A CAN FOR ALL SEASONS

ADVANCED ARMAMENT’S TI-RANT 45M IS THE LEATHERMAN TOOL OF PISTOL SILENCERS

STORY BY MIKE SEARSON

Join entering the world of NFA silencers, the typical firearm owner thinks, “If I want to tame the sound signature on my rifle chambered in the mighty .308 Lapua or .50 BMG cartridges, it’s a simple matter of buying a can.” However, with machine-gun prices soaring every year, the common thought process is “Get one while you can; they’ll only increase in value.” This is a result of an unconstitutional law being passed in 1986 that restricts current civilian ownership to those machineguns manufactured prior to May 1986.

In the realm of silencers, the expense is somewhat different. Silencers are still manufactured and can be owned by residents of 39 states. There’s the cost of transfer (which can run anywhere from $50 to $250 per transfer) aside, purchasing a silencer represents a significant investment and as such, the can becomes a lifetime purchase.

Lastly, there’s the matter of the $200 tax stamp. While many shooters claim it’s the only tax they look forward to paying, we still feel the tax is unjust and like to minimize the amount of our shooting budget that goes into federal coffers.

If you’re looking for that one pistol silencer you may want to look at the Advanced Armament Corporation (AAC) Ti-RANT 45M.

SIZE MATTERS NOT

The shorter Ti-RANT “S series” came about at the request of the U.S. military. Unlike a civilian shooter who might prize the ultimate in sound suppression, the MIL types wanted something short for a secondary weapon that might be riding in a holster. The handgun is generally a backup piece, and if deployed, that means something has more than likely gone wrong with the rifle. So if the bad guys in the immediate area already know your position, this would keep potential reinforcements from possibly being alerted.

The Ti-RANT 45M gives the best of both worlds in this regard — you can run it long or short and change its configuration in under a minute.

INTERCHANGEABILITY

Many people don’t realize that certain .45 ACP silencers can be used on smaller calibers like 9mm, .40 S&W, .22 LR, or even 300 Blackout subsonic loads. AAC doesn’t manufacture a piston to convert the latter, and shooting such a round will void the warranty if there’s any damage — a supersonic 30-caliber rifle round will more than likely ruin the silencer, and yes, people do make mistakes and use the wrong round from time to time. However, it is possible to do it, just realize that the shooter assumes all risks.

The problem is that most silencers are threaded to a specific pattern, which means that the shooter needs to have the same pitch threaded to all his firearms on which he wants to run the silencer.

Or does it? The Ti-RANT 45M gives the best of both worlds in this regard — you can run it long or short and change its configuration in under a minute.

The Ti-RANT is based on the earlier AAC Evolution (which we looked at in our one-shot ZERODE edition from 2013). This means that the female threaded portion of the can rests in an interchangeable piston. On a can like the Evolution, the silencer was caliber specific and there were fewer than a handful of pistons available for either version. The Ti-RANT shares the same pistons across calibers, and if you have a multitude of firearms with differing calibers and male threaded ends, you can pretty much cover them all.

These pistons, known as the ASAP (Assured Semi-Automatic Performance) Clutch, form the base of the Nielsen device, which uses a spring in order to cycle the action on blowback-style pistols. When using the Ti-RANT on fixed-barrel firearms like a pistol caliber carbine or a Walther PPK, the spring is removed and replaced with a fixed barrel spacer.

The spring-loaded ASAP is housed in a steel blast baffle that takes the brunt of the initial blast and acts like a magnet for unburnt powder. More importantly, this booster takes the weight of the silencer off the barrel in order to allow the handgun to function properly. As an added bonus, the shooter can tune the silencer to the pistol by pushing the silencer forward and rotating it in order to adjust the point of impact.

The ammunition provided for this review was courtesy of Freedom Munitions and their HUSH line, which is optimized for use with silencers as this goes beyond a simple subsonic factory loading.

The loads in the HUSH line minimize excessive unburnt powder. This results in a more effective silencer and a lot less carbon when it comes time to clean up.
TEST TIME

We ran the Ti-RANT 45M on every threaded barreled handgun in our safe. We started with the 45s and Freedom Munitions 230 Grain Hush subsonic rounds:

› HK USP Tactical 45

If there was ever a pistol designed for use with a silencer it’s the USP 45 Tactical by HK. Wet, dry, with the short version or the full length: We find this to be the quietest handgun with any silencer. It may be the O-ring on the barrel providing slight drag on the slide or placement of the threads, but we suspect that the slide unlocks a microsecond later than everything else, keeping the gases from escaping through the ejection port.

› SIG SAUER 1911 TACOPS Carry

SIG’s 1911 with a factory-threaded barrel makes for an extremely quiet silencer host. Of course it takes a different thread than the HKs, but thanks to our good friends at silencershop.com, we were able to obtain the correct piston.

When it was time to change the piston, we noticed it was covered in carbon, but still a lot cleaner than the ammunition we usually use for range sessions with no unburnt powder.

Although not as quiet as the HKs to our ears, it still performed admirably. Then we moved on to the 9mm hosts. Note: Not all .45 cans will work with smaller calibers. The aforementioned Evolution 45 is an example; the Ti-RANT on the other hand, was made with interchangeability in mind.

Again, we relied on Freedom Munitions HUSH ammo in 147- and 165-grain loads.

› HK USP Compact Tactical 45

Like its slightly bigger brother, the USP CT was a joy to shoot. Our host pistol relies on extra tall Heine “Straight 8” sights, which we preferred to the factory USP sights. When we can see over the can, we won’t say “no.”
A CAN FOR ALL SEASONS

WHAT'S IN A NAME?

“Silencer,” believe it or not, is the correct term and was coined by Hiram Percy Maxim in 1906 for his invention to reduce firearm noise. To date this is the legal term used by the BATFE and the overwhelming majority of manufacturers who build them. “Suppressor” or “muffler” may sound like a more accurate term with regard to the action being performed, but it is really a form of slang just like “can” or “hush puppy.”

SHOOTING WITH THE SILENCER

Some shooters prefer taller “Suppressor Sights” (Yeah, yeah, we know what we said, but that’s what the pistol manufacturers like to call them) and some might opt for an electronic sight like the Trijicon RMR to see over the silencer. However, there’s another method, which may not be taught by every “Certified Instructor” known as “Shooting through the can.” The front sight is still the primary focal point, only in this instance the silencer is superimposed over the target.

It takes a little getting used to and can be improved upon by using contrasting sights such as an orange front and white or green rears. In the case of the Beretta, we paint the rear of the front sight orange.

SIG SAUER P229

The P229 has a slow lockup time by a few milliseconds and results in a quiet shooter. We were particularly impressed with the sound on the shorter version of the Ti-RANT with this pistol.

Glock 19

Our Glock 19 is a Gen 3 with an aftermarket AAC barrel threaded in 13.5 X1 LH, like the SIG. The first three generations of Glocks suppress decently. The fourth Gens seem a bit more finicky. One problem with the Glock in this regard is their shorter dwell time than the HKs and their wider ejection port, allowing expelled gases to escape. This can be improved by running a heavier (19# to 20#) recoil spring than stock (18#). It slows the cycling enough that the ejection port doesn’t allow the gases to escape rearward.

NIelsen RATINGS

The original Nielsen Device was a modular component that had to be added to the suppressor or the host pistol and actually hampered sound reduction, making the suppressor slightly louder.

It was designed by the late Charles “Mickey” Finn at the request of a fledgling Naval Special Warfare Unit whose name rhymes with “SEAL Team Six” for use with Finn’s Qual-A-Tec suppressors that the SEALs were using on their pistols.

When going from the M9 (Beretta 92), which did not need the device, to the SIG P226 or MK23 SOCCOM pistol, there were reliability issues that prompted its invention.

AAC chose to make the Nielsen Device an integral part of their centerfire pistol cans and, in doing so, realized they could make interchangeable rear caps and pistons so the suppressor could be used on more than one pistol with different thread patterns such as ½-28, ½-32, and Metric 13.5 x 1 LH.

The namesake of the Nielsen Device was the maiden name of a family member of Finn’s.
THE MAKING OF A TI-RANT

Despite its name the can isn’t entirely constructed of titanium. Only the outer tube gets that space-age honor and the Grade 9 titanium offers improved strength coupled with a significant weight reduction. The baffles are made from hard coat anodized 7075-T6 aluminum alloy.

The 45 M differs from the full-sized and 9 models in that the first 3 inches of baffle stack are removable and can be replaced by the endcap to transform into a shorter silencer.

HUSH AMMO

Most shooters running suppressors typically run the most convenient subsonic ammunition that they can find, which in the case of the .45 ACP is 230-grain loads and in 9mm 147-grain or heavier.

Run-of-the-mill factory loadings can often throw unburnt powder into the can or the shooter’s face, even if it’s branded as “subsonic.” Freedom Munitions HUSH line was developed specifically for use with silencers, and from the rounds we tested we experienced little of these problems. The result was a quieter, more efficient silencer that was easy to take apart and clean.

FIRST ROUND POP

The first round through a silencer at a range session is often the loudest. The root cause for this is the silencer is full of cooler air containing oxygen that reacts with hot gases from the fired round. After that first shot, the oxygen is depleted and subsequent shots are quieter.

WHERE TO GET ONE?

The Ti-RANT 45M is shipping regularly now; most NFA dealers can order them for you if they’re not in stock. If you’re brand new to the process and need a trust or the lowdown on finding a local dealer, you can order from silencershop.com. They’re the leading distributor for silencers and their unique ordering system makes it a hassle-free transaction, plus they spend a significant amount of time and energy helping to reform NFA laws in every state. If you live in one of the states that just decriminalized silencers and have no idea where to find a dealer, check them out.

A WET CAN?

Pistol silencers can benefit from a slightly reduced sound signature by running them with about 5 cc of water (a bottle cap full). Simply pour the water into the rear of the can, hold your finger over the hole in the front and give it a quick shake. The water acts like an ablative and cools the hot gases eliminating the dreaded “first round pop” (see above).

Despite some people advocating wire pulling gels, WD-40, or hippie tears, the experts and manufacturers advocate using water above all else.

Beretta 92

We expected the Beretta to sound louder than it did due to the open slide design and were pleasantly surprised with its performance. We had two issues with the rear endcap impacting the plastic guide rod and causing a stoppage. This was in part our fault for threading an existing factory barrel. Aftermarket barrels tend to be a bit longer and don’t have this issue.

There is some debate about using a fixed barrel spacer on the Beretta — AAC told us it wasn’t necessary, but other silencer manufacturers do advise running them on the M92. Using the ASAP won’t damage the suppressor, but it may help if using an aftermarket threaded barrel with a longer thread pattern.

Steyr M9A1

There’s another Austrian pistol designer, more famous for the rifles, known as Steyr Arms. The S9A1 subcompact model is this author’s regular CCW pistol, so we wanted to see how its parent design fared with a can.

The high grip angle coupled with a low bore axis makes for an accurate shooting platform, and the trapezoidal sights make “shooting through the can” an easy feat as the front sight is a hi-vis triangle.

What’s interesting about the M9A1 and the Ti-RANT is that this pistol can be a fickle suppressor host. We’ve tried this pistol with dedicated 9mm silencers and a variety of ammunition with less than acceptable results.

However, we experienced no such stoppages with the Ti-RANT 45M. This may be due to the larger volume of the silencer and a slight boost in recoil.

S&W M&P

Along with .45 ACP and 9mm, the Ti-RANT is rated for .40 S&W. Our host gun was a Smith & Wesson M&P with an aftermarket threaded barrel and, of course, the appropriate piston.

This caliber is not ideal for suppressed shooting as the barrel threads seem to be a weak point in most instances due to the fact that many firearms in this caliber were designed for 9mm in mind and opening up that barrel by 1 mm doesn’t leave a lot of meat for threads to be properly cut for long-time use.

We didn’t use Freedom Munitions ammo in this handgun; instead we relied on some subsonic 180-grain hand loads we developed ourselves.

The round performed well according to the sound meter, but we thought it sounded the loudest of everything we fired during this test.
Shooting with a silencer goes beyond mere decibel reduction. Different handguns in the same caliber will sound different due to the difference in milliseconds between the action unlocking, the length of the barrel, the barometric air pressure, altitude, and where you happen to be shooting. Silencers at indoor ranges sound amplified due to echoes; shooting suppressed outdoors in a wooded area can sound similar. Shooting in the desert at 5,000-plus elevation and no humidity makes everything sound much quieter.

This may seem as if we’re deviating from “the science,” but we’re not. Sound is a vibration that begins as an audible mechanical wave of pressure and displacement, through a medium such as air. How we hear sounds is a matter of perception by the brain. This is further impacted by the shooter’s hearing sensitivity.

Look at the diversity in music tastes among your friends — beyond style or genre, certain notes or tones have a different appeal to everyone. It’s the same with silencers. We provide decibel readings because it’s somewhat measurable from a manufacturer’s standpoint, but it can be like lumen ratings on flashlights and only tells a small part of the story.

The interchangeability of calibers and ability to run short or long gives the Ti-RANT 45M an edge, making it a necessity if you have a diverse assortment of threaded pistols you want to quiet down and don’t want to send off more than one $200 check to the Treasury Department for another stamp.

More importantly, with the exception of .40 S&W through the can, it’s music to our ears.

### Other Calibers

The Ti-RANT 45, 45M, and 45S are fully capable of working with calibers such as .44 Special, .45 Auto Rim, .45 Colt, .38 Special, and anything else with a bore diameter less than 0.455 inch and a muzzle velocity of less than 1,080 feet per second.

### .300 Blackout?

Based on our experience with the silencer and others of a similar design, we believe that it would work well with .300 Blackout subsonic loads and a fixed barrel spacer in lieu of the spring in the ASAP. Unfortunately AAC does not offer an adapter for this purpose. This is probably a good thing as accidentally firing a supersonic load through the can would have disastrous consequences.

### RESULTS BY THE NUMBERS

Here are the tabular results to see how each pistol performed. Each rating is an average (eliminating first round pop) of 20 rounds fired from each pistol in each configuration.

On the .45-caliber pistols and 9mm pistols, the can performed exactly as it was supposed to. We tried some 9mm out of another 9mm silencer (AAC Illusion 9) and while it metered quieter, we found the Ti-RANT to deliver a more pleasant sounding tone.

### DECIBELS

<table>
<thead>
<tr>
<th>HOST</th>
<th>CALIBER</th>
<th>LONG (DRY)</th>
<th>LONG (WET)</th>
<th>SHORT (DRY)</th>
<th>SHORT (WET)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HK USP 45 Tactical</td>
<td>.45 ACP</td>
<td>133</td>
<td>126</td>
<td>139</td>
<td>134</td>
</tr>
<tr>
<td>HK USP 45 Compact Tactical</td>
<td>.45 ACP</td>
<td>134</td>
<td>127</td>
<td>140</td>
<td>134</td>
</tr>
<tr>
<td>SIG SAUER Tac Ops Carry 1911</td>
<td>.45 ACP</td>
<td>136</td>
<td>130</td>
<td>141</td>
<td>137</td>
</tr>
<tr>
<td>SIG SAUER P229</td>
<td>9mm</td>
<td>129</td>
<td>124</td>
<td>133</td>
<td>129</td>
</tr>
<tr>
<td>Glock 19</td>
<td>9mm</td>
<td>130</td>
<td>123</td>
<td>134</td>
<td>131</td>
</tr>
<tr>
<td>Beretta M92</td>
<td>9mm</td>
<td>130</td>
<td>125</td>
<td>136</td>
<td>132</td>
</tr>
<tr>
<td>Steyr M9A1</td>
<td>9mm</td>
<td>129</td>
<td>124</td>
<td>132</td>
<td>129</td>
</tr>
<tr>
<td>S&amp;W M&amp;P 40</td>
<td>.40 S&amp;W</td>
<td>135</td>
<td>131</td>
<td>145</td>
<td>138</td>
</tr>
<tr>
<td>Beretta M71</td>
<td>.22 LR</td>
<td>127</td>
<td>125</td>
<td>129</td>
<td>128</td>
</tr>
</tbody>
</table>