STRATEGOS INTERNATIONAL

A Law Enforcement Officer's Guide to:

The Strategies of Low-Light Engagements

by Ken J. Good

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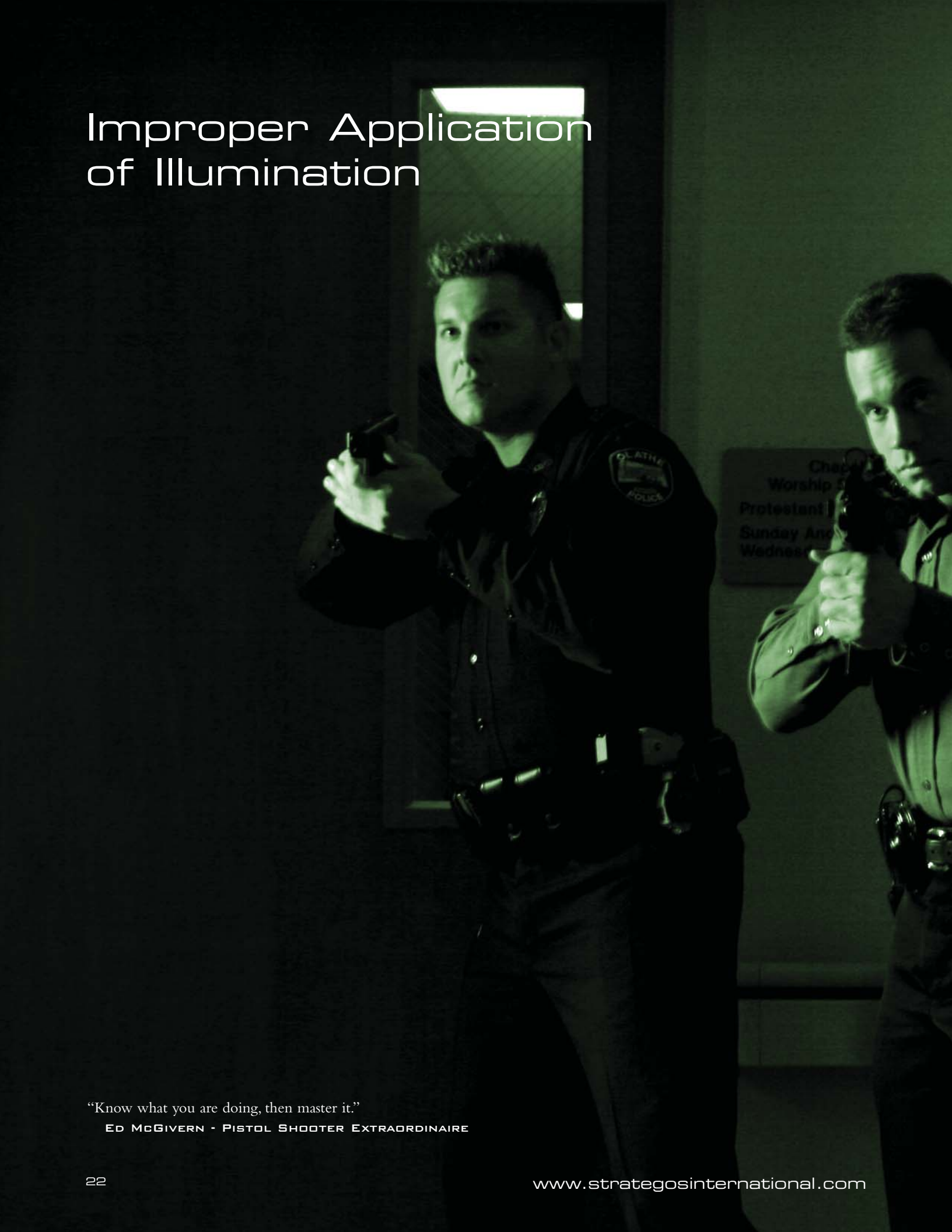
Improper Application of Illumination



"Know what you are doing, then master it."

Ed McGivern - Pistol Shooter Extraordinaire

Having the tools, understanding low-light tactics, and having practical knowledge of the techniques is fantastic and can never be viewed as a disadvantage in and of itself.

The right equipment is necessary and I do not want to undermine its importance. But the harsh reality is that many operators lean too hard on equipment and untested head knowledge to accomplish their mission.

Again, remember Hick's Law, the more possibilities you can choose from, the slower you will be in making the correct decision.

Applying what you know at the right time and the right place is where the rubber meets the road.

There are some basic mistakes that will place you and/or your partner/teammates in harm's way.

We must eliminate those larger gross errors before refinement of technique and tactics really come into play.

The first steps to drastically improving your percentages are:

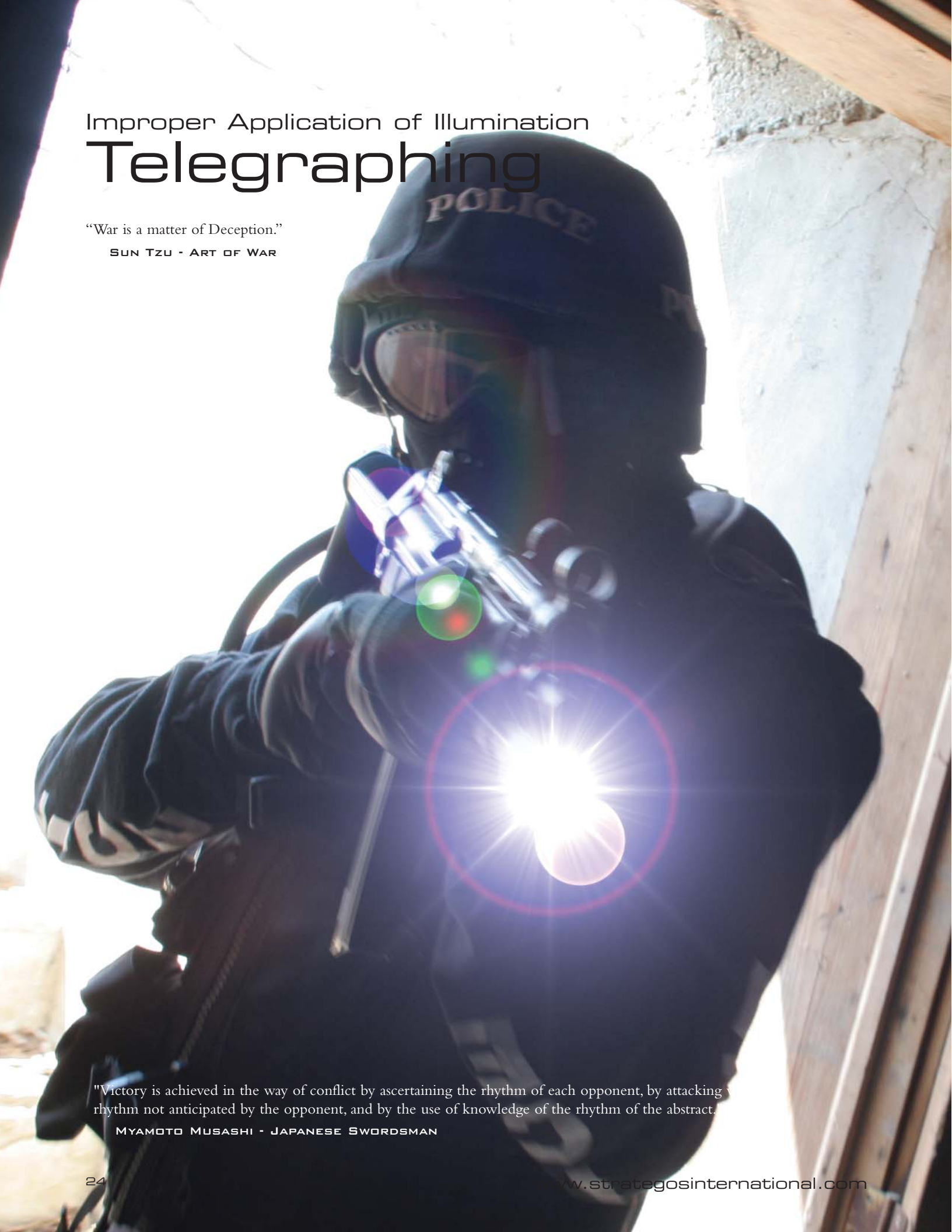
1. Reduce Telegraphing
2. Be acutely aware of being in or creating a Backlit Condition for yourself or others around you
3. Avoid Self-blinding yourself or others

Improper Application of Illumination

Telegraphing

"War is a matter of Deception."

Sun Tzu - Art of War



"Victory is achieved in the way of conflict by ascertaining the rhythm of each opponent, by attacking v
rhythm not anticipated by the opponent, and by the use of knowledge of the rhythm of the abstract.

Myamoto Musashi - Japanese Swordsman

Deception in Your Position and Movements

Once there is sufficient reason to project light, the obvious downside is that hostile threats will be alerted to this emission and if armed and committed, they will fire directly into the source of light. Therefore it is your responsibility to distort your opponent's perception of what is actually happening. We call it ***"visual distortion"***.

This is accomplished by manipulating the following variables:

Displacements - Vertical, Horizontal, and Distance
Angle of the Beam
Rhythm and Duration

Sniper analogy: - **"Three on a Match"**
It has been said, the third person on a match was the most likely to get hit by a sniper bullet on the battlefield. Why is this so? The sniper who is looking over the terrain is viewing a vast area. First strike and subsequent puff of the cigarette gets the sniper's attention and allows him to turret his weapon into the general location. Second puff by the second man allows for further angle discrimination through the optic, safety off, finger poised on the trigger.

Now that the "rhythm" and distances have been established, it only takes an incremental adjustment by the sniper and his weapon to lock on the third person attempting to light his cigarette, and bang it's over.

The same holds true for your lighting tools. Illumination from any point in the environment is like the first strike of the match. The second pulse sets the pattern, and if you pulse again using the same interval of time and space, expect incoming fire precisely in the area you are located.

Do not pulse or move in an easily defined rhythm unless you are trying to attract specific attention to yourself.

When searching, attempt to "paint" a picture to your opponent that is essentially an optical illusion. Constantly and randomly change the location (vertically and horizontally) of your flashlight when you do not know where the threat lies. Changing the angle of the beam along the floor, on the ceiling, down hallways and up stairs, will help mask your exact distance from any given location.

With practice, an officer can successfully deceive threats into believing that they are in one position when in fact they are occupying a completely different space.

One of the core principles of fighting is the ability to disguise or hide your movements and true intentions from your opponents.

Flashlight Techniques

Reality Dictates the Requirement to be Proficient with Flashlights

By a substantial percentage, most officer-involved shootings occur during the hours from sunset to sunrise, when ambient light is either greatly reduced from normal daytime levels (even when artificial lighting is available) or is virtually nonexistent.

Such low-light shootings undoubtedly comprise the majority of non-law enforcement ("citizen") shootings. The obvious reason for this fact: Perpetrators of street crime are more active after sundown.

Because most shootings occur in low-light conditions, it is not merely desirable for all officers to become proficient at shooting with the aid of flashlights, it is a critical part of their overall skill set and should not be relegated to a one-time, check the box training approach.

Being skilled and comfortable at simultaneously operating a firearm and a flashlight enables one to:

(1) focus on safely performing the job at hand, rather than becoming distracted by equipment issues and/or dangerous tactical errors

(2) maintain the proper mindset - confident, controlling, dominating any actual or potential threat

"Know and use all the capabilities in your airplane.
If you don't, sooner or later, some guy who does use them all will kick your ass."
Dave 'Preacher' Pace - Fighter Pilot

The Simultaneous Use of Handheld Flashlights and Firearms

Development of Flashlights and Flashlight/Gun Techniques

The first flashlight/gun techniques were designed around “regular” flashlights whose design had remained basically unchanged for half a century. Such lights had thin metal or plastic bodies, held a couple of C or D cells, and used a comparatively weak bulb.

Flashlights for Law Enforcement and outdoor use were gradually improved, becoming more rugged, reliable and technologically sophisticated. Long, heavy flashlights became standard Law Enforcement tools because, in addition to being comparatively powerful, they could also be used as a weapon or restraint device.

Their common use by LEO's encouraged the development of flashlight/gun techniques.

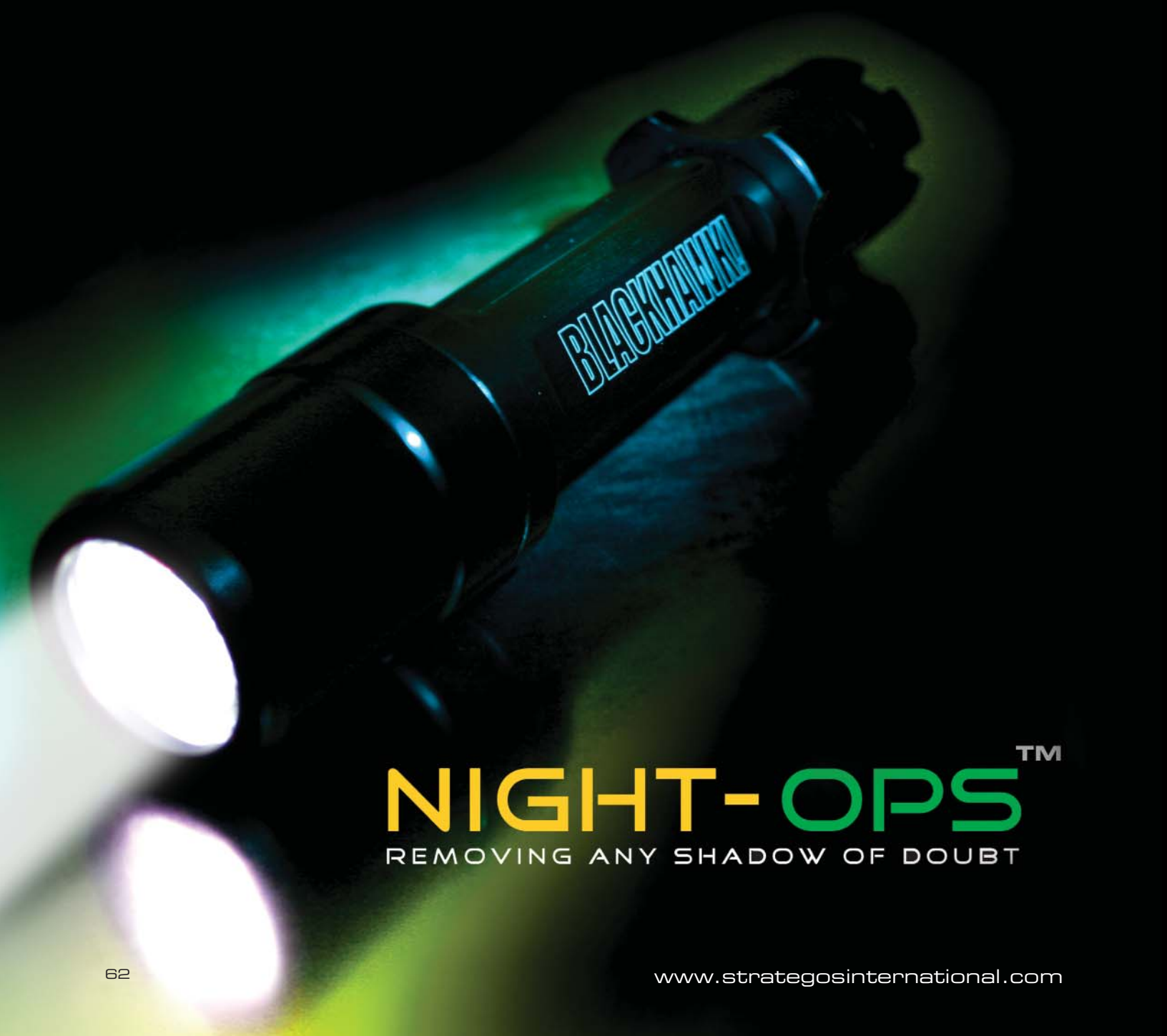
Flashlight design continued to evolve. Bulb/battery technology and ergonomic considerations resulted in more powerful beams from “regular” sized lights. Over time, the beams became more powerful from ever smaller flashlights .

These small handheld lights, whose bodies are an inch or less in diameter *(called small flashlights in this section)* are now universally accepted by Law Enforcement officers, specialized military units, and outdoorsmen. Although many flashlight/gun techniques that were developed for large flashlights worked equally well with the new small flashlights, some did not, resulting in modifications of the original techniques or the creation of new techniques.

Choosing the Right Tools

"What is the first business of one who studies philosophy? To part with self-conceit.
For it is impossible for anyone to begin to learn what he thinks that he already knows."

EPICTETUS (A.D. c. 50 - c. 138)



Hardware Considerations

In many self-defense, crime interdiction, or combat conditions occurring in low-light conditions, any flashlight may prove better than no flashlight. Furthermore, a less-than-ideal flashlight may be used in many of the techniques described on the following pages.

However, because of the potential deadly situations in which flashlight/gun techniques are employed, it is imperative to use quality flashlights with the proper features and capabilities.

Rugged
This applies to all flashlight components: body, reflector, bulb, and switch. If dropping or banging the light puts it out of order, it is not suitable for LEO or combat use.

Water Resistant
The light may be carried and/or used in the rain. It must not be susceptible to either water infiltration or corrosion from dampness.

Bright
The light will be used to clearly identify and classify threats and/or to temporarily incapacitate an assailant. Traditional 2-D cell flashlights using traditional bulbs, are inadequate sources of light. We suggest a minimum of 60 lumens for an adequate light source.

Momentary On/Off Switch Frequently, proper use of flashlights in LEO or combat situations requires activating them for a brief moment, sometimes literally a fraction of a second. Ideally this activation should be possible with just the thumb or a single finger.

Therefore:
(1) A flashlight with only a “twist” on/off mechanism is unacceptably slow to operate.

(2) A flashlight with a slide-on/off switch (most of which are not waterproof) is undesirable, since a positive and rapid on/off cycle is possible only with a thumb.

(3) A flashlight whose momentary switch is integral with its regular on/off switch is undesirable, since accidental activation of the regular switch at the wrong moment could prove disastrous.

Note: It is possible to mitigate this factor by placing the activating fingertip or thumb tip at the perimeter of the on/off button, making it difficult (even virtually impossible) to fully depress the button and lock it on.

(4) A separate momentary switch, operable with one finger or one thumb while holding the flashlight in its normal grip, is by far the best.

(5) Preferably weapons mountable for multi-purpose application and equipment compatibility.

"Quick Peeks"

Tight Corners or "T" Intersections

Phase 1
Start High or with a mind-set of getting in, snapping a photo and getting out. You are also planning to hit any potential threats directly in the face/pupils with the hot spot of your flashlight beam. Keep in mind what it feels and looks like when someone uses flash photography directly in your eyes. For a few moments, your vision is seriously degraded. This essentially means loss of situational awareness.

P1a. Break the plane with an eye, weapon, and light. Enter deep enough to make the effort worthwhile.
P1b. Get in and get out.

Principles
- **See from the Opposite Perspective**
- **Align Three Things**
- **Hunter or Victim?**

Some common mistakes that could easily lead to you being compromised include:

- Turning your illumination tool on too early.
- Illuminating the wall directly in front of you.
- Dragging the beam on the ground first.
- Slowly leading with your flashlight.

Principles
- **Self Blinding**
- **Telegraphing**

Phase 2
P2-2a. Immediately change levels and break the plane again if the corner has gone unchallenged. If this was a "T" intersection, peek one way low, move back, peek the other way high.

Any threat that has seen you and/or your light is now under the impression that you are standing, ready to try again at that level.
Do something different.

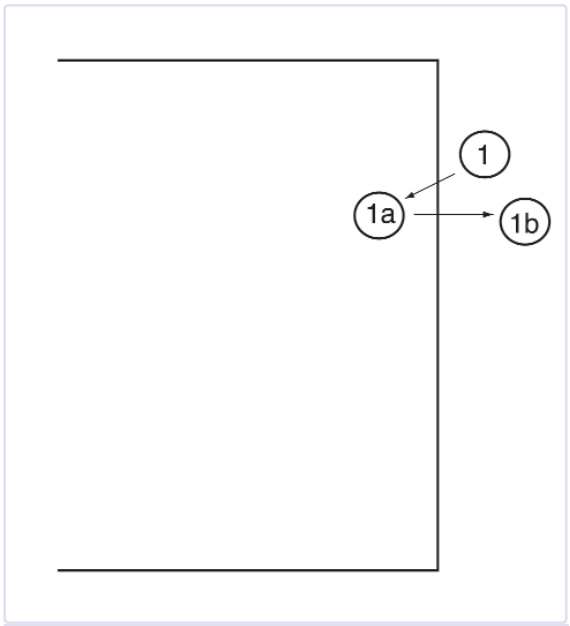
Of course it can be done in reverse, high then low.

I prefer to show high, then let gravity naturally carry me down to the ground whenever possible.

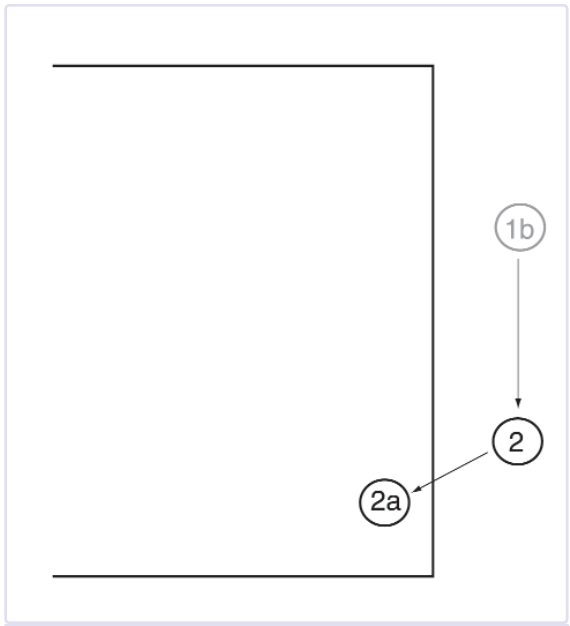
Principle
- **Flexible, Fluid, Flowing & Unpredictable**

If the threat appeared chest high during the initial peek and brings a weapon to bear, I know he will be trying to hold that chest-high force vector. He was hit in the face with a bright light and will attempt to bracket that area if he is committed to shoot. I have left that space and occupied a space he cannot see as his arms, weapon, and muzzle flash are concealing my actual position which is low and on the floor. If I choose to engage from there, I fire and move again to vacate the space.

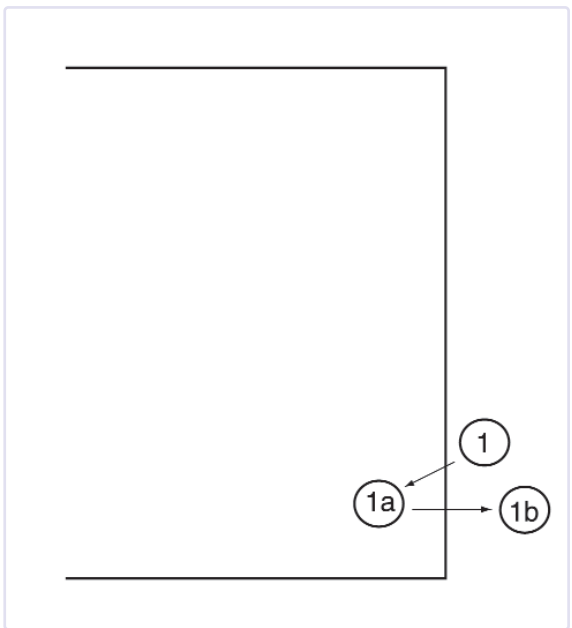
In most Law Enforcement situations, once an armed threat has been located in a deep corner, vacate the immediate space, contain and turn it into a barricaded suspect situation. I will follow that comment up with - in today's Active-Shooter environment/situations - this may no longer be the case.



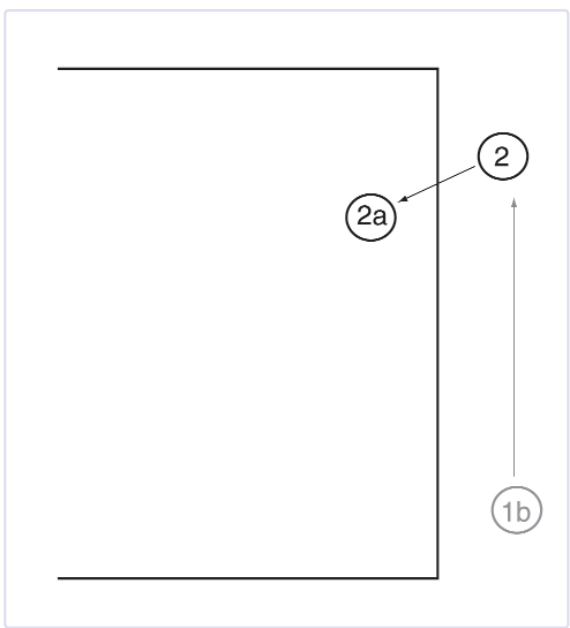
Phase 1 Start High - In & Out



Phase 2 Drop Low - In & Engage



Phase 1 Start Low - In & Out



Phase 2 Rise - In & Engage

Harries Technique

Description

The flashlight is held in an ice-pick grip (lens on side opposite the thumb). Thumb or any finger operates on/off (or momentary) switch. Wrists nest together and backs of hands are firmly pressed together to create stabilizing isometric tension. For large flashlights, body of flashlight may be rested on weapon hand's forearm.

History

This technique is named after Michael Harries, a pioneer of modern practical combat shooting. Developed in the early 1970s for use with large flashlights, this technique is widely used and is well-suited to small and larger flashlights.

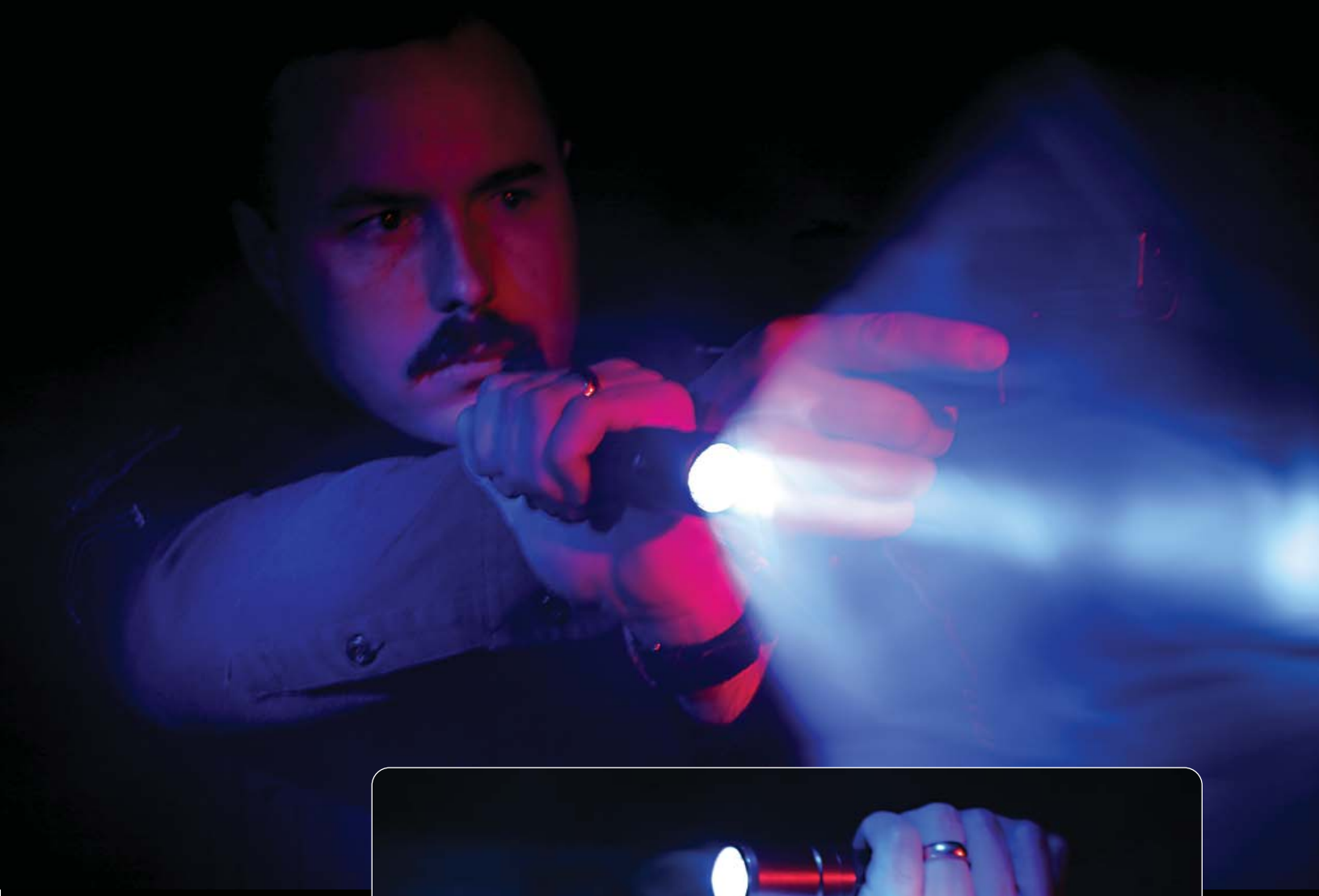
+ Attributes

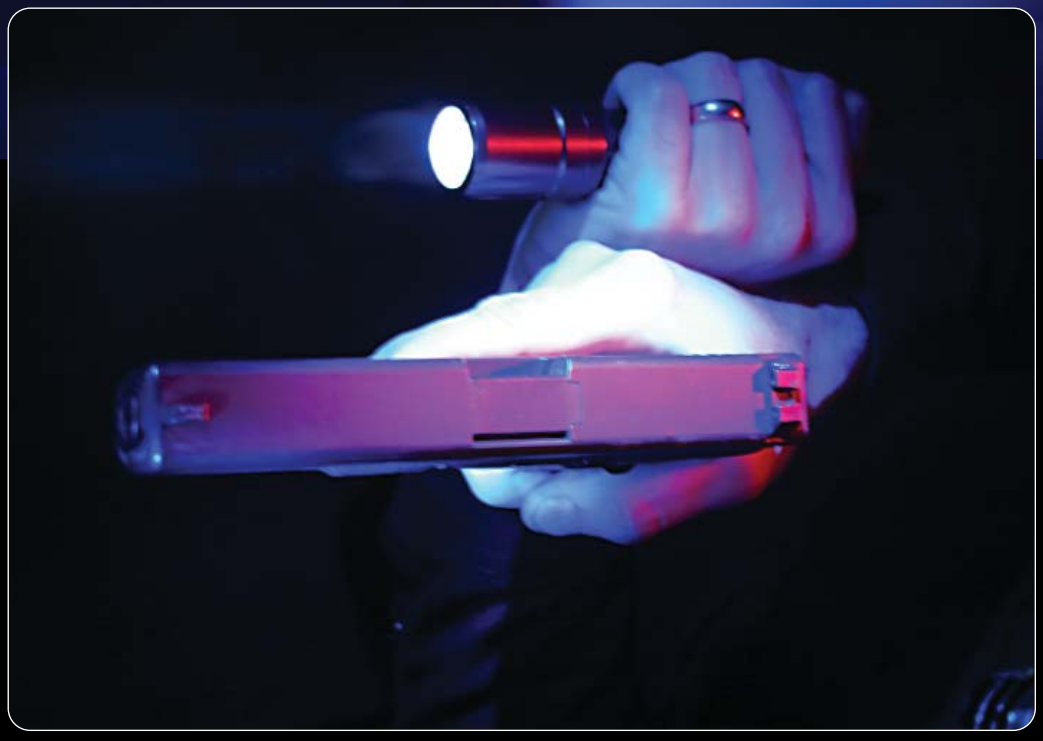
- Works with small or large flashlights.
- Enables steadier, two-hand support of weapon prior to shooting.
- Flashlight body (larger flashlights) can sometimes be rested on weapon hand's forearm, enabling extended use.
- Variations of this technique can be used with shoulder-fired weapons.

  Cross-support technique - Think Harries Flashlight Technique with a long gun, but with the weapon resting on your forearm holding the flashlight held to the side or tucked back toward your weapon support forearm.

— Attributes

- User may suffer beam/grip displacement during discharge of weapon.
- Keeping flashlight beam aligned with weapon barrel leads to fatigue due to the tension created by keeping the backs of hands together. Note the lower hand has a tendency to rotate downward when the handgun is in a "guard" or "low ready" position.
- Proximity of hands increases chance of sympathetic contraction and hand confusion.
- During hasty execution, weapon muzzle can cross flashlight hand or arm.
- Can lead to "Self-Blinding" - for example, right-handed shooter attempting to navigate a corner with a wall on the right side. The hot spot of the beam will "drag" behind the weapon. If the light is activated, the reflected light will be directed back to the shooter. This not only substantially reduces the shooter's vision but also silhouettes the shooter and other team member(s) to all threat(s) in the area.
- Light is located center of mass. If unseen threat(s) engage the light, your body is directly in the line of fire.





Solo Forward

Shooting Platform

Oftentimes, you need to move forward in a confrontation. During this movement you need to pay attention to the surroundings around you, as well as have the ability to accurately engage targets on the move at the closer ranges.

This drill is designed to bring these skills to the forefront.

The shooter starts off on the #1 target. The shooter is given the command, "On You" and leaves the starting point whenever he or she is ready.

Once shooters start moving, they should continue to move forward, firing two shots on each target as they move through the gauntlet of targets.

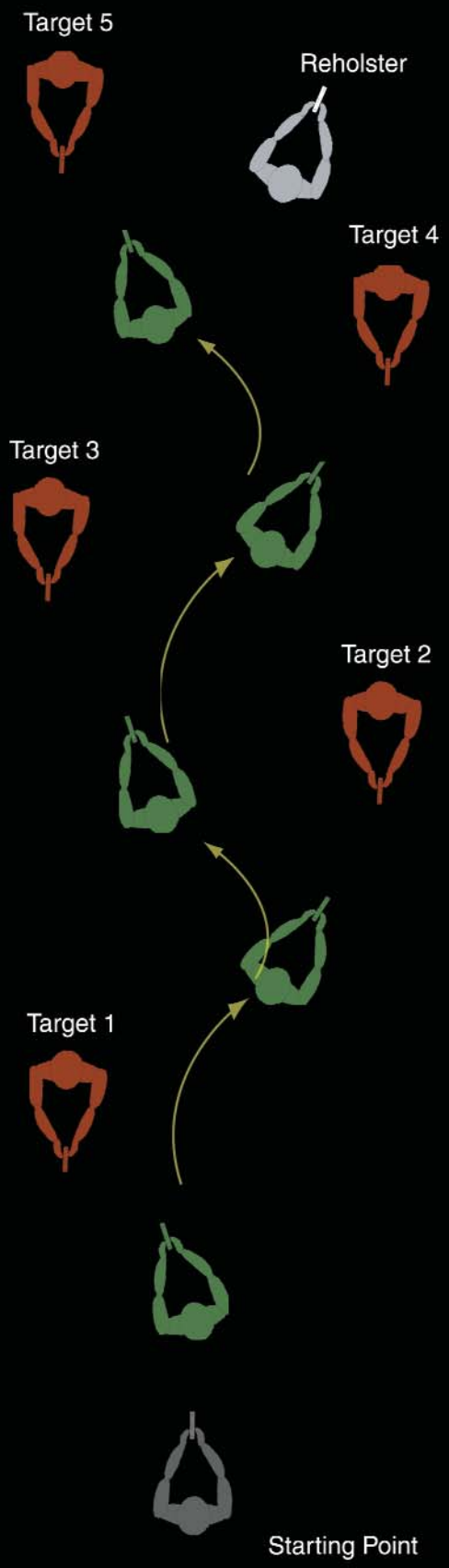
When completed, holster up downrange, turn and return to the firing line.

Skills & Considerations:

- The ability to maintain the shooting platform.
- Maintaining the proper movement and shooting pace.
- The ability to mentally "attack" targets when required (i.e. Active Shooter scenarios).
- Helps develop situational awareness (not getting too close to the targets before engaging).
- Reloading and clearing malfunctions on the move (if required).

Safety Issues:

- Running is unacceptable.
- Getting too close to the targets is dangerous when shooting at steel targets.
- Turning and facing the firing line BEFORE holstering the weapon is a potentially deadly situation. Initially have an instructor move all the way up and down the gauntlet with the student, *before* allowing them to move unaccompanied.
- Ensure all students are accounted for before allowing the next student to proceed forward to engage targets.

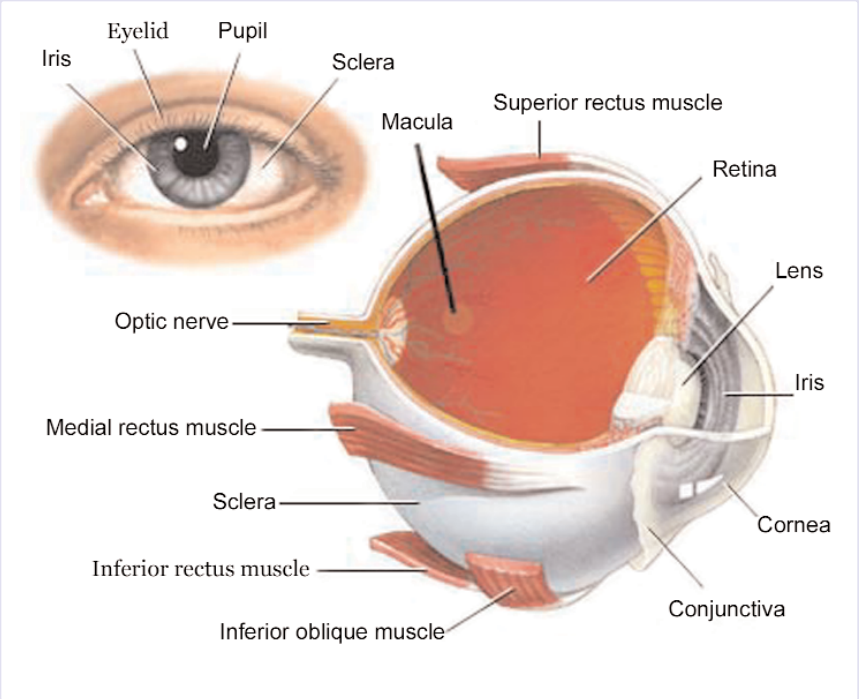

Target 5
Reholster
Target 4
Target 3
Target 2
Target 1
Starting Point

Physiology of the Eye

Sight is an amazing process made possible by many parts of the eye working together. Light enters the eye and is bent or refracted by the cornea through the pupil (the opening in the iris). This light passes through the lens (located behind the pupil). This completes refraction by fine tuning the focused light onto the retina.

The retina changes the light (energy) into electric impulses that are carried through the optic nerve to the vision center (occipital cortex) of the brain where the image is interpreted.

A summary of the eye's structures and their functions follows:



Cornea
The cornea is the "window" of the eye (like a watch crystal). It is the clear part of the eye, through which the colored part of the eye is seen. It is the main source of refraction. The cornea is made up of five layers of strong clear tissue.

The first layer (epithelium) is made up of rapidly-replaced cells that allow for fast healing (24 to 48 hrs) of surface injuries. The last four layers add rigidity, provide a barrier against infection, and keep the cornea clear.

Sclera
The outer "white part" of an eye is the sclera. This tough structure is the outer wall of the eye that gives protection to the delicate inner structures.

Choroid
This structure, between the sclera and the retina, is made up of blood vessels that provide nourishment to the eye.

Iris
This colored part of the eye has very fine muscles to control the size of the pupil. The iris is the colored portion of the eye. It is similar to the aperture of a camera. The iris regulates the amount of light entering the eye.

Pupil
The pupil is the black-appearing spot in the center of the iris. Its size changes since its function is to control the amount of light reaching the retina. In the dark, it expands allowing more light to enter. It contracts in bright light to keep out excess light.

Physiology of the Eye

Lens
This controls 1/3 of the refraction of light that enters the eye (the cornea, the other 2/3). Located just behind the pupil it allows for changing of focus from distance to near objects by altering its shape. This changing focus is called accommodation. As a person ages the lens hardens and accommodation becomes more difficult.

Zonules
These "threads" attach the lens to the ciliary muscle and help the lens to change its curvature during accommodation.

Ciliary Body
This contains two main structures. The first is a muscle that contracts and expands to control the curvature of the lens during accommodation. The second is a gland that secretes aqueous humor.

Aqueous Humor
This fluid is produced by the ciliary body and circulates in the front part of the eye. It provides nourishment to the front parts of the eye and maintains the eye pressure.

Retina
This membrane lines the inside wall of the eye. It contains photoreceptors (rods and cones)that change light into sight by converting light into electrical impulses. These electrical messages are sent from the retina to the brain and interpreted as images.

Macula
This tiny part of the retina is the central focusing spot. It is responsible for seeing details (such as reading) and also for color vision.

Optic Nerve
This nerve is the pathway that the light rays take from the retina to the processing center of the brain. It actually is made of about a million tiny nerves bundled together.

Optic Disc
This area is not sensitive to light and it is often referred to as the "blind spot". It is where the retina meets the optic nerve.

Vitreous Gel
This clear gel fills the central core of the eye. It helps to maintain a spherical shape to the eye.