

FOLDAR

OPERATOR'S MANUAL



WATCHMAN - 16"



SHEPHERD - 12.5"



SHEPHERD - 10.5"



SENTINEL - 9"



REMNANT - 7.5"



TABLE OF CONTENTS

Features Unique to FoldAR	3
Unfolding the Barrel System	6
Folding the Barrel System	8
Quick Detach Barrel System	11
Adjustable Gasblock	14
Unloading the Firearm	17
Loading the Magazine	19
Loading the Firearm	21
Operating the Firearm	23
Disassembly/Assembly	26
Maintenance	32
Barrel Break-In	33
Illustrated Parts Breakdown (Lower)	34
Illustrated Parts Breakdown (Upper)	35
Illustrated Parts Breakdown (Barrel System)	36
Warranty	37
Service	38
NFA Rules	39

FEATURES UNIQUE TO FOLDAR

FoldAR is the only product available that allows an AR-style firearm to be folded at the barrel connection interface, resulting in a concealable full-sized firearm rivaled by no other product offering. While the FoldAR firearm generally functions just like any other standard AR-style firearm, the FoldAR utilizes patented features that allow a secure, reliable, and safe folding barrel interface connection. Components comprising FoldAR's unique application are the Folding Upper Receiver, Folding Forearm Base, Locking Lever Assembly, Tapered Barrel Extension, Flared Split Gastube System, and Female/Male Snaps. All other components are interchangeable with common "mil-spec" parts widely available across the industry.

Folding Barrel Interface



The self-releasing taper design of the barrel extension allows the barrel to be pivoted into the upper receiver, and easily released when folding. The male cone of the barrel extension and the corresponding female cone of the upper receiver are designed and machined to match up in perfect, rigid, and reliable barrel alignment with the upper receiver when connected. The design provides a connection that is just as rigid and reliable as a standard barrel-nut system.

No additional safety concerns are introduced, as there is no possibility of catastrophic failure as a result of the design, whether the system is latched or not.

Folding Upper Receiver & Barrel System



The upper receiver and the forearm components of the FoldAR firearm are specially designed to allow either a folding or fixed barrel connection. If a fixed barrel configuration is desired, simply remove the locking lever/hook assembly and pivot pin, and install four 10-32 x 1.25" socket head cap screws to join the forearm and barrel to the upper receiver. This is rarely ever done by customers, as the folding system performs just as well under all conditions.

Locking Lever Assembly



The locking lever and hook are precision machined to ensure the right amount of tension is applied to the connection, while preventing the lever from being inadvertently disengaged. Failing to engage the locking hook properly -then firing the firearm- poses no additional safety concern. However, we do caution and require that the locking hook and lever must be properly and fully engaged before attempting to operate the firearm.

Male & Female Snap



The snap feature exists to secure the folded portions of the firearm for transport or stowage. The snap is engaged and disengaged by manual-force.

Flared Split Gastube System



Unlike a traditional AR-15, the FoldAR firearm must be able to disconnect the gastube at the folding interface. To accomplish this, FoldAR uses two separate gastubes, one attached to a standard gasblock and one press-fit into the upper receiver. When connected, the gastubes press together on their corresponding male and female flared ends, thereby allowing the firearm to function just as a standard AR-15 would.

UNFOLDING THE BARREL SYSTEM

Ensure the chamber is cleared. It is advised to perform the following techniques without a magazine loaded into the lower receiver, until the operator has become proficient with the below process.



1) Begin Unfolding: With your right thumb over the top of the charging handle lever, pull rearward approximately an inch. Disengage the male and female snaps by pulling apart the barrel and the buttstock. There is no need to preposition the lever or hook before unfolding the firearm, as the hook will pre-set itself when the barrel comes into alignment with the upper receiver.



2) Unfold Barrel System: Bring the barrel system into alignment with the upper receiver with the charging handle still pulled rearward approximately an inch. Once alignment is set, release the charging handle. This allows the bolt to seat into the barrel extension without chambering a cartridge.



3) While holding the hook down with one hand, use the other hand to bring the lever all the way outward, then palm the lever towards the barrel system until it snaps into place. Palming the lever into place minimizes the risk of pinching yourself, and ensures the lanyard does not get caught underneath the lever.



Now the folding barrel interface is fully connected and the firearm is ready to function like any standard AR-style firearm.

Always treat the firearm as if it were loaded and never point in the direction of anyone, no matter how near or far.

FOLDING THE BARREL SYSTEM

Ensure the firearm is unloaded and chamber cleared. It is advised to perform the following techniques without a magazine in the lower receiver until the operator has become proficient with the below process.



Option 1.B) Lever Release Using the Lanyard: Pinch the lanyard between your index finger and thumb. Using the base of your pinky finger as leverage, rotate your wrist and the lever will easily unlock.



Option 1.A) Lever Release Using a Cartridge: Using the rim of a live cartridge or a fired brass casing, apply lifting leverage to the end of the lever, using the forearm as a fulcrum.



2) Bring the lever all the way out.



3) Automatic Hook Disengagement: Without manipulating the hook, close the lever back towards the barrel system. This will automatically draw the hook out and away from the clasp pin of the upper receiver.



4) Retract Bolt: Pull the charging handle rearward approximately an inch.



5) Fold and Snap: Fold the barrel system all the way over and engage the female and male snaps together, while releasing the charging handle.



Now the barrel system is folded and the firearm is ready for stowage, concealment, and/or transport.

QUICK DETACH BARREL SYSTEM

FoldAR barrel systems are designed to be interchangeable in seconds and without requiring any tools.



1) Disengage the Barrel System Takedown Pin: Disengage the barrel system takedown pin in the same manner as the front and rear takedown pins of the lower receiver.



Note: Resting the muzzle end on a supported surface with the barrel oriented vertically will relax any binding on the pin and allow easier disengagement.



With the barrel system removed, cleaning and maintenance is greatly simplified.



Handguard Removal: Using a Torx-20 bit, remove 8 screws holding the handguard securely to the folding forearm base.



Barrel Set Screws: The two set screws located on the bottom forearm base are used to keep the barrel connected to the forearm base while the unit is folded. If these are loosened during maintenance, ensure that the barrel system is connected to the upper, unfolded, and latched before retightening these set screws using a 9/64" hex key with a torque setting of 28 in-lbs. This ensures that the barrel extension flange is properly seated against the internal flange of the forearm base, which ultimately ensures proper connection and alignment with the upper receiver.



Locking Lever Assembly: Although designed to last for thousands of fold-cycles, the hook is easily removed and replaced if necessary. The disk washers are to provide slight friction resistance so the hook will hold its position while latching and unlatching the system, which increases the ergonomics of deployment and stowage.

ADJUSTABLE GASBLOCK

All FoldAR systems come with a fine-tuning adjustable gasblock in order to accommodate many variations of pressures and setups. Although it's admittedly not the easiest to access, the gasblock remains very low profile, lightweight, robust, and highly functional.



1) Remove Handguard: The best way to access the gasblock's adjustment feature is by first removing the handguard.



2) Remove the Needle-Locking Set Screw: Using a 1/16" hex wrench, loosen and remove the set screw that locks the gas adjustment needle in place.



3) Gas Needle Adjustment: Using the same 1/16" hex wrench, adjust the gas until the desired brass-casing ejection pattern is achieved with your setup (suppressor, ammunition selection). A brass ejection angle between 2 and 4 o'clock is best, with 2 o'clock being slightly over-gassed for adverse/fouled conditions, and 4 o'clock being slightly under-gassed for softer shooting. For simplification, make your needle adjustments while shooting with the handguard removed until you achieve your desired gas setting.



Factory Gas Setting Note: FoldAR systems are shipped with the gas needle set in the full-flow condition. Other ways to achieve desired cyclic conditions may include replacing the standard buffer with a H1, H2, or H3 buffer, or by replacing the standard recoil spring with a higher stiffness recoil spring like those offered by Sprinco.



Gasblock Set Screws: The gasblock set screws are torqued to 32 in-lbs. The barrel is dimpled under the rear set screw in order to maintain alignment and rearward pressure of the gasblock against the gasblock journal shoulder of the barrel. If you observe a gap between the gasblock and the barrel's shoulder, then the gasblock has become loosened, which will result in a substantial loss of gas pressure required for reliable cycling.

UNLOADING THE FIREARM



1) Remove Magazine: First, press the magazine release button -on the right side of the firearm above the trigger- and remove the magazine. With the firearm pointed in a safe direction, pull the charging handle all the way back in order to remove any chambered cartridge.



2) Locking Bolt Carrier Group Back: With your left thumb, press the bolt catch while simultaneously pulling the charging handle to the rear. When the charging handle is pulled all the way back, remove pressure from the bolt catch then the charging handle. This technique will lock the bolt carrier group in the rearward condition.



4) Chamber Check: Visually inspect and confirm that the chamber is clear of any fired/unfired cartridge or bore obstruction.

Regardless of accomplishing the above unloading procedure, always treat the firearm as if it were loaded and never point in the direction of anyone, no matter how near or far.

LOADING THE MAGAZINE

Only use ammunition for which your FoldAR firearm is chambered. You will find its chamber details etched onto your barrel.



1) Loading the Magazine: Place the cartridge with the bullet facing forward and firmly press into place. If loaded properly, the cartridge will seat inside the magazine feed lips and remain in place without overhanging the front or rear of the magazine.



2) Complete Loading: Repeat until you have the desired number of cartridges loaded into your magazine. Take care of your magazines, maintaining them clean and dry.

LOADING THE FIREARM



1) SAFE: Lock the bolt carrier group back per the unloading instructions. Place the safety selector in the SAFE position and verify that the chamber is cleared of any fired/unfired cartridge or bore obstruction.



2) Magazine Insertion: Insert the loaded magazine into the lower receiver's magazine well with bullets pointing forward.



3) Magazine Check: Verify that the magazine is securely locked into position by pulling the magazine downwards. Magazines may need to be bumped from the bottom in order to set them into place and fully lock onto the magazine release.



4) Loading a Cartridge into the Chamber: When the bolt catch button is pressed, the bolt carrier group will accelerate forward, grabbing a cartridge from the magazine, and load that cartridge into the chamber.

At this point, your firearm is loaded with a live round and additional care must be taken to ensure your safety and the safety of those around you.

Always treat the firearm as if it were loaded and never point in the direction of anyone, no matter how near or far.

OPERATING THE FIREARM



1) Shouldering: With the firearm now loaded and pointing in a direction appropriate for delivering live fire, place the buttstock firmly in your shoulder. **Disclaimer:** Pistol-version firearms should not be shouldered (wrap it and strap it).



2) Safety-Off: Only when you are ready to fire a round, turn the safety selector to the FIRE position with your thumb.

Always treat the firearm as if it were loaded and never point in the direction of anyone, no matter how near or far.



4) Firing: Only while aiming at a safely placed target, slowly squeeze through the trigger. Once a cartridge is fired the bolt carrier group extracts the fired brass casing from the chamber and loads a new unfired cartridge into the chamber. The firearm is automatically ready to fire another round.



5) Post-Firing Safety: Immediately place the safety selector in the SAFE position until you're ready to fire another round.

Always treat the firearm as if it were loaded and never point in the direction of anyone, no matter how near or far.

When the last round is fired from the magazine, the bolt carrier group will lock back on the bolt catch. This enables quick and easy removal of the empty magazine and loading of a new magazine. Once reloaded, pressing the bolt catch release will automatically chamber a new cartridge and condition the firearm for continued operation.



Note: you should not rest the magazine on any surface when firing, as this could cause malfunction or undue wear to the magazine feed lips and/or to other firearm components.

Always treat the firearm as if it were loaded and never point in the direction of anyone, no matter how near or far.

DISASSEMBLY

Your FoldAR firearm is dependable and rugged, but like any machine, proper maintenance will ensure yours stays that way. In the following section you will be shown how to properly field strip your FoldAR firearm to prepare it for cleaning and maintenance.

1) Unload Firearm: Ensure your FoldAR firearm is unloaded per the unloading instructions.



2) Takedown Pins: Locate the front and rear takedown pins.



3) Rear Takedown Pin: With your finger or the tip of a bullet, press the left side of the rear takedown pin. If the pin is tight-fitting, squeeze the upper and lower receivers together while pressing the rear takedown pin.



4) Front Takedown Pin: Repeat for the front takedown pivot pin.



5) Disengage Takedown Pins: Pull the rear takedown pin the remaining way from the right side first, then the front takedown pin (reverse for assembling). Both takedown pins are captive and will remain attached to the lower receiver.



6) Remove Bolt Carrier Group: Pull the charging handle rearward a few inches and remove the bolt carrier group.

7) Disassembly of the Bolt Carrier Group:



7.1) Remove Firing Pin Retainer: Remove the firing pin retainer located on the side of the carrier.



7.2) Remove Firing Pin: Now the firing pin will drop out of the carrier.



7.3) Remove Cam Pin: Push the bolt rearward into the carrier and rotate the cam pin 90 degrees to remove.



7.4) Remove Bolt: Remove bolt from the carrier.



7.5) Remove Extractor: With your thumb, place pressure on the extractor, while using the firing pin, push the extractor pin out until you are able to pull the extractor pin free from the bolt. Lift out the extractor from the bolt, using caution not to lose the extractor spring.



Now that all primary components have been disassembled in the bolt carrier group, they are ready for cleaning, inspection, lubrication, and reassembly.

These instructions are limited to disassembly techniques recommended to be limited to the average operator. To explore more advanced disassembly techniques, please refer to your local certified gunsmith or contact FoldAR directly. To reassemble your FoldAR firearm, follow the above instructions in reverse order.

MAINTENANCE



1) Initial Cleaning: Using a nylon brush for aluminum or steel parts, or a brass brush for steel parts, scrub and clean all accessible parts of the firearm with any light gun oil. Wipe down with a lint-free cloth to reveal baked-on carbon.

2) Carbon Removal: Once parts have been thoroughly scrubbed, use a product such as Gun Scrubber or any other carbon solvent cleaner to loosen carbon buildup and oil from the parts. Repeat scrub and wipe.

3) Re-Oil: Once parts are dry, lightly spray the parts with a thin layer of gun oil. We generally recommend RemOil or GunMax spray oil, however some other specialty oils may hold up better in particular areas and use cases.

4) Barrel Bore Cleaning:

- 4.1)** Using a bore cleaning rod and brass or copper brush and patch, scrub the bore back and forth with application of a copper and carbon removing solvent.
- 4.2)** Repeat this process until no carbon residue is visible on your patches.
- 4.3)** Run a dry patch through the bore prior to starting a shooting session.
- 4.4)** Run a patch saturated with gun oil if you are about to stow the firearm for more than a week.
- 4.5)** Run a dry patch or properly sized bore snake through the bore before starting a shooting session. Shooting a firearm with excess oil in the bore can cause hydraulic deformation of the bore walls, inducing accuracy and fouling issues.

5) Reassemble your FoldAR.

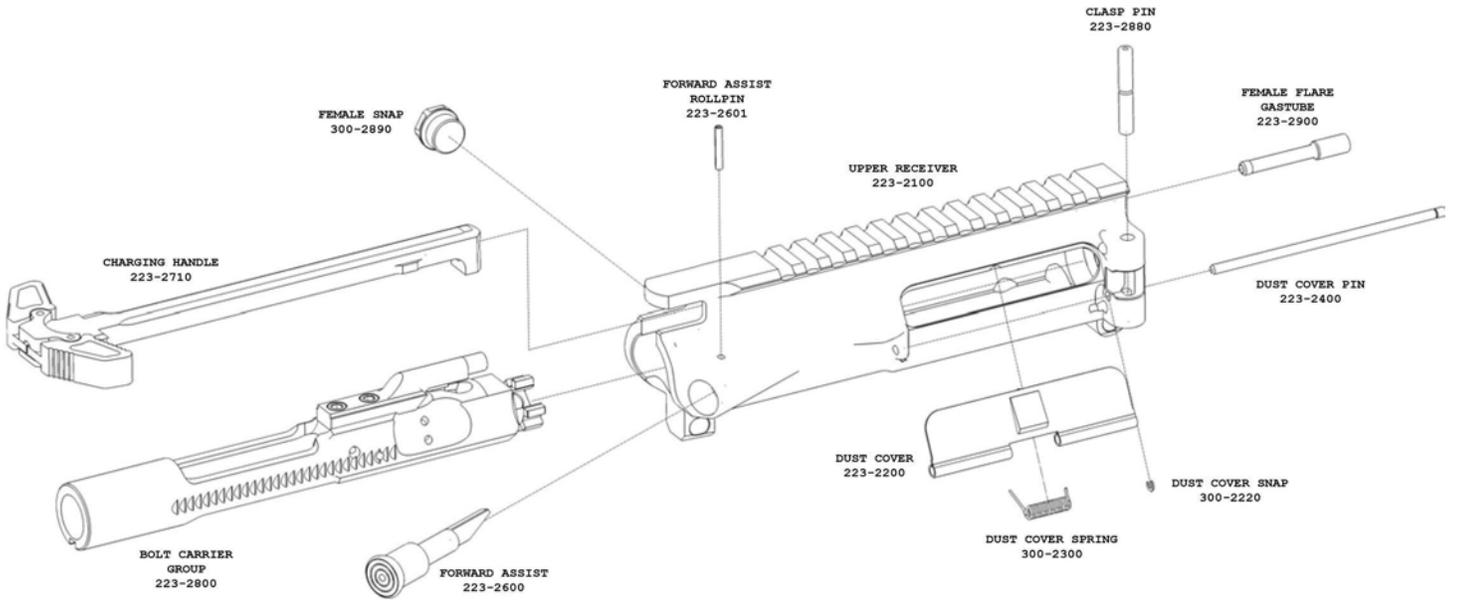
BARREL BREAK-IN

The bore cleaning steps above are recommended before and after your first shooting session, and in between each 20 rounds of fire for the first 200 rounds of fire. Thereafter, perform this cleaning at least each time you clean the remainder of your firearm. A periodic cleaning schedule will vary depending on conditions, suppressor usage, ammo selection and a number of other variables. But, as a general rule, you should clean your firearm after every session of use.

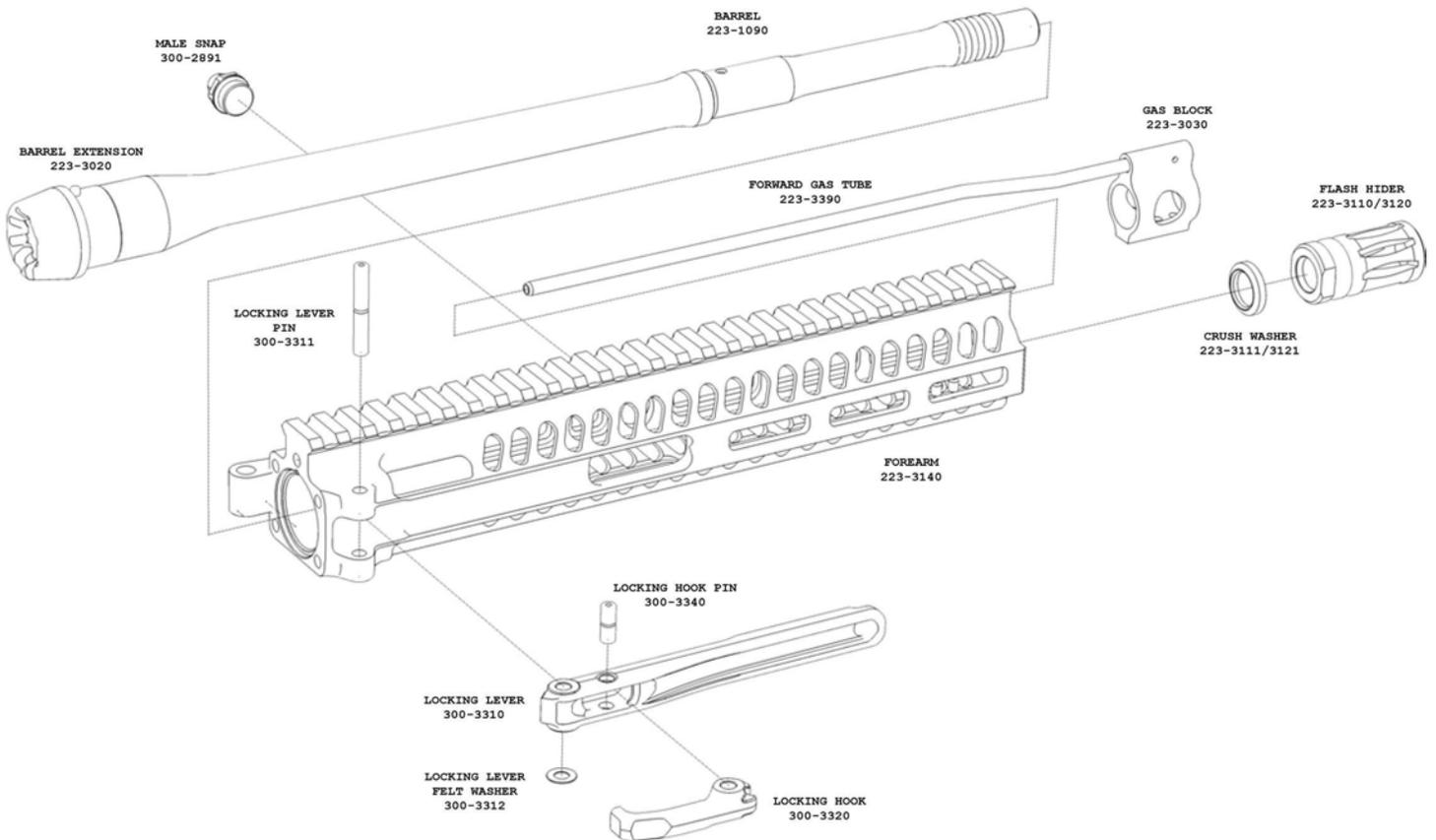
Always treat the firearm as if it were loaded and never point in the direction of anyone, no matter how near or far.

UPPER ASSEMBLY

ILLUSTRATED PARTS BREAKDOWN



BARREL SYSTEM ASSEMBLY ILLUSTRATED PARTS BREAKDOWN



WARRANTY

FoldAR guarantees and warrants that the enclosed firearm was manufactured free of defects in material, workmanship, and mechanical function. This warranty confers the right to have the subject firearm or its parts repaired, adjusted, or replaced as FoldAR determines is necessary and to pay transportation and insurance charges for return of the warranted firearm to the owner.

Third-party Components: Defects in material and workmanship claims apply only to factory built components; third-party products are subject to that manufacturer's warranty and must be claimed through the original manufacturer, although -in good faith- we will still consider warranting the third-party component depending on the component and circumstances.

Transferable: This warranty constitutes the exclusive remedies of any authorized customer, as well as his or her successors.

Domestic Consumers: This warranty applies for the life of the product.

Domestic Military & Law Enforcement: This warranty applies for 5 years following receipt of the firearm unless otherwise contracted.

International Customers: This warranty applies for 1 year following receipt of the firearm unless otherwise contracted.

Exclusions: Except as otherwise provided, the buyer agrees that this warranty is voided and FoldAR is not liable -in any way- if the product has been damaged by: accident or neglect, careless handling, abuse or misuse, firing with an obstruction in the barrel, damage through failure to provide reasonable or necessary maintenance, or any use that may be determined as unreasonable by FoldAR. Unauthorized repair; adjustment; alteration or modification; the use of defective, foreign-made, hand-loaded, or otherwise improper use of ammunition permanently voids this warranty. This warranty does not apply to normal wear and tear of parts.

Accuracy: Accuracy depends on various factors such as bullet weight, type, quality, powder load and type, operator technique and skill level, proper maintenance and break-in of action components and barrel, components and scopes, environmental conditions, buffer weight and recoil spring stiffness, and gassing conditions, among other variables; and therefore FoldAR does not guarantee or warrant the operator's ability to shoot a specific minimum group size or "MOA". However, if you are not satisfied with the accuracy of your FoldAR firearm, please simply return it with (accompanied by your paid receipt) and FoldAR will -at your choice- either replace your barrel or refund your purchase with the deduction of a 25% restocking fee.

SERVICE

FoldAR firearms are manufactured to perform properly with the original parts as designed. Your firearm is a complex, dynamic assembly with parts that must relate correctly to each other for proper and safe operation. Assembling a firearm incorrectly or with improper, modified or other manufacturers' parts can result in damage, personal injury or death. A certified gunsmith should work on your firearm only after receiving proper authorization from FoldAR. Failure to properly follow the instructions listed in this user manual will void the warranty partially or entirely, at the sole discretion of FoldAR. It is the customer's responsibility to acquire the latest version of this Operator's Manual from FoldAR's website and apply the manual's instructions accordingly.

For warranty authorization, please contact FoldAR at:

Email: sales@foldar.com

Phone: 903-308-0016

Once you receive a repair authorization, follow the instructions provided in order to help us process your repairs efficiently. Thanks for choosing FoldAR!

After warranty authorization, ship your FoldAR to:

FoldAR

13864 County Road 4196D

Henderson, TX. 75654

RELEVANT NFA RULES

The FoldAR platform itself is not regulated under the National Firearms Act (NFA). However, certain aspects of the law must be considered for certain configurations of the FoldAR product, as follows:

- Any barrel measuring less than 16" (excluding any removable muzzle device) must be configured with a "pistol stabilizing brace" in order to avoid being classified as a Short Barreled Rifle (SBR).

- For pistol configurations, if the overall length of the pistol is less than 26", you may not install any vertical foregrip device, otherwise making the firearm an AOW (All Other Weapons).

- You may not adjust any pistol stabilizing brace beyond 13.5" length of trigger pull. Length of trigger pull is measured between the point where the trigger is pulled by the operator's finger to the end of the brace at its most extended position. If the brace can be extended without the use of tools, then the measurement is taken at the most extended position.

- You may not modify a pistol stabilizing brace in any way that would result in a more "comfortable" shouldering of the weapon. The braces are specifically designed to be used primarily as a one-handed operation.

It is the operator's responsibility (not just the owner of the firearm) to review and comply with all applicable state and federal laws and regulations regarding the use and configuration of firearms in possession. The above is not a complete description of laws and regulations and may come out of date from time to time.