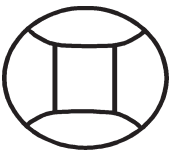


TM-TREK

OPERATION AND MAINTENANCE OF SOUND SUPPRESSOR MODELS TREK and TREK-Ti

**Before using this suppressor,
be certain you have read and
understand this manual.**

Manufactured by



GEMTECH
Div. of Gemini Technologies, Inc.
P.O. Box 140618
Boise, Idaho 83714

ISSUED: January 2015

★ ★ ★ ★ ★ **WARNING** ★ ★ ★ ★ ★

☞ **Because sound suppressed weapons make less noise than non-suppressed weapons, it is easy to forget that they are still firearms. It is of vital importance to remember that a sound suppressed firearm is just as dangerous as a non-suppressed one, and the same safe handling requirements apply.**

TM-TREK

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TM-TREK

OPERATIONAL MANUAL FOR
SOUND SUPPRESSOR MODEL
TREK and TREK-T

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IMPORTANT

The manufacturer disclaims any liability for damages resulting from any unauthorized modification of this product. Any modification of this suppressor without prior express authorization from Gemtech's Engineering Department will void all warranties, both written and implied, and will result in the assumption of all liability by the person performing the unauthorized modification.

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☆☆☆☆☆ **WARNING** ☆☆☆☆☆

☞ **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.** Firearm sound suppressors are user-attached firearm muzzle devices, and as such are subject to improper attachment unless the proper procedures outlined in this manual are followed.

MANUFACTURER'S DISCLAIMER

The manufacturer is not responsible for improper usage of this product. This product is potentially dangerous, and as such it is the user's responsibility to understand and implement its proper use. If you do not understand the instructions in this manual, please contact the manufacturer for further clarification.

GENERAL DESCRIPTION

Designed specifically to fill the needs of the law enforcement user, the TREK is a compact, durable and lightweight sound suppressor for the 5.56x45 mm centerfire cartridge. The TREK suppressor meets all OSHA and MIL-SPEC requirements for shooting without the use of hearing protection.

The TREK is also available in a lightweight version, the Trek-T, fabricated from high strength, aircraft grade titanium alloys.

This suppressor markedly reduces the sound of the muzzle blast, making it difficult for an observer to determine the origin of the shot and eliminating the need for shooter hearing protection. There is no way to eliminate the ballistic crack (or sonic boom) of the projectile traveling downrange. As well as being a superior recoil and flash reducer, the TREK masks the far field perception of gunfire.

The TREK is designed to operate completely dry, and the introduction of liquids into the suppressor prior to use may result in damage from erratic pressures. The suppressor was specifically engineered for semiautomatic fire and limited fully automatic fire. Manufactured from series 300 stainless steel and Inconel, the TREK suppressor is engineered to give a lifetime of service if these simple instructions are followed. Please take a few minutes to read this instruction manual and keep it in a safe place.

The TREK is a medium volume suppressor that was designed specifically around the M4 carbine platform. The user should be aware that shorter barrels are associated with significantly increased pressure in the entrance chamber. While it may be used on barrels shorter than the M4, the minimum barrel length for which it is warranted is 10.4 inches. Use on shorter barrels could result in damage.

The TREK sound suppressor fits a variety of .223 caliber centerfire rifles which utilize 1/2"-28 tpi muzzle threads, including the M16, AR15, AR-18 and similarly threaded rifles. The suppressor warranty is voided by installation on threads cut by anyone other than the original manufacturer or Gemtech. The TREK is intended for the 5.56mm NATO cartridge and should not be used with higher powered .22 cartridges, such as the .22-250 or .220 Swift.

HEAT BUILDUP

Although designed to withstand limited fully automatic fire, heat buildup with fully automatic fire can reach levels that can cause severe burns and ignite flammable materials. Temperature increases average 7.5°F per round, and a 30 round magazine will raise the suppressor approximately 225°F above ambient air temperature. After 60-80 rounds full auto, the suppressor and barrel should be allowed to cool to room temperature.

Further, because of the large copper jacket surface area and small mass of lead in the bullet core, after 100 rounds the heat of friction in the bore has raised the bore temperature above the melting point of lead, causing the bullet core to soften or melt. This results in serious bullet instability with subsequent baffle damage.

OVERALL EFFECTIVENESS

The real limiting factor on the effectiveness of centerfire rifle suppressors is related to the sound of the bullet in free flight. The free flight bullet noise is related to the general bullet shape and is also directly proportional to the bullet velocity. The TREK suppressor is capable of reducing the sound of the muzzle blast to approximately that of a .22 rifle shooting .22 short ammunition.

To minimize bullet noise as well as eliminate the "sonic crack" of the supersonic bullet, many have suggested using "subsonic" ammunition. The majority of commercially available 5.56mm subsonic ammunition does not stabilize in the M16 barrel and will yaw while in the suppressor. Damage caused by this ammunition is not covered under warranty.

If it is desired to reduce the bullet flight noise and sonic crack, we suggest that a .22 rimfire adapter be used with standard velocity .22LR ammunition. If subsonic .223 ammunition is a requirement, Gemtech recommends only subsonic ammunition manufactured by Engel Ballistic Research, Inc.

Besides sound suppression, there are two additional added benefits of a sound suppressor, which are seldom mentioned. The first is that a sound suppressor is also an exceptionally effective recoil reducer, often reducing recoil to less than one fourth of its original magnitude. The second is that a sound suppressor is an effective flash suppressor, preventing "blooming" on a night vision device sight and reducing the possibility of igniting surrounding combustible materials.

Although the suppressor may alter the point of impact slightly as compared to the non-suppressed weapon, the added weight of the suppressor on

the barrel changes barrel vibrations, which usually improves grouping.

PHYSICAL SPECIFICATIONS

Length: 5.7 in.
Diameter: 1.5 in.

Weight: 17 oz. (10.4 oz. TREK-T)
Minimum Barrel: 10.4 in.

AMMUNITION

Because many of the partially jacketed bullets used in 5.56mm (.223) ammunition can have jacket separation, we recommend that only full metal jacketed bullets be used with the suppressor. Jacket separation will cause the bullet to tumble while in the suppressor which can seriously damage the internal baffles and lead to suppressor failure. Damage resulting from use of ammunition with bullets other than full metal jacket types will not be covered under the warranty if there is jacket separation. The ultra-frangible ammunition is most apt to have jacket separation in the suppressor.

★★★★★ WARNING ★★★★★

☞ **Failure to follow installation instructions detailed in this manual can result in potential for serious injury to the user and damage to the weapon.**

INSTALLATION

The suppressor is attached to the rifle with ease. The flash hider must first be removed from the rifle, and the suppressor screwed on to the end of the barrel.

Because the suppressor aligns on the muzzle threads and against the shoulder at the rear of the muzzle threads, it is of utmost importance to be certain that the suppressor is at all times screwed tightly onto the muzzle of the weapon. We recommend the use of "Blue" Loctite on the threads when mounting the suppressor.

Do not use any type lockwasher or the factory crush washer. Lockwashers or the crush washer will cause misalignment.

It is possible that with firing, the suppressor will unscrew, which can create misalignment. Therefore it is imperative that the shooter periodically check to be certain that the suppressor remains screwed tightly onto the weapon.

★★★★★ DANGER ★★★★★

☞ **Before performing any maintenance operation, always remove the magazine from the firearm, open the action, and visually ascertain that the chamber is empty and the weapon unloaded. Failure to do so can result in potential for serious injury to the user and others in the vicinity**

CLEANING

Because of the high flame temperatures, there is no need whatsoever to clean this suppressor when used on weapons chambered for the 5.56x45 cartridge. There is no need to disassemble the suppressor, and any evidence of an attempt to do so will void the warranty.

If used on weapons chambered for the .22 rimfire cartridges, it is necessary to flush out unburned powder residues by immersion in solvents such as WD-40 or a mixture of mineral spirits and automatic transmission fluid (2:1). **Do not use water-based solvents, such as SLIP-2000, Simple Green, or MP7.** They will create a residue that is corrosive and which cannot be removed. Because ultrasonic cleaners do not cavitate properly with hydrocarbon-based solvents, they have little or no use in suppressor cleaning.

★★★★★ CAUTION ★★★★★

☞ **Always read the warning label on any cleaner or solvent, and remember that virtually all solvents are inherently dangerous and potentially toxic. Always use adequate ventilation and both skin and eye protection when using organic solvents.**

After soaking in solvent, the suppressor must be drained by standing first on one end and then the other for a few minutes. Before use, it is of utmost importance that the suppressor be blown out with a high pressure air hose to remove any residual liquid. *Any residual liquid in the suppressor can cause damage when firing. Such damage is not covered by warranty.*

LIMITED WARRANTY STATEMENT

Gemini Technologies, Inc., dba Gemtech, warrants to the initial retail purchaser that Gemtech products will be free of defects in workmanship or material and that the product meets manufacturing specifications at the time of manufacture. This warranty is limited to the repair or replacement of the product. This express limited warranty is exclusive and no other express or implied warranty is otherwise provided.

GEMTECH MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

Product technical specifications and/or designs may be changed without notice. This warranty does not cover negligence, misuse, careless or improper handling and/or operation, abuse, unauthorized adjustments or modifications, improper mounting/installation, ordinary wear and tear, the failure to follow manufacturer instructions and/or the use of inappropriate or defective ammunition.

Gemtech shall have no liability for incidental or consequential damages and under no circumstances will Gemtech be liable for personal injury, property damage or economic loss.

This warranty and disclaimer is subject to all applicable laws some of which may limit these terms.

WARRANTY REPAIRS: Return of a Damaged Suppressor

If a suppressor is damaged due to a manufacturing defect once it has been fired, it may be returned to Gemtech for repair or replacement. Determination to repair or replace is made solely at our discretion and only after we have had the opportunity to examine and determine that the cause of the damage is due to a manufacturing defect. It is the responsibility of the customer to cover shipping costs and insurance to return the suppressor to Gemtech for inspection or repair. Gemtech will pay any reasonable shipping and insurance costs to return the unit to you.

To insure proper legal procedures for any repair returns, fill out and provide a copy of the **General Service Form** with any packages sent to us. (Visit gem-tech.com, navigate to [Customer Support/Return and Repair Policies](#) to download the fillable **General Service Form.pdf** or call 208.939.7222)

BATFE no longer requires transfer on a Form 5 to the manufacturer for repair. BATFE does require a letter accompanying the suppressor detailing the repairs or modifications required (satisfied by a completely filled out **General Service Form**). BATFE also requires proof of ownership satisfied by a photocopy of the front of the owner's Form 3, 4, or 5.

NOTE: BATFE prohibits transferring the serial number to a new outer tube in the case of damage to the tube. Tube damage rendering the suppressor unsafe will require a new suppressor.



All Gemtech products are
100% manufactured in the
United States of America.