CAUTION

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.

FIRST EDITION: 1979
SECOND EDITION: 1980
THIRD EDITION: 1982
FOURTH EDITION: 1983
FIFTH EDITION: 1985
SIXTH EDITION: 1987
SEVENTH EDITION: 1988
EIGHTH EDITION: 1989

Published by:
HONDO PRESS
Div. of Automatic Weapons Company
P.O. Box 278
El Prado, New Mexico 87529
Phone: (505) 776-8515

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TM-R10
INSTRUCTION MANUAL FOR SOUND SUPPRESSOR MODELS
R10 & 77/22

Manufactured by

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GENERAL INFORMATION

Congratulations! You have just purchased one of the most efficient .22 rimfire suppressed weapons available on today's market. This suppressor is designed to give a lifetime of service if simple routine maintenance is performed. Please take a few moments to read through this instruction manual and keep both it and the disassembly tool in a safe place.

The Ruger® model 10/22 or 77/22 rifle is modified into a suppressed weapon by AWC. When built on the Ruger® 10/22 rifle, the unit is designated the model R10. It is designated the model 77/22 when built on the Ruger® model 77/22 rifle. The AWC model AR7 (currently out of production) was a similarly built suppressed barrel for the Armalite® AR-7 rifle. The suppressors are essentially identical, and the same instructions apply to both.

DESCRIPTION

The unit consists of a standard Ruger® 10/22 rifle in .22LR caliber with an integral sound suppressor built around the modified original barrel. Because of early porting of the gases, bullet velocity is maintained subsonic for more effective sound suppression. Additionally, although the overall length of the suppressed weapon is the same or shorter than the original rifle, a full 16" legal barrel length has been preserved by building the suppressor around the barrel. This precludes the additional registration of the weapon as a short-barreled rifle, which is necessary in some designs.

The sound of the firearm is caused primarily by the rapid expansion of high pressure propelling gases into the atmosphere at the muzzle of the weapon. In order to reduce the sound, it is necessary to reduce this pressure. In the rear section of the suppressor, the gases are ported into the rear chamber, where there is a relatively large volume for expansion, reducing gas pressure. By lowering the temperature of the gases, the pressure is further reduced. In the front chamber there is further volume for gas expansion, changing the characteristic sound by attenuating the high frequency sound components.

AMMUNITION

The suppressor consists basically of six parts, all of which are aluminum except the barrel. All external parts are black anodized. Please refer to the drawing on page 4.

SIGHTS

Since barrel modification removes the sights, a scope or other optical sight must be used. A base for the .22 caliber tip-off scopes is included with the Ruger® 10/22 rifle.

CLEANING

The rifle should be cleaned normally after each use. This should include swabbing the bore with a .22 caliber brass brush dipped in powder solvent followed by swabbing with a dry patch and lightly oiling with a light gun oil. Thorough cleaning of the suppressor requires total disassembly and should be performed when the suppressor needs to be disassembled for repacking.

DISASSEMBLY, CLEANING, AND MAINTENANCE

The suppressor requires maintenance each 2000 to 4000 rounds. As the user becomes accustomed to shooting a suppressed weapon, the weapon will appear to become louder, a normal illusion.

1. Remove the barreled action from the stock (see the rifle manufacturer's instructions).

2. With the spanner wrench, unscrew the front end cap (which is threaded onto the barrel).
NOTES:  
1. Rear suppression chamber contains rolled 8-mesh steel screen (6.25 x 18 in rolled on 5/8" form).  
2. Front suppression chamber contains 6x7 inch fiberglass.
3. Twist the outer tube CLOCKWISE and pull off the outer tube. The outer tube is not screwed onto the barrel or the rear suppressor mount. To prevent accidental unscrewing of the internal parts, ALWAYS TWIST THE OUTER TUBE CLOCKWISE when either assembling or disassembling the suppressor.

4. Remove the fiberglass packing from the front chamber. Unscrew and remove the center suppressor support.

5. Slide the rolled screen (rear chamber packing) forward and remove. It can be cleaned by immersion in suitable solvents, such as Hoppe’s No.9®, amyl acetate, Varso®, or even Diesel fuel. It is not necessary (or desirable) to unwind the screen. Optionally, the diffusing screen can be replaced. The diffusing screen consists of a piece of 8 mesh (1/8") galvanized steel mesh (sold as hardware cloth) 6-1/4" by 18" rolled on a 5/8" dowel as a form and secured with filament strapping tape, stainless safety wire or solder. This material is available at any well stocked hardware store.

6. Clean the rifle barrel in a normal manner, making sure that the holes in the barrel are free of powder residues. Oil the barrel. It is desirable to coat the outside of the barrel with a coat of light grease.

7. Slide the rolled screen on the barrel. Replace the center suppressor support, screwing finger tight only.

8. Wrap a piece of 1/2" thick fiberglass (6" wide by 7" long) around the front portion of the barrel. Secure with masking tape.

9. Slide the outer tube over the packing, twisting the tube clockwise, and be sure the end of the tube slips over the rubber “O” ring on the rear suppressor support. Position the tube so that the serial number is up and readable.

10. Screw on the front end cap and tighten with the spanner wrench. Replace the barreled action in the stock.

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**REPLACEMENT PARTS**

The only parts which should require replacement are the fiberglass in the front suppression chamber (each time the suppressor is repacked) and the rubber “O” ring in the rear support (only if it wears out). All of these items should be available at a reasonably well stocked hardware store.

Due to recent changes in the law, we are unable to supply repair parts for field replacement. It is now necessary to transfer the suppressor back to the manufacturer should replacement parts be necessary.

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**PHYSICAL SPECIFICATIONS**

- Suppressor overall length = 14.2 in.
- Suppressor outer tube diameter = 1.25 in.
- Degree of suppression = 48 dB.
LIMITED WARRANTY and REPAIR POLICY

AWC warrants that all sound suppressors manufactured by them are free of defects in materials or workmanship for a period is one year from the date of the initial transfer from the manufacturer to first transferee. In instances where the suppressor is made as an integral part of a firearm manufactured by another manufacturer, this warranty applies only to the suppressor, as the firearm is covered by a separate warranty provided by its manufacturer. The warranty covers defects discovered during normal use of the sound suppressor and excludes replaceable packings and the exterior finish. The company further disclaims liability for damage to internal parts caused by disintegration of bullets, neglect, and abuse. The warranty is also voided by unapproved modification of the suppressor.

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

If a suppressor is found to be defective or if it mechanically fails during the warranty period, it will be repaired free of charge. No other warranties are either expressed or implied.

Should the sound suppressor require repair or modification, the owner should contact AWC either in writing or by telephone, because many problems and repairs can be effected without returning the unit. If it should become necessary to return the suppressor for repair or modification, it will be necessary to transfer it to the manufacturer. Class 3 dealers may transfer using ATF Form 3. Individual owners must transfer using ATF Form 5 (taxexempt) and the suppressor will be returned using ATF Form 5. No additional tax liability is incurred and it is not necessary to obtain reapproval by local police, as only the front sheet of the Form 5 will need to be filled out.

Should return be necessary, properly filled out copies of the correct form will be mailed to the customer for the customer’s signature.

If repairs are required due to a defect in manufacturing or materials, there will be no charge for repairs. Otherwise, the owner will be invoiced for both time and materials required.