



4702

The Echo Trigger is designed with safety being of utmost priority. When the operator is in the Echo Mode and depresses the trigger one round is fired. The operator can move the safety selector to the safe or semi-automatic mode and a second round will NOT fire upon release of the trigger.

3 MODES OF OPERATION

SAFE MODE:

FIREARM WILL NOT FIRE

SEMI-AUTOMATIC MODE:

FIREARM FIRES WHEN TRIGGER IS PULLED

ECHO MODE:

FIREARM FIRES WHEN TRIGGER IS PULLED

AND ALSO WHEN TRIGGER IS RELEASED.

PROUDLY MADE IN THE USA



VETERAN-OWNED SMALL BUSINESS



ATF APPROVED • PATENT PENDING TRIGGER
LOCK DESIGN PATENTED SECONDARY
DISCONNECT
(U.S. PATENT 8,820,211 & U.S. 8,667,881)
TECHNOLOGY LICENSED THROUGH
FRANKLIN ARMORY®
INSIDE THE ECHO TRIGGER, INCLUDING U.S.
PAT. NOS 9,952,012 AND 9,952,013
DROP IN DESIGN

4702

For more information please contact:



812-445-4028
www.fostech.us
sales@fostech.us





By breaking the seal and opening this package you agree that you will take responsibility for your own actions both intentional and unintentional. You agree to hold FosTech Inc and any of its distributors harmless in any consequences resulting from the installation and or use of any FosTech products. You also agree to the terms on the Warning Statement contained within this package.

Thank you for your purchase of the Echo Trigger. This product should be used only after reading and understanding these warnings and the instructions accompanying this product. Installation of this product in a firearm will enable the firearm to fire on the pull of the trigger and on the release of the trigger when in Echo Mode and on the pull of the trigger in semi-automatic mode and could result in injury or death to the user or another person. Upon installation of any Echo Trigger, you (defined as the purchaser, possessor or user) are agreeing with this warning, the liability statement below, and the use instructions set forth herein or online.

WARNING STATEMENT

Firearms are the inherently dangerous. Complete safety is essential in possessing, handling, and operating any firearm on which this product is installed. By purchasing, possessing or using this product, you confirm your understanding and agreement to follow all applicable local, state, and federal laws and regulations, and take full responsibility for your own actions, both intentional and unintentional. Never use this product while under the influence of alcohol or drugs (prescription or non-prescription). It is your responsibility to assure that the firearm on which this product is installed is safely handled, fired, and stored at all times. Always make sure muzzle is pointed in a safe direction before manipulating the controls on the firearm.

You acknowledge that you are solely accountable for your own actions relating to the handling, firing, and storing of the firearm and this product. FosTech specifically disclaims all responsibility for any death, injury, or damage that may occur because of, or as a result of modification and/or the use or attempted use, of any FosTech product in conjunction with any firearm.

Children are attracted to and can operate firearms that can cause severe injuries or death. Prevent child access by always keeping guns locked and away and unloaded when not in use. If you keep a loaded firearm where a child obtains and improperly uses it, you may be fined or sent to prison in certain states.

FosTech will not repair any damage to product due to your modification, attempted modification, use or attempted use of the product in conjunction with any firearm other than the specific model and caliber for which the product is specifically intended. FosTech products are carefully engineered with your safety in mind – any actual or attempted modifications could result in a fatal accident.

FosTech expressly disclaims any implied warranties, including the implied warranties of merchantability and/or fitness for use. Under no circumstances will FosTech, or any of its parents, affiliates or vendors (or any officers, directors, employees or agents of the parties, or its parents, affiliates or vendors) be liable for any indirect, incidental, consequential, special or exemplary damages (however or whenever arising), including, without limitation, death, damages for lost revenue, lost profits, anticipated profits, lost business or personal injury.

By purchasing, handling, possessing, and or operating, this product, you agree that you have read and understand all included warnings and instructions, and expressly and unequivocally agree to these terms and conditions of use for this FosTech product.

Disclaimer:

The AK platform does not have a single standard set of dimensions to ensure compatibility with aftermarket parts. Please see our current list of compatible AK variants at www.fostech.us.

Video-Assisted Installation:

Full installation video, other FAQ videos, and our troubleshooting guide are available on our YouTube Channel.

www.echoquestions.com



Table of Contents:

Parts Diagrams	2
Requirements/Recommendations	3
Installation of the Echo AK	4
Function Check	6
Letters from ATF and Consultant	7
Connect with Fostech	10

****CAUTION****

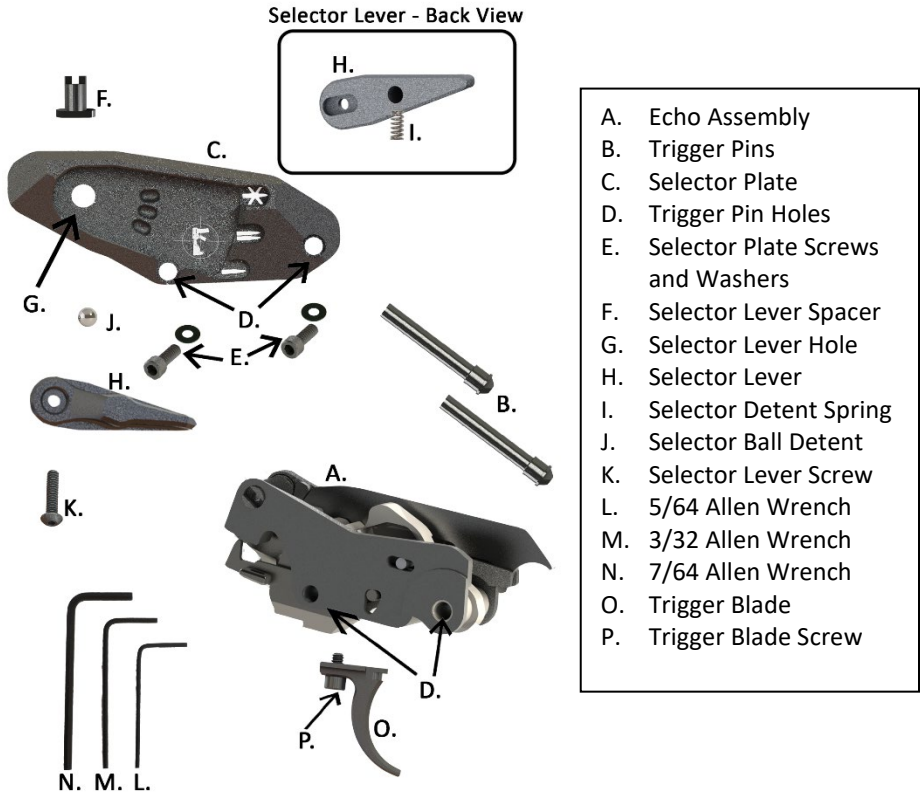
READ BEFORE INSTALLING TRIGGER

WHEN INSTALLING THE ECHO AK TRIGGER, DO NOT DISASSEMBLE THE "ECHO ASSEMBLY" (A) ON THE PARTS DIAGRAM. DOING SO WILL VOID THE WARRANTY.



Parts Diagram

(Use this page as a reference for parts described throughout the instruction manual.)



Directional Nomenclature

In conventional terminology regarding a firearm in the horizontal position, the stock is in the “rear” or “rearward”; the muzzle is in the “front” or “forward”; the sights are on “top” or “upward”; the trigger is on the “bottom” or “downward.” On a traditional AK platform, the “Right” side is where the Fire Controls are located, and the “Left” side traditionally has no controls.

The Echo Trigger™ is an engineering breakthrough that incorporates several different technologies. The Echo Trigger™ is also protected under several patents and patent pending patents from FosTech. These patents include but are not limited to US Patent 8667881, 8820211. Technology licensed through Franklin Armory inside the Echo Trigger, including U.S. Pat Nos 9952012, 9952013, 10393461, and 10480881.

Requirements:

A compatible AK Variant. Due to the wide variety of AK rifles, Fostech cannot guarantee compatibility with any specific firearm.



Tools Needed:

- 5/64, 3/32, and 7/64 Allen Wrench (Provided)
- Small Adjustable Wrench

How the Echo AK Works:

- **Safe Mode (Selector Lever (H) to "Safe")** (See fig. 1): Firearm will not fire.
- **Echo Mode (Selector Lever (H) to "Echo")** (See fig. 2): Firearm will fire once on the pull of the Trigger and will reset when the Trigger is pulled rearward to reset activation. It will fire again on the release of the Trigger and will reset when released to reset activation. It is then ready to repeat the described.



Note: (If the Trigger is not pulled rearward to reset activation, it will not fire on release but will reset when released to reset activation and will fire on the next pull.)

- **Semi-Automatic Mode (Selector Lever (H) to "Semi")** (See fig. 3): Firearm will fire once on the pull of the Trigger and will reset on the release, ready to fire on the next pull.



WARNINGS

TO NEGATE THE SECOND ROUND IN "ECHO" MODE, ONE MUST MAINTAIN REARWARD PRESSURE ON THE TRIGGER, AND POSITION THE SELECTOR LEVER (H) TO "SEMI" ONLY.

****THE SELECTOR WILL NOT POSITION TO "SAFE" IN THIS OPERATION**
ONE MAY THEN RELEASE THE TRIGGER (NO ROUND WILL BE FIRED).**

WARNING! IF ONE POSITIONS THE ECHO SELECTOR LEVER (H) TO "ECHO" AFTER FIRING A ROUND IN "SEMI," A ROUND WILL FIRE ON THE RELEASE OF THE TRIGGER!

AS WITH ANY OTHER SEMI-AUTOMATIC FIREARM, IF ONE IS NOT SHOULDERING AND GRIPPING THE FIREARM SECURELY, THERE IS A RISK OF BUMP-FIRING.

Installation of the Echo AK

1) Prepare the AK Receiver for Installation of the Echo AK:

- a) Remove Dust Cover, Operation Spring Assembly, Bolt Carrier Assembly, Hammer, Safety Selector, and Trigger from the AK Receiver, and set them aside for final assembly.

2) Installation of the Trigger Assembly:

- a) Remove Trigger Blade (O) from Echo Assembly (A) by sliding it rearward. (Set the Trigger Blade (O) aside for installation later.) (See fig. 4)
- b) Set Echo Assembly (A) into the Receiver. The Echo Assembly (A) may need to be worked in from the rear of the Receiver, rocking it into place to get the Echo Assembly (A) under the guide rails of the Receiver. (See figs. 5&6)

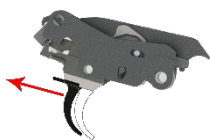


fig. 4

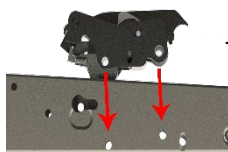


fig. 5



fig. 6

- c) Push Trigger Pins(B) through Trigger Pin Holes (D) on the left side of the Receiver, through the Echo Assembly (A) and through the Pin Holes (D) on the right side of the Receiver. (See fig. 7)
- d) Position the Selector Plate (C) on the right side of the Receiver so that the Trigger Pins (B) fit into the Trigger Pin Holes (D) on the Selector Plate (C). (See fig. 8)
- e) Using the 3/32 Allen Wrench (M), install Selector Plate Screws and Washers (E) into Trigger Pins (B). (See fig. 9) Hold Trigger Pins (B) on the left side of the Receiver with a small adjustable wrench to tighten. (See fig. 10)

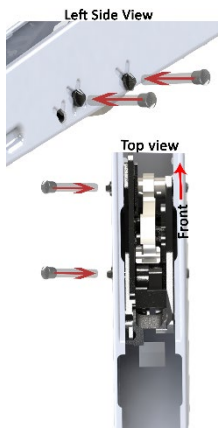


fig. 7



fig. 8



fig. 9

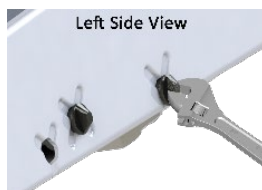


fig. 10

- f) Place the forked end of the Selector Lever Spacer (F) into the Selector Lever Hole (G) so that it engages the slot in the Echo Assembly (A). (See fig. 11)
- g) Place the Selector Ball Detent (J) on the top detent pocket on the Selector Plate (C) (This will line the Selector Lever (H) up with "Safe" mode). (See fig. 11)
- h) Ensure the Selector Detent Spring (I) is seated in the pocket of the Selector Lever (H) (See fig. 12), then place the Selector Lever (H) on the Selector Plate (C). Ensure that the cutout in the Selector Lever (H) engages the slot shape on the top of the Selector Lever Spacer (F), and the Selector Detent Spring (I) engages the Selector Ball Detent (J). (See fig. 13)
- i) With the 5/64 Allen Wrench (L), use the Selector Lever Screw (K) to attach the Selector Lever (H) and tighten. (See fig. 14)

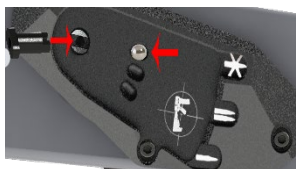


fig. 11

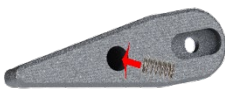


fig. 12

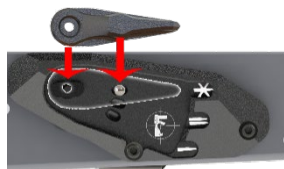


fig. 13

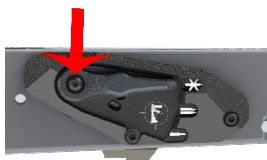


fig. 14

- j) Slide the Trigger Blade (O) back onto the Echo Assembly (A) from the rear. (See fig. 15)
- k) With the 7/64 Allen Wrench (N), use the Trigger Blade Screw (P) to attach the Trigger Blade (O) and tighten. (See fig. 15)

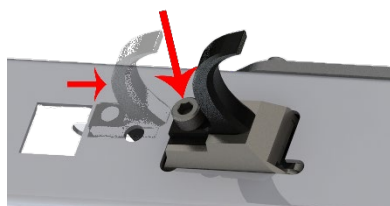


fig. 15

3) Reassemble the AK Receiver

- a) Reassemble the Bolt Carrier Assembly, Operation Spring Assembly, and Dust Cover.

Function Check

Before performing the function check on the Fostech Echo AK, ensure the firearm is unloaded.

1) **Test "Safe" Mode:**

- a) Charge the firearm. Position the Selector Lever (H) to "Safe" (See fig. 18) and pull the Trigger. This should result in **no hammer drop**.



fig. 18

2) **Test "Echo" Mode:**

- a) Having already charged the firearm, position the Selector Lever (H) to "Echo." (See fig. 19) Pull the Trigger (**keep the Trigger pulled for the next test**). This should result in a **hammer drop**. **The Trigger must be pulled rearward to reset activation for the Trigger to fire on the release.**
- b) Charge the firearm and release the Trigger. This should result in a **hammer drop**.



fig. 19

Note: (If Trigger is not pulled rearward to reset activation, it will not fire on release but will reset when released to reset activation and will fire on the next pull.)

3) **Test "Semi-Automatic" Mode:**

- a) Charge the firearm. Position the Selector Lever (H) to "Semi-Automatic" (See fig. 20). Pull the Trigger (**keep the Trigger pulled for the next test**). This should result in a **hammer drop**.
- b) As the Trigger is still being pulled, charge the firearm. Slowly release the Trigger. This should result in **no hammer drop**.



fig. 20

4) **Test Negating the Second Round in "Echo" Mode:**

- a) Position the Selector Lever (H) to "Echo" (See fig. 19). Charge the firearm. Pull the Trigger (**keep the Trigger pulled for the next test**). This should result in a **hammer drop**.
- b) Charge the firearm. Maintain constant pressure on the Trigger. Position the Selector Lever (H) to "Semi-Automatic". The Trigger may now be released, and this should result in **no hammer drop**. The Trigger is then ready to operate appropriately in whatever mode is selected.

***The entire installation process
and a trouble-shooting guide are available at
www.echoquestions.com***

*Tools used in installation/assembly may be different than tools pictured.



U.S. Department of Justice

Bureau of Alcohol, Tobacco,
Firearms and Explosives

Martinsburg, WV 25405

www.atf.gov

903050: WJS
3311/301397

NOV 20 2013

Dear Mr. Hawbaker,

This is in reference to your latest correspondence to FTB, Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), which is accompanied by an AR-type firearm in which AR-15 pattern fire-control components are installed (see enclosed photos). Your item was submitted in response to FTB letter # 2012-683-WS, which provided our evaluation of the last sample of your proposed trigger device. Although we informed you in letter #2012-683 that FTB had classified this device as a "machinegun" per 26 U.S.C. § 5845(b), we indicated that our Branch would evaluate it again if you could redesign your trigger device to incorporate a positive disconnecter mechanism.

The current sample examined by FTB consists of a modified trigger device (assembly) for AR-15 pattern firearms. This assembly is designed to allow one shot to be fired when the trigger is pulled, and another shot when the trigger is released. Further, we found that the device selector has not been machined to enable the trigger to be pulled further than an unmodified selector would allow. The trigger has been modified to incorporate a shaft which adjusts the position of the disconnecter relative to the trigger. Additionally, FTB observed that material on the top and bottom portion of the hammer has been removed, and our evaluation also disclosed that there is an additional "disconnecter" located directly behind the primary disconnecter. This "secondary" disconnecter enables the hammer to be held positively to rear, prior to the release of trigger, for the "release shot."

To determine its two modes of operation, FTB first performed a manual function test on the submitted sample in its "normal mode" with the device selector placed in its "12 o'clock position." This test disclosed that the submitted sample would function as an un-modified semiautomatic AR-type firearm.

Mr. Peter Hawbaker

Page 2

The second function test, performed in the "modified mode," with the device selector placed in its "9 o'clock position," found that (1) a pull of the trigger would release the hammer, and (2) a subsequent release of the trigger would allow the secondary disconnecter to release the hammer. At this point, an unmodified trigger group would retain the hammer on the trigger-engagement surface; the modified group, however, allows the hammer to travel forward, firing a cartridge by releasing the trigger.

Based on these function tests, our Branch has determined your system is designed and intended to allow only *a single shot to be fired with each movement of the trigger* since it incorporates a positive disconnecter function for the "pull" shot and the "release" shot. As a result, the safe capture of the hammer after the "pull" shot has been fired is not affected by the rapid release of the trigger by the shooter. Consequently, if the trigger is pulled slowly, a condition known as "hammer-follow" *does not* occur.

Live-fire testing of the accompanying host firearm with your submitted trigger device installed confirmed the results of the manual function testing. If the trigger was pulled and released deliberately and quickly, a single shot was fired for each pull and each release. Further, if the trigger was pulled slowly, "hammer-follow," which could cause a firearm to shoot automatically more than one shot, without manual reloading, by a single function of the trigger, *was not observed*—in contrast to our findings when testing your previously submitted sample.

Therefore, based on the results of our examination and testing, FTB has determined that your submitted trigger device, as received and examined, *does not* constitute a combination of parts designed and intended for use in converting a weapon into a machinegun. Also, FTB finds that the host AR-type firearm, CMMG MK-4 (serial number SCM-101303), not having any modifications made to the receiver that would cause it to fire automatically, is *not* a "machinegun" as defined in 26 U.S.C. 5845(b). This firearm, along with the installed trigger device, will be returned to you as soon as our Branch has received either a FedEx (or alternate carrier) account number, or a prepaid return label.

We thank you for providing FTB with a new sample and trust the foregoing has been responsive to your current evaluation request.

Sincerely yours,


Earl E. Ruppel
Chief, Firearms Technology Branch

Enclosure

Gentlemen:

My consulting firm was asked to provide an opinion concerning the classification of FosTech MFG, LLC's new model of Echo trigger which incorporates a trigger lock system to further guard against the potential of a firearm firing with hammer follow through. As part of my research and analysis, I have reviewed product diagrams and descriptions that you have provided, reviewed previous ATF Firearms Technology Branch rulings, and utilized my extensive experience in firearms technology classification related matters. This experience includes, among other things, over two decades in the United States Marine Corps, work as a firearms instructor, and fifteen years with the Bureau of Alcohol, Tobacco and Firearms, including time as the acting chief of ATF's Firearms Technology Branch - the branch of ATF charged with rendering firearms classification decisions. As a consultant, I have worked with numerous other federal firearm licensees with regard to ATF regulatory compliance and related matters, including a number of firearm manufacturers. Accordingly, and while my analysis and opinion is set forth in additional detail below, it is my opinion that the new model of FosTech's Echo trigger containing the new trigger lock does not constitute a machinegun pursuant to the National Firearms Act.

I. LEGAL DEFINITIONS AND BACKGROUND:

Under 18 U.S.C. § 921(a)(3), the Gun Control Act of 1968 ("GCA") defines the term "firearm" to include "any weapon (including a starter gun) which will or is designed to or may be readily converted to expel a projectile by the action of an explosive ... [and] ... the frame or receiver of any such weapon ... " Moreover, under 26 U.S.C. § 5845(b), the National Firearms Act of 1934 ("NFA") defines "machinegun" to include "any weapon which shoots, is designed to shoot, or can be readily restored to shoot, automatically more than one shot, without manual reloading, by a single function of the trigger. This term shall also include the frame or receiver of any such weapon, any part designed and intended solely and exclusively, or combination of parts designed and intended, for use in converting a weapon into a machinegun, and any combination of parts from which a machinegun can be assembled if such parts are in the possession or under the control of a person." (emphasis added). Thus, the question presently under consideration is whether the new model of the Echo trigger containing the trigger lock falls within the definition of "machinegun" under the NFA. II. APPLICATION AND ANALYSIS:

As a preliminary matter, it has long been ATF's position (dating back to the late 1980s) that semi-automatic rifles having "two-stage" triggers that fire one round on the trigger pull and another round on the trigger release are not machineguns, because ATF interprets "single function of the trigger" to mean a "single movement of the trigger, whether that movement is the pull of the trigger or the release of the trigger." ATF reiterated this position when it approved the design underlying the Echo trigger and determined that, without more, the mere ability of a device to fire a shot upon the pull of the trigger and a second shot upon release of the trigger does not render it a "machinegun" as defined in the NFA. See, ATF Letter 903050: WS, 2211/201397 (issued November 20, 2013 to Mr. Peter Hawbaker). Accordingly, since ATF interprets the term "single function of the trigger" in the NFA definition of machinegun to mean a single movement of the trigger, and the "pull" of a trigger and the "release" of a trigger each constitute separate movements, if a firearm does not allow more than one shot to fire on a single trigger pull or a single trigger release, such a firearm is, by definition, not a "machinegun."

Here, the Echo trigger is specifically designed to fire a single shot on each movement of the trigger, and in my evaluation of the Echo trigger, that is in fact what it does. Such is confirmed by ATF's approval of the underlying design in the 2013 Hawbaker letter. However, in an attempt to further enhance the Echo trigger and increase its safety, FosTech has updated the Echo system with a new trigger lock mechanism that was not a part of the underlying design when it was supplied to ATF for evaluation. As a result, while FosTech is confident that the enhanced Echo trigger containing the new trigger lock remains outside the definition of "machinegun" because it in no way substantively changes, modifies and/or interferes with the operation of the approved design, out of an

abundance of caution, FosTech requested that I independently, and without restriction, evaluate the revised mechanism to determine if I agree.

The new Echo trigger lock feature is not a necessary component of the functionality of the Echo trigger, and the new component does not in any way impact the one-movement/one-fire nature of the device. Thus, the addition of the trigger lock should in no way impact ATF's approval of the underlying design as non-substantive changes can be made to approved designs without risking their approved status. Instead, the new trigger lock feature is intended as an advanced safety mechanism designed to eliminate the ability of a firearm to discharge as a result of hammer follow-through.

When an AR-type firearm is equipped with the Echo trigger having the trigger lock feature, it functions as follows: 1) If the firearm is loaded and the selector is dialed to the standard semiautomatic position, the firearm will operate as a standard semiautomatic firearm firing once for every trigger pull with no firing upon release. 2) In the standard semiautomatic position, the trigger lock functions to prevent the possibility of hammer follow-through. Should a shooter have the ability to activate the trigger faster than the firearm can function, the trigger lock will prevent the trigger from being pulled until the firearm is completely in battery. 3) If the firearm is loaded and the selector is dialed to the Echo position, the firearm will fire in connection with both the pull and release of the trigger. No components of the Echo trigger permit allow automatic fire. 4) In the Echo position, the components of the firearm operate as follows:

- The hammer is cocked and rests on the trigger sear nose.
- When the trigger is activated, it releases the hammer from the trigger sear nose and starts the firing cycle.
- The bolt pushes the hammer rearward once the firearm is fired, and the hammer is captured by the forward release disconnecter. At this point, the trigger is not held by the trigger lock, but with the bolt carrier no longer holding it in the forward position, the trigger lock is positioned to lock the trigger once the trigger is released to the forward position.
- When the trigger is released, the hammer is released from the forward release disconnecter, which allows a second shot to be fired.
- During the above described cycle, the trigger lock prevents the trigger from being pulled until the firearm is in battery while not preventing the trigger from moving to the forward position.
- This cycle repeats with every pull and release of the trigger.

5) In the event that a shooter holds the trigger in a position that neither the trigger sear nose nor the forward release disconnecter captures the hammer, the anti-hammer follow-through disconnecter will still catch the hammer. 6) Once the anti-hammer follow-through disconnecter is engaged, the shooter must pull the trigger rearward to disengage the anti-hammer follow-through disconnecter in order to start the firing sequence over again.

III. CONCLUSION:

The Echo trigger system without the trigger lock addition is unquestionably not a "machinegun" and there is a verifiable history of ATF opinions to support this, both in general and specifically pertaining to the underlying design. As the inclusion of the new trigger lock system on the new model of FosTech's Echo trigger system does nothing to change the underlying design, the device's functionality, or to otherwise somehow allow more than one round for each movement of the trigger -- in fact, although not recommended, removal of the trigger lock system would not impact the original functionality in any way --, and it is my opinion that such does not alter the Echo's previously approved classification and the new model of Echo trigger system likewise is not a "machinegun" as defined in the NFA.

Please contact me with any questions or concerns that you may have or should you require any clarification of my opinion. This letter and the opinions contained therein are intended solely for FosTech MFG, LLC and are not to be relied upon by any other individual or entity for any purposes.



SCAN ME


Receive news and exclusive offers direct to your inbox!

Complete the simple form at <https://mailchi.mp/fostech/signup>

-Or-

1. Open the QR Scanner app of your choice.
2. Scan the QR code to the left.
3. Complete the simple form.

Connect with us on Instagram!

1. Open the Instagram app and tap  in the top left.
2. Make sure our nametag (the picture to the right) is visible in front of you.
3. Hover the camera over the nametag. Hold and press on the middle of your camera screen (not the button) until the nametag is captured.
4. Click to follow us and/or view our profile to easily send us a private message. We'd love to hear from you!



Connect with us on Facebook!

Simply Navigate to www.facebook.com/FosTechinc and like/follow/message us

-Or-

1. Open the QR Scanner app of your choice.
2. Scan the QR code to the left.
3. like/follow/message us. We would love to hear from you!

Email: echo@fostech.us or sales@fostech.us

Phone: 812-445-4028

Web: www.fostech.us