



Multi Cal Suppressor

Owners Manual

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Thank you for purchasing your GSL Multi Cal Suppressor

Thank you for your purchase of a GSL Technology suppressor. We take pride in our engineering driven products that are now, and will always be, designed and manufactured entirely in the United States. With 9 patents to his credit, our owner and founder Greg Latka has been one of the driving forces in the suppressor industry. With over 40 years of suppressor design and manufacturing, we are confident that you have in your hands, the best firearm suppressor available today. Marketing hype is one thing, but performance is entirely different, and our suppressors will quietly perform with the rugged reliability that you can count on for years to come.

GSL Technology is an engineering, performance driven company. Marketing hype is not part of who we are as shooters. We are one of the very few ISO 9000 certified companies in the industry. The International Organization for Standardization (ISO) is an independent, non-governmental organization made up of the national standards bodies of over 160 countries that set the standards related to products and services. Specifically, these areas include: customer focus, leadership, engagement of people, process approach, constant improvement, evidence based decision making, and relationship management of partners and vendors for sustained success. What that means to you, is that our company that holds itself to a higher level of accountable quality that remains constant over time. We strive to design and manufacture the best suppressors available on the market within their service criteria. We also do our very best to explain and educate shooters of all experience levels about suppressor design, usefulness, limitations, and advantages. This education is a key part of our ongoing commitment to excellence and our passion to make the world hearing safe.

Every employee of GSL Technology is a shooter and we ALL remember the first time we shot a GSL suppressor. The sound reduction, reduced perceived recoil, lack of muffs on our ears, sound of the bullet hitting the dirt or steel, and the sound of the brass hitting the floor, ALL brought huge smiles to our faces with that first suppressed shot. Shooting a suppressed firearm is a game changing experience. Many of us just don't like shooting firearms that are NOT properly suppressed anymore. The shooting experience is THAT different between suppressed and unsuppressed. It's hard to properly describe an experience, especially one that involves sound, but the moment you pull the trigger on a

well engineered suppressed firearm you will “get it” and never forget it. If you are new to suppressors, you are in for a treat. If you are an old pro, we hope that you will enjoy the fruits of our labor and spread the word! If you enjoy our products, feel free to sing our praises and spread the word! Share the experience of shooting a suppressed firearm with others so that they too can get that smile from pulling the trigger on something that is unexpectedly quiet!



Multi Cal Specifications

Caliber: Multi from .17 cal to .30 cal in rifle chamberings

Sound Reduction: 32 DB

Length: 7.75"

Diameter: 1.62"

Weight (without mount parts): 15.6oz

Materials: Titanium/Inconel

Finish: High Temperature Cerakote

Mount: Multiple (direct thread 1/2x28, 5/8x24, Bi-Lock, others)

Bi-Lock Flash Hider 1/2 x 28 tpi caliber range: .17 HMR to .224 Valkyrie

Bi-Lock Flash Hider 5/8 x 24 tpi caliber range: .17 HMR to 300 WinMag

Minimum Barrel Lengths

Shorter barrels in rifle chamberings can cause overpressure issues within a suppressor as the burning powder is still rapidly increasing pressure in the suppressor after it leaves the muzzle of the barrel.

| | |
|---------------------------------|-------|
| 5.56x45 / 5.56 NATO / .223 Win: | 7.5" |
| 300 BLK | 7.5" |
| 7.62x51 / 7.62 NATO / .308 Win | 12.5" |
| 300 WinMag | 24" |

Multi Cal Box Contents

Be sure to let us know if anything is either missing or damaged within this box and we will gladly get you whatever might need to be replaced. Please read this owner's manual all the way through prior to shooting as it contains important safety and operating information. Your GSL Multi Cal Suppressor is a high performance tool designed to give you many years of reliable service. This suppressor can suppress any round with a bullet diameter size from .17 cal to .30 cal (basically anything from .17HMR to 300 Win Mag)



- 1) GSL Technology Multi Cal Suppressor
- 1) Quick Disconnect mount for Bi-Lock Flash Hider (comes installed in the suppressor)
- 1) Bi-Lock Flash Hider 5.56 mm (max bullet diameter)
- 1) Bi-Lock Flash Hider 7.62 mm (max bullet diameter)
- 1) Package Loctite 262

Bullet Diameter Warning

*GSL Bi-Lock Flash Hiders have the following limitations. The 1/2 x 28 mounts are for bullet diameters of .343" or smaller and the 5/8 x 24 mount .308 (7.62)" or smaller. It IS possible to mount a 1/2 x 28 GSL Bi-Lock Flash Hider or threaded barrel mount on a barrel chambered for a larger diameter bullet than what either mount and the suppressor itself, is designed for. **DOUBLE CHECK YOUR CHAMBERING** prior to attaching the GSL Multi Cal Suppressor to your firearm.*

Mounting the flash hider on the barrel

Pick the appropriate sized GSL Bi-Lock Flash Hider for your barrel understanding that the thread mounts and GSL Bi-Lock Flash Hiders have safety limitations (see page 5 of this manual).

- 1) First, remove existing flash hider and crush washer. A crush washer is a washer is pictured below. Old style crush washers are sometimes split with a bend that prevents it from laying flat on a table (potato chip shaped when looking on edge) or may be star shaped with many points. NEVER use a crush washer when installing a GSL Bi-Lock Flash Hider or when using a direct thread adapter. *A crush washer will cause any suppressor to possibly be mounted in a non-concentric way so that there is a greater likelihood of a baffle or end cap strike to occur, thus damaging your suppressor.*
- 2) Degrease with alcohol, all threads using a soft cloth or paper towel for the barrel threads and a Q-Tip swab for the inside threads of the Bi-Lock Flash Hider. Using a bit of denatured alcohol (DNA), acetone or another degreasing agent will be helpful to insure clean surfaces. Just a very small amount is needed. It is critical to have these threads free from contamination.
- 3) Apply 2 drops of Loctite 262 (non permanent Loctite) on the barrel threads and flash hider threads.



Crush washer types
Never use!!!



Looking straight down, the lugs should be either straight up and down or horizontal in relation to the rifle.

4) If the flash hider lugs do not line up either vertically or horizontal relative to the rifle, use shims to adjust. This is known as adjusting the timing of the flash hider. Each barrel will have threads cut that may start or finish in a different location so attaching anything to those threads may cause the timing to be off relative to the requirements for that device. By timing the lugs either vertically or horizontally for that barrel, you will always have a uniform position for the suppressor to mount to. For some flash hiders, like those typically found on AR pattern rifles, the bottom of the flash hider is solid (no slots cut in it) in order to prevent a dust signature when shooting in a prone position) so timing these flash hiders are important to time the flash hider to insure that this bottom is where it is supposed to be. If you cannot time your device, you may purchase flat shim washers for either 5.56 or 7.62 muzzle devices through Brownells or possibly at your dealer. **Again DO NOT USE A CRUSH WASHER to time your muzzle device.**

5) Using a torque wrench and appropriate armorer's tool, torque the flash hider to between 35-45 ft lbs. When torquing the flash hider, care should be taken to insure that either the upper (if a 2 piece receiver type firearm like with AR-15 pattern rifles) or the entire firearm is properly held in a vise or appropriate fixture in such a way that it is both secure and will NOT damage the firearm or finish.

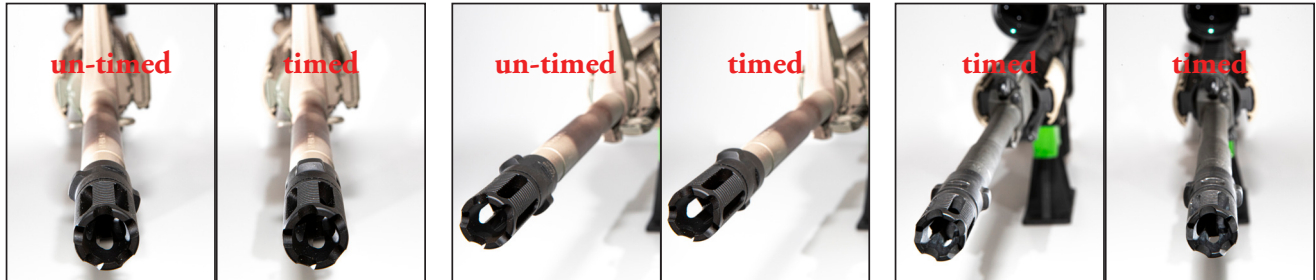


Timing the suppressor

Barrel harmonics and suppressor/mount designs can combine for a large Point of Aim/Point of Impact shift with some firearms. Short, stiff or heavy, large diameter barrels are less affected by the addition of weight at the end of the barrel. Adjusting the suppressor on the barrel (or suppressor mount such as the Bi-Lock) by using shims will cause the suppressor/mount to be in a slightly different position on the threaded end of the muzzle. This is referred to as timing the suppressor (or flash hider or other muzzle device). Shims will slightly change the harmonics of the barrel with the suppressor attached, and help you minimize any POA/POI shift and make any shift predictable so that it can be doped.

1) With the mount and suppressor attached to your firearm, shoot at an appropriate distance for your purposes, and note if there is a significant difference between POA/POI with the suppressor attached vs shooting without the suppressor. Note the distance and direction of any shift. Remember, different ammunition loadings will also make a difference, so always use the same loading when doing this testing.

2) If you desire to, you may experiment with using different combinations of shims to see if one combination will cause any shift to be minimal. This is a trial and test procedure in which the mount and/or suppressor will be removed and shims added or subtracted until you are satisfied with the performance of your firearm/suppressor combination. Individual firearms will most likely have different results, so document your findings in the back of this manual so that you will always know what combination of shims (and ammunition!) works best with that particular firearm. Ideally, the studs on the QD Mount should either be in a versicle or horizontal orientation relative to the firearm.



Mounting the Multi Cal Suppressor on Bi-Lock Flash Hiders

- 1) Look through the suppressor in order to insure that there are no obstructions, damaged baffles or a damaged end cap. Shake the suppressor to insure that there is nothing loose in the suppressor. With an empty firearm, action open, and magazine removed, you are now ready to install your Multi Cal Suppressor.
- 2) Place the suppressor on the front of the Bi-Lock Flash Hider and rotate the suppressor until the lugs on the flash hider align with the notches. This will only happen in one position. This is engineered so that any POA/POI shift is repeatable and therefore the rifle can be doped for shooting both with, and without the suppressor being in place.
- 3) After the lugs are aligned, press the suppressor down approximately $\frac{3}{8}$ " and rotate clockwise (looking from the muzzle end down) until it will not rotate further. This will be an approximate 90 degrees. You are compressing a spring so it will take about 15lbs of pressure. You will hear and feel the suppressor click into place as it is seated. The suppressor will pop back forward (away from the firearm) approximately $\frac{1}{8}$ " as it seats and locks into place.
- 4) Check to insure that the suppressor will not rotate after it is seated. Your suppressor is now both aligned with the bore and ready to be used.



Removing the Multi Cal Suppressor from Bi-Lock Flash Hiders

To remove, reverse the steps outlined above. **CAUTION:** Suppressors can gain 7-10° F (or more) per round fired and therefore can be **EXTREMELY HOT** to the touch depending upon how many rounds were fired and over what time frame they were fired. Understand that attempting to remove a hot suppressor without protection (like welder's gloves) can cause severe injury. Also, do **NOT** put your firearm with the suppressor mounted or the suppressor alone when it is hot, into anything that can be melted or otherwise damaged by heat of up to 700° F or more. Your suppressor will cool according to ambient temperature and the initial peak temperature that your suppressor reached, so plan accordingly.

Bi-Lock Mount removal from the suppressor

- 1) Confirm that the firearm is unloaded, magazine removed and action open
- 2) With the suppressor installed on the GSL Bi-Lock Flash Hider, rotate the suppressor body counter clockwise but **DO NOT PRESS THE SUPPRESSOR DOWN** while doing this. In essence, the GSL Bi-Lock Flash Hider serves as a wrench attached to the barrel and allows you to remove the quick detach mount from the rear of the suppressor.



Replacing Quick Disconnect Mount with optional thread adapter mount

Pick the appropriate sized GSL thread adapter mount for your barrel understanding that the thread mounts and GSL Bi-Lock Flash hiders Have safety limitations (see page 5 of this manual).

- 1) If a GSL Bi-Lock flash hider is installed on one of your barrels, remove the rear mount as outlined on page 10.
- 2) If the Multi Cal Suppressor has the Quick Disconnect mount installed (as it comes from the factory), use the head of the spanner tool to remove the Quick Disconnect mount from the body of the suppressor by inserting it into the slots, spreading the arms and rotating counter clockwise.
- 3) Remove the spring plate and spring completely and set aside.
- 4) Using the spanner wrench, slightly spread the arms so that you can insert the pins into the two larger diameter holes in the bottom of the thread adapter mount.
- 5) Screw the thread adapter mount (being careful not to cross thread it) into the body of the suppressor until it is firmly seated and flush with the edge of the suppressor body.
- 6) Your suppressor is now ready to be threaded onto the barrel of your firearm. Thread it all the way until it is firmly on your barrel. While firing, occasionally check to confirm that it has not become loose. ***Remember, the suppressor may be extremely hot.***



Attaching the Suppressor with a thread adapter mount

- 1) Insure that your firearm is unloaded, magazine removed and action is open.
- 2) ***DO NOT USE ANY CRUSH WASHERS!***
- 3) Carefully thread the suppressor onto the threads of the barrel being sure not to cross-thread the suppressor mount.
- 4) Looking from the muzzle end down, screw clockwise until it is firmly on your barrel.
- 5) While firing, occasionally check to confirm that it has not become loose. If it loosens, do not shoot until it is firmly screwed back onto the barrel. ***Remember, the suppressor may be extremely hot.***



Cleaning the Multi Cal Suppressor

Cleaning the Multi Cal Suppressor involves the occasional removal from the barrel and removing built up carbon deposits from the threads on the suppressor and on the thread adapter if used. If .22 short, .22 long or .22 long rifle ammunition (or any ammo with exposed lead bullets) is fired through your Multi Cal Suppressor extensively, you may have generated a bit of lead build up. These rounds can be extremely dirty compared to other rounds fired. Shooting a high pressure round like a 5.56 NATO or 7.62 NATO through the suppressor will be sufficient to clear the vast majority of lead deposits from the inside of the suppressor. Be sure to wear gloves and work in a well ventilated area when cleaning lead deposits from surfaces. Shooting corrosive primed ammunition can cause damage to any metal surfaces including your barrel and suppressor, so using such ammunition is never recommended.

On occasion you may experience difficulty in removing the suppressor from the threads of a rifle due to carbon build up (often referred to as carbon lock). Be sure that the suppressor is not hot, and firmly tap the suppressor squarely on the muzzle end onto a carpeted surface or otherwise hard surface that has a cushioned top covering. Doing so will break the carbon that is locking the threads and allow you to removed the suppressor. You may also use a 2x4 or similar piece of soft wood, or a soft rubber mallet, and tap on the muzzle end squarely. You will not have to, nor want to hit the muzzle with a lot of force to accomplish this.



Warranty Information

GSL Technology, Inc. has an unconditional, no BS lifetime Warranty. If for any reason you have an issue with a GSL Technology product, we will repair it free of charge. We cannot warranty any product that has been altered in any way.

Damaged Suppressor

If your suppressor is damaged or obstructed it may not properly operate and create significant risk of injury or death. Any and all such damage should be reported to an armorer familiar with this suppressor and the weapon system, or it should be returned with a copy of your form 4 or for dealers/SOTs form 3's and a letter stating that it is coming back for repair and what needs to be done to GSL Technology, Inc. There is no need to go through a Class 3 FFL/SOT as you are sending it directly back to the manufacturer for repairs. For more information, contact GSL Technology, Inc at:

warranty@gsltechnology.com

Manufacturer's Disclaimer

GSL Technology, Inc. manufactures all suppressors with the highest quality and technical standards in the industry. Improper usage of this product by any user, may result in serious injury or death to the user or third parties. Therefore, it is the user's responsibility to understand this product and the weapon system used in conjunction with it. If you do not understand the instructions in this manual, please contact GSL Technology for further clarification or go to www.gsltechnology.com. GSL Technology, Inc. shall have no liability for incidental or consequential damages and under no circumstances be liable for personal injury, death, property damage, environmental damage, damage to the weapon or economic losses of any type caused by the misuse of this product or negligence on the part of the user. To the extent allowed by law, all liability from act or omission from improper usage of this suppressor is disclaimed. The warranty and disclaimer in this manual for the suppressor is subject to all laws which may limit these terms. To the extent allowed by law, the purchase of this product places an affirmative duty on any distributor, retailer, or user to transmit this manual with the suppressor.

For the latest, most complete version of this manual, please visit:

www.gsltechnology.com

Multi Cal Suppressor Records

Please register your suppressor with GSL Technology, Inc. so that we may notify you of any updates or new product information.

Your suppressor has a lifetime warranty. Fill out the following personal suppressor record for future reference:

Owner Name _____

Suppressor Model: _____

Serial Number: _____
(Located on the body of the suppressor)

Retailer Purchased at: _____

Purchase Date: _____

Rifles and Loads

Your Multi Cal suppressor is designed to be used for multiple rifles, rifle chamberings and loads. Therefore, documenting your preferred rifle and load for use with your suppressor will allow you to remember what load that rifle shoots best with the Multi Cal installed.

Rifle _____ Chambering _____ POA/POI Shift at 100yds _____
Windage adjustment _____ Elevation adjustment _____
Best load: Manufacturer _____ Bullet weight _____ Bullet type _____
Powder type _____ Charge weight _____ Cartridge overall length _____

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Windage adjustment _____ Elevation adjustment _____
Best load: Manufacturer _____ Bullet weight _____ Bullet type _____
Powder type _____ Charge weight _____ Cartridge overall length _____

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface. There is no handwriting or other markings on the paper.

GSL Multi Cal Accessories

The GSL Technology Multi Cal suppressor is designed for a lifetime of shooting. Some accessories for this suppressor may be found to make it more useful for your specific needs. The most up to date list will always be found at gsltechnology.com.

The GSL Multi Cal Suppressor has optional direct thread mounts available from GSL. These are available in:

- 1) 1/2 x 28 tpi Direct Thread Mount
- 2) 5/8 x 24 tpi Direct Thread Mount

An optional spanner take down tool is also available and will be needed to install either of the Direct Thread mounts.



Warnings

Read the Owner/Operator manual in its entirety before using the suppressor. Failure to follow installation and maintenance instructions detailed in this manual can result in potential for serious injury to the user and damage to the weapon.

Verify Firearm is Unloaded

Visually and physically confirm your firearm is unloaded before attempting or performing any of the procedures in this manual. Failure to ensure the firearm is unloaded could result in an unintentional discharge, causing injury or death.

Burn Warning

Allow the suppressor to cool to ambient temperature before removal, service and/or storage. The outside surface temperature of this suppressor may greatly exceed 104° F, therefore protective gloves should be worn at all times in attaching or detaching the suppressor. Failure to do so may result in severe burns to hands and any other unprotected skin surface.

Pinch Warning

The point of attachment and detachment is a pinch point and caution should be taken, including wearing protective gloves, to avoid severe injury at this pinch point.

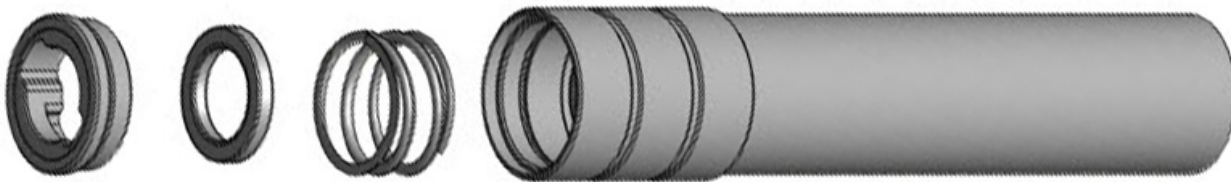
Muzzle Warning

The muzzle of the firearm is different when a suppressor is attached. However, this is still the point where the projectile exits the weapon system and the muzzle should not cover or sweep any area that the user would not want to destroy or kill.

Sonic Crack Warning

This suppressor will NOT protect the shooter or those in close proximity to the firearm, from hearing damage when, and if, the projectile exceeds the speed of sound (in dry air at 68 F (20 C), the speed of sound is about 1,125 ft/sec (343 meters/sec). Therefore, proper hearing (and eye) protection should be worn at all times when using firearms.

Suppressed firing can appear that the bullet has reduced power. THIS IS NOT CORRECT. Treat the firearm as you should normally be treating a weapon that is unsuppressed. All firearms safety rules still apply to suppressed weapons.



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GSL Technology, Inc. Suppressors are proudly made in the United States of America

This sound suppressor manual contains technical data controlled under the International Trade In Arms Regulations (ITAR). Export and/or release of technical data to foreign persons, entities or governments requires prior authorization from the United States Department of State. Title 22 CFR, Parts 120-130.