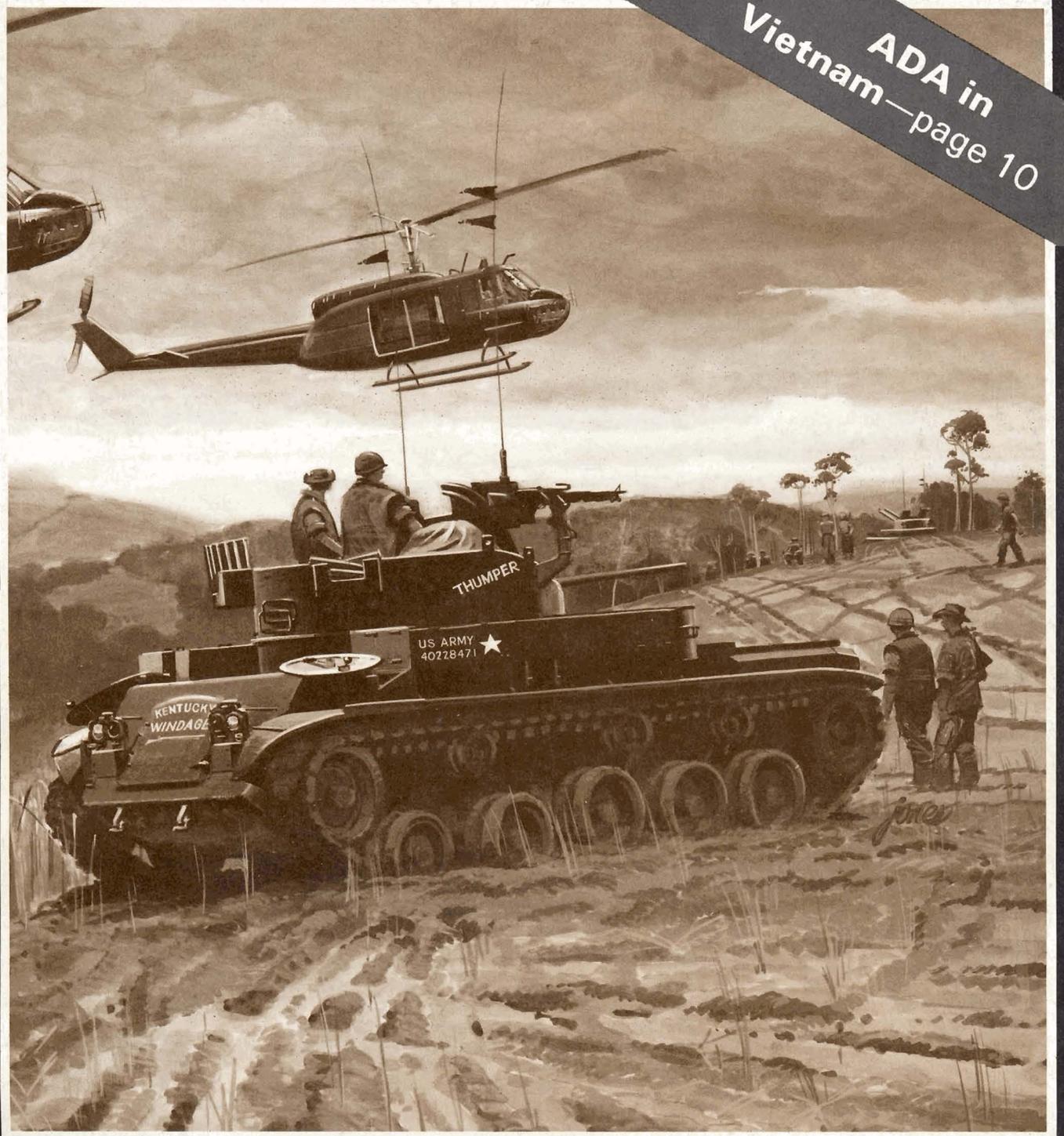


# AIR DEFENSE ARTILLERY



ADA in  
Vietnam—page 10



FALL 1983

# AIR DEFENSE ARTILLERY

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### About the Cover

Artist John Paul Jones' cover illustration shows an M-42 "Duster" arriving at a newly constructed firebase in Vietnam. Dusters, denied airborne targets, were mainstays of perimeter defenses.



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## AIR DEFENSE ARTILLERY

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Air Defense Artillery was created as a separate branch in the midst of the Vietnam War. Hanoi never risked sending the MiGs south of the demilitarized zone during America's long involvement in Southeast Asia, but air defenders served in a variety of ground support roles. This issue of *Air Defense Artillery* contains a special section dedicated to the air defense artillerymen who distinguished themselves and the new branch in the rice paddies and jungles of America's most unpopular war.

# INTERCEPT POINT

**O**n the eve of Waterloo, there was a sound of revelry by night but dawn brought disaster. Wellington's ally, Marshal Blucher, was driven from the field at Lingy, and hard-pressed British cavalry were forced to relinquish the crossroads at Quatre Bras. The road to Brussels lay open except for Wellington's regiments deployed under the ridge of Mount St. Jean. Wellington thought the thin red lines could halt Napoleon's columns long enough for Blucher's Prussians to regain the field. "They will not run," the Iron Duke explained, "and it will take a long time to kill them all."

Wellington based his plan of battle not so much on bayonets and musketry as he did on the moral fiber of his soldiers. His trust in their character, his conviction that they would not run, allowed him to win a decisive battle other generals would have lost.

AirLand Battle Doctrine, like Wellington's battle plan, depends on the quality of soldiers we send into the air-land battle, for battles are not won by sophisticated weaponry and schemes of maneuver; they are won by soldiers.

The armies which fought the Napoleonic Wars asked little more of the "ordinary soldier" than basic marksmanship and that he stand unflinching on the line of battle. The air-land battlefield is a much more complex arena in which "ordinary" soldiers are obsolete. Only "extraordinary" soldiers able to perform complex tasks exceedingly well can win the air-land battle. Producing such soldiers requires expert training, leadership and a third ingredient that little concerned officers and non-commissioned officers of Wellington's time: expert personnel management.

The Army's personnel management system is human logistics. It allows us to put key people in key jobs and offers us a way to encourage and reward superior performance. The system, however, works only as well as the commissioned and non-commissioned officers who write the enlisted evaluation reports and supervise the maintenance of military personnel folders make it work. The system is not working as



**Major General James P. Maloney**

well as it should in Air Defense Artillery.

BG Donald R. Infante, Patriot project manager and former 32nd AADCOT deputy commander for operations, recently served on an E-7 selection board. He discovered that, while air defense artillery soldiers are "truly second to none," air defense artillery personnel files are "the worst maintained files in the Army." General Infante, whose article in this issue of *Air Defense Artillery* lists practical steps soldiers of all ranks can take to make the system work better, concludes that "we work our soldiers hard enough, but we don't take the time to reward them properly."

Soldiers in combat know the officers and non-commissioned officers who share the danger and physical discomfort of the battlefield with them care about them. In peacetime, the same soldiers quickly conclude that officers and non-commissioned officers who work them hard, but don't put forth the effort to do the administrative chores that safeguard their military careers, don't care.

Such soldiers will quickly conclude they're being treated as just another cog in a machine and they'll respond accordingly. The cog in the machine mentality permeates the Soviet military thinking. The result is a rigid military system in which the enlisted soldier possesses little initiative and is

primarily motivated by harsh discipline.

American soldiers don't function to their full potential as just another cog in the machine. They are capable of doing many jobs, taking over command, of thinking independently.

A not surprising result of having been bred in a society that rewards most those who perform best is that American soldiers expect superior performance to result in advancement. Soldiers do not enter the American Army to become privates. Their career ambitions aren't fulfilled by the receipt of their first stripe. When their best efforts go unrecognized and unrewarded, they are likely to stop putting forward their best efforts, becoming inefficient cogs in a machine.

This is why working soldiers hard, but not rewarding them for their achievements, makes as little sense as fielding new weapon systems without ammunition. Recognition and reward, not fear of discipline, motivate the American soldier. Leaders must do their part to make certain soldiers' performances and potentials are adequately reflected in their enlisted evaluation reports and unit commanders must establish standing operating procedures that ensure personnel files are well maintained. The Army cannot afford to lose good soldiers who can become better soldiers, or average soldiers who can become good soldiers, because they are handicapped with improperly prepared or poorly written enlisted efficiency reports.

I've often used "Intercept Point" to encourage air defense artillery leaders to become expert tacticians. I would now like to challenge you to become expert personnel managers.

The United States once possessed a quantitative edge in military power but that edge vanished long ago. The qualitative edge in weapon technology we seek to maintain has been eroded by the exportation of American technology. Do we possess an edge at all? I'm convinced we do. It is the same type of edge Wellington possessed at Waterloo. It lies in the character of our soldiers. It's an edge we can keep sharp through expert personnel management.

✱

# ON TRACK

**H**igh technology to most people is an esoteric and sometimes frightening world of microchips, video screens, flashing lights and multicolored buttons. While high technology can be found in an increasing number of household items such as video and stereo equipment, home computers and even kitchen appliances, some people harbor an unnecessary fear of sophisticated state-of-the-art equipment, believing that it would take a PhD education to understand the innovations that are flooding the markets. Unfortunately, that analogy is true to some extent even in our military.

We have leapt from smooth-bore cannons to precision-guided artillery munitions in the space of a century—a mere blink of the eye in relation to the history of mankind. With the advent of the space age, dinosaurs like the 75mm and 90mm anti-aircraft artillery guns yielded to the fielding of Nike and Hawk missile systems. More to the point, research and development of air defense weaponry and equipment have advanced more rapidly during the past decade than at any other period of our history as a direct result of the technological growth of our society.

We have seen the development of Patriot, the SGT York Gun and Stinger. Other weapon systems such as Hawk, Vulcan, Chaparral and the M-42 "Duster" have been or are being upgraded to meet the increasing demands for air defense.

Technologically advanced weapon systems are not flawless. Like computers, they are only as good as the people operating and maintaining them. The monitor screens of our latest air defense systems may look like any number of computer games in a video arcade, but there is a vast difference. One day, those blips on the screens may represent a very real enemy threat, which is why we need top notch soldiers at the consoles.

Some time ago, defense critics and the media in general alleged that a large percentage of our soldiers were not capable of properly manning or maintaining the new systems being fielded to the Army. The critics cited lack of education and training among



**CSM Frederick T. Stafford Jr.**

the causes for the deficiency. Right or wrong, it is an issue which needs to be addressed seriously by our air defense instructors and, more so, by our NCOs.

As the leaders primarily responsible for soldiers' individual training, our NCOs must understand the terminology, capabilities and limitations of the Army's newest weapons and equipment. It is imperative, therefore, that they be conversant with the latest developments in air defense if they are to bring their subordinates up to standard and keep them there. What it boils down to, really, is readiness.

Readiness is the objective of our vast manning and training efforts. It dictates that we undertake modernization programs to keep pace with the technological advances of potential enemies and to replace aging and difficult-to-maintain equipment. But along with that, we must produce highly skilled technicians. It is not enough that our soldiers recognize there is a fault in the radar system when a red light comes on.

The Army has long praised the merits of innovative weapon systems that have been or are being fielded, but little has been said about the caliber of the soldiers selected to man and maintain them. While the Army is recruiting soldiers with a higher-average education than ever before, there remains a need to train them to perform their tasks with complete competency.

In a speech before the Senate earlier this year, LTG Maxwell R. Thurman, deputy chief of staff for personnel, said it may be true that most soldiers can be transitioned from one series of equipment to another. "But when we replace one weapon system with another—the Patriot in place of the Hawk missile—or bring in entirely new systems such as the Multiple Launch Rocket System, we are confronted with some tasks that have no comparable foundation in the existing arsenal."

The non-commissioned officer's job as a trainer has not been made easier by the consequences of the latest scientific achievements. Along with their other responsibilities, they must approach each day with enthusiasm and confidence if they are to convey that same spirit to their subordinates. High technology in our weapon systems may promise increased ranges and better target discrimination, but it is doubtful whether the soldiers charged to fight with that equipment can do so effectively without confidence in their weapons' ability to perform. A large share of the responsibility for instilling that confidence in our soldiers rests heavily on the shoulders of our NCOs. That confidence can only be infused in our soldiers through the complete proficiency of their leaders.

Education is paramount if our trainers expect to maintain their state of readiness and proficiency. Ideally, training and education begin at the top with the NCOs and has a trickle-down effect. The primary leadership development course is essential, as are the basic and advanced NCO courses. Our NCOs must also take advantage of cross training for those MOSs that merge at skill level 4 as well as other correspondence courses offered by the Army Institute for Professional Development.

It has been said many times in many ways that combat is no place for learning what to do. We must learn now. As Secretary of Defense Caspar W. Weinberger said, "We cannot afford the luxury of sitting back and ignoring our defense until a genuine emergency occurs. We must be ready when a crisis begins—not later." To that end, our NCOs must assimilate and put to practical use the knowledge gained in today's high-tech environment. The future of our Army depends on it. In a much broader sense, the future of our way of life depends on it. ✱

# Letters to the Editor

## Roland Unit POC

Could you assist me in obtaining a point of contact for the new Roland National Guard unit to be formed in mid-1984? I will ETS in May 1984 and would consider volunteering for the new unit. I noticed that there is a need for MANPADS NCOs and I am a 16S20T/16P20, school-trained in Redeye, Stinger and Chaparral.

Any assistance would be greatly appreciated.

Lloyd J. Allgaier  
SGT, 8th Inf Div  
APO N.Y. 09034

*Individuals interested in joining the 5th Battalion (Roland), 200th ADA, New Mexico Army National Guard, can contact its headquarters by calling commercial (915) 569-9384 or AV 979-9384. The mailing address is P.O. Box 6910, Fort Bliss, TX 79906.*

## Senior Commanders' List

I have enjoyed *Air Defense Artillery* for many years, especially during times when I have not been assigned to air defense units. The magazine and its informative articles have kept me abreast of trends in air defense doctrine and weapon system developments. Your winter issue covering the AirLand Battle 2000 concept, as it relates to air defense, was excellently done. However, the senior commanders list published in that same issue had two notable errors. First, the Chaparral/Vulcan battalions assigned to the division in Europe do not fall under the 108th Brigade for either administration, logistics or operations. These battalions have habitually operated independently from the 108th Brigade and report directly to the commanding generals of the divisions they support. Second, and more personal, I command the 3rd Bn, 61st ADA (C/V), which has the responsibility of providing air defense protection to the 3rd Armored Division.

I am sure it is difficult to identify and correct errors in every issue that is published. But, it is extremely important that commanders are properly identified and given credit for the units they command. I would

appreciate it if the magazine could correct this error in its next publication.

Richard D. Kline  
LTC, AD  
3rd Bn, 61st ADA

*A revised senior commanders' list will be published in the Winter issue.*

## E-2C Identification

This letter is intended to provide feedback on the Spring 83 issue of *Air Defense Artillery*.

First, my compliments to CPT Faires. His article on the National Training Center made several important and interesting observations about the way most units habitually operate at both unit and individual levels. His comments on the map reading abilities of all leaders are unquestionably accurate. It is a well thought-out and well-written article.

Also, 2LT Frost has an excellent, if "chatty," article on the problems of arctic warfare.

However, the major question that I have is why the photograph on Page 57, "Japan Receives Hawkeye," is not the E-2C that I know, but what I believe is a British version of the same concept.

Keep up the good work.

Sinisa Lavric  
CPT, FA  
Ohio ARNG

Reference the Spring 83 issue, Page 57, Intelligence section, article "Japan Receives Hawkeye." The article states that Japan recently received the first of eight E-2C Hawkeye early warning aircraft. The E-2C is an early warning or fighter control aircraft powered with two turbo-prop engines. The picture provided with your article is that of a commercial jet (DC-9) reconfigured for military application.

Am I correct or do I need to be corrected?

Stephen B. Engle  
CPT, SigC  
Redstone Arsenal, Ala.

*You're both close. The photo was that of a British Aerospace VC-10 transport aircraft. The error is rectified on*

*Page 53. See "Singapore Requests Four E-2Cs."*

## Soviet Military Power

While Americans concern themselves with the increasing cost of developing, acquiring and deploying new weapons, the Soviet Union has forged ahead and accomplished what the United States still argues about for its defense.

The Department of Defense's "Soviet Military Power 1983" is claimed by some people to be a "scare tactic" to obtain the requested defense budget. Scare tactic or not, Secretary of Defense Caspar Weinberger simply acknowledges the facts that have been rumored for the past year. And the facts are that the Soviet Union is rapidly building, with a "world-bet damned" attitude, its offensive and defensive capabilities at an alarming rate.

If one doubts the agony of a military force that is underequipped and undermanned, perhaps the soldiers, sailors and marines of the Pearl Harbor fiasco could shed some light.

It would behoove everyone to get their hands on Weinberger's report and read it, then answer the question: Are the United States and NATO capable of meeting, on an even par, a foe as described in "Soviet Military Power 1983?"

Ralph Dohme  
Fort Bliss, Texas

## From Argentina

I'm taking the liberty to inform you that the date of the Fall 1982 issue of *Air Defense Artillery* did not appear on it. This omission does not reduce the importance of your publication which is analyzed and used for our magazine, *Abstracts of Military Bibliography*.

We feel honored to receive your magazine and we congratulate you for your excellent publication which demonstrates great professionalism.

R. A. Ramirez Mitchell  
CPT, National Defence College  
Buenos Aires, Argentina

*CPT Ramirez is the editor of Abstracts of Military Bibliography.*

## Correspondence Courses

# Promotion Points In Your Mailbox

by Herman B. Rupp

The Army Correspondence Course Program is designed for Active Army and Reserve Component soldiers of all ranks. It offers soldiers a chance to learn more about their MOS, or another MOS they may be interested in, while compiling points for future promotions or retirement. It leads to good SQT scores and MOS certification, and it builds retirement points for reservists.

The Army Institute for Professional Development, headquartered at Fort Eustis, Va., administers the program and handles all student services. The courses are written by experts at service schools, but the institute manages printing and distribution of subject materials.

The first comprehensive catalog of ACCP courses was distributed in April. This new publication, DA Pamphlet 351-20, Correspondence Course Catalog, is available at unit training offices, education centers and MOS libraries.

There are 490 courses and 3,000 subcourses listed in the 716-page catalog, which is about the size of a metropolitan telephone directory. All correspondence courses produced by 18 U.S. Army Training and Doctrine Command and four Department of the Army and Department of Defense consolidated activities are included. The pamphlet explains how to obtain information about courses offered by the 10 DoD and DA non-consolidated activities not carried in the catalog. The catalog, dated March 1, 1983, replaces all 22 volumes in the DA Pamphlet 351-20 series.

ROTC cadets, National Defense Cadet Corps cadets, authorized federal employees, foreign military personnel, government contractors and non-U.S. citizens employed by DoD as well as members of the Active Army and Reserve Components are eligible to register for ACCP courses. The courses are free for members of the U.S. armed forces. Completion certificates and a limited number of diplomas are awarded. Some courses may be accepted

for credit toward a college degree.

### Officer Professional Development

The ACCP for air defense artillery officers consists of four courses. The ADA Officer Basic Course provides basic branch training for junior grade ADA officers with Chaparral/Vulcan, Nike Hercules, Hawk and automatic weapon options. The ADA Officer Advanced Course prepares ADA officers for battery command, battalion staff positions and other duties required of captains. The ADA Officer Qualification Course provides basic branch training in Chaparral/Vulcan, Hawk, Nike Hercules and forward-area weapon systems for commissioned officers transferred to Air Defense Artillery. The Special Combat Arms Training Program provides cross training for other combat arms officer advanced course graduates. Subcourses for Patriot and SGT York Gun are being prepared and will become available as these new systems are fielded.

### NCO Professional Development

The ACCP for non-commissioned officers parallels that of the officer program. The ADA Senior Sergeant's Course provides training to help enlisted personnel in grades E-6 or higher improve their job knowledge and performance, to qualify for promotion and to prepare for SQTs. The ADA Advanced NCO Course teaches enlisted personnel how to perform appropriate duties as NCOs in the grade of E-7 within their career management field. The options include MOS 16B, 16C, 16D, 16E, 16F, 16H, 16J, 16P, 16R, and 16S.

### Merger Training For NCOs

The Advanced NCO Course programs of instruction for ADA require cross training for those MOSs which merge at skill level 4. Students selected for the Advanced NCO Course are advised of the requirement to complete merger training by correspondence. Those who report for the resident Advanced NCO Course before complet-

ing the merger MOS training, or without having enrolled in the correspondence course, will be enrolled in the appropriate merger training course upon their arrival.

Material in these courses covers the MOS instruction needed for a merger at skill level 4. For example, soldiers with a 16D MOS would enroll in the 16D Merger MOS Training Course.

### MOS Courses

The air defense artillery portion of the ACCP includes courses in common subjects and MOS-peculiar subjects at skill levels 1 through 4 in all air defense artillery career management fields.

There are also a number of functional and specialty courses available to provide refresher training, orientation and other training for specialized needs.

### Points

Correspondence courses are available to fit the needs of all air defense artillerymen. Soldiers who complete ACCP courses earn one promotion point for every five credit hours. Reservists earn one retirement point for every three credit hours. The quest for promotion in today's Army is highly competitive. Recent recruiting upswings and the Army's continuing search for excellence guarantee it will stay that way. The ACCP program offers soldiers an excellent opportunity to stay abreast of the competition. \*

**HERMAN RUPP**, a senior education specialist and correspondence course program manager, works for the Directorate of Training and Doctrine, U.S. Army Air Defense Artillery School, Fort Bliss, Texas.

Silhouetted against pre-dawn skies, soldiers from the 25th Infantry Division's 1st Battalion, 62nd Air Defense Artillery, are poised on hills a few miles from Mauna Loa, the world's largest active volcano. A Chaparral launcher can be seen with its missiles aimed skyward. A senior gunner sits behind the controls, anxiously counting the seconds. Temperatures in the low 40s betray Hawaii's promise of a tropical paradise as the soldiers huddle together in anticipation.

Looking out over the barren plateau, one can understand why NASA chose the planetoid landscape around the volcano on the island of Hawaii (Big Island) as a training site for many of its Apollo astronauts. The island en-

compasses miles of volcanic residue—lava rock, choking dust and sparse vegetation. It has few obstructions, except for a few distant *puus* (inactive volcano vents) which are ideal for the 1/62 ADA live-fire exercise.

The countdown begins. At the command of "launch," a simulated enemy aircraft (a ballistic aerial target) spirals at high velocity into the sky.

The gunner launches the Chaparral with precision. Just as the target seems to descend and swerve out of the missile's range, the Chaparral dips and swerves a few meters, striking the target dead center. The impact lights up the sky momentarily. The soldiers on the hill stand and cheer as though the victory were their own.

The soldiers of the 1/62 ADA are conducting their annual service practice and Army readiness training evaluation program and have just entered the last phase of four weeks of training. In just a few days, they are scheduled to return to the more congenial climate of Oahu and Schofield Barracks.

The Chaparral and Redeye platoons practice live-firing once a year on the Big Island, explained LTC Donald J. Banta, battalion commander. The Vulcans, however, have live-fire practice twice a year—once on the Big Island and again during Team Spirit exercises in South Korea. "Since we are a self-propelled battalion, the training areas on Oahu are quite limited," Banta said. "The maneuver area on the Big Island comes closest to duplicating a combat environment. In addition, it doesn't have all the distractions present on Oahu."

Training conditions in Korea contrast sharply with those in Hawaii, Banta pointed out. In Korea, the



## ADA Hawaiian Style Duty In Paradise

by SP5 Laurie Scott



A team from Battery C, 1st Battalion, 62nd Air Defense Artillery, launches a heat-seeking Chaparral missile. (Photo by SP5 Laurie Scott.)

battalion is sometimes confronted with freezing temperatures, snow and muddy terrain during the early spring thaw. The 1/62 ADA commander says the annual Team Spirit exercise is vital to unit readiness.

"It's possible that the division could go to combat in South Korea, therefore, it's good for our soldiers to be exposed to the terrain and joint operations with ROK troops," Banta said. "We also get training that's not peculiar to air defense. Navigation and acclimatization are good examples. In addition, soldiers get to see how compartmentalized and vertical the country is."

Since the 25th Infantry Division is a light division, the 1/62 ADA trains in platoon-size units. They can accompany infantry units to the front line or stay behind with field artillery units. In addition, they can be easily integrated to provide air defense for convoys.

The unit's training success record speaks for itself, but there is more to duty with the 25th Infantry Division than MOS training.

"The division has a lot of physically fit soldiers as the result of a demanding physical training and overweight program," SP5 Steven Huskin, Redeye gunner with Battery D, said. He became acquainted with the division's standard of excellence for physical training when he first arrived at Schofield Barracks, the setting for James



Section Chief SSG Wayne Collie assembles a forward area alerting radar prior to a missile launching during the battalion's annual service practice. (Photo by SP5 Laurie Scott)



SP4 Pedro Barrios, gunner, SP4 Dale Letteer, assistant gunner, and SP4 Rob Tracey, driver (left to right), man their M-163A1 Vulcan anti-aircraft gun. The four are members of the 1st Squad, 1st Platoon, Battery B, 1st Battalion, 62nd Air Defense Artillery, which scored a perfect 300 during its recent annual service practice on Hawaii. (Photo by Janos Gaspar)

Jones' celebrated novel, *From Here to Eternity*.

"I was immediately put on the overweight program. I knew they meant business, so I set about getting into shape. In the first two months here, I lost 12 pounds," Huskin said. "Life with the 1st of the 62nd ADA is not all training. When it's time for recreation, I take off to the ocean. Sometimes I catch a few waves on my boggie board, or I body surf. I'm also learning to scuba-dive." A native of Tampa, Fla., Huskin feels right at home in Hawaii's moderate-to-hot climate.

"It isn't difficult to find a good volleyball game on the beaches," Huskin said. "It doesn't matter if you're military or a native Hawaiian, everyone is usually welcome to join in. My wife, Lisa, is a big fan of Magnum P.I.'s Tom Selleck. She found out that he's also an avid volleyball player. So, one evening we ended up watching him help slaughter an opposing team at the University of Honolulu."

SP4 Kenneth J. Lusk, who has advanced from Chaparral driver to senior gunner during his three-year stint with the division, prefers auto racing over water sports. He and his native Hawaiian wife, Misty, build high-performance race cars. "Every Saturday finds us at the race track," he said. The Memphis, Tenn., native has an advantage that many of his counterparts don't have—he has a home away from home. He's surrounded by family members and in-laws. "My father, SSG James W. Lusk, is the assistant adjutant for the 1st of the 62nd ADA," the specialist said. "It has been a tradition in my family for generations for the eldest son to join the Army." Lusk also enjoys the company of his mother, his children, Shantell and Brandon, two sisters and a brother, all of whom live in Hawaii.

Huskin and Lusk agree that being a part of the 1/62 ADA is demanding, but they also agree that the sun and surf and myriad recreational activities that Hawaii offers add a pleasant, wholesome touch to duty in paradise.

✱

**SP5 LAURIE SCOTT** is assistant editor of *Tropic Lightning News*, the 25th Infantry Division's official newspaper. She served as a public affairs NCOIC at Fort Hamilton, N.Y., prior to her current assignment.



# Korean Night Firing

A Chaparral and one of its crew are silhouetted against the setting sun as the squad prepares for night firing at Chulmae Range, Korea.

Story and photos  
by SP5 Geary McSpadden

It's been three decades since North Korean armored spearheads rolled across the 38th Parallel and ignited the Korean War, America's introduction to limited war. Three decades of peace, marred by constant border violations, have made some forget the fragile truce along the no-man's-land that separates north from south is only a cease-fire. The Korean War has never officially ended.

The men of the 2nd Battalion, 61st Air Defense Artillery, aren't likely to forget. Since July 20, 1982, when the 2nd Battalion, 71st Air Defense Artillery, handed over its Hawk equipment

to South Korean soldiers on a hill outside Seoul, the 2/61 ADA has been the only U.S. air defense artillery unit in Korea.

Semi-annually, the 2/61 ADA prepares its Chaparrals and Vulcans for a road march and heads for the beaches.

Bleached sand and a tropical breeze from the Yellow Sea provide the setting for the 2nd Infantry Division's air defenders' semi-annual aerial gunnery practice at Chulmae Range on Daecheon Beach.

Chulmae Range, located about 150 miles southwest of Camp Casey, is a strip of white sand on Korea's west

coast that uses the ocean as a firing range.

"Moving men and equipment that far just to fire live missiles is a problem many ADA units are used to," said LTC Herbert J. Smith III, the battalion commander. "ADA usually has to travel farther to fire because we're forced to own all the range area we fire over. The reason is falling debris from targets and missiles."

MAJ Edward A. Flowers, battalion S-3, described Chulmae Range as ideal for air defense artillery. "Because of range and altitude restrictions encountered in aerial gunnery, we're limited in



A Vulcan belonging to Battery B, 2/61 ADA, moves onto the range to fire for qualification.



Chulmae Range extends from bleached sand into the waters of the Yellow Sea off Daecheon Beach, Korea.

where we can shoot," Flowers said. "This is the only place in Korea where we can do real aerial gunnery for air defense weapon systems." This summer, the battalion conducted the first live night firing of a Redeye missile in Korea.

SGT Charles W. Seldon, an instructor at the 2nd Infantry Division moving target simulator, explained why Redeye night firings are unusual. "It's not a night weapon," he said. "A gunner needs positive visual identification of an aircraft before he fires. The average Redeye gunner in Korea learns to recognize a minimum of 66 aircraft, but night vision is limited."

Chaparral missiles currently sell for \$69,540 per round while Redeye missiles go for \$24,245 apiece. That's the reason the 2/61 ADA only fires live missiles once a year and why air defense missiles are big in demand and short in supply. The gunners who fired at Chulmae Range won the right to fire live missiles during intense intra-battalion competition with other gunners.

PVT David P. Berthelot, a Redeye gunner and second place winner from Battery A, had been in the Army only seven months when his battery took its turn on the firing range. He was aware



SGT Nelson Nathaniel (left) and SGT Charles Seldon (right) offer instructions as PFC Michael Odum tracks a target. The 2/61 ADA launched the first Redeye missile fired at night in Korea during July.

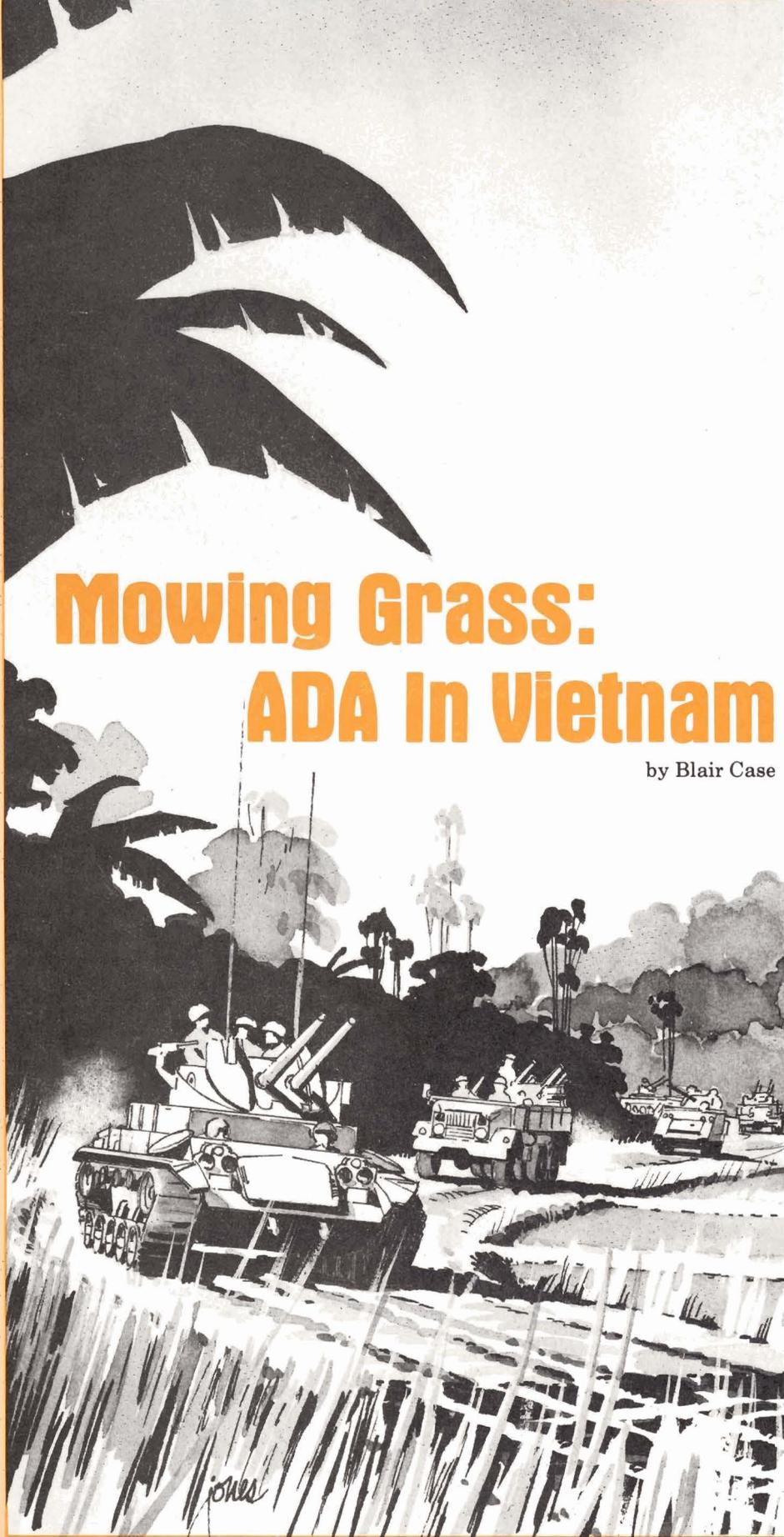


The fiery trail of a Chaparral missile lights its launcher and spreads smoke and dust during night firing at Chulmae Range, Korea.

that it's rare for someone with so little time in service to fire a live missile.

"Advanced individual training taught me how to fire," he said, "but I never thought I'd get the chance. I was pretty nervous. You can talk about it all you want, but until you live-fire you don't know what it's really like. It felt good. Now that I've fired live, I have faith I can do my job." ✱

**SP5 GEARY McSPADDEN** is a photo-journalist with the 2nd Infantry Division's Public Affairs Office at Camp Casey, Korea.



# Mowing Grass: ADA In Vietnam

by Blair Case

Nearly a decade has passed since the last American helicopters, laden with refugees, departed the rooftops of Saigon, but critics of American military commitment to El Salvador and Lebanon are quick to draw inexact parallels between the two hot spots and Vietnam.

The television networks broadcast a sense of *deja vu* with every three-minute spot about the time bomb ticking away in Central America. El Salvador even looks like the same jungle. Shells exploding inside the sandbagged Marine fortifications at Beirut resound like echoes from the siege of Khe Sanh.

Vietnam remains, for better or worse, very much a part of the national consciousness.

The names of air defense artillerymen who died in Vietnam are etched in the black granite of the Vietnam Veterans Memorial in Washington, but the exploits of ADA units which fought in Southeast Asia have gone largely unrecorded.

*This is their story.*

Air Defense Artillery was designated a branch in the midst of a war in which the air threat it was to defend against never put in an appearance. The sort of war ADA units fought in Vietnam's rain forests wasn't the sort of war they trained for on the desert ranges of the U.S. Army Air Defense Center at Fort Bliss, Texas. They called it "mowing grass."

Anti-aircraft guns were considered obsolete prior to the American escalation in Vietnam. The Army had turned its anti-aircraft guns over to the Army National Guard and air defense artillerymen were already being called missilemen. The Army was forced to scrounge M-42 "Dusters" and Quad 50s from the National Guard to equip automatic weapon battalions for Vietnam. The automatic weapon battalions, after a crash training course at Fort Bliss, Texas, began arriving in Vietnam during 1966.

"They took us out to Oro Grande," recalled SGM Fred Handley, who trained with the 1st Battalion, 44th Artillery, the first automatic weapon battalion sent to Vietnam, at Fort Bliss, Texas. "We trained on Dusters that had belonged to the National Guard. We practiced against aerial targets. We expected to defend against aircraft in Vietnam, but we never got a shot at

one. We could see them sometimes—NVA (North Vietnamese Army) helicopters flitting around just across the border in Cambodia, but they always stayed just out of reach.”

The automatic weapon crewmen went to Vietnam expecting to combat enemy aircraft but took on enemy infantry instead. They fought outside their MOS but in the finest tradition of Air Defense Artillery.

The air threat evaporates quickly in most wars. The U.S. Army hasn't fought a battle without air superiority since 1942. The air defense artillerymen who went ashore at Normandy on June 6, 1944, for the most part, trained their anti-aircraft pieces on German Panther and Tiger tanks. Even the German 88mm dual-purpose anti-aircraft gun, the most famous gun of the war, made its reputation against Allied tanks.

The men who crewed the Dusters and Quad 50s hoped to become the first anti-aircraft artillerymen credited with bringing down an enemy aircraft since World War II but, when the air threat failed to materialize, the Dusters and Quad 50s were assigned ground support roles. Vietnam was on-the-job training for air defense artillerymen trained against aerial drones who had to improvise tactics as they went along.

The Dusters and Quad 50s added their fire to the tremendous volume of fire American units expended in Vietnam. The U.S. reliance on firepower was criticized by those at home who could never visualize a Viet Cong force moving through the jungle in regimental strength, and refused to admit the North Vietnamese Army was a participant in the fighting, but the tactics worked. Firepower wrecked the VC, who never really recovered from their losses in the 1968 Tet Offensive, and it made the trip south down the Ho Chi Minh Trail a one-way journey for the typical NVA recruit. The North Vietnamese knew the tactics were effective. They used the same sort of tactics to fight insurgents in Cambodia and Laos.

Still, the myth persisted that the Army was beaten by small squads of guerrillas even when, two years after the American withdrawal, NVA armor rolled blitzkrieg-style over South Vietnam.

Air defense artillery units had been in the war zone two years when they

learned they'd become part of a new branch. Air Defense Artillery was separated from Field Artillery by Department of the Army General Order 25 in 1968, the Chinese Year of the Monkey and the year American public opinion, shaken by the Tet Offensive and campus protests, soured toward the war.

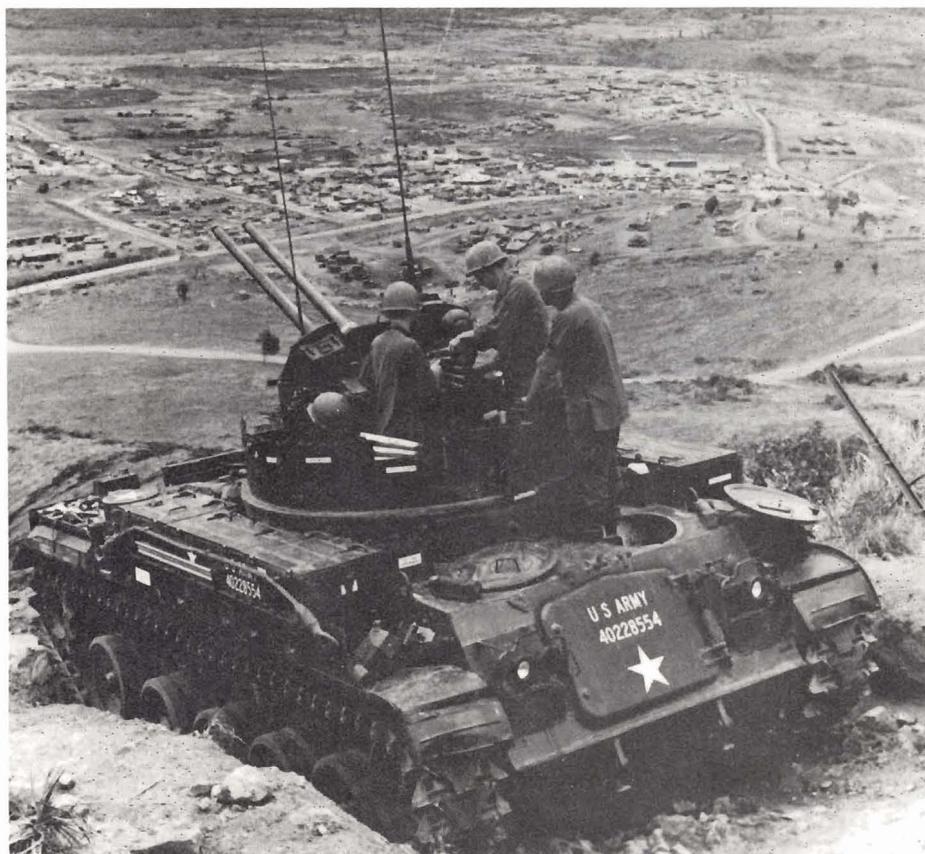
Dusters, because of their firepower and maneuverability, drew a lot of fire. So did Quad 50s and Vulcans and, for that matter, everything else in Vietnam with the missile and crossed cannon insignia attached. That included ADA officers who went out as field artillery observers or served as field artillery fire direction center officers. Some ADA officers went out as field artillery forward observers or served as fire direction center or artillery liaison officers while others who were assigned as advisors to South Vietnamese infantry-type units were awarded Combat Infantryman Badges.

The ADA NCOs and enlisted soldiers on the Dusters or behind the Quad 50s seldom saw their battery headquarters or an ADA officer. They were orphaned out to mechanized in-

fantry or armored cavalry units scattered the length and breadth of Vietnam. They provided convoy escorts on the “Street Without Joy” (Highway 1), “circled the wagons” with combat engineers in places like the Ia Drang Valley, floated down the Mekong in barges and conducted reconnaissance by fire for infantry heading into the Michelin Rubber Plantation.

The Hawk units were the only units in Vietnam whose primary mission was air defense. They protected theater assets like the huge logistic base at Cam Ranh Bay or “the world's busiest airport” at Tan Son Nhut. They played a waiting game in their fortified bunkers, surviving frequent rocket and mortar attacks, fending off VC or NVA sapper assaults and living for the day Hanoi might risk sending the MiGs south.

Air Defense Artillery's new FM 44-1, *U.S. Army Air Defense Artillery Employment*, concludes that the principal air defense lesson learned from the Vietnam conflict concerns the losses suffered by Air Force and Navy aircraft and Army helicopters from enemy short-range air defense artillery. In one



A DUSTER defends the high ground overlooking a U.S. basecamp.

case, a helicopter was shot down by fire from a crossbow. The manual also notes that the North Vietnamese high-altitude air defense weapon systems forced aircraft to fly at altitudes where they were subjected to short-range fire, thus demonstrating the importance of deploying a mix of complementary air defense weapon systems.

The realization that gun systems might not be obsolete after all explains Vulcan's appearance alongside weapon systems borrowed from Air Defense

Artillery's past, the Dusters and Quad 50s scrounged from the Army National Guard. Thus Vietnam, even though the air threat never put in an appearance over the southern portion of the battlefield during the American involvement, played an important role in shaping the new combat arms branch by ensuring that gun systems would continue to be a part of the air defense artillery weapons mix.

Vietnam did little to give air defense artillerymen experience in air defense

tactics, but it did provide the branch's junior officers and NCOs with combat experience, an important asset now that the Korean veterans are on the edge of retirement. Today, air defense artillery training is geared toward participation in the air-land battle—the battle America can't afford to lose—but if the Army is sent to fight another Vietnam, Air Defense Artillery has plenty of soldiers who remember how to use air defense weapons in a ground support role.

## Dusters



DUSTERS delivered effective indirect fire against NVA or VC troop concentrations.

The airborne troopers' uniforms were the color of the Central Highland's red clay. The three troopers had come down out of the mountains just before the monsoon at the end of their one-year tour and had been roused out for berm duty their last night in the base camp. They belonged to the 101st Airborne (Airmobile) Division and knew next to nothing about tracks, having spent

their entire tour miles from the nearest road or overhead cover. They'd never seen a Duster until they came onto the berm line in the gathering twilight.

"What is it?" asked the gunner.

"It's a Duster, an M-42," the track commander answered.

"You guys armored cav?"

"Naw. We're ADA."

"AD what?"

"Air Defense Artillery."

The three troopers mulled that over for awhile.

"Looks like it can really rock 'n' roll," one trooper said.

"Want to see it mow some grass?" the gunner asked.

"Sure."

The gunner and track commander climbed into the turret and fired four

long bursts beyond the concertina wire. "Pyschedelic!" one of the troopers exclaimed.

"Airborne!" said another.

"Bet it draws a lot of fire," the squad leader said.

"No lie, GI," the track commander answered.

The three troopers picked up their rucksacks and moved on past the fighting positions adjacent to the Duster, which no short-timer wanted to occupy, to other fighting positions farther down the berm line.

The infantry mostly didn't care how high the Duster could elevate its twin 40mm barrels. Many of the 11-Bravos, combat infantry who went to Vietnam straight out of advanced individual training at places like Fort Benning, Ga., or Fort Polk, La., were unaware that the Duster was an anti-aircraft weapon or that such a thing as the newly created Air Defense Artillery Branch even existed. The Duster, with its high silhouette, open turret and bulky configuration, wasn't a sleek or impressive looking weapon, but the infantry and cavalry, who recognized a good anti-personnel weapon when they saw one, liked what they saw. They put Duster to work as point security for convoys, assigned it the most likely avenues of approach to cover on perimeter defense and used it to conduct recons by fire.

Convoy duty was dangerous and nerve racking. Normally, the lead Duster covered the left side of the road while the rear track covered the right side. Dusters caught in an ambush pulled off the road, traversed their guns and provided covering fire for the convoy's other vehicles as they hurried to escape the kill zone. The tactic was effective, but it meant Duster crews spent eternities in the kill zone.

The twin 40mm, fully automatic gun mounted on an M-41 light tank chassis gave Duster a combination of devastating firepower, mobility and strength. The 40mm projectiles it fired were often mistakenly compared with 40mm grenades. Both projectiles were of the same caliber and both were equipped with point-detonating fuzes, but there were few other similarities. The 40mm high-explosive, incendiary, anti-tank projectile weighed approximately two pounds and traveled 2,870 feet per second while the 40mm grenade projectile weighed eight ounces and was propelled at approximately 250 feet per

second. The effect of the HEIT round against personnel in the open or inside hasty fortifications was appalling.

The Duster also delivered effective indirect fire. Enemy units learned to set up mortar, recoilless rifle and rocket positions just outside the maximum range of the Duster's regular 40mm, self-destruct ammunition. The NVA tried this tactic during the siege of Ben Het in June 1969. The Duster crews responded by loading one gun with regular ammunition and one gun with long-range ammunition. The crews, upon observing mortar, recoilless rifle or rocket flashes, made their direct-fire adjustments with regular ammunition, lulling the enemy into a false sense of security, and then switched to long-range ammunition.

Most Dusters towed a trailer that served the crew as a baggage car for personal belongings, C-rations, clean uniforms, extra ammunition and "SP" packages filled with stationery, chewing gum and cigarette cartons. The trailer that SFC Steve Nash's track was towing took a direct hit from a 122mm howitzer in Cambodia. "We lost all our worldly possessions," Nash said. "Our extra uniforms, the letters from home. Everything."

The normal load also included culvert halves, chain-link fencing and empty sandbags. When the Duster pulled into a nighttime defensive position, the crew would unload the culvert halves and emplace them near the gun. Once the crews had covered them with two to three layers of sandbags and had constructed a blast wall, the culvert halves became bunkers that provided effective protection from mortars. The chain-link fencing, when staked out in front of the weapon, stopped rocket-propelled grenades.

Duster crewmen, like field artillery cannoneers, were vulnerable to mortar fire because they manned their guns during mortar attacks and returned fire while riflemen sought the shelter of bunkers and foxholes.

SFC Jerry Kiker and his Duster crew were dueling VC 60mm mortars at LZ Oasis near Pleiku when their track took a direct hit that killed the gunner and disabled the gun. The explosion blew Kiker and the driver off the track. They got back on the track and continued to return fire with M-16s and the track's M-60 machine gun.

The track's mascot, Tiger, a Vietnamese dog with a keen eye for defi-

lade, survived the mortar attack by hiding under the track. Tiger was still with the track weeks later when Kiker returned from having his wounds patched up at Pleiku. One of the crewmen took Tiger home with him to Ohio.

ADA crews assigned perimeter defense worried mostly about sapper attacks which were sometimes followed up by infantry. A typical attack against an isolated firebase or nighttime defensive position began with a mortar barrage designed to drive the defenders into their bunkers. Once the sappers, incredibly brave men who stripped to loincloths and slung satchel charges around their bodies, were snaking through the tanglefoot and concertina wire, the enemy would switch from mortars to RPGs, hoping the defenders would fail to distinguish the RPGs from incoming mortars and remain in their bunkers. Having cleared the wire, the sappers would dash through the firebase or NDP, hurling satchel charges into the bunkers. If the sappers caused sufficient havoc, the enemy commander might follow up their success by launching a full-scale infantry assault. Being overrun became the ultimate Vietnam nightmare.

SGT Mitchell Stout of Battery C, 1st Battalion, 44th Artillery, a Duster battalion, was in a bunker with members of a searchlight crew the night an NVA sapper company hit the Khe Gio



**TIGER**, who hid beneath the track while SFC Jerry Kiker and his crew dueling a VC mortar, was the only crewmember to emerge from combat at Firebase Oasis without a scratch. The mascot was still with the track when the wounded crewmen returned from the hospital. One of them took the Vietnamese mascot home to Ohio.

Bridge. An enemy grenade was thrown into the bunker. Stout, a 20-year-old Tennessean, ran to the grenade, picked it up and started out of the bunker, cradling the grenade close to his body to protect the other soldiers in the bunker. As Stout reached the door, the grenade exploded.

A Duster spitting fire on the perimeter during "mad minutes" was sometimes so intimidating that it prevented ground attacks from being launched. The Duster was often the number one objective of attacks that were launched. Knowing that the enemy would attempt to silence Dusters at the beginning of an attack, units made it SOP to move Dusters from one alternate firing position to another after dark in order to conceal their position.

Duster crewmen inside perimeters pulled four-hour shifts on the gun, peering out through the concertina wire at the darkness. Some GIs swore the jungle moved at night. Sometimes VC or NVA sappers would slither up in the darkness and turn the claymores around so they were pointing toward instead of away from the perimeter. Then they'd make a little noise, hoping a GI would squeeze the firing

mechanisms hooked up to the claymores. Some units went on a full alert at 4 a.m. so that everyone in the perimeter would be awake during the hours just before dawn which were considered the most likely hours for a sapper attack.

The Dusters spent most daylight hours pulling road security or convoy escort duty. They spent nights in base-camp or firebase perimeters or simply "circled the wagons" with the unit they were supporting.

Three Duster battalions served in Vietnam. Each battalion had a battalion headquarters, four Duster batteries, an attached machine gun (M-55) battery and an attached searchlight battery. The automatic weapon battalion, with a personnel strength, counting attachments, of approximately 1,000, was one of the larger-type battalions in Vietnam.

The Duster batteries had a battery headquarters and two firing platoons. The machine gun batteries had a battery headquarters and six machine gun sections, while the searchlight batteries consisted of a battery headquarters and three searchlight platoons.

The 1st Battalion, 44th Artillery, was the first automatic weapon battalion to

reach Vietnam, arriving in November 1966. A self-propelled Duster battalion, the 1/44 Artillery was to become one of the most decorated artillery units in history, supporting the Marines at places like Con Thien and Khe Sanh as well as Army divisions in South Vietnam's rugged I Corps region.

The battalion was assigned to I Field Force Vietnam Artillery and was located at Dong Ha. In 1968, it was attached to the 108th Artillery Group. The 1/44 Artillery became part of XXIV Corps Artillery and moved to Da Nang in 1970, later coming under control of the Da Nang Support Command just prior to its departure from Vietnam in 1971.

The 4th Battalion, 60th Artillery, arrived in Vietnam in March 1967 and became part of the 41st Artillery Group of I Field Force Vietnam at Qui Nhon. In February 1968, it was attached to I Field Force Vietnam Artillery and moved to An Khe in June 1968. The battalion moved to Tuy Hoa in late 1970 and left Vietnam in December 1971.

The 5th Battalion, 2nd Artillery, arrived in Vietnam in November 1966 and was stationed at Long Binh. The battalion left Vietnam in June 1971.



A Duster arrives at a firebase still under construction. Duster's withering fire made it a mainstay of perimeter defense.

## Quad 50s



QUAD 50s were often airlifted into isolated firebases and assigned the most likely avenue of approach to cover.

The Quad 50 looked like a spiny crustacean that had crawled out of the South China Sea. Quad .50-caliber machine gun batteries were attached to the Duster battalions, but they went wherever the tactical situation dictated. Some were mounted on trucks to provide convoy security while others manned perimeter defenses. Some went places tracks couldn't go. Quad 50s floated through the Mekong Delta on barges and were airlifted onto remote firebases in trouble.

There was a Quad 50 on Firebase Hellen which perched on a razorback ridge overlooking a mountain stream called the Rao Trang. Sheer cliffs surrounded Hellen on three sides, but the ridgeline tapered downward at the southern end of the firebase. The 101st Airborne troopers who manned the firebase figured any ground assault would have to come over the landing pad at the south end. They positioned the Quad 50 at the edge of the landing pad.

Firebase Hellen was expecting rain. A company of the 101st, caught in an attrition trap within mortar range of the firebase, had been reduced to 26 men in five days of fighting and three NVA regiments had knocked a battal-

ion of the 101st off Firebase Ripcord a few kilometers to the west.

The Quad 50 crew lived in the mud at the low end of the firebase, waited for enemy sappers and listened to war stories told, with slight variations, from the Mekong to the DMZ. They heard stories about MiGs streaking down the A Shau Valley, a major infiltration route, on moonless nights; of NVA resupply helicopters painted solid black. No one knew for sure if the story about the NVA helicopters were true, but the air defense artillerymen dreamed of catching one in the sights of their Quad 50.

One night a helicopter swooped out of the night and strafed Firebase Hellen, spewing .50-caliber bullets the length of the firebase. The helicopter caught the Quad 50 crew, awakened by the clattering of the .50-caliber door guns, as they scrambled for their gun. One of the crewmen went down with a .50-caliber slug in the leg.

The helicopter turned out to be a command and control ship from a neighboring battalion. The ship, out for a nighttime recon, had wandered out of its area of operations and the battalion commander had mistaken

kerosene lanterns being carried down the middle of Hellen for lights aboard a VC sampan. The neighboring battalion commander realized his mistake when Firebase Hellen began firing illumination rounds. He radioed the firebase tactical operation center that he wanted to land and apologize.

The crew of the Quad 50 was in no mood for apologies. They had the gun elevated and were praying the helicopter would try a second pass.

The firebase's artillery liaison officer telephoned the Quad 50 position. "The helicopter is friendly. It's going to come in at the lower pad," said the liaison officer.

"Good," said the Quad 50 crew chief, "we'll get him when he hovers."

The TOC had to radio the helicopter to stand by, out of range, while the infantry company commander ran down and ordered the Quad 50 crew off the gun.

Four Quad 50 batteries fought in Vietnam.

Battery E, 41st Artillery, assigned to the 41st Artillery Group of I Field Force Vietnam, arrived in March 1967 and departed in December 1971. The battery, headquartered at An Khe and Tuy

Hoa, served with the 4/60 Artillery.

Battery G, 55th Artillery, arrived in Vietnam in February 1967 and left in July 1971. It was stationed at Chu Lai and was attached to the 23rd Infantry Division.

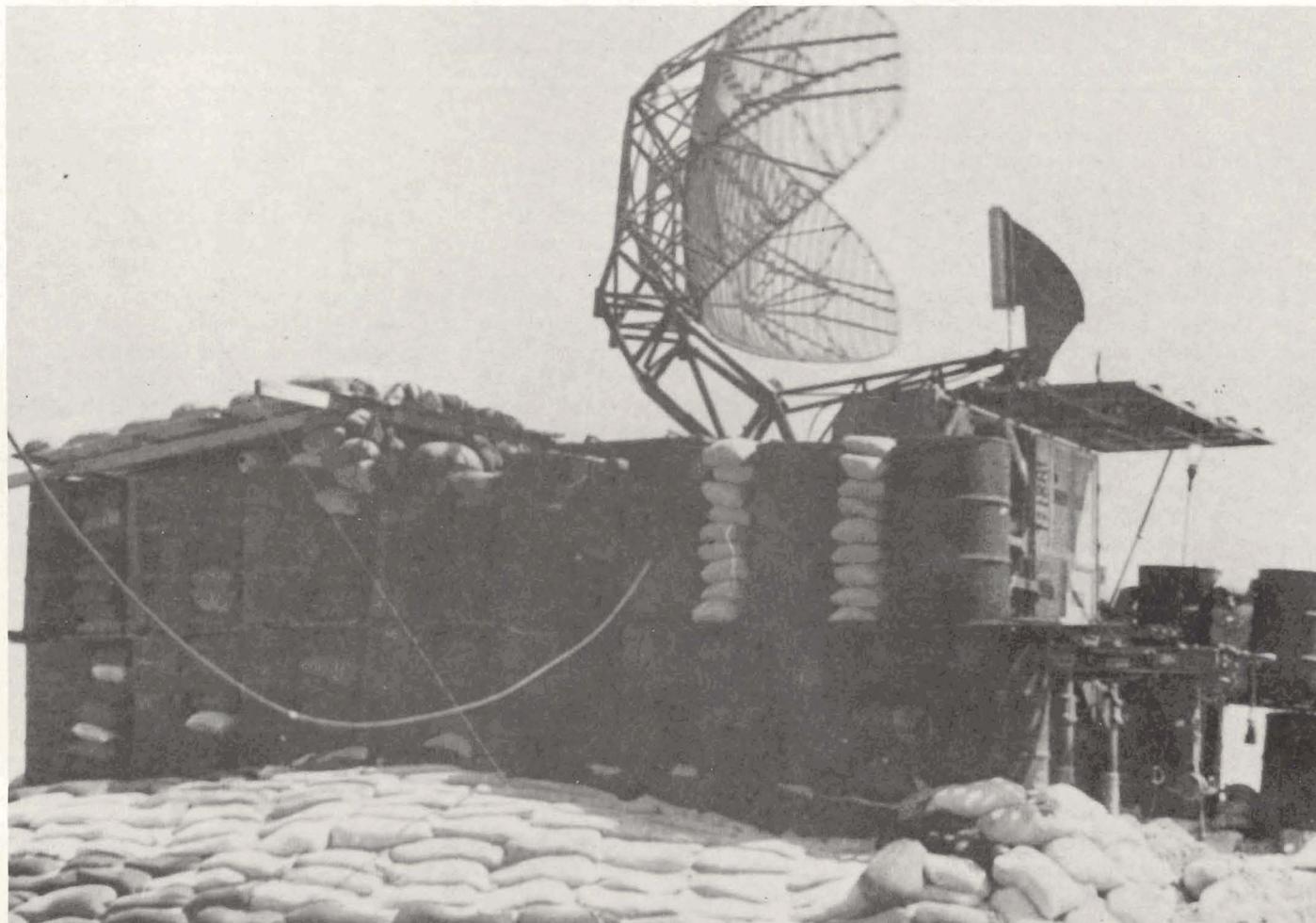
Battery G, 65th Artillery, arrived in Vietnam in October 1966 and departed in December 1971. It served with the 1/44 Artillery at Dong Ha until it was attached to the 108th Artillery Group in 1968. The battery was sent to Da Nang as part of XXIV Corps Artillery in 1970.

Battery D of the 71st Artillery served two tours in Vietnam. During its first tour (November 1966 to June 1971) it was stationed with the 5/2 Artillery and later the II Field Force Vietnam at Long Binh. During its second tour (September 1971 to March 1972) the battery was attached to XXIV Corps and stationed at Da Nang.



QUAD 50s were often mounted on trucks to increase their mobility.

## Hawk



HAWK positions resembled sandbagged fortresses. During the monsoon, trenches dug through the fortifications turned into moats.

The Army could never figure out a way to use Hawk in a ground support role, though many probably spent sleepless nights pondering the possibility.

The 6th Battalion, 56th Artillery, a mobile Hawk unit, arrived in Vietnam in September 1965. The battalion was assigned to the 97th Artillery Group and was stationed at Tan Son Nhut and Long Binh. In 1968, it was posted to Chu Lai and attached to the AMERICAL Division. Battery C of the battalion was inactivated in Vietnam June 5, 1969. The 6/56 Artillery left Vietnam in August 1969.

The 6th Battalion, 71st Artillery, a mobile Hawk battalion, arrived in Vietnam in September 1965. It was stationed first at Qui Nhon and was then assigned to the 97th Artillery Group and relocated at Cam Ranh Bay in 1966. The 6/71 Artillery left Vietnam

in June 1971.

Hawk personnel provided manpower for base reaction teams, were frequently subject to rocket and mortar attack and spent many hours on "red alert" when unidentified aircraft were detected penetrating the DMZ. But it was mostly a waiting game. The missilemen fired live missiles during annual service practices on islands in the South China Sea, complained about the lack of target drones, petitioned higher headquarters to move a Hawk unit north to take on NVA helicopters rumored to be operating in and just below the DMZ and protested the move of some Hawk batteries to Korea and Thailand.

They also became masters at field fortifications, building sandbag fortresses that could withstand mortar attacks with virtual impunity.

Approaching a Hawk position, you

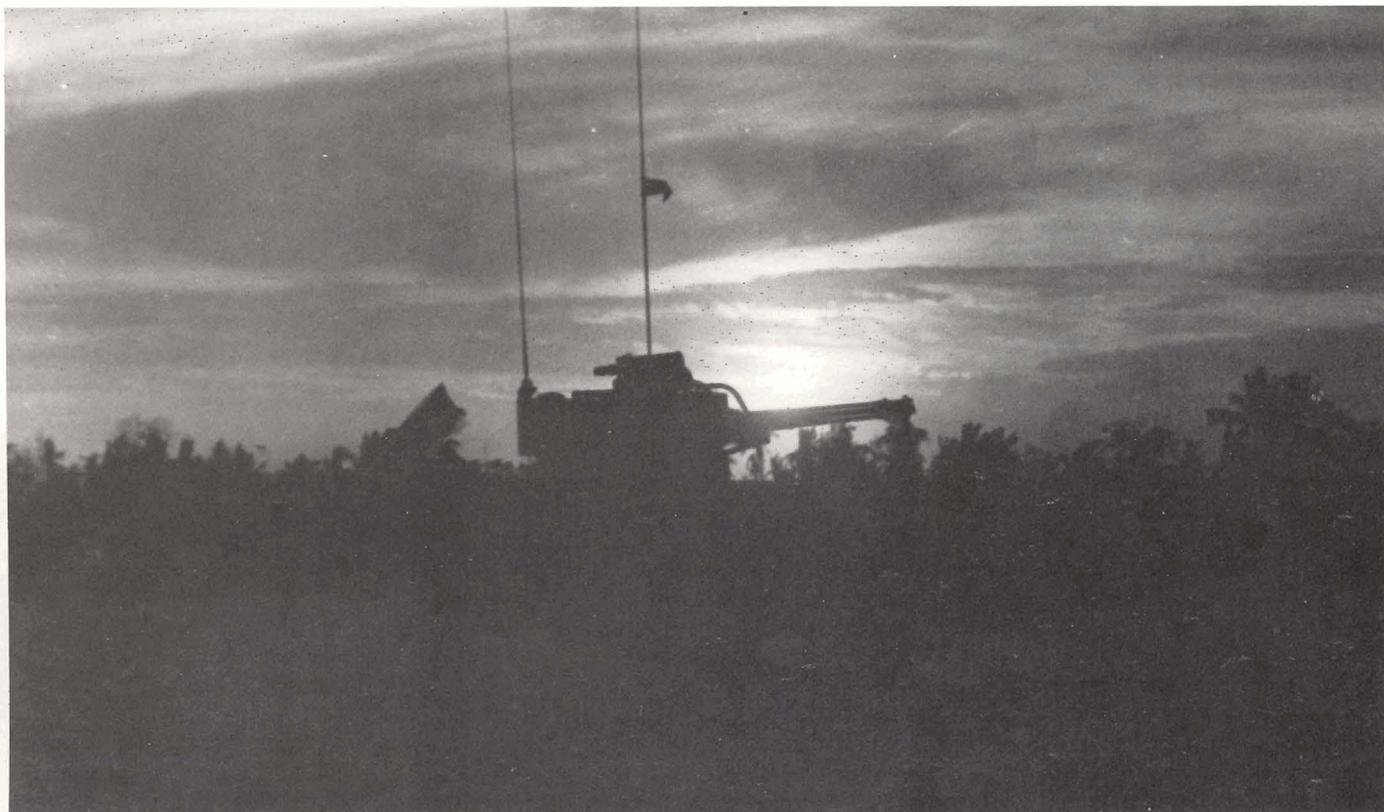
got the feeling of entering a walled city. During the monsoon season, the Hawk positions were protected by moats.

"We took 'ditchers' and dug trenches all through the perimeter," remembers Joe Riddell, today a civilian training specialist at the Air Defense Artillery School. "The trenches were for drainage and for protection against rockets. If you were walking through a position when the rockets started coming in, you'd take a header into one of the trenches. During the monsoon, they filled up with water."

The Hawk positions, however, were not invulnerable.

SSG Kenneth Freeman, today with the 7th Infantry Division at Fort Ord, Calif., won't forget the day a 122mm rocket plunged through the roof of his battery's TOC and splintered the operations table. Luckily the rocket was a dud.

## Vulcan



CSM Vincent De Santis' Vulcan silhouetted by sunset glow. The night belonged to "Charlie" until massive firepower produced by weapons like Vulcan decimated Viet Cong ranks during the Tet 1968 Offensive.

The GIs thought Vulcan was sexy, almost as glamorous as a Spooky or Cobra gunship.

The 1st Vulcan Combat Team was

deployed to Vietnam for combat evaluation in November 1968. They were scheduled to leave in March 1969 but stayed an additional 45 days to finish

mopping up after the Tet 1968 Offensive. The team consisted of five Vulcans, two officers and 21 enlisted men.

A typical Vulcan action took place

close to Firebase Thunder III on Highway 13 near Quan Loi. A force of six armored cavalry assault vehicles and one Vulcan was clearing the road for a convoy from Saigon when they were ambushed by about 200 NVA. Five of the six ACAVs were hit by rockets during the first 15 seconds. The two lead ACAVs were stopped in the road. The cavalry commander, CPT Harold Fritz, was hit and seriously wounded. His column, with the damaged ACAVs blocking the road, was pinned in the kill zone.

The Vulcan, third in line, pulled to the left around the second ACAV and then back onto the road. It traversed its guns to the rear and fired a 30-round burst. The track commander then switched to 10-round bursts to conserve ammunition and radioed Thunder III for help. During the first critical minutes of the ambush, the Vulcan was the only weapon delivering effective fire against the ambush.

Despite his wounds, Fritz, who won the Medal of Honor that morning, was able to move to the Vulcan and direct its fire into the enemy assault. The Vulcan delayed the attack long enough for Fritz to regroup his unit, remove machine guns from the destroyed ACAVs and establish a defensive position.

A ready reaction force, consisting of a tank platoon and a Vulcan, roared out of Thunder III. The relief force broke through to the beleaguered column about 30 minutes after the fire-fight began. The battle lasted about four hours. When it was over, the cavalrymen counted 41 enemy dead.

"Without the single Vulcan, the unit would have been annihilated," Fritz said. "The survival of my unit during the first critical minutes of the ambush can be attributed to the Vulcan's ability to engage the enemy quickly and place a high volume of fire on the target.

"Initially, the Vulcan gunner could not see the assaulting force because of dust and smoke, so the Vulcan gunner started firing into the most likely area of enemy concentration. The shock and sound caused the assault to waver.

"On that day in Vietnam, it was just a case of having the right gun, at the right time, in the right place. We just would not have made it without the Vulcan," Fritz said.

Vulcan had passed its combat test.



Prelude to combat, 1st Vulcan Combat Team crewmen inspect their newly arrived tracks near Saigon.

"The NVA made a big mistake by firing first at the ACAVs instead of the Vulcan," says CSM Vincent De Santis, who missed the fight near Thunder III but served with the Vulcan team in Vietnam. "They probably didn't know what Vulcan could do."

De Santis, one of the five Vulcan squad leaders picked for the evaluation team, recalls that Vulcan passed its combat evaluation test with flying

colors. "Vulcan worked all the time. You didn't get the mechanical jamming you get with Dusters."

The evaluation team commander, CPT John S. Wilson, who was wounded during an earlier tour with the 1/44 Artillery, died when a rocket crashed through the roof of a bunker. The Vulcan crewmembers, most of them veterans of previous tours, returned to Fort Bliss after their six-month tour.



Members of the 1st Vulcan Combat Team are decorated at the end of the team's tour in Vietnam.

## Snap Shots



A member of SSG STEVE NASH's crew took this photograph of him standing near a typical Vietnamese "hootch."

### SFC Steve Nash

I volunteered for the draft and did three tours in Vietnam. I was just 17 and wasn't about to be drafted, but I wanted to go. I wanted to be in the Army. I did three tours in Vietnam. I did the first two with the 5th Battalion, 2nd Artillery, in '68 and '69 and the last one with the 1st Battalion, 44th Artillery, in '70 and '71.

My first track was called the *Triple Deuce*. We were the second track in the second squad of the second platoon. I started out as an assistant gunner and worked my way up to track commander and squad leader. I spent the second tour on a track called *The Dirty Five*. I spent the third tour with the 1st of the 44th up in I Corps on a track called *Pa Kettle*. We were the "front door" on convoy duty and *Ma Kettle* was the back door.

I was wounded twice. The second time was worse. I was on *Pa Kettle* when it happened. We were pulling convoy duty not far from Firebase



SSG STEVE NASH and the crew of *The Dirty Five*. "There were four of us and the track made five," Nash said. Nash, the track commander, is wearing the "boonie hat." SP4 Richard Allen (left), the driver, is now a civilian and lives in Ohio. PFC David Johnson (center), the cannoneer, died in Vietnam. SP4 John Kravatz, on the track with Nash, went home to Texas. The photograph was taken near Cu Chi in 1969.

Tennessee near Dau Tieng and had to leave the second track behind because it had a blown engine. We made a looping left turn and Charlie hit us with B-22 and B-40 rockets. A rocket came through the ready rack and exploded inside the tub. The explosion knocked the track off the road into a rice paddy. My assistant gunner lived just long enough to scream my name. I got hit by shrapnel in the abdomen.

We got the track back on the road and were headed for LZ Bird, the nearest firebase, when we saw a Huey. We popped smoke grenades and the Huey came down and picked up the wounded. I was taken to the 24th Evac and ended up in Japan.

I didn't know anything about the protest movement. I must have been the biggest dummy around. I thought we were fighting for the American way of life. Then Jane Fonda started her "send the boys home" campaign. The GI got no support. We had to support ourselves.

I got a "Dear John" letter my first tour.

### **SFC Jerry Kiker**

I was drafted. I figured "go over, do your job, serve your time and come home alive." Vietnam made you grow up. I went over at 19 and took everything—the way we live here at home—for granted, and then I saw the way the Vietnamese lived.

I was with Delta Battery, 4th Battalion, 60th Artillery, in '69 and '70. We were in the Central Highlands near Pleiku. At Fort Bliss, we were trained in anti-aircraft tactics, not in ground-support tactics. In Vietnam, you learned as you went along.

I was wounded at LZ Oasis. One night we started taking incoming. We could see the mortar flashes and were on the gun returning fire. I was the squad leader acting as cannoneer. We took a direct hit from a 60mm. A lucky shot. It blew me and the driver off the track and killed the other two guys on the track. The driver—we called him Moose—and I climbed back on the track. It was inoperable because of the mortar hit. We continued returning fire with M-16s and the M-60 machine gun



SFC Jerry Kiker's temporary home, a sandbagged bunker.

on the track.

The next morning, they took me into Pleiku where they cut the shrapnel out of my legs. It wasn't that serious. I stayed in the base camp for 30 days and then went back to the track.

There was a purpose to begin with, but now I don't know what it was. I feel we let the Vietnamese people down. I feel America let the Army and the country down.

When I got home, the only reception I got was from my family. My friends didn't seem to realize I'd been gone. I don't think about Vietnam much anymore. Not unless someone asks me a direct question.

### **CSM Vincent De Santis**

I was a missile man. They put me with a Hawk battalion at Cam Ranh Bay. I looked around and said, "I want to go and fight the war." I kept putting in paperwork. Finally, I met a sergeant who worked in personnel assignments and he told me about Dusters. I asked what Dusters did and he told me. A couple of weeks later, I was with the 1st Battalion, 44th Artillery, on a Duster with the Marines on the DMZ. The crew taught me everything I needed to know. I learned on the gun.



CSM Vincent De Santis crewed Dusters and Vulcans.

When I got back to Bliss, they were putting together a Vulcan team for combat evaluation in Vietnam. I volunteered. We trained on Vulcans with an AIT unit. They handpicked five

squad leaders and five crews. The squad leaders were all Vietnam vets like me. The crews were about half professionals and half draftees.

The tracks went by rail and then by sea to Saigon. We flew over and picked them up. We stayed down south. We had two sections with two guns to a section. The fifth Vulcan was used as a backup. One gun per section had a working radar. I asked for one of the guns without a radar because I knew the radar wasn't going to be any use in Vietnam.

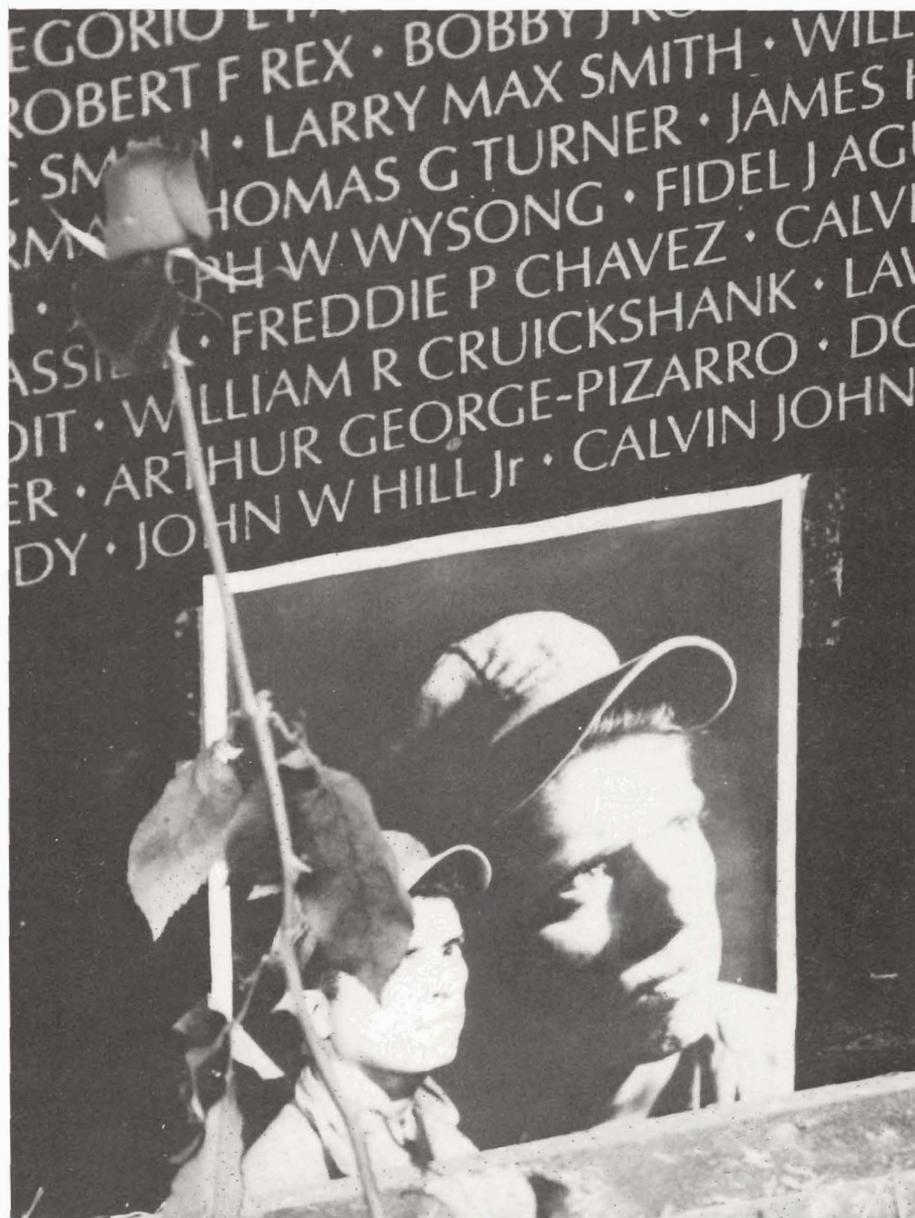
We did a lot of different things. We pulled convoy security, checkpoint security, a lot of perimeter duty and conducted a lot of sweeps with the Cav. We had only four guys to a track and we fired H and I fires through the night. At places where they had engineer equipment, we buried the track in a hull-down firing position so only the turret was showing. Other times, we set up for the night covered-wagon style. We also fired a lot of demonstrations. The gun was new and it attracted a lot of attention. We fired one demonstration for General Abrams.

The team did really well, but I've never seen any mention of what the team did there. We were there to test the effectiveness and durability of the gun, and the gun's performance was excellent. It always worked. There wasn't any mechanical jamming like you get with the Duster. It worked with minimum operational maintenance. When we got back to Bliss, there wasn't a single member who didn't have a feeling of accomplishment. I think the team did a super job.

Captain Wilson, the leader of the evaluation team, was killed and the lieutenant lost a leg when a rocket hit a bunker in one of the base camps. They have a portrait of the captain in one of the buildings here at Fort Bliss now. We'd been playing basketball together on Christmas Eve just a few days before he was killed. We had a support team that went around with us for awhile in an APC with a mini-gun but it was hit by a mortar. None of the guys on the Vulcan tracks were hit.

I think the soldiers who served in Vietnam have a lot to be proud of. The draftees may have been disillusioned because of the demonstrations back home, but they did their job. I think they did a hell of a job.

## War Stories



Names etched in the black granite of the Vietnam Veterans Memorial, Washington, D.C., are a roll call of the nation's Vietnam War dead. (U.S. Coast Guard photos of the Vietnam Veterans Memorial by PA2 Tom Gillespie)

In *On Strategy: The Vietnam War in Context*, Harry Summers records the following conversation between an American and North Vietnamese colonel after the war: "You know you never defeated us on the battlefield," the American colonel said. "That may be so," the North Vietnamese colonel replied, "but it is also irrelevant."

The soldiers who crewed the Dusters and Quad 50s were mostly draftees who weren't eligible for college defer-

ments. "These kids are kids who got stuck at the end of the pipeline. They know that, and they know that we know it," a colonel told a correspondent.

They were the last of the civilian soldiers. When the inequities of a draft which sent the children of the working class to war but granted deferments to the sons of the middle and upper classes gave way to the lottery system, middle class support of the war vanished with the college deferments.



Some believed in the war. Some were superpatriots like the replacement who told a squad of 101st troopers that, "It's better to stop them [the communists] here than on the beaches in California." They stared at him in disbelief.

Some didn't believe in the war but fought it anyway. Their fathers had fought in World War II and their older brothers in Korea. Canada was out of the question. They drew peace symbols on their helmet liners and flashed "V" signs that stood for peace instead of

victory, but they did their part in a firefight.

Their setbacks, which were few, received more publicity than their victories, which were commonplace.

When a VC squad stormed the American Embassy in Saigon during the 1968 Tet Offensive, and were gunned down by a handful of Marine guards in the embassy courtyard, the press made it sound like another Kasserine Pass. When a platoon refused its lieutenant's orders to advance down a particularly

hazardous trail, the media made it sound as though American troops had never before refused an order. Lieutenant Calley replaced SGT York and Audie Murphy as America's most publicized soldier.

They developed a sort of fatalism that World War II and Korean veterans found disconcerting. "There it is," they'd say, after being assigned the rottenest mission or hearing news of the death of friends in other tracks. They fought on even after the schedule for troop withdrawals was announced and the war didn't seem to make much sense anymore.

The professional soldier had an easy answer for those who asked: "Why did you go to Vietnam?" "You sent us," they'd reply. The question was a more difficult one for civilian soldiers who listened to their peers brag about beating the draft.

The teenagers on the Duster tracks purchased cars on the layaway plan and carried around photos of the Ford, Chevy or Pontiac they knew would be waiting in the garage the day they got home.

They rigged showers by suspending buckets from the Duster's twin barrels or bathed in monsoon rains, though the last was tricky business since the rain sometimes quit before they had time to rinse the lather off.

*Lessons Learned: Clean people smell more than people who haven't bathed for a couple of months.*

They went on R&R in Sydney, Hong Kong and Bangkok with a thousand dollars in their pockets and just one week to spend it.

They photographed everything. Some photographs were obligatory: (1) the crew drinking warm beer atop the track; (2) the girl back home; (3) the girl in Bangkok; (4) the Viet Cong dead on the edge of the perimeter. They showed the snapshots (including the one of dead Viet Cong) to "doughnut dollies," Red Cross volunteers who served coffee and doughnuts to troops coming out of combat.

There was little resentment among GIs still in Vietnam toward the Vietnam Vets Against the War who everyone figured had their right to protest, and not as much as you'd expect against student demonstrators.

Some signed up for second tours, discovering the type of jobs their old high-

school buddies were doing back home couldn't compare with the responsibility assigned 20- and 21-year-olds in the Army. Some, who would have never dreamed it possible the day they got their induction notice, stayed on and made the Army a career.

Automatic weapon crews listened to the Armed Forces Network on their transistor radios. The DJs played songs like *The Green, Green Grass of Home* and *We've Got to Get Out of This Place*, an early sixties rock 'n' roll hit whose popularity lasted the length of the war.

They carried cassette players into battle and would sometimes turn the volume up full blast during firefights. A Jimmie Hendrix album was considered good background music for a firefight. It was something they'd picked up from the movies, a need for a soundtrack.

*Lessons Learned: GIs who try to burn off leeches Hollywood-style with cigarettes usually give up before the leeches.*

The GIs invented a new language. CIA agents were "spooks" and the Special Forces were "Science Fiction." No one was killed. They were "zapped," "wasted," "blown away" or "gone to do a little recon work in the sky." Dead enemy soldiers were "believers." Napalmed VC or NVA were "crispie critters." Point men carried their M-16s on "rock 'n' roll" (automatic) and "Lurps" (long-range reconnaissance patrols) set up NDPs (night defensive positions) along "blue lines" (rivers) or atop a "prominent terrain feature" (mountain).

"Packs" (soldiers) drew short-timer calendars on their helmets, marked the passing days and waited for their "turtles" (the nickname for replacements because they were so slow in arriving). The United States was the "real world" or, simply, the "world."

It got so bad that soldiers new in country couldn't communicate.

At night, the automatic weapon crews on mountain firebases watched firefights in the valley below: red tracers from U.S. or ARVN weapons and pink and blue tracers from NVA or VC weapons.

They called the jetliners that ferried troops to and from Vietnam "freedom birds." The war ended for most of them the day their freedom bird lifted off the runway at Cam Ranh Bay or Tan Son Nhut.

It was one of the weird things about the war. A Duster or Quad 50 gunner coming out of action Monday would hear the wheels touch down on the runway at Fort Lewis near Seattle on Wednesday. If he were eligible for an early out, he might be a civilian Thursday morning sitting in a civilian airport, suffering from startle reactions and clutching a ticket home to some place like Decatur, Mich., or Mountain Home, Ark.

For the most part, people in airports ignored him. No one asked "What unit were you with?" or "Did you see any action?" No one offered to buy him a beer.

He wondered what the guys back on the track might be doing at that very moment.

*Lessons Learned: Wrap everything in plastic.*

The monsoon was breaking up the night of December 31, 1970. The Quad 50 crews manning firebase perimeters atop the rugged ridges of northern I Corps watched base camps and firebases scattered up and down Vietnam's narrow coastal plain celebrate the new year with barrages of flares, rockets, tracers and cannon fire.

Every Duster, Quad 50, howitzer, cannon, machine gun and M-16 on every perimeter from Quang Tri to Hue opened up with everything they had at midnight. It was beautiful. It was psychedelic. It was "number one." It was

the ultimate mad minute.

The action junkies, soldiers who were high on war and had signed up for tour after tour, worried about adjusting to peacetime. Things were bad enough already, they complained. The VC weren't what they used to be in the 60s. Genuine black-pajama VC made up only 20 percent of the communist forces operating south of the DMZ after Tet of 1968. You had to go to Cambodia or into the mountains near the Laotian border to find NVA to fight.

*Lessons Learned: Drive in the ruts.*

There was a sense of optimism and foreboding. Everyone was "short." President Nixon had announced the schedule for American troop withdrawal and the final "Vietnamization" of the war. The last air defense artillery unit would be home—back in the real world—by the end of the new year, but there was a feeling everything had gone wrong, that all the killing and dying had been for nothing. No one expected Hanoi to honor any piece of paper that might be produced by the Paris Peace talks. "Peace with honor" was a euphemism for throwing in the towel. The only Vietnamization about to take place was "North Vietnamization."

"I felt we were running out," SFC Jerry Kiker recalls. "We were running out on the people we'd gone there to protect."

"I thought the North Vietnamese



would come across the DMZ with tanks the moment we pulled out," SSG Steve Nash remembers. "That's what ultimately happened. They waited a little longer than I thought they would."

Kiker and Nash stayed in the Army, but most of the Vietnam-era draftees took their discharges and went to college on the GI Bill or to work in factories near their hometowns.

PVT Charles Boyle didn't make it home. He died when the rocket slammed into *Pa Kettle*, Nash's track, near Firebase Tennessee, living long enough to call out Nash's name.

SGT Mitchell Stout of the 1/44 Artillery didn't live to pin on the Medal of Honor he was awarded. He died cradling the grenade in the bunker at the Khe Gio Bridge.

They named a building in honor of CPT John Wilson at the Air Defense Artillery School.

A decade later, their names were etched into the black granite "V" of the Vietnam Veterans Memorial in Washington, D.C.

The air defenders who served in Vietnam won't be forgotten by the field artillery cannoneer who watched a Quad 50 stop a sapper attack in the wire, by the cavalry platoon leader who rallied his platoon while a Vulcan stood off an enemy ambush or by the infantrymen who embraced the Duster leader who broke through to the infantry position early one morning.

The automatic weapon battalions fired more than four million rounds of Duster ammunition and more than 10 million rounds of Quad 50 ammunition.

They participated in every major American campaign during the conflict in Southeast Asia. Some reached the outskirts of Phnom Penh.

Each battalion won either a Presidential or Meritorious Unit Citation. The soldiers who served in them won more than 450 medals for valor and earned more than 1,000 Purple Hearts.

They proved anti-aircraft guns belong in the Army arsenal, but they were never able to stop the flow of communist replacements down the Ho Chi Minh Trail, make front-page news as often as the peace demonstrators, convince people back home that Vietnam might be worth the price they paid or make South Vietnam over in the image of America.

*Lessons Learned: There are some things you can do with a gun and some things you can't.*





# Automated Communications For Air Defense

by CPT L. A. Wade

Battlefield automation to accommodate new sophisticated weapons, sensors and combat service support systems has created a demand for a data distribution system to carry the load of information with critical speed-of-service at extremely high data rates. We don't have such a data distribution system in our current communications systems. However, computer processors and display systems requiring a data distribution medium are now in production or near production.

The communications system that has been chosen to provide data distribution speed, automation and interoperability for Air Defense Artillery is the combination of the position locating reporting system and the joint tactical information distribution system, referred to as the PLRS/JTIDS Hybrid or PJH. This new generation of digital data communications equipment will feed information to video-type displays and consoles on the battlefield. It will revolutionize field communications by providing truly automated, timely transmissions of perishable informa-

tion of the type and quality which manual voice transmissions cannot deliver. The PLRS/JTIDS Hybrid will give ADA the command, control, communications and interoperability needed to best use the new short-range air defense weapons.

Take Stinger, for example, which can shoot down any aircraft that flies within its range. The critical question in the use of that weapon is: Will the gunner know that the threat is coming, and will he know whether the aircraft is friendly or hostile?

In the stress of combat, the gunner must have a communications system for early warning and cueing of approaching aircraft and for positive hostile identification. This will be a key part of controlling Army and Air Force close-air-support missions. Today, we don't have a communications system that can effectively service the SHORAD weapon systems against a fast-moving, low-flying threat. The PJH will provide the necessary data for the soldier to engage hostile aircraft while protecting friendly aircraft.

Let's examine the functional features

of both systems and their applications to air defense.

## Position Locating Reporting System

The PLRS will move us from the slow, manual, voice and electronic countermeasure-vulnerable communications now used to a near real-time, digital-data transmission of messages.

A PLRS communications terminal will enable the user-operator to obtain his own location or that of another user in a matter of seconds. It will also give navigational information permitting the user to travel accurately from one place to another, a handy feature which will allow the user to stay inside safety zones.

To make the PLRS even more serviceable for SHORAD units, a handheld computer display device will be connected to a port on the PLRS terminal, thus permitting the display of air tracks and command and control information to the gunner. In addition, the user can send preformatted or "free-style" text messages.

The wonder of the PLRS is that hundreds of users can operate on a

single net (not frequency), talking to each other without interfering with one another—another step towards large-scale interoperability.

The net control station of a single PLRS network, housed in an S-280 shelter, will display the location of hundreds of users on a single, large console, thereby informing the tactical commander where his force elements are at any given moment.

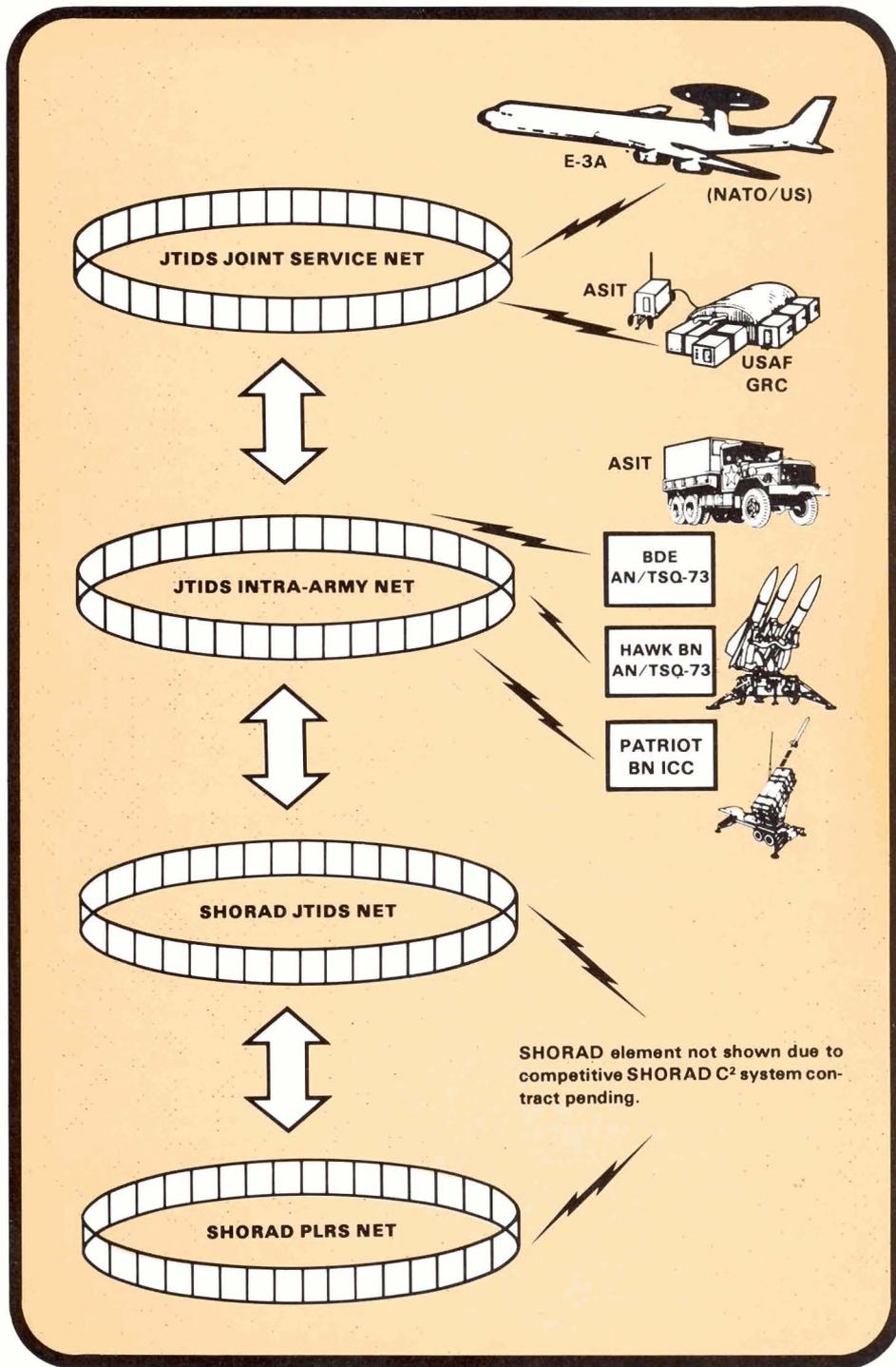
Another PLRS characteristic is its advanced jam-resistance called frequency hopping. Instead of transmitting on a single frequency as is usually done with today's voice single-frequency radios, a new technology called frequency and time division multiple access will send a message by "burst" data transmission. Before it reaches the recipient, different parts of that "burst" message will have been sent over several different frequencies of microseconds' duration. Consequently, such transmissions would require an enemy jammer to be lightning fast in locating a transmitting signal on each frequency used, be able to find the multiple frequencies being transmitted on and be able to jam most of the frequencies in order to interrupt communications.

Add to these characteristics the ability to be automatically encoded, and we have a highly proficient system that will reliably maintain communications.

### Joint Tactical Information Distribution System

The primary intent of the PLRS is to automatically provide accurate position location and navigation information and to give data communications support to weapon systems and command and control elements. The JTIDS is primarily intended to be an information distribution system which can also provide position location, navigation and user-unit identification. Although the JTIDS has the same technological characteristics as the PLRS, it has many more frequencies, a larger information-holding capacity, and can operate without a net control station. Just turn it on and use it.

The Army is cooperating with the Air Force in the full-scale development of JTIDS which will give ADA not only internal command, control, communications and interoperability between and among SHORAD and HIMAD systems, but also with external elements. Command and control centers will be linked with the Air Force E-3A AWACS aircraft and control and reporting cen-



ters. The JTIDS will provide unprecedented joint service and NATO interoperability.

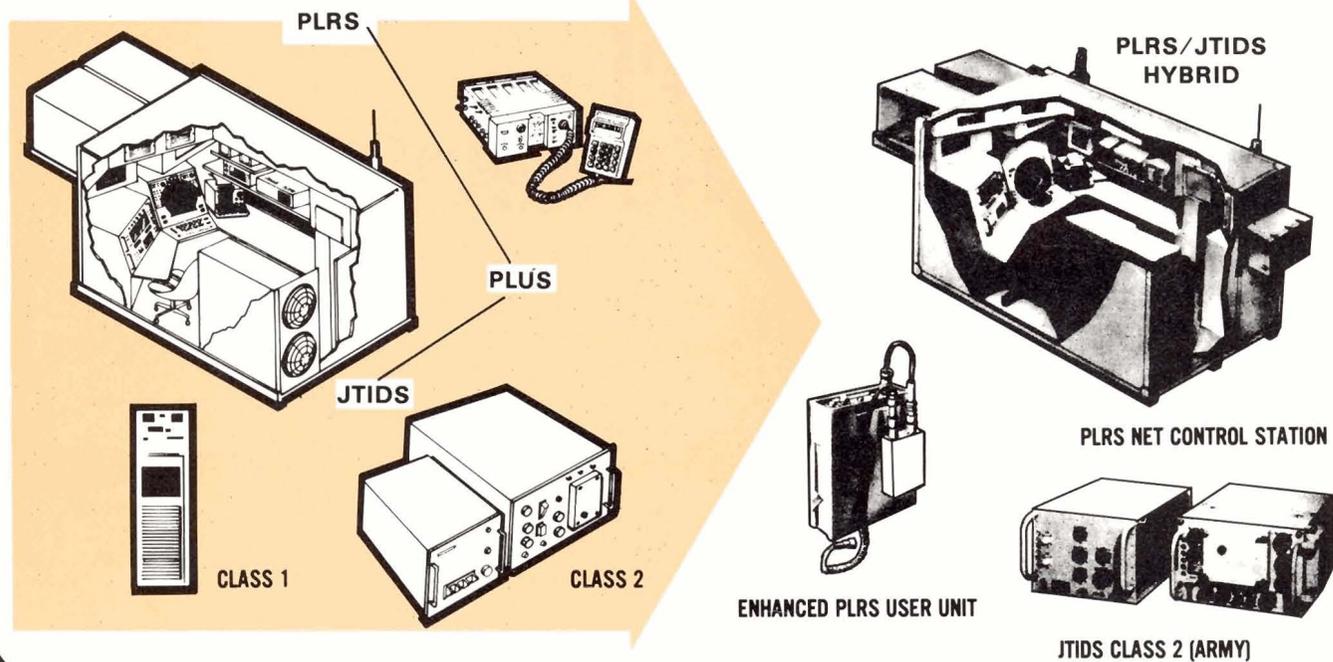
In 1985, the fielding of four JTIDS Class I terminals known as adaptable surface interface terminals will give ADA rapid deployment forces a near-term JTIDS capability. Later, when the JTIDS Class II terminal development and production are complete (projected fielding date is 1987), SHORAD units and the external links of HIMAD

elements will be equipped with JTIDS terminals.

By 1988, when both PLRS and JTIDS terminals are fielded, we will have the combined communications system referred to as the PLRS/JTIDS Hybrid. The integration of these two systems will provide a dynamic data distribution network tailored to each tactical unit's area of concern, yet having access to far-reaching resources.

By taking advantage of these two

## ELEMENTS OF THE PLRS/JTIDS HYBRID SYSTEM



similar but separate systems, the weapon and sensor systems' information distribution will overcome the existing deficiencies of current voice and data communications, the lack of automatic relay capabilities and the limitations of electronic countermeasures.

The hybrid system builds on PLRS and JTIDS elements to support ADA primarily in the divisional area. Most ADA divisional units will be assigned a PLRS terminal. JTIDS terminals will be assigned to those users whose data requirements cannot be accommodated

by the PLRS terminal, or who will participate heavily in interservice communications. With the PLRS/JTIDS Hybrid program, ADA's weapon and support systems will be able to make the transition from a manual SHORAD command and control system to an automated one. Furthermore, the hybrid system will support all data communications in the five functional areas of the battlefield: fire support, intelligence and electronic warfare, maneuver control, combat service support and, of course, air defense.

This new generation in communications equipment will effectively launch the advanced air defense weapons, defeat the threat and protect the soldiers. \*

## PLRS Contracted

A \$260,016,652 multiyear, fixed-price contract has been awarded to Hughes Aircraft Co. Ground Systems Group to produce the PLRS communications network for the Army and Marine Corps.

Delivery of equipment is scheduled to begin in 1986. The 9th Infantry Division and the 1st Marine Amphibious Force have been selected as the first units to receive the system.

Each stand-alone PLRS segment consists of two centralized master stations, housed in transportable shelters, and as many as 370 user units. Under the contract, Hughes will deliver 23 master stations and

more than 2,000 user units.

The PLRS uses spread spectrum, frequency hopping and cryptographic techniques to protect the information transmitted from being intercepted or jammed by the enemy.

Should a unit fall into enemy hands, it can be eliminated from the system.

During tests last year at the Yakima Firing Center, Wash., officials of the High Technology Test Bed said the PLRS communications system was essential to the successful employment of a high technology light division in the future battlefield.

\*



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## Celebrating St. Barbara's Day

# Gaudeamus Igitur! (Therefore, Let Us Rejoice!)

by Brian R. Kilgallen

Tradition today can be found almost everywhere, from the hallowed halls of ivy to powerful multinational conglomerates. It is often the substance that lends continuity to organizations, the adhesive that engenders camaraderie among the ranks. The celebration of St. Barbara's Day among artillerymen is a tradition that dates back centuries in European countries. Here in America, the custom was adopted by the Coast Artillery, Field Artillery and, more recently, by Air Defense Artillery when it, too, became a separate branch of the Army.

While St. Barbara is the artilleryman's symbol of protection, much of the religious significance of the celebration has disappeared over the years. Now, St. Barbara's Day is mostly a social occasion. The dining-in ritual of the past, a stag event, has given way to the St. Barbara's Day Ball. Dress Blues are de rigueur for the military, while tuxedos for civilians and evening gowns for ladies are appropriate.

The ball is usually held on the evening of Dec. 4, and begins with a cocktail hour, after which "first call" is sounded. The master of ceremonies, appointed by the commander, then asks the guests to find their chairs and remain standing for the entrance of the colors and honors to the commandant or commander and to the nation. (It has been suggested that individual unit guidons be included among the colors.)

After the color guard marches to the center of the ballroom and faces the guests, the commander is escorted to a spot in front of the head table facing the colors. If a band is available, it should play *Ruffles and Flourishes* followed by the national anthem. (Those in uniform stand at attention; there is no salute or hand over the heart.) The color sergeant then salutes the commander and requests permission to post the colors. The commander returns the salute and says, "Permission granted."

The invocation, delivered by the chaplain, is followed by prescribed toasts:

"To the President of the United States."

"To the United States Army."

"To the Artillery."

"To St. Barbara."

"To the ladies."

It is customary for a junior officer to present at least one of the toasts.

The master of ceremonies then asks everyone to be seated for dinner and brief after-dinner comments from the commander. It is at this stage that events take on a more ceremonial tone with the making of the punch and the induction of air defenders into the Order of St. Barbara.

Following the commander's remarks, the master of ceremonies turns to the selected senior officer and says, "Are you prepared to make the punch, sir?" At this time the "making of the punch ceremony" takes place. Individual units may wish to improvise, but as a rule, five people are directly involved. Some units have even made the punch bowl in the fashion of a mortar or cannon lined with a plastic sack. When the punch is made, the senior officer offers a glass to the commander.

The highlight of the evening is the induction into the Order of St. Barbara. This year, for the first time, Air Defense Artillery is having its own pewter medals struck and certificates printed for the occasion. Commanders who have not yet ordered theirs should submit their requests to the U.S. Army Air Defense Artillery Association, P.O. Box 6101, Fort Bliss, TX 79906.

The award of the Honorable Order of St. Barbara was established to recognize artillerymen throughout the world. The certificate that accompanies the award should be signed by the approving commander who must be an O-6 or above.

Air defenders recommended for this award should have demonstrated an outstanding degree of excellence and dedicated application of time and effort



Officers at the U.S. Army Air Defense Artillery Center, Fort Bliss, Texas, prepare to make Artillery Punch at the St. Barbara's Day Ball.

Matteo di Giovanni painted this altarpiece for the Church of San Domenico in Siena, Italy. Signed and dated 1479, the artist depicts St. Barbara enthroned, holding her martyr's palm between thumb and forefinger with a gesture of supreme nonchalance. A tower, the symbol of her imprisonment, rests on her lap.



*They are burst asunder in the midst that eat of their own flatteries,  
Whose lip is curled to order as its barbered hair is curled. . .  
Blast of the beauty of sudden death, St. Barbara of the batteries!  
That blow the new white window in the wall of all the world.*

—G.K. Chesterton

in distinguished service to the Air Defense Artillery. They will have promoted esprit de corps and recognition of Air Defense Artillery as a member of the combined arms team. They will have demonstrated the highest standards of integrity and moral standards and must have personal and professional qualifications that set candidates apart from other air defense artillerymen. They will also have generated genuine respect of their subordinates, peers and seniors. It should be emphasized that the award is not intended to be a service award, nor should the award be diluted by induction of other than the most outstanding air defense artillerymen.

Following the induction ceremony, the master of ceremonies asks all present to rise for the retrieving of the colors. When the colors have departed, the remainder of the evening is open for dancing.

## The Legend of Saint Barbara

The legend of St. Barbara was introduced from the East in the 10th century by Simeon Metaphrastes, a Byzantine scholar who derived his name from his "metaphrases"—translations, usually in verse form—of older versions of the saints' lives. Though it is generally supposed that St. Barbara lived in the third or fourth century, the facts supporting the story are now considered dubious at best, and there is even grave doubt as to whether she existed at all. The latter possibility is quite plausible, considering that it was not uncommon for unsubstantiated stories or rumors of martyrdom to be passed on and exaggerated by word of mouth during the period in which she was supposed to have lived. Nonetheless, St. Barbara, whose feast day is traditionally celebrated Dec. 4, has remained one of the most popular saints in Christendom.

According to the legend, Barbara was the only daughter of Dioscorus, a wealthy heathen believed to have lived in Heliopolis in Asia Minor. Her father

was insanely jealous of her remarkable beauty and, fearing that Barbara would one day marry and leave him, he locked her in a tower where no man other than himself would be allowed to set eyes on her.

In her solitude, Barbara turned to study and meditation, discovering for herself that the idols of wood and stone worshipped by her parents could not really be gods and hence could not have created the wonders of nature she contemplated from the window of her prison. But even in the loneliness of her tower, word reached her of a certain wise man named Origen, the famous Christian doctor and teacher from Alexandria who had publically demonstrated the fruitlessness of idolatrous practices. Longing to know more of his teachings, Barbara secretly wrote a letter to him. He, in return, sent one of his disciples disguised as a physician who, in her father's absence, completed Barbara's conversion to Christianity.

Shortly thereafter, Barbara had three windows constructed in her tower to commemorate the Holy Trinity. When Dioscorus returned and demanded to know why she had ordered the alterations, she explained that through those windows the soul received the light of the Father, the Son and the Holy Spirit.

Dioscorus, violently opposed to Christianity, was enraged. He denounced her to the proconsul who tried to force her to renounce Christ; but she would not yield to his tortures. In the end, her father took her to his summer villa in the mountains where, in a fit of pique, he cut off her head and thereby sealed his own destiny. As he fled down the mountainside in the midst of a violent thunderstorm, the bloodied sword still in his hand, he was struck down by a bolt of lightning and burned to ashes.

Because of the fate that befell her father, St. Barbara was invoked by early Christians as a protectress against lightning, fires and sudden

death. With the advent of cannon and gunpowder, artillerymen adopted her as their special patroness because they regarded the effect of their weapons as lightning from the sky. However, a more likely reason was that early cannons often exploded when discharged, bringing sudden death to the cannoneers.

St. Barbara is also the patron saint of fireworks makers, founders, stone-masons, architects, grave-diggers, fortifications and magazines. In works of art, she is usually depicted with a crown and tower. She may also be holding a sword or the palm of martyrdom or both.

## Wassall the Defenders of the Skies!

No St. Barbara's Day festivity would be complete without that long established, effervescent elixir that every air defense artilleryman becomes acquainted with early in his career—Artillery Punch.

From the latter part of the 18th century, punches have been associated with most military social affairs, and today many of the recipes bear the names of the units that made them popular: First Artillery Punch, Chatham Artillery Punch and so on.

"Punch" is thought to have been derived from the Hindustani or Urdu work, "panj," meaning "five," symbolizing the five key ingredients of an authentic punch. English recruits supposedly introduced the tradition of punch making to England from India. The custom soon spread to the American colonies where it was adopted by the state militias, the Continental Army and, ultimately, by its regular Army descendants.

As most air defenders are aware, the original Artillery Punch was comprised of brandy and red wine; but over the years, that recipe has been transposed and embellished so that today there are almost as many different concoctions as there are missiles in a battery. Understandably, it would be impossible to print all of those recipes here. However,

The statue of St. Barbara, made in Spain, was donated to the Air Defense Artillery Museum, Fort Bliss, Texas, by SGM Victor Ortiz-Colon four years ago.



we have included three perennial favorites for you to choose from—or you

may wish to use them as a guide for experimenting on your own.

### Artillery Punch 1

This variation incorporates the brandy and claret wine of the original recipe and is relatively inexpensive to make.

1 bottle brandy  
 1½ bottle vodka  
 2 bottles claret wine  
 ¼ bottle Cointreau  
 1 qt cold tea (brewed medium strong)  
 1 qt club soda  
 ½ cup lemon juice

Makes about one and a half gallons.

### Artillery Punch 2

For air defenders with discriminating taste, this hearty, robust blend of grape and grain is guaranteed to tantalize even the most jaded palates.

1 bottle whiskey  
 1 bottle sherry  
 1 bottle sauterne  
 1 bottle burgundy  
 1 bottle club soda  
 1 bottle champagne

Pour over large piece of ice and

decorate with sweet red grapes. Two rounds serves about 25 people.

### Artillery Punch 3

This unpretentious little punch, though deviating considerably from the original recipe, stands up well on its own. The rum lends a touch of the Caribbean, while the citrus provides a pleasant, fruity bouquet.

1 lb sugar  
 3 lemons  
 2 oranges  
 1 qt strong tea  
 1 qt champagne  
 1 qt Jamaican rum  
 1 qt sherry  
 ½ pt brandy

Put sugar in a large punch bowl, add grated rinds of three lemons and juice of two lemons and two oranges. Pour in boiling tea, then cover and cool. When cool, add the rum, sherry and brandy. Chill. Before serving, add the champagne. If the punch needs further diluting, one or two quarts of club soda may be added.

*Cheers!*

## Coping with Ada and Barbara

# The 'Other' Women in My Husband's Life

by Candi Daddazio Vaughn

As every (mature) married woman knows, there will always be "other women" in her husband's life. Most are welcome—mother, sister, aunt, cousin. Even an old school teacher, his brother's wife or an old girl friend are not enough to turn a single hair on her head green.

So it was with me. What I hadn't planned on, however, were two red-heads named Ada and St. Barbara. Actually, Ada is my husband's first love—St. Barbara is just a guardian angel he calls on when things get rough with Ada.

I know what you're thinking. Now that I know about this, how can I accept it so easily? Well, at times it's been difficult.

His own mother tried to warn me—his daddy had the same problem. For more than 20 years, around the world, his daddy chased Ada. Guess it runs in the family.

I don't give up on my man easily, so I decided to find out all I could about Ada. After all, I don't want any of the neighbors talking behind my back.

I really don't know what my husband sees in her. She calls him at three in the morning in really crummy weather—snow, fog, rain, ice—and always gives him a time limit to get to her. No matter where she is, he always goes. He says she needs him. He gets dressed in his best fatigues and shines his boots.

He always takes a duffle bag full of presents for her—maps, magic markers and papers with pretty blue and red covers. Also, because Ada likes to travel to unknown places for various lengths of time, my husband takes things for himself—flashlight, canteen, gas mask and (just in case things get scary) a weapon.

Ada has a long past and a somewhat risqué reputation. She becomes very defensive when someone mentions how belligerent and aggressive she acts.

She says she adopted the children; that she wanted to take care of them and live in a peaceful society. She claims other countries help her support them through their acceptance. It could be true, I guess. They do have foreign-sounding names.

Ada has never been married to anyone. She prefers to have "friends" like my husband to keep her company. She keeps battalions of friends all over the world.

I doubt she will ever have a long relationship with anyone. She says they all become obsolete after a while. The woman is really fickle.

This isn't just gossip, I tell you. Facts support it. Even her current long-term beau, Nike Hercules, is being dumped in a few years. Ada has her eye on the new guy already.

Ada is sure this new one will be accepted into social circles. His name is Patriot—how could anyone not trust a traditional country-loving type like that?

One night, when my husband was in a sharing mood, we talked about Ada. After finding out about her, I can only feel sorry. She has had a rather hot life. Now that the action is cooler, she doesn't always know what to do.

Since Ada is basically a combat girl, she needs a lot of support from the community chain-of-command. Her units are often out in the boondocks with family and personnel close by. Demands for supplies can't always be met immediately.

My husband is right; she does need him.

She also needs thousands more pro-



A painting of St. Barbara by Palmavecchio can be seen at the Altar of the Bombardieri in the church of Santa Maria Formosa, Venice. The modern tradition of celebrating St. Barbara's Day was initiated by Italian artillerymen who prayed there before going to battle.

fessional soldiers and their families. Commanders are beginning programs to improve living conditions for these followers, whether in remote sites or in the middle of cities.

Ada may not like having to take the time to organize community involvement and families. But she may find that when THIS wife is happy, I won't mind letting her have my hubby every once in a while for an affair.

Compromises can always be worked out for the benefit of all.

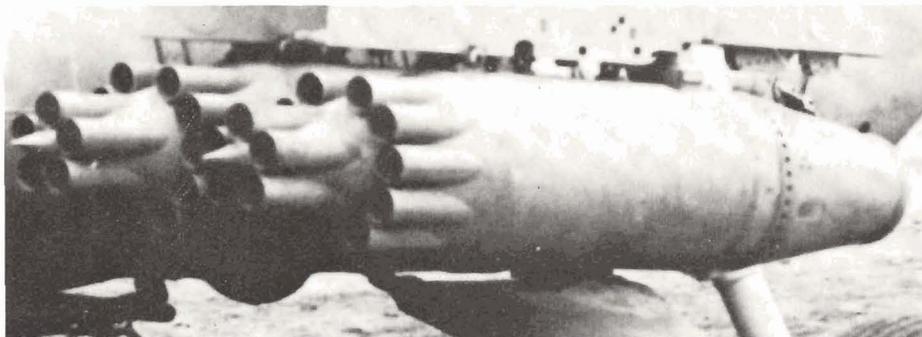
(Reprinted from *The 32nd Army Air Defense Command News*.)

# The Soviet Armed Helicopter Threat:

by MAJ Richard J. Armour



The Mi-8 Hip-E military helicopter has been described as the world's most heavily armed helicopter.



This Soviet UV-16-57 rocket pod contains 16 57mm rockets and is shown on a Hip helicopter.



This Mi-24 Hind E, the latest version of the Hind family, has the tube-launched Spiral AT-6 missile as well as rockets and guns.

The relatively small size of our short-range air defense weapon systems will make it difficult for the majority of Soviet high-speed, fixed-wing aircraft to successfully locate and attack our forward area air defense forces deployed on the battlefield. However, Soviet armed helicopters, with their slow speeds, their ability to loiter in an area and their heavy armaments, present a formidable threat to those forces. Stinger, Redeye and Chaparral missile systems and the Vulcan and SGT York Gun systems will be lucrative targets for the Soviet helicopters.

The current attack helicopter force opposite NATO reportedly consists of about 800 helicopters. Because of a reorganization of Soviet forces and the creation of an army aviation branch, many of these attack helicopters are now divisional assets. This change reflects Soviet emphasis on creating well-balanced combined arms forces at many organizational levels.

One of the main attack helicopters facing NATO is the Mi-8 Hip-E which has been described as the world's most heavily armed helicopter. It carries a flexibly mounted 12.7mm machine gun, up to 192 unguided 57mm rockets and four AT-2 Swatter anti-tank missiles. It can also carry up to 24 combat-ready troops. The Hip can travel at speeds in excess of 250 kilometers per hour. The export version, the Hip-F, carries six AT-3 Sagger anti-tank missiles in place of the AT-2 Swatters carried on the Hip-E.

The other attack helicopter, the Mi-24 Hind, is considered by many to be the best attack helicopter in the world. Three models of the Hind, the A, D and E, comprise the threat to air defense.

A new attack helicopter designated Mi-28, similar in size to the AH-1 Cobra and considered more maneuverable than the Mi-24 Hind, is being tested in the Soviet Union. Only six are known to be flying. Test profiles and armament indicate a heavy bias towards air-to-air operations vs. helicopters and "slow movers" like the A-10. The Mi-28 has been observed with the same type of anti-tank guided missile launchers as seen on the Hind-E.

The Hind-A has a large enclosed flight deck that carries its crew of four,

**AIR DEFENSE  
ARTILLERY**

# An Air Defense Perspective

while the Hind-D carries a crew of two in tandem-mounted crew stations for the pilot and weapon systems operator. The Hind-A carries a nose-mounted 12.7mm machine gun, while the Hind-D is equipped with a 12.7mm four-barrel, chin-mounted rotary gun. Both the Hind-A and D carry four AT-2 Swatter anti-tank guided missiles and 128 57mm unguided rockets.

The Hind-E, the latest version, is basically identical to the Hind-D with the exception that it carries four AT-6 Spiral anti-tank missiles in place of the AT-2 Swatters. The Hind can also carry conventional bombs of up to 500 kilograms in place of the rocket pods on the inboard pylons, and bombs of up to 250 kilograms on the outboard pylons, giving a total bomb load of 1,500 kilograms. Both the Hind-D and E have speeds greater than 340 kilometers per hour and can carry eight combat troops.

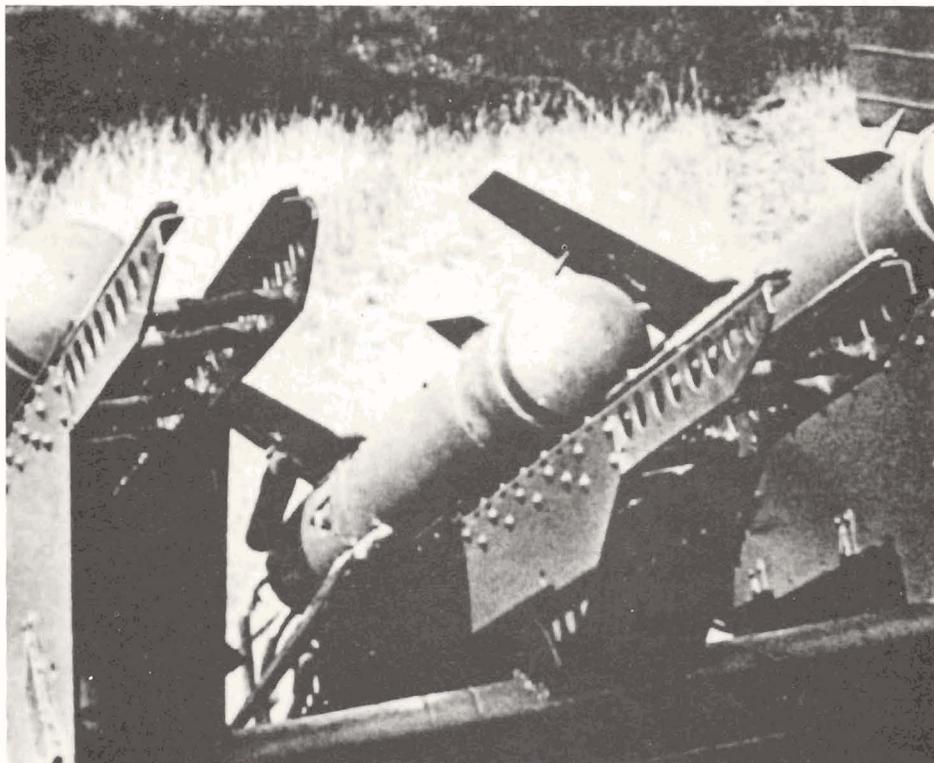
## Basic data on AT-2 Swatter and AT-6 Spiral

	AT-2	AT-6
Length (mm)	900	1,700
Diameter (mm)	140	135
Weight (kg)	25	40
Speed (m/s)	150	450
Minimum range (m)	300	1,000
Maximum range (m)	2,200	5,000*
Armor penetration (mm)	500	750

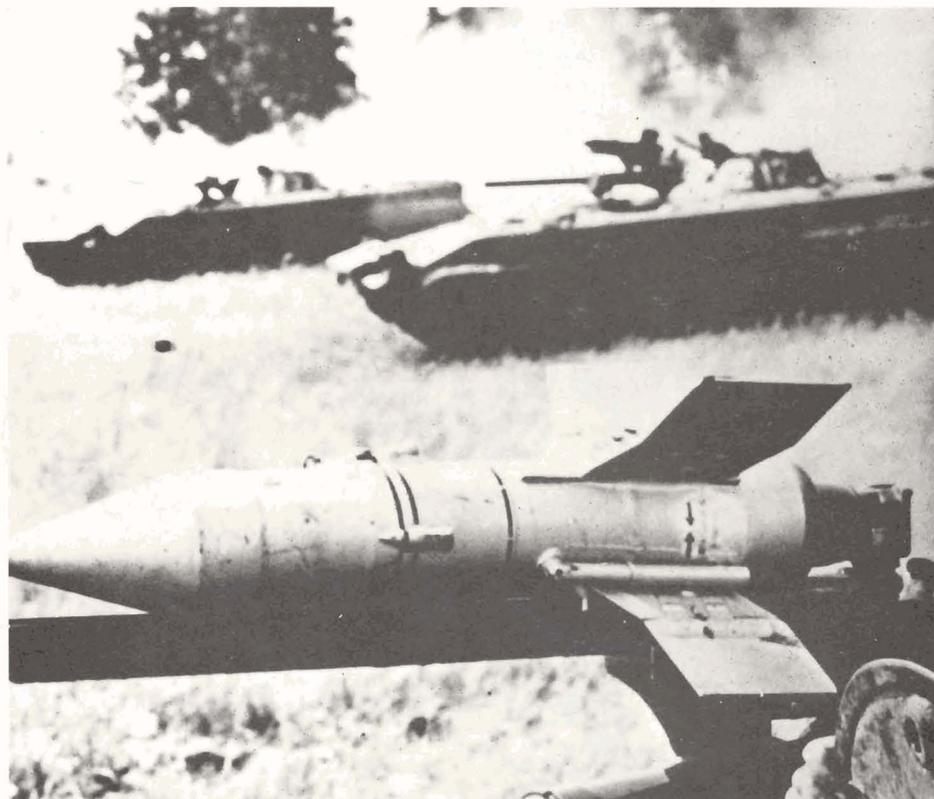
\*in powered flight

## Soviet Helicopter Employment

The Soviets intend to make maximum use of their armed helicopters in performing such missions as close air support, engagement of targets of opportunity, escort of troop-transport helicopters during air assault and airmobile operations and ground attack and anti-armor operations. Normally, air-assault and airmobile troop-carrying missions would be performed by the Hip-C. However, with their troop-carrying capabilities, the Hip-E and F and the Hind-D and E could also perform these missions to a limited extent. These armed helicopters would also be able to provide fire support to air-assault and airmobile troops during portions of their operations.



The AT-2 Swatter anti-tank missiles installed on a scout car. The AT-2 Swatter is command-guided by radio, which facilitates deployment from the various versions of the Mi-24 tactical helicopter. Note the blunt nose and the two fins behind it.



The Mi-24 Hind-A helicopter can carry the AT-3 Sagger anti-tank missile on its four outboard launchers, presumably firing from the hover or at low-forward speeds.

Because of their heavy armaments, the Hip and Hind are well suited for close air support missions. The helicopter can replace fixed-wing aircraft which can be used elsewhere. Some of the most important targets for helicopters will be combat troops, command posts in the forward area to which SHORAD weapon systems may be providing air defense protection and air defense forces themselves.

The most common attack scenario seems to be the helicopter approaching the target while flying at the lowest possible altitude, using terrain masking. When it reaches the most favorable location for engaging the target, it climbs up to the weapons launch altitude, 50 to 100 meters, thus executing a "pop-up" maneuver, fires its weapons and disappears in a turning dive.

Helicopters attack singly, in pairs, in threes or in fours. There are no fixed rules for determining how many helicopters will be used in an attack. Furthermore, a target can be attacked once or several times.

In 1981, an *International Defense Review* article stated that Soviet helicopters will use the full range of their armaments against our air defense forces in performing their missions. The 12.7mm four-barrel rotary gun on the Hind and the 12.7mm single-barrel machine gun on the Hip have an estimated effective range of between 1,300 to 1,400 meters. These guns fire not only armor-piercing ammunition, but also high-explosive incendiary ammunition. The 57mm unguided rockets can be armed with high-explosive incendiary or hollow-charge warheads capable of piercing up to 230 millimeters of armor. In view of the accuracy required, the maximum effective range of the unguided missiles is unlikely to exceed 1,200 meters (the flat part of the rocket trajectory).

The *International Defense Review* article further stated that, in the future, the Hind may be equipped with 80mm rocket pods in place of the 57mm pods currently in use. The armor-penetration capability of these rockets, with hollow-charge warheads, could be 350 to 400 millimeters.

If they attack using only guns and unguided rockets, these helicopters would have to come within range of, and could therefore be engaged by, our

forward area air defense weapon systems. However, if they attack using anti-tank guided missiles, Soviet helicopters could stand off beyond range of most of our forward area air defense systems. The older missiles, such as the AT-2 Swatter, travel at subsonic speeds and are guided by radio command line-of-sight type of guidance which forces the helicopter to expose itself for a longer period of unmasked time. The new missiles, however, such as the AT-6 Spiral, travel at supersonic speeds, thus allowing shorter periods of unmasked time. According to *Jane's All the World's Aircraft*, these missiles use a laser-designator, terminal-homing type of guidance and have a range of seven to 10 kilometers. However, the *International Defense Review* gives a more realistic range of about five kilometers.

With these new, improved missiles, Soviet armed helicopters would theoretically be able to engage weapons such as the SGT York Gun beyond the effective range of the system. However, the capabilities of these missiles may not be the determining factor governing the ranges at which helicopters would engage our air defense systems. Overall system performance would depend on the terrain, weather conditions, the ability of the Soviet pilot to locate his target and the quality of the missile guidance equipment. If we consider an engagement in a European environment, it would be most likely that Soviet helicopters would have to come within a range of less than five kilometers in order to locate a target and have some assurance of a successful engagement.

Soviet helicopters do have certain other limitations. There are indications that the Hind, with its conventional, fully articulated rotor head, may not be as agile as the Soviets would like it to be. When firing guided missiles, the Hind must remain exposed to guide the missile to its target, therefore becoming subject to engagement by SHORAD systems. Exposure times when firing anti-tank guided missiles are up to 27 seconds with the Sagger, 23.5 seconds for the Swatter-B or C, and an estimated 23.3 seconds for the Spiral.

Realizing that their helicopters could be vulnerable to small-caliber gun fire, the Soviets have taken steps to reduce

that vulnerability. Little has been done to provide armor protection to the Hip. However, as their primary attack helicopter, the Hind has been given armor shielding around the cockpits which are separated by an anti-fragment shield. The fuel tanks, engines and storage area for its 12.7mm ammunition are also armor protected.

The Soviet invasion of Afghanistan has shown that the Hind can be engaged and destroyed by small-caliber weapons. However, according to the *International Defense Review*, reports from Afghanistan indicate that the Hind appears to be virtually invulnerable to hits from weapons up to 12.7mm caliber. The Hind is well protected against hits from a frontal attack and probably even from hits from large-caliber weapons at certain angles. But some kills have been reported as a result of small-arms fire penetrating the main rotor region from above as the helicopters flew along valley floors.

The severity of the Hind threat can be seen from their large numbers already in the Soviet inventory. The 1982-83 edition of *Jane's All the World's Aircraft* states that deliveries of all models of the Hind are known to exceed 1,000 with production continuing at the rate of 15 a month. Well over 450 gunship versions were deployed by Soviet forces in 1982 with other Warsaw Pact countries operating still more gunships.

While the Soviet armed helicopter threat is significant, it is by no means impossible to defeat. By employing proper deployment of forces, techniques of camouflage, fire and maneuver, our forward area air defense forces will be able to perform their mission and survive. ★

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# Enlisted Career Development

by BG Donald R. Infante

Do you care about soldiers? Do you care whether non-commissioned officers are becoming all they can be? Contrary to some schools of thought, soldier care—specifically career development for our NCOs—is officer and NCO business. The responsibilities must be shared.

What qualified me as an expert was a stint on the last E-7 selection board. For six weeks, I reviewed more than 200 files a day. I spent the first three weeks as president of the secondary board, examining all 30 CMFs and 192 MOSs under consideration. During the second three weeks, I served as chief for the air defense and field artillery panel, examining CMFs 13, 16, 23, 27 and the associated 33 MOSs.

I had mixed feelings as I reviewed the air defense artillery files. On the one hand I was ecstatic over the quality of our air defense artillerymen, truly second to none; on the other, I was dismayed at what was obviously a lack of understanding the system, as evidenced by the Army's worst maintained files. Since then, every battalion officer and NCO in the 32nd Army Air Defense Command has received a briefing from me on how to make the system work better. The command has also published a superb pamphlet on career development.

### Selection System

Department of the Army boards select personnel for promotion to E-7 and E-8 by MOS. Thus, until there is an equalization of the Army's needs, a soldier's MOS will influence his opportunity for promotion.

The Army wants to promote everyone who is "fully qualified." Unfortunately, MOS needs drive us to select only those who are "best qualified." Rank ordering of soldiers by MOS on an order-of-merit listing is done by board members awarding points to each soldier's file. What's in the file, then, represents reality for that NCO. If it's not in the file, it doesn't count.

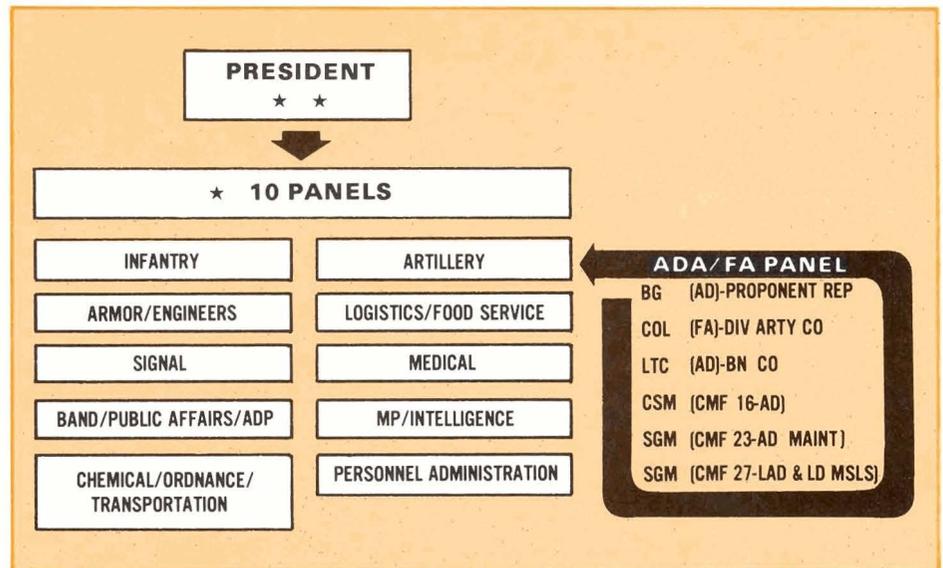


Figure 1. Board Organization

### Selection Boards

There are 12 general officers on selection boards (Figure 1). The board president is a major general. Each panel is headed by a brigadier general. On our E-7 board, the president was MG Thomas F. Healy, commanding general of the 1st Armored Division. All the brigadier generals had extensive background in their respective panels. Panel members who score our field soldiers are true experts in their fields. Each officer serving on my panel was either a serving or past brigade or battalion commander, and the NCOs were the creme de la creme of the corps.

The Army is dead serious about making the system work and ensuring quality selection. Consequently, the boards realize what their responsibilities are to the Army and to the individuals they review for promotion selection.

A facsimile of the scores awarded during voting is shown in Figure 2. Scores awarded range from six to one with a plus or minus for emphasis. With three people voting, the maximum score possible is 18 + 3. On the other end, it is 3 - 3. Those soldiers on the lower end of the scale are qualitative management program material. Our board QMPed only two percent of

those in the primary zone—the highest of any board.

The first panel member to vote scrubs the file and annotates points of interest on a worksheet. He passes the scorecard face down to the panel chief. If there is a score difference of greater than one, say a "5" and a "3," when the other two members vote, those two members must meet and discuss the "whys." The panel chief acts as a referee and tie-breaker.

When the three panel members have voted on everyone in a given MOS, an order-of-merit listing is obtained. This computer rank listing is the basis for cut lines. "Fully qualified" soldiers are those we want to promote if given no promotion constraints. "Best qualified" are soldiers at the top of the list in the number needed by the Army for the year under consideration. Drawing the cut lines is tough business. Tie scores often require multiple revotes of the files at and near the cut lines. That's when things like SQT scores really make the difference.

### File Reality

As I stated earlier, what the board sees in a soldier's file is reality. NCOs who fail to review their files are playing Russian roulette with their careers.

Let's take a look at the folder the board members review.

The Army Enlisted Records and Evaluation Center data form, besides containing basic information on the individual, has the enlisted efficiency report weighted average, the figure that indicates percentage-wise how an individual soldier stacks up against his contemporaries. These averages are driven by the last 12 months' scores. Also given on the USAEREC form are the scores of every SQT taken. Thus, the panel gets its first impression of a soldier's overall performance and degree of job knowledge. It is vital that individuals verify the accuracy of this data on their DA Forms 2 and 2-1 if they are truly concerned about being promoted.

The soldier's fiche is an individual's life on a 3 inch by 4 inch piece of plastic. Enlisted efficiency reports are shown at the upper left. Awards and disciplinary data are at the lower right. It was most discouraging for me to discover that the Army has, according to the EERs, many exemplary soldiers who have no awards, not even good conduct medals. We need to re-emphasize the importance of taking the time to award our good people. The reward has a lasting impact.

Every soldier in the primary zone has the right to write to the president of the board. The letter should highlight certain aspects of the total profile that the individual feels merit the attention of the board members. Such things as weight loss, addition of college credits and recently demonstrated sound leadership in a key position are all valid reasons for such a letter.

### Enlisted Efficiency Report

Commanders who care about their soldiers take the time to do a good job

on a soldier's EER because they know it is the most important document in a soldier's file. Without it, the file will have no impact. The world's best EER not in the file equals no EER.

Here are some things about EERs I think are important.

In the job description, supervisors should stress leadership and supervisory aspects. Describe the duties in plain English. Do not use technical language.

Ensure consistency and maintain credibility on the numbers rating. Giving a "5" in physical fitness to a person who is grossly overweight and who failed the PT test can cast doubt on the validity of the entire report.

Make sure the words and numbers track. The potential description must be specific and comparative: "The best E-6 in the battery and my first choice of all E-6s I know for promotion to E-7." Don't fall into the trap of saying, "Send this NCO through the advanced non-commissioned officer education system and all his leadership problems will disappear." Baloney! ANCOES is a reward for recognized potential and demonstrated performance.

### 10 Ways to Help Yourself

Our Army promotion system generally works as it should. However, to ensure that an individual's full potential is properly portrayed and represents reality, there are some things a soldier can do for himself. Additionally, there are some standards that should not and will not be compromised in any way, and that's how it must stay to ensure the quality Army we all want. Here are 10 ways to help yourself:

*Do a file review.* Go over your file with an expert such as the battalion or brigade command sergeant major. A

good time to start is about six months before the board convenes.

*Have a good photo in your file.* Under the centralized promotion system, the photo represents your personal appearance before the board. Members study the photo in detail. Shave your mustache, since fische techniques make it look untrimmed even if it is trimmed. Black soldiers should check their photos carefully. Until recent improvements were made in the fische filtering techniques, many photos were not distinct.

*Work in your MOS.* The Army promotes by MOS. Therefore, demonstrating primary MOS proficiency is essential. If you are assigned to an important auxiliary job, such as a community assignment in Europe, stay with it no longer than 18 months to two years.

*Be physically fit.* Every EER indicates whether weight and physical fitness standards are being achieved. In a close race such as promotion to E-7, E-8 and E-9, soldiers who fail to measure up to those standards are almost always out of the running.

*Be a leader.* The Army promotes soldiers to higher grades who can encourage others to give their willing best. Strive for and excel at leadership positions, especially those that call for one grade over present grade. An example would be an E-7 in a first sergeant position.

*Put good things in your file.* Ensure that relevant awards and letters are in your file. Too often, even the recognized good job does not reach the file. Don't be afraid to toot your own horn.

*Consider MOS migration.* One of the best first sergeants in 32nd AADCOM today was passed over the first time in a maintenance (24 series) MOS. He wrote the board president and requested that, if not selected in his primary maintenance field, he be considered in the operator (16 series) field. His file reflected demonstrated performance in the operator's field. He is an E-8 today, about to make E-9!

*Do well on your SQT.* It's important today and will be much more important tomorrow. Under the new rules, an unauthorized miss is the same as failure. The test for personnel file use is entirely written and there will be one for every MOS. The SQT train is on the same track as the overweight train. If your qualifications are not verified, you will not be promoted.

*Strive for more education.* In a quality Army, the winners in an already

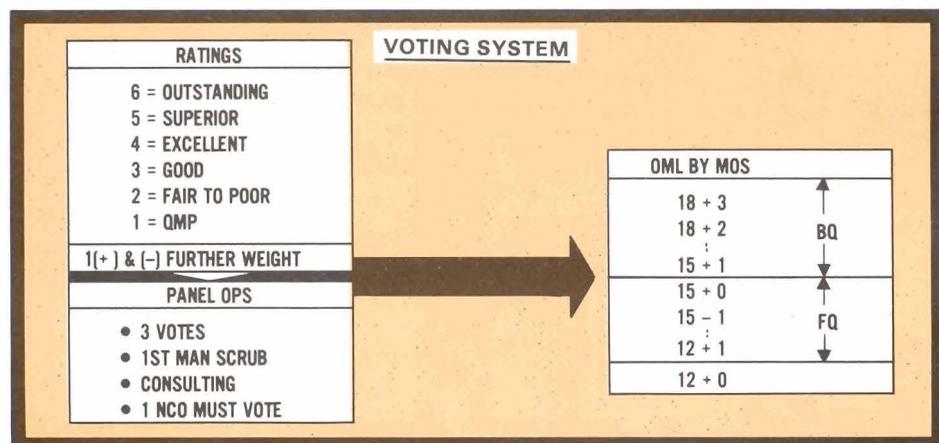


Figure 2.

close promotion race become closer. My bet is that soldiers will soon need two years of college to be competitive for sergeant major. Did you know that on the last E-7 board, those without a high-school diploma were not considered—that's right, *not considered!*—for promotion?

*Know where you stand.* Have a game plan to better yourself, based on an objective review. Don't do it yourself, as we are our worst critics. Use your chain of command.

### Chain of Command Help

Concerned commanders take care of their soldiers. One way to demonstrate true concern is to ensure the chain of command does its part in helping its NCOs realize their full potential. Here are some ways the chain of command can help.

*Anticipate boards.* About six months out, go on the offense. Insist that your soldiers do the 10 things listed above.

*Complete the record EERs.* Showing concern is important both to the soldier and the board. Recently demonstrated excellence has an important impact. Additionally, the impact of the EER weighted average would be substantial.

*Ensure a logical rating scheme.* An E-6 being rated and endorsed by E-7s, neither of whom writes well and with whom the report indicates over familiarity, is being done no favors. An EER on an E-6 has more punch if rated by the first sergeant and endorsed by the battery commander. Check your rating scheme for fairness, compliance with regulations and maximization of what's best for your NCOs.

*Award your good soldiers.* The Army's decentralized awards system puts the approval for Army Achievement Medals and Army Commendation Medals just where it should be, at battalion and brigade levels. There is absolutely no excuse for the battalion family not awarding its good soldiers. Impact awards, if justified, can be given so as to ensure board timeliness. Awards make a difference. Give them to our deserving soldiers.

*Have a plan for file review.* Publish a standing operating procedure listing milestones when files will be reviewed and by whom. The latest date for a file scrub should be about six months before the board meets.

*Push the true "below the zone."* Have a commander or command sergeant major "huddle." Pick out the true

below the zone and map out an aggressive campaign to make his file reflect reality. Apply the tips in this article to ensure his file catches the eyes of board members.

*Ensure that EERs receive the same care as OERs.* Both documents count heavily toward a soldier's progression. If you are an officer, treat every EER as if it were your OER. If you are an NCO, treat it as if it were your EER.

*Insist on officer involvement.* Don't ever accept the cop-out that NCO career development is "NCO business." This is NCO and officer business.

### The ADA NCO

All generalizations are wrong, including those that follow about the air defense artillery NCO. However, they are worth a mental check by asking yourself if the shoe fits. My perceptions are that Air Defense Artillery has more than its fare share of superb NCOs in all air defense MOSs. We are indeed blessed. However, our branch, along with the Signal Corps, has the worst files in the Army. Mountaintop duty a long way from the regional personnel center has its impact. The chain of command must insist our soldiers take the time for file updates. Make the file reflect reality.

It's my opinion that we work our soldiers hard enough, but we don't take the time to reward them properly. Our high-quality air defense artillery NCOs deserve only the best.

A combination of factors, from site-duty crew manning to special events orientation, causes too many young E-6s not to develop their leadership skills. We need to work hard at making this happen. Leaders are born and made.

Some maintenance men forget they are NCOs first. The tag over the left pocket says "U.S. Army" not "maintenance man"! Every NCO is first a leader. Their records must reflect this reality.

### The Future

Our future Army is best summed up in one word: Quality. Professional NCOs wishing to be promoted in the future should excel in all areas. If you are not physically fit, get in shape and stay in shape. Anything less makes one non-competitive.

Higher education is a must. Remember, candidates for sergeant major will soon be required to have at least two years of college. Taking written tests and passing them with the highest

possible scores must become a way of life.

Work in your MOS. Show you know your job. But above all, be a soldier first. Do well in such events as the common tasks test.

Demonstrate selflessness. Those who stay in the same easy job at the same good location are fooling no one. The good jobs are on the front lines in the trenches!

Being a leader and demonstrating that others give you their willing best have no substitutes. Our Army will promote successful leaders. We are in the leadership business.

The outlook for the future is great! I'm proud to be associated with the quality of soldiers in today's Army. The key now is the chain of command with the individuals helping themselves and ensuring that each person develops his fullest potential. Our Army truly is an organization where good soldiers can become all they can be.

★



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# **Laying Your Career On The Line**

by MG James P. Maloney

The moment comes to many officers when circumstance or principle forces them to "lay their career on the line." COL William Barret Travis faced such a moment when he used his sword to draw the line in the dust at the Alamo, inviting those who would fight with him to the death to cross over. GEN Billy Mitchell faced such a moment in peacetime when he defied orders and sent his dive bombers in low to demonstrate the vulnerability of battleships to air attack.

The moments when careers hang in the balance, however, seldom come so dramatically. More careers die of neglect than are shattered by single moments of decision or indecision. A little bit of your career goes on the line every day.

In the following paragraphs, I'm going to discuss minor details that can have a major impact on your career. You may think some of these details shouldn't matter as much as they do, but historically they do matter and will probably continue to matter.

### **MILPERCEN File**

The only things promotion selection boards usually know about you are what they read in your official military personnel file. Your officer record brief, photograph and officer evaluation report are the three most important documents in your file. Your officer record brief must be up to date and it's your responsibility to keep it up to date. Make sure the duty description contained in your officer evaluation report clearly cites your responsibilities and the resources (people, equipment and money) for which you have responsibility. Remember that selection boards must be able to quickly glean the breadth of your responsibility, performance and achievements, so use layman's terms and simple language. Don't undersell the officer record brief. MILPERCEN feels more decisions are made from the officer record brief than from the officer evaluation report.

The official photograph may be one of the things you think shouldn't count for as much as it does. It's true the Marines rejected Audie Murphy because of his diminutive size and that you shouldn't judge people by appearances. It's also true that people—including those who sit on promotion selection boards—do judge people by appearances. The photograph you want in your file is one that makes you look the part of a leader, a photograph that projects a strong military bearing. Such things as a neatly pressed uniform, shiny brass, a clean shave and complete rows of decorations all play an important role. Have the photograph taken where they do excellent work or, at least, take someone with you to adjust your uniform.

Flab isn't flattering, especially when it's encased in a uniform. Get fit! Officers who can't pass PT tests are in trouble. Comments about your physical shape go into your officer evaluation report. A flattering photograph won't save you. Promotion boards match your height and weight against what they see in the photograph. Stay slim or get slim.

### **Assignments**

MILPERCEN is charged to manage your career and control your assignments. However, you must help manage your own career if you wish to succeed and this means knowing which jobs can lead to success for you. For example, command of a battery is imperative if you hope to become a battalion commander. Assignments with divisional units are also extremely important. High level staff experience at corps, major command or Department of the Army is also a necessity if you expect to succeed. Too often, majors who hope to be selected for battalion command find themselves non-competitive because they haven't served with troops since their days as a platoon leader or company commander. If your goal is a battalion command,

then tours as a battery commander, battalion staff officer and completion of the Command and General Staff College will greatly enhance your chances.

Although it's not a criterion, those selected for O-6 command were usually outstanding battalion commanders. Those selected for battalion command were successful at company level. Other trends are evident. Officers chosen for battalion command usually have attended an officer advanced course, have successfully commanded a company, have served on a battalion staff and have attended the Command and General Staff College. Those who go on to O-6 level commands usually have served on the Department of the Army staff and have attended a senior service college.

There are always exceptions. GEN George Catlett Marshall, for instance, never held a major troop command. This only proves that the George Catlett Marshalls of the world can defy the odds. For most people—those of us watched over by lesser gods—the odds are too long.

### **Specialty Areas**

Every officer has a primary and a secondary specialty area. Choose your secondary specialty with your career in mind. Your ambitions probably won't clash with the needs of the Army. Promotion opportunities are best where you're capable and needed most, in underaligned specialties. Just prior to World War I, George S. Patton selected an unpopular and undermanned specialty—tanks. GEN James M. Gavin was one of the first officers of his generation to volunteer for jump school. When airborne fighting forces were forged during World War II, Gavin became America's youngest brigadier general since the Civil War. Figure 1 lists secondary specialties which are underaligned (short), aligned (balanced) or overaligned (over staffed). Choosing an underaligned specialty enhances your chances of promotion.

The blank spaces indicate aligned (balanced) specialties. The under-aligned specialties offer the best career opportunities while overaligned specialties should be avoided.

<u>No.</u>	<u>COL</u>	<u>LTC</u>	<u>MAJ</u>
21	U	U	U
22	U	U	U
26		U	U
27			U
31		U	U
35			U
36	O		
37	U		
41	O		
42		U	U
43	U	U	U
51			U
52			U
53			
54			
71			
72	U		
73	U		
74		U	U
75		U	U
81	O	U	U
82	O		U

Figure 1.

### Education

In today's environment, a major who hasn't attended the Command and General Staff College will have a tough time making lieutenant colonel. You should not wait to be selected by a Department of the Army board, but should enroll as soon as you are eligible for non-resident Command and General Staff College studies. Certainly, you should wait no longer than your third year of eligibility to enroll. The bottom line is either you have MEL 4 in the applicable block of your officer record brief or you are playing long odds.

The relatively new Combined Arms and Services Staff School offers you a chance to continue your resident education if you're one of the approximately 50 percent of active duty Army officers not selected for Command and General Staff College attendance.

Attending a senior service college is a career prerequisite for colonels who hope to pin on a brigadier's star or fill one of the choice colonel's jobs. During a typical year, less than five percent of officers are selected to attend the Army War College. Seriously consider applying for the Army War College Corresponding Studies Course.

### Correspondence Studies Recommended

The objective of the U.S. Army War College Corresponding Studies Course is to make senior-service, college-level education more widely available to qualified officers, thus preparing them to exercise command and to execute key staff responsibilities at major military and departmental headquarters.

The number of ADA officers who applied for and were accepted for enrollment in the U.S. Army War College Corresponding Studies Course in 1983 represents only one percent of ADA officers eligible for selection!

The Army War College Corresponding Studies Course commences each July and includes two, two-week resident sessions at Carlisle Barracks, Pa. Two classes are in session at all times.

Lieutenant colonels and colonels with 15 to 25 years of service, who have completed the Combined Arms and Services Staff School or the Command and General Staff College and who have a final top secret clearance are eligible for selection.

The application process is simple. Active duty officers should submit applications, endorsed by their immediate commander, prior to Feb. 1 each year. The format for applications is spelled out in AR 351-11.

The U.S. Army War College Corresponding Studies Course is a demanding program with reading and writing requirements equal to that of a college graduate course. It is, however, a course I heartily recommend to officers who, despite present and projected workloads, possess the time, energy and dedication to complete the course successfully.

The following story is often told about Confederate cavalry leader Nathan Bedford Forrest. During a hotly contested moment in the Civil War, one of Forrest's lieutenants, a West Pointer, dispatched a rider to headquarters with the following note: "Sir, I am being assailed on three sides by superior forces. What should I do?" Forrest wrote back: "Fit 'em." The story is supposed to illustrate that formal education is of little use on the battlefield, but it illustrates the opposite. Forrest, whose reputation for illiteracy was exaggerated by his use of Tennessee idioms, possessed a remarkable and original mind. His lack of education, which set him apart from Southern aristocracy, was one reason he was

never given a command which would have allowed him to exercise his genius for war on a broader and, perhaps, more decisive scope.

Continuing civilian education is important. Most posts have graduate studies programs. With perseverance, every officer can obtain a master's degree. If you don't have one, get one. Be careful not to close out options for needed command or staff assignments by poor timing.

When LT William Scott of the Colonial militia was captured by the British following the Battle of Bunker Hill, he confessed his reasons for enlisting weren't purely patriotic. "I offered to enlist upon having a lieutenant commission, which was granted," said Scott. "I now imagined myself in a way of promotion. If I were killed in battle, there would be an end of me, but if my captain was killed, I should rise in rank and should still have a chance to rise higher."

The Army's promotion selection process is far less capricious and much more methodical than in Revolutionary War days, but fate will still play its hand. GEN Douglas MacArthur seemed destined to live forever in the shadow of his father who—at age 18—won the Medal of Honor at Missionary Ridge during the Civil War and later became military governor of the Philippines. History and the Japanese bombing of Pearl Harbor gave MacArthur a second chance. GEN Dwight D. Eisenhower, a member along with GEN Omar N. Bradley of the West Point "class the stars fell on," was resigned to retirement as a lieutenant colonel until World War II gave his career new momentum.

The officers who vaulted from obscurity to fame during World War II, however, spent the long years of peace and slow promotion prior to the war painstakingly laying the foundations of successful careers. When opportunity came, they were prepared and promotable. The military leaders we call great—the MacArthurs, the Pattons, the Eisenhowers and the Bradleys—pursued career advancement with the same tenacity, audacity, passion and devotion that they pursued victory on the battlefield. Where would we be without such soldiers?

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# Learning To 'Milk The Staff Cow'

by CPT Erno Buky and Ralph Rhea

In *Follow Me*, MG Aubrey Newman's study of the human element in leadership, he describes his reaction, as a young infantry captain, to his first staff assignment:

*The sensation was heady at first. I hadn't yet realized that learning to be a staff officer is something like learning to milk a cow. The novelty soon wears off and the job becomes burdensome and smelly. As a boy I had learned the hard way if you demonstrated skill at milking a cow, somebody would keep you milking one. It's the same way with being a good staff officer. For 20 years, much of my service would be in a staff capacity against my will. By nature and inclination, I was a commander, but I had learned to milk the staff cow—so someone was always setting me to milk one.*

Most officers, sooner or later, must "learn to milk the staff cow." Fortunately, the Army's new Combined Arms and Services Staff School, created in 1981, exists to teach junior officers to function efficiently in staff assignments that have grown more challenging as warfare has grown more complex.

The Combined Arms and Services Staff School, or CAS<sup>3</sup>, owes its existence to a special study conducted by the Army Review of Education and Training for Officers Group. The group, created by GEN Bernard Rogers, then Army chief of staff, released a report in 1978 which announced a major shortfall in the Army's officer development system. The report concluded that the Army was doing a good job of preparing officers for company and battalion-level staff jobs, but a poor job of preparing officers not selected for the Command and General Staff College to function as staff officers at the brigade, division and installation level.

The cause of the shortfall was easily pinpointed. Only 50 percent of eligible officers are selected to attend the Command and General Staff College. This statistic meant that half of the Army officers who graduated from an officer



advanced course (usually during the fifth year of their career) received no resident instruction during their remaining 15 to 16 years in the service. For the 50 percent not selected for the Command and General Staff College, tackling a brigade, division or installation staff assignment was a sink or swim proposition. Lots of officers sank.

CAS<sup>3</sup> bridges the officer education gap by arming its students with written and oral communication skills, an understanding of Army organizations, operations and procedures and the ability to interact and coordinate as a member of a staff. It teaches them how to "milk the staff cow."

All air defense artillery officers should attend CAS<sup>3</sup> between their seventh and ninth year of service. It is not a matter of selection or non-selection. MILPERCEN schedules all officers for attendance. Officers should learn what to expect once their local military personnel officer or assignments officer notifies them they are scheduled to attend.

The average class size at CAS<sup>3</sup> is currently 240 students. Four classes are scheduled for FY83 and for FY84. Five classes are scheduled for FY85

and succeeding years, but the average class size will grow to 900 students during FY86, the first year of full CAS<sup>3</sup> implementation.

CAS<sup>3</sup> instructors are of the highest caliber and the academic standards are high. The staff likes to refer to CAS<sup>3</sup> as the "ranger course" of the Army academic world. Officers can, and some do, flunk the course.

The course is conducted in two phases. Phase I is a 142-hour, non-resident course which culminates in an open-book exam. The purpose of Phase I is to bring all students up to a common level of knowledge before they proceed to the resident phase.

Phase I students receive 15 study modules which may be delivered up to a year in advance of resident instruction. The modules cover subjects as diverse as budgeting, Reserve Component operations, threat forces and the historical development of military staffs. Students may study the modules individually or as a group.

The completion of Phase I can be a burden to officers tasked with the demands of regular duty assignments. Students need to set and adhere to a strict study schedule, allotting a cer-

tain amount of time to complete each of the 15 modules. Many officers take a few days off prior to the exam to review the modules. Those who fail the open-book exam are rescheduled to repeat the examination approximately six months later. No provisions have been made for officers who fail a second time.

While Phase I is mostly an individual effort, Phase II is highly interactive. During the nine-week TDY resident course at Fort Leavenworth, Kan., students are formed into small staff groups of 12 individuals. Each group is tasked to develop all phases of a tactical deployment of a mechanized division (including a Reserve Component roundout brigade) to Europe. The inter-branch interface with armor, field artillery, infantry, combat support and combat service support officers is a positive by-product of the group arrangement that air defense artillery officers will remember as one of CAS<sup>3</sup>'s most rewarding experiences.

Each group performs under the continuous tutelage of a staff leader, normally a senior lieutenant colonel with Department of the Army and battalion staff experience. The staff leader acts as the group's facilitator, instructor, monitor and evaluator.

Mondays through Fridays at CAS<sup>3</sup> are filled with eight hours of classes with a one-hour lunch break. Student groups usually work on their staff projects in the evening and, perhaps, half a day on weekends. Working until 10 or 11 p.m. is not unusual. An Army physical readiness test, which is annotated on student academic records, provides the motivation for one-hour sessions of "on-your-own" physical training three days a week.

The grading system is nontraditional and nonthreatening. Students are graded on a Go/No Go basis against their own potential rather than against their classmates. Officers who receive a No Go appear before an academic board, but, while medical reasons may be sufficient cause for rescheduling, no provisions have been made for officers who simply fail to measure up to CAS<sup>3</sup> standards of performance. The primary pressure CAS<sup>3</sup> students experience, however, is that of making a significant contribution to the group, the same sort of pressure officers experience in staff assignments.

Students are encouraged to leave their families at their last assignment

post. Government housing at Fort Leavenworth is limited. Student quarters have no kitchen facilities, but government messes are available.

GEN George Catlett Marshall, then a colonel, performed so brilliantly as a staff officer during World War I (first as G-3 of the First Division and later as G-3 of First Army) that he was not released for a command position and missed making brigadier before the war's end. He was to remain forever a staff officer, but a staff officer who, as chief of staff during World War II, won public acclaim as the "organizer of victory."

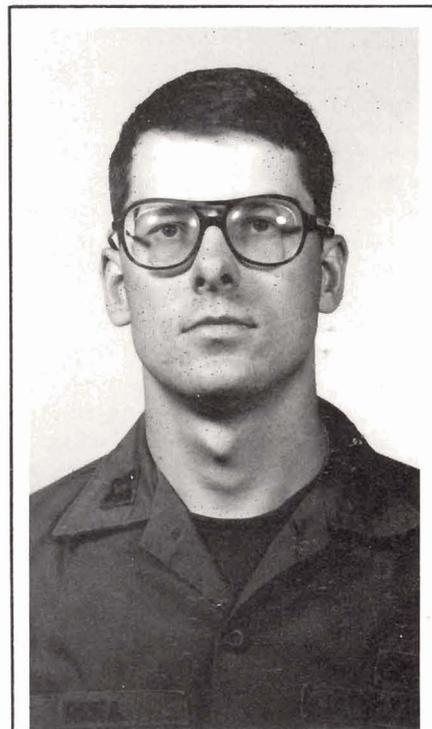
The typical staff officer, however, is remembered only by military historians, seldom receives praise when things go well, but often shoulders the blame when things go wrong. After the victory in Europe, GEN Dwight D. Eisenhower viewed his new job as Army chief of staff as a definite let-down. "This job is as bad as I thought," he wrote in his diary.

CAS<sup>3</sup>, then, prepares officers for what is often a frustrating and thankless job, but a job that is essential to success on the battlefield, for no army can operate effectively without an efficient staff. The notion that behind every good general is a good staff has become almost a military axiom. Newman, in *Follow Me*, contends staff duty should be an essential ingredient in the preparation of general officers for command: "Command duty is, quite properly, an important factor in selection for promotion to general officer rank, but, similarly, the same should be true for adequate staff experience. How can a general use his staff to the best advantage if he has never been a staff officer?"

CAS<sup>3</sup> is serious but enjoyable business and learning to "milk the staff cow" is an important and essential career step. CAS<sup>3</sup> will—if you're willing to learn—teach you the skills you need to become a competent and professional staff officer. \*



**CPT ERNO BUKY** was recently assigned as an assistant professor of military science at the University of Wisconsin. After graduating from Loyola University of Chicago, he spent 37 months in Germany as a Hawk platoon leader and battery commander. Returning to CONUS, he served as commander of Battery B, Staff and Faculty Battalion, School Brigade, Fort Bliss, Texas.



**CPT RALPH RHEA** is training in his specialty, Russian, at the Defense Language Institute's Foreign Language Center at the Presidio of Monterey, Calif. A graduate of ROTC at the University of California at Davis, Rhea once commanded Battery A, 1st Battalion, 55th ADA, at Fort Bliss, Texas. He is a recent graduate of CAS<sup>3</sup>.



### The Distinctive Unit Insignia

A red and yellow border was added to the shield of the 200th Artillery's coat of arms to indicate the descent of Headquarters and Headquarters Battery, 111th Air Defense Artillery Brigade, from that organization. The Avanyu in the center of the shield is a figure representing happiness and prosperity, a symbol used by the ancient Pueblo Indians in New Mexico. The motto *Miras Arriba* means "Keep your goal high."

The 111th Air Defense Artillery Brigade was organized at Albuquerque, N.M., in 1886 as Company E, 1st Regiment of Infantry, New Mexico Volunteer Militia. Four years later, the unit was redesignated as Company G. The New Mexico Volunteer Militia was redesignated in March 1897 as the New Mexico National Guard by an act of the New Mexico Territorial Legislature.

Company G was mustered into Federal service July 16, 1916, at Albuquerque for service on the Mexican border. It was mustered out of Federal service April 5, 1917, at Columbus, N.M., but was again called into Federal service April 21, 1917.

On Oct. 20, 1917, Company G, 1st Regiment of Infantry, was consolidated with Company C, 1st Regiment of Infantry, which was organized at Silver City, N.M. The consolidated unit was then reorganized and redesignated as Company C, 143rd Machine Gun Battalion, 40th Division. While the majority of the old Company G went to the new unit, some individuals went to the 115th Train Headquarters and Military Police and into Company B, 143rd Machine Gun Battalion.

Company C, 143rd Machine Gun Battalion, was reorganized and redesignated in March 1918 as Company D, 144th Machine Gun Battalion, part of the 79th Infantry Brigade which was also an element of the 40th Division.

# 111th

## Air Defense Artillery Brigade

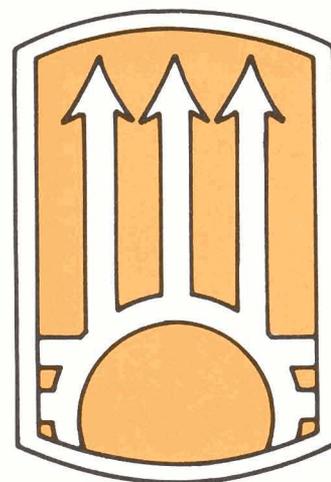
by Danny Johnson

The battalion sailed for France in August 1918. While there, the unit had no front-line service, but as part of the 40th Division (which was later converted to the 6th Depot Division) earned a World War I campaign streamer without inscription. The unit returned to the United States in April 1919 and was demobilized the same month at Camp Grant, Ill.

In July 1920, the former Company G, 1st Regiment of Infantry, was reorganized and Federally recognized in the New Mexico National Guard at Albuquerque as Troop A. In December 1920, Troop A was redesignated as Troop A, 1st Cavalry. It was reorganized and redesignated in September 1921 as Headquarters Troop, 1st Cavalry, and in May 1922 as Headquarters Troop, 111th Cavalry. The 111th Cavalry was assigned to the 23rd Cavalry Division from November 1923 to March 1929.

The 111th Cavalry was converted and redesignated in April 1940 as Battery A, 207th Coast Artillery. The 207th, at its own request, was redesignated as the 200th Coast Artillery to enable the famous New York National Guard Regiment to retain the number "7." So July 1, 1940, Battery A became part of the 200th Coast Artillery. With the cooperation of the Regular Army Coast Artillery, a school for officers was conducted on the campus of the New Mexico School of Mines at Socorro. The conversion of the unit to Coast Artillery was completed by August 1940, after approximately 90 percent of the materials and equipment had been received.

The unit was inducted into Federal service Jan. 6, 1941, at Albuquerque for one year of active duty and, 10 days later, moved to Fort Bliss, Texas. In August, the 750 officers and enlisted personnel in the unit were notified that



### Shoulder Sleeve Insignia

The modified ancient Indian sun symbol of Zia was suggested by New Mexico's state flag. The seven scarlet sun rays on a yellow shield allude to the brigade's mission to provide air defense for forward combat elements. The horizontal bars also symbolize defense and control, while the barbed vertical bars allude to 111, further distinguishing the numerical designation of the 111th Air Defense Artillery Brigade. The colors red and yellow, the national colors of Spain, refer to the historical Spanish influence in New Mexico.

they had been selected for an overseas assignment of great importance, primarily because their unit officially had been named "best-trained anti-aircraft artillery regiment, Regular Army or otherwise."

The regiment moved to the San Francisco port of embarkation Aug. 25, 1941, and departed Aug. 27 aboard the *President Pierce*, arriving in Manila, Philippine Islands, Sept. 16, 1941. The unit then moved to Fort Stotsenberg some 75 miles to the north. The largest single American organization in the Philippines (1,732 enlisted personnel and 77 officers), the unit's primary purpose was to protect Clark Field and the Fort Stotsenberg Reservation.

From the day of the first Japanese attack on Manila at about 3 a.m., Dec. 8, 1941, the 200th executed brilliant maneuvers with successive withdrawals and deployments. The main objective was to protect the retreat of the northern Luzon Force into Bataan. During the ensuing months, hunger and malaria took their toll on the unit.

Japanese forces, with a constant stream of reinforcements, were pushing into the Philippines daily. On April 7, 1942, an order was issued to create the Philippine Provisional Coast Artillery Brigade (AA). However, within 30 hours after its organization, the unit



New Mexico National Guardsmen of the 200th Coast Artillery (AA) train at Fort Bliss, Texas, in 1941 before leaving for the Philippines.

was ordered to destroy all equipment and to reorganize as an infantry unit. The following day, April 9, the unit surrendered to the Japanese 14th Army. Some 40 months later, the men were liberated from various Japanese prison camps and returned with nearly 50 percent casualties to the United States.

Battery A, 200th Coast Artillery, earned the Philippine Islands campaign streamer for World War II in addition to the Presidential Unit Citation for Clark Field, Bataan and Defense of the Philippines. The unit also earned the Philippine Presidential Unit Citation. The battery was officially inactivated April 2, 1946, at Fort Mills, Philippine Islands.

The unit was redesignated May 31, 1946, as Battery B, 717th Anti-aircraft Artillery Gun Battalion (90mm). Reorganized and Federally recognized Sept. 29, 1947, at Albuquerque, the unit was ordered into active Federal service for the Korean conflict call-up May 1, 1951.

The 717th Anti-aircraft Artillery Gun Battalion moved to Fort Bliss May 9, 1951, where the battalion was attached to the 11th Anti-aircraft Artillery Group and then, in February 1952, to the 38th Anti-aircraft Brigade. In March, the battalion moved to the New

Orleans port of embarkation and departed aboard the *General R.M. Blatchford* for Germany where it was assigned to the European Command. It was later assigned to Seventh Army and attached to the 34th Anti-aircraft Artillery Brigade.

Notified of its release from active Federal service, the 717th Anti-aircraft Artillery moved to Westover Air Force Base, Mass., returned to Albuquerque by way of Fort Bliss Feb. 25, 1953, and was released to state control Feb. 28.

It was reorganized and redesignated Nov. 1, 1956, as Headquarters Battery, 4th Gun Battalion, 200th Artillery, and again Feb. 10, 1961, as Headquarters and Headquarters Battery, 111th Artillery Brigade. On Nov. 1, 1972, it was redesignated Headquarters and Headquarters Battery, 111th Air Defense Artillery Brigade. The home station of the brigade headquarters is in Albuquerque.

The 1st Battalion, 200th ADA, in Roswell, N.M., is the air defense artillery unit for the Texas-based 49th Armored Division. The 2nd Battalion, 200th ADA, in Las Cruces supports the Minnesota-based 47th Infantry Division. The 3rd Battalion, 200th ADA, in Albuquerque is the ADA battalion for the 50th Armored Division located in New

Jersey and Vermont. The 4th Battalion, 200th ADA, in Tucumcari supports the California-based 40th Infantry Division (Mechanized). All of these battalions are equipped with the 40mm M-42 "Duster" anti-aircraft gun.

The recently activated 5th Battalion, 200th ADA, is stationed at Fort Bliss' McGregor Range and is affiliated with the 11th ADA Brigade. Equipped with the U.S. Roland missile system, the unit belongs to the U.S. Central Command and U.S. Army Forces Command. Also assigned to the 111th ADA Brigade is the 200th ADA Detachment (Air Target) in Las Cruces, the 209th ADA Detachment (Air Target) at Fort Sumner and the 744th Medical Detachment in Albuquerque.

The 111th ADA Brigade is a CAPSTONE unit to the 32nd Army Air Defense Command in Germany. The brigade will receive the Chaparral and Vulcan weapon systems in the near future. \*

**DANNY JOHNSON** is a management analyst for Assistant Chief of Staff for Intelligence, DA, at the Pentagon. This article is one in a series he is compiling from official Army sources for Air Defense Artillery magazine.

# WHO'S NEWS

The 1st Battalion, 7th ADA, 11th ADA Brigade, Fort Bliss, Texas, was named runner-up for best field mess in a TRADOC level competition.

**GEN William R. Richardson**, TRADOC commander, presented the Phillip A. Connelly Award to **SSG Kenneth Smith**, **SSG James Scott**, **SP4 Randy Jones** and **PFC Gregory Jackson**.

"I believe in tough competition," said Richardson, "and you have shown you rank with the best in the military. Let this award guide you to further success and continued excellence in food service."

The runner-up award in the TRADOC competition marks the first time the unit has won on that level. \*

**President Reagan** recently announced the appointment of the 1983-84 White House Fellows. Among the 13 chosen was **MAJ George H. Seldon Jr.**, an air defense artillery officer and one of two career military personnel selected by the panel.

According to a statement by the president's press secretary, the 13 Fellows were selected from among 1,112 applicants and screened by 11 regional panels. The President's Commission on White House Fellowships then interviewed the 34 national finalists before recommending their choices to the president.

The purpose of the White House Fellowship program, begun in 1964, is to provide gifted and highly motivated young Americans with firsthand experience in the process of governing the nation. Seldon, a recent graduate of the Command and General Staff College, began his year of government service in Washington, D.C., Sept. 1. \*

When **SP4 J.J. Gigliotti** isn't working as a radio operator at White Sands Missile Range, N.M., his mind is on professional football. But Gigliotti is



**SSG Kenneth Smith** of the 1st Battalion, 7th ADA, accepts the runner-up award for best field mess from TRADOC Commander **GEN William R. Richardson**.

more than just another fan. In his spare time, he writes analyses of the annual crop of draft eligible college gridiron stars for the National Football League's New York Giants.

The 28-year-old multichannel communications specialist with the Patriot missile project at White Sands has been submitting his recommendations to the Giants' director of research and development since 1980. When he was 14, Gigliotti began trying to outguess the NFL draft pickers. However, it wasn't until 1979 that he started keeping records of how well he did. The results prompted him to seek a professional outlet for his talent.

"So I just got on the phone to the Giants one day," he said. "From memory I named every one of their draft choices for the past 20 years, plus the strong and weak points of each draft."

While Gigliotti does not claim to have broken anyone's career, he noted that two players he recently lobbied for, North Carolina linebacker **Lawrence Taylor** and Michigan run-

ning back **Butch Woolfolk**, were both drafted by the Giants.

"People used to think I was crazy doing this, until I made that connection with the Giants," he said, "But now, the same guys are coming to me and asking if I can get them tickets and souvenirs."

After completion of his Army service, he would like to parley his long hours of research into a job as a pro football scout. \*



In his spare time, **SP4 J.J. Gigliotti** is a draft analyst for the New York Giants.



**PFC Jacquelin Molter** of the 2nd Battalion, 51st ADA, placed first in three separate events, setting a record at the Jesse Owens Track and Field Competition held at Fort Riley, Kan. The Battery A clerk took first place in the mile and the 880-yard runs, then went on to win the high jump as well. She was the only competitor in the postwide event to capture three top trophies. \*

(Photo by Sylvia Dailey)



**Dr. Manfred Woerner**, West German's minister of defense, who visited the U.S. Army Air Defense Center at Fort Bliss, Texas, recently, was greeted at El Paso International Airport by **BG Stanislaus J. Hoey** (center), assistant commandant of the U.S. Army Air Defense Artillery School, and **BG Karl-Heinz Griese** (right), commander of the German Air Force Training Command, USA. \*



(Photo by Anthony Sweeney)

**SSG David Johnson** of the 2nd Battalion, 5th ADA, hands off the Headquarters and Headquarters Battery guidon to **SGT John Becker** during their leg of a grueling 46-mile relay race. The battalion's five batteries vied for first place in what may have been the longest race ever recorded at Fort Hood, Texas. Battery D won. \*

A number of air defense artillery commands have changed hands recently. **LTC Gary L. Bridgewater** replaced **LTC Paul M. Vilcoq II** as commander of the 2nd Bn., 5th ADA, Ford Hood, Texas. **LTC Edgar L. Wylie** turned the reins of the 1st Bn., 51st ADA, Ford Ord, Calif., over to **LTC David K. Heebner**. **LTC Lewis J. Goldberg** took over from **LTC Zigmund J. Roebuck** as commander of the 1st Bn., 67th ADA, Fort Lewis, Wash. **LTC James L. Frederick** is the new commander of the 3rd Bn., 4th ADA, Fort Bragg, N.C., replacing **LTC Jerry W. Felder**.

Assuming command of the 1st Bn. (Air Assault), 3rd ADA, Fort Campbell, Ky., is **LTC Joseph B. Berger** who took over from **LTC Vincent J. Tedesco Jr.** **LTC Robert M. Davis** succeeded **LTC Irvin S. Butler Jr.** as commander of the 2nd Bn., 55th ADA, Fort Bliss, Texas. **LTC Howard A. Murray Jr.** replaced **LTC Gerald J. Dunn Jr.** as commander of the Student Battalion, Fort Bliss, Texas. **COL Richard E. Supinski** assumed command of the 1st ADA Brigade, Fort Bliss, Texas, replacing **COL Edmond S. Solymosy**.

In oversea assignments, **COL Norman E. Jarock** passed command of the 10th ADA Brigade to **COL Robert J. Weinfurter**. **LTC Norman T. O'Meara II** is the new commander of the 3rd Bn., 7th ADA, taking over from **LTC James P. Kress**. **LTC John J. O'Connell Jr.** replaced **LTC Chapin Horton** as commander of the 2nd Bn., 57th ADA. **COL Joe B. Thurston** took over from **COL William F. Winzurk** as commander of the 94th ADA Brigade. **LTC Herbert J. Smith III** replaced **LTC Andrew L. Austin** as commander of 2nd Bn., 61st ADA.

A revised commanders' list will appear in the winter issue of *Air Defense Artillery*. \*

# Scanning

## **MICOM Gets New Test Equipment**

The U.S. Army Missile Command has received its first multipurpose automatic test equipment as part of the Army's goal to end the proliferation of "system-peculiar" test equipment. The Army decided in 1980 that it had too many specialized devices to test electronic units.

The new equipment will be used to develop test program sets for shipping to Army depots and other general support activities in the field. The software developed at MICOM can be used by those activities with similar machines to test electronic units.

Each missile system has thousands of electronic components which, from time to time, can and have failed. The new million-dollar machine, which can test everything from printed circuit cards and electronic assemblies to the so-called "black-box" line-replaceable units, will automatically fault-isolate those failures. It uses Army standard Atlas computer programming language and stands about 74 inches high, 12 feet long and 26 inches deep.

The Automatic Test Equipment Section of the Maintenance Engineering Directorate, MICOM Logistics Center, will be responsible for any updates and changes for test program sets and will assist in developing test programs for present and future MICOM-managed systems.

## **AWACS Get Jam-resistant System**

NATO is equipping its E-3A AWACS with secure and jam-resistant digital and voice communications which will be difficult for an enemy to intercept with eavesdropping equipment or stop with jamming devices.

The communications system is called the Joint Tactical Information Distribution System (see "Automated Communications For Air Defense," Page 25). JTIDS communications terminals are operating on several NATO AWACS and at two ground command centers in Europe. Eventually all NATO AWACS and nearly all NATO ground command centers will be equipped with the system.

NATO will use JTIDS to transfer radar track data from the early warning aircraft to NATO ground command centers where the information

will be blended with surveillance data gathered from ground-based radars.

Commanders at ground centers will use the combined ground and airborne surveillance information to direct their respective nation's fighters in intercept missions.

The JTIDS equipment is being added to the E-3A AWACS and NATO ground centers through the Airborne Early Warning/Ground Integration Segment, a major upgrading program of NATO's existing air defense system.

## **Fielding of Patriot Delayed**

A delay in the fielding of the Patriot missile system has been announced.

Department of Defense spokesman Henry Cato explained that during a follow-on evaluation from May through July 1983 at White Sands Missile Range, N.M., problems within the Patriot system were noted. Instead of proceeding with the proposed schedule, which would have held to the plan of an initial operating date of April 1984, Army management decided to revise the testing and fielding schedules. The new milestone schedule is designed to ensure that when fielding of the Patriot occurs all fixes will have been made and retested.

MG James P. Maloney, commandant of the U.S. Army Air Defense Artillery School, Fort Bliss, Texas, said the primary problem was radar down time.

Maloney stressed that the slip in the schedule is being made so that, when fielded, the Patriot will be totally ready.

Follow-on Evaluation II at White Sands Missile Range was terminated July 28 to return the Patriot system to the contractor for updating and various maintenance actions.

Follow-on Evaluation III is tentatively scheduled to begin in February 1984, after the 4/3 ADA completes its collective training. If test results are positive, the battalion will deploy to Germany next summer at the end of FOE III.

In the future, all Patriot systems will be delivered to Fort Bliss for acceptance testing and will be deployed to Europe with their units, as opposed to the original plan to have Patriot equipment waiting in Germany when the battalions arrive.

# Developments

## Modernized Chinooks Delivered

The 159th Aviation Battalion, 101st Airborne Division (Air Assault), Fort Campbell, Ky., became the first operational Army helicopter unit to take delivery of newly modernized CH-47D Chinooks.

The Chinook is the Army's medium-lift helicopter used to ferry troops, artillery pieces or general supplies over the battlefield. Under the "D" modernization program, the Army Aviation Research and Development Command contracted to incorporate new engines, advanced flight controls and avionics, composite rotor blades, night-vision equipment and additional cargo hooks into the older "B" and "C" model aircraft. The modernized Chinook has greater speed, lift capacity and operability.

Plans are to deliver 48 modernized Chinooks to the 101st, part of a total of 436 older helicopters which will undergo retrofitting. The first Chinooks were delivered to two companies of the

159th Aviation Battalion, the only battalion-sized Army outfit equipped exclusively with Chinooks. (RD&A)

## Tent Testing in Alaska

Product improvement testing on five- and 10-man tents is ongoing at Bolio Lake, the coldest subpost in the Army. Located at the Army's Cold Regions Test Center, Fort Greeley, Alaska, the subpost has had temperatures recorded as low as minus 70.

Soldiers performing the tests are looking for a tent that has improved heat retention and blackout capability yet be 25 percent lighter in weight without loss of durability. Other tests include wind and snow loading and water repellency.

The tent's durability, including how well small components such as zippers and slide fasteners hold up, is being tested under actual environmental conditions rather than in a cold chamber in order to determine soldier and material interface.

## Army Fields Tactical Truck

Fielding of the Army's new heavy expanded mobility tactical truck is underway. The HEMTT is a 10-ton truck that can be driven cross-country over rough terrain. It comes in five models: the M-977 cargo vehicle, equipped with a light duty crane; the M-978 fuel tanker, capable of transporting 2,500 gallons of fuel; the M-983 tractor, designed to haul the Patriot and Pershing mis-

sile systems; the M-984 recovery vehicle, built to tow disabled vehicles; and the M-985 cargo vehicle, outfitted with a heavy duty crane capable of lifting 14,500 pounds.

The Army has contracted for 2,140 HEMTTs over five years, with an option to buy an additional 5,350.

(Army Logistician)



### Reserve Units to Maintain Black Hawks

In a transfer ceremony at McGlachlin Field, Fort George G. Meade, Md., two First Army reserve units received the Army's newest helicopter, the UH-60A Black Hawk. The transfer is a milestone for the Army Force Modernization Program and for the Total Army Concept.

The 79th U.S. Army Reserve Command's 357th Transportation Company of Greencastle, Pa., and the 121st U.S. Army Reserve Command's 376th Transportation Company of Fort Rucker, Ala., were selected as the recipients of the Black Hawks. The two units will each maintain a "float" Black Hawk for the 101st Airborne Division (Air Assault) of Fort Campbell, Ky. After completion of the required maintenance, the unit

will deliver the repaired helicopter to the 101st and return with another Black Hawk in need of maintenance.

The Black Hawk will eventually replace the UH-1 Huey, the workhorse of the Vietnam conflict. The Black Hawk can carry a fully equipped 11-man squad and more than twice the payload of the Huey, fly 42 knots faster than the Huey and can operate in all types of weather. It can reposition a 105mm howitzer, 30 rounds of ammunition and its six-man crew in a single lift.

The program of fielding equipment to the Reserve Component in conjunction with the Active Army will be expanded to include the M-1 Abrams tank, the Bradley Fighting Vehicle and the Stinger.

### Airborne Target Handoff System Tested

A UH-1 Iroquois helicopter pilot checks the Airborne Target Handoff System prior to testing at the U.S. Army Aviation Development Test Activity, Fort Rucker, Ala. This evaluation of the integrated digital system, which is designed to

send target and fire command information via data burst over normal voice communications equipment, will determine if a significant reduction of on-air time required to relay voluminous information can be accomplished.



### Army Looking For New Protective Clothing

The Army, worried that soldiers would be hampered by their protective clothing in chemical warfare, has asked researchers to develop a chemical armor to neutralize nerve gas.

Nerve gas can attack through any unprotected area of skin. Once inside the body, the agent inactivates an important enzyme in the nervous system and essentially induces paralysis instantaneously.

Synthetic polymers that have shown promise in neutralizing substances similar to nerve gas now are being tested. Nerve gas is not used in the tests. The polymers are being developed as possible replacements for the current rubberized protective suits which rely on charcoal absorbing agents.

### Soldier Designs TOW Jeep Changes

A modified TOW vehicle is currently being used by the 3rd Brigade, 505th Infantry, Fort Bragg, N.C., that allows its crew to use the weapon to its fullest capabilities.

The modifications are the result of the ingenuity of SGT Tony Jones, Company E. Working with a TOW crew, Jones became aware of several deficiencies on the missile carrier. After identifying the problems, he began a project that would take him two years to complete.

The following modifications, based on Jones' proposal, have been adopted in the 3rd Brigade:

- A wire cutter was mounted on the front of the vehicle to clear the battle field of excess strewn wire.
- Handles were placed at critical areas on the vehicle to enable the crew to maintain stability during movement.
- Rucksack racks were mounted at the rear of the vehicle to hold personal items.
- A water can rack has been fixed to the passenger's side.
- A rear platform with a gunner's seat was installed to make loading and unloading the vehicle easier and to give the gunner increased stability when tracking a target. (*Paraglide*)

### Army Tests Improved Abrams Tank



(Photo by John Nibling)

The M-1E1, an improved version of the Abrams M-1 tank, is in full-scale engineering develop-

ment at Aberdeen Proving Ground, Md.

The differences between the Abrams M-1 and the M-1E1 (above) are minimal. The major differences are the larger XM-256 120mm cannon and the addition of nuclear, biological and chemical protection capability on the M-1E1. Although the outside appearance of both tanks is the same, the E-1's armor is improved in certain selected areas to provide greater protection. These improvements reduce the maximum speed from 44 mph to 41.5 mph.

The 120mm gun is of German design with changes to meet the Army's requirements. It is also to be interchangeable with German and American tanks.

Testing is expected to be completed next year. Production date for the first M-1E1 is September 1985.

### First Bradley Crews Graduate



The first Bradley Fighting Vehicle crewmen in the Army recently graduated from the New Equipment Training Team course at Fort Hood, Texas. The soldiers, assigned to the 1st Battalion, 41st Infantry, 2nd Armored Division, were described by instructors as the "smartest, most motivated bunch of men we could have hoped to train first."

The 2nd Armored Division is the first combat unit to receive the Bradley. The turreted vehicle replaces the aging M-113 armored personnel carrier which has transported and protected Army scouts and infantrymen for many years.

### Air Force Emphasizes ASAT Technology

The U.S. Air Force Space Command has drafted a formal statement of need for developing a laser anti-satellite (ASAT) weapon to counter hostile spacecraft.

While the statement of need gives laser technology emphasis, the Space Command will continue to examine other future ASAT options, such as ground-launched systems or larger aircraft-launched weapons. The new Space Technology Center at Kirtland Air Force Base, N.M., which oversees activities of the NKC-1135A airborne laser, will be the focal point for the Space Command's effort.

# Career

## Schools Receiving Non-qualified Soldiers

Army schools continue to receive students for training who do not meet the qualifications for course attendance, Military Personnel Center officials say.

A common occurrence involves students who report without sufficient time remaining on their enlistments to satisfy training prerequisites, particularly "pay-back" time. In addition, some of those students are not eligible to re-enlist or to extend because of lack of weapons qualification, completion of the Army physical readiness test and a current physical examination. Some soldiers simply refuse to re-enlist or to extend when advised of course obligations.

Officials explain that permitting soldiers to transfer to training sites without first being certain that they meet the minimum qualifications for attendance is a costly venture with a serious morale implication. Military personnel officers must ensure that soldiers are qualified for a school prior to departure from the losing command. (*ArNews*)

## Training Extension Courses Helpful

The new standards effective this fall for promotion to E-5 and E-6 emphasize SQT results and job skills to a greater degree than the old standards.

One way to gain a better chance at advancement under the new promotion standards is by using training tools such as training extension courses (TEC).

There are more than 4,000 self-paced lessons in everything from first aid, land navigation and NBC protective gear to care and maintenance for the M-16 rifle and the .45-caliber pistol, all of which are areas tested during the annual common task test. TEC lessons are also available for about 100 different job specialties.

Army TEC lessons are accessible worldwide at almost every unit and can be found in most battalion learning resource centers and at post education centers.

The subjects and identification numbers of TEC lessons are listed in the Army's Extension Training Material catalogs found in Department of the Army pamphlets in the "350" series. For more information on TEC material, contact the unit training NCO, or write: U.S. Army Training Support Center, ATTN: ATIC-ETP-T, Fort Eustis, VA 23604. Telephone numbers are AV 927-2141 or 3728.

## Proponency Points of Contact

ORGANIZATION	CONTACT	OFFICE SYMBOL	AUTOVON PHONE
Air Defense Artillery School	LTC Matthews	ATSA-DAC-SP	978-3002/6217
Armor School	MAJ Smith	ATZK-AM(P)	464-5155
Aviation School	CPT(P) Christiansen	ATZQ-TD-ACMT-M	558-4926/4823
Chief of Public Affairs	MAJ Brown	SAPA-ZDP	225-4660
Chemical School	MAJ Peterson	ATZN-CM-CO	865-5595/3273
Combined Arms Center	CPT Derie	ATZL-SWP-IT	552-2924/3435
SC-49	CPT Caudle	ATOR-CAA-DR	552-2744
SC-52	MAJ Miller	ATZL-CAD-3N	552-3296/5183
SC-54	MAJ Sharp	ATZL-SWO-3P	552-3409
Engineer School	LTC Brown/ CPT Ruark	ATZA-FM	354-4172/3668
Field Artillery School	LTC Faber	ATSF-AF	639-5220/1266
FORSCOM	MAJ Leshner	AFAG-PD/ AFPR-MPS	588-4243/2314
Infantry School	MAJ Moffitt	ATSH-IP	835-1115/7113
Intelligence Center & School	LTC Hunt	ATSI-CG-SP	879-3166/3162
Intelligence (Devens)	MAJ Grunden	ATSI-CG-SPD	256-3411/2179
Logistics Center	CPT Wilder	ATCL-TP	687-4067
MILPERCEN	CPT Higham	DAPC-PL	221-7785
Military Police School	LTC Marek	ATZN-MP-DS	865-3817/3183
Ordnance School Missile & Munitions Center	LTC Saikowski	ATSL-PRO	283-5400
	CPT Hauser	ATSK-ROP	746-1428/2743
Proponency Coordination Center	LTC Miller	ATZI-NCR-I	221-7441/7562
Quartermaster School	LTC Flanagan	ATSM-ACZ	687-3530/1287
Signal School	CPT Montgomery (Off)	ATZH-TDO-A	780-2058
	SGM Holshouser (Enl)	ATZH-TDP-SP	780-2780
Soldier Support Center	COL Cooper	ATSG-FS	699-4730/31/25
Adjutant General School	LTC Fleck	ATSG-AGS-P	699-4690/94/95
Finance School	MAJ Crouch	ATSG-FS-SPAD	699-4750/53
Personnel Management School	LTC Shaffler	ATSG-PMS	699-4769/70/71
Computer Science School	MAJ Martin	ATSG-CSS-0	699-4644/45
TRADOC	LTC Valliant	ATCD-H	680-4225
Transportation School	MAJ Groom	ATSP-DS-P	927-2407/2624

### **Policy For Overweight Soldiers**

Overweight personnel whose records are flagged are not precluded from reassignment. However, those individuals will not be assigned to professional schools or command positions, nor will they be allowed to extend or re-enlist to meet requirements for oversea tours.

It is the responsibility of individuals and losing commanders to ensure that personnel are in compliance with the Army Weight Control Program (AR 600-9) prior to departure. Individuals reporting for professional schooling or assumption of command who do not meet AR 600-9 standards will be prevented from doing so. Instead, they will be reported to the Military Personnel Center for reassignment. Normally, these persons will be reassigned to fill other requirements at that installation, enrolled in the installation's weight control program and monitored under the provisions of AR 600-9. (MILPERCEN)

### **Precommand Course Includes NTC**

Some officers selected for command at battalion and brigade levels now will be scheduled to visit the National Training Center at Fort Irwin, Calif., as part of their precommand training.

The purpose of the training is to review tactics, techniques and procedures of the combined arms team. It also gives the command designee a chance to see tactical training at the task force level.

Combat arms and combat support command designees will be scheduled in groups of eight to visit the center.

### **New Command Tour Lengths Announced**

Battalion and brigade commanders will stay at their positions six months less under a new personnel policy scheduled to go into effect this fall.

The change will make command tours 24 months instead of the usual 30, although higher commanders will have the authority to extend those tours up to six months. The change will allow about five percent more lieutenant colonels and colonels to take command positions, thus helping to achieve a better balance of command stability and professional development of the commander. (MILPERCEN)

### **Army Needs Counterintelligence Agents**

The Army needs about 300 agents to conduct counterintelligence inspections and surveys, and to investigate individuals, organizations and installations to detect, prevent and neutralize

threats to national security.

Soldiers E-4 through E-7 who, upon completion of the course, will be within one year of separation and have less than 10 years' active federal service may apply. Soldiers entering the field (MOS 97B) are authorized a selective re-enlistment bonus under zones 4A, 2B and 2C. Applications also will be accepted under the bonus extension and retention program.

Soldiers serving overseas may apply at any time after their arrival in the command. However, they must still serve the normal tour length before attending the 97B course, unless the oversea command will fund temporary duty to the school and return.

Interested soldiers should call or visit their local military intelligence unit and local military personnel center.

Applicants approved for the 18-week course at the U.S. Army Intelligence Center and School at Fort Huachuca, Ariz., will be assigned to a class after special background investigations have been initiated.

### **Warrant Officer Recall Includes Missile Fields**

Under the Retiree Recall Program, retired warrant officers can volunteer to return to active duty if their specialty is critically short.

Currently, the Missile and Munitions Center and School at Redstone Arsenal, Ala., wants to fill the critically short ordnance-type specialties. These include 214E Pershing missile system technician, 260A nuclear weapons technician, 271A land combat missile system repair technician, 411A ammunition technician, 421A armament repair technician, 621A engineer equipment repair technician and 630A automotive maintenance technician.

Persons wishing to return to active duty must be retired Army warrant officers, 55 years old or younger as of September 1984, who have held the primary specialty requested and passed the required medical fitness standards.

About 35 military occupational specialties are included in the recall program. However, once quotas are met, the MOS is closed and taken off the recall program. For more information, call the Missile and Munitions Center and School's Proponency Branch at (205) 876-2743 or AV 746-2743.

Forward applications to Commander, U.S. Army Reserve Components Personnel and Administrative Center, 9700 Page Blvd., ATTN: AGUZ-PAA-AT, St. Louis, MO 63132. (Redstone Rocket)

# Communiqué

## **New System Links Pentagon, Ft. Leavenworth**

Students and faculty at the Command and General Staff College at Fort Leavenworth, Kan., now have a connection with top Army leaders in the Pentagon.

The connection is a teleconference system known as "Penworth" that allows the chief of staff and senior staff members to participate in actual visual communications with the school. The system uses two-way, full-motion video and two-way audio that can be used as needed.

Officials say the system, which became operational in August, is part of the continuing effort to use teleconferences instead of travel to conduct day-to-day business.

## **National Cemetery Opens at Quantico**

The newest cemetery in the Veterans Administration's National Cemetery System was dedicated at Quantico, Va., earlier this year. Located 25 miles south of Washington, D.C., the cemetery opened for burials in May. When fully developed, the cemetery will provide 200,000 grave spaces.

Burial in national cemeteries having open space is available to veterans discharged under conditions other than dishonorable. Burial is also available to an eligible veteran's spouse and minor children and, under certain conditions, to unmarried adult children.

Of the 108 cemeteries in the system, 60 have grave space available. The remainder have no remaining space for initial interments; however, family members of a veteran buried in one of these may still be buried in the family gravesite.

## **Army Tests Classes by Satellite**

Soldiers are attending classes by satellite under an experimental program called the "Army School of the Air" pioneered by the U.S. Army Training Support Center, Fort Benjamin Harrison, Ind. The first 12-hour instructional block was given in six cities nationwide to update instructors teaching Command and General Staff College courses to Reserve Component officers. For this project, the Army is using the Bell microwave system to transmit the classes from Fort Leavenworth, Kan., to a television station in Kansas City which has a satellite transmitter. The Army is renting the station's facilities to beam the programs to a West Star II satellite. Rental fees are much lower than the cost of moving soldiers and their families to the school's

location, thus saving government funds.

The Training Support Center will conduct a similar experiment on a different network at the Quartermaster School, Fort Lee, Va., later this year. The program will consist of 20 hours of instruction and will incorporate lessons learned from the Fort Leavenworth experiment. (TNS)

## **Maintenance Guide Distributed**

A new edition of DA Pamphlet 750-1, Organizational Maintenance Guide for Leaders, is being distributed. The pocket-size handbook, designed as an aid in establishing and supervising unit-level maintenance operations, includes the changes resulting from the Supply and Maintenance Assessment and Review Team project.

## **Beware of Commercial Field Jackets**

Woodland camouflaged field jackets are now being sold by some Army-Navy surplus stores and by other commercial vendors located near Army installations. These jackets contain labels that closely resemble the government specified labels, to include contract identification data.

These field jackets may not have been subjected to government quality assurance surveillance and may not meet specific requirements. Furthermore, the reported retail price is significantly greater than the standard price at military clothing sales stores.

Army officials advise personnel not to purchase any of these field jackets for wear with the BDU. (DCSP)

## **Physical Fitness Pamphlet Available**

DA Pamphlet 350-18, The Individual's Handbook on Physical Fitness, is the Army's new bible on how soldiers can pursue a systematic course toward life-long physical fitness and sound nutrition. The illustrated, highly readable, 83-page compilation of programmed instruction is designed for the soldier who, by virtue of his assignment, is separated from battalion-type fitness programs.

The new pamphlet, published by the U.S. Army Soldier Support Center, Fort Benjamin Harrison, Ind., comes on the heels of DA Pamphlet 350-15, Commander's Handbook on Physical Fitness, and precedes the publication of a family fitness manual which will be keyed to the desires and needs of Army family members. All three pamphlets are limited in supply but will be available at post libraries. (ArNews)

# Intelligence

## Norway To Lease Improved Hawk

A Department of Defense spokesman confirmed recent reports that the United States will lease an undisclosed number of Improved Hawk missile systems to Norway. Norway is also buying 30 missiles and new surveillance and fire-control radars to operate with the leased systems.

The I-Hawk systems, to be delivered between 1985 and 1987, will provide defense for six major air bases in mid- and northern Norway.

## Singapore Requests Four E-2Cs

Department of Defense has notified Congress that the Singapore Air Force will buy four, instead of the previously reported two, E-2C Hawkeye early warning aircraft.

The aircraft will be used to monitor air and sea traffic approaching the Strait of Malacca, which carries considerable west-to-east oil tanker traffic from the Middle East. Under law, Congress must approve the sale.

Singapore is the latest oversea customer for the E-2C with deliveries starting in 1985. Other countries are Japan, Egypt and Israel. Greece is negotiating with the Department of Defense for purchase of the E-2C.

Pictured below is an E-2C Hawkeye with Japanese markings. The photo published in the Spring issue of *Air Defense Artillery* (Intelligence, Page 57, "Japan Receives Hawkeye,") wrongly identified a British Aerospace VC-10 transport aircraft as an E-2C Hawkeye.

## British Develop New Rapier Version



A new version of the British Aerospace Rapier missile system has been developed for defense against low-flying aircraft within a three-mile range and two-mile altitude.

The Rapier Laserfire missiles system can fit on a single pallet mounted on any medium-sized military vehicle. All elements, including the operator's cabin, are mounted on a turntable. The surveillance radar, which can distinguish between fixed-wing aircraft and helicopters, operates in the millimeter waveband. The system's central feature is an automatic laser tracker that acquires and locks onto the target to provide laser line of sight, alerting indicators in the cab that tell the operator when to fire. The Rapier Laserfire is built in modular sections with self-test facilities.



### **Soviets Deploy SA-5, Develop SA-12**

Reports from Danish intelligence sources recently confirm other reports that work is being completed on an SA-5 Gammon surface-to-air missile base near Rostock on East Germany's Baltic coast. First deployment of the SA-5 outside the Soviet Union was to Syria earlier this year where there are some 1,000 SA-5 launchers at about 100 sites. Each site is protected by lower-altitude SA-6 and SA-3 missile launchers. There are also reports of a new SA-10 radar.

The SA-5 Gammons deployed at Rostock are likely to pose a serious threat to NATO's E-3A AWACS.

Sources say the deployment of the SA-5 outside the Soviet Union for the first time this year could indicate that development of its successor, the SA-12, may be complete.

According to *Aviation Week & Space Technology*, the Soviets have indeed completed field tests of the SA-12 and are now deploying the surface-

to-air weapon in the Soviet Union and Eastern Europe.

The SA-12 is thought to have a slant range of 345 miles and be capable of intercepting the Pershing II intermediate-range ballistic missile. It has a radar based on phased-array and micro-circuit technology.

### **Japan Selects Patriot**

Japan has selected the Patriot as its next generation mainstay air defense missile. The Patriot, which will be produced under license by a group of Japanese companies, was selected over improved versions of the Nike J and the Hawk.

The selection of the Patriot was based on its superior fire power, resistance to radiowave interference and ability to hit many targets simultaneously.

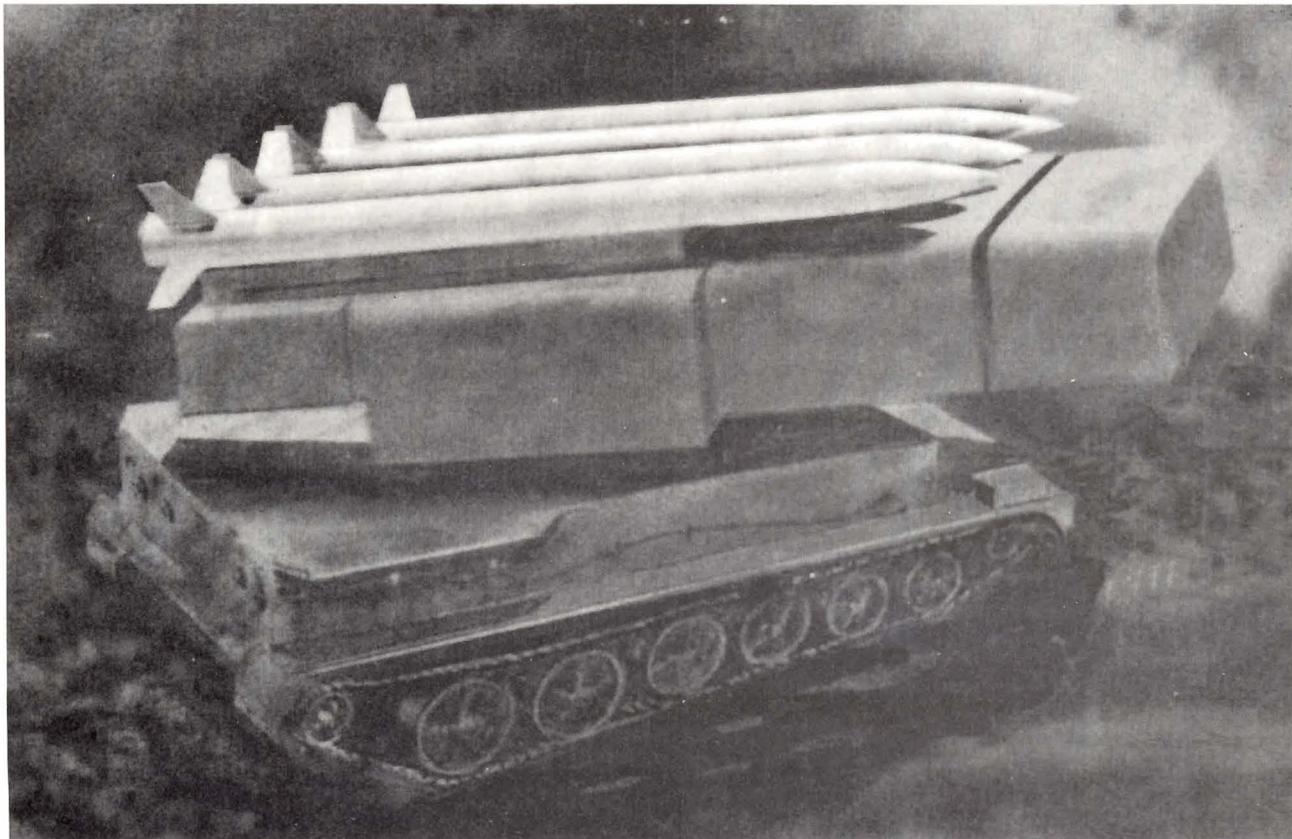
The Japanese Defense Agency will seek appropriation of an estimated \$6.3 billion this fall when it submits its proposed FY84 budget request.

### **Soviets Develop SA-11 System**

The Soviet SA-11 air defense missile system now in development operates with the Clamshell acquisition radar and the Flaplid guidance and tracking radar. The missile, which can be tied in with the SA-6 system, has a maximum range of approximately 17 miles and a maximum altitude

of 45,000 feet. Minimum altitude is 100 feet and the minimum range is less than two miles.

The radar system is thought to be a three-dimensional system providing heights, bearing and range. The circular multiple horn antenna feed is on the side of the acquisition radar.



## Soviets To Deploy New AWACS



The Il-76 Mainstay succeeds the Tu-126 Moss AWACS aircraft, which has been in service for approximately 15 years. The derivative of the Candid reportedly features a lengthened forward fuselage and a large rotating radome which will markedly extend Soviet overwater and overland detection and interceptor control capability.

The Soviet air force will begin deploying its new airborne warning and control system air-

craft this year, Pentagon sources say. Based on the Il-76 Candid freighter and troop transporter (above), the AWACS version has been assigned the reporting name of Mainstay.

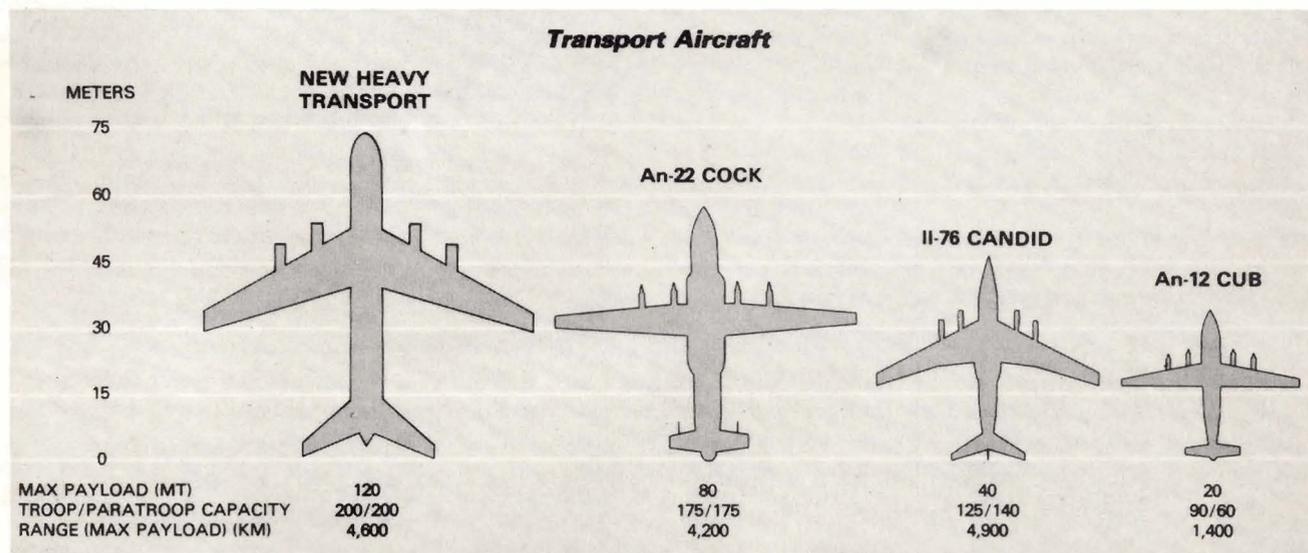
It is expected that some 50 Il-76 Mainstay aircraft will be in operation by the mid-1980s for use against low-level penetration aircraft by directing Soviet fighters equipped with new look-down, shoot-down missiles.

## Soviets Develop New Transport Aircraft

The Soviets are developing a new long-range transport aircraft considered to be in the C-5A class. Such an aircraft would significantly enhance the Soviet Military Transport Aviation's (VTA) capability to carry large, outsized loads, such as the new T-80 main battle tank. It is believed that the heavy-lift transport, designated the Condor, will replace the Il-76 Candid long-range transport, itself in the C-141 class.

Under Soviet military reorganization plans, the large transport would be integrated closely with 190 active army divisions, of which 94 are located opposite NATO's central and northern regions. While the overall VTA inventory has declined by about 60 transports, its carrying capacity has greatly increased.

The Condor is expected to enter service in the mid-to-late 1980s.





# BOOKS

## KGB TODAY: THE HIDDEN HAND

by John Barron

*Reader's Digest Press, distributed by Random House, Inc., New York, 1983. 489 pages. \$19.95.*

In exposing Soviet KGB activities in the world today, John Barron makes some startling claims. The work of the KGB and its agents has given the Soviet Union the plans to the Patriot missile, the F-15 look-down, shoot-down radar, the quiet radar system for the B-1 and Stealth bombers, an all-weather radar system for tanks, an experimental radar system from the U.S. Navy, the Phoenix air-to-air missile, a shipborne surveillance radar, a towed array submarine sonar system, the improved Hawk and a NATO air defense system. Securing this type of information saves the Soviet Union not only time, but hundreds of millions of dollars in research and development efforts. Defensive countermeasures and effective counterpart equipment can readily be developed, some even before our systems are fielded.

Much of the information in the book comes from exclusive interviews with some of the most important KGB officers and spies ever to flee the Soviet Union or to be caught in the West. From meticulous research comes a chilling tale of technological theft and of public opinion manipulation to undermine Western nations.

Barron outlines in great detail efforts by the KGB that have resulted in wholesale weapon systems thefts and illicit purchases of enough sensitive, embargoed American equipment to build entire factories in the Soviet Union. He shows how, through "shell" corporations, embargoed equipment is purchased and shipped to dummy addresses, eventually making its way to the Soviet Union.

In the realm of public opinion, Barron tells how many peace and disarmament movements have been heavily influenced by KGB agents or money. He lists and gives great detail of organizations in the United States that receive such active Soviet support.

Sleeper agents, dummy corporations, underground movement activity, industrial espionage, forgery, blackmail and murder are KGB tools which are described in great detail. The KGB organization, its methods and case histories unfold for the reader in this convincing narrative.

*KGB Today: The Hidden Hand* should be required reading for all personnel who think that they are immune to espionage activities or that their systems are secure.

—Ed Starnes

## AIR POWER IN THE NUCLEAR AGE

by M. J. Armitage and R. A. Mason  
*University of Illinois Press, Champaign, Ill., 1983. 296 pages. \$24.95.*

This book is a well-organized, factual account of the importance of air power in warfare following the first nuclear attacks in 1945. It gives the reader a detailed historical account of the use of air power in various conflicts between 1945 and 1982, including the Korean conflict, the Vietnam War and the Falkland Islands conflict.

The authors discuss various rotary and fixed-wing aircraft and their warfare roles such as reconnaissance, electronic warfare, tactical and strategic bombing, close-air support and transport. Throughout the discussions of various campaigns, M. J. Armitage and R. A. Mason explain how development of new and more sophisticated aircraft and munitions constantly change aircraft tactics and roles. The rapid evolution and increasing deployment of air defense systems, which

were to become a major threat to warfare aircraft and embattled geographical areas, greatly influenced air power.

Armitage and Mason, members of the Royal Air Force, convey their knowledge in a text that is not only easy to read but extremely informative. Military history buffs will enjoy reading about the different uses of air power from the battlefields of 1945 to those of the present.

—ILT Pamela Bodager

## VISIONS OF VIETNAM

by James McJunkin and Max Crace  
*Presidio Press, Navato, Calif. 1983. 256 pages. \$25.*

James McJunkin, a former Army combat photographer, and Max Crace, an Air Force artist, have joined forces to produce a book that graphically and poignantly tells the Vietnam War story.

The 82 black and white photographs and 34 drawings vividly capture the hardships of a country at war. Retired Army CPT Shelby L. Stanton, author of *Vietnam Order of Battle*, describes the book as a "gripping and accurate portrayal of Vietnam as the American soldier actually knew it. . . . McJunkin photographed the soldiers as only another soldier could, and his images of the civilians are filled with a sincere compassion. . . . The drawings of Max Crace capture the intensity and human drama of this war. . . . Their excellent work is an overdue tribute to the American soldier and the Vietnamese people."

The photos and drawings speak for themselves, although captions are provided to assist the reader in placing them in the context of the war's action.

*Visions of Vietnam* is a powerful book that places the Vietnam War in sharp perspective.

—Claire B. Starnes

## THE FINAL COLLAPSE

by GEN Cao Van Vien  
*Center of Military History, Washington, D.C., 1983. Softbound, 184 pages. \$5.50.*

GEN Cao Van Vien was the last chairman of the South Vietnamese Joint General Staff. *The Final Collapse* is his personal, sometimes poignant view of the military and political events which led, after decades of struggle, to South Vietnam's surrender to North Vietnam on April 30, 1975.

One in a series of monographs written by officers who held responsible positions in the Cambodian, Laotian and South Vietnamese armed forces, *The Final Collapse* documents the sudden and total disintegration of Saigon's armed forces in the face of Communist onslaughts designed to achieve only limited objectives. The ease with which North Vietnamese regulars, armed with Soviet tanks, artillery and aircraft, routed South Vietnamese units which had gallantly withstood the Communist's Easter Offensive of 1972 surprised even Hanoi.

Vien blames the rout on strategic advantages given the Communist foe by the Paris Peace Agreements, America's abandonment of her former ally and high-level corruption and tactical blunders in Saigon.

Vien thinks the outcome could have been much different. "My contention is that, given the advantageous military position we enjoyed after the 1968 Tet offensive, if we had pursued our successes by more forceful exploiting actions and larger-scale counterattacks, the Vietnam War could have been resolved then and there."

*The Final Collapse* seems to be the most authoritative account of the fall of the Republic of Vietnam yet published. It is likely to be painful reading for American veterans who bled to defend ground so quickly overrun in the spring of 1975 and who will recognize the names of certain proud South Vietnamese units which, despite terrible casualties, stood their ground with incredible heroism and dedication as their world collapsed around them.

The volume is offered for sale by the Superintendent of Documents, Government Printing Office, Washington, DC 20402. Army units may

requisition *The Final Collapse* as CMH PUB 90-26 through AG Publications Center, 2800 Eastern Boulevard, Baltimore, MD 21220.

—Blair Case

## DONOVAN AND THE CIA

by Thomas F. Troy  
*University Publications of America, Inc., Frederick, Md., 1981. 589 pages. \$29.50.*

William J. "Wild Bill" Donovan—lawyer, soldier, statesman and a man with incredible foresight—is undoubtedly one of the great legends of our time. If any one person were to be credited as the architect of America's intelligence network, from the establishment of the Coordinator of Information to the formation of the Central Intelligence Agency, it would have to be Donovan.

Thomas F. Troy's book, first published in 1975 in two volumes, was classified secret until recently when the book was reviewed and declassified after the elimination of six pages. Originally, the book's purpose was to provide new CIA employees with a detailed and comprehensive account of the agency's origin and of the politics and machinations that went on behind closed doors during the formative postwar years of that organization.

As the title suggests, *Donovan and the CIA* is both biography and history. Though he was referred to as Colonel Donovan, "Wild Bill" Donovan or just plain Bill Donovan, he actually held the rank of major general in the Army during World War II. He earned his nickname while serving with General Pershing in Mexico when, after a 10-mile hike, he taunted his exhausted men with "Look at me, I'm not even panting. If I can take it, so can you." Whereupon, someone in the ranks remarked, "We ain't as wild as you, Bill." The name stuck, and he liked it.

His position as advisor to President Roosevelt allowed Donovan freedom of movement throughout the world between wars. It was that freedom of movement as a statesman and private citizen, rather than soldier, that gave him access to the plans, organization and administration of countries from South America to Europe. It later became clear that, through his many foreign

contacts, he had already laid the groundwork for a worldwide intelligence network.

*Donovan and the CIA* traces the history, achievements and defeats of the Coordinator of Intelligence and the wartime Office of Strategic Services, the latter forming the basis for the foundation of the CIA.

At some stages, the pace of the book becomes bogged down with an overabundance of detail, particularly when describing the politics that led to major organizational decisions. The reader may also find himself stumbling over the plethora of acronyms that are rife in books of this nature. Unfortunately, the author did not provide a glossary.

*Donovan and the CIA* is amply illustrated with historical photographs, diagrams and organizational flow charts. While this work has all the appearances of a textbook replete with footnotes and appendices, it is surprisingly easy and captivating reading. Highly recommended.

—Brian R. Kilgallen

## AN ILLUSTRATED GUIDE TO MODERN AIRBORNE MISSILES

by Bill Gunston  
*ARCO Publishing, Inc., New York, 1983. 160 pages. \$9.95.*

This guide presents all the air-to-air and air-to-ground missiles currently in the inventory of or being developed for the world's armed forces. The more than 100 systems include long-range strategic weapons such as the AS-6 Kingfish and the new generation of small, helicopter-borne, anti-tank weapons. Detailed cutaways, diagrams, line drawings and 150 photographs support the text. The entries are arranged by missile type and feature concise data and descriptions of the weapons' development.

## CORRECTION

The equation

$$P_{K_T} = P_{K_0} \underbrace{[1 - (1 - V_R)^n]^g}_{1-S} + P_{K_1} \underbrace{\{1 - [1 - (1 - V_R)^n]^g\}}_S$$

in the article "SHORAD Surveillance System Survivability vs. Enemy ARM Strategies," Summer 1983 issue of *Air Defense Artillery* (page 19), should have read:

$$P_{K_T} = P_{K_0} \underbrace{[1 - (1 - V_R)^n]^g}_{1-S} + P_{K_1} \underbrace{\{1 - [1 - (1 - V_R)^n]^g\}}_S$$

## FIRE OVER ENGLAND

by H. G. Castle

*Martin Secker & Warburg Ltd., London, 1982 (distributed by David & Charles, Inc., North Pomfret, Vt.). 254 pages. \$22.50.*

## AIRSHIP SAGA

by Lord Ventry and Eugene M. Kolesnik

*Blandford Press, Dorset, U.K., 1982 (distributed by Sterling Publishing Co., Inc., New York). 192 pages. \$16.95.*

*Fire Over England* is the story of history's first strategic bombing raids over England, the German airship raids during World War I.

The *Luftschiff Zeppelin 6* (LZ 6), one of three German dirigibles which set out across the English Channel January 19, 1915, was the first combat Zeppelin to fly over Britain and drop bombs. The other two dirigibles were driven back by bad weather, but LZ 6 succeeded in making landfall. A change of wind caused Kapitanleutnant Hans Fritz, LZ 6's commander, to miss his target, Humber, by 80 miles, and the weight of rainwater forced his dirigible down to 5,000 feet. He bombed Great Yarmouth instead. The raid lasted 10 minutes, killed two people and injured three.

The dirigibles were not as vulnerable as one might imagine. Not one of the anti-aircraft weapons of the day could hit one of the air battleships at 10,000 feet and the dirigibles could easily outclimb British fighters. However, they made inviting targets when descending to lower levels to increase bombing accuracy.

Air defenders should find H. G. Castle's book, which takes the reader into the gondolas and cockpits of the German airships as well as inside the gun emplacements of British anti-aircraft artillerymen, enlightening. It is a fascinating study of air power's emergence as a strategic threat.

H. G. Castle, a former publisher and editor grew up during World War I which, he says, was "an unforgettably exciting experience." That experience included a ground-eye view of the first German airship to be shot down over England.

*Airship Saga* is a highly illustrated (282 photos) historical record

of the rise and fall of the world's first means of controlled flight. The book spans from the first Zeppelin that flew over Lake Constance in 1900 to today's Goodyear publicity blimps, and covers all the countries that ever built or used dirigibles.

What makes this book exciting are the first-hand accounts of some of the most distinguished persons of the airship era. These accounts by airship pilots, eyewitnesses to airships in combat situations and persons who flew in the early passenger ships, are combined with design descriptions and the histories of these airships' development and operations in each of the countries which built them—Great Britain, France, Italy, Germany and the United States.

Lord Ventry lived through the early development of military and civil aeronautics in Great Britain. In 1951, with a group of friends, he designed and built the airship *Bournemouth*, which was flown until August 1952. In recent years he has flown airships in the United States, Germany and, most recently, the *Europa* in the United Kingdom.

Eugene M. Kolesnik is an editor, defense writer and military historian. He has written extensively on transport, military logistics and anti-aircraft and anti-tank weapons. With Lord Ventry, he is also author of *Airship Development*. —Blair Case, Claire Starnes

## INSIDE THE GREEN BERETS:

The First Thirty Years

by Charles M. Simpson III

*Presidio Press, Novato, Calif., 1983. 256 pages. \$15.95.*

Who the Green Berets are, what they do and where, their missions in war and peace, how they are funded and their relationships to other army units form the most comprehensive history of the U.S. Army Special Forces ever written.

Retired Army COL Charles M. Simpson III thoroughly examines guerrilla warfare which began when the first cave man ambushed another. Today's U.S. guerrilla warfare is dominated by members of elite military units who can accomplish certain tasks more effectively than any other regular unit. The Army's Special Forces, descendent

of the OSS, has been clouded in the same secrecy as its predecessor. This is one of the reasons why a realistic account now is so valuable.

Basic Special Forces missions have generally been to train, support and advise armies of foreign countries. They have helped neutralize guerrilla action or, depending on the situation, increase guerrilla potential. Both insurgency and counter-insurgency can be their business.

Trained at Bad Tolz in Bavaria, Germany, and the modern school at Fort Bragg, N.C., this elite group of men has served in covert and advisory operations throughout the world. Some of these operations involved scaling the Iranian mountains to retrieve the bodies of four Military Army Assistance Group officers downed in a crash, providing basic training for Ethiopian troops, rescuing a party of refugees in the Congo and instructing more than 41,000 military men in Latin America.

The Vietnam War brought the Special Forces into greater prominence. However, their diversified operations throughout Indochina had never been told in such detail until now.

Simpson, a nine-year veteran as a Green Beret, has written an exciting tribute to the men of the U.S. Army Special Forces. —Bobby R. Herndon

## CHEVRONS

by LTC William K. Emerson

*Smithsonian Institution Press, Washington, D.C., 1983. 298 pages. \$49.50.*

*Chevrons* is one of the finest, most thoroughly researched military books to hit the market in the last five years. LTC William Emerson's illustrated history of U.S. Army chevrons and their development from 1815 to the present fills a void that will be much appreciated by collectors, historians, librarians and museum curators.

The book discusses the initial growth of the chevron, borrowed from the British, and its evolution to the present-day corporal and sergeant stripes which came into being shortly after the War of 1812. Profusely footnoted, this masterpiece is divided into four major sections that

trace changes in the appearance and manufacture of chevrons: pre-1872, 1872-1902, 1902-1920 and 1920-present. Each section, accompanied by drawings or photographs, describes all chevrons authorized by the Army. Many "worn, but not official" chevrons are described and may solve mysteries that have haunted private and museum collectors. Each chapter contains tables, indexes and a catalog of rank, color, material, date and sometimes manufacturer of chevrons. Armed with this information, an historian can positively identify his own chevron specimens.

*Chevrons* should be on all novice and expert collectors' desks for handy reference, whether they specialize in chevrons or not. Do not miss this terrific book.

—Leon W. Laframboise

#### McCAMPBELL'S HEROES

By Edwin P. Hoyt

*Van Nostrand Reinhold Co., Inc., New York, 1983. 189 pages. \$19.50.*

This is the story of what some people claim were the U.S. Navy's most celebrated carrier fighters of the Pacific in World War II. It is a stirring history of Air Group Fifteen's remarkable performance against the Japanese while protecting its own ship, the *Essex*. Boasting 26 aces, the fighter pilots sank or damaged 58 Japanese warships, including four carriers, for a total of 560,000 tons of enemy shipping. They also destroyed nearly 700 planes. The book is based on the air group's battle reports, Navy documents and interviews with men who took part in the action. The title honors CPT David McCampbell who led the pilots during the American drive to regain control of the Pacific and, while doing so, earned the Medal of Honor.

USAFE. A Primer of Modern Air Combat in Europe

by Michael Skinner; photography by George Hall  
*Presidio Press, Novato, Calif., 1983. 138 pages. \$9.95.*

Writing with the layman in mind, the author explains the nature and operations of the men and equipment of the U.S. Air Force, Europe. Skinner explains American Air Force

commitment in Europe, unravels the complex command structure and breathes life into technical statistics and jargon. *USAFE* is about the balance of power in the skies of Europe, about the changing nature of modern air combat and, most of all, about the airmen and their world.

#### SPACE-A AIR OPPORTUNITIES AROUND THE WORLD

by Ann and Roy Crawford

*Military Living Publications, Arlington, Va., 1983. 360 pages. \$11.95.*

This book lists more than 250 worldwide military installations that offer space-available flights. It also contains information about personal entry requirements for foreign countries, how to obtain passports and visas, immunization requirements, space-A rules and regulations and more than 40 questions and answers concerning unique space-A situations.

This is the first book of its kind for use by military families.

#### PROFESSIONAL PILOT

by John Lowery

*Iowa State University Press, Ames, Iowa, 1983. 155 pages. \$22.50.*

John Lowery, an Air Force test pilot, aircraft accident investigator and director of flight safety for National Aviation Underwriters, Inc., isolates in this book the main causes of flight accidents and provides rules of thumb, training and piloting techniques to alleviate trouble spots. He covers single, twin and general aviation airplanes as well as turbojets and commercial jet transports. He hopes this book "will be a source of information for serious pilots and thus help them make sound decisions when conditions are less than optimum." *Professional Pilot* is written specifically for the pilot to provide him training in important piloting techniques.

ECHOES IN THE SKY. An Anthology of Aviation Verse From Two World Wars.

Edited by Ronald Dixon

*Sterling Publishing Co., Inc., New York, 1983. 238 pages. \$7.95.*

*Echoes In The Sky* is a stirring collection of 65 verses and songs sung by British Royal Air Force

airmen, spanning both world wars.

The anthology comprises heroic poems, bitter verses, prayers and parodies, mournful ditties and epitaphs. Some are authored by well-known writers such as William Butler Yeats, John Masefield and Noel Coward while others are anonymous. The pieces, however, evoke images of those daring airmen and their fears, bravery, fatigue and yearnings.

*Echoes In The Sky* is an exciting book to browse through, study and even sing.

#### CLANDESTINE OPERATIONS.

The Arms and Techniques of the Resistance, 1941-1944

By Pierre Lorain; English adaptation by David Kahn

*Macmillan Publishing Co., New York, 1983. 185 pages. \$24.95.*

This is the first book that tells how the French underground movement worked and describes in meticulous and vivid detail the arms and paraphernalia used by its members. The book contains more than 200 detailed drawings of transmitters and receivers, knives, pistols, explosives, even airplanes, that were essential to the success of the Resistance missions. A special section of the book is devoted to codes and ciphers. Code specialist David Kahn, author of *The Codebreakers* and *Hitler's Spies*, calls this material "remarkably precise."

While descriptions of hardware and technique form the core of this book, Lorain never loses sight of the brave people involved, giving a human touch to the spying methods of the Resistance. The result will prove irresistible to armchair operatives and history buffs alike.

#### AN ILLUSTRATED GUIDE TO NATO FIGHTERS AND ATTACK AIRCRAFT

by Bill Gunston

*ARCO Publishing, Inc., New York, 1983. 160 pages. \$9.95.*

This book contains more than 30 types of fighter and attack aircraft, each with detailed specifications of weight, size and performance. Close to 100 line drawings and 30 detailed profiles in full-color and black-and-white photographs show combat aircraft in action.

# Opinion

## Counterair or Air Defence

by LtCol Michael F. Bremridge,  
MC Royal Artillery

Since the end of World War II, air defence weapons have improved dramatically and there is no doubt that by the year 2000 we shall have even better weapons to deal with the ever advancing threat. Hosts of people have been employed to examine the ground-to-air battle and the effect of air on the ground battle. Computers are used extensively to process elaborate scenarios. True, this work is essential if we are to develop the new family of weapons together with command, control and communications. But, are we doing enough positive thinking about how to use the equipment to its fullest potential today as well as in the future?

There are two common deficiencies of air defence. The first states that the aim of air defence of the field army is to prevent the air threat from interfering with the conduct of operations on the ground. The second maintains that the mission is to nullify or reduce the effectiveness of attack or surveillance by hostile aircraft or missiles after they are airborne, thereby supporting the primary Army function of conducting prompt and sustained land operations.

When it gets down to battalion, battery and platoon level, what does this really mean? Is the mission to defend a piece of ground, say a critical point, or is it to defend the troops on the ground or some commodity on the ground? Or could the mission be to destroy enemy aircraft? Armour is very positive about its role, which is primarily to destroy tanks. Isn't it time, then, that we in NATO adopt a more positive mission for our field air defence units? Shouldn't winning the economic war by high rates of attrition of expensive aircraft be high on

the priority list? Neutralisation can only be second best. It is wasteful in ammunition and produces a conflict for those deploying the weapons.

The best fire positions for achieving neutralisation are not necessarily the best fire positions from which to destroy aircraft. There will, of course, be occasions where an air defence unit is tasked with the protection of a high capital asset such as a nuclear ammunition dump, in which case the priority may well change from destruction to protection.

At battalion level, one of the keys to success is the ability of the air defence commander to outwit his opponent, the air commander, and to do this, one requires detailed knowledge of the threat. (I can hear the armchair critics saying, "So what's new about that?") Unfortunately, our knowledge of the air threat tends to be superficial, confined to numbers and types of aircraft and weapons which would be used against us and how they might be delivered (attack profiles). The threat does not address the tactics used by the air commander, what formations he might use and how the mission might be planned, flown and controlled. The field army well understands how a motorised rifle battalion might operate. But, does it have the same knowledge about air tactics or the limitations of modern aircraft?

Our own pilots make detailed studies of how best to beat the anti-aircraft threat. Should we not be using their expertise to teach us how to be good air defenders by creating the maximum problems for opposing air commanders?

Not all field commanders are aware of modern aircraft weaknesses and how the ground limits the ability of air commanders to attack certain areas without exposing pilots to undue risks from short-range air defence weapons. Pilots usually will not risk attacking into the sun or flying into their ordnance or debris hemisphere. Armed with this knowledge, air defence officers are well placed to help field army commanders adopt good passive air defence measures. This starts with an appreciation of the ground. Are commanders considering

the ground as viewed from the air, or only from the ground? As already mentioned, some ground affords marvelous protection from the air. If we can, we should use it to best advantage for hide areas, movement and combat. Proper use of ground for passive air defence releases air defence weapons for use where the ground favours aircraft.

Other passive measures of dispersion and camouflage are well known; however, the risk factor is unlikely to be taken into account. Where is the commander prepared to take risks? There will never be enough air defence weapons to provide complete cover for everyone all the time, so a field commander must decide what his key assets are and where he is prepared to accept solely passive means of air defence. This will help the air defence commander decide how best to deploy his forces to destroy enemy aircraft, while at the same time affording the field commander the protection he requires. The difficulty facing air defenders is to convince the field commander that their mission is to destroy enemy aircraft.

Command plays a key part in the way any unit fights a battle. One frequently hears the cry that commanders will place themselves where they can observe the battle or a key aspect of the ground battle. Are we training air defence officers to man command posts or to get out in the field and watch the air battle to determine what tactics are being used by enemy aircraft, to see practically the effects of short-range air defence systems and to analyse how the day's battle has gone so that adjustments can be made the following day? Another aspect of command is reacting to the ground threat. We often think of the main physical threat to short-range air defence weapons being from the air. But, will not the ground forces pose as great a threat? There will be problems of preventing short-range air defence weapons from being overrun and surviving artillery barrages.

In the design of command and control, we must improve not only our ability to destroy aircraft, but our

ability to command our soldiers and safeguard their lives, as well as our valuable equipment. The electronic threat will be ever increasing.

Helicopters have an essential role to play in support of Army operations, but in a hostile air environment or one in which there is a real requirement to destroy enemy aircraft, the helicopter becomes extremely vulnerable, particularly to fire-and-forget weapons. The dilemma is: how much can we restrict helicopter operations upon which we have become dependent? The alternative is to restrict air defence operations.

Currently, we are looking at the self-defence of helicopters from enemy helicopters. Shouldn't we be more

positive and think about the destruction of enemy helicopters by helicopters armed with medium-range missiles? There are two particular circumstances in which I envisage dedicated helicopters armed with air-to-air missiles will be required. First, they will be needed prior to and during an attack by helicopters in an anti-tank role; second, to protect armour moving in any of its traditional roles.

I have heard the view expressed by many officers that weapon control orders are strangling our air defence systems. I would like to think that our general officers, in time of war, will order whatever weapon control orders they consider applicable to win the

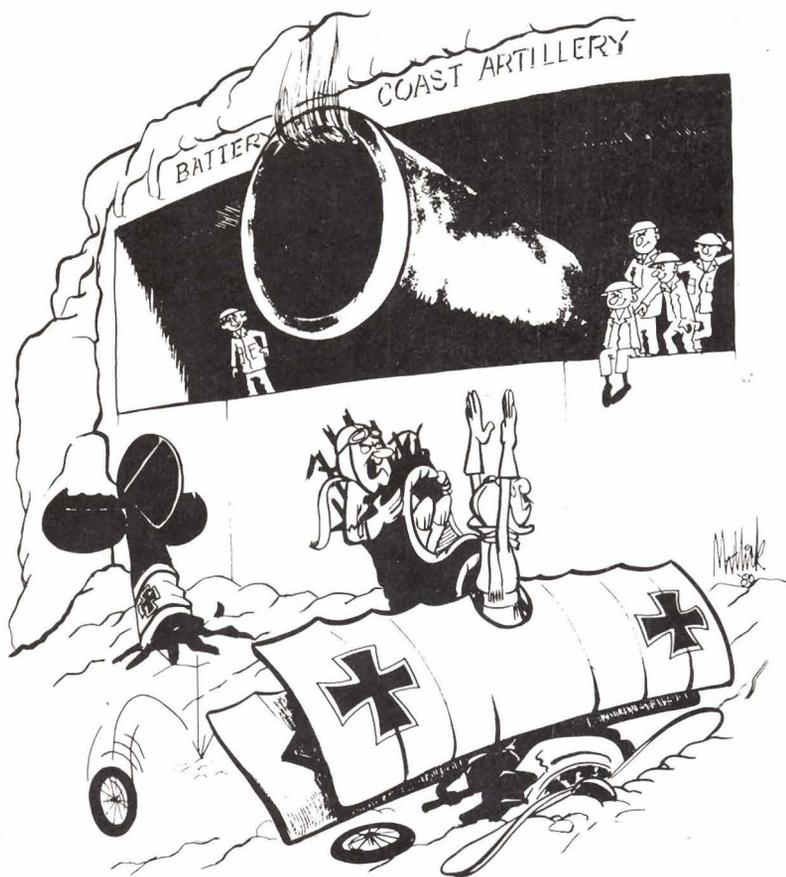
war. At the end of a day, if 16 aircraft have been destroyed as well as one of our own by short-range air defence weapons, that must be a fair exchange. The peacetime academic debate will continue to be the bane of air defence for many years to come, although people do seem to be taking a more realistic viewpoint. The requirement for a good means of identification still exists.

The question remains: Does the name "air defence" tend to produce negative thinking? We all expect to be *defending*, whether we be marines, armour, infantry or artillery. Should we in air defence be more aggressive in our approach to defeating enemy air by destruction? \*

## HISTORY OF ADA

THE COAST ARTILLERY CORPS BEGAT THE ANTI-AIRCRAFT ARTILLERY DUE TO THEIR PASTIME OF SHOOTING DOWN DUCKS AND OTHER FLYING OBJECTS WHEN NOT ACTIVELY ENGAGED IN SHOOTING DOWN COASTS.

THE AAA INHERITED MANY TRADITIONS FROM THE COAST ARTILLERY CORPS; THE MOST SIGNIFICANT BEING... "CONCRETE." (ADA's image still suffers from that one!)



"HAVE YOU NEVER HEARD THAT DISCRETION IS OFTEN THE BETTER PART OF VALOR?"



LtCol MICHAEL F. BREMRIDGE is the British liaison officer at the U.S. Army Air Defense Center, Fort Bliss, Texas. He was educated at Sandhurst (the British equivalent of West Point) and has served in Malaya, Kenya, Germany and the United Kingdom. He has seen active service in Aden, Northern Ireland and Rhodesia. For his service in Aden, he was decorated with a Military Cross and for service in Northern Ireland, he was Mentioned in Dispatches. He commanded a field battery in Germany and an air defense battalion assigned to the British Army of the Rhine. He has also served on the staff of HQ 1(BR) Corps and HQ 1st Armoured Division. Part of his training was as a forward air controller, during which time he attended an offensive air support course at Ramstein Air Force Base, Germany.

COMING IN THE WINTER ISSUE. . .  
THE SGT YORK GUN STORY

