



Commandant's NOTE

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JAVELIN—THE KNOCKOUT PUNCH

In my last Commandant's Note, I focused on the close Infantry fight, and the importance of developing the training, tactical, and materiel systems to ensure an early, decisive victory over an adversary. In this issue's Note, I want to discuss one of those systems—the Javelin antitank missile—and the advantages it offers the U.S. Infantryman.

Javelin is the world's first fire-and-forget antitank missile. It is man-portable, it can kill a target at two thousand meters plus—twice the range of the Dragon missile—and its fire-and-forget capability permits the gunner to seek cover or change his position as soon as he has fired at his target. This not only gives him far greater survivability than with conventional wire-guided missiles, but also broadens his tactical flexibility. The low-smoke launch motor of the Javelin further reduces the firing signature and track of the missile. This makes it difficult for an enemy to identify either the firer's location or the track of an incoming Javelin.

Through its ability to destroy armor and other hard targets at long range, Javelin will also support the close fight by enabling Infantrymen to engage and destroy enemy vehicles before they can effectively bring their main guns and automatic cannon to bear on our troops. This stand-off advantage will apply to the urban battle as well, since the soft-launch design of Javelin allows it to be fired from within buildings. Javelins thus emplaced along the periphery of a built-up area can isolate the city by effectively engaging approaching tanks and armored personnel carriers at long range, before they can support or reinforce other enemy in the city.

The Javelin gunner can select two attack modes, each of which has its own characteristic flight path or "profile" for engaging the target. In the top-attack mode, the missile plunges down from above to impact on the top of

its target. Since armored vehicles have less protective armor on top, this mode greatly increases the kill probability and is the primary attack mode. In the alternate—direct-attack—mode, a missile impacts and detonates while traveling generally horizontally, against the side of the target. This mode allows the gunner to engage targets under overhead cover or under forest canopy.

Whichever mode the gunner selects, the tandem five-inch warhead can defeat explosive reactive armor and other types of enhanced armor protection, and for this reason Javelin is considered a one-shot, one-kill weapon. To ensure the lethality of the system, target acquisition is accomplished with the Javelin's command launch unit (CLU), with its superior day/night second-generation forward looking infrared (FLIR) surveillance and detection capability, and by the imaging infrared seeker in the warhead.

Javelin is clearly the best man-portable tank killer we have fielded; it can acquire and engage targets day or night with its integral sight, while the Dragon gunner must remove the day sight and replace it with the night sight for night engagements. Throughout its development cycle, Javelin has undergone extensive technical and operational testing to ensure that the Army is fielding the most effective, reliable antitank weapon system money can buy. Javelin has already been fielded to the 75th Ranger Regiment, and fielding to the 82d Airborne Division will begin in April 1997.

The Soldier's load is a factor in the development of any weapon, and Javelin is no exception. At 49.5 pounds with all of its accessories, Javelin is heavier than initially envisioned, but when you consider that the Dragon with its day and night sights weighs over 73 pounds, that Javelin is a fire-and-forget weapon with over twice the range, and the size of Javelin's tandem warhead, Javelin is well

worth the weight. During operational testing, each Soldier and Marine was asked to carry a complete Javelin in addition to his basic Soldier load and complete a ten-kilometer road march. The results showed no significant differences between the movement rates of Soldiers carrying Javelins and those with Dragons. When the Soldiers and Marines were asked which weapon they would prefer, their choice was almost unanimously Javelin. This is not surprising, considering the higher kill probability of Javelin.

It is not enough, however, to have the best antitank system on the battlefield; we must train leaders and Soldiers to fully exploit its capabilities. For example, Javelin's increased range will allow for greater dispersion, laterally and in depth, while placing effective fires into the same engagement area. This means that Javelins placed 500 to 1,000 meters behind other Javelin teams can still bring the enemy under effective fire, leaving the forward teams free to displace. The Infantry School's Combined Arms and Tactics Directorate is working on a White Paper that will examine tactical employment implications of the Javelin.

The fact that Javelin has fire-and-forget technology means that all of the gunner skills and tasks are accomplished prior to the launch of the missile. The gunner no longer has to acquire and retain the high maintenance training tasks of tracking a target until a fired missile impacts on target. Javelin training devices have been developed concurrently with the weapon system to ensure that the gunner can practice every skill necessary to launch a missile, with a high probability of destroying his target, as many times as the training schedule permits.

The soft launch of Javelin seems to have been the biggest eye-opener for gunners firing it: Those who have previously fired Dragons are surprised at the lesser launch effect of Javelin. Additionally, the tremendous lethality

of the Javelin missile ensures one-shot kills, something that is less likely with the smaller, shorter range Dragon. And don't forget that a Dragon gunner engaging at maximum range may have to sit in his firing position for up to 20 seconds, holding the sight unit crosshairs on target until impact.

Other training concerns such as weapon employment criteria, rules of engagement, resupply, and fratricide apply to Javelin as they do to all weapon systems. Since Javelin is a one-shot one-kill weapon with a highly accurate seeker, we must continue to develop a reliable means of thermal identification—and make certain that gunners are thoroughly trained in its operation—if we are to ensure that potential targets are properly identified and that only the intended targets are engaged. Eventually, the Javelin Basic Skills Trainer will include an infrared training module. In the meantime, leaders will have to rely upon vehicle identification, improved situational awareness—down to the Javelin gunner himself—and direct-fire weapons control techniques to maintain this vital aspect of force protection. In the Javelin, the U.S. Infantryman now has at his disposal a man-portable antitank missile system that offers unsurpassed accuracy, reliability, lethality, and survivability. Soldier confidence in Javelin is steadily mounting as fielding continues and more and more gunners train with and use the system.

Throughout history, our nation has successfully fulfilled her role as leader of the free world because she had the teeth and the will to back up her diplomatic initiatives and those of her allies. Those bent on testing our resolve quickly found themselves faced with staggering losses in men and materiel, but some potential aggressors never stop trying. With Javelin, today's Infantryman will still be able to deploy rapidly, deliver the knockout punch against the best armor the enemy can field, and dominate the battlefield. That is the challenge, that is our mission, and that is what we are going to do.

