to disclose these conditions to a third party without first providing acknowledgment and acceptance by the transferee of the conditions set herein will be grounds for liability on the part of the transferor.

7. BINDING EFFECT

By purchasing the Franklin Armory® BFS™, you agree that this waiver shall be binding upon you as well as your next of kin, personal representatives, heirs, beneficiaries, and assigns and shall inure to the benefit of Franklin Armory® and successors and assigns of Franklin Armory®.

8. SEVERABILITY

If any provision of this Waiver and Release is for any reason declared to be invalid or unenforceable, the validity and enforceability of the remaining provisions will not be affected. The invalid or unenforceable provision will be deemed modified to the extent necessary to render it valid and enforceable, and if no modification may render it valid and enforceable, this Waiver and Release will be construed as if not containing such provision and the rights and obligations of the parties will be construed and enforced accordingly.

9. GOVERNING LAW

This Waiver and Release shall be governed in all respects by the laws of the state of Nevada without regard to conflict and law principles. Any action or claim shall be brought in Douglas County, Nevada.

10. DISPUTE RESOLUTION: ARBITRATION

To the extent permitted by applicable law, any controversy or claim arising out of or relating to the product, its design, functionality, or materials, and this contract, or breach thereof, will be settled by binding arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association. Under this arbitration provision, you give up the right to resolve any controversy or claim arising out of or relating to the product, including its design, functionality, materials, or this contract by a judge and/or a jury. You also agree not to participate as a class representative or class member in any class action litigation, any class arbitration or any consolidation of individual arbitrations. The parties specifically agree to the binding nature of the arbitration.

11. VOLUNTARY ACTION

While we sincerely value every Franklin Armory® customer, there is no necessity for anyone to own a Franklin Armory® BFS™. There are many other high-quality firearms and Triggers that the consumer may purchase instead of our products. Please take your time in deciding whether to purchase the BFS™ products. We intend to maintain supply, so please do not rush this important decision. Please contact the Franklin Armory® factory if you have any questions. However, if for any reason the conditions set forth in this agreement are unacceptable to you, THEN DO NOT PURCHASE THIS PRODUCT.

If you have already purchased a Franklin Armory® BFS™, and you do not agree to the terms set herein, then we encourage you to IMMEDIATELY RETURN THE PRODUCT TO YOUR RETAILER in an unused, new condition. Refund terms will be set by each independent retailer.

THIS IS A WAIVER AND RELEASE OF LIABILITY. YOU AGREE TO THIS ENTIRE DOCUMENT. YOU AGREE TO ALL OF THE PROVISIONS HEREIN AND UNDERSTAND THAT YOU HAVE GIVEN UP SUBSTANTIAL RIGHTS BY AGREEING TO ALL OF THE PROVISIONS. BY PURCHASING, AND CONTINUING TO RETAIN THESE PRODUCTS, YOU ARE INDICATING YOUR VOLUNTARY AGREEMENT TO THE PROVISIONS OF THIS WAIVER AND RELEASE OF LIABILITY.

MANUFACTURER'S WARNING: The Binary Firing System® should only be installed by a Franklin Armory® Certified Armorer. Franklin Armory® will not be responsible for an improper installation.

MANUFACTURER'S WARNING: ALWAYS wear safety glasses when installing BFS™ components. Small springs may inadvertently project small parts with great force.

NOTE: Franklin Armory® requires all Certified Armorers to install the red sticker on every BFS™. If the sticker is not applied, an unsuspecting user of the firearm could accidentally discharge the weapon causing injury or even death.

IMPORTANT NOTICES

NOTICE: Read this entire manual including the section titled “Franklin Armory® Patented Binary Firing System® Waiver and Release” **BEFORE** installing and using this product.

NOTICE: It is very important that new users seek qualified instruction before using the Binary Firing System®. A professional firearms instructor with experience operating Franklin Armory's Binary Firing System® is highly recommended.

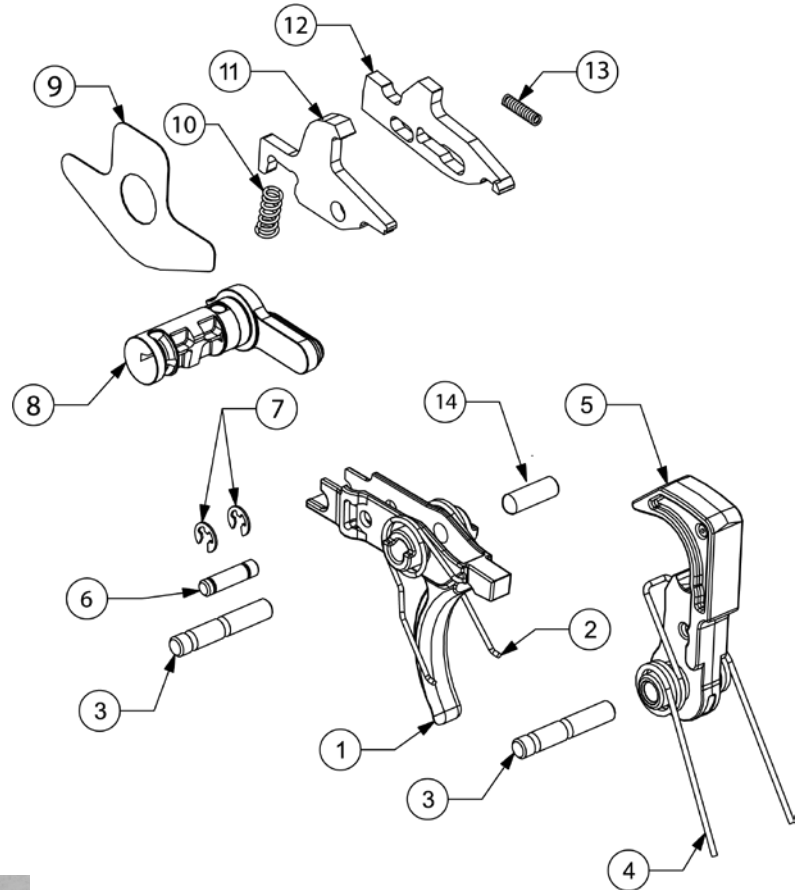
NOTICE: It is very important that the Binary Firing System® is installed correctly. Franklin Armory recommends that this product be installed by a Franklin Armory Certified Armorer or a certified gunsmith. Franklin Armory will not be responsible for improper installation.

NOTICE: To ensure the Binary Firing System® was installed correctly, user **MUST** perform the “Dry Fire Function Tests” (included in this manual) **BEFORE** live fire operation. If any of the checklist steps result in a failure, it is likely that something has been installed incorrectly. If re-installation does not resolve the problem, contact your gunsmith or Franklin Armory's Customer Service department for assistance.

AR-ESSENTIAL PARTS

Part # | Part Name | (QTY)

1. Trigger (1)
2. Trigger Spring (1)
3. Hammer Trigger Pin (2)
4. Hammer Spring (1)
5. Hammer (1)
6. IDS Guide Rod (1)
7. E-Clip (2)
8. Selector Shaft (1)
9. Selector Label - Left (1)
10. Disconnecter Spring (1)
11. Disconnecter (1)
12. IDS (1)
13. IDS Spring (1)
14. Slave Pin (1)



TOOLS REQUIRED



1. 1/8 Punch
2. Mallet

INSTALLATION

MANUFACTURER WARNING: The Binary Firing System® should only be installed by a Franklin Armory® Certified Armorer. Franklin Armory® will not be responsible for an improper installation.

Step 1: Locate all of the components and tools necessary for the installation. Read the entire instructions before attempting installation of the Binary Firing System®.

Step 2: Ensure that both sides of the customer supplied lower receiver do not have oil residue that would prevent the application of the Safety Selector Indicator Sticker. (If necessary, use alcohol or a similar oil removing substance to clean the receiver.) Remove the Safety Selector Indicator Sticker from the backing and squarely apply it to the left side of the customer supplied lower receiver with the safe position facing forward. (See figures 1A-1B).



Figure 1A



Figure 1B

NOTE: Franklin Armory® requires all Certified Armorsers to install the red sticker on every Binary® equipped firearm. If the sticker is not applied, an unsuspecting user could accidentally discharge the weapon causing injury or even death.

Step 3: Slide the trigger sub-assembly into the receiver (see figure 2A), position one trigger pin through the left side of the receiver so that it barely holds the left side spacer in position. Run the other Trigger Pin in from the right side. (See figure 2B). It is best to have the smooth end of the Trigger Pin enter from the right side of the receiver and be lightly tapped until the other Trigger Pin and Slave Pin have drifted out. (See figure 2C).



Figure 2A



Figure 2B



Figure 2C

Step 4: Wrap the Hammer Spring around the Hammer as shown (see figure 3A). Install the hammer with the remaining hammer/trigger pin. Using a mallet or punch, push the hammer pin flush with the receiver (see figure 3B).



Figure 3A



Figure 3B



Figure 3C



Figure 3D

FUNCTION CHECK: With the Hammer and Trigger Sub-Assembly installed, the Binary® Mode can be tested. One should be able to cock the Hammer, pull the Trigger, hold the Trigger back, re-cock the Hammer on the Disconnecter, and then release the Trigger to allow the Hammer to fall fully forward. (Note: It is prudent to prevent the steel Hammer from hitting the receiver).

FUNCTION CHECK: With the Hammer forward, apply forward pressure to the back face of the IDS. The IDS should slip forward from underneath the forward lip of the Disconnecter. (See figure 3C).

FUNCTION CHECK: With the Hammer forward, apply downward pressure on the rear portion of the Disconnecter. The IDS should slip under the forward lip of the Disconnecter. (See figure 3D).

Step 5: Ensure that the Hammer is cocked, then install the Safety Selector in from the left side of the receiver. (See figure 4A). Install the customer supplied Safety Detent into the appropriate hole in the receiver. (See figure 4B). Install the customer supplied Safety Detent Spring and Grip to the receiver. (See figure 4C). Install the customer supplied Grip Screw. (See figure 4D).

**Figure 4A****Figure 4B****Figure 4C****Figure 4D**

FUNCTION CHECK: Cock the Hammer and make sure that the IDS is in a forward position. Move the Safety Selector through all three modes. The Safety Selector should be easily manipulated between all three modes. (Note: The Safety Selector is not designed to go in to Safe Mode with the Hammer forward).

Step 6: Perform the “BFS™ Dry Fire Checklist” found on Page 5 of this manual. If the BFS™ malfunctions during the Dry Fire Checklist, then it is important to fix the problem before moving forward to live fire testing.

WARNING: DO NOT LIVE FIRE TEST YOUR FIREARM UNTIL YOU HAVE COMPLETED AND PASSED THE BFS™ DRY FIRE CHECK LIST!

TRIGGER REASSEMBLY INSTRUCTIONS

The Trigger sub-assembly is pre-built at the factory. If the Slave Pin should fall out in transit, then the sub-assembly will need to be rebuilt.

Step 1: Insert the IDS spring into the channel inside the IDS. (See figure 7A).

Step 2: Reposition the Disconnecter inside the Trigger Subassembly so the trigger pin holes align.

Step 3: Insert the Slave Pin into the right side far enough to hold the Disconnecter in place. (See figure 7B).

Step 4: With a pick, compress the IDS Spring rearward so that the Slave Pin can be pushed through all the way to the left side of the Trigger. (See figure 7C).

Step 5: Place the Spacers on either end of the Trigger with the half round portion facing upward on the outside ends. Wrap the Trigger Spring around the assembly. (See figure 7D).

**Figure 7A****Figure 7B****Figure 7C****Figure 7D**

Before using your Binary® equipped firearm for the first time, and each time you use your firearm again thereafter, we recommend that each operator run through the following litany of dry fire function checks. By doing so, you will not only ensure that your Binary® is operating correctly, you will also train your thought process on what to expect from your trigger system.

WARNING: Always ensure that your firearm is completely unloaded before performing a dry fire test. Remove the ammunition, magazine, and ensure that there is not a loaded round in the chamber.

WARNING: Even though you believe your firearm is unloaded, it is always important to point your muzzle in a safe direction while performing the following tasks.

NOTE: Function checks 1 & 2 to be completed with the upper receiver removed. Function checks 3-10 are recommended to be completed with the upper receiver properly attached to the firearm.

1. Function Check the Disconnecter Motion

- A. With the Selector on Binary® and the Hammer forward, push on the tail of the disconnecter.
- B. The IDS protrusion should slip under the front tip of the Disconnecter.

2. Function Check the IDS Motion

- A. With the Selector in Binary® and the Hammer forward, push on the back of the IDS.
- B. The IDS protrusion should slip out from under the front tip of the Disconnecter

3. Function Check the Safety

- A. Ensure that the hammer is cocked on the sear.
- B. Move the safety selector to “Safe” Mode.
- C. Pull the Trigger.
- D. The Trigger should not move.
- E. Release the trigger and move the Safety Selector back to “Semi” Mode.
- F. The Hammer should not fall forward.

4. Function Check the Transition from “Semi” to “Safe”

- A. Ensure the Hammer is cocked on the sear.
- B. Move the Safety Selector to “Semi” Mode.
- C. Pull the Trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. With the Trigger still held back, re-cock the Hammer on the Disconnecter.
- F. While still depressing the Trigger, turn the selector back to “Safe” Mode and release the Trigger.
- G. The Hammer should fall to the sear and not strike the Firing Pin.

5. Function Check Semi Mode

- A. Ensure that the hammer is cocked on the sear.
- B. Pull the Trigger and keep it held back.
- C. The Hammer should fall forward and impact the Firing Pin.
- D. With the Trigger still held back, re-cock the Hammer.
- E. It should now be held back by the Disconnecter.
- F. Release the Trigger.
- G. The Hammer should now fall to the sear and not to the Firing Pin.

6. Function Check the Transition from Semi to Binary®, Scenario 1

- A. Move the Selector to “Semi” Mode.
- B. Ensure the Hammer is cocked.
- C. Pull the Trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. With the Trigger held back, re-cock the Hammer on the Disconnecter.
- F. Hold the Trigger back while turning the Safety Selector to Binary® mode.
- G. The Selector should not be able to turn to Binary® mode.
- H. The Hammer should not fall while manipulating the selector.
- I. Release the trigger.
- J. The Hammer should fall off of the Semiautomatic Disconnecter and be caught by the sear.

7. Function Check the Transition from Semi to Binary®, Scenario 2

- A. Move the Selector to “Semi” Mode.
- B. Ensure the Hammer is cocked.
- C. Pull the trigger and keep it back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. With the Trigger still held back, re-cock the Hammer on the Disconnecter.
- F. Hold the Trigger back while turning the Safety Selector to Binary® Mode.
- G. The Selector should not be able to fully turn to Binary® mode.
- H. Continue to maintain pressure on the Selector.
- I. Release the Trigger while continuing to maintain pressure on the Selector.
- J. The Hammer should not move.
- K. Now release pressure on the Selector.
- L. The Hammer should fall off of the Disconnecter and be caught by the sear.

8. Function Check Binary® Mode, Scenario 1

- A. Ensure that the Hammer is cocked on the sear.
- B. Move the Safety Selector to Binary Mode.
- C. Pull the Trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. Re-cock the Hammer on the Disconnecter.
- F. Slowly release the Trigger until the Hammer falls on the firing pin.
- G. Keep your finger held at the point that the Hammer fell forward.
- H. Re-cock the Hammer on the Disconnecter.
- I. Release the trigger and the hammer should reset to the sear.

9. Function Check Binary® Mode, Scenario 2

- A. Ensure that the Hammer is cocked on the sear.
- B. Ensure that the Safety Selector is in “Binary®” Mode.
- C. Pull the trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. Re-cock the Hammer on the Disconnecter.
- F. Slowly release the trigger until the Hammer falls on the Firing Pin.
- G. Keep the trigger held at the point that the Hammer fell forward.
- H. Re-cock the Hammer on the Disconnecter.
- I. Pull the Trigger and the Hammer should not fall.
- J. Release the Trigger slowly until the Hammer falls on the Firing Pin
- K. While keeping your finger at the breaking point, re-cock the Hammer.
- L. Release the Trigger again, and it should reset at the sear.

10. Function Check Intermodal travel from Binary® to Semi Mode

- A. Ensure that the Hammer is cocked on the sear.
- B. Ensure that the Safety Selector is in “Binary®” Mode.
- C. Pull the Trigger and keep it held back.
- D. The Hammer should fall forward and impact the Firing Pin.
- E. Re-cock the Hammer on the Disconnecter.
- F. Continue to hold the Trigger back.
- G. Rotate the Safety Selector from “Binary®” Mode to “Semi” Mode.
- H. Release the trigger.
- I. The Hammer should fall off the Disconnecter and rest on the sear.

This concludes the function test of the Binary Firing System®

What to Expect When Live Fire Testing the Binary Firing System®

WARNING: Keep your finger off the trigger until you are ready to shoot.

WARNING: Never Point your firearm at anything you are not willing to destroy.

WARNING: Be sure of your target and what is behind it.

Test the Safe Mode

With the Safety Selector in Safe Mode, the Trigger should not move, and the Hammer should not fall forward.

Test the Semiautomatic Mode

With the Safety Selector in Semi Mode, the firearm should fire one round every time the trigger is pulled.

When the trigger is released, the Hammer should reset to the sear.

Test the Binary® Mode

With the Safety Selector in Binary® Mode, the firearm should fire once every time the Trigger is pulled and once again when the Trigger is release. By releasing the trigger slightly more, an audible reset should be perceived.

NOTE: It may be possible to fire on the pull phase in Binary® Mode, and then again on the release phase in Binary® Mode, but if the release phase reset is not performed, an operator can potentially pull the trigger again and the firearm will not fire. However, when the Trigger is release a second time, the firearm will fire. It is recommended that the operator use a “pull through, release through” technique when operating in Binary® mode.

Buffer Spring Upgrade

The OEM buffer spring that came with your AR-style firearm will most likely be compatible with Franklin Armory's patented Binary Firing System. However, if you find the need to fine tune your AR for optimal Binary® performance, Franklin Armory offers Binary-rated buffer springs in two different weights (Medium and Heavy) to help reduce the possibility of hammer follow as a function of carrier speed. Visit www.FranklinArmory.com to order or contact our Customer Service team for more information.



Optional Buffer Spring Insertion

NOTE: The optional – and sold separately – BFS™ Buffer Springs are stiffer than a typical carbine buffer spring and are designed to help reduce the possibility of hammer follow as a function of carrier speed. The Medium Buffer Spring is marked with rubberized black paint on one end while the Heavy Buffer Spring is unmarked. Use the spring that works best for your particular application. It is possible that your existing spring might work better than either of the BFS™ Buffer Springs. Any additional fine-tuning should be completed by a professional gunsmith.

Ambidextrous Selector Upgrade

Your AR-Essential Binary Firing System features a mil-spec style selector. Ambidextrous selector conversion kits - similar to that which is included in the AR-ELITE Binary Firing System® may be purchased at www.FranklinArmory.com or through your local firearm retailer.



Optional Ambidextrous Selector: Left



Optional Ambidextrous Selector: Right



FRANKLIN[®] ARMORY

For a downloadable copy of this manual as well as links to installation videos,
please go to our website:

www.FranklinArmory.com

UPGRADE YOUR 2A.

*“Those who would give up essential Liberty,
to purchase a little temporary Safety,
deserve neither Liberty nor Safety.”*

-BENJAMIN FRANKLIN

If you have a suggestion on how to improve this installation procedure or if you have any questions
please contact us:

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