

# TM-ALPINE

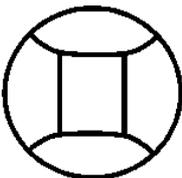
---

## OPERATION AND MAINTENANCE OF SOUND SUPPRESSOR MODEL

### ALPINE

**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: August 15, 2011

★ ★ ★ ★ ★ **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-ALPINE

FIRST EDITION

February 2010

SECOND EDITION

August 2011

Published by:

**ATI Star Press**

*Antares Technologies, Inc.*

P.O. Box 140618

Boise, Idaho 83714

Phone: (208) 938-2173

**COPYRIGHT NOTICE:**

©2011 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-ALPINE**

OPERATIONAL MANUAL FOR  
SOUND SUPPRESSOR MODEL  
ALPINE (.22LR)

*Manufactured by*

**GEMTECH®**

*Division of Gemini Technologies, Inc.*

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

Phone: (208) 939-7222

FAX: (208) 939-7804

**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
Ammunition Recommendation .....	P. 2
Installation .....	P. 3
Maintenance and Cleaning .....	P. 4
Disassembly .....	P. 4
Reassembly .....	P. 5
Physical Specifications .....	P. 6
Threading Specifications .....	P. 7
Warranty Statement .....	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.

**GENERAL DESCRIPTION**

The ALPINE™ is the answer to those who wanted a relatively small, fully user-serviceable suppressor for the the popular (but dirty) .22LR cartridge. No packing material or wipes are used in these units. Designed to meet requirements for an affordable, compact, highly efficient muzzle suppressor, this unit is radically different from conventional silencer designs. Only 1/2 inch longer than our famous Outback-II suppressor, it demonstrates outstanding dry sonic performance in a compact package.

The ALPINE features a titanium thread insert to prevent thread wear occasionally possible with aluminum threads. Titanium does not gall on properly threaded steel barrels.

The ALPINE™ is easily disassembled without the need for specialized tools.

**AMMUNITION RECOMMENDATIONS**

Because this is a muzzle suppressor, there is no velocity control of the projectile. On rifles, high velocity ammunition will be accompanied by the "ballistic crack" of the bullet in flight. For maximum suppression effect, we suggest the use of Gemtech Subsonic .22LR ammunition (available from our web store) or CCI standard velocity .22 rimfire ammunition. Hyper velocity cartridges such as the CCI Stinger® will cause a significant increase in sound signature. These cartridges should be avoided if possible. **It must not be used with any type of centerfire ammunition.**

**Do not use the Aguilla SSS 60 gr. subsonic ammunition.** It does not stabilize in barrel twists readily available and can yaw badly on exit from the rifling, seriously damaging the internal components of your suppressor. **Use of this ammunition is at the user's risk and will void the warranty.**

☆☆☆☆ **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

Before installing (or removing) the suppressor on the weapon, be certain to remove the magazine, open the action, and visually ascertain that the weapon is unloaded.

The suppressor mounts on conventional 1/2-28 (Class 2A) threads. Maximum thread length on the barrel is 4/10 inch. For longer AR-15-type threads, a spacer is available from our web store.

For proper alignment, the muzzle threads must be absolutely concentric with the bore and must have a 90° rear shoulder perpendicular to the bore. We cannot guarantee alignment on improperly threaded barrels. Threading specifications are on P. 7.

Screw on finger tight only. **DO NOT overtighten.** There is no need to “monkey grip” it in place.

☆☆☆☆ **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

## MAINTENANCE and CLEANING

Because the .22 rimfire cartridge generates significant powder residue and condensation in the suppressor of vaporized lead (from the friction of the bare lead bullet in the rifling), the suppressor has been designed for easy disassembly and cleaning. Disassembly and cleaning should be performed after each day's shooting or at intervals not to exceed 250 rounds. Excessive intervals between disassembly and cleaning may make disassembly impossible outside the factory.

The suppressor is aluminum (with titanium threads), and many normal gun cleaning solvents will damage aluminum. These include Hoppe's, Sweets, GI Bore Cleaner, and all water-based agents (such as SLIP-2000, MP-7, Simple Green, etc.). Water and water-based solvents should never be used.

### DISASSEMBLY:

Refer to figure 1 below.

1. Unscrew the front end cap. The only tool needed is a coin, preferably a US nickel.
2. With a dowel of approximately 3/8 inch diameter, push out the entire baffle stack from the rear.

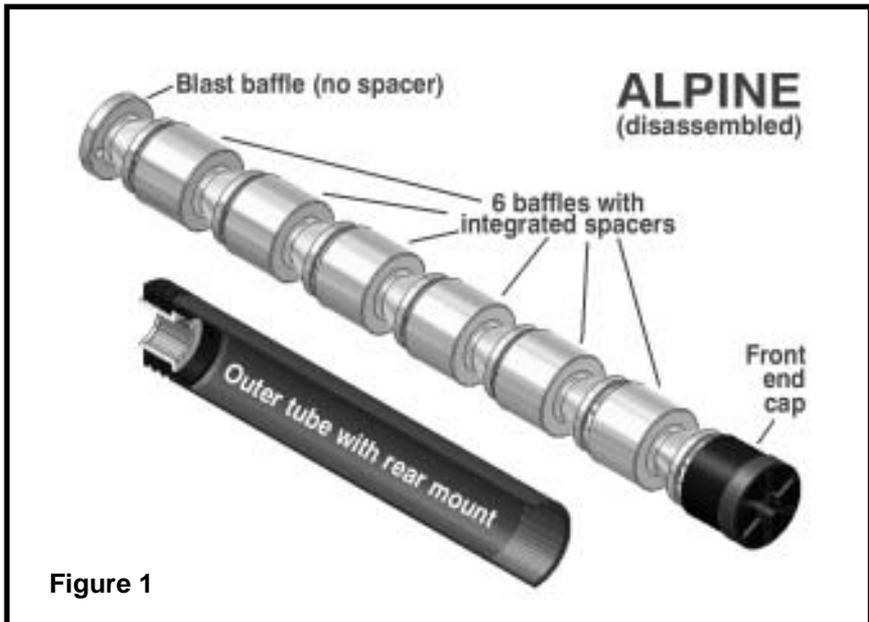


Figure 1

3. You will notice that the integrated spacer telescopes over and engulfs the previous baffle. This makes removal from the outer tube significantly easier without damaging the outer tube.
4. Separate the baffles from each other. This may be difficult if cleaning is not done on a rigid schedule. Soaking in a solvent such as WD-40 or Kroil may be of help.
5. Clean all baffles as desired with solvent such as WD-40, Kroil, or LRM. Steel wool (#0000) or grey Scotchbrite may be used if a toothbrush is not adequate. Absolute cleanliness is not necessary, and damage from using a sand/bead blaster is not covered under warranty.

☆☆☆☆ 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.**

☞ **Further, in the cleaning process, you are exposing yourself to elemental lead and lead salts, all toxic. Use adequate ventilation and wear rubber gloves when handling internal components of the suppressor.**

☞ **Used solvents are classified as hazardous waste and must be disposed of in accordance with applicable environmental requirements.**

## REASSEMBLY:

Reassembly is the reverse of disassembly. All thread surfaces should be coated with a very thin coating of either grease or a colloidal copper anti-seize compound. The sequence of assembly is important and must be followed as enumerated. Do not use excessive force tightening any threaded parts.

Refer to figure 2 on the next page.

1. Figure 2 shows the sequence of parts. All baffles (except the short blast baffle with the hole in the flat plate) are the same, and the order is not important. Notice that the front end cap telescopes over the baffle portion of the baffle below it.
2. Although the baffles can be dropped in place, it is far easier and faster to

stack the baffles on a 1/4 inch rod with the spacer portion of the baffle being up. The blast baffle then inserts into the spacer of the following baffle with the flat portion of the baffle up.

3. The orientation of the jets on the baffles is not really critical, and we have found no significant or measurable difference with differences in orientation in this suppressor.
4. Slip the outer tube over the baffle stack and seat.
5. Insert the cup-shaped front end cap and tighten finger tight with a coin.



**Assembled ALPINE Cross-section**

**Figure 2**

## PHYSICAL SPECIFICATIONS

Caliber	.22 LR
Length	5.6 in.
Diameter	1 in.
Weight	3.7 oz.
Muzzle threads	1/2-28 (Class 2A)
Maximum Thread Length	4/10 inch (see P. 7)
Degree of Suppression (dry)	38 dB*

\*Degree of suppression will vary with barrel length and ammunition used

# Barrel Threading Specifications

.17 and .22 rimfire suppressors

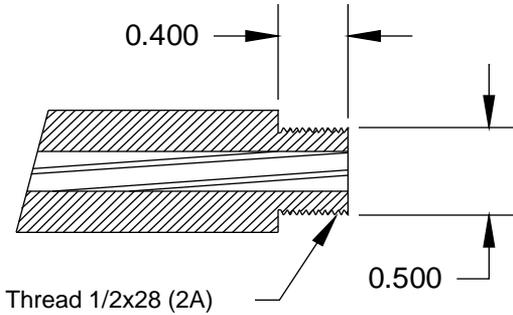


Figure 3

NOTE: LRM solvent is available from LRM Technologies, LLC, 12510 US HWY 441, Alachua, FL 32615. Phone: (352) 317-5868

## WARRANTY STATEMENT

Our "warranty" has been practiced since our personnel started in the suppressor business in 1976, in a time before legalese and when a handshake and this simple statement sufficed: "If a Gemtech product breaks and it's your fault, we'll fix it for a fair price in a timely manner. If it's our fault, we'll fix it quickly at no charge." This policy born of pride in craftsmanship and honor has served us and our clients well for over two decades and will continue in Gemtech's future.

The small print follows:

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.

As do most major firearms manufacturers, Gemtech 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.

It is our intent that the customer be completely satisfied with the product. Certain Gemtech products may be classified as ordnance and/or implements of war and are sold by us with the specific understanding that Gemtech has taken every reasonable precaution in providing our customers with inherently safe merchandise, and that we assume no liability whatsoever for unsafe handling or operation by the purchaser or his agents. Gemtech assumes no responsibility whatsoever and we will honor no claims for damages, regardless of nature, for physical injury or property damage resulting from careless and/or irresponsible handling, adjustments to equipment, improper operation, neglect, or abuse.

Gemtech reserves the right to make changes at any time and without notice, in prices, to change specification or design, to add or remove accessory materials, and to add or delete items without incurring any obligation.

Use of ammunition that does not meet SAAMI specifications will void all warranties.

## REPAIR POLICY

Gemtech maintains complete repair facilities for all suppressors manufactured by them or their antecedent companies. Return authorization and shipping instructions must be obtained prior to return. Contact Gemtech for this information.

ATF no longer requires transfer on a Form 5 to the manufacturer for repair. However, they do require a letter accompanying the weapon detailing the repairs or modifications required. ATF requires proof of ownership, satisfied by a photocopy of the front of the owner's Form 3, 4, or 5.

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

For accessories or adapters,  
visit our web store:

[www.gem-tech.com](http://www.gem-tech.com)

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

