



Sgt Robert Montanaro, 3d Light Armored Reconnaissance Bn, adjusts the sights on his SAM-R rifle during a live-fire exercise at Sahl Sinjar Airfield, 350 kilometers north of Baghdad, Iraq. Sgt Montanaro likes the in-country addition of a suppressor to the rifle, because it gives shooters even more stealth.

CPL ALAN MOSSON

## The Corps' Guardian Angels Tote One Hell of a Rifle

By R. R. Keene

**M**any Marines believe guardian angels watch over them, looking over their shoulders to cover their "six."

Spiritual beings aside, today's Marine rifle squads depend on their guardian angel: a sharpshooter packing the 39.5-inch Mark-12 squad advanced marksman rifle (SAM-R), which is a gas-operated, air-cooled, 30-round magazine-fed, 5.56 (77-grain) National Match rifle to zero in and neutralize Taliban and al-Qaida targets on the rugged Afghan terrain or those using civilians as shields in urban environments.

Marines and their rifles are again the deadly weapon of battle, particularly in Afghanistan. Operation Khanjar, or "Strike of the Sword," began July 2, and it requires Marines to be, among other things, the accurate sharpshooters they've been touted as since World War I.

Why is it more so now? What has changed? Answer: Directives and orders. U.S. Army General Stanley McChrystal, the new commander of U.S. and North

Atlantic Treaty Organization forces in Afghanistan, issued directives telling field commanders "to scrutinize and limit" air strikes against residential areas and targets that are "likely to produce civilian casualties," saying such casualties can "turn the Afghan people against us."

GEN McChrystal said he personally can't "prescribe" the appropriate use of force "for every condition that a complex battlefield will produce, so I expect our forces to operate in accordance with my intent." He told reporters that commanders in the field are responsible to disseminate and explain the directives "to the most junior soldiers."

The directives for U.S. and NATO forces say, "Air strikes must be very limited, ... but can be used in self-defense if troops' lives are at risk." The use of missiles, mortars and artillery also is limited and authorized under "prescribed conditions."

Thus, Marines dismounted their armored vehicles and moved on foot through Helmand province, hefting 50 to 100 pounds of equipment in 100-plus-degree heat, with only a few Cobra helicopter gunships

overhead. Their mission was to enter villages to meet elders and tribal leaders, assess their needs, and assure them that the Americans are going to be right there with them for as long as it takes.

This has made Afghanistan "rifle country," where Marines can selectively and accurately hit the targets they are aiming at, win battles and perhaps win the hearts and minds of Afghans who under other circumstances could become what the media calls "collateral damage" under the "shock and awe" of American firepower. This also is where the Mark-12 (SAM-R) is likely to make a name for itself.

There is nothing basically wrong with the M16A4 or M4 carried into battle by leathernecks today. The M16 and its various versions have been the longest-serving standard-issue rifles in the American military since entering service with the U.S. Army in 1964. It is lethal at more than 500 yards.

"In the open terrain of Afghanistan, the Mark-12 [SAM-R]'s key value is the ability to reach out a little farther [maximum effective range said to be 700 meters with

a maximum range of 3,534 meters]," said Gunnery Sergeant Joseph Kennedy, the staff noncommissioned officer in charge of Teams and National Match for Precision Weapons Section, Weapons Training Battalion, Marine Corps Base Quantico, Va. "In today's combat environments, positive identification and hostile intent are much more scrutinized. If you don't have positive identification, you are not taking the shot."

The "gunny" knows. The 13-year veteran precision weapons repairman has been involved in the development of the SAM-R (which later became the Mark-12) since 2002. "At the time, I was building the National Match M16s," he said.

It was then that Marines involved in the actual trigger-pulling portion of the global war on terrorism started submitting lessons learned and requirements to make the business end of their rifles more deadly.

"There was a requirement for a more accurate weapon at the squad level," said Kennedy. They didn't need a sniper rifle, but a tighter and more finely tuned version of the standard M16. Kennedy recalled being briefed by his officer in charge. "He said: 'This is what we have [an M16A4 Match rifle]. Tell me what you can do with commercial parts to make this work.'"

Kennedy says PWS looked at a few different iterations. "We liked the 1913 commercial rail system [a bracket used to provide a standardized mounting platform] because we could mount a night vision device in the front and mount an infrared laser on the side. We took the sniper rifle's bipod. We took available pop-up front and rear sights.

"Basically we took what we could find and put together a couple of different types, tested them, saw what they could do and went with what we thought was the best of both worlds. When we couldn't find what we wanted, we made it."

They also gave it a match-grade, free-floated, stainless-steel barrel, with a flat-top upper receiver and an M4A1 trigger group or old M16A1 trigger "to give that all-important for accuracy consistent trigger pull," Kennedy explained. "The M16A2 and A4 and M4 are all burst firing. They have a cam that allows three shots and then engages the sear."

That action causes three slightly different, but distinct trigger pulls for each setting on the selector switch, not desirable in squeezing off rounds that will put a tight group of holes in an armed insurgent at a distance or for close-in targets who, for a myriad of reasons, require a more "surgical" precision shot. The old trigger mechanisms proved to be perfect for consistent trigger pull. "We used an M16A1 trigger because they are still available, and the

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M4A1 parts are supportable through the system," said Kennedy.

The scope is a battery-operated illuminator recital with cross hairs. It is an adjustable 3 x 9 as opposed to the standard issue Advanced Combat Optical Gunsight, or ACOG, which is a fixed four power.

Kennedy pointed out, "With a more positive scope as opposed to the RCO [rifle combat optic/ACOG], you have a better

opportunity for positive identification.

"The rifle is an evolution. The Mark-12 is basically a combat derivative of the National Match rifle, lightened, [9 pounds empty] with combat accessories. What we learned from the National Match rifle used by the Marine Corps Shooting Team was basically applied to this.

"The Mark-12 is a minute of angle out to 600 yards plus," said Kennedy. In layman's terms: "The standard M16, and the ammunition a Marine is issued, is made to specifications. The rifle itself has the ability to hit a 20-inch-wide target at 500 yards. The Mark-12 shoots a 5-inch-wide target at 500 yards. The Marine carries a 77-grain 5.56, which is now available in the Marine Corps. He can draw regular ammunition, but the rifle is designed to be run with 77-grain Black Hills Rifle



**Sgt Josh Heckman (above and below), a small-arms repairer/technician, MOS 2111, working to become a 2112, precision weapons technician at PWS, Wpns Training Bn, Quantico, Va., gives readers a look at the Mark-12 (SAM-R) rifle being used by squad advanced marksmen, or "Guardian Angels," in Iraq and Afghanistan today. The weapon gives extra range and precision and protection to a Marine rifle squad.**





A "Guardian Angel" (center) with 2d Bn, 8th Marines working with other Marines and Afghan soldiers helps provide security during operations in southern Helmand province July 5. Armed with the Mark-12 (SAM-R) rifle, this shooter has the ability to hit targets farther out than the others of his squad and also to hit selective targets nearby that require a precision shot.



Ammunition, which is available in Iraq and Afghanistan.

"When properly maintained and using its National Match rifle lineage with a 77-grain, it is fine at 600 yards. It has shot with 80-grain ammunition [not necessarily available out in the operating forces] all the way back to 1,000. We had one individual who took it through the sniper course. It shot fine competitively against individuals with the M40 sniper rifle all the way back to 1,000. It's great from ridge to ridge."

Kennedy said there were 100 SAM-Rs built by PWS. "The Second Marine Division took them to Iraq, and they were basically left in Iraq used by units rotating in. I deployed twice to the exact same place, and both times the same SAM-Rs were there. As they code out, they were sent back, and that was the end of them."

But the Marine Corps had a goal of issuing one SAM-R to each rifle squad, more than what Precision Weapons Section is capable of making, and because, according to Kennedy, everything in the Corps "must have a designation," what used to be called the SAM-R is now the Mark-12 and manufactured by Naval Surface Warfare Center, Crane Division, Crane, Ind.

OK, but how does this rifle make a "guardian angel" out of a squad rifleman?

The Mark-12 gives the squad the advantage of a more powerful optic and more accurate firepower. "Questions were initially asked: 'What is the use of a guardian angel? What is his purpose? How do you justify him as your guardian angel?'" said Kennedy. "Our main answer was, you try not to do anything without somebody covering your back. If the guy covering your back has better vision and better capabilities, that's who and what you want. That's never been a bad thing."

Kennedy explained that while squads, companies and platoons may utilize him differently, the initial insight for it was that

the Marine carrying the Mark-12 would work for the squad leader and be the squad's guardian angel. "If you have one fire team set to watch out for the other two fire teams while they are maneuvering, one of those Marines with that weapon is watching over everyone else."

"He is not just shooting, he's observing through the scope. In today's day and age with the amount of communication, your guardian angel can alert the squad leader: 'Hey, you have a problem going on over here.'"

"Yes, you want the guy that's going to hit the target, but you also want someone with G-2 [intelligence], who can pass information to the rest of the fire teams. There's no rank requirement, but you want someone with a little time in, a little experience, good common sense. Sometimes that's hard to find."

"You would hope they pick out their best rifleman for the job because he has more accuracy out the gate than those carrying an M4 or an M16A4. So, if he's the one sitting in your guardian angel position, he can more accurately take out individuals. His basic targets shouldn't change from the guy who is essentially doing the same thing with an M16A4; the guardian angel just has a more likelihood of

identifying and hitting that specific target. Thus, less collateral damage."

The 77-grain round does not have the steel penetrator, so it may not be ideal beyond 600 yards. Obviously, the 7.62 rounds of the designated marksman and sniper

rifles are going to be better bullets, but the Mark-12 gives the squad-advanced marksman the opportunity of shot placement. It is like real estate. When you are trying to kill someone, it's location, location, location. So if you are going for farther away, you have a more probable chance of hitting where you know it will likely do fatal damage."

Kennedy also added, "If things get close in a firefight, it can go full auto."

The squad-advanced marksman is not the same as a designated marksman or the sniper who is sent for a specific reason. "You're not going to send a guy with this on a counter sniper mission. He's there to give more of an advantage to the entire squad."

"What is nice about this rifle is that from a distance, it looks very much like any other M16. You don't give away who the guardian angel is."

"What is also nice about the weapon is you can give it to a recruit and say, 'Go shoot!' And, he can, because its operating system is exactly the same [as the M16]. There is a very small learning curve from the M16, and you have to do your preventive maintenance check and services."

Marines in Iraq and Afghanistan leave their Mark-12s in country. Kennedy said the rifles have become a favorite with infantrymen. "They want them almost as much as they want their Designated Marksman Rifles."

The Mark-12 is proving to be a force multiplier that gives a squad that extra reach for accurate distance shooting and insurance protection from surprises cooked up by insurgents. While there are guardian angels in the spiritual world, for now, Marines prefer to rely on their leather-neck guardian angel to cover their six in tight spots.



Sgt. Joseph Kennedy

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