Soldier Armed

M68 Close Combat Optic

By Scott R. Gourley

The U.S. Army's M68 close combat optic (CCO) has the straightforward mission of "provid[ing] the soldier armed with an M16-series rifle or M4 carbine with a robust precision electronic optical red dot sight for use with both eyes open to improve effectiveness."

Measuring 5.3 inches long by 3.0 inches wide, the approximately 14-ounce system (14.4 ounces in M16A4/M4 configuration and 14.1 ounces in M16A2 configuration with auxiliary mounting rail) is a red-dot aiming device that enhances soldier battlefield situational awareness and target acquisition speed.

The sight, which has no magnification and can be used with all current night-vision equipment, incorporates seven night-vision, eight daylight and one extra-bright switch settings (16 total settings); 100 percent parallax-free, antireflective coated lens system optics; and a dot diameter of 2 inches at 100 yards (2 minutes of angle).

Formal characteristics and features aside, a recent system description from the office of Product Manager Individual Weapons at PEO Soldier quoted SSG Paul Wolfley as noting, "For the guys who like to play Nintendo, the 68 is very simple. You put the red dot on it and that's it. You don't have to line up two sight pictures."

The U.S. Army has been contracting for red-dot sights for more than a dozen years, with tens of thousands of warfighters equipped with the Aimpoint CompM2 passive red-dot sight as their M68 CCO. With those units in full-rate production and fielding to U.S. warfighters, the Army conducted a follow-on M68 CCO competitive action in fiscal year 2008. In July 2009, the contract was awarded to Aimpoint (Chantilly, Va.) to supply up to 565,783 of their new CompM4 sights to satisfy M68 CCO requirements.

According to Keith Weaver, commercial customer support representative for Aimpoint, the new M68 close combat optic is basically an Aimpoint model CompM4s. Weaver highlighted some of the new warfighter enhancements during a recent industry firing demonstration in Nevada.

"There is a slight difference in the *s* variant of the CompM4, in that the battery compartment and switch housing are in the lower right-hand position versus the CompM4 in which they are in the upper right-hand position," Weaver explained. "The old M68, the CompM2, which the Army has been fielding as the CCO, had the switch and housing in the upper right-hand position as well. We went to the lower position for the battery compartment and switch to give the entire sight a lower profile by getting those parts out of the way. That redesign was definitely driven by a lot of end-user input—that is, the U.S. Army as the largest end user of the M68 optic."

Another specific improvement on the CompM4s M68 CCO over the older CompM2 is an integrated mount. According to Weaver, "The CompM2 had a 30 mm ring as part of the mount, but with the new CompM4s it's integrated—it just bolts right into the bottom. There are fewer parts. It's cleaner, stronger and easier. It only mounts one

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Earlier models of the M68 close combat optic (CCO) featured a battery compartment and switch housing in the upper right-hand position shown here.

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Redesign of the latest model M68 CCO includes movement of the battery housing/switch compartment to the lower right-hand position.

way, so it takes any guesswork out of how to mount it. There are just two bolts to put together, and that's it. The spacer is already in there from the factory, so it is already configured to be mounted where the center of the optic is at the exact same height as the iron sights on a flattop M4 carbine. It already 'co-witnesses'—we call it an absolute co-witness. It can be reconfigured for lower mount heights—such as an M249 or M240—with just the Allen key: You pull the two bolts out, pull the spacer out and then reattach the QRP [Quick Release Picatinny], or 'rail-grabber' portion of the mount, directly to the sight.

"The QRP has also been improved over the older QRP," Weaver continued. "It's still the same knurled knob, but the knob is 'closer in' so that it doesn't hang up on things as easily, and it tightens down a little bit more, too.

"Another one of the improvements is that we've gone to a single double-A [AA] battery," he added. "Again, that was due to user input. The Army has a lot of AAs. They use them in other devices, so having the same battery for multiple devices really helps out with logistics. It also increases battery life to 80,000 hours of 'constant on' run time—that's more than eight years on one AA. The soldier can now turn his sight on, leave it on, and it will be ready whenever the soldier needs it. That run-time rating of 80,000 hours is for a setting of '12 of 16,' and that's a daytime setting. It's not setting 1. So it's a *real* eight years of run time."

Elaborating on the settings and switch, Weaver said, "That's another area where we have improved the sight a lot. The CompM2 is a phenomenal sight, and it has served the Army very well, but the one thing that soldiers could break on it was the knob. That knob protrudes out [from the battery compartment] so you can grab it. We like a manual switch that we can get with gloves on. We can get it in the dark. We can get it in stressful situations very easily, turn it, and it goes 'click.' Because it protrudes for easy grabbing, however, it's also the first thing that hits the ground when you drop the rifle. I won't say that the new switch is indestructible—but [it] almost [is]. You can beat the heck out of it—it is incredibly durable. Also, those 16 settings include a full array of night-vision settings as well as the extra-bright setting for use in any conditions where you may need that extra boost—it disproportionally jumps higher and brighter."

Other changes in the new design involve the windage and elevation adjustment caps, which have also been modified to be "flush turret" for a lower profile and shielded design. "Not that those were a vulnerable part of the CompM2," Weaver said, "but you might say that one of the themes of this new CompM4s is that it has been specifically engineered for the Army to get a long life out of the sight."

The sight also includes a screw-in/screw-out killFlash antireflective device as well as a rubber "bikini-type" cover (the sight also accepts flip caps if the end user desires to upgrade). The U.S. Army configuration ships with a forward-extension gooseneck or Z mount that allows adaptation for M16A2 rifles with fixed carry handle.

Asked about significance to the warfighter, Weaver credited the M68 CCO as providing "an absolutely maintenance-free, worry-free tool. [A soldier] doesn't have to worry about changing batteries. He doesn't have to worry about the sight not working. He doesn't have to worry about it losing zero or falling off the gun. He doesn't have to worry about it getting wet. You can basically treat it like a nonelectronic or nonoptic. Everything that you traditionally have to worry about with electronics and optics, you don't have to worry about with this.

"It's the ultimate Aimpoint red-dot performance to put rounds on target faster and easier," he concluded. "It's there when the warfighter needs it, so that he can focus on his job." ★