ISSUE 48

THE FIREARMS INSTRUCTOR

The Official Publication of The International Association of Law Enforcement Firearms Instructors®

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SPECIAL DOUBLE ISSUE

Insight to the Front Sight

by Matt Seibert
& Sherrie Seibert

If you feel it is important for your students to see their front sight to make a precision shot with a pistol, then you need to know about the "Gip." The proper use of the Gip will virtually guarantee that your students will be able to see their front sight with perfect focal acuity. As you know, the more clearly you see the front sight, the more accurate your shot will be.

In this article, we are assuming that your students (i) already know how to create a neuro pathway which isolates the trigger finger from the rest of their hand, (ii) have mastered the skill of trigger compression, and (iii) know how to enter the required emotional trance-state of "Detachment" to produce machine-like precision.

How The Eye Focuses

The ciliary body is a muscle which holds the lens of the eye in place by means of tiny filaments attached to the edge of the lens. When you "converge" your focus from the target to the front sight, the ciliary muscles contract around the lens of the eye. The tension on the ligaments holds the lens in place as the lens springs into a more convex shape (becomes thicker). This increases the refraction of the light rays, thus allowing the eye to focus the image of the front sight onto the retina.

The reverse process occurs when you look at a distant object such as a target. As the muscles in the ciliary body relax, the lens becomes flatter. This "diverges" the focus from the sights to the distant target. The alteration in the shape of the lens acts as a focusing mechanism much like the lens of a camera. **(FIGURE 1)**

When the eye performs the process of focusing on an object it is called "accommodation." Since this active process requires muscular effort, the ciliary muscle can become fatigued. The ciliary muscle is one of the most frequently used muscles in the body. When you repeatedly shift your focus from the target to the front sight, or when you try to focus on the front sight for prolonged periods of time, the ciliary muscle can become fatigued causing a blurred image which allows the front sight to slip out of focus. This does not occur when looking at distant objects, because in this condition the muscles remain relaxed.

Movements Of The Eye

There are two important movements of the eye required for precision accuracy:

1. Saccade Movement
2. Pursuit Movement

Saccade Movement

Saccade movements take place when the eye moves from point to point. It is a function of the peripheral field for locating direction, speed and distance. It helps you identify your sights when you converge your focus from the target back to the front sight. It verifies that your sights are in alignment. Most shooters stop at this point and assume that they are seeing the front sight. They may see their sights, but in actuality they are

still looking "through" their sights because the point of focus is not specifically on the front sight.

Pursuit Movement

Once the sight alignment is located and established, you need to make a pursuit movement which will direct the image onto the macula area of the eye to center and achieve acuity on the Gip. This pursuit movement is the "Missing Link" to precision accuracy. This is how you change your vision from "seeing" to "fine focus." It is this movement that enables peak performance.

Both these movements working together are required to complete the visual process, which is critical to precision-shooting. We estimate that 95% of pistol shooters have never been taught to make the pursuit movement. Because of this missing link, these shooters have never been able to maximize their performance and shoot tight groups.

Both components are separate, independent movements. Each is controlled by a different part of the brain through separate nerve patterns to distinct areas of the eye. Each requires a different process. It is important to know that vision and sight are not automatic. They are learned skills that must be taught just like many other motor skills. This also means that the visual skills for shooting must be taught to the unconscious part of the brain in a very special way if maximum accuracy is to be achieved.

Ok, What Is A Gip?

The "Gip" is a scratch, a serration, a defect or a peculiarity on the front sight. By looking at the Gip, the shooter's eye is forced to make a pursuit movement to clearly define the level of intensity of focus and concentration. This fixation also becomes the doorway to entering a "trance state" or, as many professional athletes call it, the "Zone."

Remember: The finer the focus on the front sight, the more accurate the shot will be on the target. The finest possible focus is achieved when the shooter concentrates their focus on the Gip. **(FIGURE 2A & 2B)**

Achieving High Definition – Contrast & Polarity

When you look at an object, your brain identifies and labels it in relationship to the rest of the universe. This automatic labeling allows you to conceptualize, create and contrast objects. This process (i.e., "Polarity") allows the brain to discriminate its focus from one object to another. It is the contrast between objects which enables the brain to define objects. Here are some examples:

Sight Picture – "Sights in relationship to the target." When you see your sights, you see them in relationship to the target. You are seeing the sights and the target peripherally for neither of them are in perfect focus.

Sight Alignment – "The front sight in relationship to the rear sight." When you look at the sight alignment you are seeing your front sight in contrast to the rear sight. By narrowing your focus to the sights, you have made a saccade movement of the eye and then you achieve accommodation onto the sights.

Front Sight/Gip – "The front sight in relation to the Gip." When you look at the Gip you direct the eye to focus on the front sight to a finer extent by making a pursuit movement of the eye. It is this focus that provides "High Definition" and precision accuracy.

Thus, don't just tell your students to "look at the front sight." Tell them to focus their attention exclusively to the Gip on the front sight. This will help you to emphasize the contrast between the front sight, and the Gip. Without creating this contrast differentiation, the brain will blend the image with the rear sight, front sight and the target. By specifically referring to these "polar points," the brain will use this Polarity to define the contrast to solve the age-old problem of students looking "through" their sights instead of looking at the Gip. **(FIGURE 3A & 3B)**

Center Of Mass & The Pursuit Movement Of The Eye

This principle of contrast is the foundation of the shooting process. In the past you were told to shoot at the "center of mass." Based on this instruction, your brain defined the field of focus using the head and the groin, and from shoulder to shoulder. By doing so, the mind is programmed to accept peripheral shots generated by gross motor movements in your presentation of the gun to the target.

Contrast the "center of mass" technique to shooting for a specific spot on the chest, for instance the second button down from the collar on the target's shirt by making a pursuit movement to that exact spot. This specific point of focus produces a much finer motor movement in the presentation of the gun to that spot, and will yield a significantly more precise shot. **(FIGURE 4)** Then by making a saccade movement to verify the sight alignment, followed by a pursuit movement of the eye to the Gip, you dramati-

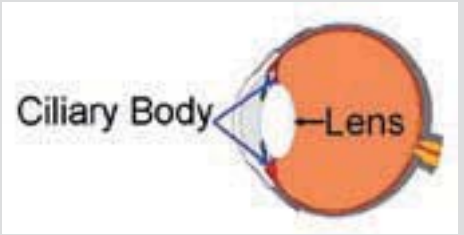


Figure 1. The ciliary body is made up of muscles that control the shape of the lens of the eye.

Figure 2a. The Gip can be anything specific that forces the eye to make the Pursuit Movement of the eye.

Figure 2b. The Gip on this front sight is the "speck of black" in the center of the white dot on the front sight.

Figure 3a. Most shooters see this picture when they shoot. They are looking through their sights.

Figure 3b. This is what the shooter will see if their concentrated focus is only on the Gip.

cally increase the amount of exerted concentration to produce the ocular movement needed to obtain a surgical precision shot and achieve peak performance. Accuracy is proportionate to the amount of concentrated focal acuity on the Gip that is exerted by the shooter. **(FIGURE 5A & 5B)**

The Lookie-Lou

A "Lookie-Lou" can often occur in two stages of the shooting process. (i) It occurs when you "peek" at the target either during trigger compression and/or (ii) immediately after the firing process.

Pre-Shot Lookie-Lou - This happens when the shooter changes their focus from their sights during trigger compression to the target to see if the sights have remained centered in the bullseye. This oscillation of focus causes the eye to fatigue. The shot results in being released without the shooters focus exclusively on the Gip. This means that there is a good chance that the sights were not in perfect alignment when the shot was released, causing inaccuracy. The relationship between the amount of concentrated focus on the Gip and accuracy are directly proportionate.

Post-Shot Lookie-Lou - After firing a shot, most shooters want to immediately see where the bullet hit the target. The Lookie-Lou destroys the proper technique for visual follow through (i.e., continuing to direct their focus on the sights throughout the firing process until the sights return back into alignment. This is achieved as a result of intentionally anticipating their focus to remain on the Gip). Lookie-Lou shooters are looking for "instant gratification" of seeing where they hit on the target.

It is important to stress to your students that any disruption of focus from the Gip causes missed shots. It also increases the fatigue rate of the ciliary muscle thus degrading accuracy for the next shot.

How To Demonstrate That Focusing On The Gip Works

Have a student hold a carpenter's level with arms extended straight out in front of them. Then ask the student to tell you when the carpenter's level is level. Once the student indicates that it is level, then ask the student: "What are you looking at that indicates the level is level?" The student usually responds: "the bubble." Make the connection that your front sight is like the bubble in the level. The finer the focus and concentration is on the bubble the more centered the bubble becomes and remains. **(FIGURE 6)**

Then ask the student as they hold the level out in front of them to diverge their focus to a clock or to an object in the back of the room. Now ask the student if the bubble is still centered. 99 times out of 100, the bubble will have moved. This vividly demonstrates that when the point of focus diverges to the target, the sights will move off of center. **(FIGURE 7)**

In class, we use a fully animated PowerPoint presentation containing video clips of the visual process transitioning from the peripheral vision to the saccade movement then to the pursuit movement of the eye onto the Gip. The PowerPoint presentation also demonstrates the principle that an angle increases proportionally with the distance. Most shooters are unaware that if the sights become misaligned by only 1/8 of an inch with a 4 inch barrel gun at 20 ft., it will create a 7-1/2 inch error on the target. **(FIGURE 8)** If the sights become misaligned 1/8 of an inch with a 2 inch barrel pistol when shooting at a target that is at a distance of 20 ft., this results

Figure 4. Making a Pursuit Movement of the eye to the exact spot you want the bullet to impact will yield finer motor movement to that spot during a shooters presentation of the gun to the target, thus producing finer accuracy.

Figure 5a. The relationship between the degree of focus on the Gip and the degree of precision accuracy a shooter will achieve is proportionate.

Figure 5b. Focusing deeply on the Gip requires concentrated fixation that puts the shooter in the "Zone" of peak performance.

Figure 6. The more you concentrate on the bubble, the more centered the bubble becomes.

Figure 7. When you allow your focus to shift onto a distant object, the bubble looses the quality of its centeredness.

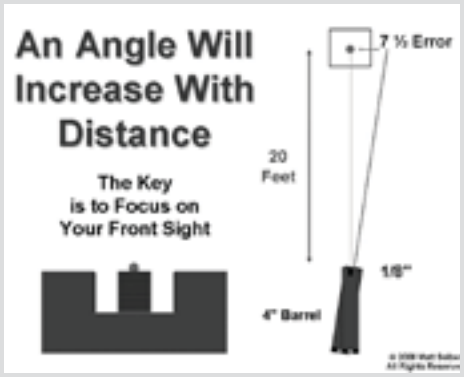


Figure 8. As the error of the alignment of the sights increases, the error on the target increases proportionately with the distance from the target.

in a 15 inch error on the target. Because an angle increases proportionally with distance, if the shooter is shooting at a target that is 40 feet away with a 2 inch barreled pistol and the sights were misaligned by a 1/8 of an inch, this translates into a 30 inch error. **(FIGURE 9)**

Emphasize: If the sights were in "perfect alignment" at the time the gun was fired and the estimation of Sight Picture (the sights in relation to the target) was off by 2 inches, the error on the target would only be 2 inches. This illustrates "why" it is more important to look at the Gip, than it is to see where the sights are in relationship to the target once sight picture has been established. **(FIGURE 10)**

Precision Accuracy On Moving Targets

Try this exercise: Find a light switch or other object on which to focus across the room. Now, bring your thumb onto that spot so you see your thumb in relationship to the switch. You've just achieved sight picture (peripheral vision).

Now change your focus and look at your thumb. You may need to close one eye completely; if it helps you achieve a stable sighting plane or eliminate the pseudo image. When you see your thumb clearly, and the target object becomes blurred, you've completed the saccade movement.

Now look for a piece of dirt underneath your thumbnail or a scratch or line on your thumbnail. You've just made a pursuit movement of the eye. You just focused on a "Gip" on your thumbnail! **(FIGURE 11)**

A skeptical student will ask; "What happens if the target is moving?" This is an excellent question. Have your students repeat the above exercise by having them bring their thumb onto a spot in the very center of your chest, then direct their focus to their thumb and then to the Gip. After the students have made the pursuit movement to the imperfection on their thumbnail (i.e., the "Gip"), ask them to keep the imperfection in focus as you move left to right in front of the class. Share with your students that their unconscious mind is able to track movement and keep their thumb centered on your chest as you move. They'll be amazed at how the unconscious mind will keep their thumb centered as they maintain fine focal acuity on the Gip on their thumbnail. This process will transfer on the range in live fire exercises or on the street and provide the officer with the accuracy for a precision shot even with moving targets.

The "Gap"

What happens if you are in low light or the light source is stronger in front of you and your sights are silhouetted? Again, we use our PowerPoint presentation to demonstrate that if you can't see the Gip, you focus on the "Gap," i.e., the light coming through the space between the front sight and notch of the rear sight. This facilitates a pursuit movement and gives you precision accuracy. So if you can't see the Gip, focus on the Gap! **(FIGURE 12)**

The Gap is also a great technique for a student who is presbyopic, or a student whose spatial intelligence is not fully developed or is impaired. There are students who have problems focusing on the front sight. In these cases, the Gap can be used as a great technique to compensate for this condition.

Figure 9. The shorter the length of the barrel, the greater the error will be magnified on the target.

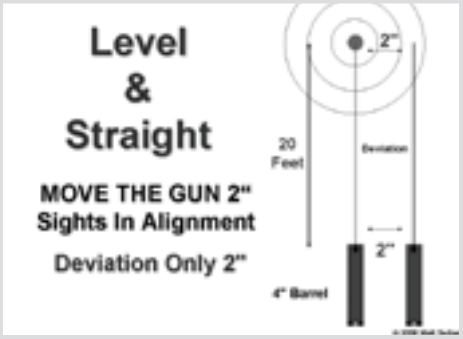
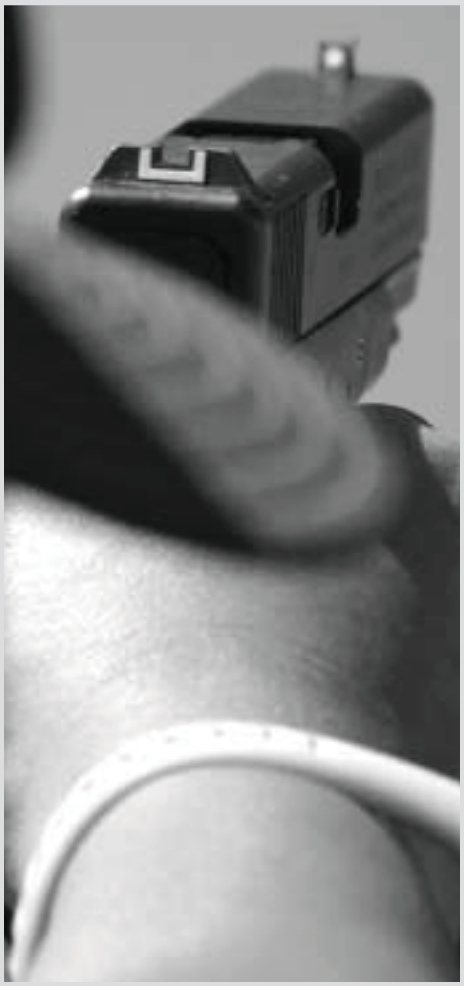


Figure 10. Even if you misjudge the placement of the sights on the on the target by 2 inches when you establish "Sight Picture," if your sights are properly aligned and your concentrated focus is only on the Gip, the error will only be 2 inches even when the target is further away.

Figure 11. This 3-Step exercise will help your students understand what it feels and looks like when they make a Pursuit Movement of the eye.
1. Peripheral: Thumb on Target
2. Saccade: Look at Thumb
3. Pursuit: Really Focus on a Peculiarity

Figure 12. The Gap is a great technique to achieve precision accuracy when you can't see a Gip.



Testing For Acuity On The Front Sight

After establishing the shooters eye dominance, the next step is to test their ability to achieve focal acuity (i.e. a clear focus) on the Gip. We do this by having the student take a proper 2-handed grip on the gun using a stable stance of their preference. Then we have them bring the gun up to the eye and we position one of our "Insight" business cards on the top of their front sight. We then ask them to read the bottom line on the card. **(FIGURE 13)**

If they are unable to read the bottom line, then we know their accuracy will be compromised due to their inability to achieve focal acuity at the distance from the eye to the front sight. (This testing method only works with an "Insight" business card…*Just kidding*.) The bottom line of our business card is printed in a 6 point font. If the shooter is unable to read the bottom line, then we ask: "Do you normally use reading glasses when you read?" If they respond "yes," then we have them put on their reading glasses. If they are able to see the Gip with their reading glasses, we have them shoot using their reading glasses as a temporary fix.

Now I know many of you may be saying, "You don't have time to put on your reading glasses in a gun fight." You are right, but you're not in a gunfight. You're trying to teach the foundation of marksmanship and develop the skills to shoot with precision accuracy. Once you master the skills at the unconscious level under optimal conditions and gain the confidence and belief that you can do it, then your pyramidal pathways (muscle memory) will already be in place and the skill has a greater chance of transferring to less than desirable conditions. The fact is, once you master: controlling your emotional state, develop a clean presentation and gentle compression on the trigger; the lack of focal acuity on the front sight will unconsciously shift to the Gap and you will still be able to shoot with precision accuracy.

If your student wears bifocals or progressive lenses, then they will have to make an upward head movement in order to utilize the proper strength lens so they can see the Gip. If they are using bifocals, they may experience an optical jump from the line in the bifocal. If they are using progressive lenses, then they will have to experiment to find the ideal head position to achieve fine focal acuity on the Gip. This takes a little practice and can usually be fully integrated in the first hour on the range. **(FIGURE 14A & 14B)**

CAUTION: You need to be aware that if you are working with a student whose learning style is auditory, or if the student has an auditory aversion to gunfire, the upward movement of the head opens the auditory canal and can increase sensitivity to sound by 10%. In those cases, using ear plugs in conjunction with electronic ear muffs will alleviate the discomfort and minimize the effect.

Problems Encountered By Many Shooters

PRESBYOPIA

In many shooters over the age of 40, the lenses of their eyes progressively lose their elasticity and resiliency. This makes it more difficult to achieve fine focal acuity on the Gip. This problem is called presbyopia, and requires visual correction to achieve fine focus on the Gip. This can be accomplished by using reading glasses, bifocals, progressive lenses, contacts, or having surgery to create a clear focus on the Gip of the front sight.

MONO-VISION

Mono-vision is often prescribed by opticians. They set the patient's vision of one eye for distance vision and the other eye for near vision. Ken Tapp, a senior Master Class Shooter, once shared with me that this was his secret. He had an optician who was familiar with Sports Vision set the diopter of the lens for his dominant eye so he could see his front sight with perfect clarity. His non-dominant eye was set for distance. He was able to win the Second Chance Bowling Pin Match in 1994 using the vision correction method of mono-vision when he was in his late 50's.

We have two Doctors of Optometry in Prescott, Arizona; Dr. Todd Geiler, who was on the National Shooting Team, and his father Tom Geiler who was on the Board of Directors for the National Rifle Association. They allow patients to bring their pistols into their office. After doing a thorough eye examination, they have the student bring out their gun so they can set the diopter (strength of the lens) for the distance from the patient's dominant eye to the front sight of their gun so they can see the Gip with perfect focus. The lens of the other eye will be set for distance.

Another quick temporary fix for your presbyopic students is to use the vinyl sticky lenses you can purchase at most drug stores. They are called "Stick-On Optx 20/20 Magnifying Lenses." **(FIGURE 15)** The student can stick them on non-prescription shooting glasses on the lens of the dominant eye and create instant mono-vision.

Figure 13. Testing for acuity at the front sight is one of the most important diagnostic tools you can use to assure your student has the visual ability to achieve peak performance.

Figure 14a. When this shooter looked at the front sight through the center of the lens of his glasses he was unable to see his Gip.

Figure 14b. Once this shooter was instructed to use his bifocal to achieve acuity on the Gip, he immediately started shooting one-hole groups.

A Common Problem With Laser & Rk Surgery Or Contacts

We are having more and more shooters coming to class who have elected to have

Figure 15. A quick fix for a shooter who does not have the visual ability to see their Gip can be achieved by using "Stick On Magnifying Lenses" in order to help them develop their skills.

surgery in hopes of correcting their vision but unfortunately end-up cross wired due to the doctor's lack of knowledge regarding "eye dominance." The doctor unknowingly corrects the vision of the dominant eye for distance and the non-dominant eye for close-up. This has disastrous implications for a shooter! When the gun is brought into the sighting plane, the dominant eye (which is the origin of the line of sight) fails to achieve focal acuity on the front sight. This results in releasing the shot without obtaining clear focus on the front sight or they cross-fire due to this unstable condition.

A student who is considering having surgery to correct vision should be given a full 9 point dominance test. (A 7 point test is sufficient if only shooting a pistol, but if shooting a long gun, then a 9 point test is required to fully understand the stability of the dominance of the shooter's eyes.) (*Refer to the article "Insight to Eye Dominance" IALEFI Firearms Instructor Magazine Issue 44 for more information on Eye Dominance)*

Another problem with refractive surgery is that when you surgically alter the cornea, there are a series of problems that can affect acuity. This affect can be slight at first, and then more dramatic as time goes on. Not every patient is affected in the same way, but there can be side effects. There can be sensitivity to light, dry eye symptoms and glare issues, all which can affect the shooters ability to see the Gip with perfect focus.

Summary

The Gip becomes an "eye magnet" to direct the eye to focus specifically and exclusively on the front sight. We use a "magnet metaphor" in combination with hypnotic suggestions that attracts the eye to the front sight and forces the pursuit movement to the Gip. If you don't have a Gip on your front sight, then you need to create one. One of the first things the Military Special Op's that come to us for training at Insight Firearms Training Development in Prescott Arizona do when they arrive on the range is to take out their knife and deface government property. That's right; they intentionally make a scratch on their front sight. This scratch becomes their Gip. When you are training a person who comes to class with a $1,200.00 customized gun, they may prefer that you use a dab of "White-out," **(FIGURE 16)** or if they are shooting a Glock with standard sights, a small black dot with a Sharpie Magic Marker in the center of the white insert on the front sight works well. **(REFER BACK TO FIGURE 2B)**

KEY: The student must focus on a very specific spot on the front sight (the "Gip") to shoot with precision accuracy.

As you shift your focus from verifying the alignment of your sights to the front sight, don't just "look at the front sight." Direct your focus to the Gip! (A scratch, a serration, a defect or a peculiarity.) It is only when you make the pursuit movement to the Gip on your front sight that you will make the ocular movement required for precision accuracy; that is one of the "secrets" to shooting one-hole groups! When you teach your students to combine the Gip method along with how to create a clear neural pathway to the trigger finger for proper trigger compression, and techniques to enter the trance-state of detachment for managing their emotional state, then your students will be shooting one-hole groups instantly. Guaranteed! **(FIGURE 17)**

Figure 16. A dab of "White Out" on a black front sight can act a temporary Gip, until a more permanent Gip can be applied.

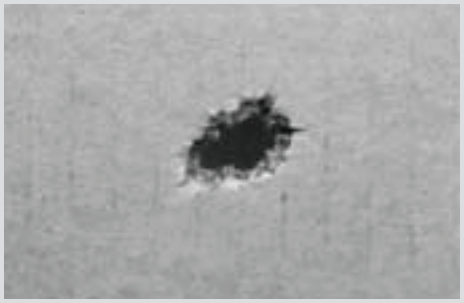


Figure 17. Every student will "instantly" shoot one-hole groups if they create a clear neuro pathway to the trigger finger, if they enter a trance-state of detachment, and focuses exclusively on the Gip.

ACKNOWLEDGEMENT: We would like to thank Robert Erven Brown, Esq., an Insight Firearms Instructor, and his Secretary, Betty Mazur, for their editorial contributions to this article. Also, we would like to thank Dr. Todd Geiler, OD for his expertise on RK surgery. **TFI**

About the Authors

A former law enforcement officer, Matt Seibert has been training law enforcement in the use of firearms since 1976. A former Instructor and General Manager for Gunsite Training Academy, he is currently the President of Insight Firearms Training Development in Prescott Arizona. A former member of the International Academy of Sports Vision, he spent the last 15 years researching the visual skills and neuro psychology required to achieve peak performance in the use of the pistol and carbine. He has developed training curriculums and PowerPoint Programs for teaching the concepts of precision marksmanship and firearms instructor development.

Sherrie Seibert is also a firearms instructor and training specialist. Matt and Sherrie are trained Hypnologists who specialize in developing and conducting advanced firearms instructor development programs for Law Enforcement and Military Special Operations forces. They developed an accelerated training methodology which programs the shooting process to the unconscious and "enhances" accuracy and speed with a pistol or carbine under extreme conditions.

For more information on the Gip and using its acronym, or "The Visual Requirements for Shooting and Peak Performance Training"; please visit our website or contact us at:

Insight Firearms Training Development
PO Box 12293
Prescott, AZ. 86304-2293
Phone: (928) 708-9208
www.insightfirearmstraining.com
seibert@insightfirearmstraining.com