



SOF SUPPRESSORS

OWNER'S MANUAL & FURTHER INFORMATION

SAFETY NOTICE – READ BEFORE USE

Firearm Safety

Before installing, removing, or servicing any suppressor or mounting component, ensure the firearm is completely unloaded and cleared safe. Remove the magazine, lock the action open, and visually and physically inspect the chamber. Failure to confirm a cleared firearm may result in serious injury or death.

Heat Warning

Suppressors operate at extreme temperatures during use. Surface temperatures may exceed safe handling limits within a single firing sequence. Always allow the suppressor to cool to ambient temperature before handling, removing, or servicing. Use heat resistant gloves if necessary. Never attempt removal while the suppressor is hot.

1. SUPPRESSOR FITMENT OVERVIEW

SOF suppressors are compatible with:

- HUB Standard Direct Thread Adapters – 1.375x24
- Quick Detach (QD) Systems – 1x16LH

Only use mounting components that meet recognized firearm industry specifications. Inspect all threads for debris, carbon buildup, or damage prior to installation.



DIRECT THREAD INSTALLATION (HUB 1.375x24)

1. High strength-to-weight ratio.
2. Thread the HUB 1.375x24 direct thread adapter fully into the suppressor body by hand.
3. Torque the adapter to industry standard values (typically 20–30 ft lbs) unless otherwise specified by the adapter manufacturer.
4. Thread the suppressor onto the firearm muzzle threads by hand until fully seated against the shoulder.
5. Final torque to 20–30 ft lbs using appropriate suppressor tools. Do not over torque.

Important:

- Never install over crush washers unless explicitly designed for suppressor use.
- Verify suppressor alignment before firing.

QUICK DETACH INSTALLATION (1x16LH)

1. Confirm the QD muzzle device is properly installed and torqued to the firearm per manufacturer's specifications.
2. Inspect 1x16LH threads for fouling or damage.
3. Thread the suppressor onto the QD interface by hand until fully seated.
4. Torque to industry standard specifications (generally 25–35 ft lbs) unless otherwise noted.
5. Verify secure lockup before firing.

Do not fire if the suppressor is loose or improperly seated.

2. CLEANING & MAINTENANCE

- Suppressors should be inspected and cleaned every 3,000 rounds, or sooner depending on ammunition type, firing schedule, and operating environment.
- Cleaning should follow industry accepted suppressor maintenance practices, including:
 - Carbon removal using approved solvents.
 - Approved ultrasonic cleaning units.
 - Mechanical cleaning with non-abrasive tools.
 - Avoidance of aggressive scraping or grinding that may damage internal geometry.

Do not disassemble sealed suppressors unless explicitly designed for user service.

3. BARREL LENGTH & FIRING SCHEDULE CONSIDERATIONS

Short barrels, high-pressure cartridges, and aggressive firing schedules significantly increase:

- Internal temperature.
- Gas erosion.
- Cyclic stress on materials.

Excessive firing schedules and short barrel configurations accelerate material fatigue may reduce service life. This is expected behavior across all suppressor designs and materials. Adequate cooling periods between firing strings to mitigates thermal stress.

Operating outside recommended barrel length or firing cadence parameters may void warranty coverage related to material fatigue or thermal damage.

4. MATERIALS & ADDITIVE CONSTRUCTION

SOF suppressors are manufactured using advanced additive manufacturing processes and purpose selected high performance alloys. Material selection is based on thermal load, pressure exposure, barrel length, and firing schedule, not aesthetics or cost. The primary materials used are Titanium Ti-6Al-4V (Ti64) and Inconel 718 (IN718).

Titanium Ti-6Al-4V (Ti64)

Application Intent:

Ti64 is utilized where reduced mass, improved weapon balance, and corrosion resistance are prioritized.

Advantages:

- High strength-to-weight ratio.
- Significant reduction in suppressor system mass.
- Excellent corrosion resistance.
- Lower thermal conductivity limits external heat transfer.

Limitations:

- Lower sustained high temperature capability than nickel-based alloys.
- Reduced tolerance for prolonged aggressive firing schedules.
- Accelerated fatigue under excessive thermal cycling.

Recommended Use:

- Barrel lengths $\geq 10.3"$ (5.56mm).
- Controlled or moderate firing schedules.
- Applications prioritizing mobility and reduced front end weight.

Inconel 718 (IN718)

Application Intent:

IN718 is used for suppressors intended for short barrels, high-pressure cartridges, and sustained or aggressive firing schedules.

Advantages:

- Exceptional high-temperature strength and creep resistance.
- Superior resistance to gas erosion and thermal fatigue.
- Maintains structural integrity under prolonged heat exposure.
- Extended service life in high-stress environments.

Limitations:

- Increased overall weight.
- Higher heat retention and slower cooldown.
- Greater thermal signature during sustained fire.

Recommended Use:

- Barrel lengths $\leq 10.3"$ (5.56mm).
- High rate or sustained firing schedules.
- Duty, combat, and hard use operational environments.

Material Selection & Service Life

SOF material selection is application driven. Additive manufacturing allows internal geometry, wall thickness, and reinforcement to be optimized for each alloy's mechanical and thermal characteristics. No material is immune to fatigue.

Short barrels, high cyclic rates, and extended firing strings significantly increase thermal and mechanical stress. Operating outside the intended material envelope will accelerate wear and reduce service life and may affect warranty coverage related to thermal or material fatigue.

5. NOTES

- Always verify proper suppressor alignment before live fire.
- Use only quality ammunition manufactured to recognized standards.
- Failure to follow these instructions may result in equipment damage, personal injury, or voided warranty.

CONTINUE

WARRANTY, LIABILITY & LEGAL NOTICE

1. ASSUMPTION OF RISK

Suppressors and firearms are inherently dangerous products. By purchasing, possessing, installing, or using any SOF suppressor, the user knowingly and voluntarily assumes all risks associated with its use, including but not limited to serious bodily injury, death, property damage, and damage to firearms or third-party equipment.

Improper installation, unsafe handling, failure to verify firearm clearance, or failure to follow all instructions and warnings contained in this manual may result in catastrophic failure, injury, or death.

2. COMPLIANCE WITH LAW

The user is solely responsible for ensuring compliance with all applicable federal, state, and local laws and regulations, including but not limited to those governing the ownership, possession, transfer, installation, transport, and use of suppressors and related mounting devices.

SOF assumes no responsibility or liability for unlawful possession or use of this firearm.

3. LIMITED LIFETIME WARRANTY – SUPPRESSORS

SOF warrants to the original civilian retail purchaser that all suppressors manufactured by SOF will be free from defects in materials and workmanship for the lifetime of the product, when used under normal, intended operating conditions and properly maintained in accordance with applicable SOF suppressor manual.

This Limited Warranty:

- Applies only to the original purchaser.
- Is non-transferable, except where otherwise required by law.
- Covers manufacturing and workmanship defects only.

Unless otherwise expressly stated in a written quotation, proposal, or contract, SOF further warrants that the product will conform to applicable specifications and be free from defects at the time of delivery.



4. WARRANTY EXCLUSIONS

This Limited Warranty is void and SOF shall have no obligation if the suppressor has been subject to:

- Improper installation, removal, or mounting.
- Use on firearms with improper thread concentricity or damaged barrels.
- Use with non-approved mounting systems or adapters.
- Use of reloaded, remanufactured, experimental, or over-pressure ammunition.
- Excessive firing schedules, sustained high rate fire, or thermal abuse.
- Operation on barrel lengths shorter than recommended.
- Unauthorized modification, disassembly, or repair.
- Negligent handling, improper maintenance, or misuse.

Damage resulting from baffle strikes, end-cap strikes, erosion, or misalignment is not a manufacturing defect.

5. MATERIAL & THERMAL LIMITATIONS ACKNOWLEDGMENT

The user acknowledges that suppressors manufactured from materials including Titanium Ti-6Al-4V (Ti64) and Inconel 718 (IN718) have defined thermal, pressure, and fatigue limits.

Short barrels, suppressor use on high pressure cartridges, aggressive firing schedules, and inadequate cooling intervals may exceed these limits and permanently degrade the suppressor. Such degradation is expected, irreversible, and excluded from warranty coverage.

6. LAW ENFORCEMENT & GOVERNMENT USE CARVE OUT

Suppressors sold to or issued for law-enforcement, military, or government agency use are warranted solely pursuant to the terms of the applicable agency purchase agreement or contract.

Operational wear, sustained fire, training abuse, duty-related damage, or combat use are expressly excluded unless otherwise stated in a written contract executed by SOF.

No civilian warranty terms shall apply to agency-issued suppressors.

7. LIMITATION OF LIABILITY

To the maximum extent permitted by law:

SOF shall not be liable for any indirect, incidental, consequential, special, or punitive damages, including but not limited to loss of use, loss of profits, personal injury, or firearm damage arising from the use or inability to use any suppressor.

SOF's total liability under any theory of recovery shall not exceed the original purchase price of the suppressor.

8. INDEMNIFICATION

The user agrees to indemnify, defend, and hold harmless SOF, its officers, directors, employees, agents, and affiliates from and against any claims, damages, liabilities, losses, costs, or expenses arising from misuse, unlawful use, improper installation, or failure to comply with this manual.

9. DISCLAIMER OF IMPLIED WARRANTIES

Except as expressly stated herein, SOF disclaims all implied warranties, including any implied warranties of merchantability or fitness for a particular purpose, to the fullest extent permitted by law.

10. GOVERNING LAW & VENUE

This warranty and all disputes arising from the ownership or use of any SOF suppressor shall be governed by the laws of the jurisdiction designated by SOF, without regard to conflict of law principles.

Venue for any legal action shall lie exclusively in a court of competent jurisdiction selected by SOF.

11. SEVERABILITY

If any provision of this section is held invalid or unenforceable, the remaining provisions shall remain in full force and effect.

