

INTRO

The Gas Pedal ® grip is more than just a part, it enables the shooter to use the “opposable grip” method which is easier to learn and can yield results superior to traditional shooting grips.

The Problem: How to control pistol recoil, and shoot faster, easier and more reliably

The Solution: The Gas Pedal ® Opposable Grip

If you are a shooter and don't use our Gas Pedal® grip you could be going faster with more reliability. PLEASE do not confuse the real Gas Pedal ® grip with other products that have tried to emulate the concept and called it a Thumb Rest. Other's will rest your thumb but do not have the following enhanced shooting benefits.

- Enhanced Recoil Management with less flip.
- Much Less Dot or front sight movement
- Faster shot to shot times
- More consistent draw
- Quicker more repeatable Acquisition.
- Enhanced Accuracy
- The perfect grip every time
- Ensures perfect wrist alignment.
- Aids Grip with Minimal effort to allow precise trigger control
- Can be shot in any arm or foot position. No special stances required
- Easy to learn
- Automatic Control for windage or trigger error
- Easy to control Big caliber loads with small or weak hands
- 100% USA designed and made

FAQ

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What are the principal advantages of the Gas Pedal® Method?

It's faster and easier to use than traditional methods. You can shoot in ANY position of arms or legs easily (no complicated stances or grips required to learn). It is much easier to control recoil. It solves the two biggest pistol problems with pistol, which are precise trigger control with relaxed trigger finger and getting a consistent strong grip without much effort.

What is the History of Gas Pedal® grip?

The history of the Gas Pedal is somewhat convoluted. Some say a similar device was used in the early 80's but abandoned because it did not work well. GoGun Guys, Master Shooter, Cem Esteban, along with a Sports Medical Physician, and GM, A, and B shooters perfected the “Gas Pedal ® opposable grip”, as we know it today, in the 1990's in USPSA competition. Several Hawaii based teams competed with the Gas Pedal® grip in US Nationals and Area Matches in the 90's. However, American tradition being what it was, it was not well received then in the USA. But shooters worldwide embraced the concept. Esteban continued making the Gas Pedals by hand until 2010 when CNC machines allowed him to introduce it all shooters with larger numbers of parts made.

The Gas Pedal® opposable grip was not widely recognized in the USA as the parts were made by hand in small numbers. In the early 2000's a foreign company introduced a similar product which in truth was a “thumb rest”, not a true Gas Pedal® part and unfortunately improperly used the name Gas Pedal. To confuse matter more, a non USA, International Shooter used their version, improperly named Gas Pedal to win several World Titles. Most of the top competition shooters worldwide today use the opposable grip but the opposable grip is still only used by a minority in USA.

It is very interesting to note that no World Open championship since 1996 has been won without an opposable grip.

How and why does it work, and why is it better than other similar products?

Although the Gas Pedal® grip is generically but improperly put in the broad category of “thumb rests”, it **DOES NOT REST** the thumb, it uses the thumb AND grip muscles of the hand while simultaneously REDUCING the amount of force required to counteract flip, recoil and yaw.

The Gas Pedal® grip does NOT rest your thumb but rather USES it as the biggest set of muscles in the Hand to enhance and stabilize grip. If you are “resting” your thumb you are losing at least 70% of your hand’s strength. If you shoot in the classic “thumb forward” or wrist cocked or cammed forward (Ulnar deviation) you are losing even more strength in your wrist. By efficiently using all grip muscles, muscle tension in dominant and non dominant hand is *dramatically* reduced while simultaneously increasing actual grip power.

Because of its unique design and Trade Dress Monolithic wing, it enables the shooter four axis control, ALL with the natural gripping action of the non-dominant hand.

Here is the secret. When using the non dominant hand in an efficient way, one can get a very solid grip every time with minimal effort. (No more “death grips” needed) This allows the dominant hand to be very loose and significantly enhances trigger control. Precise trigger control is an absolute must for superior shooting and the Gas Pedal® opposable grip makes it much easier to obtain.

What is an Opposable Grip with the Gas Pedal ® grip?

An opposable grip can be easily obtained, efficiently with a Gas Pedal® grip. Almost all control of the pistol is done with the non dominant hand and only small corrections are necessary with the dominant (trigger finger) hand. The Gas Pedal® grip puts the non dominant hand much higher and much closer to the bore axis than traditional methods. Also the wrist is automatically placed in “true neutral” position of function rather than cammed forward position (usually incorrectly termed “the neutral grip”)

It’s actually simpler than it sounds, ***just put your thumb on the Gas Pedal® grip and squeeze with the whole hand, THAT’S IT.*** It’s that simple

If you want to know the details of what’s going on there are 4 primary pressure areas. You don’t have to think about them but here they are:

1) The large pad of the thumb where the majority of pressure is perceived, and which is the primary point of opposition strength. A minority, but still very significant part of the thumb pressure is perceived on Trade Dress Monolithic Wing side of the thumb (anatomically lateral or radial side of thumb). In practice this minority pressure awareness does not need conscious thought as the Trade Dress Wing will automatically make you compensate with correct amount of pressure.

2) The index finger nearest the trigger guard (usually between first and second knuckle, anatomically between the MCP and PIP joints). Some shooter will wrap the index finger around the trigger guard and this works also. This is the second part of the opposable grip

3) The opposing grip area pressure is also felt the in distal or end parts of the third, fourth, and fifth fingers and completes the opposable grip.

4) The palm of the non dominant hand will adjust pressure automatically.

This sounds complicated in writing but is actually a very simple natural squeezing grip.

A very key part of this is that this uses a “true neutral” position of the wrist which enhances natural strength greatly. But the Gas Pedal® grip takes care of that angle of wrist automatically without shooter thought or input.

How does it aid trigger control?

Trigger control is significantly enhanced when the dominant hand is in a relaxed rather than tense mode. Fine motor control of index trigger finger is simply not possible with a strong dominant hand grip (aka “the death grip”). The Gas Pedal ® grip allows a very loose and relaxed dominant hand and trigger finger.

Poor trigger control in the traditional grip is the number one cause of accuracy problems and is eliminated with the Gas Pedal® Grip.

How does the Gas Pedal® grip differ from generic “Thumb Rests”?

Generic Thumb rests are basically just that, a place to rest the thumb, and does not use the opposable grip strength in the hand. In the classic shooting method the non dominant thumb is not used. In the late twentieth century expert shooters in USA went to great practice lengths to keep that non dominant thumb from influencing the frame and shot alignment. However many folks are physiologically wired to search for something to do with that thumb so the idea of a “Thumb Rest” as a place to put the thumb was used. The placement of most manufacturers

thumb rests the thumb in a position not totally helpful in obtaining grip. The Gas Pedal® grip uses the Thumb in a natural and repeatable manner.

Does the Gas Pedal® cause “steering” error?

NO! It PREVENTS “Steering Error”. Other “Thumb Rests” can cause steering error (side to side sight movement, yaw or windage) because they inherently encourage uneven side to side pressure. But the Gas Pedal has a trade dress Monolithic wing that automatically compensates for that. It automatically corrects windage error. In addition the trade dress texture of the Pedal itself encourages the thumb to automatically seek the perfect position and stay there. The opposition pressure of the fingers compensates for windage error without thought.

Can I rest my thumb on the Gas Pedal ® grip or do I push on it?

You *can* if you wish rest, or push on the Gas Pedal ® grip *BUT* that does not yield optimal results. The best results are obtained with a natural grip using the *opposable* thumb strength. Its easy to learn the Gas Pedal® grip as you simply squeeze your hand. Advanced shooters will subconsciously learn that a split second before ignition a little extra squeezing pressure will reduce dot or front sight movement even more. Pushing on the thumb without squeezing the rest of hand is a misconception that does not yield optimal results.

Are you an Ulnar Deviant? To Cam or not to Cam?

Most USA shooters today are using an inefficient and difficult to learn wrist and thumb position for their non dominant hand. This results in difficulty controlling recoil and difficulty maintaining consistency. The classic and most widely technique teaches the shooter hold the pistol with their wrist “cammed or cocked” forward (ulnar deviation is the medical term of art) and their thumb either not involved or “resting” (some have called this the floating thumb method). This theory was based on the incorrect idea that cocking the wrist forward gave the muscles “pre load” in the opposite direction of recoil.

However it is extremely well known by physicians and physical therapists that this ulnar deviation position weakens the wrist and hand grip. The reason is the hand functions much better and is stronger in true neutral (not cammed forward) position. Why would a shooter intentionally put their wrist in a non anatomic and weakened position? The answer is based on complicated history and 20th century myth but it is not based on optimal anatomic function.

The Gas Pedal® grip WILL place the wrist in its proper position automatically AND make a perfect grip every time.

Does the Gas Pedal® grip require a particular stance or arm position?

No, this is one of the real beauties of the Gas Pedal® opposable grip. You can shoot it with any foot stance or any arm or torso position. Other methods encourage a particular stance or arm position. With the Gas Pedal® grip, ANY position works well because recoil is tamed significantly AND the natural “true neutral” position of the wrist allows any arm position from extended to close to the shooters face.

This flexibility of shooters position enables quick acquisitions in awkward shooting scenarios, such as wide arc of fire from a cramped position (i.e. the driver’s seat car scenario).

How do I mount it?

It depends on the model, some models like the Gas Pedal Grip Panel are simple no gunsmithing drop in parts.

For Racing Models, Mounting and the proper position is very important. Mounting should be done by an experienced Gun Smith. For racing, maximum benefit, the Pedal should be behind the axis of the slide stop and ideally almost as far back as slide stop release pad. But some shooters prefer it farther forward

For Doc’s Original Racing model, only two screws drilled and tapped independent of the scope mount are sufficient to hold the Gas Pedal. If you only want to “try it out” without drilling the scope mount, you may use the same holes as your scope mount but you may need to re zero after attachment. Scope Zero is not a problem with the two independent screws. It is not loctited and easily removed

For Racer Cut (Racing) or Duster Cut (Racing or Carry) Models we recommend 4 permanent loctited screws to reduce flex.

Do I have to remove it for cleaning (field stripping)?

It depends on model. For Racer Cut and Duster models, no removal is necessary.

For the Grip Panel model, the grip panel is easily removed

For Doc’s Original, the Pedal is removed BUT this is a VERY simple procedure taking less than 30 seconds. We recommend two dedicated drill and tap holes for the Gas Pedal, independent of

the scope mount. The holes are customarily drilled and taped right thru the scope mount, so the Gas Pedal® grip may be very easily removed for field stripping without losing scope zero. Loctite is not required. Fifteen years and hundreds of thousands of rounds have proved this concept.

I tried a thumb rest once and the dot seemed to dip or move sideways, Does the Gas Pedal® brand do that too?

No, The Gas Pedal® grip itself does not cause that. However those that are used to the traditional methods of grip, will usually fight the gun with the first couple of mags they fire with a Gas Pedal. After a few mags, you will relax and see much less sight movement. However with other thumb rests, the shooter will still be using the old set of muscle reflexes which causes overcompensation and can yield dot (or front sight) “dip”, “bounce” or side to side movement.

Does it make my draw faster or better?

Yes, for most of us. For those gifted shooters at the absolute edge of human performance it won't make you faster but even for those it makes it more repeatable. For 99+% of the rest of us, it makes your draw faster and much easier by making a perfect reproducible grip every time. Instead of trying to get your non dominant hand in perfect hard to obtain position, all you have to do is index (place your non dominant thumb) on the HUGE Pedal and the rest of the perfect grip comes every time without further effort. No more long frequent practice sessions to get a perfect consistent grip

Are there any particular advantages of the Gas Pedal® grip in tactical situations?

Yes, the traditional cammed forward technique puts a lot of restrictions on shooting style. For example, whether you choose Weaver, Isocolos, balanced or any other stance you almost HAVE to master one of those stance techniques to shoot well. Also the traditional grip requires a fair amount of arm extension otherwise you simply cannot cam the wrist forward.

The Gas Pedal® grip allows you to shoot from ANY position of feet and ANY position of arms and ANY torso position. Further it allows wide arcs of fire to be generated with short axis wrist movements instead of long axis arm and torso movements. This is a huge advantage in action sports or close quarters combat. In tactical situations it allows the pistol to be shot very close to the face lessening the chance of being disarmed.

Physics, Anatomical Principles, and some numbers

Although somewhat simplified, here is the bottom line.

Traditional cam forward position: Maximum potential human force around 30 lbs counteracting higher gun torque because of longer radius.

Gas Pedal® opposable grip: Maximum human force about 100 lbs enhanced by leverage counteracting lower gun torque because of shorter radius.

In a nutshell, with pistols, recoil consists of two main components, a straight back impulse sometimes referred to recoil only, and flip which is a rotational force (angular momentum) created by transient torque. Although the Gas Pedal also helps to manage straight impulse recoil, the real culprit in pistol shooting is managing flip.

THE ONLY way to counteract this flip is with an equal and opposite torque.

How you get this opposing torque is what causes all the confusion in understanding and difficulty in execution.

To simplify a complex topic, torque is the arithmetic multiple of force times distance from the rotation point. (Force times radius).

Torque=Force x radius

When forces are not exactly perpendicular other factors become involved like trigonometric functions of angle and time (but again, it is not necessary to know the details to get an understanding)

The *traditional* way to counteract torque with pistols involves two concepts. First the dominant hand is placed as high on the pistol as possible which reduces the radius component from the dominant hand but paradoxically INCREASES it with the non dominant hand, which makes matters worse! Second a counter acting torque is applied by combination of compressing the grip with opposite forces from both hands (the so called incorrectly labeled “neutral grip”). This with friction creates a counter torque but unfortunately it has a high radius and is anatomically inefficient. *Thus the shooter has to use a LOT of effort and practice a lot to achieve a satisfactory counter torque.*

With the Gas Pedal® opposable grip, still a counter torque is applied but in a much more efficient manner. First, counter torque effort required is significantly reduced because the radius is dramatically reduced. Second, instead of using highly inefficient bilateral compression, the much stronger hand grasping or pincher muscles of the hand and thumb are utilized which are anatomically much more efficient. And this more efficient force is multiplied by leverage.

For the anatomically technically inclined, this is capsule summary.

In *traditional* Cam forward position, recoil flip is managed principally by the “Flexor Carpi Ulnaris Tendon” (a very small muscle of forearm attached to the wrist via a small tendon not designed or accustomed to high repetitive forces and susceptible to chronic repetitive stress injuries). A secondary anti torqueing force is applied by combined shoulder forearm and wrist compression (combined adduction), which thru friction produces the anti torque.

The *traditional* Cam forward or “ulnar deviation” position is well known to physicians to extremely inefficient, lacking power and susceptible to repetitive stress injury.

With the *Gas Pedal* ® *opposable grip*, the much stronger muscles of the hand including the large thumb muscles and pincher grasp are utilized. Not only is this much more efficient, it mostly eliminates the need for muscle tension in the arms and shoulders allowing for a variety of shooting styles. It has much less potential for repetitive injury.

Here are some VERY approximate numbers to give you an idea based on 100% effort of a moderately strong male in non dominant hand :

Hand grasp with *opposable grip with out* cam forward position, **about 100 lbs!**

Hand grasp *with* cam forward (ulnar deviation), about 30 lbs

Hand grasp *with* cam forward (ulnar deviation) without use of thumb, about 15 to 20 pounds.

Maximum adduction of combined arms, wrists and hand in cam forward position about 30 lbs.

Although somewhat simplified, here is the bottom line.

*Traditional cammed forward position(old style): Maximum potential human force around 30 lbs counteracting higher gun torque because of longer radius. Due to poor efficiency a major portion of the 30 lb potential is required (**read high perceived effort**).*

*Gas Pedal® opposable grip: Maximum human force about 100 lbs counteracting lower gun torque because of shorter radius. But due to increased efficiency thru leverage only a small fraction of potential force is needed (**read lower perceived effort**).*