

AIR DEFENSE ARTILLERY



PB 44-88-3 (TEST)

MAY — JUNE 1988

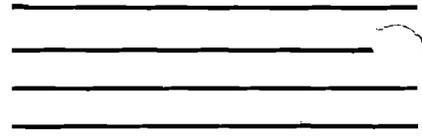
ADA

Year of Training

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HEADQUARTERS, DEPT OF THE ARMY

AIR DEFENSE ARTILLERY



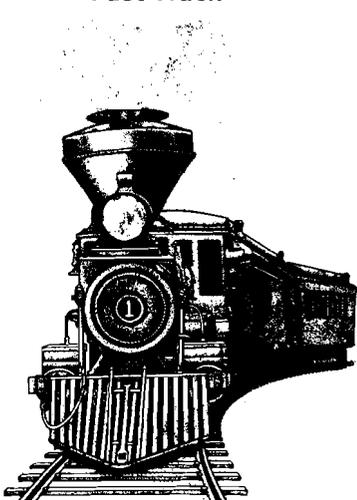
Professional Bulletin of United States Army Air Defense Branch

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"Fast Track"



"On the Fast Track to Excellence," Page 32, supports the Army "Year of Training" with a program for exceptional soldiers with the potential for accelerated advancement.

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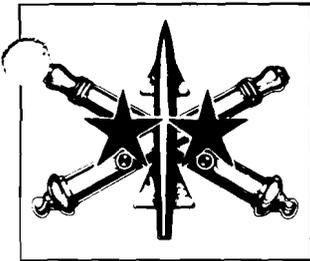
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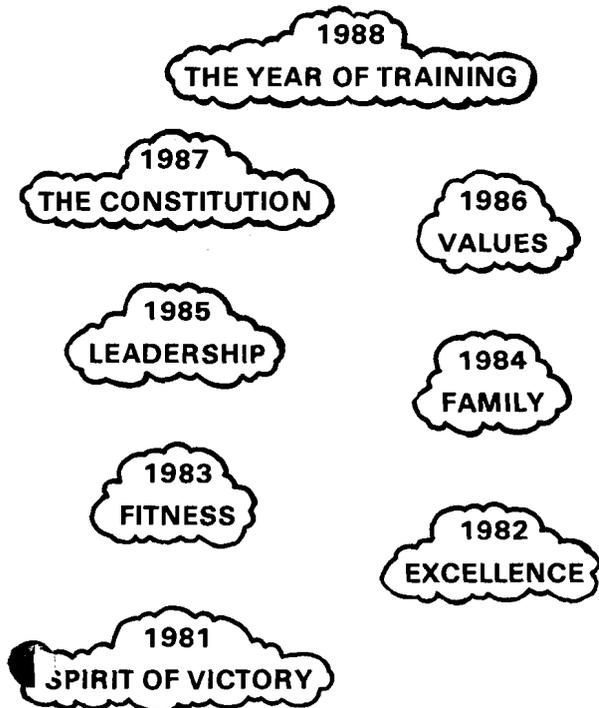
Intercept Point

by Maj. Gen. Donald R. Infante
Chief of Air Defense Artillery

Make Training Priority One

1988 — the Year of Training. Training is eighth in the series of Army themes. This is the first of a series of "Intercept Points" on training to support this year's theme.

The concept behind having an annual theme is that the theme continues even after the year ends. One only needs to review the prior themes listed in the chart below to know exactly what happened in prior years and to verify the lasting impact of these themes on our Army.

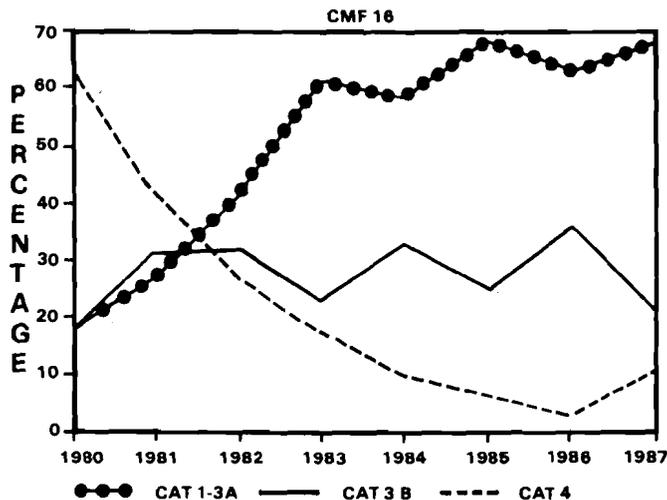


Our business is warfighting. By being good at our business, we accomplish our primary objective of preserving the peace. If this objective is not achieved we must then show we know our business of warfighting by fighting, winning and returning. Anyone who has soldiered for more than a day knows the essential ingredients are well-led, well-trained soldiers manning modern weapons of war and fighting as a combined arms team.

All of the above ingredients are important, but the most important, in this soldier's opinion, is the soldier. High quality soldiers who are well trained will consistently outfight soldiers manned with more modern equipment. Witness the National Training Center where the highly skilled opposing force (OPFOR), using Sheridans (long ago phased from our inventory), routinely whips lesser trained units with M-1s (the top tank of our line).

Anyone who doubts the dramatic increase in the quality of our soldiers should look carefully at the chart below, which displays entry test results for ADA career management field (CMF) 16. Seven years ago about two-thirds of our youngsters were in the lower half of national averages. The latest results show about two-thirds of our youngsters are now in the upper third of national averages. High school degrees for new entries are up from about 50 percent to more than 95 percent. At the Basic Training Center here at Fort Bliss, almost 85 percent are signing up for the latest version of the GI Bill. High quality youngsters. Best I've ever seen!

QUALITY OF ENLISTED ACCESSIONS



These high quality youngsters pose to us leaders a tough challenge. In an era of declining resources they are saying, "challenge me or lose me." *U.S. News & World Report* quoted Col. Ralph Allen, commander of the 6th ADA Brigade, as saying, "Most of today's soldiers are so outstanding that they sometimes scare their sergeants to death, not because they are undisciplined, but because they are so smart."

Our youngsters want to be well trained. They want to be stretched. Our training programs must be built

to do both, even with lesser bucks. If we don't, we'll lose them. An unacceptable alternative. Our job — train and retain high quality soldiers for less!

In this article let's cover some thoughts on training philosophy and management. With this as a base, later articles will address topics such as training objectives and the combined arms focus.

Everyone's training program must have at its foundation a philosophy. Basics that should always be in everyone's program, regardless of whether you are a divisional or EAC unit. Many elements, some of which a few ADA units tend to relegate to the back burner. Examine your training program. Does it include these basics?

Individual training proficiency and common tasks training. Everyone's job is important. From air defender to medics to supply. No one ever knows enough about their MOS. Furthermore, regardless of MOS, there are common tasks that every soldier must know from NBC to first aid to map reading. To stay good and get better, soldiers must practice both.

Individual and crew-served weapon qualification. My thoughts are that ADA units must be more proficient in small arms than front-line infantry. We will be the ones facing the top of the line *Spetnaz*. The most lucrative target for a strike is a Patriot unit that can change the course of the air battle. As an aside, soldiers love to fire weapons and small arms firings don't cost much.

Collective training in a 3-D AirLand Battle setting. No ADA unit should ever go to the field without a complete AirLand Battle (ALB) setting. Know the land battle and the land battle commander's objectives. Anticipate future land battle operations. Pass total ALB information out to the soldier in the rear ranks. If you see any type of unit playing less than a 3-D ALB, chastise them. But don't you, as an ADA unit, be guilty.

The full battlefield environment. From NBC to EW to OPSEC to night operations, the one thing you can be sure of is that night will come once every 24 hours. One must assume the Warsaw Pact emphasizes NBC training for valid reasons. If every time your unit goes to the field you do less than practice the full battlefield environment, you are cheating your soldiers. Train as you will fight.

Logistics and maintenance operations. Do these in the environment in which you will fight. Visited the support unit for a Patriot unit recently and asked where they performed maintenance on the sensitive 150-kilowatt generator, which requires near operating room conditions. The wrong answer was, "we take them back to the base to work on them." Get your maintenance folks at all levels the proper tentage and equipment they need to work in the field, and keep them and the equipment in the field. Don't forget operator maintenance. Maintain as you will fight. Remember, the war will likely drag on for more than a few days. Develop long-term maintenance and logistic habits.

New equipment training. Our Army, and particularly ADA, is in the midst of the most intensive

modernization since World War II. From radios to maintenance test sets to vehicles to ADA system new equipment probably will change for the better the way you do business for your unit. To realize the full potential of a new item, your soldiers must be trained on what it does and doesn't do. This includes the leadership. There is absolutely no substitute for hands-on!

Train to standard. Every task for every weapon, whether individual or collective, has a standard. In most cases, that task is listed in an Army document (for example, ARTEP 44-325 for Chaparral/Vulcan and ARTEP 44-635 for Patriot units). Dig it out. Pass it down. Hold the sergeants responsible. Check to see if standards are being met. Accept nothing less. Good units exceed standards in all things.

The issue is, of course, how to put it all together: how to accomplish your training program in an environment that requires support to the post or the community, in an environment that never has everyone available because of reasons that run the gamut from personal to professional.

Here are some guidelines that great trainers I've known made work and that I've tried to follow. Follow these guidelines for training management.

Establish priorities. You will never have enough time or resources to do it all. Priorities must be established. The mission essential task list (METL) must be used as the basis for prioritization. The objective is to correct shortcomings through daily routines.

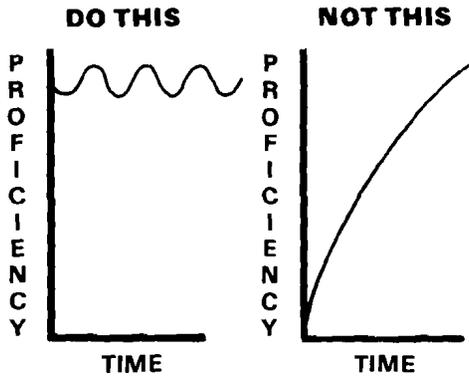
Define and schedule specific events. Get it on the calendar far out and don't change! Time is your most precious resource. Remember your priorities in your scheduling and check to see if your schedule reflects your priorities. In all this, commander visibility is absolutely essential. Your troops will not believe training is important until they see you personally checking. To check, the commander must know what's going on — technical and tactical proficiency.

Use the building block approach. This is not to say that you focus only at a given time on individual skills or collective training. Both go on all the time. But evaluate what's best for your unit based on where they stand at that particular time. We are moving a Hawk unit (3rd Battalion, 1st Air Defense Artillery) to Fort Hood this summer. The training program needed at the conclusion of this move will be dramatically different from a European Hawk unit that has just gotten all "1s" on an AAFCE tactical evaluation. Evaluate and then structure your program using a building block approach based on unit needs.

Schedule prime time training. Block the calendar. Get all the medical appointments on the same day of the week. Put your paperwork aside and make it happen! Insist on maintaining chain of command integrity. Be selective about what's being trained. Go back to METL and prioritization.

Insist on stability. This is what the chain of command gets paid for. If you have a problem with stability, buck it up and don't stop until it's solved. Publish a plan. Accept no excuses. Be an SOB on stability.

Remember, a good unit maintains a reasonable level of training proficiency in a wide spectrum of tasks and avoids peaks and valleys. Maintain proficiency — don't peak for any given event on a subset of tasks. Evaluate your program with regard to the figures below.



Our Chief of Staff of the Army, General Carl E. Vuono, has repeatedly stated, "Training is our number one priority." Make it yours. Remember, our business is warfighting. A dangerous business in a dangerous place: on the battlefield. The secret to surviving, winning and returning is being well trained. You owe it to your soldiers.



**NCO
to
NCO**

by CSM Harry E. Hicks
U.S. Army Air Defense Artillery School

Everything is Training

In selecting training as the focus for the year 1988, the Army could not have made a better choice. Combat after-action reports echo the same refrain: "If we

had it to do over again, we would spend more time on individual and small-unit training." Better we emphasize the importance of training in peacetime than have it emphasized for us by the next war.

For non-commissioned officers training is the top priority — it is the cornerstone of combat readiness. Soldiers spend most of their Army careers in training.

The non-commissioned officer plays an especially important role in preparing soldiers who are skilled in their jobs and professionally developed to the full extent of their capabilities. Quality training is essential if the Army is to fulfill its fundamental mission — to deter war, or, if deterrence fails, to reestablish peace through victory on the battlefield. FM 25-100 conveys the philosophy to which we should aspire: "everything is training."

During the "Year of Training," attitudes toward training need to change. Training is not just something to fill a gap in the working day — we need to focus on realistic, tough but safe, "go to war" type training at all levels. The standards that guide our training must reflect the requirements of the battlefield. Leaders are responsible for the establishment of unit standards. We as NCOs are responsible to see that these standards are met.

We need to get back to the basics in training — tasks, conditions and standards must be used and understood at each level of training. Once the task has been stated and the conditions have been explained, we *must* enforce the standards. Soldiers are better educated today than ever before. Seek feedback from soldiers. If the training provides no challenge to them, or if they feel that some standards are at too low a level, we may need to raise the standards.

The physical fitness level for soldiers and their units is the foundation of all individual and unit collective proficiency.

More basic marksmanship is needed — all soldiers need to master their basic weapon. No matter how technical we have gotten through the years, we will always need to return to the basics. Marksmanship and survival skills are essential on the battlefield when the computers stop working.

Training focuses on leader development, unit training proficiency and soldier excellence. In the area of leader development, strive to develop competent and confident junior non-commissioned officer leaders who understand and are able to exploit the full potential of AirLand Battle doctrine. Select small unit group leaders who can provide the quality role models needed to instill professionalism in our future leaders.

The future of training will be significantly affected by advancing technology and a diminishing manpower pool. NCOs, as trainers, must use every training resource with imagination to get the most training value out of every training opportunity. The effective use of simulations, simulators and training devices not only conserves taxpayers' dollars but provides more training time per individual.

Non-commissioned officers, meet the challenge. Everything is training.

2/62nd ADA Are Light Fighters

The 2nd Battalion, 62nd Air Defense Artillery, conducted its annual Light Fighters Course at Camp Roberts and Fort Hunter Liggett in California late last year.

The course came right on the heels of the Light Leaders Course, where officers and senior NCOs took part in a three-day seminar on ADA tactics, employment techniques and Vulcan squad and Stinger team training. The Light Leaders Course also included classes in logistics accountability and responsibility and practical exercises. Maj. Michael Wilcomb, on temporary duty from the Communicative Skills Office, Fort Bliss, Texas, taught a half-day session on effective writing.

This was all a prelude to the battalion's Light Fighters Course. The training was fast and furious, beginning with the honing of air defense skills at Camp Roberts, where the Vulcan weapon systems and the senior gunners got a workout.

"No matter how many times you've seen the weapon fire, it's still awesome to watch," said Cpl. Terrence Richardson. The Vulcan gunners cleared the skies of radio-controlled miniature aerial targets (RCMATs) on three consecutive days. Gunners also demonstrated their skills firing at ground targets, giving the "biggest machine gun" in the division the chance to show its stuff "up close and personal."

After completing Vulcan gunnery at Camp Roberts, the battalion packed up and moved to Fort Hunter Liggett and entered into Phase II of the training mission, where they refreshed their light infantry basic skills. During the next eight days, the soldiers of the "Aim High" battalion got a large dose of light fighter soldiercraft, including everything from patrolling to demolition training.



A 2/62nd Stinger gunner takes aim.

Other highlights included MEDEVAC training, land navigation, air assault training and rappelling. "It's always a thrill taking that first step off the top of the palisades rappel site," said Spec. Paul Wood of HHB.

The air defenders seemed to get a special kick out of conquering the 100-foot heights of the palisades. Another exciting event was the air assault exercise where Vulcan weapon systems and crews were airlifted by Blackhawks. It was all part of a mission deployment scenario giving Vulcaneers

a new scenic perspective on Fort Hunter Liggett.

As fast as it began, the exercise was over. But the surprises weren't over yet. The Family Support Group of each battery had also been working long and hard while the soldiers were away. "Welcome home" signs of all kinds were everywhere to greet the 2/62nd ADA troops. It was each family member's way of saying, "We're proud of you and glad to have you home."

by Peter Deperro

1/43rd ADA Demonstrates Teamwork

Teamwork was the goal, along with a whole lot of esprit, as the 1st Battalion, 43rd Air Defense Artillery, Fort Bliss, Texas, was pitted unit-against-unit at the obstacle course. Each battery and or company provided 20 soldiers to complete the course as a team, and the competition was fierce!

As each unit location soon discovered, a little strategy was necessary to negotiate the obstacles.

As bottlenecks formed, teams were forced to find unique means to overcome the delays. Each unit performed impressively and walked away with a newfound pride in their abilities. Times were compared and points deducted for improperly negotiating obstacles.

In the end, 3rd Maintenance Company was found to be the best overall; however, congratulations are due to each team for their outstanding efforts.

Courtesy of The Monitor

2/1st ADA Takes Part in Exercise New Frontier

A Battery, 2nd Battalion, 1st Air Defense Artillery, recently participated in Exercise New Frontier at the National Training Center (NTC), Fort Irwin, Calif. During the exercise the battery deployed one assault firing platoon along with 3,800 other soldiers from the 3rd Armored Cavalry Regiment to train in what is probably the most realistic and challenging training environment the Army has to offer.

For the soldiers of A Battery, it was a rare opportunity to train as an integrated part of a combined arms team. During a 14-day force-on-force struggle that pitted the combat power of the 3rd ACR against the 32nd Guards Motorized Rifle Regiment of the NTC, 2/1st ADA had the mission of providing very low- to medium-altitude air defense and early warning to the maneuver forces.

Training at the NTC gave the soldiers of A Battery the chance to see friendly ground forces go "toe-to-toe" with a Soviet look-alike opposing force (OPFOR) that even dressed in Soviet uniforms. The OPFOR equipment inventory consisted of everything from tanks that had been altered to resemble Soviet Bloc T-72 main battle tanks and BMPs to visually modified helicopters that portrayed Soviet Bloc HIND-D helicopters.

If that wasn't enough to scare you, figure a five- or six-to-one advantage that the OPFOR usually enjoys against a typical Blue Force Task Force (Friendly Force) and you now have an idea of what was in store for all the participants in the rotation.

For the "Hawkers," engaging enemy fixed- and rotary-wing aircraft before they could release their ordnance on the maneuver force presented a significant challenge. It required the Hawk platoon to be totally integrated into the maneuver force's mission planning process. By doing this,

the Hawk platoon was always able to position itself to provide effective engagements and to pass timely early warning to friendly ground troops. This relationship really helped to cultivate a true combined arms spirit between the air defense community and the maneuver elements.

The opportunity to train at the NTC not only helped the "Hawkers" gain more confidence in the Hawk system's ability to detect and kill enemy aircraft, it also showed over 3,500 soldiers how critical air defense could be to their own success. More importantly, the combined power of both air defense and maneuver forces came together in a synchronized effort to bring the maximum amount of combat power on the enemy. It was truly a "combined arms" effort.

by Capt. Curtis A. Mathis

2/6th ADA Learn Basic Rappelling Techniques

Shouts of "On Rappel!" filled the air during rappelling training where 40 soldiers from C Battery and HHB, 2nd Battalion, 6th Air Defense Artillery, learned the basics of military rappelling, rope bridging techniques and knot tying.

Under the careful supervision of 1st Lt. Chris Mitchell, 2nd Lt. David Cole and several NCOs, all personnel successfully descended the 50-foot cliff in Training Area 2D. Those seeking a greater challenge were introduced to more advanced techniques, the most popular being the Australian rappel, where the rappeller descends the cliff face first.

Capt. Daniel F. Mulligan, commander of C Battery, said, "The soldiers really enjoy doing something different, and rappelling exercises build their self-confidence."

Concurrent training in rope bridging and knot tying was con-

ducted for those waiting their turn to rappel. Soldiers were taught the necessary knots and were instructed in procedures for building a single-rope bridge across an 80-foot wide ravine. Once given a chance to practice, teams were formed for the timed bridging event in which each 10-man team had to build the rope bridge and cross it as quickly as possible.

Although C Battery had conducted this type of training in the past, a new feature was added when the group went to the training site for a Rappelling Trainer's Workshop. There the NCOs were instructed in techniques for conducting and supervising a safe rappelling exercise, which they put to use later in battery training.

"We threw a lot of new information at them and they absorbed it all," said Cole. "They understand the importance of safety and are not about to allow anyone to get hurt. They learned a lot and know what they're doing."

Safety is first and foremost in the minds of the officers and NCOs of C Battery, 2/6th ADA. They are proud that no one has been injured during rappelling training.

Courtesy of The Monitor

2/67th ADA Conducts Vulcan Training

The 2nd Battalion, 67th Air Defense Artillery, recently conducted a Vulcan live-fire training exercise and competition at the Multi-Purpose Range Complex (MPRC), Fort Riley, Kan.

According to Maj. Michael R. Lloyd, the battalion S-3, the new range site used for firing the Vulcan surpasses previous training facilities because of the number of soldiers that can train at one time. The MPRC allows Vulcan squads to operate from 12 firing points simultaneously and provides a larger range fan.

Major Lloyd said the purpose of the exercise was to sharpen

Vulcan firing squad skills and improve combat readiness. Competition was held at both squad and platoon levels during the exercise.

"On the average, 50 to 60 RCMATs may be used in a three-day exercise of this type. Because of the additional fire squads able to conduct operations simultaneously, only 16 RCMATs were used during the exercise," Lloyd said.

"For the competition part of the exercise, each four-man squad was evaluated on a series of weighted tasks to include ammunition upload, boresighting, camouflage, target engagement and march order," Lloyd added. "An evaluation team, made up of platoon sergeants and various elements of 2/67th ADA operations and logistics, scored soldiers on Vulcan tasks. There were a significant number of direct hits on targets during the exercise."

To better simulate war-time conditions, soldiers (including the mess and medical support) were kept in the field throughout the entire exercise.

The winner of the 2/67th ADA Vulcan best squad competition was the 3rd Squad, 3rd Platoon, B Battery, and the winner of the best platoon competition was the 3rd Platoon, C Battery.

"Everyone did exactly what they were supposed to do," stated Lloyd. "All personnel involved deserve credit for a very successful exercise."

by Robert Henson

3/1st ADA Joins Combined Arms Team

For many high- to medium-altitude air defense (HIMAD) air defenders, the concept of the combined arms team is a theory they learn in a classroom but rarely have the opportunity to put into practice. However, C Battery, 3rd Battalion, 1st Air Defense Artil-

lery, 11th ADA Brigade, knows firsthand what being part of the combined arms team can mean.

C Battery completed a rotation at the National Training Center (NTC), Fort Irwin, Calif., in support of the 1st Brigade, 5th Mechanized, Fort Polk, La. As one of only four Hawk units that have participated in the NTC exercises, C Battery received a realistic view of its role on the AirLand Battlefield.

"NTC was a good learning tool for all the maneuver commanders concerning HIMAD systems and their capabilities on the battlefield," said Capt. Eddie J. McCoy, C Battery's commander. "That's why it's important that HIMAD units get to the NTC. We need to educate maneuver forces on the integrated aspects of air defense and not just on the short-range air defense (SHORAD) weapon systems before we have to fight in a real war."

The NTC scenario consisted of daily battles fought by an armor task force and a mechanized infantry task force. Battle scenarios for both task forces included conducting a movement to contact, hasty and deliberate defenses, night attacks and a final brigade force-on-force scenario. The task forces were also involved in a live-fire exercise.

C Battery's primary responsibility was to provide low- to medium-altitude air defense coverage for friendly maneuver forces. The air defense coverage allowed the units more freedom to maneuver on the battlefield. Units fought against opposing forces (OPFOR) that adopted Soviet-style equipment, uniforms and tactics.

Air Force pilots provided the Red air threat, which were designated by lack of Mode 4 identification, friend or foe (IFF) responses and visual identification. Air Force crews flew F-16s, A-7s and F-104s. UH-1s were mocked up as HINDs as part of the Red air force during the exercise.

"Normally during an air battle we made an attempt to get a visual ID of the aircraft with the tracking adjunct system (TAS) mounted on the illuminating radar," said 1st Lt. Douglas C. Gagnon, a C Battery platoon leader. "We had a good experience with the Air Force using Mode 4 responses. Visual identification was just a backup measure."

C Battery achieved a better than 90 percent kill ratio. Early warning to the maneuver forces concerning the Red air threat was another responsibility of the Hawk unit. By using the battery control central and the pulse acquisition radar, a SHORAD liaison officer passed hostile track information to the air battle management operations center (ABMOC). The ABMOC then passed the information to the maneuver forces via SHORAD elements on the battlefield and the division early warning net.

"The air battle training we got was invaluable," McCoy said. "But the additional training the troops received by being involved was the real plus." McCoy said the unit was expected to defend itself when the OPFOR broke through friendly lines. Because Hawk units are located in the rear area, his unit had to stand and fight since there was no place to run. "The soldiers really began to understand what their additional responsibilities were, not just as air defenders, but when the occasion demands it, they've got to function as infantry."

Following the after-action review, C Battery was complimented on its performance during the rotation. "Once they understood what Hawk can do to protect them, they were really interested in using air defenders," McCoy proclaimed. "A large part of the mission at NTC is selling Hawk and air defense as one of the most important players of the combined arms team."

by 1st Lt. Elizabeth M. Linke.

Ninth U.S. Patriot Battalion Activated

The 2nd Battalion (Patriot), 7th Air Defense Artillery, was formally activated during a ceremony conducted at McGregor Range, N.M. The battalion became the ninth Patriot unit to activate since the missile system was introduced into the U.S. Army's arsenal in 1982.

More than 500 people attended the activation ceremony hosted by newly installed commander Lt. Col. Roy C. Gortney and the soldiers of 2/7th ADA. In a spectacular and moving ceremony, Lt. Col. Gortney said, "I can think of no greater honor than assuming command of the 2nd Battalion (Patriot), 7th ADA, and becoming a part of this great family." He told the soldiers, "You can be proud of your many accomplishments in the short time we have been together."

Since Lt. Col. Gortney's arrival at Fort Bliss, Texas, in August last year, the battalion has gone from only a handful of soldiers to more than 400 personnel, and has accomplished many significant tasks. The battalion, now headquartered at McGregor Range, was initially given temporary quarters on Fort Bliss while quarters were renovated at McGregor Range.

All the work was done by the soldiers in the unit. They built offices, tiled floors, constructed orderly rooms, and prepared the billets for occupation. The transformation was miraculous. McGregor Range did not look like the same place when they were finished.

The entire battalion relocated from Fort Bliss to McGregor Range in less than one week. When the time came to stage the Patriot system equipment, the soldiers of C Battery took on the task. The staging was completed in two weeks, an amazing accomplishment for this new unit. The representatives from the Army Materiel Command, who were supervising the operation, commended the soldiers for their hard work and dedication.

Commenting on the unit, Lt. Col. Gortney expressed extreme pride in 2/7th ADA's achievements so far. But he reminded the soldiers that there is still a lot of work ahead, referring to the upcoming collective training. He concluded, "Together we will make 2/7th ADA one of the best battalions to ever raise her colors to the wind."

The 2nd Battalion (Patriot), 7th Air Defense Artillery, was originally constituted in the Regular Army on March 8, 1898 as Battery B, 7th Regiment of Artillery. It was organized March 31, 1898 at Fort Slocum, New York. Since then it has been reorganized several times, and is highly decorated for its participation in major campaigns.

The battalion served during World War I as the 6th Company, Coast Defenses of Balboa. During World War II the battalion served as B Battery, 126th Anti-aircraft Artillery Gun Battalion, and is credited for its role in the

Normandy, Northern France, Rhineland, Ardennes-Alsace, Central Europe, and England 1944 campaigns. The battalion was cited in the Order of the Day of the Belgian Army for action at Liege, Ardennes, and given the Belgian Fourragere in 1940.

The battalion saw action during the Korean War as B Battery, 7th Anti-aircraft Artillery Battalion, receiving campaign credits during the UN Defensive, UN Offensive, CCF Intervention, First UN Counter Offensive, CCF Spring Offensive, UN Summer-Fall Offensive, Second Korean Winter and Korea Summer 1953 operations.

The Presidential Unit Citation (Army) Streamer, embroidered DEFENSE OF KOREA, was awarded to the battalion in addition to the campaign credits it has received.

Courtesy of The Monitor

If you have news about your unit and would like to see it in Vapor Trails, send the text and photos to: Vapor Trails, Air Defense Artillery Bulletin, USAADASCH, ATTN: ATSA-DTP-SP, Fort Bliss, TX 79916-7090.

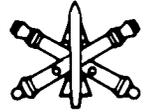
**SIMNET
being
tested**

**FAAD TSM
develops
FPA**

**Linebacker —
the new
nickname?**



FAAD News



Vol. 2, No. 103

Fort Bliss, Texas

May — June 1988

LINEBACKER

Who is the new Linebacker for the Air Defense Artillery team? The ADATS, Martin Marietta/Oerlikon-Buhrle's air defense anti-tank system, will soon have a nickname. Will that nickname be Linebacker?

Some soldiers obviously believe that it will, because Linebacker is already synonymous, if not officially so, with the ADATS.

Col. V. J. Tedesco, then FAAD TRADOC System Manager, proposed the nickname "Linebacker" for obvious reasons. The psychological profile of the stereotype linebacker bears a close resemblance to that of the stereotype pit bulldog — the major difference being that a few pit bulldogs are exceptions to the stereotype. Linebackers were primarily responsible for transforming the game of football from a contact sport into a collision sport. The position demands agility, mobility, tenacity, ferociousness and hitting power — the same attributes air defense planners had in mind

when they set the requirements for the line-of-sight forward (heavy) component of the FAAD system.

And what of Martin Marietta and Oerlikon-Buhrle? Did they envision a football player when they entered their ADATS in the bids and subsequent tests for the line-of-sight forward (heavy)



(LOS-F-H) component of the FAAD system? No one knows.

But everyone agrees that the ADATS should be a member of the team — the Air Defense Artillery

team and the combined arms team. The ADATS, as the LOS-F-H component of the FAAD system, is a valuable player on both of these teams. And it will always be a valuable player — regardless of the nickname it will officially receive.

U.S. Army Air Defense Artillery School (USAADASCH) artists who produce illustrations for ADA field manuals were tasked to submit designs for the Linebacker logo. Four were presented to Maj. Gen. Donald R. Infante. The chief of Air Defense Artillery selected a design created by visual information specialist Angel Quezada. The logo at left will become the official Linebacker logo, provided Linebacker becomes the official nickname for the FAAD line-of-sight forward component.

Will Linebacker be the official nickname for this FAAD component?

Maybe we'll have an answer for you on this question — next issue.

CAI at Work

The combined arms initiative continues to emphasize combined arms coordination and cooperation. Just one example of

this is the Linebacker's adaptability to the simulations technology (SIMNET) application being tested at Fort Knox, Ky. SIMNET is a

collection of computer-assisted training simulators that provide battlefield realism. Linebacker is being used to validate SIMNET's ability to portray the third dimension of the battlefield. If SIMNET is successful in portraying the air

battle, air defenders will be able to participate in combined arms battalion task force operations in LOS-F-H SIMNET trainers.

The SIMNET program currently has a battalion task force of M-1 tanks and M-2 Bradley fighting vehicles at Fort Knox. The simulators are full size mock-ups of the vehicle interiors. Computer-projected graphics are displayed in the vision blocks and sights. The facility allows units to train on collective tasks at crew, platoon, company and battalion level. The full training value of SIMNET will not be realized until all of the combined arms players can participate. SIMNET versions for helicopters and close air support aircraft are also under development. The Linebacker crews will have 'manned' targets to train against.

The soldiers of the 2-6th ADA battalion will crew the SIMNET LOS-F-H simulators. These are the same soldiers who performed so well during the arduous LOS-F-H system candidate testing. The same deadly accurate skills developed during the live firings will be put to good use in the simulated exercises.

Here's another example of the coordination that exists among the combined arms brethren and the material developers.

The U.S. Army Missile Command's forward area air defense (FAAD) system program executive office hosted a joint working group at Huntsville, Ala., to design a solution to increase the effectiveness of the Linebacker and the Bradley fighting vehicle against the ever-growing threat. The joint working group investigated new and improved 25mm ammunition with air defense applications.

Air Defense, Infantry and Armor school representatives united to look for a common round that could be used against lightly armored ground targets as well as aircraft.

Five corporations gave briefings on present and projected

25mm ammunition that could be used in the Bradley fighting vehicle and the Linebacker. The munitions demonstrated high technology solutions for greater penetration against armor and a higher probability of hit against fixed- and rotary-wing aircraft.

In yet another example of combined arms coordination, the Army Development and Employment Agency (ADEA) at Fort Lewis, Wash., commissioned Sanders Electronics of New Hampshire to do a technological demonstration of providing FAAD C²I cueing to a combined arms maneuver unit.

A demonstration will take air track information and electronically provide it into the turrets of a tank/infantry company team. The tank/infantry team will have the information displayed to provide early warning and cueing to the target.

The demonstration will evaluate what type of information and how much information can be and should be provided and displayed to the combined arms player. It will also look at which level of command should receive the information. The present plan calls for information to be fed to a tank crew, a platoon leader and the team commander.

The demonstration is scheduled for the last two weeks of June at Fort Lewis. The appraisal test plan (ATP) will be developed and reviewed at Sanders Electronics by members of ADEA; the Combined Arms Center; Fort Knox; Fort Benning, Ga.; and Fort Bliss, Texas. The ATP will be in concert with the precepts of the combined arms air defense concept (CAAD) as developed by the Combined Arms Center and the U.S. Army Air Defense Artillery School.

Here's one final example of a combined arms initiative. The new FAAD TRADOC system manager, Col. Glen McLeod, is

developing the FAAD program assessment (FPA). The FPA is a complete assessment of the FAAD program with input from the material developer, the testing community, USAADASCH, the combined arms players and users in the field.

The FPA is the most accurate and complete collection of information on the FAAD program, including training, personnel MOS changes, TOE organizational changes, testing schedules, funding schedules, fielding schedules, documentation requirements and the writing of doctrine.

McLeod has assembled a team of subject matter experts that will brief Maj. Gen. Donald R. Infante, chief of Air Defense Artillery, on the program. Infante and McLeod will then brief the Combined Arms Center, the U.S. Army Training and Doctrine Command commander and the Vice Chief of Staff of the Army.

The objective of the briefing will be to discern any issues or problems in the program at the present time. If any issues or problems exist, answers and solutions will be developed and acted upon to enable a quick and easy fielding and transition to FAAD organizations.

State of

ADA

FIRST
★ TO ★
FIRE

Branch chief kicks off ADA Commanders Conference

by Mary French

A DA Commanders Conference, Fort Bliss, Texas, May 24, 1988 — Maj. Gen. Donald R. Infante, chief of Air Defense Artillery, delivered the State of ADA speech at the 1988 ADA Commanders Conference. In his welcoming speech, Infante presented a positive picture of Air Defense Artillery today and contrasted it with the branch of a few years ago.

Nearly 300 conferees heard Infante briefly discuss the orientation of the conference and its relevance to the 1988 Army Theme: The Year of Training. The first day's focus at the conference, held from May 24 through May 26, would be on training the ADA warrior today. The second day's focus would be on training the ADA warrior tomorrow, and the third day's focus would be on caring for the ADA soldier.

The theme of the conference is not only training but also where ADA has been, where ADA is today and where ADA is going in the future. It was on this aspect of the conference that Infante based his welcoming address.

Infante examined, one by one, each of the following six aspects of ADA from the points of view of "where from," circa 1985, and "where to," circa 1992:

- Branch pride.
- Combined arms role.
- Strong doctrinal foundation.
- ADA School — center for excellence.
- ADA equipment for total battlefield mission.
- Caring for the ADA warrior.

Branch Pride

In 1985 ADA branch pride had ebbed to an all-time low. "We were feeling sorry for ourselves," said Infante. "We lost the [Sergeant] York battle. Some in the branch knew our AirLand Battle function, some didn't. We didn't know where we were going."

Infante credited an understanding of the essential role ADA plays in AirLand Battle doctrine, the *Air Defense Artillery Bulletin*, professional education reforms, the ADA March and the growing membership in the ADA Association for generating a resurgence of branch pride.

Infante also stressed the importance of building pride from the bottom up, not necessarily from the top down. "If you are an E-6 or above or ADA Brass," said Infante, "there's no excuse for you not to put up the 30 bucks and join the association."

ADA and the Combined Arms Team

In 1985, Infante said senior combined arms leaders had serious doubts as to the role of ADA in the combined arms team. For all they knew, ADA's role was akin to "duck hunting on Saturday morning."

Even today, Infante added, some combined arms leaders still have a two-dimensional focus, a problem Infante hopes to see corrected by the early 1990s. Infante stressed that ADA must make sure that the Army understands we need a three-dimensional battlefield. And there are many ways to do that: possess a clear mission with a strong three-dimensional focus and make sure that *all* ADA officers, especially senior officers, are fully aware of AirLand Battle doctrine.

Making sure that all ADA officers are aware of the role of ADA in the AirLand Battle was a major impetus behind the revision of FM 44-100, *U.S. Army Air Defense Operations*, including AirLand Battle doctrine. In 1985, FM 44-100, the ADA capstone manual, gave no reference to ADA in combined arms AirLand Battle doctrine. The revision, currently in draft form and scheduled for publication in FY 1989, describes ADA's AirLand Battle role. Now we know what our role is in counterair, said Infante. "FM 44-100 is your bible," he added. "Get familiar with it."

ADA School — The Center for Excellence

In 1985, said Infante, the ADA School had conventional large classrooms, standard lecture formats and standard department organizations. Now we have small group instruction, hands-on experience and an integrated tactics department and training battalion.

Furthermore, students are receiving training in a combined arms setting and are "leaving here smart," said Infante. "Students are leaving here aware of AirLand Battle doctrine," he added, "ready to serve you and the Army."

ADA Equipment for Total Battlefield Mission

We used to have a high- to medium-altitude air defense focus at the expense of forward area air defense, said Infante. Now we have a more balanced approach across the battlefield.

Here is an area where "we have a bright future if we can execute it," the ADA branch chief said. Air Defense Artillery ranks second in RDA expenditures Armywide. These are telling figures that demonstrate others in the Army recognize the importance of ADA.

Caring for the ADA Warrior

There was a time when National Guard training and progression was a National Guard problem, Infante said. Now National Guard training and active duty training are better coordinated.

There were and still are far too many ADA MOSs. Currently there is a plan to reduce the number. In addition, NCO promotions have been good some years, bad others. It is here that ADA needs the most work. Infante said: "One E-7 promotion out of two-thirds of your eligible E-6s — we've got to do better in

caring for our ADA warrior." In addition to reducing the number of MOSs, other plans to help the progression and training of NCOs include improving both the Basic and Advanced Non-Commissioned Officers Courses.

ADA Report Card

The chief of Air Defense Artillery concluded his State of ADA address with a look at ADA's overall performance. In the area of pride, the branch has shown considerable improvement. There is still more room for growth here, but now the job lies with the individual air defender.

In the area of the combined arms focus "we wrote the 44-100 to educate the rest of the field," said Infante. Furthermore, this relates to all air defenders possessing a strong doctrinal foundation: we are not here just to kill airplanes, we have a larger combined arms focus. "We are part of something bigger — the AirLand Battle doctrine," said Infante.

The ADA school has improved courses and training techniques. The young graduates of the school are "some of the best I've seen," said Infante. "They are going to challenge some of your old fogies beyond belief."

The area that still needs the most work, according to Infante, is the care of the ADA warrior, especially the progression of the NCO, for it is the enlisted soldiers who are the backbone of ADA.

Many briefings were still to come. Some of the featured speakers on the ADA Commanders Conference agenda included Lt. Gen.(P) Crosbie S. Saint (Training from a Corps Level Perspective), Maj. Gen. James C. Cercy (32nd Army Air Defense Command Training Challenges), Lt. Col. Lewis A. Palumbo (An ADA Operational Concept to Support ALB Doctrine) and Maj. Gen. Edward D. Baca and Maj. Gen. Robert E. Ensslin (The National Guard: Modernization Training Challenges).

Air Defense Artillery will cover many of these briefings in future issues.

Infante's opening speech to an audience of nearly 300 attendees gave a good overview of the issues near and dear to the heart of ADA. His overview of the progress ADA has made from its lowest point to the present indicates that ADA has an A+ future ahead.

Mary French is the associate editor of *Air Defense Artillery*.

Guidelines for the New Battery Commander

Get ready for one of the toughest, most rewarding experiences in the Army: command

by Capt. David B. Hamilton

As a battery commander, you will be faced with your greatest challenge to date. It will seem a quantum leap and, in many ways, it is. But it doesn't need to be filled with stress and anxiety. Approach it positively. It is a fantastic opportunity to develop not only your own leadership style, but also to assist others to grow and develop as well.

With the passing of that unit guidon, you will suddenly be the "old man," and everything will seem to change. You will wear the mantle of command in the strongest military force on Earth. You will lead soldiers, many of whom have more experience in the Army than yourself. You must never underestimate their experience and abilities. However, by the same token, these same soldiers will depend on you *every day* for leadership, guidance and decisions. Never underestimate this either.

Approach the challenge enthusiastically and confidently. Teach your soldiers, and learn from them also.

Always remember that you are not alone, though you will sometimes feel alone.

To put it simply, do the best you can. Make decisions, given the information you have, which you believe are correct. Never make a hasty decision unless you have no choice. Your decisions will be important for many reasons and to many people. Take time to make a good, informed decision. Ask others for their opinions. Their rank should not matter. Expect that you will be wrong sometimes. Do not let such occasions discourage you. Learn from them. If you make a decision which you feel is best at the time, all factors considered, there will be no need to second-guess your judgment. Your soldiers will never lose their respect for you because you made an honest mistake.

Use your battalion staff. All staffs have only one purpose — to serve commanders.

Never feel obligated to justify your decisions to your soldiers, but always be prepared to do so.

Learn to delegate authority, and do it a lot. You'll have to. If you try to drive the train by yourself, you will only cheat your soldiers and yourself.

Take care always to avoid situations which are potentially embarrassing. As a commander, such situations will be more harmful than ever before and, perhaps, impossible to recover from.

Don't speak too quickly. Think before you open your mouth, whether it's in the motor pool or in the battalion commander's office. It's wise to let others speak first, particularly at staff calls.

Always show your soldiers that you care. They will be the first ones to know whether you do or not. Do all that you can to improve their living and working conditions. They deserve it.

Be open to advice. Again, rank doesn't matter here.

Establish a good, open working relationship with your commander. Take advantage of his years of experience. Learn from him. He, too, will make mistakes. Learn from those, and continue to support him. If you disagree strongly with him on a particular issue or policy, take it up with him in private — never challenge his authority or insult his judgment in front of others.

Never make the same mistake twice. You'll look stupid if you do. No commander can afford that.

Ensure that a solid counseling program is in place and followed. Every soldier should clearly understand what is expected and should always know where he or she stands. Besides, administrative actions (and there will be some) can be eased a thousandfold if proper counseling records are maintained.

Stay professional and cool under tough circumstances. Even if you're churning inside, you cannot afford to panic in front of others. Make an assessment, given time and other constraints, and act.

Know your business. Get in bed with your war plans. Know how to deploy your unit. Intimately know how to employ your unit in wartime and peacetime.

Tips for the Change of Command Ceremony

1. Address the soldiers. Know exactly what you will say.
2. Be brief, definitely briefer than the outgoing commander.
3. Be sincere, not loud.
4. Be certain to tell the soldiers that you are proud and honored to take over such an outstanding unit, regardless of its previous record.
5. Thank the outgoing commander for his help during the transition phase.
6. Thank your commander for his faith in you.
7. Promise only that you'll do your best to prove worthy of the challenge.
8. Have the first sergeant take charge of the formation and release the troops for the day. Enjoy a short reception.
9. Issue instructions for the following day to the first sergeant and executive officer.
10. Prepare yourself to meet the challenge.

Always support your lieutenants and NCOs, unless you are 100 percent sure that they are wrong. If so, straighten them out, but only with their immediate chain of command present. Teach them and counsel them. Like everyone else, they will make mistakes.

Never chew someone out in front of his subordinates. This would be disastrous and forever destroy the trust which someone may have had in your leadership.

Use your first sergeant. This individual was always my most trusted comrade. But counsel him too! If he's not doing the job and you counsel him to no avail (believe it or not, this can happen), inform your commander and the battalion command sergeant major of the problem. If the first sergeant continues to be weak or ineffective, take appropriate action and, by all means, aggressively seek a new first sergeant. Remember that you might be able to get away with having a weak executive officer, platoon leader or platoon sergeant, but you *must* have a good first sergeant.

Include family members in company activities. Extend your caring to them. They are more integral to supporting your soldiers' health, morale and welfare than any community agency.

Never be afraid of appearing stupid because you ask questions. If you are ignorant about any of your areas of responsibility, the troops will find out anyway.

Make it a point not to believe everything you hear — check it out first!

Make your unit's mission and the welfare of your soldiers more important than your own personal time and desires. Your actions should reflect this every single day, including weekends and holidays. It will be very hard to do this at times, but remember, the command will not last forever but the impression you make on your soldiers will. What you teach many

of them, through example, may have a real impact in developing tomorrow's leaders and preparing soldiers in future generations.

Lastly, I remind you to always treat all of your soldiers with dignity and respect, even those in jail. Remember that they will ultimately determine your success or failure, no matter how smart or strong you are. Napoleon once said, "There are no bad regiments. There are only bad colonels." That's worth remembering too.

Tips for the Second Day

1. Arrange to address your soldiers in more detail than at the change of command ceremony. Have the XO and first sergeant notify the soldiers of the meeting time and place the day before.
2. Speak to them in three separate groups:
 - Officers — have the executive officer assemble them.
 - NCOs — have the first sergeant assemble them.
 - E4 and below — have the first sergeant assemble them.
3. "Tailor" your messages to each group. You will want some of what you say to be common to each group. Other parts of what you say, such as how you see the role of each group, will be specific to the particular group you address at that time.
4. Some recommended items to touch on in your discussions:
 - Background information (prior experience or jobs, home of record, marital status, etc.). This should not be too lengthy.
 - Your command philosophy.
 - What you like (only a few).
 - What you don't like (only a few).
5. Assure your soldiers that you plan no immediate major changes in their daily operations and that you will take a little while to assess how things run in the unit. (The only exception here might be if you already observed something during your change of command inventory which you feel must be changed immediately.)
6. Stress to your soldiers that you are accessible. Your "open door" policy should be posted the first day.
7. Close by telling the soldiers again how glad you are to have the opportunity to command the unit, and tell them that you'll be around to see them in their workplaces.

Capt. David B. Hamilton is the chief of the Community and Family Support Division, 32nd Army Air Defense Command, Darmstadt, Germany.

In Defense of the Commander's Wallet

Two easy steps to accurate property accountability

by Capt. Daniel F. Mulligan

How many war stories have you heard about commanders paying substantial amounts when they leave their command? Too often we hear of \$25, \$50, even \$70 thousand reports of survey. The result is double jeopardy: money out of your pocket to pay for the survey, and less than desirable comments on your OER. In fact, many brigade commanders now withhold OERs until property accountability discrepancies are resolved.

The reasons for accurate property accountability, besides protecting your wallet, are numerous. Accurate accountability means having, or getting, everything you are supposed to have. Accurate accountability educates the soldiers, boosts morale, instills confidence in the supply system and precludes reports of survey and other time-consuming and troublesome investigations. *Accurate accountability means mission preparedness.*

Accurate property accountability? Now, that would be something! Why do so many commanders pay so much? "I'm not a supply expert," you say, "I just hope my supply sergeant keeps me squared away. Come on, we all know command costs one month's pay." Unfortunately, these quotes sound only too familiar to many commanders. If you're interested in not becoming a property accountability war story, this article is for you.

While the supply system requires some knowledge and attention to detail, it is not insurmountable. PREPARE is the answer. Not the word *prepare*, as in, "to make ready beforehand." PREPARE is an acronym for post requisitions and post adjustments to the receipts. It is a two-part system developed and implemented by C Battery, 2nd Battalion, 6th Air Defense Artillery, Fort Bliss, Texas, to maintain accurate property accountability.

PREPARE is a system that allows everyone in the supply chain, from the user to the commander, to know the exact status of all assigned property at a glance. It is easy to maintain because it consolidates and simplifies accountability. PREPARE allows you to research, track and determine the exact status of each item in the unit in less than one minute. In fact, PREPARE is so organized and efficient, you'll wonder how units exist without it.

To demonstrate the efficiency and effectiveness of this system let us use a typical supply scenario.

The commander is walking through the motor pool during PMCS and notices that most of the maintenance mechanics are missing tools from their tool boxes. Upon inquiry, he receives the usual response, "Uh, Sir, the supply sergeant says they're all on order." Now, this commander is going to verify that answer. Enter the supply sergeant, Sergeant Doe.

Commander: Sergeant Doe, we're missing too many tools! Several of our mechanics are missing pliers. I want to know how many pliers we're short and whether or not they're on order. Everyone tells me that you say they're on order. I hope that's true!

Sergeant Doe: Yes, Sir. Let's look at the shortage annex. It says here that we're short five pliers. I keep copies of all requisitions in the due-in suspense file. See how many items are on order? I'm sure one of those is for the pliers.

Commander: We do have quite a few things on order. I guess the system is slow. Well, Sergeant Doe, keep up the good work!

While this sounds like a normal exchange, there are several inaccuracies. Let us analyze them.

The answer to the first question, "How many pliers are we short?" cannot be determined by just looking at the shortage annex. Remember, the shortage annex tells you how many pliers you were short on the day of your last hand receipt update. It does not include any changes since then (statements of charges, cash collection vouchers, reports of survey and DA Forms 3161). To determine exactly how many pliers you are short, you need to reconcile all adjustment documents with the shortage annex first.

Second, unless you search through the due-in suspense file and find the copy of the requisition for the pliers, you really don't know that they're on order. The problem is that searching through all those "flimsies" for one specific requisition is very time-consuming.

REQUEST FOR ISSUE OR TURN-IN (DA PAM 710-2-1)				XX ISSUE TURN-IN	SHEET NO. 1	NO. SHEETS 1	3. REQUEST NO. Change Document	4. VOUCHER NO.			
1. SEND TO: Commander, 2 Btry, O-X ADA				5. DATE MATERIEL REQUIRED		6. DODAA		7. PRIORITY		8. ACCOUNTING/FUNDING DATA	
2. REQUEST FROM: PBO, O-X ADA				9. END ITEM IDENT		9a. NAME/MANUFACTURER		9b. MOEEL		9c. SERIAL NO.	
*CODE I-Initial R-Replacement				TURN-IN FWT-Fair Wear And Tear RS-Report of Survey		EX-Excess SC-Stmt of Charges		10. PUBLICATION		11. JOB ORDER NO.	
12. ITEM NO. a	STOCK NO. b	ITEM DESCRIPTION c	UNIT OF ISSUE d	QUANTITY e	CODE* f	SUPPLY ACTION g	UNIT PRICE h	TOTAL COST i	j. POSTED DATE BY		
1	9876-01-234-5678	Truck, Util...	EA	2	I	2					
NOTHING FOLLOWS											

Figure 5

HAND RECEIPT/ANNEX NUMBER For use of this form, see DA PAM 710-2-1. The proponent agency is ODCSLOG.				FROM Property Book Officer O Bn, X ADA				TO Commander 2 Btry, O-X ADA				HAND RECEIPT NUMBER 8			
FOR ANNEX OR ONLY		END ITEM STOCK NUMBER		END ITEM DESCRIPTION				PUBLICATION NUMBER				PUBLICATION DATE		QUANTITY	
STOCK NUMBER a		ITEM DESCRIPTION b				* c	SEC d	UI e	QTY. AUTH. f	QUANTITY g. A B C D E F					
9876-01-234-5678		Truck, Utility...				U	EA	12	10						
CPT John Smith 9 Jan 87															

Figure 6

REQUEST FOR ISSUE OR TURN-IN (DA PAM 710-2.1)				ISSUE	SHEET NO.	NO. SHEETS	3. REQUEST NO.		4. VOUCHER NO.		
1. SEND TO: <i>Commander, 2 Btry, O-X ADA</i>				TURN-IN	1	1	<i>Change Document</i>				
2. REQUEST FROM: <i>PBO, O-X ADA</i>				5. DATE MATERIEL REQUIRED		6. DODAAC		7. PRIORITY		8. ACCOUNTING/FUNDING DATA	
*CODE ISSUE: I-Initial, R-Replacement TURN-IN: FWT-Fair Wear And Tear, RS-Report of Survey				9. END ITEM IDENT		9a. NAME/MANUFACTURER		9b. MODEL		9c. SERIAL NO.	
10. PUBLICATION				11. JOB ORDER NO.							
12. ITEM NO.	STOCK NO.	ITEM DESCRIPTION	UNIT OF ISSUE	QUANTITY	CODE*	SUPPLY ACTION	UNIT PRICE	TOTAL COST	j. POSTED		
a	b	c	d	e	f	g	h	i	DATE	BY	
1.	9876-01-234-5678	Truck, util...	EA	2	I	2					
<i>NOTHING FOLLOWS</i>											
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> <i>posted 10 Jan 87 J.F.S.</i> </div>											

Figure 7

By posting adjustments to the receipts as they occur, you always know the exact status of your property. It is not more work than you're already doing, it is just that you're doing it "bit by bit" instead of "all at once" at the six-month update.

Well, that's the system! PREPARE — post requisitions and post adjustments to the receipts. It's not too difficult. Let's look at the advantages.

PREPARE is the most efficient means of maintaining current property accountability status (adjustment document reconciliations already completed). It answers the questions: How many do I have now? How many did I sign for? and How many have been received and or turned in since then? And it answers all of these questions in less than 15 seconds.

PREPARE is the most efficient means of reconciling shortages with requisitions (simple comparison of the hand receipt or shortage annex: short items need document numbers). The alternative involves searching through the due-in suspense file for every item short on the hand receipt or shortage annex.

PREPARE works toward the virtual elimination of shortage annexes, thereby ensuring that units have all required items on hand. (The assumption is that you can order and receive items more often than you lose them.)

The system educates all soldiers throughout the supply chain and boosts morale because soldiers no longer listen to, "Check's in the mail." Soldiers know —

- their item is on order,
- how long it's been on order and
- that they can track their requisition for status updates.

Without PREPARE, commanders cannot determine their supply status without days of research (reconciling all adjustment documents with the hand receipt or shortage annexes and then reconciling all short items with the due-in suspense file).

PREPARE is easily inspectable by the chain of command.

That's our system. It works great for us, and it will work the same for you if you use it. But a word of caution. The initial setup is time-consuming (probably two to three weeks of work). That's because you have to reconcile all of your present adjustment documents with the receipts and then reconcile all of your present requisitions from your due-in suspense file with your shortage annexes.

The work is worth it. You will only have to do it once, and the rewards are immeasurable. Good luck!

Capt. Daniel F. Mulligan is the battery commander of C Battery, 2nd Battalion, 6th Air Defense Artillery, Fort Bliss, Texas.

A Call for Adversary Air Training

An Army rotary-wing adversary force could bridge the intelligence and tactical knowledge gap of our soldiers

by Capt. (P) Greg R. Hampton

AirLand Battle Doctrine mixes the vertical and horizontal forces of ground and air. Positional warfare has been replaced by the maneuver school of doctrine that relies upon the tenets of agility, synchronization, depth and initiative in our soldiers to win while fighting outnumbered. The use of vertical maneuver, aided by the use of the modern helicopter, is a vital concept of AirLand Battle.

Pioneered by the U.S. Army, this concept of "air mechanization" has developed the Aviation Branch into a fluid maneuver force, capable of waging war throughout the entire spectrum of the deep,

close and rear battle areas.

But, we are not alone.

Warsaw Pact forces have seen the potential in the use of the attack helicopter and have developed a vast array of combat helicopters to promulgate vertical maneuver and envelopment. Other nations of the world, also, have seen the light, and a vast spectrum of combat rotorcraft will be employed in any major conflict in the future. We must prepare to counter the combat helicopter threat in the development of our doctrine and materiel requirements, and, more importantly, in our training. In training, an army hones its fighting edge.

Only by training relentlessly against a realistically portrayed and equipped threat helicopter force can we gain the experience in peacetime of how to fight one



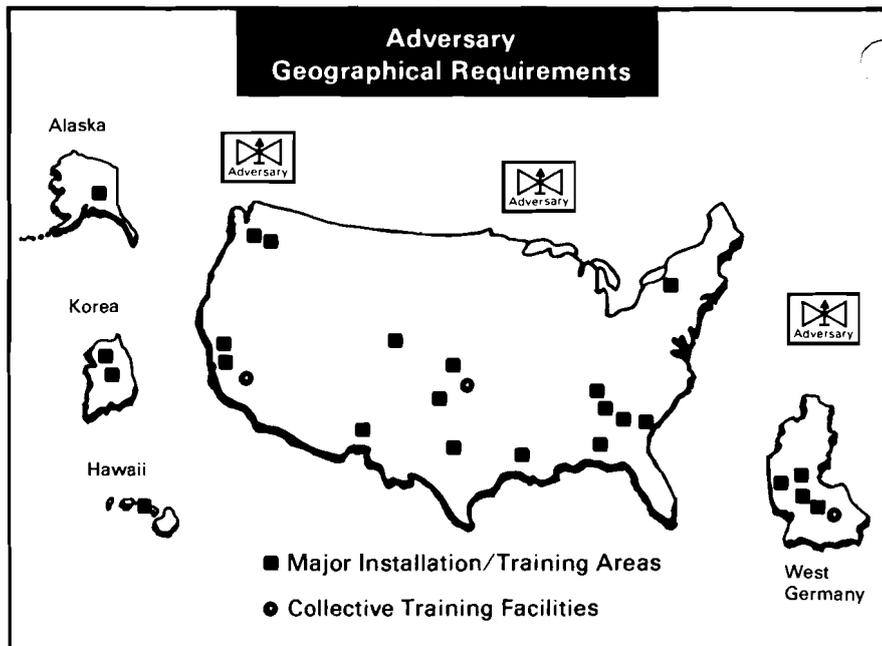
of the battlefield's most destructive and elusive of enemies — the attack helicopter.

As the ancient tactician Sun Tzu wrote, "Know the enemy and know yourself; in a hundred battles you will never be in peril. When you are ignorant of the enemy but know yourself, your chances of winning and losing are equal. If ignorant both of your enemy and yourself, you are certain in every battle to be in peril."

The U.S. Army has recently undertaken a massive effort to come to grips with the combat helicopter threat to our ground forces through the development of the forward area air defense system initiative. Army doctrine and tactical manuals now address the need to counter these formidable aerial weapon platforms in a combined arms manner with all team members contributing to the effort.

But what is preached must also be practiced and we must train regularly against a realistically portrayed helicopter force to realize an effective capability. Rarely do opponents simulate threat helicopter formations, tactics or weapons employment during Reforger or division- and brigade-level training maneuvers. If a threat capability is simulated, the forces that emulate the threat side often introduce inaccuracies in simulation which invariably produce incorrect sight cues and improper habit patterns.

Additionally, units that train against each other regularly tend to develop tactics that counter the opponent's tactics and machines rather than that of the threat. When you fight Blue versus Blue, you learn the best means of fighting yourself, not the enemy. Realism is a must-have requirement for training.



What is needed now is an Army owned and operated rotary-wing adversarial organization designed to promote and foster an awareness and means of countering enemy helicopters. This organization's prime focus would be to act as an enemy helicopter force during training. It would act as the enemy at both home stations and at collective training centers in the United States and Europe.

Its goal during these training events would be to train the combined arms team members by portraying the battlefield capabilities of the threat helicopter force. Quite simply, the Army rotary-wing adversary force would provide the necessary bridge between intelligence and tactical knowledge to our soldiers.

This concept is really nothing new. For years now, the U.S. Air Force and Navy have been employing specialized adversary forces to train their air crews in dissimilar air combat maneuvers. This requirement was fueled by the dismal performance exhibited by both servi-

ces during aerial engagements in the Vietnam conflict.

Both the Navy "Ault Report" (1968) and the Air Force "Red Baron" study (1972) determined that previous forms of training were inadequate. The Air Force and Navy had both concentrated extensively on improving the machine without spending enough effort on the men who were flying the aircraft.

The Navy introduced its "Top Gun" postgraduate course in fighter weapons, tactics and doctrine. The Air Force established the continuing Red Flag series of exercises which employ the aggressors as well as ground air defense systems in fully instrumented, realistic "battles" above the desert ranges of Nellis Air Force Base, Nev.

The success of the Red Flag series of exercises by the Air Force led directly to the Army's activation of the Fort Irwin, Calif., military reservation as the National Training Center (NTC), and the conversion of two ground maneuver battalions, the 6th Battalion, 31st Infantry, and the 1st Battalion,

73rd Armor, for use as opposing forces. The NTC has shown itself to be the most realistic collective training tool the Army has ever had short of actual war, and has led to the proposed development of a light infantry oriented training complex at Fort Chaffee, Ark., as well as a European training facility at Hohenfels, Federal Republic of Germany. They are all aimed at offering realistic combined arms training experience against an enemy who fights as we expect it to fight.

The Threat

The combat helicopter threat posed to the combined arms team is a formidable one. The Warsaw Pact has adopted the concept of helicopter vertical employment in order to add to the offensive momentum necessary for promulgation of its maneuver group doctrine.

They have carved out a niche in their force structure for the employment of the armed helicopter, and all indications seem to point to an ever-expanding mission role for the Soviet rotary-wing combat arm. Many combat missions, including the following, are assigned to Warsaw Pact helicopters:

- Close air support.
- Ground attack.
- Anti-tank operations.
- Escort of airmobile assaults.
- Anti-helicopter operations.

Consequently, the Soviets employ attack helicopters in every major exercise as a vital part of their combined arms doctrine.

Naturally, the Soviets have been upgrading the numbers and quality of their helicopter forces. These assets have virtually doubled in quantity and effectiveness since 1979.

A growing decentralization effort has pushed Soviet Army

4,400 Soviet helicopters ready to wage three-dimensional war

aviation forces down to division level and has bolstered existing Hind and Hip formations at independent regimental and Army front levels. Existing Hind-equipped formations are having product improvements and modernizations done to enhance their survivability on the increasingly lethal battlefield.

The Soviets are rapidly equipping their helicopters with a wide variety of infrared jammers, suppressors and decoy devices, in addition to bolted-on armor plate, no doubt as a result of eight years of combat experience in Afghanistan.

Additionally, since their development and fielding of the world's largest production helicopter, the Mi-26 Halo, the Soviets have the ability to vertically move armored forces. This rotorcraft is capable of moving two airborne infantry combat vehicles or 90 combat troops deep into enemy territory.

But what may be most disheartening to NATO maneuver commanders is the Soviet development of an Apache-like, point designed, anti-tank helicopter, the Mi-28 Havoc. The thought of being drilled by threat attack helicopters with Apache-like characteristics from standoff ranges in excess of many friendly air defense systems has the NATO alliance concerned. The Havoc is expected to be deployed soon and, in conjunction with the deployment of the Kamov Hokum air superiority helicopter, the Soviets will, for the first time,

challenge NATO for the maneuver rights to the third dimension of the battlefield. In all, more than 4,400 Soviet combat helicopters stand ready to wage three-dimensional war against us in any major conflict, and they are getting better at it every day.

The nations of the Third World must also be considered. Recently, the armed helicopter has proven its worth in several brushfire conflicts around the world. The *New York Times* reported that the Iraqi tank forces have been all but paralyzed during daylight hours by Iranian helicopter gunships.

The Syrians managed to severely disrupt the Israelis during the Lebanon incursion in 1982 by employing Gazelle helicopters armed with anti-tank missiles. Conversely, the Israelis made good use of their Hughes 500 Defender helicopters against the Syrians during the final stages of their brief war, destroying numerous tanks and armored infantry vehicles.

More recently, we have witnessed the use of export versions of the Mi-24 Hind helicopter being used in counter insurgency operations in Nicaragua.

Adversary Training

This discussion leads to the following questions. What helicopter will the Army rotary-wing adversary force use? Who will fly them in training exercises? How will they be organized? Where will they be stationed? And, of course, what will be the cost?

The wide spectrum of rotorcraft that may face us in any conflict must be considered carefully before selecting any potential aircraft for adversary training. Ideally, it would be good to acquire one of each of the actual

threat helicopters for use, but money and political concerns as well as logistic concerns rule out the exact replication of any single threat helicopter for day-to-day training use. There are just too many of them out there.

Therefore, we must concentrate on obtaining a helicopter that —

- performs in flight equal to or better than that of the threat,
- possesses a mission equipment package (or simulation thereof) of what we assess the bad guy to be capable,
- is reliable enough to facilitate high-density use,
- looks different enough to promote the aircraft identification and recognition process,
- can be modified to replicate the various other signatures that the various threat aircraft possess and
- is not currently employed as a front-line attack helicopter by any of the members of the NATO alliance.

The bottom line for performance for any aircraft we would acquire would be that it replicates the true battlefield capabilities of the threat helicopter forces in our training.

Several candidates surface. All possess the flight characteristics or can be slightly altered to reflect the adversary's needs. While none of these aircraft really looks like the front-line Soviet helicopter threat, they all are different in appearance. This difference would offer soldiers an effective aircraft recognition training opportunity because they would still have to identify them as unfriendly based on their aircraft recognition training.

The Air Force and Navy have found that this is the case, and that replicating the tactics and mission equipment performance is what promotes good, realistic

Possible Aircraft Candidates

- Aerospatiale SA-332 Puma
- Bell 222
- Augusta 109
- Sikorsky S-76
- Aerospatiale SA-365 Panther



training. Above all, understand that the adversary aircraft is not an end in itself, but merely a tool to demonstrate threat helicopter tactics, formations and weapons effectiveness.

One of the most important learning tools that the adversary aircraft will employ is the extensive engagement debriefings. Videotape recordings from on-board gun cameras, as well as verbal comments made by the adversary crews during actual engagements, could be reviewed by all members of the combined arms training with adversary air.

The adversary crews could immediately land at a unit's location and conduct an on-the-spot after-action review using the on-board video and discuss the unit's strengths and weaknesses to reinforce lessons learned.

Additionally, the adversary aircraft will employ a real-time casualty assessment system, such as the current laser engagement systems, to add real-

ism to all engagements. But the heart and soul of this initiative resides in the pilots who convey the tactics and capabilities of the aircraft.

Army rotary-wing adversary pilots would be experts in Soviet capabilities and could provide a valuable source for combined arms soldiers' education on threat "fighting philosophies." These aviators must be schooled in the Soviet "mind set," be fully immersed in the threat's doctrinal background and be made aware of their own ethnocentrism so as to authentically mimic the Soviet pilot's way of doing things. American aggressiveness would have to be bred out and replaced with the Soviet "do as I do" rigid command-and-control thought process that causes the threat pilots to fly the way they do.

The Organization

The Army rotary-wing adversary force would focus on one point — that of meeting the day-to-day counter-helicopter training needs of the U.S. Army. The force design required for this initiative must resemble how our principal opponent has organized its helicopters. Also, the design must efficiently employ its assets for training at the Army's collective training facilities and unit home stations.

The adversary force design allows for this capability by having two separate combat helicopter platoons that employ a generic attack or assault helicopter which can be tailored by the addition of wing stores to reflect either type of helicopter.

The force design allows for the simultaneous use of assets at, and away from, the training center location. This would allow for home station training for many Army units, including

Army Reserve and National Guard, throughout each regional district. These organizations should be based at the NTC, the Joint Readiness Training Center, Fort Chaffee, and at the Combat Maneuver Training Complex in Germany. The adversary force could then aid both collective combined arms scenarios and individual unit training at home stations while still maintaining a presence at its base location. This "road show" capability would be one of the biggest selling points of the initiative and would greatly enhance Army home station training.

The organization shown below mirrors the Soviet-style divisional helicopter squadron, which is designed for attack helicopters.

The Cost

Today, when additions to a "capped" Army force structure are suggested, the immediate reaction is, "No, we can't afford it!" or "Are you prepared to take

it out of your hide?" However, adversary training has proven to be far less expensive and, more importantly, far more effective than any other training we execute using Blue force-on-force scenarios.

The bottom line on the acquisition of 36 adversary helicopters is bound to be one of the major stumbling blocks of this program. Enemy combat helicopters threaten all of the members of the combined arms team and, therefore, must be jointly paid for as all will end up fighting them. Moreover, the "faces and spaces" for the 36 pilots and the ground personnel must be apportioned throughout the Army. The Aviation Branch cannot absorb fielding the entire force structure requirement alone.

The diversion of acquisition and operational funds to procure and man unique helicopters for the Army rotary-wing adversary program would have a minor effect upon the overall Army budget, especially if a phased approach toward aircraft acquisition is undertaken.

sition is undertaken.

Examine the trade-offs.

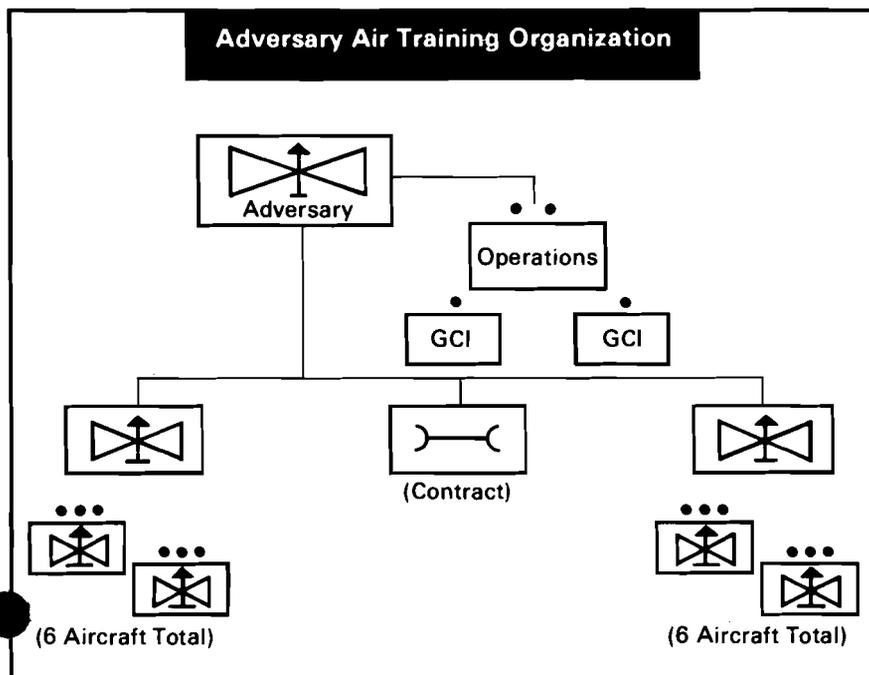
The skills gained from helicopter adversary training would not only reduce the number of our combat systems lost in battle, but would also result in greater numbers of threat helicopters destroyed, thus negating one of the enemy's most potent maneuver assets. We have learned through example that combat is not the place to train.

Realism is a must-have requirement for training and we must pay for it. It has been shown by our sister services, as well as through our experiences at the NTC, that the best way to achieve readiness is through aggressive, structured, regular and realistic training. The groundwork has been laid and the results have been impressive.

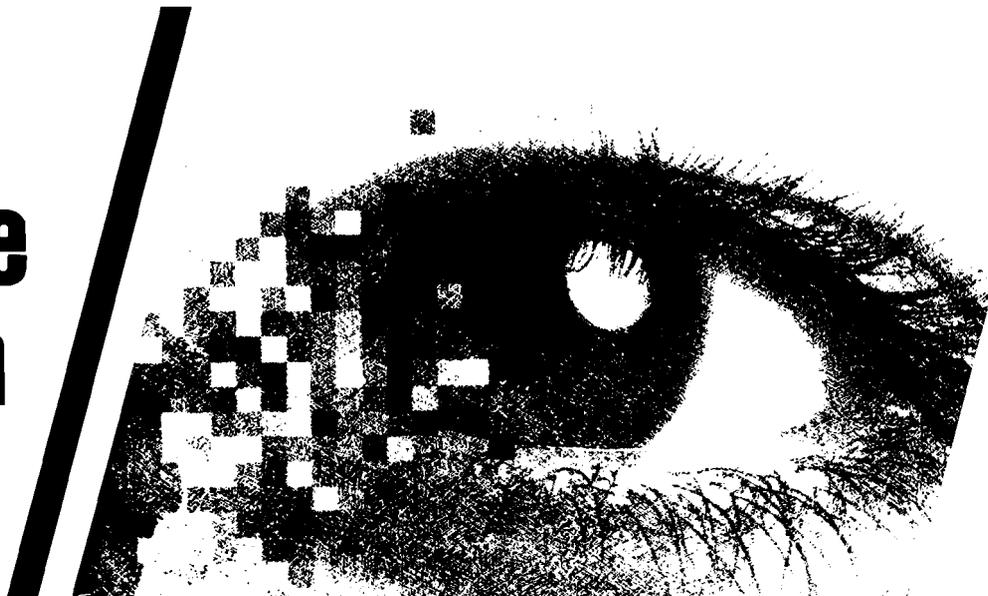
The Army rotary-wing adversary force will simply add to an already established training system and make us, for the first time, contest the vertical maneuver dimension in our training. The cost will have to be paid, but reflect upon this fact: If one Havoc can kill 15 U.S. M-1s or Bradley Fighting Vehicles and four Havocs conduct four sorties a day, then 240 armored fighting vehicles or two brigades cease to exist.

But if, through realistic training, we reduce the threat attack helicopter's effectiveness by 50 percent, then the savings are immense. A savings of 120 combat systems, with a price tag in excess of \$210 million, not to mention the crews, is realized. We need an Army rotary-wing adversary force right now.

Capt.(P) Greg R. Hampton is chief of the Air Combat Division, Directorate of Combat Developments, Fort Rucker, Ala.



Future Vision



The branch needs quality representation in key planning positions to take ADA's future influence from mud into space

by Capt. Todd A. Rey

Air Defense Artillery's mission includes the following:

- Preserve the force commander's freedom to maneuver that is crucial to implementing our Air-Land Battle doctrine.
- Protect critical command, control and communication nodes with the right force at the right place and time.
- Protect our sustainment capabilities to assure the battle can continue.
- Kill enemy aircraft and missiles while preventing fratricide.

The scope of the mission area, as air defenders know, takes us from the forward line of own troops to the frontiers of space, demanding of Air Defense Artillery unprecedented technological breadth.

Not only does the mission demand a wide range of technology, but the evolving air threat also re-

quires the ADA branch to be on the cutting edge of developing and maintaining these technologies.

The technology gap is closing. The threat is fielding stealth or low observable aircraft and its weaponry has increasingly greater standoff ranges. In addition, the sophistication of the countermeasures used by the threat in deception operations has increased significantly. The once comfortable advantage of technological superiority over numerically superior forces has been eroded as the threat adds broad technological advances to its larger numbers.

The mission of Air Defense Artillery combined with the evolving threat compels us to explore ever-broadening technologies. Figure 1 is a depiction of the "mud into space" spectrum of influence of the Air Defense Artillery of the future. Although endo- and exo-atmospheric interceptors may represent the leading edge of technology, it is important to remember that our battlefield systems, like the forward area air defense system, employ sophisticated and complex technologies as well.

The combination of our mission, the threat and the spectrum of influence that Air Defense Artillery will operate in requires a vision of the future that will allow growth in near-, mid- and long-term technological requirements. There is no shortage of applicable and emerging technologies available. The trick, however, is to ensure we don't miss one — especially the breakthrough or "trump card" technology. And the way to ensure we don't miss it is to have strong ADA representation at the drawing boards of all emerging technologies, force designs and doctrine planning.

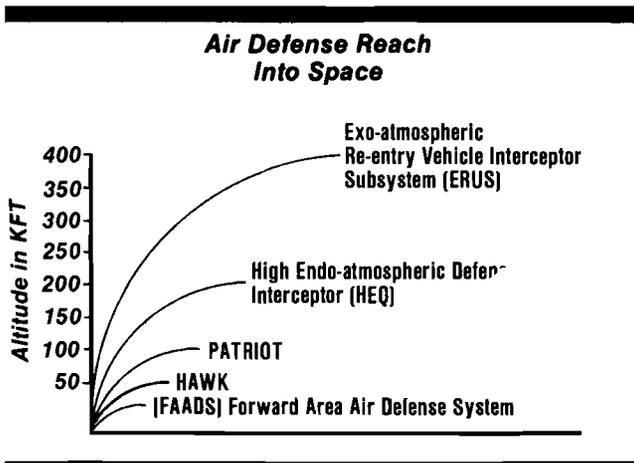


Figure 1

The future vision models Air Defense Artillery operations as a system of three principal components — input, control and output. This model is shown in Figure 2. Each of the three components represents enabling technologies that the ADA community needs and must share in developing and maintaining.

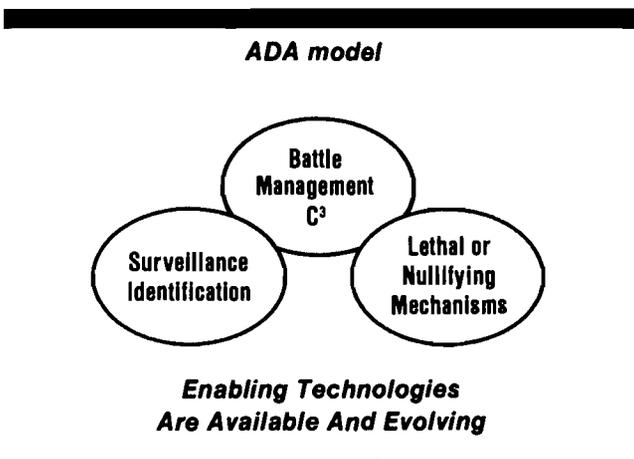


Figure 2

Situational awareness is the input of the system. The components of surveillance and acquisition reveal the position of hostile aircraft or objects and distinguish them from friendly aircraft.

The output is the lethal or nullifying mechanism, the means by which we kill or render hostile flying objects ineffective.

Finally, battle management or command, control and communications pulls together all the system's components. These integrate Air Defense Artillery with higher-order counterair systems as well as with the Army command and control system.

ADA Input

The first component of the ADA model, input, is seen as a distributed network of fused sensors. These sensors must be able to move assorted data bases rapidly and accurately. Configurations for these sensors include ground, aerial and space platforms. The various configurations will provide tracking continuity and, therefore, assist in positive hostile identification based on the origin of the airborne object. These sensors will use active and passive techniques to detect and identify airborne objects, then, via battle management, pass engagement data to lethal or nullifying mechanisms to accomplish the ADA mission.

The supporting technologies for the input requirements are radar, passive, electro-optical, aeronautical and sensor-survivability technologies. Radar technologies include multistatic, ultrasresolution, micro-millimeter wave, synthetic aperture and wide-band multifunction frequency agility.

These technologies will enhance ADA system capabilities to detect low observables and low-radar cross-section targets at ranges to provide effective employment of kill mechanisms. Passive technologies will support detection and identification functions while enhancing survivability of our battlefield sensor and weapon systems. Electro-optical technologies needed include infrared, visible-sensitive focal arrays and multi-mode sensors capable of integrating several sources of data, including visible, infrared and ultraviolet data. Additionally, the following technologies are required: aeronautical technologies incorporating remotely piloted vehicles, ducted

fan, survivable platform/material and processing, and low observable.

Also needed are sensor survivability technologies resulting in ultra-low side lobes, intelligence disruption through decoys and automated emission management. By capitalizing on the apparent breakthrough technologies, the "eyes" of the system will allow greater decision time and informed use of the limited assets of the force commander.

ADA Output

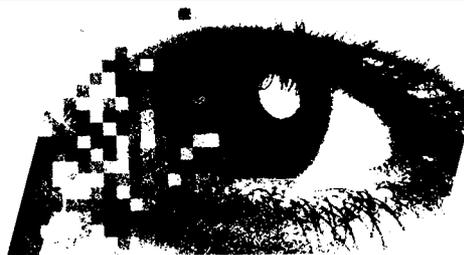
The second component of the ADA model, output, is seen as an integrated system of interceptors that are effective against the spectrum of threat vehicles. Supporting technologies and desired capabilities that meet the needs of the output requirement include missile technologies with increased capabilities in guidance and control. This would achieve truly brilliant weaponry that could be launched with total autonomy and destroy targets with minimal operator assistance. It also includes employment of hypervelocity projectiles with close to zero flight times which offer advantages in simplifying fire control. Other desired technologies are the further refining of propulsion possibilities, miniaturization of components and systems, use of composite materials to strengthen missile structure and decrease the weight of missiles, and improvement in seekers to provide searching, detecting, identifying and locking and guiding capabilities.

Directed energy weapon technology will also support the output requirement. These weapons will enhance lethal or nullifying mechanisms through their power generation, energy conversion, tracking and pointing.

Technologies that advance the present state of warheads are vital. Exotic explosives, kinetic energy and brilliant munitions are some of the capabilities which require ADA exploration.

The most desired near-term technological enhancements include hypervelocity projectiles and multimode seekers for fire-and-forget engagements. In the longer term, directed energy weap-

ons to either kill or render ineffective hostile threat vehicles represent the lead-ahead technology. Developing a more lethal punch with the fist of the system will mean greater success at first-time engagements and fewer possibilities of repairing the threat vehicle for reuse.



ADA Control

The third component of the ADA model, control, is seen as a near real-time automated warning, cueing, acquisition and reporting data distribution system aided by artificial intelligence, data burst communications and advanced processing capabilities. This would permit effective command and control of ADA weapon systems providing for full integration of the AirLand Battlefield through the ADA spectrum of influence. Data processing technologies support this requirement. Included capabilities are artificial intelligence to aid in the decision-making process of battle management, very high-speed integrated circuits to provide the near real-time transmission of data, optical processing to enhance identification requirements, photonics to defeat electromagnetic pulse and superconductivity.

Communications technologies in the areas of information management, distributed time-shared networks, satellite down and up links, fiber optics and lasers will also support the control requirement. Human engineering will play a big role in enhancing the soldier's ability to employ the ADA system by providing for configuration management, robotics and voice/eye translator capabilities. Here, artificial intelligence, enabled

by superconductivity, is the clear high-payoff technology.

Keeping air defenders close at hand with these technologies will ensure that the brain of the system offers capable battle management. The discussion of applicable technologies is incomplete, however, without the recognition of the narrowness of many of the disciplines. While specialists are clearly required, a strong core of interdisciplinary technologists also will be required to support the future ADA mission.

Where should ADA Technologists Work?

- Fort Bliss: U.S. Army Air Defense Artillery School's Directorate of Combat Developments; Air Defense Artillery Board; TRADOC System Manager Offices
- U.S. Army Materiel Development and Readiness Command: Staff; Missile Command; Laboratory Command
- Washington, D.C.: Office of the Secretary of Defense; Headquarters, Department of the Army; Operational Test and Evaluation Agency; Defense Advanced Research Projects Agency
- U.S. Space Command; Strategic Defense Command
- Combined Arms Center
- Other services
- Academia and think tanks (MIT, RAND, etc.)

Note: Not all places listed here currently have ADA Army Educational Requirements/Review Board positions. Some positions require interdisciplinary technologists.

Air Defense Artillery needs integrator analysts (operational research system analysts or engineering analysts skilled in simulations and modeling) who have a broad range of specific technological skills in addition to the analytical tools traditionally employed.

Paramount to the success of the integrator concept is the knowledge of the ADA field. How better to provide for our future than to place key ADA personnel in positions worldwide to help update and project ADA needs and concerns?

Figure 3 indicates where ADA technologists should work. Air Defense Artillery should have technologists at the ADA schoolhouse to ensure the needs of the ADA field are met. Positions with the Army Missile Command will help Air Defense Artillery to monitor and develop required missile technologies. Positions at the Department of the Army level will help to update the vision of the branch in terms of resources and personnel. Major command positions will ensure that ADA doctrine keeps pace with changing Army doctrine and will help define realistic capabilities for ADA. Positions with the Space Command will offer insight into the ever-increasing spectrum of ADA influence.

Air Defense Artillery can provide for growth in inter- and intra-service integration and interoperability. Think tanks and other academia-type positions will vault ADA into the twenty-first century as a truly vital arm of the combat forces. The ADA vision of the future will help our branch continue as "First to Fire."

Capt. Todd A. Rey is with the Professional Development Division, Office, Chief of Air Defense Artillery, U.S. Army Air Defense Artillery School, Fort Bliss, Texas.

Figure 3

The ADA Year

The U.S. Army Air Defense Artillery School, Fort Bliss, Texas, has developed new strategies to meet the Army's "Year of Training" objectives by improving the way Air Defense Artillery soldiers train.

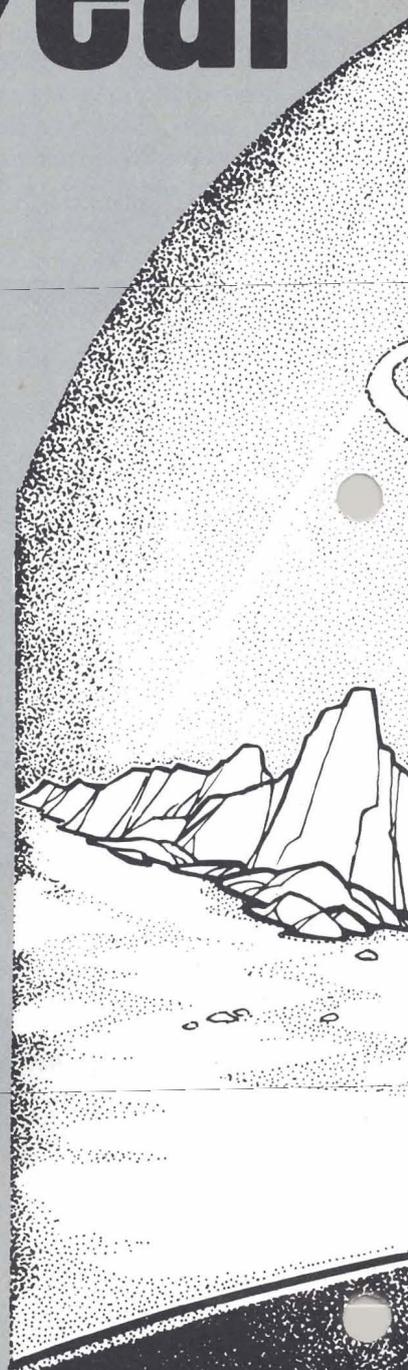
The school initiatives are part of a Fort Bliss-wide Year of Training Plan. While most of the actions generated by the plan will affect only soldiers and civilians assigned to Fort Bliss, those developed by the Air Defense Artillery School, as the branch proponent, will have an impact on ADA units around the world.

"We thematically celebrate 1988 as the 'Army Year of Training.' However, we have developed a corporate strategy designed to make not just 1988, but every year, the 'Year of Training' in Air Defense Artillery," said Brig. Gen. Donald M. Lionetti, the school's assistant commandant.

One highlight of the "ADA Year of Training Plan" sure to prove especially popular with ADA soldiers is the creation of an Expert ADA Badge. There's also a fast track program for initial entry soldiers and a forward area air defense range target system that will, at last, provide commanders a reliable means of qualifying and certifying all weapons operators. The school has even asked air defenders to come up with a "Jody Song" with ADA lyrics.

These training innovations are explained in the following series of articles which focus on the ADA Year of Training.

Expert ADA Badge	30
Fast Track to Excellence	32
ADA Cadence Calls	33
Range Target System	41
Safety in Training	45



of Training

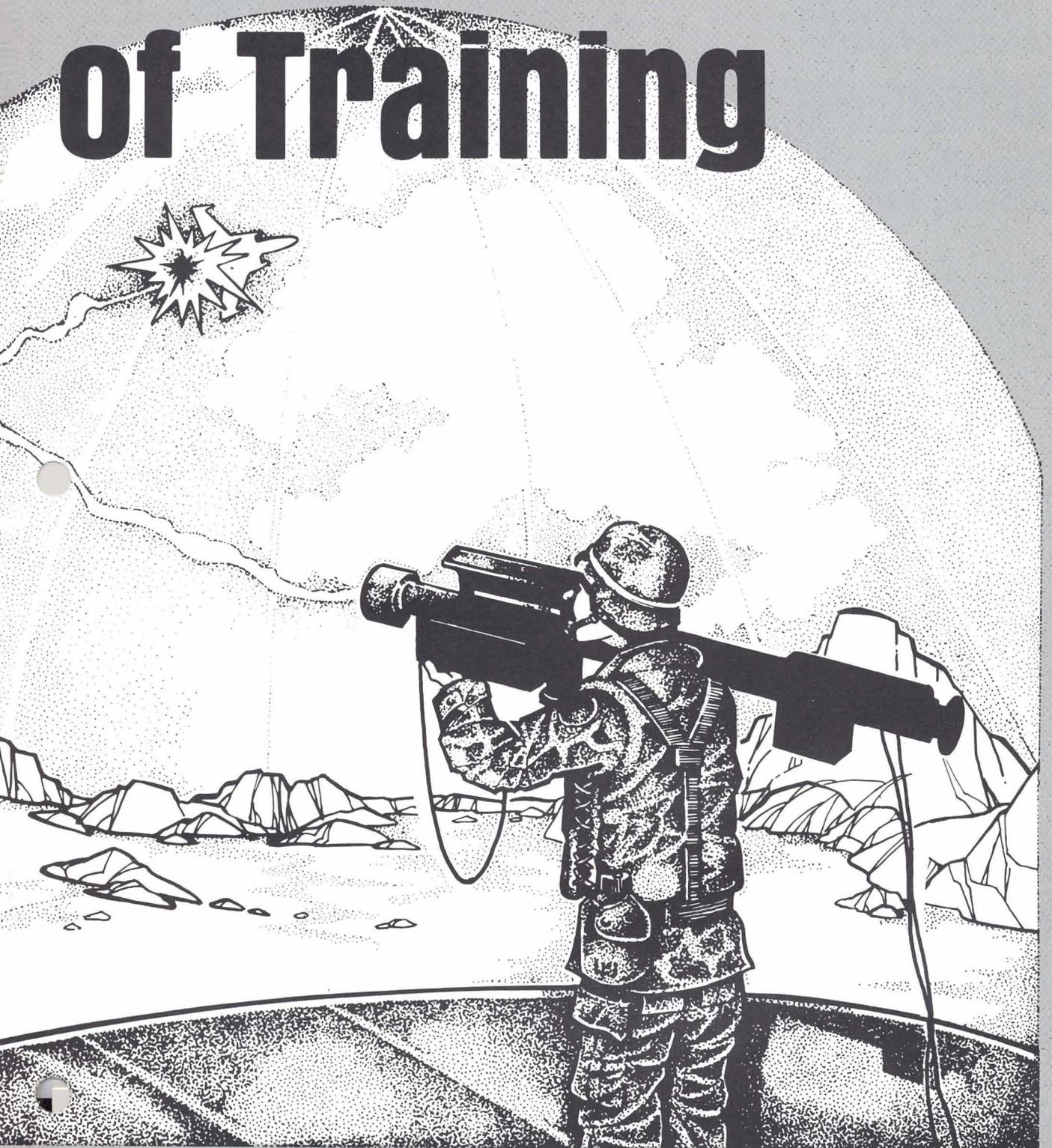


Illustration by Dennis Kurtz

Expert Air Defense Artillery Badge

Are you good? Would you like to show that you are good? The Air Defense Artillery branch plans to seek Department of the Army approval to award an Expert Air Defense Artillery Badge. The proposed EADAB will recognize ADA personnel who attain a high degree of professional skill and proficiency, promote esprit de corps, provide an incentive for greater effort by ADA personnel and foster quality training for ADA personnel.

Today, the EADAB is just a proposal. Tomorrow it may become a reality.

Before the EADAB becomes a reality, a number of hurdles have to be cleared. The Department of the Army, in the past, had denied other combined arms branches permission to issue expert badges for fear the badges would dilute the prestige of the Combat Infantryman's Badge. There's an overabundance of differing opinions on which ranks should be eligible to wear the badge and on what the qualifications should be. The proliferation of ADA MOSs complicates the certification process.

This article describes what would emerge if one proposal on the EADAB, by the U.S. Army Air Defense Artillery School, Fort Bliss, Texas, is approved.

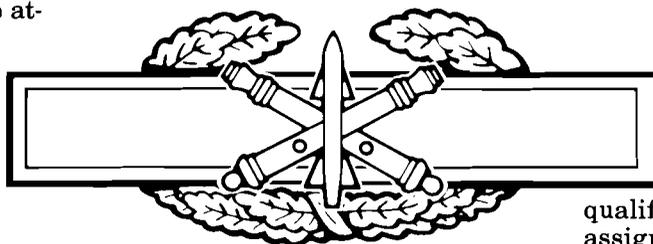
The proposed badge, similar to the expert infantry badge in size and shape, has an artillery red

background with the Air Defense Artillery insignia superimposed in the center.

There also will be a Combat Air Defense Artillery Badge. The CADAB is the same as the EADAB with the addition of a wreath.

The EADAB is not easy to earn. It is physically and mentally demanding. The EADAB is not designed to reward the *average* soldier.

Who is eligible for the EADAB? Enlisted personnel of all pay grades of the Active Army, National Guard or Reserve in career management field (CMF) 16 or 23 and officers and warrant officers of the ADA branch are eligible to take the EADAB test.



Combat Air Defense Artillery Badge

How do I qualify for the EADAB? All candidates for EADAB testing must —

- volunteer for EADAB testing,
- be recommended by their unit commander,
- qualify with their assigned weapon or the M-16 series rifle and
- have a passing APFT score per AR 350-15.

So far so good! But what do I have to do to be awarded an EADAB?

Testing

To qualify for the EADAB, candidates must successfully complete the required number of tasks in each of the eight critical performance areas outlined below. All candidates must be tested on all tasks within a critical performance area.

Comprehensive written test. Each candidate must pass a written test consisting of performance-oriented multiple choice questions. Candidates must answer a minimum of 80 percent of the questions correctly, within two hours, to pass the test.

The comprehensive written test, when finalized, may cover all ADA weapons, a family of weapons like SHORAD or HIMAD or a primary MOS.

Army Physical Fitness Test (APFT). The APFT consists of three events: pushups, situps and a two-mile run. Substitution of a test event is *not* authorized. Candidates must pass each event with a minimum of 90 points for a minimum passing score of 270 points.

Land navigation. Land navigation will consist of a day course and a night course.

Weapons qualification. Candidates must have qualified as "expert" with an assigned weapon or M-16 series rifle according to the appropriate field manual. They must qualify within 12 months of the test date.

Communications. Candidates must assemble and operate a field telephone, assemble and operate an FM radio set and enter a radio net and authenticate.

Survival. Candidates must put on an M-17 series protective mask with hood, decontaminate skin, put on and wear mission-oriented protective posture (MOPP) gear, decontaminate individual equipment and remove MOPP gear, replace the filter in an M-17 protective mask, store an M-17 series protective mask, camouflage self and equipment, reduce a stoppage in an M-16 series rifle and disassemble and assemble the M-16 series rifle.

Forced road march. Candidates must complete a 12-mile (19.3 kilometer) march in three hours with authorized field equipment.

Hands-on evaluation. The exact configuration of the hands-on evaluation part of the EADAB test has not been determined. Again, it may be by family of weapons or by primary MOS. If keyed to an MOS, the hands-on evaluation for a Stinger gunner might look like this.

Candidates must complete a minimum of 80 percent (23 tasks) of the 29 tasks in the MOS 16S hands-on evaluation in three hours. A passing score is required on all of the performance measures in each task.

The appropriate field uniform will be worn during the test. Individual field equipment will be properly worn or carried (for example, helmet on the head and the M-16 series rifle at sling arms) during all phases of the test. The physical training uniform (shorts or sweat suit, running shoes and undershirt without equipment) will be worn during the APFT.

All EADAB testing, except the weapons qualification written test and APFT, will be conducted in a field environment. The EADAB test is designed to be physically and mentally demanding and will be conducted during four consecutive days (96 hours). Candidates should be billeted in tents for the entire duration of the test.

USAR and ARNG units may conduct EADAB testing during annual training periods provided that all necessary unit training is performed. Units unable to administer the test during annual training may conduct the test during no more than two consecutive multiple unit training assemblies. The testing may be accomplished during regularly scheduled training or equivalent training periods.

Retesting

A candidate cannot qualify for the badge if he fails any critical performance area but may, at the discretion of the EADAB test board, continue to test all remaining tasks for training. A

candidate who fails the test must wait 180 days before taking the test again.

Once a candidate qualifies by test and performance, award of the EADAB will be announced in orders. The badge will be presented at an appropriate ceremony and worn per AR 670-1. The EADAB will be a permanent award (no retesting is required once awarded).

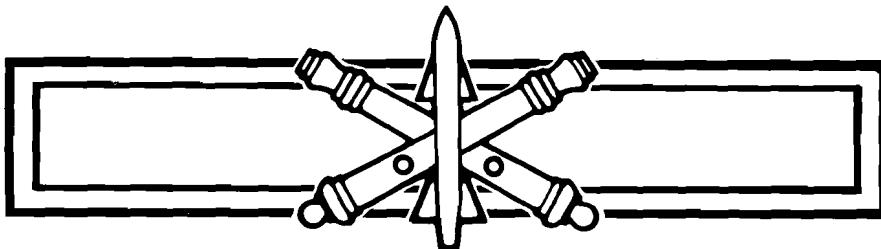
The commandant, U.S. Army Air Defense Artillery School has Army staff responsibilities for the EADAB program and approves who may administer the EADAB test. Test proctors may be commanders of Active Army, Army National Guard or Army Reserve Air Defense Artillery units holding the grade of lieutenant colonel or above.

Qualified commanders (proctors) will—

- submit a request for EADAB materials per procedures for testing,
- establish an EADAB test board under the provisions of AR 15-1,
- appoint representatives to the EADAB test board,
- conduct the EADAB test and
- award the EADAB.

Unit commanders will arrange for the weapons qualification requirement for the EADAB test and report the weapons qualification score of EADAB candidates to the test board chairperson. Commanders will certify that the candidates have a passing score of 270 on the Army Physical Fitness Test for the standard three-event (pushups, situps and two-mile run) test.

No, the expert air defense artillery badge is not a reality. But it could be soon.



Expert Air Defense Artillery Badge

Army Year of Training Objectives

Embed appropriate standards of technical, tactical and leader skill competence in Active, Reserve and civilian institutional training.

Implement standardized training strategies for use by units in the field which result in certified crews and enhanced readiness.

Implement standardized training strategies for soldiers in TDA organizations that result in maintenance of basic warfighting skills.

Provide field commanders with objective standards to assess and report training readiness.

Recognize excellence in training throughout the total Army.

Implement standardized training strategies for all Department of the Army civilians.

Enhance opportunities for individual development through training, education and mentoring.

Foundation for Pursuing Army Year of Training Objectives

Emphasize positive leadership in an environment that places safety in training as priority one.

Emphasize the joint, combined

and total Army perspective in training.

Emphasize non-commissioned officers as the first line trainers.

On the Fast Track to Excellence

All aboard! Next stop: excellence

The U.S. Army Training and Doctrine Command has recently established a "fast track" program for initial entry soldiers in all MOSs. Air Defense Artillery's fast track program is tentatively titled "Excellence in ADA." Acceptance into the Excellence in ADA program is a soldier's ticket to ride on the fast track in his MOS.

In recent years the quality of Army recruits has risen. For a well-educated, motivated soldier, Air Defense Artillery's fast track program is intended not only to encourage superior performance but to ensure that outstanding soldiers don't derail a promising career once their initial period of uniformed service is over.

The goal of the fast track program is to identify exceptional soldiers with the potential for accelerated advancement. The program will be open to the top 20 percent of soldiers entering advanced individual training (AIT) based upon their performance in basic training.

The development of the whole soldier is important to the Army. To gain a berth on the fast track Excellence in ADA program, soldiers must demonstrate a combination of projected academic abilities, motivation and

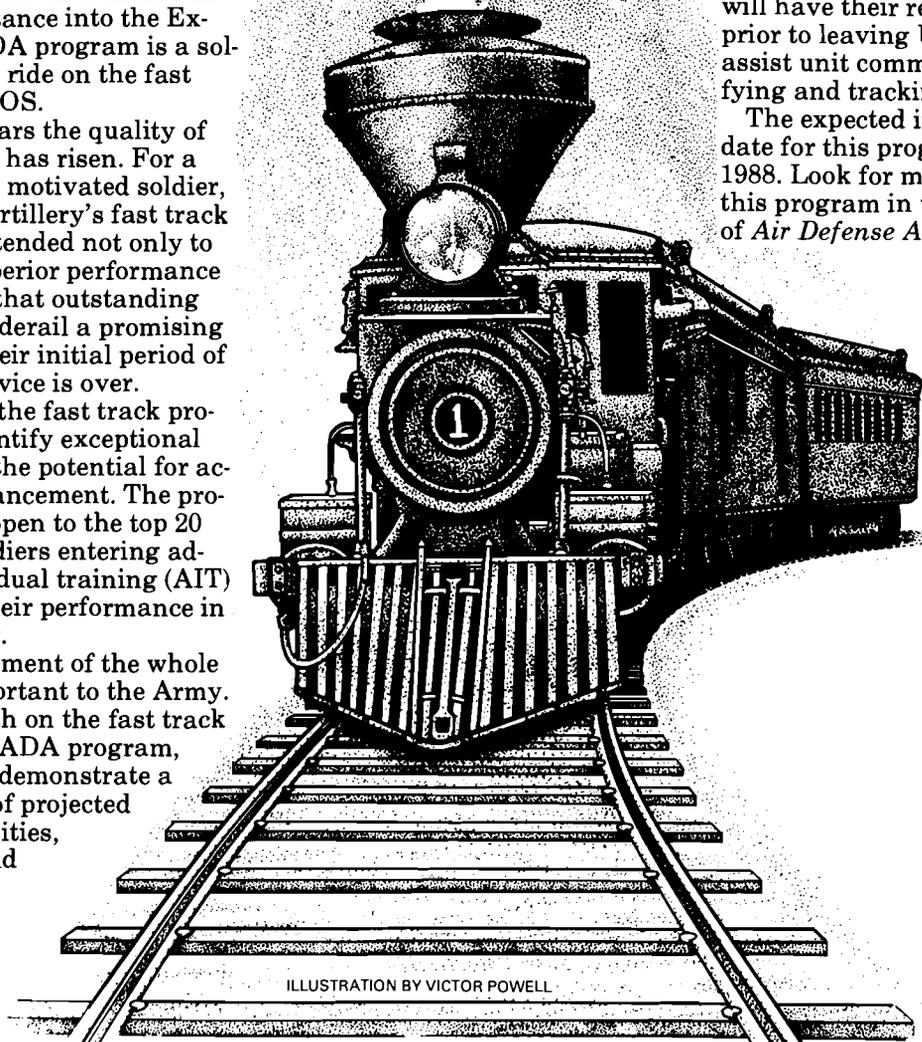
overall performance that shows they can significantly contribute to making the word "excellence" synonymous with Air Defense Artillery.

Soldiers selected for the Excellence in ADA program will receive additional instruction after normal duty hours. This instruction will focus on skill level 1 tasks not presently trained in AIT and some skill level 2 tasks. The number of hours of instruction will vary based upon the MOS.

Waivers of time-in-grade and time-in-service requirements will not be granted for promotion to E-2 and E-3. However, USAADASCH intends to promote successful Excellence in ADA soldiers to E-2 and E-3 as soon as they meet the minimum requirements.

Excellence in ADA graduates will have their records annotated prior to leaving USAADASCH to assist unit commanders in identifying and tracking these soldiers.

The expected implementation date for this program is July 1, 1988. Look for more details on this program in upcoming issues of *Air Defense Artillery*.



ADA Cadence Calls

*Here's the best
you've ever heard
time to judge 'em
first through third*

Military music boasts a long heritage that stems from the tom-toms and conch horns of primitive tribes to the flutes whose notes marked time for Greek phalanxes and from Joshua's rams-horns that tumbled the walls of Jericho to the sudden, terrible blast of Gideon's three hundred trumpets which put the Midianites to rout. Roman legions matched their conquering tread to the cadence of the curved busine and the tuba, and the massed brass of the Crusaders answered the challenge of Saracen musicians. Music has never failed to accompany the unending series of conflicts that followed. Not even the tumult of the guns has managed to silence it.

Marching tunes have always boosted morale and stirred emotion in the troops. Every American war has brought with it new marching songs, such as "Yankee Doodle," "The Battle Hymn of the Republic," "When Johnny Comes Marching Home," "The Girl I Left Behind Me" and "Over There." By the end of World War II all sorts of marching songs reflecting both people and their culture, and events as

they were experienced by the troops, appeared as songs and as cadences on the drill field. These include songs like "Anchors Aweigh," "The Caisson Song" and "Wild Blue Yonder" and marching songs like "Gee Mom I Wanna Go Home" and "They Say That in the Army" to name only a few.

Toward the end of World War II a new development in cadence counting surfaced among the armed forces — the "Jody Call" or "Sound Off." In May 1944, as exhausted marching troops were returning to their barracks at Fort Slocum, New York, a rhythmic chant was heard from somewhere in the columns. Other soldiers gradually joined in and their dragging feet picked up momentum. Thus, the "Duckworth Chant" began. The chants were named after their creator Private Willie Duckworth.

No story explaining how the "Duckworth Chant" or "Sound Off" became known as "Jody Call" or "Jodies" exists. Jody is the civilian who enjoys the comforts of civilization while the serviceman or woman is training in the field or stationed overseas.

The original chant contains the familiar "Sound Off" chorus which was repeated after each verse. Since 1944 hundreds of short verses have been used, making the "Jody Call" the most well-known cadence call of all time.

Jody	Chorus	
Sound Off		<i>(By individual)</i>
1 - 2		<i>(By troops)</i>
Sound Off		<i>(By individual)</i>
3 - 4		<i>(By troops)</i>
Cadence Count		<i>(By individual)</i>
1 - 2 - 3 - 4,		
1 - 2.....3-4		<i>(By troops)</i>

This spring, in an attempt to get air defenders marching to the same drummer, so to speak, the Office of the Chief of Air Defense Artillery (OCADA) sent a request to the field asking air defenders what songs or chants they were marching to. Those responses are listed on the following pages. After reading all of the songs write the number of your first, second and third choices on the coupon on Page 40. Send the coupon to Office, Chief of ADA, ATTN: ATSA-AC-FP, Fort Bliss, TX 79916.

1

In Fort Bliss, Texas, USA,
Is the home of America's ADA.
Where soldiers are all that they can be,
Serving our nation with dignity.

We're trained to be solid as a rock,
Maintain our vigilance around the clock.
We shoot, move, and communicate,
To send a lot of enemy to the Pearly Gate.

There's Patriot, Chaparral, and Vulcan too,
Hawk and Stinger can annihilate you.
We're getting restless from sitting still,
Send us to Lebanon to prove our skill.

We're the "First to Fire" and I'll tell you why,
We take charge and never say die.
The future battle is the ultimate test,
ADA will show why we're the best.

Everybody knows we're tough,
Don't know when we've had enough.
We're going all the way, this you can bet,
ADA doesn't know the meaning of "quit."

Keeping the skies friendly and free,
Is the job of the Air Defense Artillery.
Until we're needed we will wait,
When America calls we won't hesitate.

— SFC Juan O. Gutierrez

Hey we're gonna sing a little Jody now
Sing along with me, I'm gonna show you how
Sing about being all you can be
Sing about the Air Defense Artillery.

Air Defense soldier, you're the best
Rough and tough and trained enough to pass the test
Ready to go anywhere, and I'm no liar —
Ready when you've got to be the first to fire.

Air Defense soldier, lookin' strac
Where you goin' with your Stinger on your back
"Goin' where the Army's goin', to the front
Gonna give some cov'rage to the tank and grunt."

Air Defense soldier, lookin' number one
Where you goin with your Chap and with your gun
"I'm goin' where the U.S. Army needs me, friend
'Cause there's some soldiers out there who I'm gonna
defend."

ADA soldier, slow down to a walk
And talk to me a little bit about your Hawk
He said, "I'm sorry, buddy, but I can't slow down
My Hawks and I have got to cover lots of ground."

ADA soldier with your Patriot
I hear you got some stuff that's really hot
If someone's flyin' at me, gonna cut no slack
I'm first to fire — I'm gonna drop him in his tracks.

I'm a duck hunter, and he's the duck
And if he fires at me you know he's out of luck
He's gonna get the message if he comes my way
'Cause I'm the first to fire, you know I'm ADA.

— Lt. Col. Doug Hemphill

We're ADA we work with rhythm
So listen up, 'cause we're gonna sing some.
Our jobs are hard, we work around the clock
We never give in, and we never stop.

ADA Body Rock
The only thing to get you around the clock
ADA Body Rock
Won't let you quit and you never stop

24 hours, 7 days a week
Keep the system on the air don't worry 'bout sleep.
We guard the skies all night and day
ADA Body Rock is here to stay.

Now what's that thing that get-cha round the clock
Won't let you quit, won't let you stop
It's a new rhythm and it's very hot,
We call this ADA Body Rock.

ADA is kind of slick
ADA we never quit
ADA we can rhyme
ADA can do the double-time.

We can run 5 miles and we won't stop
'Cause we got the ADA Body Rock.

— Sgt. Clifton M. Bynum

32nd AADCOC wanted to keep the peace —
So they went out one day and hired attack geese.

Honk (left), honk (right),
Honk (left), honk (right)! (Refrain)

Had one mean goose workin' up at Hardheim,
Couldn't sneak past 'em, night or anytime.

(Refrain)

He wore BDU, brass and a combat boot
But he hadda honk real loud cuz he couldn't shoot!

(Refrain)

His name was "Drumstick," and he looked real mean,
Carrying round two Stingers and wearin' Army green!

(Refrain)

So keep in mind, if you come to Hardheim's site,
An' tangle with ol' Drumstick, you'll get a fight.

(Refrain)

So it's clear to all, that with geese like him,
If the Soviets come, 32nd AADCOC'll sure whip them!

(Refrain)

— Capt. David B. Hamilton

I am ADA (repeat)
This is how we start our day (repeat)
Up in the morning and out the rack
We run two miles on the PT track.
Knocking in doors, kicking in walls
ADA troops get it all.

I am ADA
All the way
ADA
Every day

I get up every morning about a quarter to four
I see my First Sergeant standing at my door.
I say good morning with a big wide grin
He says get down soldier and knock out ten.

'Cause I'm ADA
All the way
ADA
Every day

I wake up in the morning with running on my mind
All I want to do is double time.
I get a flashlight and a safety vest
We do PT in the leaning rest.

'Cause we're ADA
All the way
Safety Jody every day.

— SSgt. Slater L. Jackson

Listen up soldiers I got a story to tell
 About an ADA unit that's doing well,
 They run all day and they work all night
 This ADA unit is quite all right.

Chaparral, Redeye, and Stinger now
 Are three hot weapons that will turn you out,
 The Hawk, the Patriot, the Vulcan too
 Don't mess with them or you'll be through.

Now it's time to end my story right
 I'm ADA soldier and I'm dyno-mite
 The ADA motto is one you can tell,
 "First to Fire" and we do that well.

— SSgt. Donald F. Knight

Engine roaring, gonna take a trip
 C-130 rolling down the strip
 1SG has us all take a seat
 We'll be gone while others sleep.

'Cause we're first to fire
 Day and night
 First to fire (Refrain)
 Do it right

Patriot ripple one and two
 Hawk standin' by for shoot look shoot
 Got C/V waiting in the wings
 And Stinger crewmen doin' their thing

(Refrain)

We train hard at NTC
 Second to none and can't be beat
 Up every morning by the break of day
 Air Defense still leadin' the way.

(Refrain)

Allies are part of the team
 With Air Force, Navy, and Marines
 If the enemy comes that'll be unwise
 'Cause ADA will clear the skies.

(Refrain)

— SSgt. Leamon D. Montgomery Jr.

I don't know but I've been told,
 ADA is good as gold.

We work all day and we work all night,
 Shooting down aircraft while in flight.

Dodging bullets and chewing nails,
 ADA defenders are tough as hell.

Rucksacks, buttpacks walking 'cross the land.
 Air Defense Daddies gonna make a stand.

We'll fight our way to the promised land,
 With our weapons in our hands.

— Sgt. Dane D. Rogers

Say Hey ADA
 Say Hey we are all the way

We are at battle stations before its light
 We are on the job all through the night

We are first to fire because we are always ready
 Keep that trigger finger nice and steady

We are lean and mean and fit to fight
 We are ready to show the ADA might

We put rounds on the ground and missiles in the air
 Mess with me if you dare

Killing planes is my game
 Air Defense Artillery is my name

Say Hey say Hey
 ADA all the way

— 1st Sgt. Nathan E. B. Thomas Jr.

Fired all my birds, so I went to G4 —
 Said, "Hey, sir, gotta have some more!"
 He looked at me and grinned with pride,
 Said, "Sure, son, I got 200 more in hide."
 Loaded 'em up and I heard the G4 laugh —
 He asked, "How'd they fit on that deuce an' a half?"

Needed some more troops, so I went to G1,
 Said, "Hey, Sir, need some folks, cuz I got none!"
 He looked at me and bellowed his retort,
 Said, "Sure, son, as soon as I get a casualty report!"
 Filled it out and before I could say anymore,
 In through the door stormed at least 104!

Needed some maps, so I went to G2,
 Said, "Hey, Sir, tell me what you can do."
 He looked at me and said with a roar,
 "Take these two — I ain't got no more!"
 Ran outside and into the truck the maps I tossed,
 Drove aroun' the corner an' promptly got lost!

Needed a plan, so I went to G3,
 Said, "Hey, Sir, what can you do for me?"
 He turned to me and I felt I was dead,
 He threw the TSOP and bounced it off my head!
 Picked it up, made sure I ran out the door —
 Never went back, cuz I didn't want no more.

Needed some paper, so I went to SGS,
 Said, "Hey, Sir, I'm all out, I must confess!"
 He turned to me and with a deafening yell,
 Said, "Why didn't you RSVP the Hail an' Farewell?"
 Explained to him I'd never heard of it before,
 After leavin' that place, I was glad to go to war!

— Capt. David B. Hamilton

High power (HIPIR), IKE-WAR (ICWAR), A-D-P,
 Air De-fense Ar-till-er-y.

If General Patton were alive today,
 I know exactly what he'd say.

He'd say, "Take this tank and give me a Hawk,
And I'll teach those pilots how to walk."

— Maj. John Wilson

12

Up in the morning at the break of day
Time to sing about ADA.
Patriot, C-V and Hawk
Listen to us, we're gonna rock!

ADA, let's hear it!
ADA, let's cheer it! (with increasing volume)
ADA, let's shout it!
ADA!

Tell those grunts in the muck and mire
That ADA is FIRST TO FIRE!
Protecting them from the overhead threat
Trained to fight, the very best yet!

We're duck hunters, that's our name,
To fight and return — that's our game.
First to fire in the battle's fray,
We're ADA soldiers all the way.

Got a new system we call the FAAD,
Got to tell you its really BAD!
Line-of-sight and FOG-M too,
Look out hostiles, we can see you.

Up in the morning at the break of day,
Time to sing about ADA.
C-V, Hawk, FAAD, Patriot,
Those are our systems. Boy, we're HOT!

ADA, let's hear it!
ADA, let's cheer it! (with increasing volume)
ADA, let's shout it!
ADA!

— Suzann Tedesco

13

We have a weapon that's for hire
ADA missiles are "first to fire"

We are "first to fire" and that's the only way
So be all you can be in the ADA

Hey! Hey! A-D-A!
Hey! Hey! Stay that way!

Fire them low or fire them high
Fire from the ground or fire from the sky

We are ADA and what do we do
We support the Forces through and through

We are "first to fire" we've beat all the rest
From DA to Crete we've passed the test
All the Armed Forces know we are the best

Yes, it's true we're a class act
But we are ADA and that's a fact

First to fire is a lot to say
But we have to be good to stay that way

Hey! Hey! A-D-A!
Hey! Hey! Stay that way!

— SFC Gilbert D. Johnson

14

Air Defense Artillery,
Is the branch you want to be. (Refrain)
"First to Fire" is what we say,
Proud to be in the ADA!

Fort Bliss, Texas is our home post,
Quality soldiers who care the most.
Training future leaders is our job too,
Ensuring they know what to do.

(Refrain)

Stinger, Vulcan, Chaparral too,
Making our enemies sure feel blue.
Hawk and Patriot like the rest,
Are ADA systems and they're the best!

(Refrain)

So watch the skies all ADA,
Keep them safe all night and day.
Stand proud and taller than the rest,
You're an ADA soldier and you're the best!

(Refrain)

— Capt. Leon W. Hojnicky

15

Mech battalion needs the freedom to fight
Air Defense Artillery is gonna see to that.

'Cause we're First to Fire
Ain't no threat that we can't beat (Refrain)
Clear the skies
And make the enemy retreat.

They try to come in and we knock 'em all down
Enemy jets end up in pieces on the ground

(Refrain)

Friendly air base launching aircraft from the rear
With ADA protection, man, there ain't no need to fear

(Refrain)

Gunner's in the tub and search the PTL
Fills the sky with metal sending enemy to hell.

(Refrain)

— Capt. Michael D. Slotnick

16

Air Defense officers say we're light
We're here to tell you we're ready to fight

ADA FIGHTER

We can carry 70 pounds on our back
Day or night we like it like that

ADA FIGHTER

Air Defense soldiers salute with pride
We love our country that's the reason why

ADA FIGHTER

We paint our face and wear mops on our head
So we can take cover and stop the enemy dead

ADA FIGHTER

— Spec. Eric E. Kidwell

17

(to the tune of 1SG, 1SG Can't You See?)

Vulcan soldier, don't you hear?
Low mover, slow mover comin' near
Raise your barrels up to the sky
Hit 'em with a burst as they pass by

First to fire, first to fight
Pilots zoom away in fright (Refrain)
Set up, lock on, shoot 'em in the air
When they're on the ground we'll sort 'em there

Stinger crewman watchin' on a hill
Friend or foe he can tell 'em well
Round on your shoulder, BCU is hot
Put 'em on the ground with just one shot!

(Refrain)

Chaparral track movin' in the night
Get set up before first light
Chaparral gunner ready with the FLIR
Knock 'em down before they know you're there

(Refrain)

CWAR and HIPIR on a slope
RO/TCO at the scope
Finding targets and firing first
You know you got 'em when you hear tone burst

(Refrain)

Patriot radars workin' as a team
Flyin' at us is a bad bad dream
Nine birds goin' out looking for a track
Mass raid killer fills the sky with flak

(Refrain)

Duster, Redeye, .50 cal quad
Don't see them much but they were bad
Movin' to the future confident and free
Born from the Coast Artillery

(Refrain)

Hey there Armor and Infantry
Together you're a mighty team
But you can't do it all without me
The Air Defense Artillery

— Capt. Wayne J. VanGorden

18

(Sing at double time)

Way back in 1824
Artillery was organized at Fort Monroe
Coast Artillery became the name
Laid the foundation for our claim to fame.

ADA
Here to stay (Refrain)
Train to win
All the way

In two world wars we defended the skies
Philippines, Korea, Vietnam, we replied
"Proud to serve" reporting from fields and farms
Bold soldiers pride of the combat arms.

(Refrain)

The mission of the air defense is clearly set
Destroy, nullify, or reduce the air threat
Redeye and Stinger battle camouflaged

Nullifies the enemy of espionage.
For Chaparral and Vulcan when the enemy is met
Follows through with force to reduce the air threat
Herc, Hawk, and Patriot the heavyweights
Destroy the enemy with power of earthquakes.

(Refrain)

We've got modernized equipment, state of the art,
"First to Fire" ever ready to do our part.
Fort Bliss, Texas home of ADA
Air Defense Artillery is here to stay.

— SSgt. Melvin Douglas

19

I'm big, I'm bad, now can'tcha see —
I'm sure ya' got no desire to mess with me!
You know my name, no need to inquire,
It's ADA an' I'm the First to Fire!
Get outta my way, you Infantry wimp,
'Fore I break yo' leg an' make you limp!
Then kick yo' face an' make sure it hurts,
Don'tcha know I wuz trained by Colonel Kurtz!
Got Hawks in my han' and Stingers on my back,
Get outta my face — gonna cut 'cha no slack!
I'm ADA now, the best you'll find —
Don't anger me, I'm one of a kind!

— Capt. David B. Hamilton

20

Dad was in the Army,
Sister (brother) was in the Navy,
Mama was a jarhead,
ADA's the way I earn my bread.

Sound off 1-2
Sound off 3-4 (Refrain)
Break it on down now
1, 2, 3, 4, 1 . . . 2 . . . 3, 4

Spent some time across the water,
Came on back without a quarter,
32nd AADCOC is proud and true,
ADA is made for me and you.

(Refrain)

ADA all the way,
ADA is here to stay,
SHORAD ready to scour the skies,
HIMAD says "if it flies it dies."

(Refrain)

— Capt. A. E. Stearns

21

We're ready in the morning
And ready at night
Got guns on hold
And missiles on tight

I can tell a friend
And I can tell a foe
I can tell 'em when
To let the missiles go

I find them with my eye
Or I find them on my screen
I shoot 'em down
I'm a lean and mean

We rule the skies
Won't let them get through
With our weapon systems
Old and new

Got Patriot
The latest thing
Of flying objects
It's the King

Got reliable Hawk
Been around awhile
Knock 'em out
About 6 miles

Got a missile
They call the Chap
That low-flying plane
Going get a zap

Got a Vulcan
Wall of lead
Fifty rounds a second
They be dead

Got Stinger on my left
Stinger on my right
Stinger on a pedestal
Ready to fight

Don't you know
I'm firing first
If you come at me
Expect the worst

The skies are mine
You'll hit the ground
You just bit off
Another ADA round

I'm in the front
I'm a'guarding the rear
I knock 'em dead
Far and near

I maintain 'em
Keep 'em ready to go
AMV's an' tracks
Don't you know

I shoot 'em quick
I reload 'em fast
The enemy planes
They just can't last

Let me tell you pilots
In the enemy zone
If you take off
You won't be coming home

Listen up and listen twice
I'm gonna give you a little advice
HIMAD, SHORAD coming down
Best leave your planes on the ground

They choose the best
And train us right
Put us on the systems
And let us fight

ADA is everywhere
Fighting or training I don't care
Korea, Bliss, or Germ-a-nee
White Sands, Redstone, ASP

I'm the first to fire, that's my line
I'm shooting accurate and hitting fine
So all you folks, getta outa my way
Move right and left for the ADA

— Lt. Col. James H. Rosenblatt

22

Air Defense Artillery
Of the best I wanna be

Friendly skies you'll always see
First to fire at the enemy

What goes up (yeah) must come down
But you'll be safe here on the ground

Hooks and Hounds and Hips and Hinds
Got my Stinger right by my side

Fitters and Fishbeds, Floggers too
I gotta missile just waitin' for you

You don't see foreign birds around here
'Cause our high-tech they do fear

So hold 'em up an' hold 'em high
ADA soldiers with an eye on the sky

With our radar we gotta romance
We blow 'em away at the first chance

Now Sgt. Rock, he ain't no Joe
He said ADA is the way to go

— MSgt. Bruce W. Hills

23

We all know that it's a fact,
Air Defense is where it's at.

Pulling duty night and day,
Keeping skies clear all the way.

Fire that missile in the sky,
Enemies in the way will die.

When it comes to who's the best,
ADA beats all the rest.

We all know that it's a fact,
ADA is where it's at!

— Capt. Ralph Merrill

24

Stomp your left and drag your right,
ADA is out of sight.

Stomp your left and drag your right,
ADA is First to Fight!

Am I right or wrong,
You're right.

We're the ones who guard the skies,
Waiting for an enemy surprise.

On our guard both day and night,
Swift and Sure, we're First to Fight.

When I'm old and when I'm gray,
Don't you take my Stinger away.

When I die and when I'm gone,
There'll be ADA soldiers to carry on.

— SFC Eugene R. Maharry

25

Up in the morning fore day
All I hear is ADA

Missileman missileman shoot 'em down
From the sky, right down to the ground

Infantry Infantry can't you see
ADA is right for me

Linebacker and Stinger too
They can't be like me and you

Airborne Airborne not today
ADA is where I'll stay

ADA every day,
First to fire is what they say,
Colonel, Colonel can't you see
ADA is right for me.

— SFC Kirkpatrick

26

Lock your doors and hide from sight
The ADA soldiers are fix'n to fight
Standin' tall; we're lean and mean
Air Defense soldiers of the green machine

ADA faster and higher
ADA first to fire (Refrain)

No such thing as air to ground
Cuz ADA soldiers are the best around
We never run scared from an air attack
We step on up and give it back

(Refrain)

We're not afraid of enemy fighters
Cuz we are always first to fire
Death on the front and death in the rear
Enemy planes get no slack here

(Refrain)

Our calling card is often found
Burning rubble on the battleground
Infantry has got nothin' to fear
ADA is always near

(Refrain)

When they see a Stinger crew
They'll be lookin' for a parachute
When they see one of our Hawk crews
They'll be need'n somethin' new to do

(Refrain)

When they see a Patriot crew
They'll be wish'n they had never flew
When they see a Chaparral crew
They'll be wish'n they were ADA too

(Refrain)

When they see a Vulcan crew
They'll be runnin' from me and you

When they see how smooth we move
They'll be marching to the ADA groove

(Refrain)

— Spec. Scott Chandler

27

Air Defense Artillery
Come and run and fly with me
Come and see me soar away
Aiming for that peaceful day
Air Defense Artillery
Come and run and fly with me

Air Defense Artillery
ADA is good for me
Aiming high and aiming straight
"First to Fire" never late
Air Defense Artillery
ADA is good for me

Air Defense Artillery
Training is the way for me
Practice, practice every day
Training safely all the way
Air Defense Artillery
Training is the way for me.

— SSgt. James Von Hatten

28

(To the tune of "We Will Rock You")

A-D-A will rock you.
A-D-A will rock you.

You got mud on your face, a big disgrace,
ADA is gonna put you back into your place.

A-D-A will rock you.
A-D-A will rock you.

We will sing real loud, walk real proud,
Kick your face all over the place.

A-D-A will rock you.
A-D-A will rock you.

We got Stinger, Redeye and Chaparral,
Vulcan and Hawk just as well, and we're putting
those planes all on the ground.

A-D-A will rock you.
A-D-A will rock you.

— Sgt. James Carr

29

Heaven is great, to my surprise
There's a lot of ADA guys
There stood St. Peter beginning to holler
They got crossed cannons, on their collar

Bo Diddly, Bo Diddly can't you see
This ADA life is best for me

Lift your head and hold it high
Air Defense Artillery is passing by
Lift your head and hold it proud
They're running hard and yelling loud

HIMAD, LOMAD, SHORAD too
This PT is good for you

I don't know but I been told
6/43 is good as gold

Look sharp, be sharp is our cry
At Fort Bliss, we aim for the sky
Hey, hey, what do you say
Doing our best in every way

I don't know but I been told
The infantry thinks it's mighty bold
They don't know what the ADA can do
We are proud of our history too.

— 1st Sgt Ralph E. Moats

30

Up on a mountain top in the early morning
We receive message of an air raid warning
Radars are a ready we're searching the skies
For enemy airplanes that fly by

A-D-A protecting the skies (Refrain)
Leading edge of battle keeping soldiers alive

Patriot, Stinger, Hawk and C/V
We protect division corps priorities
Weapons hold, tight or free
First to fire at the enemy

(Refrain)

Patriot, Stinger, Hawk and C/V
These are the weapons that keep our skies free
Air Defense Artillery
Is the only branch for me

(Refrain)

— Maj. Harry A. Krimkowitz

31

(Slow to the tune of "Here We Go")
(Fast to the tune of "Run a Little, Run a Little,
Run a Little More, Hey!")

Air Defense Artillery
Is the only
Like for me.

From the Fulda Gap
To the DMZ
Protecting Armor
And the Infantry.

"First to Fire"
Is our cry
Enemy air will learn
If it flies, it dies.

Get them first,
Before they get us
Accuracy
Is a must.

— Anonymous

Jody Calls

Jody Songs

Jody Calls

ADA Cadence Calls

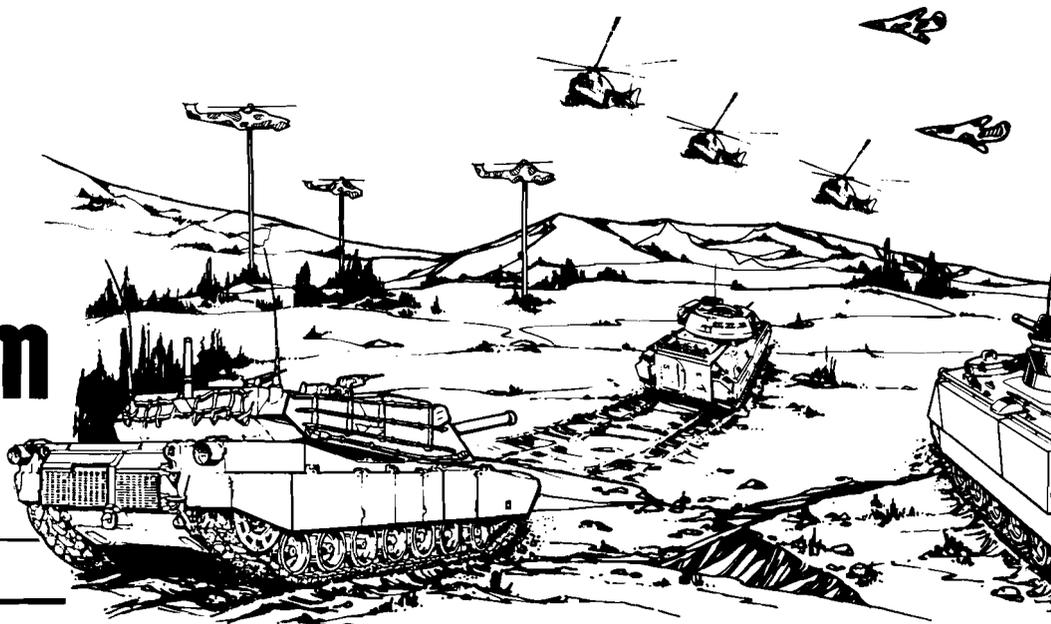
Now that you have read the entries
make your choices on this ballot and mail to :
Office, Chief of ADA, ATTN: ATSA-AC-FB, Fort Bliss, TX 79916.

No. _____ First Choice
No. _____ Second Choice
No. _____ Third Choice

The author of the winning entry will receive a new "first to fire" plaque
and a letter of appreciation from the chief of ADA.

Range Target System

by Fred Hernandez



The forward area air defense (FAAD) range target system (RTS) is the answer to a lot of ADA prayers. It will give short-range air defense (SHORAD) commanders something they've never had before — an accurate yardstick to measure individual, crew and unit performance. At last, SHORAD and FAAD commanders will be able to confidently predict how well their soldiers will perform in battle.

The RTS is an air defense engagement simulation/live-fire system being designed, developed and integrated by Science Applications International Corp.

(SAIC) for the U.S. Army Air Defense Command and the U.S. Army Missile Command. The system is designed to —

- provide a means of qualifying and certifying all SHORAD/FAAD weapons operators and crews in a timely and economical fashion;
- serve as a three-dimensional air defense engagement training device that will introduce a wide variety of combat situations to the soldier and will supplement training at the school and at the respective units;
- reduce the potential for fratricide while increasing the effective engagement range of ADA

weapons and soldiers, thereby reducing the potential for hostile ordnance release; and

- determine the effects of different FAAD concepts, configurations, conditions and procedures on ADA effectiveness.

To understand the importance of the RTS, it is necessary first to understand the shortcomings that have traditionally plagued SHORAD training. The Air Defense Artillery School recently evaluated its SHORAD soldier qualification and certification process and determined it to be deficient in several ways — most of them all too familiar to unit commanders.

Currently, ADA weapons operators are certified in limited live-fire engagement exercises which require them to fire their weapons at scaled targets. They must be able to kill the target at a reasonable range. Unfortunately, these exercises are usually conducted under unrealistic conditions using tactical situations that maximize the potential for achieving hostile kills. ADA gunners are unlikely to find conditions so favorable or hostile targets so cooperative in actual combat.

The live-fire exercises focus only on the gunner and not on the fire units as a collective

whole. They measure only the act of firing the weapon and not the other actions which lead up to and accompany the engagement process. Furthermore, live-fire exercises are expensive. Time and resources allow only a subset of the ADA population to participate in these qualification exercises. Expected reductions in the allocation of rounds for training purposes will further limit live-fire exercises.

Clearly, Air Defense Artillery needs a way to qualify and certify all weapons operators in a timely and economical fashion. To do this, we need range tables that specify the performance standards associated with scenarios of varying levels of difficulty. We don't have them at the moment. That's why SHORAD commanders often feel a vague uneasiness about the results of live-fire exercises. Most agree, however, that it beats classroom training. That's another part of the problem.

Current air defense training involves substantial classroom activities, laboratory simulations and limited field test exercises. While this training is extremely useful, it does not provide sufficient hands-on experience with the weapons in a combat environment. We haven't developed

sophisticated training simulators and computer-driven scenarios for SHORAD weapons to match those developed for high- to medium-altitude air defense weapons.

To make things worse, unit remediation training is somewhat limited by the shortage of weapons and training ranges. Field test applications and many other training environments do not provide enough feedback to determine a soldier's strengths and weaknesses.

Soldiers often respond with hesitation or panic when faced with the uncertainty of battle. Conventional training systems usually do not provide soldiers with the experience and practice they need to cope. Soldiers need to develop a repertoire of automatic contingency responses that can address a multitude of possible combat situations.

Air Defense Artillery needs a three-dimensional air defense engagement training device that can be used in the field, will introduce a wide variety of combat situations and will supplement training in the school as well as in the respective units.

SHORAD weapons engage aircraft flying at relatively low altitudes at distances of less than 10 kilometers. The ADA mission is to prevent or deter hostile aircraft from delivering ordnance on friendly assets within the effective engagement envelope. This has to be accomplished without posing a threat to friendly aircraft operating in the defended area.

Recent air defense research suggests that, while hostile attrition performance is adequate (about 75 percent on the average), the rate of hostile ordnance prevention is below that which is desired (60 to 80 percent) and fratricide is above that which is desired.

Therefore, we need a training system that can help reduce the potential for fratricide while increasing the effective engagement range of ADA weapons, thereby reducing the potential for hostile ordnance release.

The increasing capabilities of

the perceived threat have resulted in the modernization of air defense weapons and associated doctrine and tactics. Changes are being made in families of weapons; command, control and communications (C³); airspace management protocol; optical aiding; and tactical procedures. Many of the proposed modifications and procedural changes have yet to be fully investigated for effectiveness and utility.

We need a training system that will allow us to determine the effects that different concepts, configurations, conditions and procedures may have on air defense performance and effectiveness.

RTS is the answer.

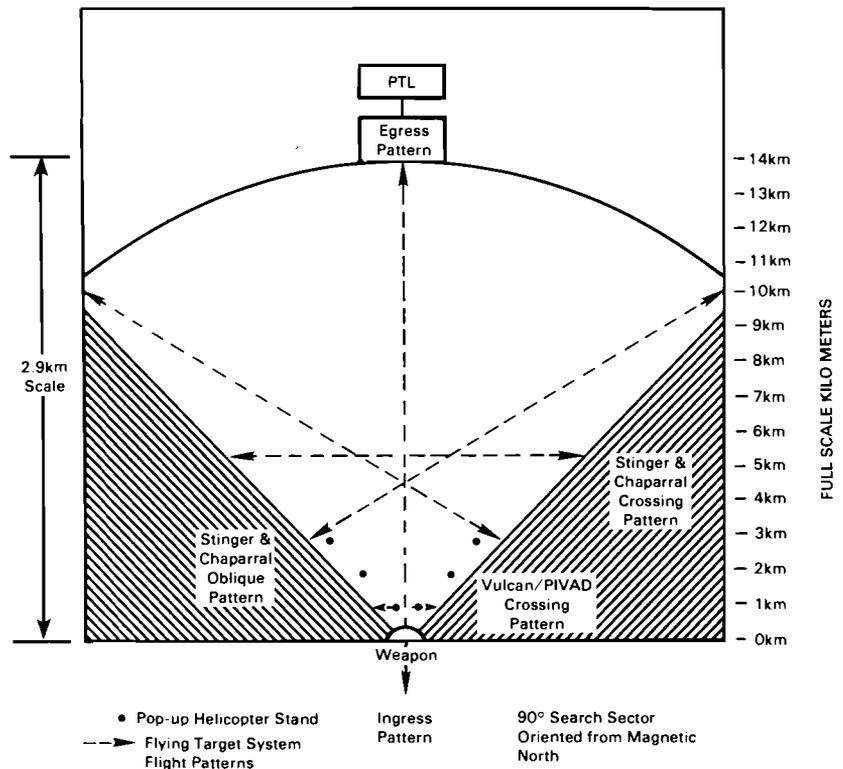
While the Air Defense Artillery School's primary objective in developing the RTS was to provide certification testing and evaluation, the system's ability to support both live-fire exercises and engagement simulations while sustaining unit readiness and proficiency soon became over-

whelmingly evident. That's why RTS has become one of the cornerstones of the ADA Year of Training Plan.

The RTS will effectively train SHORAD/FAAD soldiers in their engagement tasks, including visual aircraft recognition, battle drills, doctrine, tactics and C³. RTS training can also improve the speed, range and accuracy of air defense engagements. The RTS provides the variety and realism necessary for the rehearsal of air defense knowledge and skills and the automating of soldiers' contingency responses.

System Description

The basic RTS design was based on the currently fielded realistic air defense engagement system (RADES) developed by SAIC for the Army Research Institute to investigate issues pertinent to forward area air defense. The system uses scaled aircraft to elicit representative responses from ADA crews and weapons. All engagement actions



of the crews and weapons are captured in real time and coded according to aircraft range and time.

Target models represent actual NATO and Warsaw Pact aircraft and are presented in tactically realistic scenarios. The system can present single or multiple targets at a time. It employs up to six helicopter stands which elevate the rotary-wing target to simulate a pop-up maneuver. The self-powered helicopter stand and its pneumatic lift are mounted on a portable trailer. The helicopter targets can be controlled manually or via remote data link.

The system's fixed-wing aircraft are flown by remote control. They perform dynamic maneuvers at speeds and altitudes representative of their full-scale counterparts.

Flying rotary-wing targets are being evaluated as part of the

RTS development effort for possible inclusion.

The camouflaged, 1/5-scale replicas have been validated using engagement data from actual full-scale field tests and are currently available for military use. In fact, RTS targets have been supporting engagement simulation and live-fire tests for more than three years.

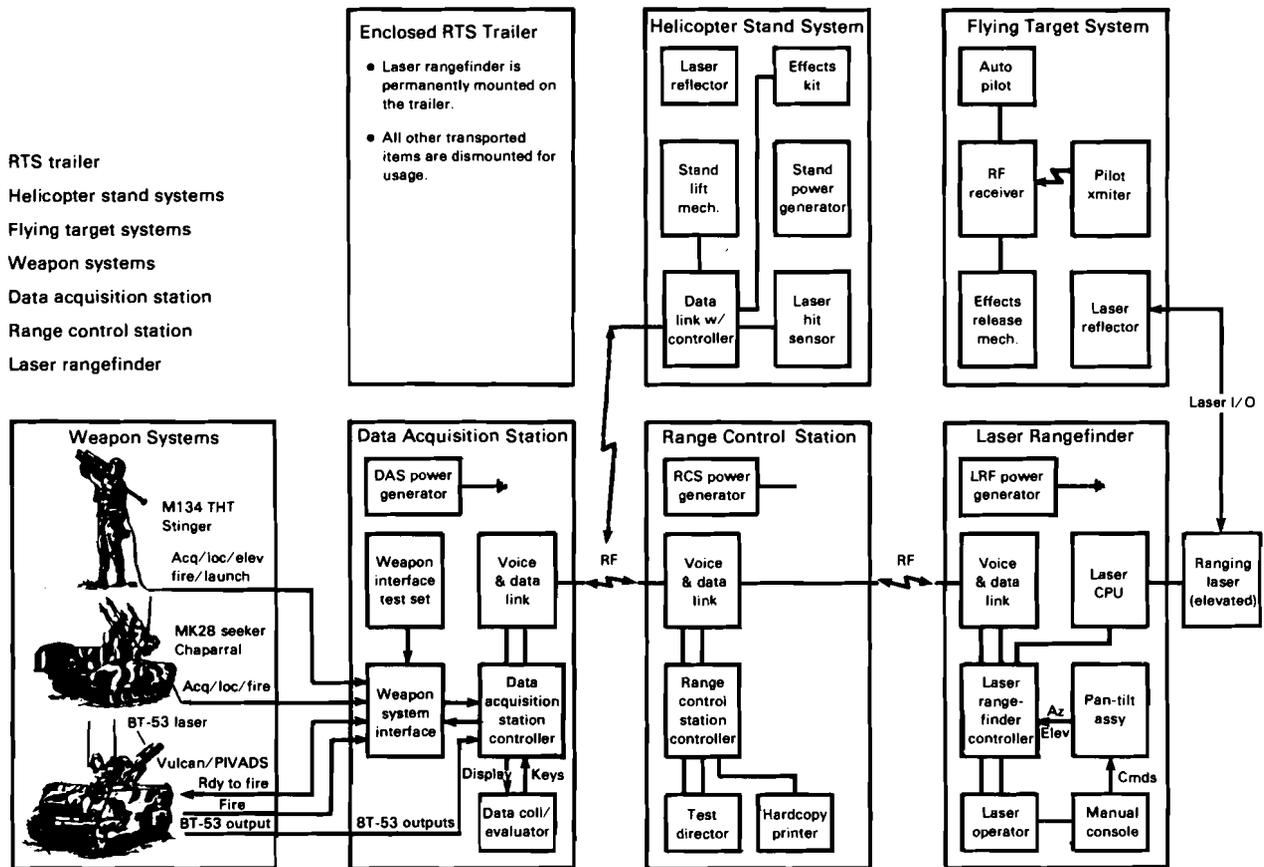
The measurement instrumentation module consists of a microcomputer, a communications interface and a universal junction box that permits weapon event recording.

The weapon interface has already been designed to accommodate measurements from the Stinger, Chaparral, Vulcan and product-improved Vulcan air defense system (PIVADS). Future FAAD weapons, such as ADATS and Avenger, will also be instrumentable using the RTS uni-

versal interface.

Commanders will be able to record weapons events including target acquisition, interrogation (Stinger and Chaparral), lock on, superelevation (Stinger), radar on (PIVADS) and fire. The communications data link will allow commanders to instrument soldiers' actions including visual detection and identification, and to command engage and cease engagement. All soldier and weapon engagement events (task performance measures) are measured in terms of the scenario time elapsed and the slant range from the weapon to the target.

The instrumentation component is modular, consisting of a data acquisition microcomputer for each station. Five modules would allow commanders to measure the performance of five weapons and observers simultaneously.



The RTS will record engagement outcomes for each scenario trial conducted. These outcomes (summary performance measures) include proportions of targets detected and correctly identified, correct friendly identifications, correct hostile identifications, friendlies engaged, friendlies killed, hostiles killed, hostiles delivering ordnance and engaged aircraft destroyed. All tasks and summary performance measures can be displayed for immediate feedback, either on a trial-by-trial basis or across several trials. The data on feedback screens can be generated as hard copy in a few minutes.

The computational and control component consists of a microcomputer, linked in real time to each data acquisition module, and an aircraft position-location system. The computer controls helicopter stand mechanisms, houses all relevant scenario specifications and trial background data, performs data transformation and provides data link communications with the various data acquisition devices.

Trial data from each weapon or crew can be uploaded to the control station microcomputer for data storage, transformational and analysis purposes and summary feedback generation. The position-location device records the position of all targets throughout a given scenario for each engagement event.

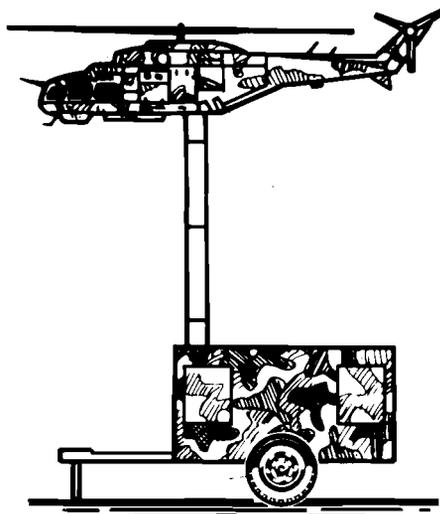
Versatility and Flexibility

The RTS was developed to meet a number of military objectives and is, therefore, quite flexible and versatile. It has been designed with sufficient modularity to enable any number of applications.

The system does not require all of its three components (targets, instrumentation and computational control) to become operational. For example, the target component could be taken to a live-fire range if live-fire testing were desired without the usual event measurement process. This would enable commanders to assess the capability of soldiers to

effectively destroy aircraft in a live-fire situation without the additional resources and personnel required for engagement sequence measurements and evaluation.

Or perhaps the commander, trainer or evaluator would be interested in focusing only on specifics such as weapons events, visual performance, identification accuracy or individual and collective crew performance. The



Rotary Wing Target

RTS could be reconfigured to allow these specific applications.

Commanders can use the RTS to determine the performance capabilities of personnel and to determine their candidacy for qualification and certification.

Trainers can employ the RTS as a training device, complete with immediate feedback capabilities.

Air defense planners can use the RTS to test new equipment, procedures, doctrine and tactics. They can also use the RTS as an

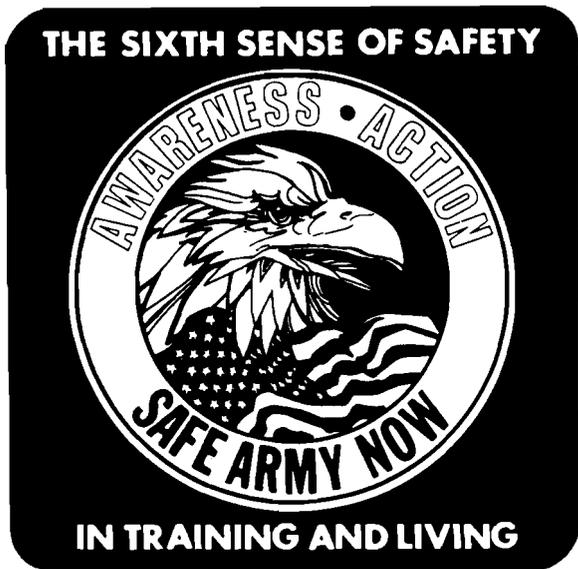
experimental research tool to answer specific questions concerning air defense issues, requirements or concepts, or as a performance evaluation yardstick to determine the effects of environmental and individual differences variable on air defense effectiveness and efficiency.

The RTS can be used in a relatively small area. The scaling factor of the target aircraft provides realistic engagement simulations within a 2-kilometer square with aircraft altitudes not exceeding 1,000 feet. The training support package for the RTS will contain prescribed scenarios that specify target requirements, administrative constraints and controls, difficulty levels and recommended performance standards. Operations manuals that explain how to deploy and employ the system will also be included.

The prototype RTS is currently scheduled for demonstration testing during the second quarter of FY 89. Since the RTS is based upon simulation technology which already has been shown to be reliable and valid, we are confident that the system demonstration will be a success. We expect full-scale production of the RTS to begin by FY 91.

The RTS represents a quantum leap in SHORAD/FAAD training effectiveness.

Fred Hernandez is a training specialist with the New Systems Training Office, Directorate of Training and Doctrine, U.S. Army Air Defense Artillery School, Fort Bliss, Texas.



Safety In Training

by Lt. Col. Bill Kunzman

The U.S. Army Training and Doctrine Command has established safety in training as priority one for the Army Year of Training.

Integrating safety into training is not a new idea; units with strong safety programs normally include safety as part of routine training. A good trainer sets aside a number of hours to talk about safety and integrates safety into everyday training and use of equipment. However, many accidents occur because of failure to train to or enforce standards, failure to integrate safety into training and failure to conduct safety-specific training.

The average ADA battalion has at least one reportable soldier injury every month. Each year, nearly 20 air defense artillerymen die. Most of these injuries and deaths are a result of training shortcomings.

Units with good safety programs integrate safety into training by teaching soldiers how to be careful. Safety training goes

beyond the operation of individual pieces of equipment. Soldiers must learn about situations where they can be hurt, what the hazards are and what they can do to prevent injury.

The first place to integrate safety is in the unit drivers training program. In 1987, 50 percent of all on-duty ADA accidents and 85 percent of all air defense fatalities were in Army motor vehicles, combat vehicles or privately owned vehicles (POVs). Inadequately trained drivers consistently cause accidents. Since there is a definite crossover of driving skills in the operation of a POV, better drivers training will improve the safety environment of a unit both on and off duty. This is the area where the most lives can be saved and accidents prevented with the least amount of effort.

AR 600-55 requires battalions to conduct centralized drivers training, testing and licensing, but many battalions leave management of the program to the battery commanders. The result is a driver who has not been adequately trained during advanced individual training or at the unit.

He is not prepared for the driving job required of him. Too often we assume soldiers only need familiarization with Army vehicles.

To reduce vehicle accidents, we must provide a complete, comprehensive battalion drivers training program. The Transportation School's new FM 21-305, *Manual for Wheeled Vehicle Operators*, incorporates FC 55-32 which is an excellent guide for operating a battalion drivers training program.

Make the drivers training program highly visible and challenging. Manage drivers training at battalion level by setting and upholding standards, but let the batteries execute it. Have certified battalion master drivers perform licensing and testing and conduct the training prescribed by the battalion program. Commit resources and allot time to drivers training. Do not make it part of motor stables. Identify training objectives and put them on your training schedules.

We must include all skills associated with vehicle operation in the driver's training. This includes defensive driving techniques, how to tow loads, the

effects of towed loads, and hooking and unhooking towed loads. For example, two-and-a-half ton truck drivers often learn to pull empty water trailers and then react incorrectly when pulling a full water trailer. They aren't used to the effects of water movement and they lose control. Many soldiers get hurt because they do not know the proper way to hook and unhook trailers and towed loads. The proper methods for securing and tying down internal or towed loads often are not included in drivers training programs. Recovery operations must be taught and, since many soldiers are injured mounting or dismounting vehicles, these skills also should be taught. Take time to integrate these often overlooked skills into the drivers training program.

Refresher training is required when a unit deploys to an unfamiliar area or when soldiers have not met the standards. Opportunities to conduct controlled training while driving in ice, snow, sand, mud and rough terrain and under blackout conditions should be planned in advance and may

be necessary for larger vehicles or tougher skills like backing with a towed load. Use driver fairs or rodeos, awards and incentives liberally to keep good, safe, professional driving foremost in soldiers' minds.

Safety is a team effort and can be integrated into training by focusing on the skills required to execute team safety in vehicle operation. Assistant drivers should be assigned specific responsibilities and then trained to perform them. Many accidents occur when the assistant driver does not help the driver. For example, most accidents caused by driving too fast for the road conditions could have been prevented by a "shotgun" (often an officer or non-commissioned officer riding with the driver) telling the driver to slow down.

We must train ground guides in their responsibilities. We assume that a soldier who can drive is a soldier who can guide. This is not true.

Ground guides need a number of skills and they must practice these skills. The proper signals — where to stand, when to direct a

turn and who watches where — are all skills of well-trained ground guides.

Conduct vehicle emergency action training for all soldiers in the unit. They need to know what to do in specific situations like rollovers, and they must practice those actions. The first time a soldier gets down in an M-113 and tucks in for a potential rollover should not be when his life is at stake.

Conduct safety integrated training and briefings which demonstrate the debilitating effects of alcohol and fatigue.

Teach the benefits of wearing safety belts and ensure that wearing safety belts is part of your training program.

Train soldiers to assume a positive and professional attitude about driving a vehicle. Soldiers must understand the seriousness of the task at hand and approach every gear changing, acceleration and braking action with maximum attention.

Maintenance and dispatching are important. Training in preventive maintenance checks and services and dispatch procedures

FY 87 TRAINING ACCIDENTS ARMYWIDE

ACDT TYPE	NUMBER	DAMAGE	INJ COST	TOT COST	FATAL	NONF
AMV	758	\$4,430,579	\$ 1,000,320	\$ 5,430,899	8	247
CBT VEH	307	1,532,687	1,351,950	2,884,637	10	250
EXPLOSIVES	59	263,716	1,906,855	2,170,571	8	84
FIRE	56	1,033,328	58,075	1,091,403	0	25
MARINE	4	144,115	6,575	150,690	0	2
PERSONAL INJ	2,499	50,257	10,270,390	10,320,647	11	2,500
POV	34	18,517	502,995	521,512	3	32
OTHER	95	643,185	227,180	870,365	3	27
TOTAL	3,812	\$8,116,384	\$15,324,340	\$23,440,724	43	3,167

ADA TRAINING ACCIDENTS, FY 87, ON DUTY

ACDT TYPE	NUMBER	DAMAGE	INJ COST	TOT COST	FATAL	NONF
AMV	29	\$280,282	\$ 11,235	\$291,517	0	8
CBT VEH	3	68	5,415	5,483	0	3
FIRE	1	0	1,640	1,640	0	1
PERSONAL INJ	55	2,000	189,685	191,685	0	54
POV	4	0	90,335	90,335	1	4
OTHER	1	1,413	0	1,413	0	0
TOTAL	93	\$283,763	\$298,310	\$582,073	1	70

should be part of the unit drivers training program of instruction. Too often it is not. Soldiers who don't know how to perform PMCS have accidents because brakes fail or laterals lock up without any warning.

Safety specific training can supplement integrated safety training to improve a unit's safety posture. Conduct refresher training periodically to ensure skills that may have deteriorated are brought back to standard. Cold and hot weather training are good examples. Drown-proofing in the springtime will prepare soldiers for summer off-duty water activities. If your soldiers are weak swimmers or cannot swim, watch them closely during water training exercises.

Use regular safety briefings by the chain of command to provide timely messages to soldiers as a safety reminder prior to weekends or holiday periods. Have first-line supervisors conduct tailgate sessions, or one-on-one safety training sessions.

Establish supplemental safety training when certain soldiers do not attain the standard of a particular task and require additional training. A soldier who has no experience driving a vehicle prior to military service might require supplemental training before receiving an operator's license.

Remedial training is another form of training which contributes to a strong safety posture. Soldiers who receive traffic tickets or who demonstrate unsafe driving practices should attend remedial drivers training. Crews that have an accident or perform unsafe acts during battle drills can benefit from remedial battle drills.

Driving accidents are not the only safety problem. Explosives, simulator, and pyrotechnic accidents cause injuries and fatalities every year. Many accidents occur because soldiers didn't follow procedures or were not trained to do the task right. We don't do a good job of teaching soldiers how to use and handle

simulators; the dangers are not fully understood.

Explosive Ordnance Disposals (EODs) provide explosive ordnance classes on request. Integrate this safety training with setting up obstacles (trip flares), and EOD will demonstrate what a firing simulator or other pyrotechnic will do when it explodes.

Bivouac sleeping is another field safety problem. Every unit has procedures for sleeping, but few practice the plan during the daylight hours to ensure it will work at night.

Apply safety principles to all unit training to ensure safety is included and to ensure sufficient time is allotted for the performance of missions. Tired soldiers or soldiers in a hurry get involved in and cause accidents. Make sure all soldiers in the unit understand that they must perform tasks on time and without shortcuts. Failure to follow procedures leads to accidents

sooner or later. Leaders must continually reevaluate procedures to ensure need and correctness. First-line supervisors must ensure that procedures are followed.

The Army theme for this year is *training*. Every soldier's challenge is to make training realistic, challenging and safe. The most significant contribution a unit can make to this year's theme is to integrate safety into training.

The guidelines for preventing accidents are neither complex nor mysterious — they are as simple as clearing weapons or turning in used ammunition. But when we neglect safety guidelines in training, accidents, injuries and deaths result.

Lt. Col. Bill Kunzman is the ADA safety manager at the U.S. Army Safety Center Fort Rucker, Ala.

Training and the Budget Crunch

The Army Year of Training overlaps fiscal year 1989, the year of "negative budget growth." The budget crunch threatens to defer some ADA Year of Training initiatives, such as the proposed Top Gun and ADA Expert Badge programs, but the Army remains committed to quality training.

"The budget cuts will be felt," said an Army spokesman, "but Army leaders know what makes a quality force and they will preserve those key ingredients. As leaders, we will ensure we make the best use of what we receive and also look at less

expensive means to accomplish training objectives."

The Army contends that the budget cuts will leave sufficient funds to continue essential improvements in readiness. Officials stressed that the Army will continue to —

- recruit and retain quality soldiers,
- man units at levels at which they can effectively train and fight,
- maintain the quality and scope of its educational and training programs and
- sustain a stable Reserve Component drill strength.

The Ghost of Sergeant York . . .

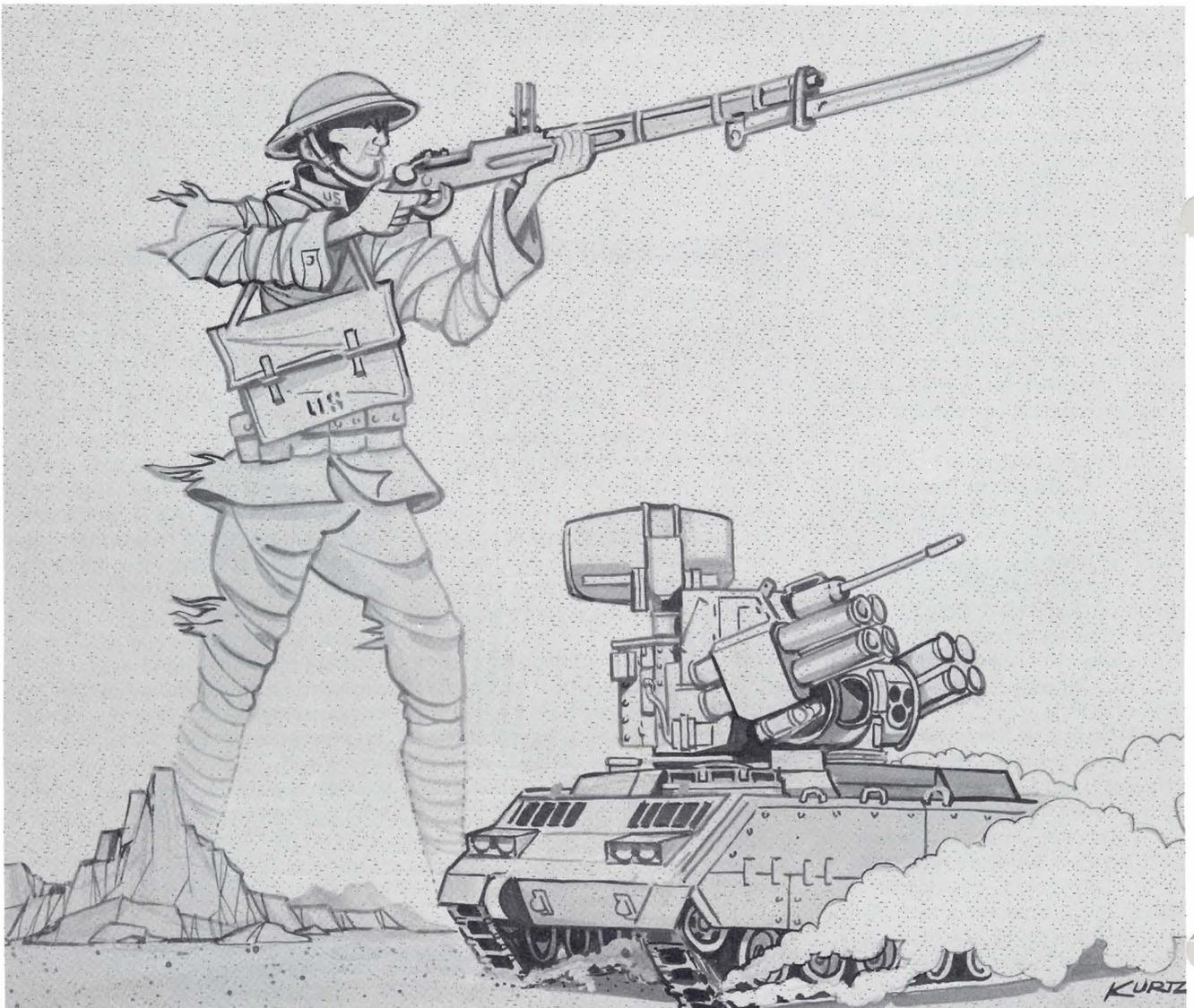
Missiles and guns don't make a mix

by Capt. Ruben Pena

This article is not a critique of the forward area air defense (FAAD) concept; it advocates the gun as a necessary anti-aircraft weapon. I believe the gun meets the tactical needs of a complete air defense and that it can play a more important role in the FAAD concept.

Opinion

In analyzing the series of articles which followed the presentation of the FAAD concept in the Spring 1986 issue of *Air Defense Artillery*, I think you have not given the same importance to the gun subsystem as you have to the missile subsystem. The FAAD doctrine considers the gun at the



same level as the missile, but when the concept was translated to requirements for each component, the gun's role was minimized.

The article that appeared in the Winter 1987 issue of *Air Defense Artillery*, dedicated to the line-of-sight forward (heavy) (LOS-F-H) component, specifies that the gun subsystem must engage targets "inside the missile's dead zone" besides providing for virtual attrition or suppression of hostile aircraft and ground targets. This means, I believe, that the role of the gun is secondary. This term, secondary, was used to define the gun as a subsystem of the line-of-sight rear (LOS-R) component (pedestal-mounted Stinger), in the Summer 1986 issue. This article says that this "secondary armament" can vary from a 7.62mm machine gun to a 25mm gun and includes the Spike rocket as a "no gun" subelement.

You have discussed the importance of the gun in each component of the FAAD concept, but you have not discussed the fact that there are no requirements for a "lone gun" subelement. I believe you give more preponderance to the missile as the air defense weapon for the forward area.

I think that when you set up the conditions to be accomplished by the LOS-F-H and LOS-R systems, the ghost of "Sergeant York" was flying over and influenced the process.

This influence resulted in priority being given to the requirements for long range and early engagement as a way to avoid the principal problem which pushed Sergeant York into early obsolescence: the helicopter's ability to use standoff techniques to deliver anti-tactical guided missiles and stay out of the gun's range. There is no doubt that the missile is more able to do this task. It has more range and its hit probability increases when it leaves the dead zone and remains constant until the end of combustion.

You must keep in mind the capabilities of the gun and the role it played in recent conflicts. The high initial speed of the ammunition and the high volume of fire lets the gun react quickly against aircraft flying very low and at so short a range that the missile is ineffective. Gunfire influences the pilots and obliges them to fly at higher altitudes, to deviate from the target or to deliver ordnance too early, missing the target.

In the recent Malvinas (Falklands) conflict, the Argentinean guns kept the Harriers flying at high altitudes and prevented the destruction of the Puerto Argentino airfield. At the same time, the lack of anti-aircraft guns on the British frigates let the Argentines, flying very low to avoid radar coverage, get so close that when they were detected optically it was too late to fire the missiles.

In a future conflict which will encompass electronic intelligence, electronic countermeasures, electronic counter-countermeasures and perhaps electromagnetic pulse, a well-trained gunner will have to put a great volume of accurate fire on targets he can see. Using guns as secondary armament mounted in the same vehicle with missiles will result in their use in the defense of the missile subsystem itself and will degrade the principle of mix.

The mere presence of guns and missiles doesn't mean mix, because from the same position both cannot exploit their capabilities. In a point defense, if the system is placed away from the asset to provide early engagement, the gun loses effectiveness unless the aircraft attacks the system. In this case, the gun would be acting as a secondary element in the defense of the missile system. On the other hand, if the system is placed too close to the asset, it will be the missile which loses effectiveness.

Is there a necessity for an "only gun" system? Is it necessary to give more importance to the gun? Could there be a possible variation of LOS-F or LOS-R components? Could a gun system be developed with a secondary missile subsystem to complement the actual systems? Field tests and the branch will tell us this in the future.

The FAAD system was not conceived to meet the operational capabilities of individual systems. It will survive the technological developments and the discussions about which kind of systems fit each component. By changing the requirements for the components, the FAAD system can grow with technological advances and tactical needs.

Captain Ruben Pena, an officer in the Army of Uruguay, attended the ADA Officer Advanced Course at Fort Bliss, Texas. His article, "The AirLand Battle Doctrine," appeared in the October 1987 issue of *Military Review* (Latin American edition).

ADA Career News

Qualifying for Colonel

Air defense officers looking toward promotion to colonel should be aware of the following career qualifying factors as listed in DA Pamphlet 600-3.

Minimum qualifications include —

- complete the requirements of military education level 4, graduate from a command and staff college, and
- have an assignment as a staff officer in a lieutenant colonel authorized staff position at division or installation (center or school) level or higher.

Exceptional qualifications include —

- successful battalion command, or
- completion of the requirements of military education level 1 and graduate from a senior service college, or
- serve as a deputy commander or brigade executive officer of an ADA brigade or its equivalent.

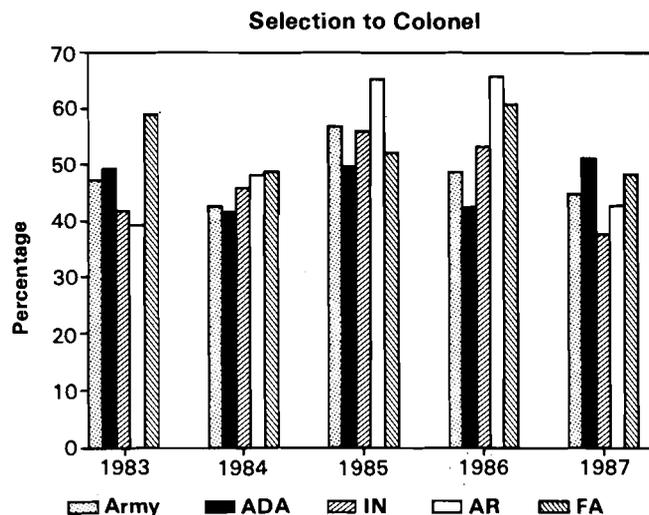
ADA officers qualifying for promotion to colonel typically have had these assignments:

- Command of an ADA battalion.
- ADA staff and/or general staff positions at all levels including DA staff.
- Staff and faculty positions in service schools, ROTC or USMA.

However, duty positions with troop units in Air Defense Artillery at the lieutenant colonel level are extremely limited due to the small number of ADA units above the battalion level.

The typical colonel selectee had 21 years of active federal commissioned service (basic year group 1966), was 44 years old and had 5.1 years time in grade. Of the officers selected for colonel, 63.6 percent had attended Senior Service College while 36.3 percent had attended Command and Staff College.

An analysis of the promotion board results shows that ADA did extremely well, exceeding the Army-



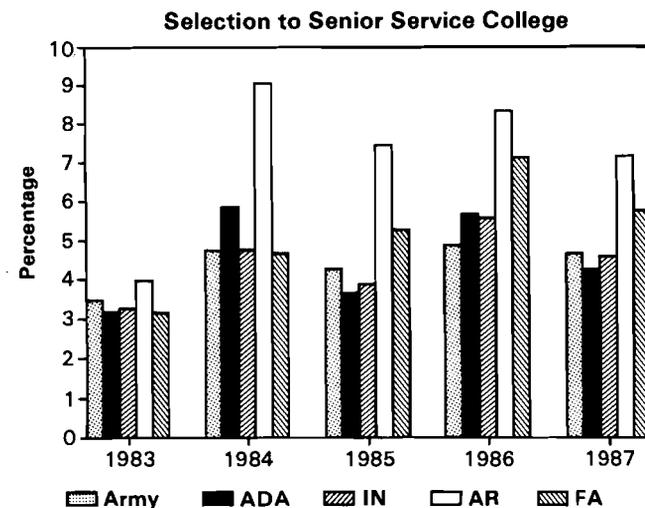
wide selection rate by 2.7 percent. Additionally, the ADA selection rate (for first time considered) exceeded every other combat arms branch and was 6.1 percent above the Armywide average.

Selection to Senior Service College

The results of the July 1987 SSC selection board are shown below.

Branch	Eligible	Selected	Percentage Selected
ADA	257	11	4.3
AR	363	26	7.2
IN	944	43	4.6
FA	588	34	5.8
AV	914	36	3.9
Army Average	5918	281	4.7

There were 75 validated deferred selectees in addition to the 281 principal selectees. The typical SSC selectee had 19.3 years of active federal commissioned service (basic year group 1968) and was 41 years old. Two hundred fifty-five of those selected had masters degrees and four had doctoral degrees.



Qualifying for Lieutenant Colonel

Minimum qualifications for promotion to lieutenant colonel as listed in DA Pamphlet 600-3 include —

- graduate from a command and staff college,
- successfully command a battery or detachment and

ADA Career News

- serve as a primary staff officer or executive officer at battalion level.

Exceptional qualifications for promotion include serving as a primary staff officer at brigade level or at key staff positions at division level or higher.

Typical assignments for ADA officers at this level include air defense staff positions at all levels, with emphasis on DA staff and faculty positions in service schools, ROTC or USMA.

Generally, there are fewer troop assignment positions for ADA officers than the other combat arms branches, providing fewer opportunities to serve as primary staff officers at battalion level. Also, there are few air defense units above the battalion level; therefore, ADA officers have limited access to brigade and higher staff positions.

Another peculiarity for ADA officers is ADA's responsibility for Nike Hercules custodial units in Europe with the associated command and staff positions. These units are smaller in size than conventional battalions and batteries, but the demands and responsibilities associated with their command are comparable. The battery commander is called a detachment commander.

The average officer selected for lieutenant colonel had 16.3 years of active federal commissioned service (basic year group 1971), was 39 years old and had 4.3 years time in grade. Most of the selectees (98.1 percent) had attended Command and Staff College.

An analysis of the promotion board results shows that ADA did exceptionally well when compared to the rest of the Army. The ADA selection rate exceeded every other combat arms branch and was 11.9 percent above the Armywide average.

Selection to Command and Staff College

The results of the November 1987 CSC selection board are shown below.

Branch	Eligible	Selected	Percentage Selected
ADA	336	65	19.3
AR	514	93	18.1
IN	1016	208	20.5
FA	684	118	17.3
AV	574	92	16.0
Army Average	5815	1000	17.2

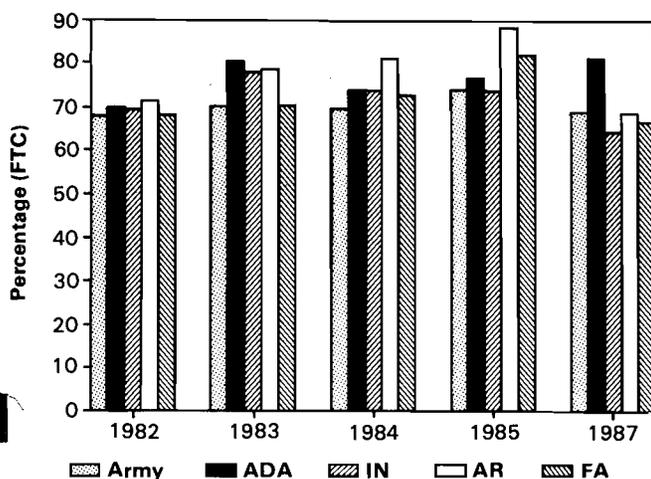
The oldest officer selected for CSC was 43 and the youngest was 28. The typical selectee was 33 years old and the predominant basic year groups were 1976 and 1977.

Following is a summary of selection by basic year group.

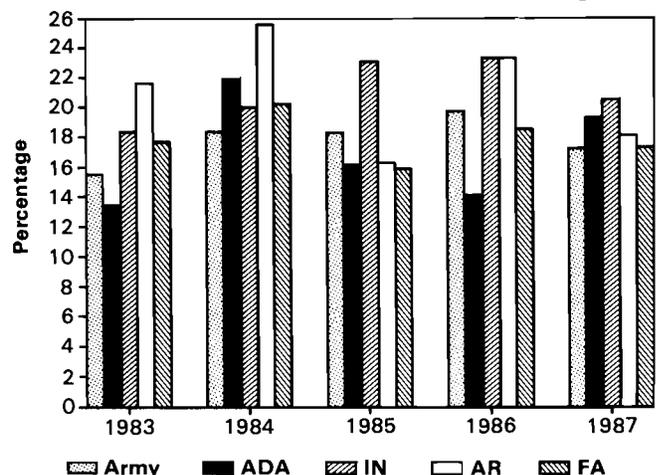
Year Group	Number of Prior Selections	Number of 1987 Selections
1974	864	51
1975	719	145
1976	434	311
1977	46	471
1978	0	22

An analysis of the selection board results shows that ADA selection rates exceeded every other combat arms branch except Infantry and were 2.1 percent above the Armywide average.

Selection to Lieutenant Colonel



Selection to Command and Staff College



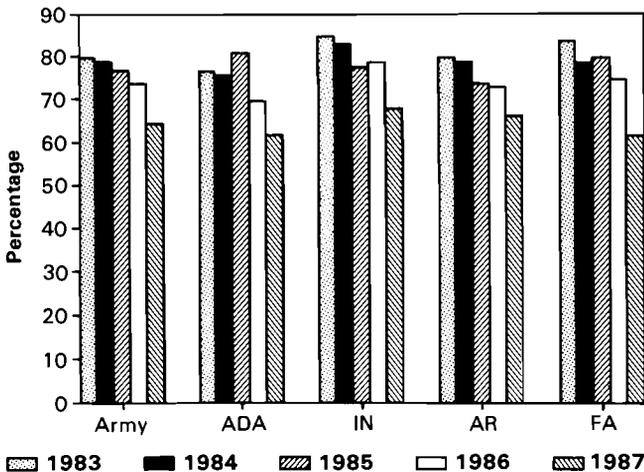
ADA Career News

Qualifying for Major

The typical officer selected for major had 9.2 years of active federal commissioned service (basic year group 1978), was 33 years old and had 5.9 years time in grade. Of those selected, 3.8 percent had attended Command and Staff College, 36.1 percent were CAS³ graduates, 21.9 percent had completed Phase I and 16.6 percent were CAS³ Phase I enrollees.

An analysis of the board results reflects an Army-wide drop in the percent selected for promotion this year compared to the FY 87 board. For ADA, the first time considered selection rate of 62.2 percent reflects a 7.1 percent decrease. The good news is that, while slightly below the Army average, the ADA selection rate this year remains highly competitive — 184 ADA captains are recommended for promotion to major.

Selection to Major



Promotion to CWO 3 (AZ and PZ):

	Considered	Selected	Percentage Selected
ADA Average	40	14	35.0
Army Average	1394	768	55.0

ADA Specialties	Considered	Selected	Percentage Selected
221B	5	2	40.0
222B	1	0	0.0
222C	3	1	33.3
223B	15	6	40.0
224B	14	5	35.7
225B	2	0	0.0

The typical CWO 4 selectee (AZ and PZ) had 12.9 years of warrant active federal service, was 40 years old and had six years time in grade. Of those selected, 76.4 percent had taken the Warrant Senior Course and 14.6 percent had taken the Warrant Advanced Course.

Promotion to CWO 4 (AZ and PZ):

	Considered	Selected	Percentage Selected
ADA Average	10	6	60.0
Army Average	551	297	53.9

ADA Specialties	Considered	Selected	Percentage Selected
221B	1	0	0.0
222C	0	0	0.0
223B	8	5	62.5
224B	1	1	100.0

ADA Sergeant Major Promotions

Below are the promotion results from the sergeant major promotion board. An analysis of the promotion board results shows that ADA career management fields (CMFs) did well when compared to the Armywide average. CMF 16 exceeded the Army average by 0.2 percent, but CMF 23 was 3.5 percent below the Army average. Overall, the ADA CMF selection rate was almost identical to the Armywide average selection rate.

	Percentage Selected		Total
	Primary Zone	Secondary Zone	
CMF 16	16.9	8.3	13.7
CMF 23	12.5	7.1	10.0
Total ADA	16.2	8.1	13.1
Armywide	18.2	6.9	13.5

ADA Warrant Officer Promotions

Below are the ADA promotion results from the FY 87 Warrant Officer Selection Board. ADA exceeded the Armywide promotion rate to CWO 4 by almost 7 percent, but fell 20 percent below the Armywide selection rate for CWO 3.

The typical CWO 3 selectee (AZ and PZ) had 6.5 years of warrant active federal service, was 34 years old and had 4.1 years time in grade. Of those selected, 3.3 percent had taken the Warrant Senior Course and 73.3 percent had taken the Warrant Advanced Course.

ADA Career News

In CMF 16, 131 soldiers were eligible. Eighteen soldiers, 14 in the primary zone and four in the secondary zone, were selected. All of the soldiers selected for promotion included a current military photograph in their file.

CMF 16 Selectee Profile	Primary Zone	Secondary Zone
Average civilian education	12.6 years	13.5 years
Average age	41.6 years	40.8 years
Average time in service	21.0 years	19.8 years
Average time in grade	4.5 years	3.1 years

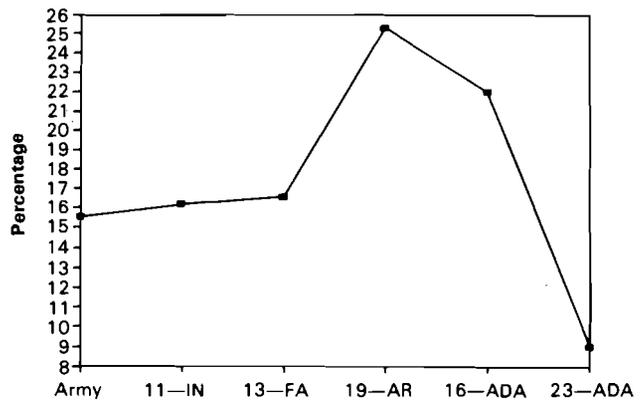
In CMF 23, 30 soldiers were eligible. Three soldiers, two in the primary zone and one in the secondary zone, were selected. All of the soldiers selected for promotion included a current military photograph in their file.

CMF 23 Selectee Profile	Primary Zone	Secondary Zone
Average civilian education	14.0 years	16.0 years
Average age	42.0 years	43.0 years
Average time in service	22.7 years	20.6 years
Average time in grade	4.1 years	2.7 years

In CMF 23, 290 soldiers were eligible. Eighteen soldiers, 17 in the primary zone and one in the secondary zone, were selected.

CMF 23 Selectee Profile	Primary Zone	Secondary Zone
Average civilian education	13.2 years	12.0 years
Average age	38.5 years	35.0 years
Average time in service	17.6 years	16.8 years
Average time in grade	5.7 years	3.8 years
Average SQT Score	86.7	93.0

E-8 Promotion Board
(Primary Zone)



Master Sergeant Promotions

Below are the promotion results from the master sergeant promotion board. An analysis of the promotion results shows that CMF 16 did extremely well, exceeding the Armywide selection rate in every category. CMF 23, however, fell below the Armywide selection rate because of low Department of the Army selection objectives.

	Percentage Selected		Total
	Primary Zone	Secondary Zone	
CMF 16	22.1	4.5	14.5
CMF 23	8.9	1.0	6.2
Armywide	15.6	3.6	10.8

In CMF 16, 414 soldiers were eligible for promotion. Sixty soldiers, 52 in the primary zone and eight in the secondary zone, were selected.

CMF 16 Selectee Profile	Primary Zone	Secondary Zone
Average civilian education	12.4 years	12.9 years
Average age	37.4 years	34.5 years
Average time in service	16.7 years	13.7 years
Average time in grade	4.8 years	4.0 years
Average SQT score	82.7	84.9

Sergeant First Class Promotions

Below are the promotion results from the sergeant first class promotion board. An analysis of the results shows that CMF 16 and CMF 23 did poorly when compared to the Armywide selection rates. The CMF 16 selection rate was 9.8 percent below the Army average and the CMF 23 selection rate was 6.0 percent below the Army average.

	Percentage Selected		Total
	Primary Zone	Secondary Zone	
CMF 16	5.6	1.0	4.8
CMF 23	11.8	1.0	8.6
Armywide	17.7	7.2	14.6

ADA Career News

In CMF 16, 1,822 soldiers were eligible for promotion. Eighty-eight soldiers, 85 in the primary zone and three in the secondary zone, were selected.

CMF 16 Selectee Profile	Primary Zone	Secondary Zone
Average civilian education	12.4 years	12.0 years
Average age	32.5 years	30.7 years
Average time in service	12.3 years	10.1 years
Average time in grade	5.1 years	2.8 years
Average SQT score	88.8	100.0

CMF 16 Results

MOS	Primary Zone			Secondary Zone			Total		
	Elig	Sel	% Sel	Elig	Sel	% Sel	Elig	Sel	% Sel
16D	143	0	0.0	28	0	0.0	171	0	0.0
16E	149	0	0.0	19	0	0.0	168	0	0.0
16H	71	15	21.1	57	2	3.5	128	17	13.3
16J	87	18	20.7	39	1	2.6	126	19	15.1
16P	315	23	7.3	20	0	0.0	335	23	6.9
16R	274	1	0.4	103	0	0.0	377	1	0.3
16S	373	0	0.0	36	0	0.0	409	0	0.0
16T	107	28	26.2	1	0	0.0	108	28	25.9
Total	1519	85	5.6	303	3	1.0	1822	88	4.8

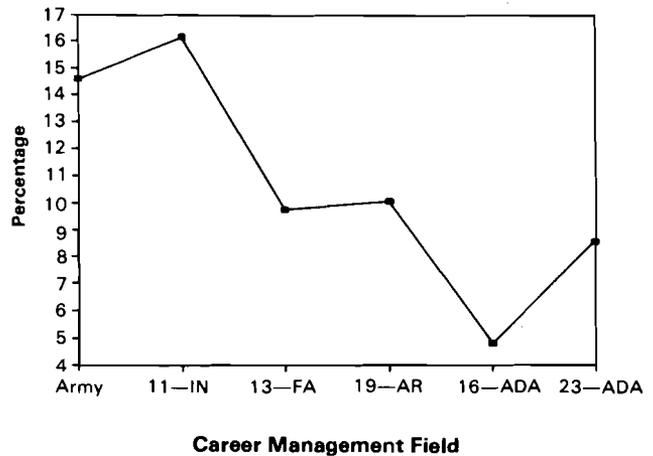
In CMF 23, 348 soldiers were eligible. Thirty soldiers, 29 in the primary zone and one in the secondary zone, were selected.

CMF 23 Selectee Profile	Primary Zone	Secondary Zone
Average civilian education	12.4 years	14.0 years
Average age	32.3 years	31.0 years
Average time in service	12.1 years	8.9 years
Average time in grade	5.3 years	2.6 years
Average SQT score	84.8	70.0

CMF 23 Results

MOS	Primary Zone			Secondary Zone			Total		
	Elig	Sel	% Sel	Elig	Sel	% Sel	Elig	Sel	% Sel
24C	62	16	25.8	13	0	0.0	75	16	21.3
24E	15	3	20.0	9	0	0.0	24	3	12.5
24G	32	2	6.3	14	1	7.1	46	3	6.5
24M	17	0	0.0	8	0	0.0	25	0	0.0
24N	18	0	0.0	8	0	0.0	26	0	0.0
24T	58	2	3.4	29	0	0.0	87	2	2.3
24U	11	0	0.0	0	0	0.0	11	0	0.0
25L	27	3	11.1	16	0	0.0	43	3	7.0
26H	6	3	50.0	5	0	0.0	11	3	27.3
Total	246	29	11.8	102	1	1.0	348	30	8.6

E-7 Promotion Board
(Primary and Secondary Zones)



Compiled by Maj. Andre Hakopian, Chief, Personnel Proponent Division, Office, Chief of Air Defense Artillery, Fort Bliss, Texas.

Training Tips

Stinger NBC Operations

In a chemical environment, Stinger gunners who habitually train in MOPP 4 are more effective than those gunners who do not.

During recent NTC rotations, observer controllers (OCs) observed that certain Stinger gunners in MOPP 4 engaged targets extremely well — eight engagements with eight kills. Conversely, other gunners were less effective and in one case had a low score of one kill out of six engagements. These were MILES engagements on either the large 1:5 scale RCMAT or the visually modified Hind-D. In almost every case, the successful gunners habitually trained in MOPP 4 at their home stations and the less effective gunners did not.

ADA Lessons Learned Bulletin No. 1-88

Attention Eagle Eyes

NATO has released information on the following new Soviet aircraft variants:

- Su-24 Fencer E — this is the naval reconnaissance version of the Su-24.
- Su-27 Flanker B — believed to be the production version, this aircraft has an extended tail cone and wing tip missile rails.
- MiG-23 Flogger K — this new variant has a notched wing leading edge and smaller dorsal fin than the B, C and G models.
- MiG-25 Foxbat F — this new offensive electronic warfare variant with anti-radiation missiles has a role similar to that of the U. S. F-4G Wild Weasel.
- Mi-34 — this cargo helicopter is now designated Hermit.
- Mi-24 Hind G — a chemical/nuclear reconnaissance/sampling aircraft, it lacks the undernose missile guidance antenna but has the standard launch rails.
- Mi-14 Haze C — this is the new search and rescue variant of the older Haze B minesweeping and Haze A anti-submarine helicopters.
- Ka-27 Helix B — the marine assault version of the standard naval Helix helicopter, it also appears as the Helix D search and rescue variant and as the Helix C civilian version.

Professional Development! Job Knowledge Improvement!

Are you interested in learning or improving your military skills? Hurry to your education center and enroll in an Air Defense Artillery School Army Correspondence Course Program (ACCP). Need more information? Call or write: U.S. Army Air Defense Artillery School, ATTN: ATSA-DTC-EP (Mr. Hoyt Ward), Fort Bliss, Texas 79916-7090, AV 978-7111/Commercial (915) 568-7111.

The following correspondence courses are offered by the Air Defense Artillery School.

Officers Correspondence Courses

Air Defense Artillery Field Grade Refresher Course
Air Defense Artillery Officer Advanced (SCAT) Course
Reserve Component ADA Officer Advanced Course
Air Defense Artillery Company Grade Officer Refresher Course

Enlisted Correspondence Courses

Air Defense Artillery Senior Sergeant Course (MOS 16Z)
Common Military Subjects for Skill Levels 1 through 4 (all MOSs)
Hawk Missile Crew Member Course (MOS 16D)
Hawk Missile Crew Member Merger Course (MOS 16D)
Hawk Fire Control Crew Member Merger Course (MOS 16E)
Intermediate Duster Training (MOS 16F)
Advanced Duster Training (MOS 16F)
Senior Duster Training (MOS 16F)
Chaparral/Vulcan System Orientation (MOSs 14B and 16F)
Operations and Intelligence Assistants (MOS 16H)
Operations and Intelligence Assistants Merger Training (MOS 16H)
Defense Acquisition Radar Crew Member (MOS 16J)
Defense Acquisition Radar Crew Member Merger Training (MOS 16J)
Air Defense Artillery Short-Range Missile Crew Member Course (MOS 16P)
Air Defense Artillery Short-Range Gunnery Crew Member Course (MOS 16R)
Man-portable Air Defense System Crew Member Course (MOS 16S)
MANPAD System Controller (MOS 16S)
Hawk Firing Section Mechanic (MOS 24C)
Hawk Fire Control Mechanic (MOS 24E)
Hawk Information Coordination Central Mechanic (MOS 24G)
Chaparral Weapon System Mechanic (MOS 24N)

Scanning

Three New States Join the Ranks of ARNG Air Defenders

North Dakota welcomes the mission to support the 6th Infantry Division (Light) with the upcoming activation of the 1st Battalion (Vulcan/Stinger), 188th Air Defense Artillery. The battalion will activate Oct. 1, 1988. Its location at Grand Forks allows easy access to Air Force transportation for quick deployment. The new commander is Maj.(P) Arthur W. Perleberg.

Indiana and Illinois will each activate one ADA battalion on Sept. 1, 1988 to support the 38th Infan-

try Division and 47th Infantry Division, respectively. These battalions were originally planned as Duster/Stinger units as an interim measure before receiving PIVADS. However, a recent decision by the vice chief of staff of the Army dictated that these battalions organize as interim MANPAD battalions until PIVADS is displaced from the regular army through the fielding of FAADS. The 1/138th ADA will be headquartered in Lafayette, Indiana, while the 1/202nd ADA will be based in Kewanee, Illinois.

These two battalions will comprise the only two MANPAD battalions in the National Guard inventory. Maj. (P) Floyd F. Branson Jr. will command the 1/138th ADA and Lt. Col. Randolph R. Harrison will command the 1/202nd ADA.

FY 89 DoD Budget Keeps Forward Strategy

When he presented his amended fiscal year 1989 Defense Budget at the Pentagon, Secretary of Defense Frank C. Carlucci said to reporters, "There is a very clear strategy and set of priorities in this budget."

Carlucci said that the cuts made to the force structure were in areas that would have the least impact on forward strategy.

In light of this, the Army will upgrade the Patriot missile instead of procuring a new anti-tactical missile and will request initial procurement funds for the Martin Marietta/Oerlikon Buhle air defense anti-tank system (ADATS). Deferred or delayed systems include FOG-M, first unit equipped FY 92, and forward area air defense C²I, proposal FY 88.

Armed Forces Journal International

New Software for Patriot

The Patriot Deployment Build-2 software, designed by Raytheon Missile Systems to improve the capabilities of the Patriot missile system, recently underwent rigorous testing at White Sands Missile Range, N.M.

Missile Command and the Army Materiel System Analysis Command conducted the 28-day test. Participants in the test included 3-1st ADA's fire direction center (FDC), B Battery and one assault fire platoon from C Battery. Also included were an information and coordination central and communications relay group from 3rd Battalion, 43rd Air Defense Artillery, the 11th ADA Brigade's new Patriot battalion.

Capt. Edward McCoy, commander of 3-1st ADA's forces during the test, said, "One of the offshoots of the new software is that it allows Patriot and Hawk units to interface with each other in a much improved manner. The software allows data to be shared by both air defense systems.

"We were able to auto-lock on targets generated by the Patriot units," McCoy said. "This is extremely important since it means we can fire on targets that we might never have seen before."

1st Lt. Timothy J. Neely, tactical director of the FDC, said the test provided an excellent opportunity to up-link and down-link target video and data between Hawk and Patriot air defense systems.

"With the improvements made in Patriot's software data base, air defense systems will be able to manage the air battle more efficiently on the modern battlefield," said Neely.

Another benefit of improved interoperability between Hawk and Patriot is that both systems function more efficiently in an electronic countermeasures environment.

Since Hawk and Patriot operate in different frequency ranges, jamming which affects one missile system may not affect the other system. If either Patriot or Hawk acquires the target, the data can be sent to the other system and the target can be engaged. 1st Lt. Michael J. Stevenson, C Battery's 2nd Platoon leader, said the software increases the effectiveness and abilities of Patriot and Hawk units by allowing them to reinforce each other.

McCoy said, "This project gave us a look into the future of air defense. We were able to get a first-hand look at how Patriot and Hawk can operate together on the battlefield."

by 1st Lt. Elizabeth M. Linker

Patriot Demonstrates ATM Capabilities

Patriot demonstrated its anti-tactical missile (ATM) capabilities during recent flight tests at White Sands Missile Range, N.M.

Patriot scored a direct hit against a Lance missile several kilometers from its intended impact point and, later, successfully intercepted and destroyed another Patriot missile.

These tests concluded Phase I of the Patriot ATM program and demonstrated that Patriot can counter short-range, conventional tactical missiles similar to those facing U.S. and NATO forces in Europe. Software changes that give Patriot this ATM capability will be fielded in the system this summer.

Phase 2 of the Patriot improvements will include additional software changes and an improved fuze and warhead. These software enhancements will be fielded in the early 1990s.

With these improvements, Patriot can defend against both advanced aircraft and tactical ballistic missiles.

The Redstone Rocket

Hawk/Patriot Scores a Hit

The Army's Hawk and Patriot missile systems were in combination to intercept a missile in a test at White Sands Missile Range, N.M.

During the test, Patriot's phased-array radar detected and tracked the target (a Patriot missile simulating a tactical ballistic missile) and passed the data to the Hawk system. The Hawk system acquired the

target with its tracking radar, launched a Hawk missile and scored an intercept.

With Patriot and Hawk interoperable, the Army greatly strengthens air defense against both aircraft and short-range tactical ballistic missiles.

New software to be fielded this summer gives Patriot an anti-tactical missile capability and was used in the test.

The Hawk Phase III system, now in production for the Army and Marine Corps, features several improvements that greatly increase Hawk firepower: radar reliability, system maintainability and performance, and system training.

Hokum

Although primarily a counterair helicopter threat, the Hokum is a new Soviet helicopter made by Kamov that may soon be seen over the battlefield. Of interest to air defenders is an article "Soviet Helicopter Air-to-Air" in the March 1988 edition of *Aviation Digest*. Edward J. Bavaro's article on Russia's anti-helicopter operations, including the Hokum, received the magazine's monthly writing award. If *Aviation Digest* is not available in your day room, check your post library.

ADA Museum

The Air Defense Artillery Museum recently acquired an M-1916 Bausch and Lomb One Meter Invert Coincidence Range Finder, a gift from Walter E. Price of Stillwater, Okla. If you are interested in donating a historical artifact to your museum, remember all donations are final. Please send a history with the item. Because of limited space, only air defense-related items are appropriate. For further information contact Mark Megehee at U.S. Army ADA Museum, ATZC-DPTM-M, ATTN: Curator, Fort Bliss, TX 79916.

Letters to Editor

Suspicious Confirmed

Tactical fighter pilots have traditionally been suspicious of the ability and inclination of "friendly" air defense units to accurately identify targets.

The caption to the photo of two Jaguars taking off (page 31 in your January-February issue) does nothing to lessen these doubts.

Richard M. Schwartz
Lt. Col., USAF
Chief, Opns Division
Langley Air Force Base, Va.

Air Defense Artillery regrets the error. However, we feel obligated to point out that the soldiers in those "friendly" air defense units did not make the identification error, we did.

Regimental Tie

The Army and Air Force Exchange Service (AAFES) has informed me that a regimental tie for the 62nd Air Defense Artillery Regiment has been shipped for sale at the PXs located where the battalions of the 62nd ADA are stationed.

The tie was created by the combined efforts of the battalion commanding officers and myself. It was ushered through the Headquarters, AAFES, by their head buyer.

The tie is a handsome bit of haberdashery as well as a symbol of the regiment. It is artillery red and displays the regimental crest in diagonal rows. The rows are separated by very thin stripes of blue and white. It may well be the first regimental tie in the regimental system.

Col. (Ret.) Adam S. Buynoski
136 Brentwood Avenue
San Francisco, CA 94127

A Need for VACR Training

Congratulations on your January-February 1988 issue which featured excellent coverage on ADATS. As a former test and evaluation guy, I thought Ed Foster's "On the Testing Front" provided a valuable perspective on an important area of current aerospace systems testing.

The ol' eyes ain't what they used to be, but I do believe that the two Tornados on page 31 are actually Jaguars. And, of course, that brings up the excellent article by John Pliler on aircraft recognition. I am a firm believer that you can never devote too much time to aircraft recognition: within technological generations aircraft have always generally tended to look alike. Today, the challenge is difficult enough for airmen, let alone for guys on the ground who may be, of necessity, more concerned about tanks over the next hill. One hour of VACR per week seems about the minimum we should build into training schedules.

Richard P. Hallion
Visiting Professor
U.S. Army Military History Institute
Carlisle Barracks, Penn.

1968 Tet Offensive

I am writing a book about the 1968 Tet Offensive and I need to collect detailed, first-hand accounts of associated military actions. I'm having trouble locating people who were there, and I wonder if your magazine can help me.

I am interested in collecting anything from someone who was in Vietnam between January 29 and April 1, 1968, and who is interested in providing his or her account of the action.

Eric Hammel
1149 Grand Teton Drive
Pacifica, Calif. 94044

Coming in the next issue . . .
ADA Commanders Conference
