



Chocolate Warfare

Mounted red dot pistol
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Introduction

The use of mounted red dot pistols (MRDP) has been common practice in dynamic shooting competitions since the 1990s. In the time since SOCOM adopted the Glock 19 pistol equipped with RMR Type 2 in 2016, MRDPs have continued to gain popularity. For a number of reasons, this system offers some advantages:

- The ability to keep your focus on the target,
- Easier aiming for aged shooters,
- Naturally aim using both eyes open

Debate surrounding the utilization of such an aiming system harkens back to those regarding the adoption of red dots on rifles back in the early 2000s; however, unlike rifles, pistols continue to be the subject of such a debate today.

The issues of the pistol-mounted red dot are intrinsically linked to the miniaturization of red dot optics. Two major concerns are identified:

- The learning curve for systematically acquiring the red dot when aiming.
- The breaking of the pistol mount, in particular of the tightening screws.

It is important to note that by reducing the size of a red dot sights window, you are in turn reducing your available margin of error for correct weapon presentation. When the weapon is incorrectly drawn, the red dot may find itself projected outside the window, forcing the shooter to look for his red dot by slightly swiveling his weapon, thus deteriorating the acquisition time and the shooter's confidence with his sight.

The miniaturization of the optic invariably leads to a reduction in the size of the mount and the tightening screws. Screws are resistant to a force applied to its axis. If the slide is poorly milled or if the optic is incorrectly mounted, a perpendicular force to the axis of the screw may be applied each shot. Repetition of this mechanical stress will eventually break the tightening screws.

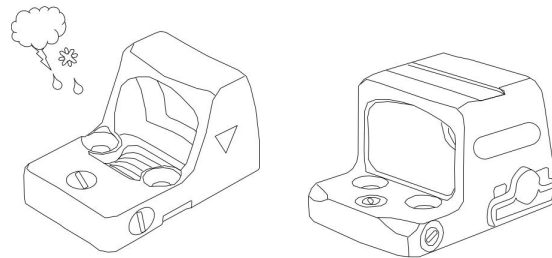
Red dot requirements

Disclaimer: This document is purely intended to provide a general outline of characteristics that should be under significant consideration. It should not be perceived as a list of pistol mounted red dots available within the market.

Enclosed Emitters

An Enclosed emitter on a red dot provides greater reliability in inclement weather. The additional structure of an Enclosed emitter in turn provides greater rigidity against shock.

Furthermore, a great number of Enclosed emitter red dots also have battery ports that are more easily accessible, meaning that you will not be required to remove the optic from the slide to conduct a battery change. Such a feature also means that you will have to Re-zero your optic less frequently.



*open emitter and enclosed emitter
Trijicon RMR Holosun EPS*

Size of the dot

The size of the dot is expressed in MOA by the manufacturers and offer dots between 1 and 6 MOA¹.

Smaller dots cover the target less and allow more precise aiming but reflect our shakiness more.

However, larger points are easier to acquire and remain more stable to our eye.

Experienced shooters prefer a 1 MOA dot whereas novices will be more comfortable with a 6 MOA dot.

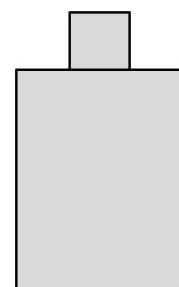
In short, the size of the dot does not matter and is only a personal preference.

*width of the 10 point
circle: 10 cm*



*10 cm at 25 m
= 8.6 MOA*

*width of a human
target: 40 cm*



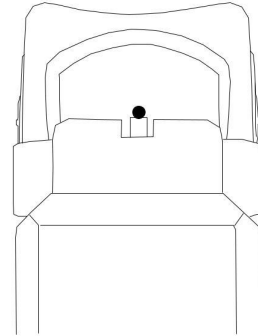
*40 cm at 100 m
= 13.76 MOA*

¹ Minute of angle: is equal to 1 inch (2.54cm) at 100 yards (91.44m). 1 MOA = 0.29 MRAD.

Irons sights co-witness

Iron sights co-witness through the optic allows:

- backup sights in the event of a broken optics or a battery failure.
- Find the dot in case of a poor draw of the weapon.
- Zero the red dot more easily.



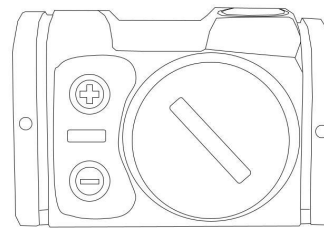
*Trijicon RMR with iron sights
co-witness*

Day and night visibility

There are plenty of red dots sights with a sensor adjusting the brightness of the dot with the ambient light.

However, you must be able to manually increase or decrease the brightness of the dot in the following cases:

- shooting in low light conditions using a white light.
- interior/exterior contrasts or vice versa.
- select night vision brightness settings.



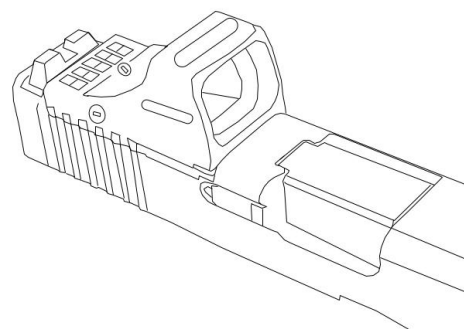
*Aimpoint ACRO P2 with manual
brightness buttons.*

Battery life

Pistol red dots generally have a battery life between 30,000 to 50,000 hours which is between 3 and 5 years, this lifespan depends on the brightness setting.

Reticles influence battery life by about 30%. Simple dots are therefore to be preferred on the various reticles.

Solar panels, fiber optics and tritium are existing solutions for avoiding batteries, but these solutions do not allow you to manually select the brightness of the red dot.



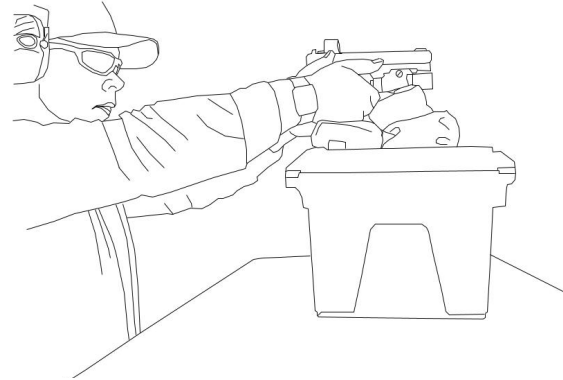
*Holosun SCS is a batteryless optic using
a capacitor and a solar panel.*

Preparation

Zeroing

Proper zeroing of the optic ensures a more precise point-of-aim to point-of-impact relationship.

- A zero distance of 25m is capable of hitting a human size target at 100m without the necessity of any holdovers.
- A minimum of 5 round shot groups are necessary for determining group placement.
- The shooter must be capable of making a group with a maximum size of 15x15cm at this distance.
- The adjustment screws move the impacts on the target according to 'up' or 'right' marks.



Zeroing a Holosun EPS using a table, a crate and range bags.

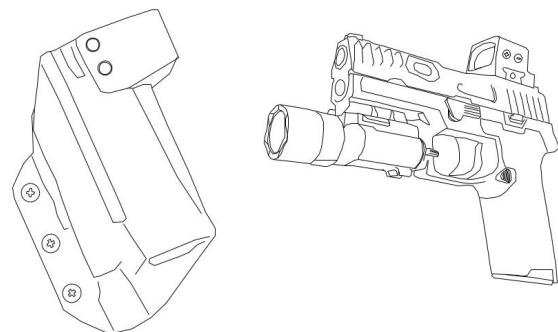
It is possible to use a physical support to zero the weapon. The support must be at eye level and the shooting position must not be biased, otherwise the zero of the optics may be affected.

Important: Avoid resting the barrel of a pistol on a range bag. The hot gasses and pressure coming out of the barrel will damage the bag.

Like any weapon sight, it is necessary to periodically check the zero of your weapon. It can be affected by different parameters; different types of ammunition, the use of a suppressor, the integrity of the mount, violent shocks or weather conditions.

Holster consideration

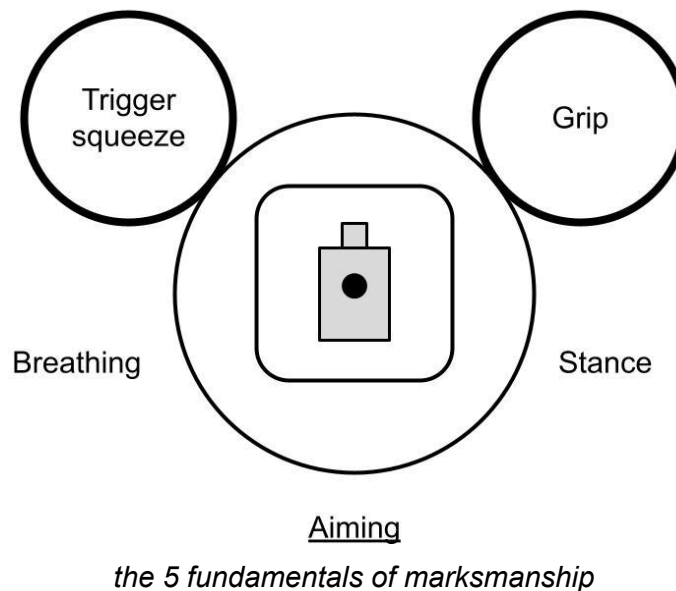
Similar to when attaching a white light to a weapon, a red dot requires a specific holster to accommodate your aiming sight. Except for the holsters worn inside the belt, it is recommended to have a holster protecting the red dot. Thus, the red dot will be protected from inclement weather and physical shocks, improving its lifespan.



Kydex holster for SIG P320C with a protective hood for the optic.

Usage principles

The red dot -while advantageous- only modestly influences ones ability to fight an opponent as it only affects aiming in the process:



Keep both eyes opened

The red dot makes it possible to acquire the target with both eyes open, improving the shooter's peripheral vision.

In case of automatism of closing of an eye, practice by taping the front face of the red dot. From then on, the shooter is forced to have both eyes opened in order to see his target and his red dot simultaneously. The shooter's stereoscopic vision will naturally align the red dot and its target.

Target focus

The red dot allows you to keep a clear view of your target and bring your red dot to it. Shooters with presbyopia² particularly appreciate red dots because they no longer have to force their eye to focus on the front sight of their pistol.

Weapon draw

The shooter must be able to raise their weapon pointing at their target before even looking through their aiming aid. As soon as the weapon is at eye level, the red dot should naturally be there. If not, the solution is diligent dry fire.

Center the dot

Although manufacturers will usually claim that their red dot is parallax-free, they tend to have a more or less pronounced distortion present within the field of view. Therefore, the aimpoint at and the point of impact may differ when the red point is offset. A negligible difference at short distances but noticeable as the distance increases.

² Visual disturbance making it difficult to focus near objects. This is a natural aging of the eye.

Conclusion

The pistol-mounted red dot is an aiming aid. It does not supplement the two most important fundamental principles of shooting: the grip and trigger squeeze.

Apart from specific situations such as passive aiming with night vision or an answer to a shooter's presbyopia, the red dot does not significantly increase the shooter's performance with a pistol while requiring substantial effort to accommodate it.

Gains are actually more subtle: better peripheral vision when for dynamic shooting, better analysis of the target because it is focused and faster aiming after the shot. There is nothing wrong with making the transition, just like refusing to invest the money and the time to do so.

Contribution

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

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