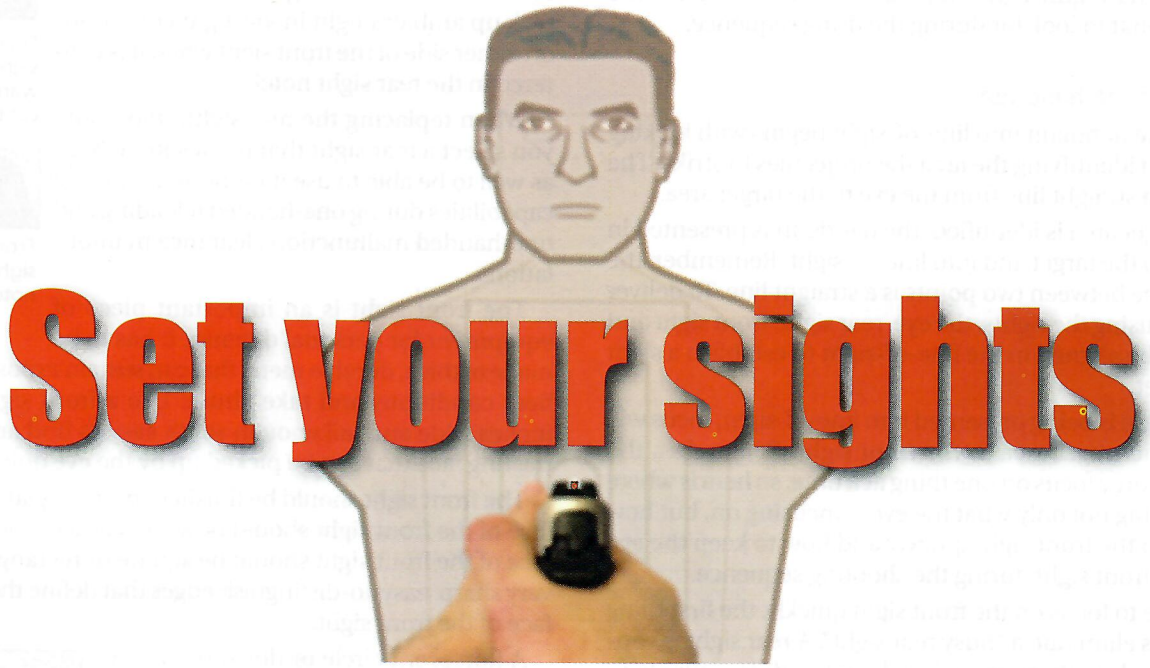


Set your sights

The evolution of handgun sights for personal defense

BY JOHN KRUPA III

PHOTOS BY RICK CALIHAN AND ALAN PURPURA

There are many different types of sight systems available for use with defensive handguns. While some sight systems are manufactured with materials that are not practical for rigorous use and combat applications, others are designed in a way that can impede the shooter from obtaining a fast sight picture. Sight systems that don't conform to the physiology of how the human eye functions in combat can actually hinder or delay the shooter from finding the front sight under duress and lead to loss of accuracy.

So how do you select a sight system that will work best for your personal defense handgun?

There are five primary elements that affect how to see and use handgun sights during combat: vision, sight design, lighting, movement and applications. Let's look at each of these:

Vision

Vision is important in gun-fighting for target discrimination and area scanning. When it's time to fire the handgun, you need vision to find the sights, develop sight alignment and establish a sight picture. This becomes even more difficult when factoring in how vasoconstriction - oxygen deprivation of the eye - impedes the ability to control what you can see and focus on.

Sight design

The quality of materials used are important, especially when choosing sights you intend to carry for personal defense. Avoid using polymer sights or sights with plastic components. While many manufacturers offer basic pistol packages with polymer sights as standard issue, those need to be replaced with reliable metal sights immediately. Other sight design options include Tritium capsules, contrasting colored dots or circles and various sight heights and widths.

Lighting

Loss of light affects the ability to see handgun sights in diminished light or darkness. Bright light affects the ability to see or use the sights due to glare. Selecting a sight system that allows the shooter to find the front sight in ambient light is just as important as selecting a sight system that reduces glare effects as well.

Movement

Various types of movement will affect sight alignment, sight picture and the ability to follow the front sight. Heavy breathing will cause the sight picture to wobble. Dynamic movement while firing the handgun will cause the front sight to wobble independently of the rear sight and will affect the sight picture. And firing will cause the front sight to rise out of sight alignment during recoil.

Applications

When selecting handgun sights for personal defense, the sights must have reliable accuracy for distant shots and surgical shots. The sight design should allow for a wide rear sight box and an easy-to-find front sight so the front sight can be observed wobbling in the rear sight box while using the flash sight picture. The front sight will also need to be designed in a way so the shooter can see the location of the front sight out of focus for front sight proximity verification. This occurs during vasoconstriction when

the shooter is restricted to focusing on the target and temporarily looses the ability to focus on the front sight.

With the understanding that these five elements influence how we see and use handgun sights, let's review presentation of the handgun and what to look for during the firing sequence.

Presentation of the handgun

Presenting the handgun into line-of-sight begins with looking at the target and identifying the area the projectiles to strike. The line-of-sight is a straight line from the eye to the target area.

Once the target area is identified, the handgun is presented in a straight line to the target and into line-of-sight. Remember, the shortest distance between two points is a straight line. To deliver shots on target using the sights, the eye, rear sight, front sight and target all must be aligned in the line-of-sight to establish a sight picture on target.

As the handgun is being presented into line-of-sight, focus will change from the target area to the front sight. Remember, the human eye can only focus on one thing at a time, so here is where to start addressing not only what the eye is focusing on, but how to get the eye to the front sight quickly and how to keep the eye focused on the front sight during the shooting sequence.

To get the eye to focus on the front sight quickly, the first thing we need to do is eliminate a "busy rear sight". A rear sight is considered "busy" when there are colored circles, dots, squares or bright fiber optics that attract the eye to the rear sight instead of the front sight. Basically, anything on the rear sight that attracts focus away from the front sight is a bad thing in a gunfight!

Keep in mind that when the handgun is in-line-of-sight, the rear sight is closer to the eye then the front sight. So not only will the rear sight appear larger, the eye will naturally be attracted to it first if it's busy. Focus will then need to be deliberately changed from the rear sight to the front sight. To make this adjustment costs time.

Busy rear sight.

This distraction can result in up to one or more seconds of additional time added to the shooter's overall reaction time to a threat. In a gunfight, that's a long time to be standing around trying to get past the rear sight when you should be on your front sight and firing to stop the threat.

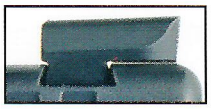
The second problem that exists with distracting rear sights is sight glare. This occurs when a bright light source comes in directly above the rear sight or from behind the shooter. This has the tendency to create a glare effect on protruding Tritium capsules, fiber optic ends, bright white dots and squares located on the face of the rear sight.

When a glare or haze like this occurs, the shooter has to concentrate on force focusing to the front sight. This also increases reaction time in finding the front sight and getting on target to fire the shot.

So how do we fix the rear sight? Rear sights with protruding fiber optics and Tritium capsules that create glare should be replaced altogether. Painted white/bright dots and squares can be removed with a small scraper tool or dental pick, or they can be covered over with black paint. This should leave a totally black rear sight and kept flat black to reduce glare even further.

Optimally, using a rear sight that has an undercut face will also reduce glare as the slant angle of the rear sight face will be angled away from light sources above or behind the shooter.

Try using a larger rear sight notch between .165-to-.180 inches. This will allow the shooter to use a thicker front sight and still be able to pick up ambient light in low light conditions on either side of the front sight when it is centered in the rear sight notch.



Side profile of rear sight with angled forward face and square cut back.

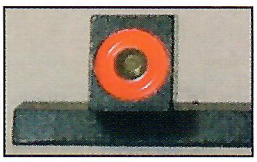
When replacing the rear sight, make sure you select a rear sight that has a square back as well to be able to use it for hook-and-cycle capabilities during one-handed reloading and one-handed malfunction clearance manipulations.

Front profile of rear sight with large notch.

The front sight is an important piece of equipment for personal defense. It has to be made of thick, durable metal that can sustain exposure to extreme heat conditions and take abuse. Use a front sight that is .140 inches wide and tall enough so it's easy to find and have a contrasting face that can be picked up by the eye quickly.

The front sight should be finished in a non-glare black and the face of the front sight should be a flat surface. The outline of the face of the front sight should be square or rectangular, and have very sharp, easy-to-distinguish edges that define the outline of the face of the front sight.

A florescent circle or dot should be in the center of the face of the front sight to attract the eye to the front sight quickly. This dot will also allow the shooter to easily track the front sight during aggressive movement, rapid multi-shot applications and during multi-target engagements.

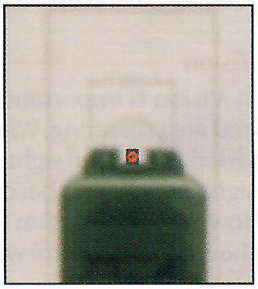


Spartan Operator Pro Glo front sight.

It's perfectly fine to use Tritium capsules in the front and rear sights. You might try sights that have sapphire design Tritium capsules that are embedded, low-profile and inconspicuous until low-light conditions exist. Green Tritium sights are easier to pick up than yellow Tritium. If you decide to use yellow Tritium, keep yellow in the rear sight and green in the front sight.

The Tritium capsules embedded in the rear sight should be outlined in black. The Tritium capsule embedded in the front sight should be outlined in a florescent color that the eye can pick up quickly. Florescent yellow and green are bright colors, but they tend to get lost quickly in white smoke. Use florescent orange on the front sight as the most consistent color to pick up quickly and track in heavy smoke, during rapid fire, multi-target engagements and diminished light conditions.

If these sight colors cannot be distinguished by a color blind shooter, the sight setup for a color blind shooter should be the same front and rear sight design, but the front sight should have a white circle instead of florescent orange.

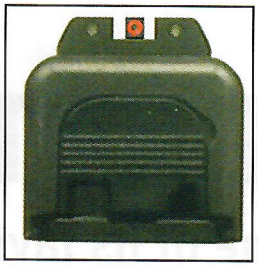


Correct sight picture, on target, with front sight in focus.

In consultation with the Ameriglo sight company to develop sight systems based on these concepts, they have developed a series of sight sets addressing the issues presented here. This includes Spartan Operator Night sights for vision-unrestricted shooters, and the Pro Operator Nights sights for color-blind restricted shooters.

If you carry a firearm for personal defense, you have to think like a gunfighter. Part of being ready to defend yourself with a handgun is selecting a reliable handgun you have confidence in. Select high-performance personal defense ammunition that will stop the threat, and handgun sights that will allow you to be fast and accurate during deadly force confrontations.

As always, stay safe, remain vigilant and fight to win.



Spartan Operator night sight set.

Pro Operator night sight set.

John Krupa is a police officer with the Orland Hills Police Department and has more than 24 years of experience in law enforcement. He has previously served as a patrol officer, FTO and firearms instructor with the Chicago PD. He is a recipient of the Award of Valor, Silver Star for Bravery and Distinguished Service Award for his actions in the line of duty. He is a certified Master Firearms Instructor from PTI and graduate firearms instructor from the Secret Service Academy, FBI, DEA and FLETC. He holds the rating of Distinguished Weapons Expert with the Department of Homeland Security. He can be reached at jkrupa@teamspartan.com.

For more information about Ameriglo sights, visit www.Ameriglo.net.

For more information about Spartan Tactical Training Group, visit www.TeamSpartan.com