



Chocolate Warfare

Pistol low light
rev. March 2023

Open Source
chocolate-warfare.com



Introduction

Low light training is often seen as advanced training but it is a fact that most violent crimes occur at night. Therefore, trainees must be able to quickly access those types of training after a basic firearm instruction. Lighting condition is only one variable that changes from regular training.

There are some considerations on equipment, preparation and usage but the fundamentals of self-defense and pistol shooting remain the same.

This handbook intends to provide a baseline of information for users to low light training with a pistol.

By analogy, you can apply the presented principles with a rifle and a weapon mounted light.

We will not cover the use of visible or IR laser mounted pistols or the use of night visions.

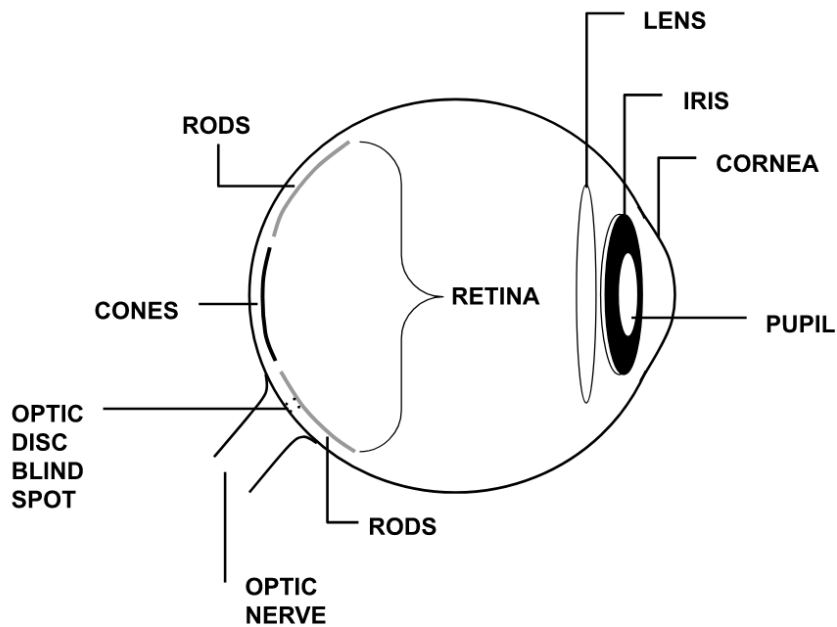
Human eyes

A quick look at the eye anatomy helps us to understand how we perceive our environment.

Cones are responsible for color sensitivity and rods are responsible for brightness and contrast. Both are mixed together, however, there is a higher concentration of cones in the center of our vision and a higher concentration of rods in our peripheral vision.

It explains why we have a better sensitivity to light in our peripheral vision during night.

Cones require a lot of brightness to detect colors. In a low light environment, rods provide most of our perception hence the lack of color in our perception.



Human eye anatomy

It takes

180 seconds

for our eyes

to accommodate to 80%

However, we need

20 to 30 minutes

for our eyes

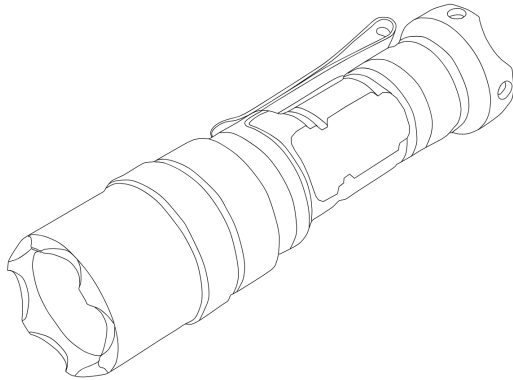
to accommodate to 100%

from bright to dark environments.

RED light preserves natural night vision because it has less effect on rods.
It is the color of choice for personal illumination during night.

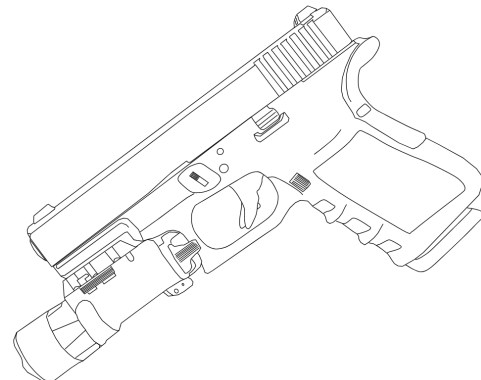
Flashlight

Flashlight vs weapon mounted light



Surefire E2D Defender

Admin tasks
Search for adversaries
Engage the enemy.



Glock 19 with Surefire X300U

As you will point with your firearm anything you illuminate, it must be used for engaging threats only.
Weapon lights usually have a high power output.¹

Having both is better

Key requirements for a flashlight

Features

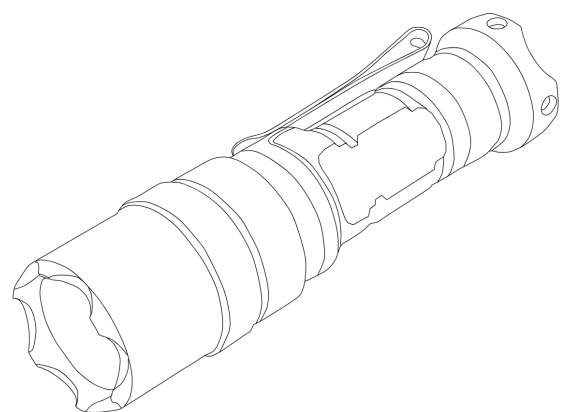
- Keep it simple. It's a flashlight, not a computer.
- Momentary + permanent light are enough and preferred.

Output power

- 100-200 Lumens is enough.
- Battery life is more important than output power.
- Overpowered output may blind yourself in a white environment (white apartment, snow, reflective material).

Strike bezel

- Self defense / Strike.
- Protect glass from hit.
- Allows to stand on the bezel and have a small amount of light.

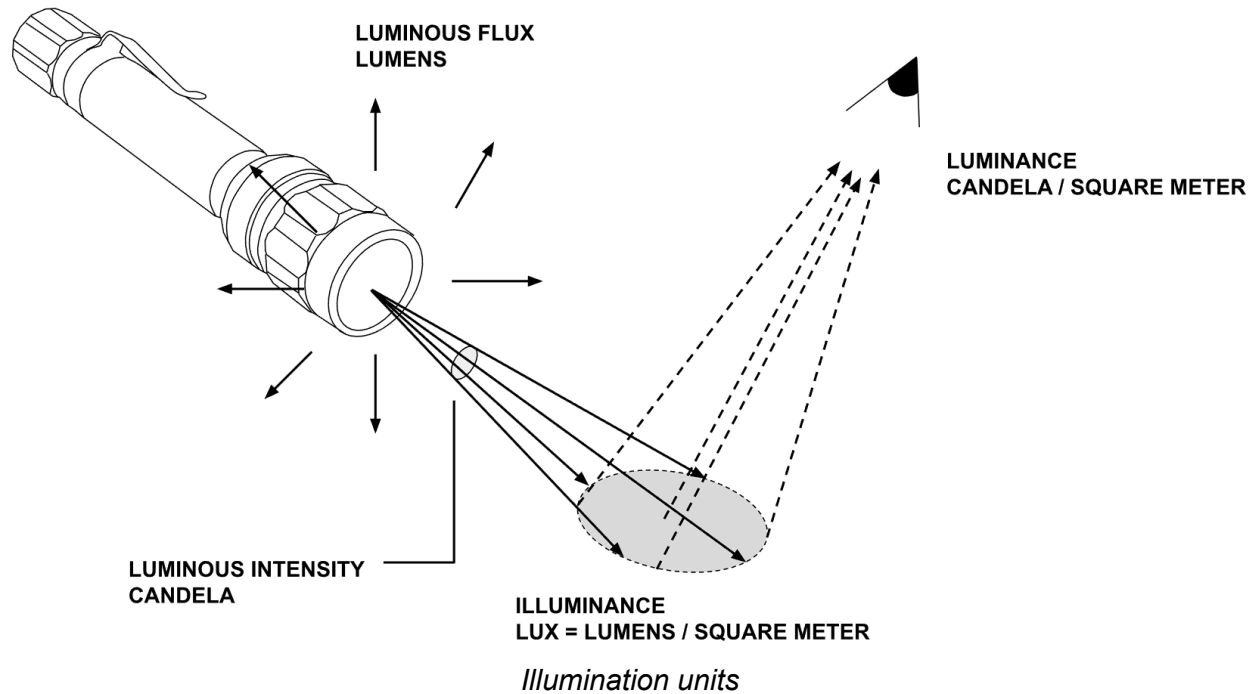


Surefire E2D Defender

¹ Surefire X300U has an autonomy of 1.25h for 1'000 Lumens.

Illumination units

Lumen, Candela and Lux may be confusing, here are the definitions:



Lumens tell you how much light comes out of a lamp. This is measured at the source of the light.

For this reason, the number of lumens doesn't say anything about how far the light shines.

Candelas measure the intensity of light at a given beam angle. Lumens tell you how much light comes out of a lamp. But they don't tell you anything about how focused or wide the light beam is. Candela helps with this.

Lux measures the quantity of light for a given surface.

1 Lux is generally 1 lumen per square meter.

Strobe lights

Strobe lights on pistol flashlights have been promoted as a useful feature ; the disorienting effect of the strobe light can temporarily blind and disorient the opponent.

However, in practice, they may not be as effective as they seem. In stressed situations, users may not be able to activate the strobe mode effectively or may end up strobing a random area for testing, giving away their position and killing the element of surprise.

Additionally, in force-on-force training, using a strobe light to locate a target using a cover or a concealment may prove challenging, reducing the effectiveness of this feature.

Strobes have proven to be valuable tools for assaulting forces when used in combination with a ballistic shield against an individual.

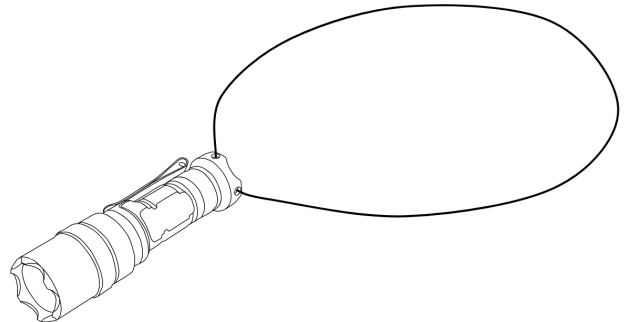
Preparation

Attaching the flashlight to yourself allows you to clear any weapon malfunction with the light off and retrieve it quickly.

Elastic cord

Loop an elastic cord around the flashlight.
Use duct tape if you lack attachment.

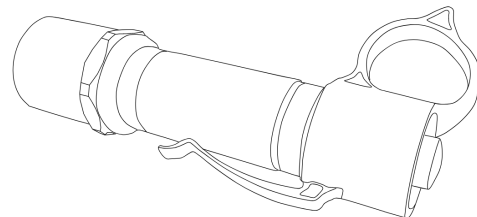
Elastic cord extends your motions and prevents adversary grip issues.



Elastic cord attached to the flashlight

Finger clip

You can either buy a finger clip or use a small cord loop attached to the belt clip.



Switchback flashlight ring

Mounted red dot

Beware of automatic brightness settings. Your dot may be washed out by your flashlight or weapon light.

Use a daylight setting.



Holosun 509T mounted on Sig P320 with a Surefire X300U

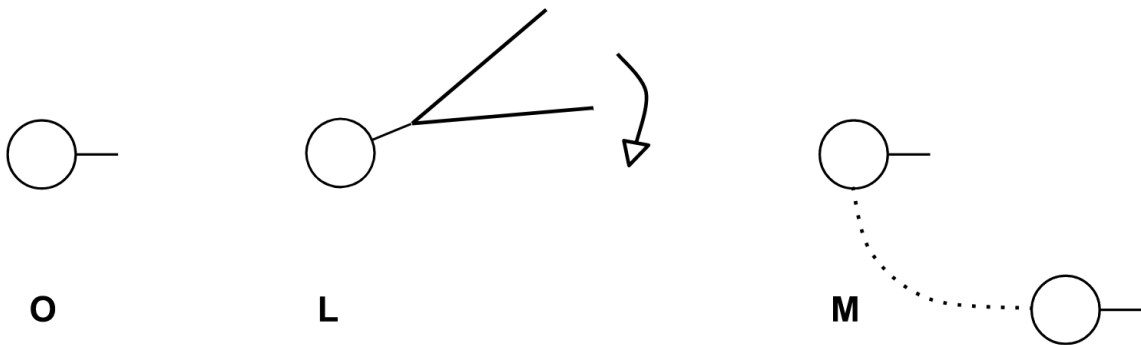
Low light principles

Obviously, if you have no expectation to get shot at, you will keep your light constantly on. Light sources attract enemy fire therefore, you will try to momentarily use your light to explore, move and engage enemies.

As possible, use other available lights like car lights, house lights, public illumination, etc.

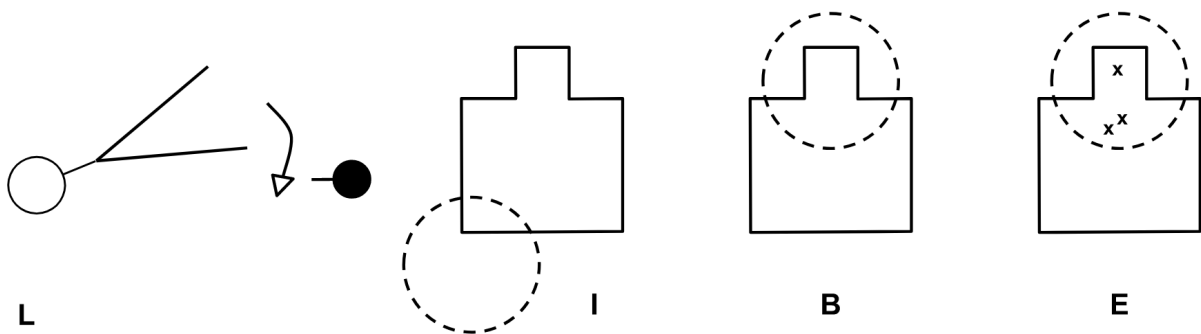
Explore

OBSERVE → LIGHT → MOVE

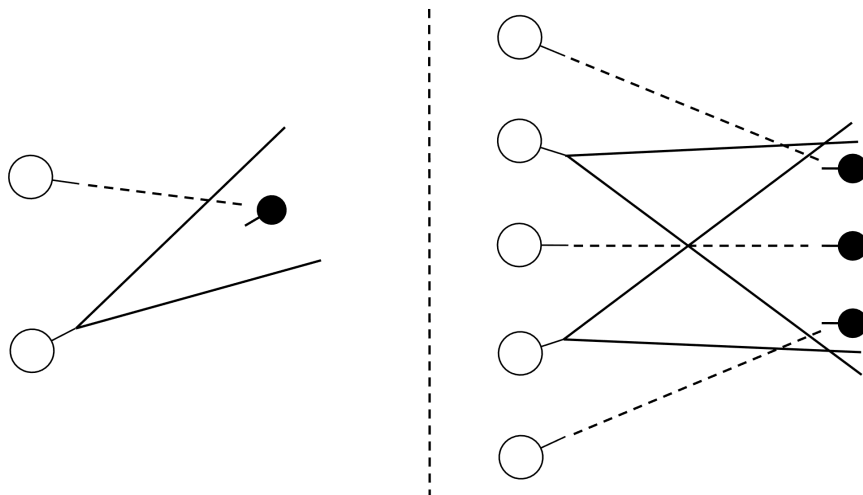


Engage

LOCATE → IDENTIFY → BLIND → ENGAGE



Team

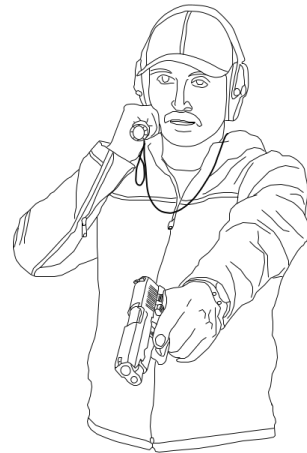


Handling techniques

Jaw-Index

Most natural way of handling your flashlight.

The light follows your vision.



Jaw-index

FBI

Dissociate the light from yourself.

Practical with a cover.



FBI

Harries

Keep the back of your hands together.

The light follows the muzzle direction.

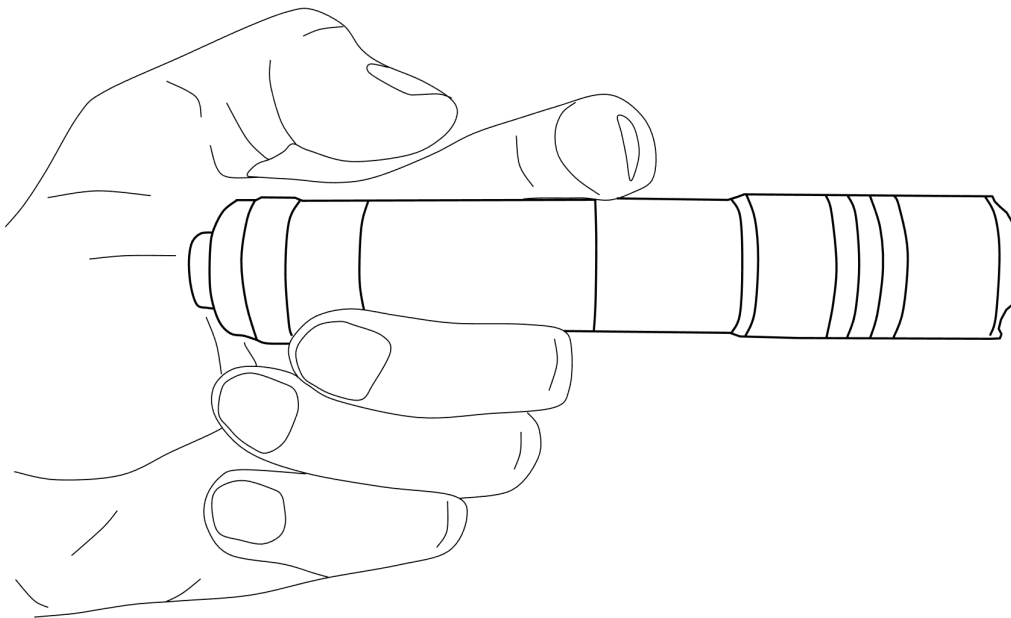
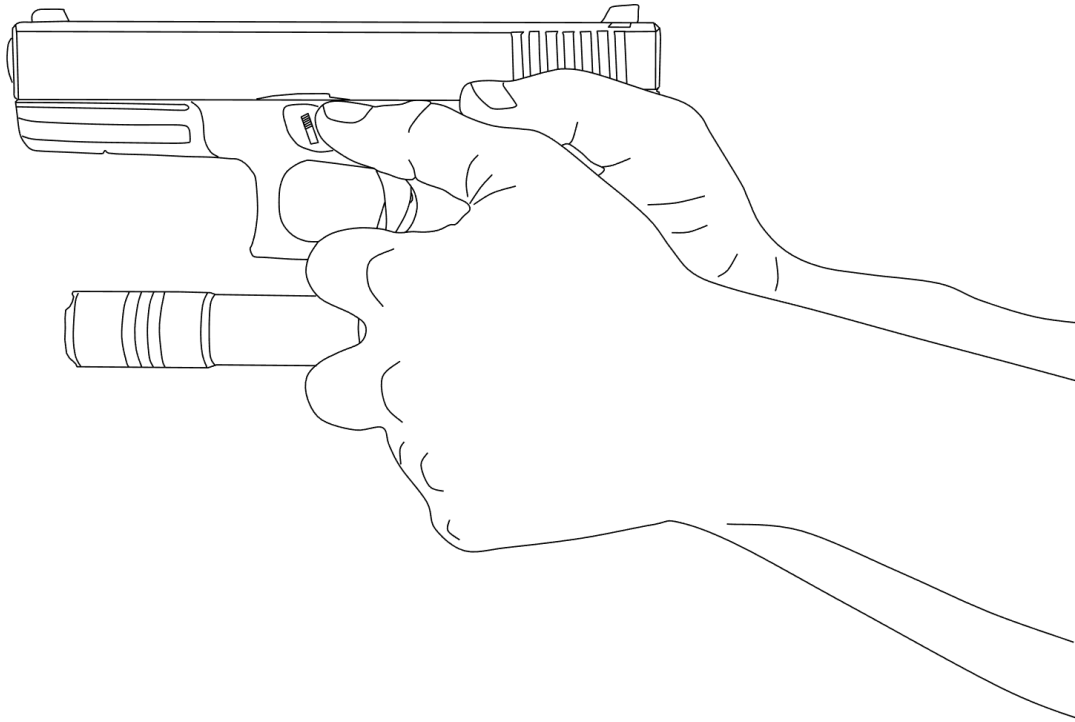
Practical in confined space.



Harries

Rogers

Alternative technique.



Rogers technique

Know how

It is interesting to train the following in low light classes:

- Practice one handed pistol shooting
- Locate, identify, blind, engage with a flashlight and pistol.
- Maintain your weapon to fire while using a flashlight and avoiding illuminating yourself or your location.
- Transition from handled flashlight to weapon light.
- Hand-to-Hand combat then weapon draw.
- Use of covers.
- Combine covers with movements.
- Force-on-Force with a blue gun (communicate, move, shoot).
- Team training.

Conclusion

People often make the mistake of limiting themselves to the infrastructure they have access to. You do not need a dark shooting range for practicing principles and techniques.

Most of low light trainings can be performed with blueguns, flashlights and some friends role playing the opponents. Weapon techniques can be practiced during dry fire sessions.

Contribution

If you want to contribute or access to the original document, please reach us:

<https://chocolate-warfare.com>

info@chocolate-warfare.com