

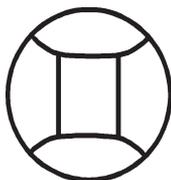
# TM-VIPER

---

## OPERATION AND MAINTENANCE OF SOUND SUPPRESSOR MODELS VIPER-45, VIPER-9, & VIPER-380

**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: December 20, 2003

★ ★ ★ ★ ★ **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-VIPER

FIRST EDITION                      July 1999

SECOND EDITION                     December 2003

Published by:

**ATI Star Press**

*Antares Technologies, Inc.*

P.O. Box 140618

Boise, Idaho 83714

Phone: (208) 939-7222

**COPYRIGHT NOTICE:**

©2003 Gemini Technologies, Inc.

All rights reserved. The contents of this publication may not be reproduced in any form or by any means in whole or in part without the prior written permission of the copyright owner.

# TM-VIPER

OPERATIONAL MANUAL FOR  
SOUND SUPPRESSOR MODELS  
Viper-45, Viper-9, and Viper-380

*Manufactured by*

## GEMTECH

*Division of Gemini Technologies, Inc.*

P.O. Box 140618  
Boise, Idaho 83714-0618

Phone: (208) 939-7222

FAX: (208) 939-7804

*Manufacturing Facilities*

Michigan Office  
P.O. Box 428  
Jackson, MI 49202

### GEMTECH PROPRIETARY

This document contains proprietary information of Gemtech and is submitted to the receiver in confidence. Any reproduction, use and/or disclosure of this and/or any portion thereof is expressly prohibited without the express written permission of Gemtech

### CONTENTS:

General Description .....	P. 2
Basic Principles .....	P. 3
Construction .....	P. 3
Initial Installation .....	P. 4
Suppressor Mounting .....	P. 5
Ammunition Recommendations .....	P. 5
Maintenance and Cleaning .....	P. 6
Sound Measurements .....	P. 7
Physical Specifications .....	P. 7
Limited Warranty .....	P. 8
Repair Policy .....	P. 8

☆☆☆☆☆ **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.

The Viper family of suppressors are the most efficient, state-of-the-art, versatile, and carefully designed muzzle suppressors for the Ingram MAC-type submachine guns. Before use, please take a few moments to read this instruction manual.

**GENERAL DESCRIPTION**

VIPER sound suppressors are purposefully designed units intended to fulfill the need for a suppressor delivering outstanding performance for the MAC-type submachine gun in a physically small and lightweight package, while providing an absolutely secure host weapon mounting interface.

There are three variants of the Viper suppressor. The Viper-45 is designed for the .45ACP caliber MAC/RPB M10, the Viper-9 is designed for the MAC/RPB M10 (9mm) or SWD M11/9, and the Viper-380 is designed for the MAC/RPB M11 or SWD M11/380 weapons.

The mounting system is designed around a secure interlocking ring consisting of the suppressor rear mount and a proprietary barrel adapter collar, semi-permanently mounted to the host weapon's rear barrel flange. Properly installed, the mounting system will securely lock the threaded-on suppressor unit to the barrel mounted collar preventing any inadvertent unscrewing or loosening of the suppressor while firing the submachine gun. Proper barrel-suppressor alignment is provided by correct design of the primary suppressor attachment method which is a two-point mounting system consisting of a precision-machined internal sleeve of barrel diameter and close tolerance rear threads. The initial suppressor alignment is not affected by or dependent upon the use of the rear locking collar, which is semi-permanently mounted on the weapon. However, the rear locking collar must be

correctly installed to prevent loosening of the suppressor during firing.

Suppression efficiency is gained through proper design of the suppressor rather than by using “wipes,” grease, or other obstacles touching the bullet in free flight. For this reason, weapon accuracy is not impaired, and accuracy may be actually slightly enhanced by tightening of the group size.

The suppressor is intended for mounting only on the specified weapons. Even though other weapon types may have similar barrel threading specifications, they may have vastly different front-end contours. Such non-intended weapons are those of the general INTRATEC series such KG-9, KG-99, TEC-9, TEC-9 Mini, AB-10, etc. as well as those guns from KIMEL Ind. known as AP-9, etc. Additionally, aftermarket threaded barrels offered for UZI-style weapons provided with the MAC-style 3/4 x 10 tpi threading should not be used. Please consult the manufacturer directly if you have any questions as to suitable host weapons.

## BASIC SUPPRESSION PRINCIPLES

The sound of a firearm discharging is due to the sudden release of high-pressure propelling gases. The purpose of a suppressor is to reduce the gas pressure by a combination of increasing the volume for gas expansion, decreasing gas temperatures, and delaying gas exit from the suppressor.

The VIPER suppressor utilizes a radical baffle design to accomplish these goals without the use of wipes or other accuracy-destroying techniques. The Viper family of suppressors are designed to provide rated performance totally dry. We discourage the use of artificial environments (such as water or oil) in any suppressor designed for fully automatic fire.

## CONSTRUCTION

The entire suppressor is constructed from high tensile strength aluminum alloys with the exception of portions of the mount. All exterior parts have a matte black hard anodized finish. Because the radial orientation of the baffles is critical to optimum performance, the suppressor is sealed and cannot be disassembled other than removal of the rear mount. Cleaning can be accomplished by simple immersion in suitable solvents.

### ☆☆☆☆☆ **DANGER** ☆☆☆☆☆

☞ Before performing any installation or 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.

## INITIAL INSTALLATION

The locking collar is a barrel attachment composed of a solid ring with a front face of precision-machined serrations designed to slide over the rearmost flange of the barrel. The collar is provided with three lock-down points to prevent it from loosening on the barrel surface. The lock-down system employs three 5/64" cup head set screws which can be hand tightened to firmly grip the barrel exterior surface.

To mount the locking collar, proceed as follows.

1. With weapon unloaded and safe, remove the upper receiver assembly from the submachine gun.
2. Remove bolt assembly and cocking handle.
3. The sling mounting collar does NOT need to be removed from front of barrel!
4. Slide suppressor locking collar onto barrel and CAREFULLY over threaded portion, until it is seated directly over rearmost portion of barrel flange. DO NOT TIGHTEN THE SET SCREWS YET!
5. Install suppressor unit by screwing onto barrel threads until just forward of barrel locking collar. While holding the sliding suppressor sleeve fully forward, screw the suppressor onto barrel threads until hand tight. Release tension on sliding suppressor sleeve to allow the serrated teeth of both parts to engage loosely and finish tightening while allowing the locking collar to rotate. This has now set the proper location for the barrel locking collar. Using the set screw key wrench provided, tighten the three set screws until firm.
6. Reassemble the weapon.

NOTE: On certain weapons it may be desirable to make a very minor barrel modification to assist the set screws in properly holding the barrel locking collar to the barrel exterior surface. If the barrel locking collar is noticeably slipping when using the recommended mounting/dismounting technique after proper locking collar installation, it is recommended that the barrel exterior surface be slightly dimpled by CAREFULLY using the tip of a drill bit to create a rounded depression on the barrel exterior surface. The rounded depression will allow the cup-head set screws to grasp the barrel surface much more securely. If permanent barrel modification is not desired, the application of a wicking thread-locking adhesive, such as LOCTITE 290 will help retain the set screws in their proper location. This is advised only if the unit will not be moved between different host weapons. If it is desired to mount the suppressor on multiple host weapons, we recommend purchasing additional barrel locking collars.

☆☆☆☆☆ **CAUTION** ☆☆☆☆☆

☞ Before initiating Mount/Dismount Procedures, be absolutely certain that the weapon is unloaded, the magazine removed, and the bolt locked in the rear position.

## SUPPRESSOR MOUNTING

The suppressor portion of the mounting system is composed of the suppression module and rear-mounted knurled sleeve, which is forward-sliding, spring-loaded, and non-rotating. The collar is attached with a ring of serrated teeth at its rear most extremity, which index with, and lock into, the opposing serrated teeth on the-weapon mounted locking collar. The suppressor unit can be mounted or dismounted from the host weapon in rapid fashion by the following simple procedure.

1. Grasp weapon firmly in left hand at front of receiver, close to the barrel. While holding suppressor in right hand, **CAREFULLY** align the first few threads of the barrel with the suppressor threaded portion and gently screw the unit on until the serrated teeth of the suppressor are nearly touching the serrated teeth of the locking collar. At this point, slide the knurled sleeve of the suppressor fully forward, then continue screwing the unit hand-tight until the teeth of the suppressor portion can be fully seated against the teeth of the locking collar when tension on the sliding suppressor portion is released. **STOP!** Proper attachment has been accomplished.
2. Dismounting is accomplished by reversing the order of operations in mounting. Once the serrated teeth on the suppression unit will clear the opposing teeth of the barrel-mounted locking collar, the sliding sleeve of the suppressor unit may be released from tension.

**WARNING!** Do not attempt to mount or dismount the suppressor unit without first sliding the knurled suppressor sleeve **FULLY FORWARD!** To do otherwise will cause **SEVERE** damage to both sets of serrated locking teeth!

## AMMUNITION NOTES

Most commercial American made ammunition is safe, but the origins, storage history, and reason for being surplus of foreign made ammunition is not available for evaluation. Although foreign made ammunition is usually safe, this is not always the case. Damage from non-American ammunition cannot be covered under warranty.

Ammunition in .45ACP and .380ACP are subsonic from most manufacturers. We discourage the use of cast lead bullets in any caliber, because vaporized lead from the friction of the bullet traveling down the barrel will

condense on the baffles and be impossible to remove. Use of non-jacketed ammunition will void the warranty.

The MAC-type submachine gun has difficulty feeding any ammunition with a flat point, such as JHP or truncated cone designs. Reliability is greatest with round-nose ball bullet designs.

The majority of 9mm ammunition is supersonic, and the projectile traveling at velocities above 1,100 fps will produce a ballistic “crack” or “sonic boom”. The majority of subsonic 9mm ammunition is loaded utilizing bullet weights of 147 grain or heavier. There are several commercial sources of subsonic 9mm ammunition, and for maximum effectiveness, we suggest the use of this type ammunition. Sources include 147 grain bullet weight loadings from Winchester, Remington, Federal, CCI, Black Hills, Alabama Ammo and others. Although 9mm subsonic ammunition has a bullet muzzle velocity below 1,100 fps, the higher bullet weight results in a significantly higher bullet kinetic energy.

Although some have suggested that the 9mm subsonic cartridge is “downloaded,” we believe users should be aware that this ammunition is anything but an anemic load with kinetic energies significantly greater than standard 9mm ball ammunition.

We strongly suggest against the use of corrosive ammunition, and evidence of its use will void the warranty.

## ROUTINE CLEANING

Cleaning of a suppressor is not essential, and a small amount of residue within the suppressor can help with sound absorption. The suppressor is not designed for disassembly, and cleaning may be performed by immersion.

Because the VIPER suppressor is of all aluminum construction, it is important that solvents known to damage aluminum not be used. There are no perfect solvents for the carbon deposited on the internal parts by the burning of the powder. We have found, however, that automatic transmission fluid (type A ATF) mixed at approximately a 1:3 ratio with mineral spirits (paint thinner) is among the better solvents for suppressor cleaning. Never use solvents containing ammonia (such as Hoppe’s, Sweets, and “GI” bore cleaner), which can damage aluminum parts. Never use water or water-based cleaning solutions.

### ☆☆☆☆☆ 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.

Cleaning by immersion may be performed every 2-3,000 rounds. Because of molten lead splattering from the heat generated by friction with cast bullets, do not use non-jacketed ammunition.

Most organic solvents are toxic and/or carcinogenic. Some carburetor cleaners and the solvents used in "automotive parts degreasers" supposedly will dissolve caked-on carbon but may contain carcinogenic materials or materials that will damage aluminum. Solvents can be removed by standing the silencer base down or blowing it out with compressed air.

Water can corrode aluminum, and mixed with the products of combustion can corrode anodized aluminum. Unfortunately, ultrasonic cleaners only work with water based solvents. For this reason, we recommend against the use of ultrasonic cleaners.

## SOUND MEASUREMENTS

Sound pressure level measurements have been made on all Gemtech suppressors. All measurements are made in compliance with MIL-STD-1474D as applicable to small arms. Gemtech sound measuring equipment meets or exceeds the technical requirements set forth in MIL-STD-1474D and are re-certified by the manufacturer traceable to National Institute of Science and Technology. Copies of certification are available.

All Gemtech suppressors are "hearing safe" and reduce the sound level significantly below that which mandates the use of hearing protection by both OSHA and MIL-STD-1474D.

Because of the blatantly exaggerated claims made by others in the industry for purposes of product promotion, Gemtech has elected to not routinely publish the results of testing. Test results are available on request to qualified users.

All Gemtech suppressors significantly reduce the muzzle flash, significantly reducing the dangers associated with weapon discharge in haz-mat environments.

## PHYSICAL SPECIFICATIONS

<u>Model</u>	<u>Viper-45</u>	<u>Viper-9</u>	<u>Viper-380</u>	<u>units</u>
Length	9-3/4	9-1/2	9	inches
Sleeve Diameter	2	1-3/4	1-1/4	inches
Tube Diameter	1-1/2	1-3/8	1-3/4	inches
Weight	14.5	12.5	11.5	ounces

### **WARRANTY STATEMENT**

The Magnuson-Moss Act (Public Law 93-637) does not require any seller or manufacturer of a consumer product to give a written warranty. It does provide that if a written warranty is given, it must be designated as "full" or as "limited" and sets minimum standards for a "full" warranty.

GEMTECH has followed the lead of all major firearm manufacturers and has elected not to provide any written warranty, either "limited" or "full," rather than to attempt to comply with the provisions of the Magnuson-Moss Act and the regulations issued thereunder.

There are certain implied warranties under state law with respect to sales of consumer goods. As the extent and interpretation of these implied warranties varies from state to state, you should refer to your state statutes.

GEMTECH certifies that all sound suppressors manufactured by them are free of defects in materials or workmanship, and that they meet manufacturing specifications at the time of manufacture. Gemtech disavows responsibility for damages resulting from neglect, abuse, misuse, or acts of war.

GEMTECH denies any liability resulting from the use, abuse, or criminal misuse of this product.

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

