THE PREPARED CITIZEN

MASTERING RED DOT SIGHTS ON HANDGUNS

FOR PERFECT SETUP AND ZERO

THE CARRY GUY®

ARE YOU READY?™

The Carry Guy Complete Manual: Setting Up and Using Red Dot Sights on Handguns

Safety First

Always keep the firearm pointed in a safe direction. Keep your finger off the trigger and outside the trigger guard until your sights are on the target and you have decided to shoot. Treat every firearm as loaded. Confirm the firearm is unloaded before any mounting, cleaning, or adjustment. This material summarizes standard published procedures for mounting, selecting, and zeroing pistol red-dot sights from manufacturer guides, Primary Arms, and related optics resources. It is not a substitute for the specific optic and firearm manufacturer's instructions, professional gunsmithing if required, or in-person training. Torque values, screw lengths, and thread-locker requirements are manufacturer-specific.

Who This Is For

Handgun owners adding a red-dot sight for defensive carry, competition, or range use. Anyone who needs a complete process from selection through final zero confirmation. Shooters who want to understand MOA, footprints, and common setup errors.

What a Proper Setup Requires

Correct footprint match between optic and slide (or adapter plate). Secure mounting to manufacturer torque specs. Selection of reticle size (MOA) appropriate to use. Bore-sight or initial close-range verification. Zero from measured groups at a chosen distance. Confirmation at additional distances. Consistent presentation practice so the dot appears in the window.

When to Perform Setup

After purchasing a compatible optic and confirming the firearm is optics-ready or professionally cut. Before any defensive or competition use. After any optic removal and reinstallation. Periodically to verify zero has not shifted.

Where Setup Occurs

Unloaded firearm in a safe area for mounting. Range with a stable rest for zeroing. Typical pistol zero distances documented in published guides are 10–25 yards.

How: Complete Instruction

MOA Defined

MOA means minute of angle. One MOA subtends approximately 1 inch at 100 yards (precisely 1.047 inches). Therefore:

- At 50 yards, 1 MOA ≈ 0.5 inch
- At 25 yards, 1 MOA ≈ 0.25 inch

- At 10 yards, 1 MOA ≈ 0.1 inch

Dot size is also stated in MOA. A 3 MOA dot covers approximately 0.75 inch at 25 yards; a 6 MOA dot covers approximately 1.5 inches at 25 yards. Most pistol optics adjust in 1 MOA or 0.5 MOA per click. Consult the specific optic manual for exact click value.

Selecting a Red Dot

Published sources consistently note these factors:

- Footprint: Must match the slide cut or adapter plate (common examples include RMR, RMSc, Holosun K, ACRO). Mismatched footprints prevent secure mounting.
- Emitter type: Open-emitter designs are lighter and offer a wider field of view; enclosed (closed-emitter) designs better resist debris and moisture.
- Dot size: 2–3.25 MOA dots are documented as favoring precision at distance. 5–6 MOA (and larger) dots are documented as favoring faster acquisition at typical pistol distances. Many sources describe 3–6 MOA as the common practical range for defensive and competition pistols.
- Brightness and battery: Manual or automatic adjustment. Motion-activation and solar-assisted options appear in many current models.
- Reliability under recoil: Choose optics designed and tested for pistol-slide mounting.

What documented sources advise against: Optics that do not match the firearm's footprint without a proper plate; optics not rated for the recoil of the specific handgun; extremely small dots (near 1 MOA) that many shooters cannot acquire quickly or that bloom excessively at high brightness; optics with known reliability issues under repeated pistol recoil (verify current testing for any specific model).

Mounting

1. Confirm the firearm is unloaded.
2. Verify footprint compatibility and select the correct screws and plate if required.
3. Clean mounting surfaces.
4. Apply the manufacturer-specified thread locker if directed.
5. Tighten to the manufacturer's torque specification.
6. Confirm the optic does not interfere with the ejection port or controls.

Zeroing Process

Published guides describe this sequence:

1. Bore-sight or fire an initial group at 7–10 yards from a rest to place impacts on paper.
2. Move to the chosen zero distance (commonly 15 or 25 yards for pistols).
3. Fire a 3–5 shot group from a stable rest while holding the same aim point.
4. Measure the center of the group relative to the aim point.
5. Calculate required clicks using the optic's MOA-per-click value and the distance formula (inches of correction ÷ MOA value at that distance).

6. Adjust windage and elevation. Turret markings indicate the direction the impact will move.
7. Fire a confirmation group. Repeat until the group center matches the aim point.
8. Confirm at additional distances relevant to intended use and note any hold-off.

A 25-yard zero is frequently cited for general pistol use; some competition shooters refine at the most common stage distances. Mechanical offset (optic height above bore) produces a small low impact at very close range; this is normal and documented.

Using the Red Dot

Present the pistol so the dot appears in the window without hunting for it. Focus on the target; the dot is superimposed. Practice draws and presentations with the exact holster and concealment garment that will be used. Confirm zero after any significant handling or temperature change.

Common Errors

- Mismatched footprint or incorrect screws.
- Adjusting after a single shot rather than a group.
- Ignoring the optic's specific click value and distance math.
- Setting brightness so high that the dot blooms.
- Failing to practice consistent presentation.
- Removing and reinstalling the optic without re-zeroing.

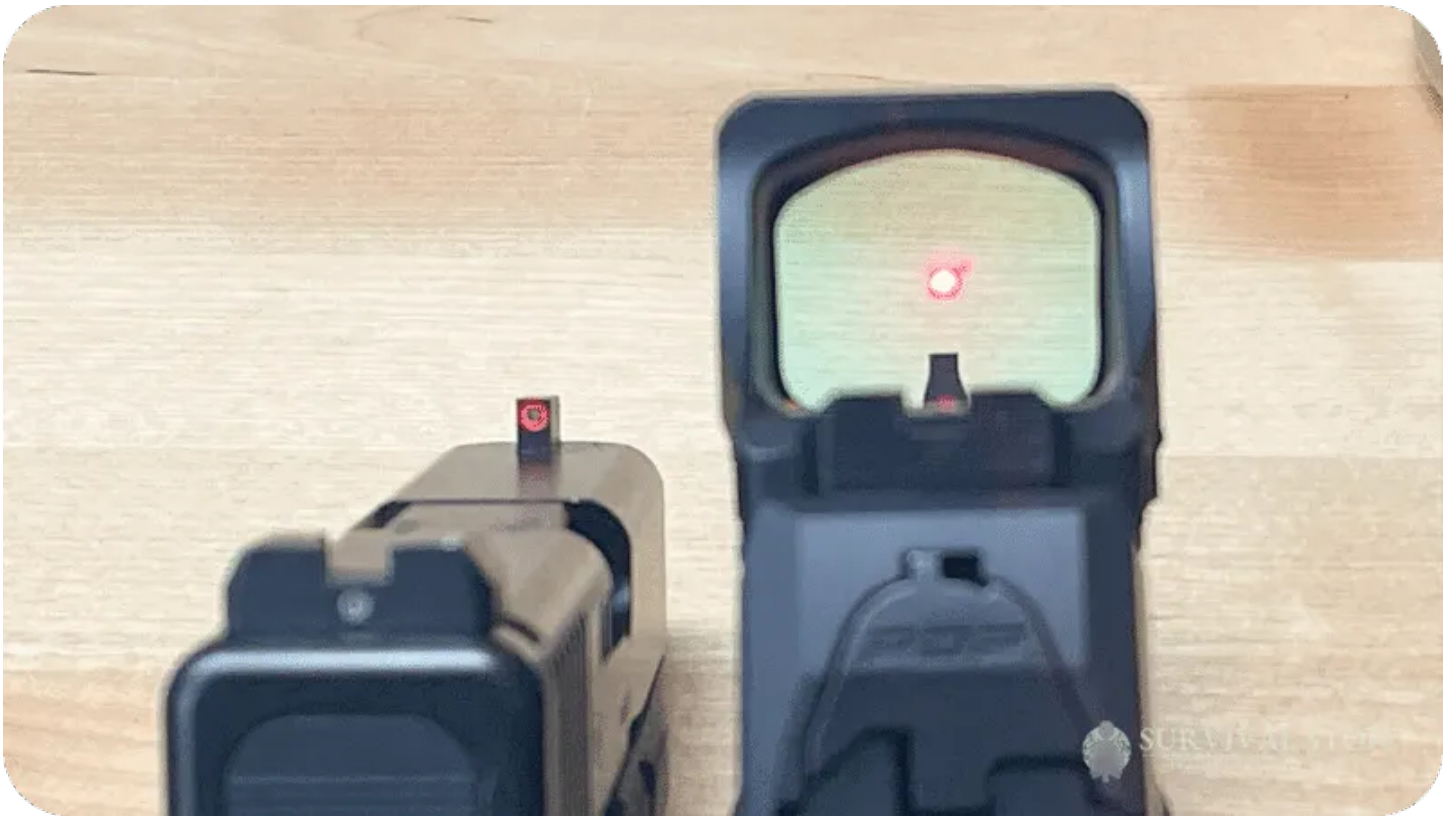
Special Considerations

Differing viewpoints exist on optimal zero distance (10 vs. 15 vs. 25 yards) and on preferred MOA size; both smaller and larger dots appear in documented successful use depending on the shooter's vision, typical distances, and priority (speed vs. precision). Enclosed vs. open emitters also show trade-offs documented in manufacturer and review literature. Professional installation is recommended if the slide is not already optics-ready. Always follow the specific optic and firearm manuals.

Conclusion

A functional red-dot setup requires a matching footprint, secure mounting to specification, selection of an appropriate MOA reticle for the intended distances, and zeroing from measured groups at a chosen distance with confirmation. Consistent presentation practice ensures the dot is available when needed.

For hands-on training go to www.thecarryguy.com.

Sources

Manufacturer zeroing procedures (SIG Sauer Academy and similar); Primary Arms pistol red-dot mounting and zeroing guide; published MOA explanations and dot-size comparisons from optics resources; NRA Shooting Illustrated comparison of red dots and iron sights. Differing viewpoints exist on preferred MOA size and zero distance; both appear in documented practice.