160th Special Operations Aviation Regiment(A)

SPECIAL FOCUS: 160TH SOAR (A) AND NIGHT VISION DEVICES

ARMY AVIATION

OFFICIAL PUBLICATION OF THE ARMY AVIATION ASSOCIATION OF AMERICA • JULY 31, 1994

PUBLISHER
Lynn Coakley

ASSOCIATE PUBLISHER
Terrence M. Coakley

EDITOR
William R. Harris, Jr.

PRODUCTION MANAGER
Barbara Ross

ASSOCIATE EDITOR
Stephen Moore

CIRCULATION MANAGER
Jill Thomas

CIRCULATION ASSISTANTS
Mary Ann Stirling, Debbie Coley, Deb Simons, Mary Ellen Kother

ARMY AVIATION is the official journal of the Army Aviation Association of America (AAAA). The views expressed in this publication are those of the individual authors, not the Department of Defense or its elements. The content does not necessarily reflect the official U.S. Army position nor the position of the Army Aviation Association of America (AAAA) or the staff of Army Aviation Publications, Inc. (AAPI). Title reg. ® in U.S. Patent Office. Registration Number 1,533,053.

ADVERTISING
Display and classified advertising rates are listed in SRDS Business Publications, Classification 90. For advertising information, call (203) 226-8184.

SUBSCRIPTION DATA
ARMY AVIATION (ISSN 0004-248X) is published monthly, except April and September by AAPI, 49 Richmondville Avenue, Westport, CT 06880-2000. Phone: (203) 226-8184. Subscription rates for non-AAAA members: $25, one year; $48, two years; add $10.00 per year for foreign addresses other than military APOs. Single copy price: $3.00.

POSTAL
Second class postage paid at Westport, CT and other offices.

POSTMASTER
Send address changes to Army Aviation Publications, Inc., 49 Richmondville Ave., Westport, CT 06880-2000

FORTHCOMING ISSUES

August-September 1994 — 1994 Annual "Blue Book" Directory.

October 1994 — Special Focus: Aircraft Survivability Equipment and Avionics. The SPOOF Roster — AAAA's Retired Members.

Briefings

The **Internatonal Liaison Pilot and Aircraft Association (ILPA)** has announced the following meetings: Sept.3-4, West Coast ILPA Getogether (WCIG), Camarillo, CA. Contact George Robinson at 818-899-8647; Oct. 8-11: Gulf Coast ILPA Getogether (GCIG) with the Air Commandos for their 50th Anniversary at Hurlburt Field, Fort Walton Beach, FL. For more information contact: Bill Stratton, 16518 Ledgestone, San Antonio, TX 78232, (210) 490-4572.

Dr. Harold Law, AAAA member since 1984, founder and President of **Decisions and Advanced Technology Associates, Inc. (DATA),** received the Clinton A. West Minority Entrepreneur Award in Washington D.C. on May 3, 1994, sponsored by the Small Business Administration. The award ceremony was followed by a reception with President Bill Clinton.

The **Helicopter Club of America (HCA)** and Co-Sponsor **Las Vegas Events, Inc.** announced that the winners of the **1994 U.S. National Helicopter Championships** overall champions are **James N. Hutchens** (Pilot), and **Jeffrey J. Johnson** (Co-Pilot), members of the Idaho National Guard. Flying the Bell OH-58, the Idaho team showed exceptional ability to maneuver this aircraft despite wind and precision flying events that included difficult maneuvers while competing against 11 other military and civilian teams.

Simula, Inc. announced that it has been selected by the Aviation Applied Technology Directorate of the U.S. Army Aviation and Troop Command for development work needed to adapt airbag systems for the cockpit of the UH-60 Black Hawk helicopter. The contract is valued at appoximately $4 million, and will deploy from minimal space on crowded instrument panels. The airbags will reduce contact injuries sustained by the flight crew during crash sequences.

Working under the U.S. Army/NASA Advanced Rotorcraft Transmission (ART) program, **McDonnell Douglas Helicopter Systems** and **Lucas Western Gear** have designed a 5,000-horsepower transmission for the Apache that is almost twice as powerful as the current system but weighs nearly half as much as it would if it were designed using existing technology. The technology is applicable to virtually any conventional rotorcraft.

The winner of the "Favorite Ad" Contest conducted in the December 1993 issue of ARMY AVIATION MAGAZINE as voted by you the readers was **Sikorsky Aircraft Division, UTC** with their ad saluting the veterans of Operations DESERT STORM.

VOLUME 43 ARMY AVIATION NUMBER 7

FEATURE ARTICLES

SPECIAL FOCUS: 160th SOAR (A)

SPECIAL FOCUS: Night Vision

DEPARTMENTS

FRONT COVER

Paid advertisement: *Manufactured by Sikorsky Aircraft, the MH-60K Special Operations Aircraft is an all-weather, self deployable helicopter capable of performing clandestine, deep penetration missions into high threat environments. Caption provided by Sikorsky Aircraft, Division of UTC.*

ARMY AVIATION AND THE CHANGING THREAT

Excerpted from an address delivered 23 April 1994 at the AAAA Annual Convention Banquet, St. Louis, MO.

As we mark the 11th year of the Aviation Branch, and the 52nd year since Army Aviation was formed, it is important to realize that where we are now is a direct result of the blood, sweat, and tears of those who came before us.

"There is a possibility we could create ... the Maginot Line of the 21st Century..."

These pioneers took an idea that was little understood and less appreciated and turned it into the truly magnificent Army Aviation force we have today. These visionaries saw that Army Aviation could revolutionize the way we fight our wars. They enabled us to break contact with the ground and truly fight in three dimensions at breathtaking speeds and unparalleled agility.

But what about the future? What contributions will we make to establish conditions so Army Aviation is on a sound footing in the 21st Century?

My message is about the future. It is a simple message.

We are at a critical period in the development of the security posture of the United States; we are in the midst of a period of dynamic, unprecedented change in the world, some of which is not in the best interests of U.S. national security.

The second point of my message is that you, the members of the Aviation Branch, will again have to be visionary as we adapt our force to this emerging world order.

I firmly believe that we are in the midst of a significant change in at least two areas that directly affect us as we carry out our duty to protect and defend our great nation.

First, we live in an age of hyper

We Do What It Takes!

Whether that's quick-turnaround maintenance for flight trainer aircraft, ingenious modifications for improved aircraft performance, or battle-area support for special missions. We're there when needed for:

- Maintenance/Modification
- System Integration
- Equipment Repair
- Structural Upgrades
- Mission Enhancement
- Logistical Support

SERV-AIR, INC.

An E-SYSTEMS Company

Serv-Air, Inc. • P.O. Box 6669
Greenville, Texas 75403-6669
(903) 454-2000

Recipient of Department of the Army, U.S. Special Operations Command, and many other Command-level awards for outstanding support during Operation Desert Shield/Desert Storm.

technological change. The rapid pace of technology is redefining how we live our lives and how we fight wars. The information age is upon us. We don't yet know the implications of this rapid change. One direction is to provide us with the capabilities to strike quicker, further, and with more precision than ever before. This holds out the promise of lightning victories with few casualties, as exemplified by DESERT STORM.

But is this really true? It is "if" we apply technology to war as we currently know and understand it. But there is a possibility we could create a military that is not applicable to some forms of future warfare; a war machine totally inappropriate to some of our future threats; a military that could be the Maginot Line of the 21st Century because the threats to America's security are changing.

There are changes occurring in the world that may change the very nature of conflict. Some of these changes are literally occurring today — before our eyes.

Some examples are:

- The linkage between narco-trafficking, crime, and revolutionaries we see in some Latin American states and the former Soviet Union.
- The unfolding events in Somalia, where human suffering, an international relief effort, clan fighting, and crime have become intertwined.
- The Intifada in the occupied territories in Israel, where stone-throwing Palestinian youths accomplished what Arab armies could not bring about in four major wars and 45 years of struggle — they brought Israel and the PLO to the peace table and gained concessions.
- The tribal warfare in Rwanda, where perhaps one hundred thousand people have died for little more than being in the wrong place at the wrong time.
- The rise of crime in our own country; slums in major U.S. cities where even basic government services are not available and shadow governments reign.

These changes in the international order (and to some extent in our own country) seem to presage a move in a direction opposite to that promised by the high tech solutions many espouse.

Through the lens of Western ideals, we see the evolution of nation-states dedicated to the peaceful solution of common problems and the continued progress of mankind towards a more understanding world order — a kinder, gentler world. The Western view is that we are headed towards a new world order characterized by reasonable men debating the forms of progress best suited to a world concerned with preserving the ecosystem and guaranteeing the rights of minorities and the disadvantaged.

However, observers see indications that exactly the opposite may be

Starring
3-5 Micron
512 X 512 Staring
Array Imager

Versatron Presents

A TALE OF FOUR SENSORS

Co-Starring
Color TV w/ 10x Zoom
900mm Spotter Scope
Laser Range Finder

Skyball® Quartet

Coming soon to a location near you

Sept. 6-11 Farnborough Air Show
(American Pavillion)

Jan. 29-31, 1995
HELI-EXPO
(Las Vegas, NV)

June 1995 Paris Air Show
(Paris France)

Versatron corporation
Tel: 707-433-3000
Fax: 707-433-7110

911 Hope Street•8 Riverbend Center•P.O. Box 4430•Stamford, CT 06907-0430•Tel 203-425-8900•Fax 203-425-8910

occurring. The gist of much of that commentary is focused on a world that, instead of progressing, appears to be disintegrating. It is a world that may become divided into two rival factions. The first is the high tech, relatively well off world of the West and the vibrant nations of the Pacific Rim that are part of the economic miracle of that region.

The other faction is that part of the world where borders, the peaceful resolution of problems, and Western ideas of progress, rights, duties, and responsibilities, are not only rejected, but vilified. These alternative views are fueled by radical religions, ethnic hatreds, disease, exploding populations, declining natural resources, and pervasive crime that is challenging the very foundations of nation states, and is making borders meaningless.

"These two views of the world, of the high tech road to increased prosperity and that of a world disintegrating as people revert to primitive values, are each partially true."

These two views of the world, that of the high tech road to increased prosperity and that of a world disintegrating as people revert to primitive values, are each partially true. Both coexist. We will have to live in each and deal with both worlds.

This will be a daunting task. Some have called the threat posed by this new environment 4th Generation Warfare — warfare where the enemies are not other nations, but drug cartels, crime syndicates, ideological revolutionaries, religious radicals, and other trans-national groups.

These are enemies that may not have an identifiable center of gravity as we define it; they may not have an army, and almost certainly don't have the kind of infrastructure that our precision weapons and stylized tactics are ideally suited for. It is warfare for which our conventional military capabilities and our high tech weapons may well not be applicable.

Trying to come to grips with this will be especially difficult, as many in the military establishment today are still trying to understand and practice 3d Generation, or maneuver warfare, as exemplified by the Blitzkrieg and the Gulf. We must break out of our Cold War mentality and look for innovative new solutions. This will not be easy.

We are, and must remain, a high tech force. This is nowhere more apparent that in Army Aviation. Technology can do great things for us. It can save lives and let us do a better job, faster, cheaper, and more effec-

tively. The Army Aviation modernization and restructuring program will do this. Your road map to the future has placed you in the forefront of the technological revolution. You will be even more important to an Army team that will depend on mobile, versatile, lethal, deployable expeditionary forces. When we become fully digitized, the impact of aviation will be even more dramatic than it is now.

But your challenge will be to deal not only with other high tech opponents, but also with the other world, where technology is overshadowed by problems for which there are no high tech solutions.

This is a world where human passions have created hatreds not amenable to rational solutions, and where a reliance on high tech will be of no avail, because the roots of these problems are in the minds and hearts of men.

We will have to be able to take our high tech force and adapt it to a primitive, foreign, and hostile world, if required to in defense of our Nation's interests.

We will have to reconcile these two views of the world and of warfare. We in the military community pride ourselves on being able to apply innovation, initiative, and forward thinking to seemingly intractable problems. The need for this kind of approach is nowhere more evident today than in the field of national security. We face a world with immense challenges, but a world developing phenomenal new technologies that may assist those who have the foresight and wisdom to recognize where to apply these innovations to develop heretofore unrecognized solutions to seemingly impossible problems.

From my perspective, that of almost 32 years of service, three wars, and a close and admiring relationship with Army Aviation, I would like to offer you some challenges for the future.

First, Army Aviation will have to survive in, adapt to, and support military operations in both worlds, the high tech and the low tech, primitive environment of much of the world.

The fight in Mogadishu on 3 October is a good example. We used the best trained aviators and the best helicopters in the world in what was probably the lowest tech area of the world. Yet, with a simple weapon — the RPG-7 — clan fighting criminals shot down two Black Hawks, and severely damaged two others.

The challenge of adapting a high tech force to a low tech environment will not be easy — but then your challenges have never been easy. I know that you will rise to this challenge as you have to every other one this nation has presented you with. The panache and enthusiasm with which you have overcome obstacles in the past will stand you

in good stead when you find yourselves flying in this challenging world in the future.

This challenging environment will require even higher levels of performance than you have achieved before. You will have to go even further than you have in the past in integrating aviation, not just with the ground forces of the Army, but with the forces of all the services, and even our allies.

The kinds of warfare that we see in the future, whether of the high- or low tech variety, will almost certainly be multinational operations. The value of Army Aviation will only be realized when it is fully integrated into the joint and multinational arena. You have done a great job so far, but you must get even better.

Army Aviation will have to improve its capability to conduct surgical operations, and even non lethal operations. Many 4th Generation Warfare threats we will face will put a premium on the extremely precise application of power to elusive and often almost indiscernible targets. In some cases, the only way to achieve our goals with acceptable collateral damage will be to use non-lethal technology. You will play a large role in this because aviation can provide the mobility required to take advantage of the perishable intelligence we need to defeat small, covert targets hiding among the population and which can move quickly at the first sign of trouble.

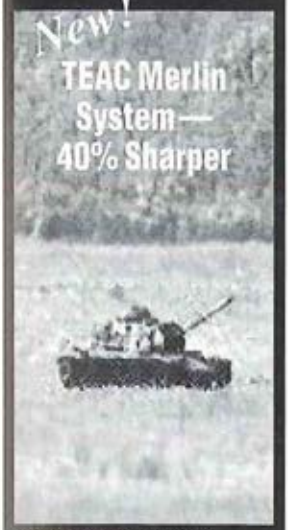
Your already exceptional capabilities to work at night will have to become even better. We own the night; we proved that, but we must expand to the entire night — all light conditions and all weather conditions, to include adverse weather.

Whether it is the high tech threat of the Gulf, the mid-level threat of Bosnia, or the low tech threat of Somalia, Army Aviation will increasingly be called upon to operate in all conditions, because only a relentlessly pressed operation will run to ground the clever and constantly adapting foes that we will face. We must become a truly all weather force.

However, we will not be able to meet these challenges unless we take advantage of all of the force multipliers in the community. Two of the most important are Reserve component forces and industry.

The superb forces in our Reserve Components are critical if Army Aviation is going to meet all of the demands of a chaotic world. We in the active force can't do it alone. We need new ways to get the RC into the fight, and this includes operations other than war and peacetime missions. We must get out of the mobilization paradigm and find better ways to use our volunteers, much the way the Air Guard and Air Force Reserve do. And,

875-line recorded picture



525-line scan-converted picture increases horizontal resolution dramatically and improves image definition during playback.

Now Apaches Can See What They've Been Missing!

The TADS/PNVS system is critical to the Apache's mission. And now TEAC and Merlin have teamed to produce a new scan conversion video system to provide a 40% improvement in image quality and resolution over the existing Apache video system. Plus, the system's Hi-8mm videotape format delivers twice the recording time (2 hours) using standard inexpensive videocassettes and standard commercial video playback equipment. So debriefs don't require special equipment — even for network news use.

But the real payoff is in combat. Where a 40% improvement in image resolution and a square pixel format can make the difference in finding, identifying, and acquiring your target. Yet TEAC's new system costs the same as the present Apache video recorder and is a drop-in, mil-qualified replacement. And, as with the other airborne video recorders that we manufacture for U.S. military aircraft, TEAC guarantees full product support for the life of your program.

Already demonstrated in Apache flight testing, TEAC and Merlin are ready to help the Apaches see what they've been missing!

TEAC Merlin

TEAC AMERICA
INDUSTRIAL VIDEO PRODUCTS DIVISION
7733 Telegraph Road, Montebello, CA 90640
(213) 726-0303 Ext. 718 or 754 • Fax: (213) 727-7621

hopefully, we will eventually get a limited call up authority in DoD that will provide us with even greater flexibility.

To our industry partners out there — we recognize that none of what we do would be possible without your efforts. You have, over the years, provided this country with the finest helicopters and associated equipment in the world. Our forces are the envy of our allies and opponents because of your efforts. Our need for your innovative solutions to technical problems, and our need for you to deliver value on the dollar are even greater in a world of fiscal constraints. We all know that we are being asked to do more with less. We in the military are working our tails off trying to find ways to achieve this, we know our staunch supporters in industry will continue to do their part to see that America's military men and women are provided with high tech, reliable, and affordable equipment.

And it's a team effort. We all know our best results are when we get this military and civilian contractor team working closely together to field combat systems that do the job, like the MH-60K and the MH-47E.

Finally, I challenge you to use the 160th Special Operations Aviation Regiment as a resource. Because we have fenced them from many of the distractors that affect other units, and because we have invested considerable resources, to include money, into the unit, they have been able to work at the outer edges of the envelope. As a result they have learned some hard lessons about training, night and adverse weather flying, high tech modifications, and, (I hesitate to say this for fear that it will be taken wrong) the value of a "can do" attitude. I truly love our Night Stalkers — they don't quit — ever!

I think the entire aviation community has benefited from what the 160th has to offer — and I guarantee that they'll be happy to continue sharing everything we know. I keep a short leash on COL Doug Brown and his band of merry men — I have to — and if you get any guff from them, just give me a call.

I take a back seat to no one in my respect and admiration for Army Aviation and Army Aviators. And I'm including everyone here, active and reserve, the pilots, the crew chiefs, the mechanics, the contractors, and everyone else who contributes to this great group of American heroes. In every conflict and rock fight I have been in, I have called upon Army Aviation to support, and they have responded with a courage, determination, and skill that has made you respected by friends and enemies alike.

We have a unique capability and totally unique bonding among our ground forces (our operators) and

our aviation units. The mutual trust, respect and camaraderie are duplicated nowhere else in this world.

I have asked you to do things that would cause lesser warriors to quake and quit; I have seen you tested to the max in combat and in demanding training.

I have placed my life and the lives of my people in your hands on countless operations, and I have never doubted that you would come through. I knew that my life, and the lives of the men and women I was responsible for, was in the hands of the best.

That kind of respect and trust comes only from a sterling record of professionalism. Army Aviation has achieved that by being there whenever needed and doing whatever was asked, and then some.

I'm proud of all of you. You each have made a tremendous contribution to our freedom and to the freedom and safety of others. I am proud to be serving our country with you. I know that you are ready and willing to do whatever your country may ask of you in the future. God bless each of you and your families — and our Great Republic!!

★★

GEN Downing is the Commander-in-Chief, U.S. Special Operations Command (USSOCOM), MacDill AFB, FL.

BY MG JOHN R. D'ARAUJO, JR.

INTEGRATING ARMY AVIATION

The Director of the ARNG Reviews the Importance of Active & Reserve Component Aviation.

Having spent a good deal of time these past few months devoted to aviation force structure issues, between the Reserve Components Leaders Meetings (leading to the "Off-Site" agreement), Congressional hearings, and the POM process, I am encouraged by the course of Army Aviation for modernization, restructuring, and electronic integration of the battlefield. MG John D. Robinson, Ret., Aviation Branch Chief and CG, U.S. Army Aviation Center (USAAVNC) and Ft. Rucker, AL, and his staff at USAAVNC deserve great credit for the arduous task of implementing the Aviation Restructure Initiative (ARI). ARI simultaneously downsizes and modernizes the Army Aviation force.

USAAVNC also deserves credit for taking the lead in developing leap-ahead technologies which will change doctrine and revolutionize the way all branches conduct warfare. ARI and digitization of the battlefield are essential to the future of all the warfighters in America's Army. Equally important to our future is the integration of Guard and Reserve Aviation into the warfight.

I agree with MG Robinson's remarks in the March-April issue of ARMY AVIATION that, "We have a long way to go in restructuring the force and bringing a Total Force concept into reality." Integration of Army National Guard Aviation into the warfight is no longer optional, as resources to maintain force struc-

ture become more and more limited. Army Aviation cannot realize its goals of modernization and implementation of leap-ahead technology, nor can Army Aviation meet the requirements of our warfighting CinCs, without an integrated effort.

We have the opportunity in the current Total Army Analysis to restructure Army Aviation so as to integrate effectively Active, Guard, and Reserve assets. When GEN Wayne A. Downing, Commander-in-Chief, U.S. Special Operations Command (USSOCOM), addressed the Annual AAAA Convention in St. Louis, MO, he challenged Army Aviation to restructure to look more like the Air Force in its use of the Guard and Reserve.

"Army Aviation cannot realize its goals of modernization and implementation of leap-ahead technology, nor can Army Aviation meet the requirements of our warfighting CinCs, without an integrated effort."

This means greater integration of Guard and Active elements — day-to-day training and operational employment — where a certified deployable unit is a certified deployable unit, regardless of component. This seamless approach has been used effectively by the Air Force for many years.

GEN Downing also challenged Army Aviation to re-focus on the broad range of requirements that span the operational continuum. "Army Aviation will have to survive in, adapt to, and support military operations in both worlds, the high-tech and the low-tech, primitive environment of much of the world." His remarks raise a very significant issue: we certainly know how to dominate in the high-tech world, but what is the best way to use our modernized systems in the low-tech world?

At the same AAAA Convention, GEN David M. Maddox, CinC USAREUR, called for Army Aviation to become more flexible. GEN Maddox has a requirement for simple, modernized systems that can be deployed and supported in small numbers throughout Eastern Europe.

The issue again involves adapting high-tech equipment to the low-tech world.

The answer to many of the challenges posed by Generals Downing, Maddox, and others is to design the aviation force to create a technologically balanced, fully modernized, fully integrated force with the resources to fight across the operational continuum. GEN Gordon R. Sullivan, Army Chief of Staff, referred to this concept as a "seamless Army" in his recent ad-

(INTEGRATING — cont. on p. 53)

THE FINAL FLIGHT

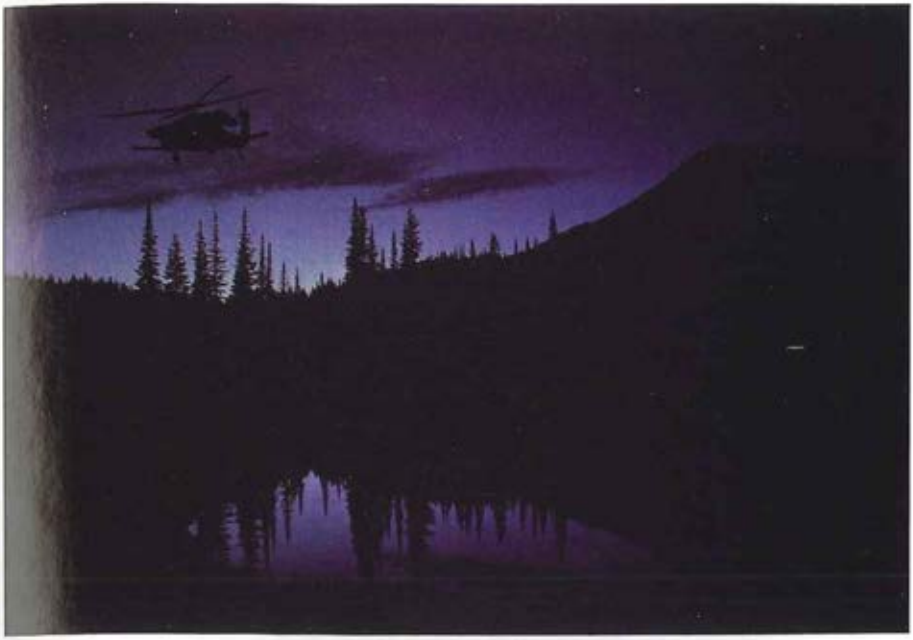
The Branch Chief reviews future challenges on the eve of his retirement.

I suspect few Army Aviators are eager to take their final flight in uniform; I am no exception. For the past 33 years, the Army has been a personal love affair for me with the profession of soldiering and the excitement of harnessing powered flight in the third dimension of the ground regime. It is easy to be mostly reflective at this point, but there is an obligation to show some understanding of the future. Therefore, I shall attempt to do both in this article, but with merciful brevity.

There are many with a thumbprint on the Branch during these incredible times. The work by those done before us provided a strong foundation for the future. Today, our ranks are blessed with incredible Americans. They are competent, their eyes are clear, there are smiles on their faces, and they are focused on the future. There is little doubt we can move with creativity and boldness toward the 21st Century and give the U.S. Army full access to the power that comes from air maneuver in the third dimension of the ground regime.

What a privilege it has been to serve at this time in history. Unthinkable changes have propelled civilization from the Industrial Age into the Information Age. Complex ideological, political, and economic interactions have raised questions on the value of military power as a means of achieving national goals. The post-Cold War era has changed the face of the enemy and challenged our national investment in defense.

Unprecedented operational mis-



No moon. No horizon. No compromises.

He's a Special Ops pilot. A "Night Stalker." And when he talks about his job, he looks you straight in the eye.

"Our job as 'Stalkers' is simple. To get in. To get out. To complete our mission. And when we are done, no one even knows we were there.

"Just give me a grid coordinate. I'll get you there. No compromises. At night. Low level. Over any terrain. In adverse weather. How do we do it? With the MH60K."

The Sikorsky MH60K was specifically designed for Special Ops. A mission where there can be no shortcuts. No compromises. Every rotor and gear, every seam and rivet, every drop of paint, is subject to the closest scrutiny. The design is of the highest quality. The materials are the finest they can be. The process by which they are assembled is the most efficient possible. This constant attention to detail is inspired by an unwavering focus on a clear duty: to ensure that the mission is accomplished. No ... matter ... what.

"It can do more than we ask it to," says the pilot, his eyes boring into you. "How do you put a value on always being able to say, 'we can get it done'?"

UNITED TECHNOLOGIES
SIKORSKY AIRCRAFT

sions ranging from major regional contingencies to operations other than war will be demanded of all components of the modern Army. Excellence and a winning spirit will be required in civil disturbance control, disaster relief, humanitarian and peacekeeping operations. Amidst all these demands, there can be no substitute for sound operational concepts, executable doctrine, efficient organizations, and trained forces.

The notion of full-dimensioned operations is propelling the Army into uncharted territory. Information technology and computer processing will give many commanders near ground truth in most operational circumstances. Battlefield knowledge will greatly increase the pace of operations; lethal, precision fires will make future battlefields very dangerous.

While technology promises much in this era, there are circumstances where the enemy must be fought in urban areas and routed from covered positions. Indeed, the future most likely will show a blend of high technology warfare along with the need for great competency in basic warfighting skills. As it has been in the past, soldiers, not their machines, must carry the victory.

The newest edition of FM 100-5 gives important insight into future warfighting. The focus is on force projection, operations other than war, overwhelming combat power, versatility, simultaneous operations, and joint, combined, and interagency dimensions of warfare. Concepts long associated with aviation such as "fighting in the spirit of cavalry" and operational parameters like agility, initiative, and flexibility, must characterize the fighting capability of the entire Army of the next century.

As the third dimension centerpiece of the land force, Army Aviation will be called upon for much in reconnaissance, attack, assault, and special operations complemented with medium-lift helicopters, electronic mission aircraft, and MEDEVAC helicopters. Army Aviation is already well acquainted with these operational parameters and should not find it difficult to execute the Army's emerging operational concepts across the full range of military operations.

The value of operations in the third dimension cannot be denied. The physical and intellectual dimensions of battlespace urgently demand intuitive and versatile leaders supported by agile battle staffs and well-trained soldiers. Aviation tactics, techniques, and procedures need continual adjustment to gain decisive advantage against increasingly sophisticated adversaries. The training base will be challenged to shift from brute-force-thinking to harness the power of the human

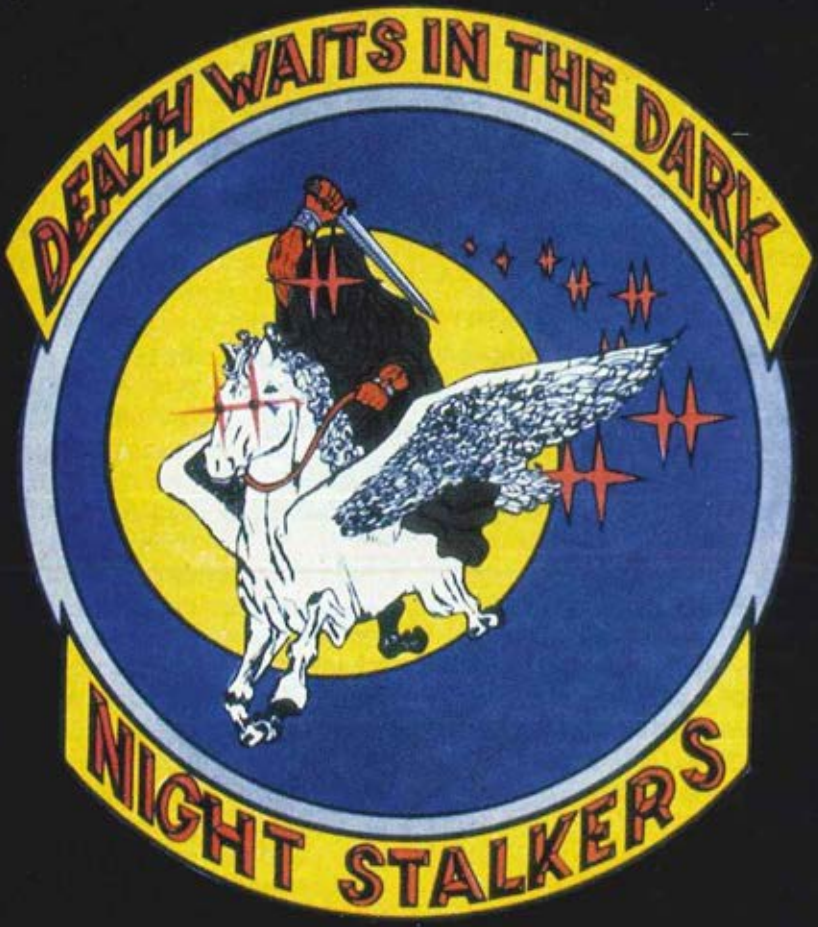
brain. Mobility, agility, simultaneity of effort, lethality, increased battle tempo, and space age logistics promise to dominate the Army's restructuring initiatives and investment decisions. We have a way to go in sorting the details of airspace management and search and rescue issues. Recent initiatives in A^2C^2 and joint CSAR promise to get us through the maze in the near term. While the operational continuum demands readiness for a wide range of employment, warfighting must be our focus.

The revolutionary Aviation Restructure Initiative (ARI) makes Aviation relevant and affordable in the 21st Century. ARI is a seminal effort that divests old aircraft and reshapes aviation forces to eliminate long-standing Army of Excellence (AOE) deficiencies. Many units have already adopted ARI's efficient homogenous and modular unit building block structure. Aviation headquarters are being restructured with the requisite personnel for operations and units will be manned at 100% of MARC. ARI is a hallmark initiative of Army Aviation that other branches have begun to adopt.

The warrior ethic is born in the training base and nurtured in operational units. Training is the glue that joins individuals to units and forges the combined arms team. If we are to have a 21st Century schoolhouse, the training base must be adequately funded now to provide quality soldiers in advanced systems; this cannot be done on-the-cheap using unit transitions and on-the-job training. Failure to properly resource the training base can be likened to eating the seed corn and salting the fields; there can be no harvest of a trained and ready force without a major commitment of resources in the training base.

"Failure to properly resource the training base can be likened to eating the seed corn and salting the field..."

The Aviation Officer Basic Course must continue to include a combined arms warfighting phase at the conclusion of flight training. We would do well to increase exchange programs among the other combat arms schools at the advance course level. The 15B90 designation will give selected aviators entry into the logistics functional area solving a long-standing problem for aviation maintenance officer career progression. Logistics-oriented aviators must continue to attend the Combined Logistics Officer Advance Course at Ft. Lee. The Warrant Officer Career Center is a **(FINAL FLIGHT — cont. p. 85)**


DEATH WAITS IN THE DARK
NIGHT STALKERS

BY COL BRYAN D. BROWN

THE MYTHS OF SPECIAL OPERATIONS AVIATION

MYTH (mith) *n.* **1.** A real or fictional story, recurring theme, or character type that appeals to the consciousness of a people by embodying its cultural ideal or by giving expression to deep, commonly felt emotions. **2.** A fiction or half-truth, esp one that forms part of the ideology of a society. **3.** A fictitious story, person or thing.

The Commander of the 160th SOAR(A) dispels the many falsehoods surrounding the unit.

The Army's only Special Operations Aviation Regiment has matured from its earlier vestige as a small ad hoc special operations unit more familiarly known as Task Force 160. Today, we have evolved into a large, robust, multifaceted aviation unit, capable of supporting the entire spectrum of military operations required of Special Operations Forces (SOF) worldwide.

Many think they know all about the 160th. This may be attributed to a variety of reasons; our growth, our participation in numerous classified and unclassified real-world missions, recent publicity in open source literature, and our proactive worldwide recruiting efforts. Despite this unparalleled profile, many people do not really know the facts and continue to promulgate several pervasive myths surrounding our unique organization.

Myth #1: The 160th "rips off" other units' personnel. It seems that everyone knows someone who got ripped off — but in reality, it rarely happens. Frequently when it does, we often find out there was manipulation on the part of the individual interested in joining the unit. Have we ever had an individual assigned to us with minimal notice? Yes, but only under extreme circumstances, such as Company Command.

This myth usually arises as a result of the ability of an individual to assess with us at any time. Nevertheless, our assignment policy in the Regiment has not changed. We will request orders assigning an indivi-

dual to the 160th, following successful assessment, commensurate only with a normal PCS. PERSCOM closely manages, supports, and supervises every assignment. The relationship with PERSCOM has never been better. While the 160th doesn't win every battle, PERSCOM goes to great lengths to keep us well manned with qualified people. Assignment dates are flexible, and often are negotiated between Commanders in the field and the 160th Chain of Command. With only four Green Platoon training cycles per year it is critical for an individual to arrive at the Special Operations Training Company in time to start this essential training.

Myth #2: The 160th pilots are Prima Donnas. False. They are tough, dedicated volunteers. They have participated in every conflict since the unit's inception and they won't quit. When one considers that they are TDY a considerable amount, that they fly the toughest missions conceived, that they operate under a "no-fail" criteria, that they have all negotiated SERE Level C (High Risk), that they perform under extreme pressure in training as well as real world missions and that they are constantly on alert, it is difficult to find any prima donnas in this crowd.

Are they proud that they contribute to the National Security posture of the United States? Most assuredly. Are they the best at what they do? Unquestionably.

Myth #3: You have to be single to be a Night Stalker. Not true! The demographic makeup of the unit is no different than any conventional aviation unit. The families we have are as tough as our great soldiers. The key to success, is that we take care of it at the unit level. It starts with a superb family support group structure, blending the cooperative efforts of officer and enlisted families alike. We suffer through hardships together, bonded by a common thread; to keep the unit strong — to never fail at what we do. It extends to the support rendered by a special staff unprecedented at the Brigade level: Chaplains, Flight Surgeons, Psychologist and Lawyer.

Myth #4: You are always TDY. Always? No, but Night Stalkers are gone a considerable period of time each year. The TDY undertaken in the 160th is in smaller increments than would be expected. One to two weeks at a time. Only under certain exceptional missions (for example Operations DESERT STORM, PRIME CHANCE) does the time away from family stretch for an extended period.

In its totality, the time away from home is not all that much more than our friends next door in the 101st Aviation Brigade. On the average it approximates 160 days per year.

Myth #5: Extended tours at the 160th hurt promotion potential. The basic premise of the Army's personnel management system is that performance is the primary yardstick of measurement. It remains as valid for Special Operations soldiers who serve more than three years with the 160th as with their contemporaries.

Promotion and school selection for our Warrant Officers and Enlisted soldiers continues to remain above the DA selection rate. Our commissioned officers are, with only a rare exception, selected for CGSC and Battalion Command. The bottom line remains: Noteworthy performance in tough, demanding, and challenging assignments results in successful professional progression. Just like the rest of Army Aviation.

"Promotion and school selection for our Warrant Officers and Enlisted soldiers continues to remain above the DA selection rate."

Myth #6: The 160th has all the money in the world. The truth remains that we are well resourced, but it is not a bottomless pit. Resources must be very carefully managed. The Regiment builds its own Command Budget that fits into the POM. We compete it all the way to USSOCOM to acquire MFP-11 dollars. It is clearly understood at every level of the command that well trained, safe aviators that can perform to standard on a moment's notice, only comes from tough realistic training; and that requires resources.

The conduct of very realistic training, with highly sophisticated aircraft is expensive. Mission preparedness costs money. The payback is substantial: BE READY — DON'T FAIL.

Myth #7: The 160th pilots are Cowboys. Risk Management is the rule at the 160th. The pilots, crewmembers and every soldier in the unit knows it. Operating in dangerous and difficult environments is not an excuse for poor risk assessment and controls that provide risk management. Supervision is a requirement.

The same rules apply to our aircrews as to all Army aircrews. Waivers are not proliferated throughout the organization nor are they capriciously derived at a unit commander's impulse.

All operations are mission oriented. The use of risk management assures success. The envelope may be stretched, but never exceeded. Safety is the primary consideration

in whatever we do. Those with a "Cowboy" mentality are weeded out in the assessment process. Those that make it through won't stay long. Safety is inculcated in every Night Stalker from the day they walk into our "Green Platoon" and remains prevalent throughout their tenure in the unit.

Well, I'm sure there are more myths out there but this is just a sample. The truth is that the Night Stalkers enjoy tremendous support throughout Army aviation and we are greatly indebted.

The values of the 160th simply reflects the larger Army. Maybe some of the myths of the Task Force are clearer now but one thing never changes — selfless uncompromising service to our nation. Unquestioned sacrifice.

The 160th, like our Army, has one enduring purpose — to fight and win the Nation's wars — it is this singular purpose that has guided us through our brief but exciting history. Night Stalkers love what they do. Their families respect, admire, and support what they do. We have no choice; we must be strong, trained and ready. Ours is a sacred trust.

America's Army will not quit — nor will we.

NIGHT STALKERS DON'T QUIT!

★★

COL Brown is the Commander, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

RECRUITMENT AND SELECTION OF SOA PERSONNEL

How the Night Stalkers are identified and selected for the world of Special Operations Aviation.

The most important resource in Special Operations Aviation (SOA) is people. Who then comprises this creature known as a Night Stalker? A Night Stalker is a soldier who possesses a strong desire to work with highly dedicated and professional soldiers, one who can work independently, one who demonstrates motivation and ability to operate under stress, and a professional who will successfully complete any mission. These are the warriors sought out by the 160th Special Operations Aviation Regiment (Airborne).

Due to the increased scope of SOA support throughout the spectrum of conflict, the 160th SOAR(A) has been through some dramatic changes. The evolution of SOA in general, and the 160th in particular, resulted in an expansion of the recruiting effort and the need to devote full attention to this process. A separate office was created to ensure the best-qualified personnel are assigned to the unit.

The Special Operations Aviation Training Company (SOATC) was created in July 1988 to recruit, assess and train the very best in Army Aviation. The recruiting section consists of a recruiting officer (a former line pilot from one of the battalions) and four senior NCO recruiters from the U.S. Army Recruiting Command.

Upon approval from the Army Chief of Staff, the 160th SOAR(A) began recruiting worldwide to seek and assign the best-qualified aviators and support soldiers available on active duty. These individuals provide the

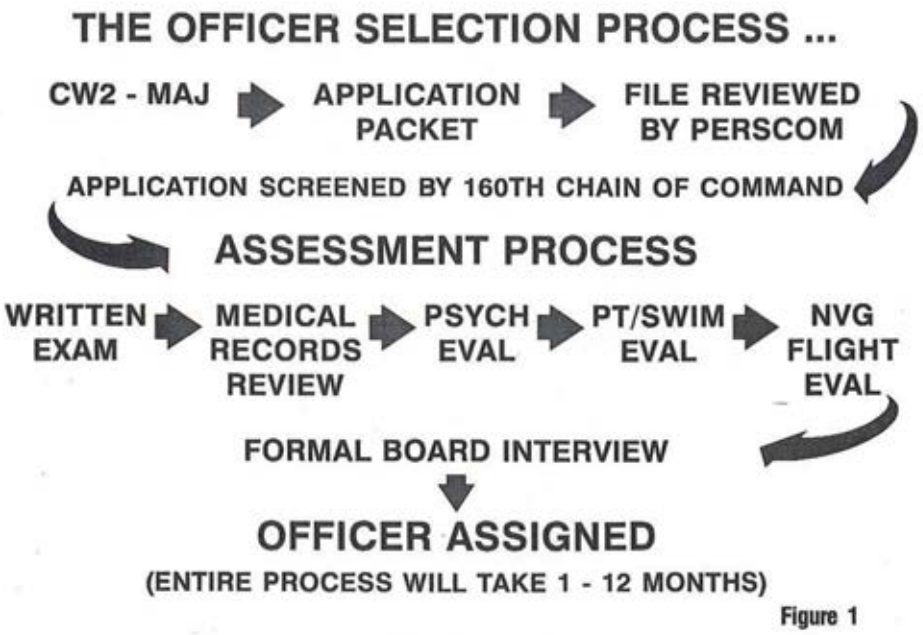


Figure 1

unit with highly skilled aircrews, as well as maintenance, logistical and technical support soldiers uniquely qualified to perform demanding special operations missions.

The Special Management Division (SMD), located at PERSCOM, was formed to assist the unit in managing and maintaining its ranks at 100% strength. Additionally, a formal Memorandum of Understanding (MOU) was generated between the U.S. Army Special Operations Command and PERSCOM. The MOU helps the unit identify, recruit, assess and assign soldiers as dictated by mission and operational security requirements, and recognizes the need to protect soldiers' careers while they are assigned to sensitive, nontraditional duties.

The Recruiting Process. The 160th recruiting team visits approximately 15 stateside and two overseas locations annually to conduct unclassified SOA information and recruiting briefings. Units identified for deactivation are contacted and visited by a recruiting team. Quarterly visits are made to various TRADOC schools to find soldiers who may be interested in joining the 160th now or later in their career. The briefing is also used by many commanders as an officer and enlisted professional development tool.

The information and recruiting briefing consists of a 35mm slide presentation followed by a video and provides pertinent information

about the mission, history, equipment, personnel assessment and assignment, and initial training received. The entire presentation lasts approximately one hour. Following the briefing, interested personnel are encouraged to stay for a one-on-one question-and-answer period conducted by the recruiters and subject matter experts, who accompany the recruiting team.

Officer Qualifications. The first and most important requirement is that all officers are volunteers. As an aviator, a minimum of 1,000 hours total time and 100 Night Vision Goggle (NVG) time are required; however, this may be waived by the chain of command on a case-by-case basis. This flight time should be primarily from tactical type environments. Additionally, officers must possess a SECRET or higher clearance and must be in excellent physical condition. It is preferred that officers be in a career status and possess a civilian education level appropriate for their time in service, prior to assignment to the 160th.

Officer Selection Process (Figure 1). Officers desiring assignment in SOA may obtain an application in one of several ways. They may call or write the recruiting office to request an application packet or attend one of the many briefings given throughout the Army. The officer application requires that several supporting documents be forwarded with the completed application.

Once received, the officer application packet begins a very detailed screening process. Character reference questionnaires provided by the applicant are sent out and a manner of performance (MOP) request is sent to SMD. This initiates a thorough file evaluation at PERSCOM to determine the officer's current assignment status and potential for assignment to the 160th. Upon receipt of the MOP and the completed reference questionnaires, the application packet is reviewed by the battalion and regimental chain of command. If assessment is warranted, the officer is contacted and an assessment date coordinated.

Officer Assessment. Assessments are conducted for officers only and occur monthly. The assessment process takes two to five days and includes a General Aviation Knowledge Test, Standard Army Physical Fitness Test, Navy Class II Swim Test, psychological evaluations and a hands-on NVG navigation flight evaluation.

The final phase is a formal military board. Chaired by the regimental commander or his deputy, the board considers each individual under the whole-man concept and makes the final decision on whether or not to accept the officer. Each assessee is debriefed by the president of the board and appraised of the board's decision.

Military Occupational Specialties Required by the 160th SOAR(A)

25Q	44B	67T	68J	71M	88N
29E	44E	67U	68K	73C	91B
29S	52C	67V	68L	73D	92A
29W	52D	67Y	68N	73Z	92Y
31C	54B	68B	68P	74F	93P
31U	55B	68D	68Q	75B	96B
31Z	63B	68F	68R	75Z	96D
39D	63J	68G	71D	77F	97B
43E	63S	68H	71L	88M	98J

Figure 2

Officer Assignment. Following successful assessment, the responsibility for assignment shifts to the regimental S-1 and coordination is made with the officer's current unit, SMD, specific branch managers at PERSCOM and the SOATC Training Section.

Enlisted Assignment Process. Enlisted soldiers are assigned directly to the 160th. They may volunteer for this assignment and must possess one of the military occupational specialties (MOSs) shown in Figure 2. They must be in excellent physical condition and be eligible for a SECRET or higher clearance. Soldiers who possess one of the appropriate MOSs and desire assignment to the unit should contact the SOATC recruiting team to request an enlisted application packet.

The enlisted application process requires a completed application and a DA Form 4187 signed by the soldier's commander. This paperwork is forwarded to the 160th recruiting officer with a current copy of DA Form 2 and 2-1, a current and signed Army Physical Fitness Test card, and a copy of the latest Enlisted Evaluation Report (if applicable). The application packet is reviewed by the chain of command. If assignment is recommended, coordination is then made with SMD to initiate reassignment.

For more information contact the Recruiting Section, DSN 35-4384/5689—COMM 502-798-4384/5689.

★★

CW3 Witter is the Recruiting Officer, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

BY CW4 TERRY P. SAHLIN
and SSG ERIC L. THOMPSON

SPECIAL OPERATIONS AVIATION TRAINING

Training the 160th Special Operations Aviation Regiment's next generation of Night Stalkers.

The key element of a successful mission is preparation through realistic training. The 160th Special Operations Aviation Regiment (Airborne) begins that preparation process the moment an individual becomes a member of the Regiment.

Each newly assigned soldier, regardless of rank or military occupational skill, attends a specialized training program called "Green Platoon". Originally formed in 1983, Green Platoon takes regular Army soldiers and orients them toward the required Special Operations Aviation (SOA) tasks and combines and standardizes their initial training. The results are the best-trained aircrews and support personnel in the world.

The Special Operations Aviation Training Company (SOATC) of the Regiment provides the instructors for Green Platoon (Figure 1). Chartered to produce ready-to-go-to-war aircrews and support personnel, the Green Platoon cadre take their mission seriously.

There are three levels of SOA qualification (Figure 2). Green Platoon, whose focus is on providing officers and enlisted personnel who are Basic Mission Qualified (BMQ), developed two independent Programs of Instruction (POIs) to meet those training qualifications. The first POI addresses special operation aviator requirements, while the second trains enlisted soldiers on SOA tactics and techniques.

The officer POI runs four times a year, lasts 14 weeks and consists of

SPECIAL OPERATIONS AVIATION TRAINING COMPANY (SOATC)

2 COMMISSIONED
4 WARRANT
20 ENLISTED
70 CIVILIAN

Figure 1

four phases (Figure 3). The enlisted POI, taught every 7 weeks, lasts 25 days and also consists of four phases (Figure 4). To graduate from Green Platoon, soldiers must successfully complete each phase of their respective POI.

Following inprocessing, deployable officers begin their training by attending the Survival, Evasion, Resistance and Escape (SERE) course conducted by the U.S. Army John F. Kennedy Special Warfare Center and School at Ft. Bragg, NC.

Upon graduation from the SERE course, officers return to Ft. Campbell to complete phase II of Green Platoon training. Phase II focuses on aviation refresher classes and special operations unique subject areas. Instructors place emphasis on combat weapons techniques, mission planning, operations order preparation and presentation, environmental operations, stress management and operational security (Figure 5).

With phase I and II under their belts, newly assigned officers begin Phase III navigation training. Pilots from the 160th navigate using joint operations graphics maps, heading indicators and clocks. Electronic navigation systems are only backups. Inability to complete a mission due to an electronic navigation failure is not an acceptable excuse.

Pilots must complete 20 hours of

Figure 2

basic navigation in an MH-6C during the two-week phase. Five to eight night vision goggle map navigation routes are included in Phase III.

At the completion of 18 hours of navigation, a senior instructor pilot evaluates the student on his abilities, using established tasks, conditions and standards. A pilot must meet the standards outlined in the 160th SOAR(A) ATM to progress to the fourth and final phase of their Green Platoon training.

Phase IV provides aircraft-specific flight training for officers. The six-week phase qualifies pilots in the required basic and special mission tasks. There are four independent tracks, depending on the type aircraft a pilot will initially fly — the MH-60, MH-47, MH-6, or AH-6. The number of hours for each track differs; however, each pilot will fly 45 to 75 hours during this phase.

Various aircraft-specific avionic systems are addressed in detail during the different blocks of instruction. These systems include Forward-Looking Infrared (FLIR), Collins Cockpit Management System (MH-60), Adverse Weather Cockpit System (MH-47), weather radar, TRIMBLE 3100 (GPS), Doppler, Omega, INS, TACAN and aerial-refueling probes.

Additionally, all pilots receive extensive training in high gross-weight operations, NBC opera-

OFFICER TRAINING

PHASE I - SERE, LEVEL C, HIGH RISK, 3 WEEKS

PHASE II - ACADEMICS, 3 WEEKS

PHASE III - INTENSIVE NAVIGATION, 2 WEEKS

PHASE IV - AIRCRAFT SPECIFIC, 6 WEEKS

Figure 3

tions, shipboard operations, on/off-load procedures for USAF aircraft and local flight regulations. A satisfactory end-of-course check ride advances the pilot to the BMQ status.

For enlisted soldiers, Green Platoon combines general administrative tasks and requirements to expedite the usual soldier inprocessing procedures. This administrative consolidation allows soldiers to move quickly on to the second phase.

Phase II training includes those subjects shown in Figure 5. The primary focus is close quarters countermeasures, weapons training, land navigation and evasion, the Basic Combat Lifesaving course and rigorous physical training.

Close quarters countermeasures consists of three days of hand-to-hand combat, covering both knife and empty-hand fighting. Instructors also teach basic survival skills.

Weapons training consists of eight hours of classroom instruction, followed by hands-on training with the M-9 pistol, the CAR-15 and the MP-5 sub-machine gun. During classroom instruction, students learn to handle the weapons, combat reload, holster draw and complete multiple-weapon transitions. Live-fire training consists of three days of basic marksmanship, rapid fire, multiple-target engagements, double and triple tapping, shoot-and-move techniques, off-land shooting, barricade shooting and back-to-target drills. During the three days at the range, each

ENLISTED TRAINING

PHASE I - INPROCESSING

PHASE II - ACADEMICS

PHASE III - DUNKER QUALIFICATION

PHASE IV - SERE LEVEL C

Figure 4

soldier fires approximately 1,800 9mm rounds and 900 M16 rounds.

The land navigation and evasion block of training consists of basic map reading, movement through enemy and friendly areas, terrain association and enemy-avoidance techniques. This training includes two days of classroom instruction on basic map-reading skills and is followed by field training during which the students learn pace count, dead reckoning, terrain association, and day and night tactical movements. Limited visibility movement, day and night evasion, and pinpoint exercises also test students' skills. During the pinpoint exercise, students must successfully locate six points within a six-hour period. The average course length for the pinpoint exercise is 18 kilometers.

During the Basic Combat Lifesaving Course, students learn basic lifesaving techniques to include buddy aid, self aid, CPR, and how to administer IVs. At the course's end, the students must successfully provide first-aid during a mass-casualty exercise. They must pass two written examinations and all hands-on exercises to complete Phase II.

For some enlisted soldiers, phase II marks the completion of Green Platoon. Other soldiers, selected because of duty position and deployabilty, continue with Phases III and IV of Green Platoon.

During Phase III, soldiers attend Crew Dunker training at the Naval Air Station in Jacksonville, FL. The Crew Dunker course teaches

Special Operations Subject Areas

Unit History
Basic Combat Life Saving
TDY Travel and Claims
AIDS/HIV Seminar
Wills and Powers of Attorney
Operational Security
Battlefield Ethics
Land Navigation
SERE Level C (High Risk)
Self Defense Techniques
Weapons Qualification
Environmental Operations
Aviation Life Support Equip.
Stress Management
Crew Coordination
Map Preparation
Mission Planning
Crew Dunker Training
Water Extraction
Helicopter Emergency Egress Devise (HEEDS)
Air and Ground Safety
Flight Regulations Seminar
Local Flying Area
Operations Order
Naval Operations
Deck Landings
Air Refuel
FARP Operations
Aircraft Specific Transition

Figure 5

crewmen water-survival skills in the event their aircraft should go down in water.

Soldiers attending Phase IV or the SERE course receive the same instruction as outlined for the officers of the Regiment.

Upon graduation from Green Platoon, soldiers are qualified to perform as part of a special operations aircrew. Training, however, does not end with completion of the courses conducted by Green Platoon. As with any military unit, training is conducted nonstop. The Regiment requires currency ratings on all special skills acquired.

Continuation training for pilots is extremely complicated. All mission pilots are expected to progress to fully mission qualified (FMQ) status. These FMQ pilots can perform as pilots-in-command for various missions. The ultimate goal is to attain flight lead status.

The Special Operations Aviation Company (SOAC) of the Regiment provides the expertise for continuation training. SOAC uses civilian mission instructors and flight engineers to standardize the training and add continuity to the program. The addition of a new simulator facility has made their job easier. Inside the facility, new MH-60K and MH-47E full axis simulators replicate shipboard operations, aerial refueling and a host of other real-world operations associated with each airframe.

The 160th SOAR makes successful mission execution its bedrock. As long as this is true, Green Platoon will continue to train the Regiment's soldiers, making them the best of the best.

★★

CW4 Sahlin is an MH-47E Instructor Pilot, SOATC, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

SSG Thompson is the Training NCOIC, SOATC, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

BY MAJ GREGORY M. WILLIAMITIS

SOA PERSONNEL MANAGEMENT

How the 160th cultivates quality Special Operations Aviation personnel.

The 160th Special Operations Aviation Regiment (Airborne) is a force package designed to simultaneously conduct the national mission and support two major regional contingencies. The Regiment organizes, equips, trains, resources and employs Army Aviation Special Operations Forces for worldwide deployment in support of these contingencies. To accomplish these complex tasks, the Regiment relies on uniquely qualified personnel who must adapt to a nonstandard career path.

Personnel management of this unique force requires equally unique procedures. These procedures are outlined in a memorandum of understanding between Department of the Army and the U.S. Army Special Operations Command. This memorandum allows the Regiment to interface with Personnel Command (PERSCOM), through Special Management Division (SMD), on all matters pertaining to commissioned officer, warrant officer and enlisted personnel assignments, schools and records.

The flexibility to recruit, assess and assign provided by this arrangement, as well as the ability to directly influence each soldier's career development, gives the Regiment a tremendous force multiplier. As described in the Recruiting and Selection article, personnel are usually assigned to the Regiment during normal rotation; however, exceptions do occur on a case-by-case basis. Commissioned officers and enlisted personnel are stabilized for four

years, and warrant officers are permitted to serve indefinitely at the discretion of the commander.

Once accepted for assignment, personnel are assigned based primarily on the needs of the Regiment to one of three locations: Ft. Campbell, KY; Hunter Army Airfield, GA; or Howard Air Force Base, Panama. During the assignment process, careful consideration is given to qualifications, personal desires and tour equity. All officers and selected enlisted personnel attend the Survival, Evasion, Resistance and Escape (SERE) course and the Regiment's Green Platoon training (described in the SOA Training article). During an individual's tenure, one can easily move within the Regiment to fulfill operational needs or satisfy career development requirements.

Career Management. The Regiment assigns personnel of all aviation specialties and a vast majority of support specialties. While assigned to the Regiment, every individual is accorded the opportunity to pursue his branch's required career development positions, training and education. Commissioned, warrant and noncommissioned officers can anticipate serving in leadership, technical and staff positions commensurate with their rank and experience.

The ideal profile of a company grade commissioned officer aviator entering the Regiment is a mid-grade, branch-qualified captain. In four years, that officer can expect to serve as a platoon leader, battalion staff officer, liaison officer, or regimental staff officer. The concept is to develop each officer within his area of expertise and expose him to higher level staff operations to round out his experience for increased responsibilities. Upon departure these officers are normally assigned within the special operations community and closely tracked for return to the Regiment to serve as majors after completion of the Command and General Staff College.

Field grade officers are either selected from this training base or assessed for specific skills and programmed for branch-qualifying positions. A field grade officer can expect to remain on station for up to four years and serve as a company commander, battalion staff officer or regimental staff officer. These officers routinely depart for battalion command, major command (MACOM) staff or joint staff assignments.

Warrant officer assignments encompass the entire spectrum of aviation responsibilities. The successful profile of an aviation warrant officer entering the Regiment is a career-tracked, experienced senior CW2 or junior CW3 well on his way to a bachelors degree. He will receive the most intense Spe-

cial Operations Aviation (SOA) training ever developed and be assigned to an operational company for several years.

As his experience base widens, he can expect to serve indefinitely with the Regiment in increasing positions of responsibility, ranging from ground component liaison officer to battalion or regimental staff officer. He will progress through all phases of warrant officer professional developmental schools and attend additional qualification courses as required to assume new responsibilities.

Noncommissioned officers are managed with the same orientation toward career development. All NCOs are encouraged to strive for increased responsibility throughout their four-year assignment, and they are programmed for career developmental courses as required. NCOs are permitted to request one-year extensions beyond 48 months. As with officer personnel, they are tracked for return after completing tours away from the Regiment.

All personnel assignments and transactions are initiated and tracked through the regimental adjutant. SMD directly coordinates these transactions with the responsible PERSCOM agency and provides expeditious handling of every action, from officer record brief updates to preparing records for promotion boards. Routinely these actions are completed within the same working day.

Capturing the Experience. In order to track and reassign personnel, the additional skill identifier K4 for officers, and skill qualification identifier 7 for enlisted personnel, is awarded to each individual after one year of SOA experience (excluding Green Platoon training). SMD maintains a data base and provides continuous updates to support personnel planning requirements. This data base allows PERSCOM to capitalize on existing SOA experience and reduces the cost of unnecessary or redundant qualification training.

"SMD maintains a data base and provides continuous updates to support personnel planning requirements."

Several agencies, departments and joint/MACOM headquarters which handle SOA initiatives require officers and noncommissioned officers with prior regimental experience. These positions are easily filled with the right individual using the established data

CRITICAL NON-REGIMENTAL ASSIGNMENTS

USSOCOM

- J-3 SPECIAL PROGRAMS
- J-3 REQUIREMENTS
- J-4 PLANS
- J-5 FORCE MOD
- J-8 PROGRAMS
- SORDAC
- JMA

USASOC

- G-3 TRAINING
- G-3 EXERCISE
- G-3 PLANS
- G-3 OPS

DCSFDI

USASOIC

SWC

SOCS

- PACOM
- LANTCOM
- EUCOM
- CENTCOM
- SOUTHCOM
- SOCSOUTH
- FORSCOM

SOSC

ASC SOLIC

JCS

FT RUCKER

JRTC

Figure 1

base. Some of these critical positions external to the Regiment are shown in Figure 1. Current initiatives are underway to establish additional K4 positions throughout the Special Operations Command and numerous joint staffs. The entire Department of Defense benefits from this intensified management system as former Night Stalkers rotate through these assignments, filling key leadership positions in conventional units and high-level staffs.

Top notch quality personnel who possess special operations experience have always been, and will continue to be, the key ingredient to successful mission accomplishment. Managing our most precious resource — people — and assigning them to career developing positions that enhance the Regiment's mission accomplishment is the goal of this unique personnel management system. The challenge is to identify and assign the right individuals to the proper positions and keep them competitive for increased positions of responsibility.

After all is said and done, the most sophisticated technology and realistic training areas in the world are useless without the right complement of personnel in control of the mission.

★★

MAJ Williamitis is the Regimental S-1, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

SOA MAINTENANCE: A FAMILY PERSPECTIVE

Most would agree that anything that is truly complex can be better understood if it is broken down into its component parts and examined. Take this title for instance. At first glance it may be a source of confusion as to what this article is even about. So let us examine further.

Families — the backbone of the Special Operations Aviation community.

Army Special Operations Aviation (SOA) is synonymous with Night Stalkers, members of the 160th Special Operations Aviation Regiment (Airborne). Maintenance is a familiar term in the SOA community and its meaning to us is consistent with Webster's description: *"the act of maintaining, to keep in an existing state, to preserve from failure or decline, to sustain against opposition or danger, to uphold and defend, to continue or preserve in, to support or provide for, to bear the expense of, to affirm or assert."*

That is an apt description of the secret of the 160th's success — the families.

The families help maintain SOA's ability to successfully accomplish its complex array of missions in the most demanding of environments time after time. They are behind the long-range, single-ship insertions or extractions that drive both man and machine to the edge, and they enable the team of mechanics to work nonstop, far into the night, taking a Chinook from pieces to full flight in a time span that would set a new world's record. The family also ensures that forward area refueling and rearming points will be precisely positioned and operate undetected without fail. In

summary, they give us our ability to serve this great nation and support the most critical National Command Authority directed missions.

Any Night Stalker will readily agree.

This is not meant to slight the credentialed maintainers, and it is not meant to be a politically correct response. It is the truth. The families that make up the Night Stalker community are the master maintainers. They are the spouses and children who also raised their right hand and agreed to serve our great nation because their loved ones have been called to serve.

Here's an example how. At 0321 hours on any Saturday, a pager's beeping pierces the night. A startled spouse leaps from the bed and grabs the pager from the dresser and runs to the den where an exhausted soldier sleeps in the Lazy-Boy, the last place he sat down the night before. He awakens and quickly begins his routine. Moments later the phone rings and he answers. During the one-sided conversation, he is only heard to say, "Roger, out."

He grabs his alert roster and makes two calls, each time saying only, "Come to work." At 0346 he leaves the house with a kiss, a good-bye and an "I love you." His wife lays back down. Not to sleep, but to wonder. Is this live or Memorex? How long will he be gone? Will he be in a place where I can page him?

She desperately wants to have answers to these questions, but she knows not to ask. Unable to sleep, she heads for the kitchen and puts on some coffee. She then turns on the television, flips to CNN Headline News, and begins to hope and pray that the world is quiet.

I have been told on many occasions that special operations aviators are different. My observations have also lead me to conclude that their families are different as well. Why are they different? How do they succeed in an environment that predicts failure in even the most hardened family systems?

My thoughts on these questions are not based on any scientific research, but on numerous personal observations.

First and foremost, these families are strong and tend to play out a daily theme that says, "We will survive, no matter what." Even the spouses and the children say, "Night Stalkers Don't Quit." They also truly believe it.

The spouses are strong in leadership traits expected in any well-tuned organization. They display those traits in spite of everything that comes the family's way. They often end up raising the children and managing family affairs, since their spouses are gone much of the time.

These family leaders often mimic characteristics of their SOA spouses. For instance, they are great compartmentalizers. They keep things in focus to accomplish what they know to be critical at a given moment. This is certainly a survival skill since many times they do not know where their spouses are or what they may be up to.

The spouses have a high-energy level and a hunger for excitement, adventure and a sense of the non-routine in their lives. They also have a high tolerance for their spouses' driven natures and understand that these special operations aviators are committed to doing more than most consider humanly possible.

To succeed in such an environment, these individuals have to be highly self-confident in their abilities, intensely focused to the point of excellence bordering on perfection, driven to succeed at all costs, physically and mentally disciplined beyond comparison, flexible yet rigid almost in the same breath, and able to stand out in a group yet be a committed member of that same group.

This is a classic description of a Night Stalker, and it is not surprising that this describes their families as well.

Our unit history states, "The Army owes its modern night-fighting aviation capabilities to Task Force 160, who pioneered night-fighting techniques, shared in the development of equipment and proved that 'Night Stalkers Don't Quit' — a motto the Task Force lives by".

"If the Army owes this [its modern night-fighting aviation capabilities] to us, then we owe everything to our families."

If the Army owes this to us, then we owe everything to our families. Special Operations Aviation families have championed our existing state, preserved us from failure and decline, sustained us throughout opposition and danger, supported and provided for all, and upheld and defended us during troubled and tragic times.

Lastly and most importantly, they bear the expense of continued sacrifice so that we may continue to serve. Our families are the master maintainers.

★★

LTC Franklin is the Regimental Psychologist, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

BY CPT ROBERT WALTERS

PUBLIC AFFAIRS SUPPORT TO SOA IN URBAN OPERATIONS

The roles and missions of Public Affairs during SOA training in American urban areas.

Urban areas throughout the United States provide a unique training environment for special operations aviation assets. Night urban navigation requires special skills that are difficult to maintain in other settings.

One significant obstacle that must be negotiated prior to training is the local civilian population. Most urbanites are not accustomed to seeing four MH-60s flying at 300 feet down Main Street.

To train in a metropolitan area and not create such public outrage that the mayor is impeached, the police chief is fired, and the unit is escorted to the city limits at gun point, the unit must be proactive in the intelligence preparation of the battlefield as well as public affairs. This is essential before, during and after the unit conducts urban training.

Each urban area is different; thus, situational conditions must be considered prior to training. Several questions should be answered. Has the unit trained in this city recently? How does the city relate to the local military installation? What type of relationship does the city police department have with the residents? What significant community events are scheduled?

Remember that the urban training area is home for thousands of registered voters. Be prepared to inform them, answer their questions and go to great lengths to establish and maintain a congenial relationship. With this in mind, the 1st Battalion, 160th Special Operations Aviation Regiment (Airborne) has developed an

outline of the public affairs/intelligence support necessary to conduct urban training.

The predeployment phase is the most critical. It is imperative that a thorough and comprehensive public affairs plan be prepared during this phase. An advance party visit prior to the mission facilitates smooth execution of the training. If possible, a public affairs/intelligence representative should be part of the advance party. Review after-action reports from previous training conducted in the city.

During the advance party trip, the intelligence officer (S2) and the operations officer (S3) should determine targets, staging bases, routes and the concept of operations. When selecting targets and routes, keep the local residents in mind. They will be concerned about the aircraft noise and their personal safety. Use a media pre-release, when possible, to inform the city residents prior to flying in their city. Make sure aircrews and support personnel stick to the plan agreed to by the local airport and the Federal Aviation Administration.

Establish a point of contact with the host agency (i.e., the Police Commander, Department of Public Safety Special Operations Commander) for training coordination. Determine who is going to be the spokesperson for the host agency, the ground force (if one is present) and the unit. All spokespersons should be thoroughly briefed on the public affairs guidance. Not only should they know exactly what to say for all possible contingencies, but they must also be aware of any sensitive information that requires protection.

While the S3 is coordinating with the local airport's air traffic control and the FAA representatives to determine inner city air corridors and altitudes, the S2 should get the names and phone numbers of the public affairs officers or public information officers for the federal, state, county, city and military agencies in the area. It is important that these public officials know about the training so they are not surprised or offended by the unit's presence. City officials hosting the training may not inform other government officials in the area about their activities. Therefore, get out and spread the word. Conduct face-to-face meetings with as many of the people identified above as possible. Other officials can be notified upon deployment and prior to commencement of training.

The S2 should produce the proposed public affairs guidance, public inquiry guidance (noise complaint plan), media release and accident flow (pre-accident plan). Staff these documents with the battalion staff, the ground force point of contact and higher headquarters public affairs officer.

In addition to the public affairs requirements, the S2 should accomplish intelligence preparation of the battlefield and conduct a target analysis. Target boards/folders should be produced for each target. Take photographs (aerial stills and video) and determine hazards to flight. Identify helicopter landing zones, high-noise areas that can be used to mask aircraft sound, and residential areas. To minimize noise complaints, look for noisy or uninhabited areas around the city (i.e., major interstates and roads, airports, railroad and bus stations, sewage treatment plants or warehouse districts).

Locate hotels, restaurants and night clubs. Determine closing hours of local businesses and the areas to avoid (i.e., zoos, monuments, shrines). Get a feel for evening activity levels in the vicinity of each target.

During the execution phase, place an S2 or a public affairs representative in the Tactical Operations Center (TOC), the 911 exchange responsible for the target area, and the target area if possible. Most residents concerned with urban training will call 911 to report the activity they have witnessed and ask what is going on. Since most 911 operators and dispatchers never get the word about training in the area, a unit representative at the 911 exchange can provide the operators noise-inquiry guidance and answers to the unusual questions they will receive. As long as the concerned citizens are satisfied with the answers they get from the 911 operator, potential problems can be solved at the lowest level.

When a caller is particularly irate about a noise incident and is not satisfied with the initial response, the operator should get the caller's name and phone number and assure the caller that an official representative will contact them shortly. The S2 representative in the TOC should immediately telephone the individual and attempt to satisfy the concerns.

"Since most 911 operators and dispatchers never get the word about training in the area, a unit representative at the 911 exchange can provide ... guidance and answers."

Frequently, just providing the caller someone new to yell at for a few minutes will solve the problem. In the event of an accident, the TOC representative should send an S2 representative to the accident site immediately to aid in crowd control and site security. Notification procedures outlined in the pre-accident plan can then begin.

The S2 representative should be

prepared for unannounced media inquiries (both telephonic and personal interviews). Expect the media to search out the unit and dig up as much information about the unit as possible. Do not underestimate the steps the media will take to get a story. Make sure the deployed soldiers know they are not authorized to talk to the press. Use school-trained officers whenever possible to deal with the media.

As the unit prepares for redeployment, conduct a security sweep of hotel rooms, planning areas and the TOC. Be sure to thank local officials for their support during the training. Leave them on good terms so the unit can train in their city in the future; however, do not wear a welcome out by routinely training in the same city. There are plenty of cities with police departments that want to develop a reciprocal training relationship.

The plan outlined above is not all encompassing, but it can serve as a guide for initial planning. It was not developed overnight. Failure to be sensitive to the concerns of local residents have resulted in some hard lessons learned as well as the loss of some valuable training opportunities. Detailed planning, flexibility, patience and an understanding of local sensitivities will provide units with the necessary foundation for successful urban aviation training.

★★

CPT Walters is the Assistant S-2, 1st Battalion, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

WHAT WE'RE ALL ABOUT

How the 160th SOAR(A) accomplishes its wide variety of missions in all manner of conditions.

Multicolored night vision devices, heads-up displays, laser weapon systems, fly-by-wire flight controls, cloaking devices, the hyperspace button, Leonard Nimoy, guest pilot-in-command — that was my Orwellian vision of the 160th Special Operations Aviation Regiment (Airborne). Shrouded in secrecy, the mystique exists to those not yet privileged to serve in the world's greatest aviation unit.

I knew almost nothing about the organization. I signed up not out of curiosity, but rather in search for something more.

After two years as a platoon leader in the regiment, I now understand what makes the unit so special. It is not the equipment, the facilities, the sometimes-exotic training areas nor the temporary duty pay. Simply and foremost, it is the soldiers and their dedication to mission accomplishment that is so special and unique.

What I witnessed during my last 90 days as a CH-47 platoon leader in B Company, 2/160th SOAR best describes "what we're all about". In that time, we conducted desert operations in the southwestern United States, participated in joint maritime operations in the Atlantic and fought the elements during combined operations north of the Arctic Circle.

All three operations were successful; however, to the flight crews maintenance and support personnel, it was business as usual. From my perspective, it was nothing less than a flawless performance by special soldiers who embrace the unit motto: "Night

Stalkers Don't Quit", or more simply stated, "Let's give that much more to accomplish the mission."

On 21 January 1994, B Company, 2/160th SOAR deployed five MH-47 Chinook helicopters to Yuma Proving Ground (YPG), AZ, to provide support to special operations forces during a National Training Center (NTC) rotation.

CW4 Keith Stephan triple-checked the time distance heading cards and mission maps, and put finishing touches on the operations order. Stephan, who will be 50 years old this year, has briefed and led many missions for the unit. Today was different though; this was his flight lead evaluation for the 160th. The mission entailed navigating at night, using only the map, clock and heading indicator, from Fort Campbell, KY, to Fort Sill, OK. He had to successfully navigate to a Forward Area Refueling Point (FARP) located at an unlit, unimproved landing strip and arrive within 30 seconds of the scheduled time on target. At the debriefing, CW5 Joseph Jones, the unit senior instructor pilot, said, "Well, it was a satisfactory check ride ... looks like the unit has another flight lead." So ended our first leg of the deployment.

Late the next afternoon, a flight of five departed Fort Sill on an IFR flight plan with ten minutes separation between aircraft. Roughly one hour later, the first aircraft broke out of the clouds and, one by one, the pilots in command canceled IFR. The flight performed a VFR rendezvous and arrived in Colorado Springs, CO, one hour after dark. Due to mother nature's lack of cooperation on a previous deployment, Colorado was our last opportunity to conduct unit snow and mountain training prior to Operation ARCTIC EXPRESS 94. We spent the next two days flying in the Rocky Mountains. Following a maintenance day, we departed Colorado Springs and arrived at YPG late that evening.

After two days of vehicle-loading drills and M134 minigun ranges, we received the first mission tasking from the Joint Special Operation Task Force. It was a special reconnaissance (SR) mission. TF 2/160 had to infiltrate two Special Forces Operational Detachment Alpha (ODA) teams into the NTC box. The pilots scrambled and, through a group effort, prepared the all-encompassing mission brief. Jones, the flight lead, began the briefing with the ritualistic time hack. The intelligence officer delivered the enemy situation. The Air Force weatherman forecasted marginal weather conditions.

A flight of four MH-47s, loaded with the teams and their vehicles, departed on time and flew two and a half hours 100 feet above the

An MH-47 on the flight deck of the USS *George Washington* during joint exercises with the Navy and the 75th Ranger Regiment.

Mojave Desert into Fort Irwin, CA. It was a DARK night with no moon, overcast skies, rain, and brown-out conditions.

Upon entering the NTC box, the two trailing aircraft broke off to become a separate flight. Both flights hit their targets on time. The four aircraft completed an aerial link-up and flew two more hours close on the forward staging base at YPG. For nearly three weeks, night after night, TF 2/160 conducted similar operations during the NTC rotation. Our maintenance officer, CW2 Pat Mueller, and his soldiers kept at least four aircraft flying at all times. In all, the unit flew 317.9 flight hours, including 174.5 hours with night vision devices.

The following week, there was a lot of activity around the maintenance hangar. Four aircraft were torn down for the C-5 flight to ARCTIC EXPRESS 94 in Norway. Preparation of four additional aircraft continued in support of the Adaptive Joint Force Package (AJFP) aboard the USS *George Washington*. ARCTIC EXPRESS and AJFP would be new ventures for the 2/160th SOAR.

During AJFP, 2/160 would validate the concept of packaging joint task forces and readily stationing them on Naval craft. Following ten days of intensive maintenance preparation, the battalion was ready to undertake two major exercises simultaneously.

On 28 February, four aircraft departed for Oceana Naval Air Sta-

tion, VA. On arrival, flight leads and planners conducted mission briefings with naval flight operations on board the aircraft carrier USS *George Washington*. Simultaneously, crew members reconfigured the aircraft and loaded a maintenance support package on the carrier.

On 4 March, the four aircraft flew to Hunter Army Airfield, GA, so that the flight leads could conduct mission planning with the 75th Ranger Regiment. After completing the detailed planning on 6 March, the Chinooks transported 150 Rangers to the USS *George Washington*. While the maintenance teams began folding blades on two of the MH-47s, the two other aircraft conducted deck landing qualification and deck currency training. It took the maintenance support personnel and crews approximately three hours to fold blades and prepare four aircraft for storage in the ship hangar below deck.

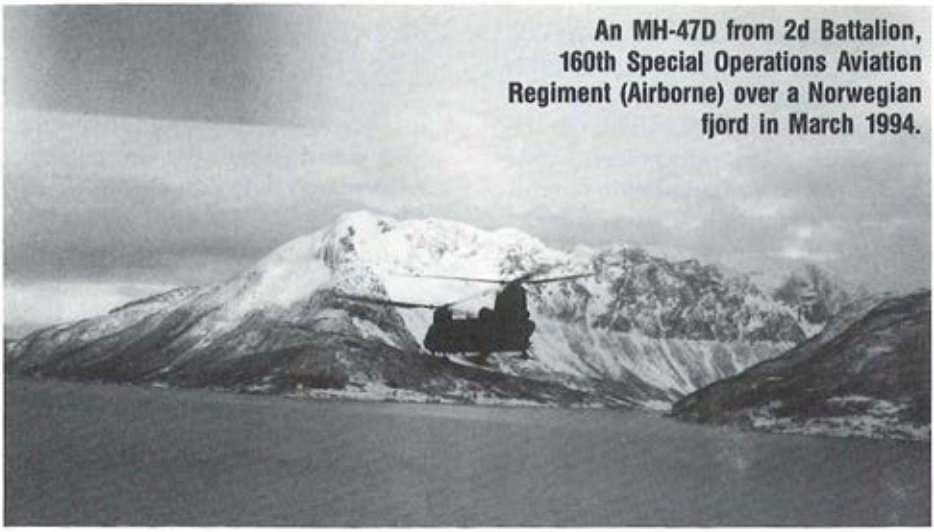
During AJFP, the joint task force conducted two missions. CW2 Jesse Fontes led the first one on 7 March. Three MH-47s, carrying two Special Forces SR teams, conducted a ship-to-shore infiltration. Two nights later, Stephan lead the four assault aircraft with 120 Rangers to the target. This was a high-visibility mission, incorporating a multitude of fixed wing and rotary wing aircraft from the three services. On both nights, moon illumination was zero, the sky was overcast, scattered thunderstorms were abundant, and there was no visible horizon. The missions were executed flawlessly, and the aircraft and maintenance support package redeployed on 11 March.

Eleven days earlier, less than eight hours after the four MH-47s departed for AJFP, two C-5 Galaxies landed at Campbell Army Airfield. Four partially disassembled MH-47s were loaded into the C-5s. The Air Force loadmaster, impressed with our load time, asked, "Do you guys do this often?" We took his question as a compliment.

When we got off the C-5 at Evenes Air Station, Norway, I remember thinking about the briefing we had received from our Royal Air Force liaison officer the week prior. He had said to expect extreme temperatures of -20° Fahrenheit and that out of every ten days, only three would be flyable because of severe weather.

The weather on the day we arrived was intimidating. I thought of the movie *Survive*, complete with snow caves and frostbite. All I could see was a low, gray ceiling with the mountains to the east totally engulfed in snow showers. The only pleasant surprise was the temperature; it was a comfortable 30° Fahrenheit.

The crews and maintenance personnel worked rapidly to off-load the aircraft and maintenance support package and move them into the large hangar provided by the Norwe-



An MH-47D from 2d Battalion, 160th Special Operations Aviation Regiment (Airborne) over a Norwegian fjord in March 1994.

gians. The aircraft build-up began immediately, as both rotor systems and the fore and aft pylons were reinstalled. By the end of the next day, two aircraft were ready for test flights. Two days later, when the weather subsided, we started training in this new and potentially hazardous environment.

We had brought aircraft skis on this deployment. A Chinook with skis is quite a comical sight. It looks like a contraption out of a Dr. Seuss book.

We were very fortunate to have a British pilot as a liaison officer. This was his fourth time in Norway, and he showed us different techniques for flying in such an unforgiving environment. He taught us some new mountain flying techniques and how to read the winds of the fjords. ARCTIC EXPRESS 94 was especially rewarding because we worked with Norwegian and British units, U.S. Special Forces, Rangers, and Navy SEALS.

On our last mission, we "infilled" two Norwegian teams and then flew back to Evenes along the coast, over the North Sea. We found ourselves flying 100 feet over the water with zero illumination once again; however, it was a comfortable and soothing flight. The sky was clear and the Northern Lights brightened the sky. Through the night vision goggles, the Aurora Borealis looked like a bright green prism dancing through the sky, which formed a halo that encircled the top of the globe.

On 19 March, the aircraft teardown process started all over again.

On 23 March, two C-5s transported us back to where it was sunny and warm — the ramp at Ft. Campbell, KY.

It did not take two years to figure out what the 160th was all about. Soldiers of the regiment are quiet professionals who utilize proven methods and techniques that have been developed over the years at the cost of many lives. CW4 John LeDuc has been with the unit since its inception. Once in a while, he talks about the old days of pioneering NVG flight. It is enticing, yet eerie at the same time.

From men like LeDuc and our flight leads, who set the example for the junior pilots; from the platoon sergeants, who put in more hours at work than I can count to ensure mission success; from the maintenance officers, who monitor every operation from the first pitch pull until the last engine shut down; from our flight operations NCOs, who do so much that they are simply worth their weight in gold; all the way down to the private turning wrenches on the aircraft tear down or blade fold teams — they are what this unit is all about. They all believe "Night Stalkers Don't Quit" — giving a little extra and never taking.

Yes, I know what we're all about. We are Night Stalkers, and Night Stalkers Don't Quit.

★★

CPT Degironimo is the S-3, 2nd Battalion, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

INTEGRATING
(CONTINUED FROM PAGE 15)

dress to the Association of the United States Army.

There is a proper "mix" for every mission, a mix that will deliver the desired results with the lowest practical risk AND COST. That mix includes the correct use of Active, Guard, and Reserve units and soldiers, and the correct use of technologically balanced, modernized equipment.

There are very few warfighting missions which should be conducted without both Active and Guard Aviation. Army Aviation should be structured to give commanders the flexibility to employ the proper mix for each mission, and operational commanders should have access to a balanced force of modernized systems.

Integration of Guard and Reserve Aviation into the warfight has never been more important to the future of Army Aviation. ARI and Comanche are dependent on the savings that can be generated within America's Army. ALL the assets of America's Army must be fully utilized and provided the resources to meet ALL requirements. We can afford nothing less.

Like the Air Guard, the Army Guard is ready to go today.

★★

MG D'Araujo is the Director, Army National Guard, National Guard Bureau, Washington, DC.

BY MAJ MICHAEL ROSE
and CPT DAVID G. RAY

SOA IN THE COMBAT TRAINING CENTER ENVIRONMENT

Realistic training at the JRTC lets the 160th SOAR(A) train as it will fight.

The Cortinian Government has requested U.S. assistance in countering an insurgency fomented by their neighbor the People Democratic Republic of Atlantica (PDRA). The PDRA is providing covert support to the Cortinian Liberation Front (CLF), which is attempting to overthrow the democratically-elected government of Cortina, a U.S. ally. Cortina, the Republic of Victoria, and the PDRA all share the fictional Island of Aragon, located 2,000 miles off the eastern coast of the U.S.

To any soldier who has trained at the Joint Readiness Training Center (JRTC), this scenario should sound familiar. However, what many soldiers do not know is that Special Operations Forces (SOF) have been conducting missions on the Island of Aragon for eight days prior to D-Day. Joint Task Force Cortina has had SOF conducting reconnaissance and surveillance of PDRA and CLF forces and is preparing the theater for the arrival of conventional U.S. forces.

Prior to conducting missions, SOF moves into the theater and establish an Initial Staging Base (ISB). At the ISB, Army Special Forces teams and Navy SEAL teams link up with Special Operations Aviation (SOA) forces to begin mission planning. The majority of reconnaissance and surveillance missions are conducted by 8- to 12-man teams.

All SOA mission planning starts with the SOF team's ground tactical plan and works backwards. SOA offers the SOF team numerous land and water insertion and extraction options.

These options are airland, Fastrope Insertion/Extraction System (FRIES), ladders, helocast, External Raft Delivery System (ERDS), delta queen and soft duck. ERDS, delta queen and soft duck are methods of inserting Combat Rubber Raiding Crafts (CRRC) and associated reconnaissance teams.

ERDS is a system used by the MH-60. The CRRC is rigged to ride tightly against the belly of an MH-60 and the rigging is secured at the cargo hook. The MH-60 can easily fly at 120 KIAS in this configuration. Upon reaching the insertion point, the raft is dropped by releasing the cargo hook. The team helocasts immediately after the raft is dropped, swims to the raft and begins the mission.

The delta queen is an MH-47 helicopter-unique CRRC insertion method. A completely inflated CRRC and team are loaded into the MH-47. Upon reaching the insertion point, the MH-47 lands in the water and floods the cargo compartment until the CRRC and its team can float out of the helicopter. For training missions, delta queen operations are conducted only in fresh water.

Both the MH-60 and MH-47 can employ the soft duck insertion method. In a soft duck insertion, most of the air is released from the CRRC; however, enough is left so the CRRC floats just below the water's surface. The CRRC is rolled up and put in the helicopter. As the helicopter approaches the insertion point, the soft duck is pushed out and the team helocasts in after it. The team swims to the soft duck and uses an attached CO_2 bottle to inflate the CRRC.

Once the method and location of the insertion are determined, SOA begins route planning by avoiding all known suspected enemy locations and population centers. Other route planning considerations are use of terrain and darkness to preclude visual or radar detection.

All missions are extended distance (100-250 nautical miles one way) and are conducted at night using ANVIS-6 and FLIR. An essential task for successful mission accomplishment is undetected infiltration and exfiltration of the SOF team. Detailed, painstaking planning and execution are critical to these missions. When time permits, SOA and the SOF team rehearse the infiltration and exfiltration methods to be used on the mission.

Mission rehearsals can be as simple as a talk-through of the mission, using the execution checklist, or as complex as a full rehearsal, including flying helicopters and actions on the objective. The type and extent of the rehearsal depends on the time available before mission execution.

Once intelligence is updated and planning and rehearsals are completed, the SOF team is ready to execute the mission.

The two special forces reconnaissance A-teams load into helicopters. The 3rd Battalion, 160th Special Operations Aviation Regiment (Airborne) offers the supported unit a choice of two helicopters—the MH-60L or MH-47D. The choice of airframe is governed by mission, distance, cargo and number of team members. The pilots have already run up the aircraft, programmed all the navigation data, and tested the aircraft survivability equipment. The noise, wind, and total darkness make it difficult to load the 60-lbs. rucksacks that will sustain the team for the six-day reconnaissance and surveillance mission in the neighboring PDRA.

"The 3rd Battalion, 160th Special Operations Aviation Regiment (Airborne) offers the supported unit a choice of two helicopters — the MH-60L or the MH-47D."

The helicopters depart the ISB, and the pilot utters a single code word over the satellite communications (SATCOM) radio. A quick response from the operations base station comes back. One minute after takeoff, the constant noise of the engines is sharply broken by the sound of four miniguns test firing. The crew chiefs fire low-light tracer ammunition aimed with a laser sight into the test fire area. These weapons are only used as a last resort since the flight is depending on speed, stealth and surprise to reach and return from the target undetected.

The team leader is updated as the flight passes the navigation checkpoints. The border crossing is uneventful except for another single word passed over SATCOM. The flight stays together for the first 50 miles inside hostile territory.

The two helicopters separate to go to their respective landing zones (approximately 30 miles apart) at a specified checkpoint. Enemy search radar signals become more frequent, but the low altitude and detailed navigation route prevent detection. Search and rescue crews are now standing by at the ISB since the code word was received that the flight of two helicopters is now operating single ship. The search and rescue team is comprised of the standard aircrew, a flight medic (organic to the battalion) and a security team provided by the supported unit.

As the aircraft near the landing zone, the pilots scan the area with the FLIR. The crew chiefs also scan their assigned sectors, ready to suppress any threat with their M-134 miniguns. No vehicles or personnel are nearby, but the landing zone has 10 ft. trees that did not

show up on imagery. Since this landing zone is the only one within a night's march from the SOF hide site, the crew has to use it.

The pilot and team leader decide on short final that fastropes will be used to infil the team. The aircraft comes to a 20-foot hover over the landing zone, and the crew chiefs give the team the signal to push the fastrope out the doors. The only light emitted during the insertion is the green chemlight glow at the bottom of the fastrope to let the team know where the ground is.

Each aircraft departs the landing zone, conveys the appropriate code word and begins navigation along separate egress routes. Separate routes avoid compromise of the other team and a possible collision in the darkness. Code words are monitored to check the progress of each aircraft.

The aircraft return to the ISB, refuel and remain on standby for a possible emergency extraction in case the team is compromised or in need of medical evacuation.

Similar training scenarios are conducted throughout the year by 160th SOAR(A) units at both the NTC and JRTC. The combat training centers give SOA aircrew, staff, and commanders the opportunity to train as they plan to fight.

★★

MAJ Rose was the Executive Officer, and CPT Ray was the S-1, 3rd Battalion, 160th Special Operations Aviation Regiment (Airborne), Hunter Army Airfield, GA, at the time this article was written.

BY MAJ(P) ROBERT P. BIRMINGHAM
and CW5 CLIFFORD L. McGEE

SPECIAL OPERATIONS AIRCRAFT COMBAT MISSION SIMULATORS (SOACMS)

How STRICOM helps support the 160th SOAR(A) with a cost effective training multiplier.

Last year's update on the status of the SOACMS program highlighted several significant challenges ahead for Team SOACMS. We're proud to report that the Team kept the program ahead of schedule and the aircraft deliveries as planned.

This past year, the 160th Special Operations Aviation Regiment (Airborne) received delivery of the most sophisticated combat mission flight simulators in the Department of Defense. The MH-60K and MH-47E CMS devices were conditionally accepted, assigned tail numbers, and brought under a Contractor Logistics Support (CLS) contract by the U.S. Army Simulation Training and Instrumentation Command (STRICOM) in November 1993 and February 1994, respectively ... ahead of aircraft deliveries and within cost constraints. The success of this dynamic program is shared by an outstanding Government-Industry Team dedicated to doing "whatever it takes" to get these training devices in the hands of our Army's finest aviators.

On 16 December 1993, the 160th SOAR and Team SOACMS assembled at Ft. Campbell, KY with over 200 Government-Industry supporters to dedicate the $80M SOACMS facility. This event not only marked completion of a multi-level training system milestone, but also symbolized the starting point for the future 160th SOAR training suites which will eventually provide a networked, mission rehearsal capability for all 160th SOAR organic aircraft.

CAE-Link Simulators -- *They Fly you there Before the Mission to Ensure Success and Bring you Home Safely!*

CAE-Link and CAE-Electronics are Advancing Human Performance in

- **Training**
- **Research & Development**
- **Acquisition**

With:

- **AH-64 CMS**
- **RAH-66 Comanche Training Devices**
- **AH-1 Cobra FWS**
- **MH-60K Special Ops CMS**
- **MH-47E Special Ops CMS**
- **UH-60 Black Hawk FS**

For:

CSRDF -- Crew Station Research Development Facility

SPIRIT -- Simulation Program for Improved Rotorcraft Integration Technologies

STRATA -- Simulation Training Research Advanced Testbed for Aviation

CAE

CAE-Link Corporation
P. O. Box 1237
Binghamton, NY 13902-1237
Tel (607) 721-LINK [5465]
Fax (607) 771-8477

CAE-Electronics Ltd.
C.P. 1800 Saint-Laurent
Quebec, Canada H4L 4X4
Tel (514) 341-6780
Fax (514) 341-7699

But Most Importantly for You!

Advancing Human Performance

TRAINING • SIMULATION • SAFETY • PRODUCTIVITY

Initial implementation of the 160th SOAR "Flight Simulation and Mission Rehearsal Master Plan" calls for a relentless CMS concurrency program coupled with a Digital Image Generator (DIG) upgrade. Currently underway and nearing completion on the MH-60K and MH-47E CMS devices is the SOACMS Block Update (SBUD) III. This $3M Engineering Change Proposal (ECP) incorporates major changes to the Integrated Avionics Subsystem (IAS) and integrates the upgraded AP 102A Mission Processor into the CMS simulation hardware and software baseline.

The $2.5M "productionization" ECP, SBUD II, was tested and completed in March 1994. Both devices will be declared Prime Item Development Specification (PIDS) compliant and "Ready for Training" (RFT) upon final testing of SBUD III this summer. STRICOM will complete New Equipment Training of the SOACMS devices for the 160th SOAR CMS Instructors in August 1994 prior to the start of SOA aircrew Block I Training.

Since conditional acceptance, these valuable training devices have not been sitting idle. In January 1994, the MH-60K CMS was utilized by the Multi-Mode Radar Improvement Process Action Team to accomplish critical prototyping for new Terrain Following (TF) cue synchronizations. This simulation test saved the SOA program over 40 hours of actual test flight time and a remarkable cost savings due to reduced engineering manhours normally required to conduct TF testing and analysis. The highly realistic Aerial Refueling (AR) training capability of the CMS devices has also been utilized and validated by several MH-47 AR Instructor Pilots since acceptance. This training capability is proving to be a cost effective training multiplier for the 160th SOAR.

Currently, STRICOM is seeking through USSOCOM certification of the CMS devices as valid AR trainers for some sustainment AR training scenarios and tasks. In the near future, improved fidelity through a DIG upgrade will allow potential certification of low level AR mission training currently not possible via the Army Tactical DIG system.

In addition to a robust CMS concurrency program, designed to maintain configuration with SOA fleet Mission Equipment Package (MEP) improvements, the 160th SOAR and STRICOM will seek funding to support a Mission Rehearsal Device (MRD) procurement for 160th SOAR organic aircraft. The 160th SOAR's Master Plan calls for high fidelity, deployable, and reconfigurable training de-

vices which will possess a Distributed Interactive Simulaton (DIS) compatible architecture for multi-service networking of Geo-Specific database training scenarios. The 160th SOAR's Master Plan integrates Army SOF Aviaton requirements with the Air Force SOF mission rehearsal and training system programs, giving USSOCOM a "real-time", enchanced "joint" training and mission rehearsal capability.

Keeping simulation ahead of the aircraft provides the 160th SOAR with a unique training capability and tactical advantage on the battlefield. In 1993 and 1994, Team SOACMS continued to "Lead the SOA Fleet" through systems integraton testing and virtual prototyping of new MEP hardware and software. The fielding of these devices represents only the beginning, however. There's been no time to sit back on the success of the SOACMS and Part Task Trainer programs. Continuous emphasis on the ECP process, planning for future CMS technology upgrades, and shaping the acquisition plan for the mission rehearsal device procurement will certainly keep the SOACMS team hard at work well into the 21st Century.

★★

MAJ(P) Birmingham is the Project Director, SOACMS, STRICOM, Orlando, FL.

CW5 McGee is with the Simulation Integration Maintenance Office (SIMO), 160th SOAR(A), Ft. Campbell KY.

NIGHT VISION & ELECTRO-OPTICS

How the PM's efforts are shaping the soldier's view of the Battlefield.

The office of the Project Manager, Night Vision & Electro-Optics (PM-NVEO) is charted under the Program Executive Officer-Intelligence and Electronic Warfare (PEO-IEW). The PM mission is to provide overall direction and guidance for the development, acquisition, testing, product improvements, and fielding of assigned programs. Programs and products include image intensification systems, infrared systems, electro-optical and electro-optical countermeasure systems, laser systems, associated unique test equipment, and the systems integration of related multi-sensor suites.

PM-NVEO also provides intensive acquisition management for a diverse group of radar systems being developed and produced to meet the Army's targeting requirements in the fields of remote sensors, electro-optics countermeasures, and target surveillance and acquisition.

PM-NVEO places primary emphasis on managing cost, schedule, and performance of its assigned programs. It is responsible for the acquisition strategies, contract oversight, planning, programming, budgeting, program execution, horizontal technology and operational integration, and interoperability.

Image Intensification Family of Devices. The AN/PVS-7B, Night Vision Goggle (NVG), is a lightweight, monocular goggle used by individual soldiers. The AN/PVS-7B uses a passive third generation image intensifier tube. It is distributed and used in combat, combat support, and combat

NOW YOU CAN OWN THE NIGHT WHEREVER YOU ARE.

Air or ground, anywhere in the world, depend on the proven performance of ITT night vision.

Owning the night gives you the war-fighting edge essential to victory. That's why we're working to expand your night vision capabilities.

For the first time, fixed-wing aviators can trust the night to ITT. U.S. Air National Guard, Air Force and Navy as well as military pilots worldwide can benefit from our improved Aviator's Night Vision Imaging System (ANVIS).

And for ground forces, our GEN III 25mm image intensifier is available as a direct retrofit to upgrade existing weapon sights and drivers' viewers.

This dedication to advancements, combined with our proven performance, has made us the world leader in GEN III image intensification. A full-service organization, ITT is committed to continuous improvement, supporting night operations of U.S. and allied military forces around the globe.

And we're ready now to respond to your future requirements ... anywhere.

ITT Electro-Optical Products Division
7635 Plantation Road
Roanoke, VA 24019 • (703) 563-0371

ITT DEFENSE & ELECTRONICS

service support operations. Ancillary items include anti-fogging devices, carrying case, shipping/storage case, a sacrificial filter, protective eyecup, and lens covers.

The AN/AVS-6, Aviator's Night Vision Imaging System (ANVIS) is a lightweight, helmet-mounted, self-contained system. The ANVIS provides sufficient image intensification for crewmembers to conduct night missions under minimal ambient light conditions. It is powered using existing aircraft power or a helmet mounted battery pack.

The latest ANVIS procurement under the OMNI-BUS III Contract includes several enhancements:

- 25mm eye relief eyepieces with improved collimation.
- Increased fore-aft adjustment range.
- Independent interpupillary (eyespan) adjustments.
- Smoother objective, eyepiece, and binocular movements.
- Improved tube and system resolution.
- Increased tube reliability (10,000 hours minimum).

These design changes allow greater durability, comfort and safety for the crewmember. The improved resolution allows the mission commander and crewmembers greater capabilities and flexibility to engage in and conduct minimal low light level operations.

The AN/AVS-7 Aviator's Night Vision Imaging System/Heads Up Display (ANVIS/HUD), is designed to provide aviators critical flight information superimposed on the outside visual scan image of the ANVIS night vision device. The system is electro-optical and it overlays cockpit information by integrated graphics on the night vision scene. It provides both the pilot and copilot critical, real-time, high resolution flight and navigational information. Its primary purpose is to enhance flight safety, ease the crew workload, and heighten the crewmembers situational awareness outside the cockpit.

The AN/PVS-10, Sniper Night Sight (SNS), is an integrated day/night sight for the M24 Snipers Rifle. The SNS provides the sniper the capability to acquire and engage targets during low and high ambient light conditions. For nighttime operation, the SNS utilizes third generation image intensification technology. The system mounts to the existing rail of the M24 and uses the same mil-dot reticle as the existing Leupold day scope. The magnification for day and night operation is 8.5X. The system's maximum weight is four pounds. It also includes adjustments for output brightness, reticle illumination, and a day/night selector switch.

The Army currently uses the TS-4348/UV and the TS-3895A/UV Electronic Systems Test Sets to test its image intensification devices.

PROJECT MANAGER, NVEO

ANVIS HEADS UP DISPLAY (HUD)

The TS-4348/UV is a small, lightweight, hand-held testing device used to evaluate the performance of both 2nd and 3rd generation night vision devices. It provides a GO/NO-GO check for the user when testing night vision devices. The user looks into the test set with the night vision device to be tested and determines the smallest target group/element visible. When the smallest visible group/element is compared to the prescribed group/element for the device under test, a determination can be made as to whether or not the night vision device is mission capable.

The TS-3895A/UV is a portable, rugged, and compact diagnostic test instrument designed to check the ANVIS, the AN/PVS-5, and the AN/PVS-7 series goggles. It provides fast fault isolation of failures for binoculars and power packs with a GO(Green)/NOGO(Red) visual indicator. The TS-3895A/UV also contains a collimation attachment and diopter scope used to test and adjust goggles during maintenance, disassembly and reassembly.

Both test sets are currently under transition to CECOM for life cycle management.

Laser Energy Devices. The AN/PVS-6, Mini Eyesafe Laser Infrared Observation Set (MELIOS), is a small, lightweight handheld or tripod mounted laser rangefinder. It provides a digital display of the range to targets from 50 to 9,995 meters with +/- five meters accuracy. It is the only eyesafe system of

its kind in the Army inventory. The MELIOS can be used by the soldier to support reconnaissance, navigation, and artillery forward observer missions.

The AN/PLQ-5 Laser Countermeasure System (LCMS) is a one-man portable, multi-role, laser illuminator negation system. Its primary design objective is to detect, jam, and suppress enemy fire control optical and electro-optical systems. LCMS will increase the Light Forces survivability by enabling the soldier to neutralize engagements of enemy ground and airborne optics.

The AN/VLQ-7, STINGRAY Combat Protection System (CPS), is an electro-optical countermeasures system for ground combat vehicles. STINGRAY uses a low energy laser system for target acquisition and for countermeasuring threat optics. The STINGRAY concept has application for horizontal integration on several military platforms.

The AN/PAQ-4B Infrared Aiming Light (IAL) is a weapon-mounted infrared source that provides a rapid pulse, accurate aiming point for distances out to 600 meters. The IAL's aiming point is not visible with the naked eye, but is readily recognizable with a night vision device. The IAL has been transitioned to CECOM for sustainment of life cycle management.

Thermal Programs. The latest application of FLIR technology is the Generation II Forward Looking Infrared (GEN II FLIR), Horizontal Technology Integration (HTI) program. The GEN II FLIR technology will horizontally integrate a common GEN II FLIR into critical, high priority combat platforms. This initiative will provide a significant overmatch of opposing battlefield capabilities. The GEN II FLIR HTI concept will obviously require the use of different technical kits (A & B kits). Because of the wide application potential of the "B Kit", a substantial cost savings from economies of scale are anticipated.

The AN/AVS-5, Drivers Vision Enhancer (DVE), addresses the need to improve the soldier's ability to operate tactical wheeled vehicles during combat, combat support, and combat service support missions. It is designed to provide low cost thermal imagery that increases the user's mobility in all weather, low and high visibility, and dirty battlefield conditions. The output device is a flat-panel display and control module that provides state-of-the-art display and ease of operation interface controls.

The AN/AVS-3 Driver's Thermal Viewer (DTV) is an innovative thermal imagery design with a relatively wide field of view when compared to longer range target acquisition FLIR common module components. Operation is independent of light levels and is much less limited by

We Star At Night

When it comes to support for image intensifiers and night vision goggles, nobody outshines Hoffman. For over 15 years, we've developed and manufactured innovative night vision products that not only comply with military standards, but have set the standard for quality around the world.

As a recognized leader in this dynamic industry, Hoffman provides you with the most advanced devices in the field, backed by comprehensive support services. In addition to a full scope of filters for lighting compatibility, we offer products which test tubes and goggles, as well as the most complete line of inspection equipment available anywhere.

With such a galaxy of products and services to choose from, it's no wonder we're seen in such a good light. For all your night vision needs, look to Hoffman.

Hoffman
engineering

911 Hope Street•8 Riverbend Center•P.O. Box 4430•Stamford, CT 06907-0430•Tel 203-425-8900•Fax 203-425-8910

smoke or dust when compared to systems containing image intensifier technology. DTV offers target detection capability to moderate ranges under all environmental conditions.

The Thermal Weapon Sight (TWS), AN/PAS-13, is a lightweight, self-contained, day/night thermal imaging device that uses advanced sensor design and a solid state thermoelectric cooler. It is operational in adverse weather and dirty battlefield conditions including light foliage, smoke, dust, and camouflage. TWS consists of a common sensor body with inter-changeable telescope assemblies and a disposable power source. There are three configurations:

- Light design weighs four pounds, has a range of 550 meters, and mounts onto the M4 Carbine, M16A1/A2/A3, M203, and M136.
- Medium design weighs five pounds, has a range of 1,100 meters, and mounts onto the M60 and the M249.
- Heavy design weighs six pounds, has a range of 2,200 meters, and is mounted on the M2, M24, MK19 with MELIOS, and handheld.

TWS will provide early warning, enhance the security of defensive positions, add control during offensive operations, and provide an all weather engagement capability to the user.

Radar Systems. The Tactical Endurance Synthetic Aperture Radar (TESAR) sensor is a pod mounted, integrated subsystem designed to be mounted onto an Endurance Unmanned Aerial Vehicle to provide real-time continuous imagery of stationary ground targets. The system interfaces through either line-of-sight or SATCOM links to a ground station. The system is designed to support Operational Commanders in worldwide contingency operations. TESAR is designed to support the direct real-time sensor to shooter architecture and the DoD deep and precision strike concepts.

New Systems. The Magic Warrior (MW) Multi-Sensor Ground Surveillance System is a highly mobile tactical multi-sensor ground surveillance vehicle designed to provide line-of-sight surveillance and targeting out to 20 kilometers. The system is mounted onto a ruggedized HMMWV chassis with a custom designed shelter. The sensor suite, which is mounted on a pan/tilt mechanism, can be extended vertically 10 meters with the use of a fully retractable pneumatic mast. The pan/tilt mechanism converts the rigidly mounted sensor suite from non-rotating to a 360° rotating/40° elevation or depression tilt.

The mast is controlled by a fully integrated computerized work station inside the climate controlled shelter. The MW includes a power subsystem, an auxiliary power hook-up point, and a hydraulically charged

stabilization/leveling system.

Magic Warrior's sensor suite includes FLIR, modular surveillance radar, laser range finder, long range and wide field-of-view cameras, and flux gate compass. All of the sensors along with Global Positioning System (GPS) and acoustical sensors are integrated into an open-architecture ruggedized computer work station. Image transmission and voice communications are achieved with use of the SINCGARS Block 2 VHF transceivers and phototelesis equipment.

Magic Warrior's tactical functions include acquisition, tracking, surveillance, targeting and force protection.

The Lightweight Laser Designator Rangefinder (LLDR) is an integrated manportable designator/rangefinder with day/night capability.

It will replace older and heavier vehicle mounted systems and eliminate the need for separate systems performing the same target designation and rangefinding tasks.

Never before in the history of conventional warfare has the ability to fight and win at night and in adverse environmental conditions been so critical. For example, several of the aforementioned systems are the result of requirements developed during DESERT SHIELD/DESERT STORM.

The Project Management Office, Night Vision & Electro-Optics will consistently deliver to the soldier world class quality night vision and electro-optical devices that incorporate leading edge technology and provide the soldier the capability to acquire, engage, and kill the enemy during low ambient light and adverse environmental conditions.

PM-NVEO is decentralized into technological branches. However, focus is centralized to fuse capabilities that meet the diverse needs of our customer, the soldier.

We continually work joint issues and developments with other Project Managers, TRADOC Battle Labs, and the Combat Developers to give the Army maximum capability to accomplish its mission.

★★

CPT(P) Chappell is the Project Engineer for Magic Warrior Multi-Sensor Surveillance System, Product Manager Night Vision & Electro-Optics at Ft. Belvoir, VA.

PM-NVEO MANAGEMENT GROUP

COL Nelson P. Johnson, Project Manager
Ft. Belvoir, VA C: (703) 704-3450 DSN: 645-

Mr. John R. Gresham, Deputy PM South
Ft. Belvoir, VA C: (703) 704-3444 DSN: 654-

Mr. Martin J. Burger, Deputy PM North
Ft. Monmouth, NJ C: (908) 544-5763 DSN: 996-

Mr. Mack R. Farr, Director
Ft. Belvoir, VA C: (703) 704-3493 DSN: 654-

LTC Joseph Mackin, Product Manager FLIR
Ft. Belvoir, VA C: (703) 704-1147 DSN: 654-

BY COL PAUL K. TANGUAY

JOINT TACTICAL UNMANNED AERIAL VEHICLES

One thing I never want to see again is a picture of an Army Aviator splashed on magazine covers after he, or she, has been shot down, captured, humiliated and tortured by hostile military or paramilitary forces.

The Hunter UAV Program is on track and should save lives.

To prevent just such an occurrence from happening again, at least to those Army Aviators performing reconnaissance and surveillance-type missions, the Department of Defense is counting on unmanned aerial vehicles to lower the risks to air crews.

One such unmanned vehicle that is approaching the day when it can be fielded by Army, Marine Corps and Naval forces is the Joint Tactical Unmanned Aerial Vehicle, also known as the Hunter.

For most of the past year, I have been the program manager for the Joint Tactical UAV, which I and my dedicated project management team are committed to fielding, possibly as soon as the fall of 1994, on a limited basis.

Lending credence to my team's efforts to get Hunter in the field is a very strong and supportive cast in the Department of Defense, the Congress, and in our indispensable team mates in industry.

What all this effort is focused on is the opportunity to give the combat forces, land and sea, those who wear muddy boots or sail in harm's way, an unprecedented ability to see the enemy "over the hill" or beyond the horizon without subjecting our

own people to death, injury, or capture.

With the Joint Tactical UAV, or JTUAV for short, as its centerpiece, the Department of Defense is proceeding with all due haste to make the unmanned vehicle an available and reliable and accepted part of every day operations.

How are we doing? As this article was written, in early July, the Joint Tactical UAV is in Low Rate Initial Production, with seven system on contract. One system was tendered for acceptance May 12 and is now undergoing acceptance test flights at Cochise Community College, Douglas, AZ. The remaining six systems will be delivered by April of 1995.

When the Government accepts delivery of the first system, we plan to issue that system to the 304th Military Intelligence Battalion, commanded by LTC Kevin Peterson, Fort Huachuca, AZ, actually to the 304th's Charlie Co. Putting the Hunter into the hands of troops will allow us to shorten the time normally needed to field a new system by simultaneously moving ahead with risk reduction efforts while completing remaining Operational Test and Evaluation requirements.

An additional benefit will be that the Army will gain a deployable unit equipped with a more capable UAV, since Charlie Co. will phase out the Pioneer UAV which it is currently operating as it gains experience and confidence with the Hunter.

Charlie Co. will then have a UAV that will permit reconnaissance flights out to an area more than 150 kilometers beyond the Forward Line of Own Troops (FLOT). This UAV will permit eight to twelve hours on station and will be a more capable reconnaissance asset than the Pioneer it will replace.

"This UAV will permit eight to twelve hours on station and will be a more capable reconnaissance asset than the Pioneer it will replace."

Such a capability will enable us to support the reconnaissance requirement ranging from those of a brigade commander up through Division and Corps, in the case of the Army. For the Marines, the Hunter will support the recon needs of a Marine Expeditionary Force (MEF).

Navy forces such as Battle groups and small combatants will receive reconnaissance, surveillance, targeting and battle damage assessment capability.

Getting to this point, where we can see a real possibility for fielding the

Hunter, has taken some five and a half years. This process is long by some standards, but not long when contrasted with the time it has taken to bring other systems this far.

A review of JTUAV highlights reveals some history of the project. It was in December 1988, when the Mission Needs Statement (MNS) was signed, with Milestone I following in February 1989. Milestone II/IIA was reached in August, 1989. This was a firm fixed price contract with not-to-exceed options.

The contract called for a competitive fly-off between the teams of Israel Aircraft Industries (IAI) and TRW, Inc., Astronautics and Surveillance Group, competing against another team composed of McDonnell Douglas and Developmental Sciences Corp.

In July 1992, the IAI/TRW team was selected as the winner of the competition, and a Low Rate Initial Production (LRIP) for seven Hunter systems was awarded in February 1993.

As I mentioned earlier, the first of these LRIP systems was presented for acceptance May 12, with the remaining six systems due by April 1995.

A system consists of eight air vehicles and the associated support equipment including group control units, missions planning units, payloads, datalinks, data relay terminals, launch and recovery equipment, and all the non-flying equipment such as trucks and generators needed to make the system self-sufficient.

At the Defense Unmanned Aerial Vehicle Training Center, also at Fort Huachuca, AZ, JTUAV training materials have been validated and training has been under way for the 304th MI Battalion since 2 May 1994. An agreement on operational assessment and follow-on operational testing will soon be signed, spares are being delivered, and a new support facility is under construction.

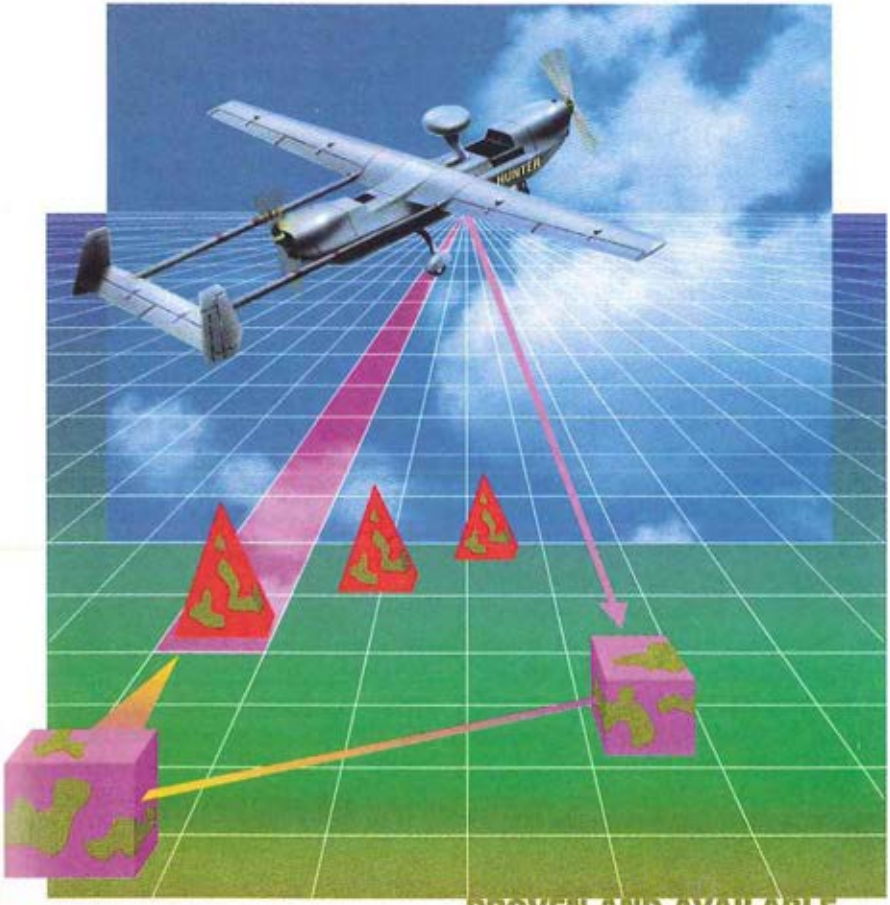
Meanwhile, the Defense Acquisition Board approved a plan that would continue with the low rate production of the seven Block 0 systems, and proceed with development and test of Block II. Block II as defined would include an auto track/search capability, a heavy fuel engine, training devices, and additional survivability studies. The DAB decision also approved the MS III exit criteria and the acquisition strategy report and shipboard compatibility objective.

The addition of a heavy fuel engine is seen as significant in light of the Army's decision to eliminate motor gasoline, for any purpose, beginning in 1995.

Since the DAB decision in January 1993, there have been several developments affecting the JTUAV. The Joint Requirements Oversight

HUNTER

THE TACTICAL UNMANNED AERIAL VEHICLE SYSTEM THAT HAS MET EVERY CHALLENGE



PROVEN AND AVAILABLE

TRW/IAI UAV Marketing Office
1001 Nineteenth Street North - Suite 900
Arlington VA 22209-1722
Tel: 703-276-5075
Fax: 703-276-5079

IAI

TRW

Council has validated a Navy requirement for 18 JTUAV systems, and the plan to deploy Hunter on LHA and LPD amphibious ships and attack aircraft carriers.

Also, training for 1993 was found to be incomplete due to system equipment malfunctions and logistics shortfalls. This resulted in the cancellation of Limited User Test II (LUT II).

In early summer I made several proposals to the Program Executive Officer, Unmanned Aerial Vehicles Joint Project, and the Assistant Secretary of the Navy (RD&A), the Service Acquisition Execution, who provides the acquisition policy and guidance for the Unmanned Aerial Vehicles program.

These proposals were for a Maturation and Operational Risk Reduction (MORR) program, a second Low Rate Production plan, and a plan for the management of the shipboard variant of the Hunter.

Advantages of the MORR phase included a reduced IOT&E risk, a shortened IOT&E, and resolution of the concerns expressed in a recent Government Accounting Office (GAO) report.

To minimize a gap in the contractor's production, with the resultant loss of skilled production workers and high re-start costs once full production is begun, we also are proposing a second LRIP to build a small number of additional Hunter systems, possibly four.

This proposal also would include adding the shipboard or "marinized" variant to meet the Navy's requirements.

In summary, although I have flown Army aircraft for over 27 years and proudly proclaim we are "Above The Best", I firmly believe there is a need and a place for UAVs on the battlefield in any conflict the Services may be called to respond to. These UAVs will save lives, save force structure, and save dollars. And, save the covers of magazines for some subject other than Army Aviation's Best.

★★

COL Tanguay is Project Manager, Joint Tactical Unmanned Aerial Vehicles, Redstone Arsenal, AL.

CORRECTION

In the article "A Salute to an Old War Horse and the Aviators Who Fly Her" appearing in the 30 June 1994 issue, one officer was left off the list of Army Medal of Honor recipients. MAJ William E. Adams, A/227th Helicopter Company, 52d Aviation Battalion, 1st Aviation Brigade, "Chickenman 6", was awarded the medal posthumously for actions on 25 May 1971. Thanks to reader Jim Roop for bringing this to our attention.

The Editor

BY COL GREGORY T. JOHNSON

THE SAFETY PUZZLE

A three part program for world class safety.

As my aviation career culminates and I prepare to "pull pitch" for the last time, I want to share some thoughts on aviation safety with my brother aviation commanders.

Reflecting over the past 25 years, I come to the realization that until I became a brigade commander, I never had to fix a broken safety program. I guess it was luck I was always assigned to units which had extremely high levels of safety consciousness, so I only had to emphasize steady-state safety maintenance; not so when I assumed brigade command.

I falsely assumed if I shared my safety philosophy (it's one that has been shaped by great mentors and superb warrant officers over many years) with all the officers and NCOs, they would embrace it as their own and I could reverse the devastating trend of the previous couple of years.

Wrong! Unfortunately, it took several mishaps, one by each of the four battalions/ sqaudrons culminating in a Class A, before I awoke and decided a more aggressive approach was necessary. It was in the development of this more aggressive plan of action that I recognized there are three necessary parts to a world class safety program: command involvement, organizational responsibility and constant focus. If any of the three prime factors are absent, your program will fail.

Command Involvement. Command involvement is the easiest piece to set in place. Heck, you're in charge — so just do it. I urge you

to start early. As part of the pre-command course at Ft. Rucker, AL, the Army Safety Center presents to incoming battalion and brigade commanders a synopsis of all mishaps from the past several years. Pay attention to it. Analyze it. Develop a safety action plan based on it. Implement your plan from the day you arrive. Don't acquiesce and think you can fix it over time. Strike fast and hard! I didn't, and this is where I made my first mistake.

As a first step, I suggest you gather all your officers and share with them your safety philosophy. Make sure they hear the words from your lips. Don't write it and send it through distribution — I guarantee they won't get the message.

Make sure your message includes the fact that "dumb" actions will result in strong punishment, and if they do happen, make your words good by putting teeth in them. Then make a full court press on little things. Seat belts, ground guides, proper tie down and moorings, tagging of parts and disposition of hazardous waste are a few that come to mind. Attack with vengeance! Rip some lips! Especially officers and NCOs. Trust me when I say the word will get out quickly. The message you want them to get is "that S.O.B. is serious!"

Another technique I would recommend is one I inherited from COL Jim Lloyd when he was my brigade commander. And that is to conduct mandatory Friday afternoon safety briefings by company commanders. The last act of the normal work week is the company commander talking for a few minutes to *all* his people on a topical safety issue or two. DUIs, drownings, winter driving, and falls are but a few examples. The key point is the last thing every soldier hears before the weekend is his leader talking safety.

A final recommendation I'd make is for you to close every meeting you conduct with a personal message on safety. There are a myriad of other things you can do. What you choose to do is not as important as that you "just do it". Your goal is to increase safety awareness — and personal command involvement is the only way you'll reach your objective.

Organizational Responsibility. This is a concept that is difficult to name, and even more difficult to ingrain. The words may be misleading, so let me explain.

There are some units in the Army that just don't have accidents. One that comes to mind is the former 501st AB(C), which later became the 4th Brigade, 1st Armored Division, now known as the Combat Aviation Brigade, 3d Infantry

Division. It's the guys and gals in Katterbach, Germany to whom I'm referring. They've had a great aviation safety record for years, even though they've been through four brigade commanders, hands full of battalion commanders, and hundreds of company commanders. What is it they're doing that's different? Why are they better than other units?

Having been a member of that great unit on two previous occasions, and having analyzed them, I think I've discovered the answer. The organization has accepted responsibility for its program, and every member of the organization has "pride of ownership" in their safety record. It's not the commander's program. It's not the safety officer's program. It belongs to the organization!

"Don't do anything to screw up our record" is the attitude that prevails. All members of the unit are safety officers and have developed a "sixth sense for safety" as well as the moral courage to correct a mistake before it becomes an accident.

I wish I had a recipe to make this or a formula to solve the equation. Unfortunately, I don't. It's just not that easy. It is the most difficult piece of the puzzle to put in place. I'm going to come back to this piece in the conclusion.

Constant Focus. During a tour as a commander, you'll find you have to fix the same problem two

or three times. You'll sit in a meeting and find yourself commenting to the group you've fixed this particular problem once before. It will then dawn on you that you are the only remaining member of the group that fixed the problem the first time.

The message you should get is we never fix anything permanently. At best, we only fix things temporarily — unless there is constant focus by all members of the organization.

Safety is a journey — not a destination. We never get to the objective. We never get it "fixed". If you take your eye off safety, think that you're "there", it will kick you in the seat of your pants.

Safety is not paragraph six of an operations order, nor is it one of the battlefield operating systems. Rather it is a part of every paragraph and included in every operating system.

It is not one of the glass balls that commanders juggle, it is the umbrella over the commander who is doing the juggling. It must pervade our thinking! It must be part of every thought and every task we perform every day. It's not a part-time thing. It's an "all-time" thing.

"Safety ... is not one of the glass balls that commanders juggle, it is the umbrella over the commander who is doing the juggling."

So there you have the three pieces of the puzzle. "How does it go together?" you ask. The answer is synergy. The action of the three pieces achieve an effect of which each piece is individually incapable. That's why I say your program must have all three pieces.

Start with command involvement. You can influence that piece the easiest. Work it hard and it will lead to increased safety awareness.

Individuals will begin to accept responsibility for their actions — don't neglect your sergeants, they're key players — which will lead eventually to the organization accepting responsibility.

Keep the pressure on, never let up. The pieces will come together.

Eventually, the three pieces to the safety puzzle will join as one solid piece, synergy will occur and your safety program is off and running. It may take your entire command tour. That's OK. What's not OK is waiting for tomorrow to start. Make it happen ... today!

★★

COL Johnson was the Commander, 12th Aviation Brigade, V Corps, at the time this article was written.

BY COL JOSEPH L. BERGANTZ

AVIATION TECHNICAL TEST UPDATE

A review of the past year at the ATTC.

Calendar year 1993 was an extremely busy year for the Aviation Technical Test Center (ATTC) at both its Fort Rucker and Edwards AFB locations. While overall workload remained constant (roughly 513,000 Direct Labor Hours), the workforce was reduced in size, due to the drawdown of the Army, by 26 civilian and 12 military spaces. In spite of personnel losses, ATTC has continued to provide quality testing services in a responsive manner and at a reasonable cost to the test customer. This article will highlight some of the more significant testing accomplishments achieved this past year.

In January 1993, ATTC contributed to the acquisition of the New Training Helicopter by providing limited qualitative handling qualities and performance data. This information substantiated user findings reported during the Training Effectiveness User's Evaluation. Five candidate aircraft were flown a total of 14.5 hours, and a report was submitted to TEXCOM for inclusion in their report.

Throughout the spring, ATTC's Airworthiness Qualification directorate at Edwards AFB continued to test and retest the engine control software on the AH-64A 701C engine. This effort proved quite challenging since it was software intensive, and many fixes were made which generated other problems along the way. However, through perseverance, all software problems were eventually resolved, paving the way for 701C engine upgrades for the entire Apache fleet. In the end, some 18 soft-

Figure 1

ware versions were written and tested, leading to the final version.

A recurring winter event is annual icing testing. Such testing was conducted at ATTC's off site location, Duluth, Minnesota, which is on the western extremity of Lake Superior. This testing typically occurs in the January-March timeframe and consists of several tests. This past year, ATTC conducted natural and artificial icing tests on an RC-12N Special Electronic Mission Aircraft and on the CH-47D Engine Air Particle Separator (EAPS).

The artificial icing testing is perhaps the most fascinating piece of this testing effort. It incorporates the use of ATTC's Helicopter Icing Spray System (HISS) aircraft and its icing instrumented U-21A, along with the aircraft being tested. The HISS aircraft is a modified CH-47D with an internal 1,800 gallon water tank and an external boom, which gravity feeds the water through nozzles to create an ice cloud (Figure 1). The water flow rate controls the severity of the ice in the cloud being formed. The cloud size is roughly eight feet tall by 36 feet wide, and the test aircraft positions itself in the cloud approximately 100 feet from the rear of the HISS. The Test Center's U-21A, which is instrumented with ice detectors, dew point sensors, and droplet sizing instruments, measures the cloud's particle size and cloud density to ensure that the proper size particles and severi-

ty of ice are being produced. These tests helped to isolate some problems previously encountered on the RC-12 in natural icing and eliminated the temperature operating restriction on the CH-47D with EAPS installed. The icing season for FY94 features the Navy's V-22 Osprey, an example of ATTC's inherent capability to provide assets for interservice testing in concert with joint testing (Reliance) initiatives.

In February, the UH-60Q MEDEVAC helicopter underwent a limited Preliminary Airworthiness Evaluation (PAE). This initial test was to support the proof of concept for an upgraded version of a medical evacuation helicopter and was conducted at Lexington Blue Grass Army Depot in Richmond, KY. During this first look not all systems were operational; however, the majority, which were, worked well and several enhancing characteristics were noted.

In March, the test center's JU-21H was modified to accept installation of an Infrared Line Scanner (IRLS). This IRLS was tested at Key West and later at Eglin AFB in support of the Aerial Reconnaissance Low (ARL) project manager and the Open Skies Treaty Office. This work was a major step in meeting testing requirements for the Program Executive Office for Intelligence and Electronic Warfare. A parallel effort to develop an aviation multi-sensor test bed aircraft was also underway. This effort took a C-23A Sherpa and modified it to accept a nose-mounted MTI Radar, belly-mounted IRLS, FLIR, and EO-TV sensors, and a roof-mounted SATCOM antenna for data and voice satellite communications. Also installed inside were two SUN workstations for integration of all sensor inputs. This test bed aircraft completed its PAE in April at Edwards AFB and returned to Fort Rucker, shortly thereafter, to complete interior modifications and begin sensor testing. This test bed is a new capability to ATTC and has been added to the joint test and evaluation support aircraft list.

Another important test, which concluded the first week of March, was the OH-58D Kiowa Warrior Cold Weather test. This test was conducted with support from the Cold Regions Test Center (Figure 2) at Fort Greely, AK, and additional test support for the armament portion was provided by Yuma Proving Ground. The concept of the test was to wring out Kiowa Warrior at extremely cold natural temperatures, and successful results would allow the fielding of Kiowa Warriors to Korea. While the temperatures were not as low as desired, some valuable testing was accomplished. In fact, one of the highlights of the test was the demonstration of the Kiowa Warrior's superb transportability characteristics via a C-130 aircraft.

Figure 2

Although several shortcomings were identified, which the project manager office is addressing, the overall test was quite successful and justified the Korea fielding.

During the spring and culminating in June the planning and execution of a unique test for the Comanche program, known as Hyperstereopsis, occurred. This effort was directly in support of the U.S. Army Aeromedical Research Lab. The purpose of the test was to identify any pilot human factor or safety problems encountered by wearing the proposed Honeywell Comanche helmet (with image intensification tubes spaced wider than the normal interpupil distance) and/or in switching from the helmet-integral Night Vision System to the aircraft-integral Pilot Night Vision System (PNVS). The AH-64A was used as a surrogate for this test representing a Comanche platform.

The primary safety concern was whether the pilot's depth cues at NOE altitudes would be adversely affected enough to pose significant safety hazards. This 150 flight hour program was flown with ATTC safety pilots in the back seat and six front seat pilots from the 6th Cavalry Brigade at Ft. Hood, TX. Although pilot workload increased initially, all subject pilots concluded after a minimal train-up period that flying with the new helmet was acceptable, and that the false depth perception encountered could be

overcome with training and familiarity.

In March, airworthiness test pilots flew the first PAE on the Longbow Apache. This first PAE was attuned to the airframe, since many of the primary systems were not operational yet. A second PAE was later flown in June which checked many of the systems previously not available. These events helped the project manager and the contractor team make needed improvements which led to the roll-out ceremony of the first Longbow Apache on 1 September 1993.

The UH-60Q underwent its final PAE in July, at which time many of the systems, which were previously non-operational, were evaluated. As a result, the UH-60Q was cleared for both day and night operations under Instrument Flight Rules and with Night Vision Devices.

Also, during the summer, ATTC initiated tests on an AH-64A external fuel tank configuration, which was used extensively in Operation DESERT STORM. This type of performance and handling qualities test is quite time consuming and eventually leads to the performance charts in the operator's handbook. Once completed, ATTC developed the charts to be placed in the appropriate -10 manual.

In the late summer, ATTC participated in another interesting test program with the Aeromed Research Lab. This effort was to determine the effects of short duration, moderate load factors on aviators while conducting air-to-air combat-type maneuvers. It turns out that very little information exists on this phenomenon, while a wealth of information is available on fixed-wing, long duration, high-G effects.

Once again, the AH-64 was used as a Comanche surrogate. In particular, ATTC's highly instrumented AH-64 at Edwards AFB was used, since only a modest amount of additional instrumentation was needed for physiological measurements. The results of this test showed that by employing the anti-gravity straining maneuver (i.e. tensing the legs, then the abdomen, and finally the upper torso/arms) all tendencies to gray out and lose peripheral vision could be avoided.

A final noteworthy program which ATTC has conducted for ATCOM and PEO Aviation is the Lead-the-Fleet (LTF) Program. This effort accounts for roughly 22% of ATTC's annual flying-hour program. The basic purpose of LTF is to monitor the performance of flight safety parts on the Army's fleet of advanced aircraft. These LTF aircraft fly the same profiles as the fleet at large, but at much faster rates. While these profiles are being flown, meticulous reliability and maintainability data are collected which often lead to materiel improvements

such as ECPs and MWOs or procedural improvements such as revised maintenance procedures. By identifying and documenting problems before the fleet encounters them, much time and money can be saved, since fixes can be developed before the problems take their toll.

One of the most important benefits derived from LTF aircraft is the ability to conduct "piggyback" testing. That is, the LTF aircraft are ideal platforms for aviation project managers and item managers to use for testing their peculiar needs. It is estimated that the aviation community return on investment is about four dollars worth of testing for every dollar spent on the LTF program. It is not unusual for an LTF aircraft to have as many as 10 or more test items installed at once. This program has proven its value time and again through not only providing cost avoidance, but also by contributing to improved reliability, availability, and maintainability.

As mentioned earlier, these are by no means the sum total of all testing done at ATTC, but merely represent some of the more visible tests. Another initiative that ATTC has subscribed to is the effort to become more involved in developmental programs early on to help reduce acquisition and testing times. In that regard, and to build a strong combined test team, ATTC has provided a test coordinator/engineer on site at the Comanche program office in Ridley Park, PA. This relationship has proven quite successful. In a similar fashion, ATTC plans to provide near continuous support on site at Ft. Campbell, KY to the Special Operations Aircraft project manager and his contractor team, as well as to the 160th SOAR(A). This presence will help collect data and reduce it in the developmental effort of the Multi-Mode Radar for the MH-60K and the MH-47E. ATTC will both help with data reduction and serve, through its test pilots and engineers, as a valuable tool for identifying problems early on with the integrated avionics system and associated sensors. ATTC will then work closely with the project manager/contractor team to resolve these problems.

As you can see, the year in review has been quite a busy one. But ATTC has been able to meet the challenges head on and overcome them. We eagerly look forward to our work in the future. Testing requirements in the Longbow Apache will be far greater in FY 94, and Comanche's requirements, after being streamlined, must be addressed as well. ATTC consistently strives to take advantage of these opportunities and to live up to its motto — "Test Above the Best."

★★

COL Bergantz is the Commander, U.S. Army Aviation Technical Test Center, Ft. Rucker, AL.

FINAL FLIGHT
(continued from page 19)

hallmark activity for the broadening of warrant officer skills across the Army. Our NCOES training is paramount for the leadership and technical training for our NCOs. NCOES should be aligned at Ft. Rucker to garner training base efficiencies and improve training. The Aviation Branch must continue its press to attract minority Americans and women to its ranks.

Army Aviation can lead the way in harnessing the power of the Reserve Components. In the post Cold War environment, all components must be shaped for short-notice contingency operations. This will require great innovation and sacrifice; we must resist maintaining the status quo. Statutes must be changed to give the National Command Authority immediate access to fully modernized Reserve Components. While offering tremendous potential, breaking the paradigm of past attitudes and practices will prove a formidable task.

The consolidation of soldier skills in many 67 and 68 MOS areas has been a great success. Soldiers currently qualified in mature aircraft systems must be retained and trained in new aviation MOSs as mature aircraft are removed from service. It will take a lot of work to minimize personnel shortfalls during this drawdown. Avionics maintenance personnel and ATC equipment repairers will change proponency so they can be branch competitive in the future. Their "bench repairer" skills are not compatible for consolidation within the branch and low density within the MOSs make promotions difficult. The 93C MOS is being considered for capping at the SFC and migration to 93P due to lack of structure at the senior NCO level.

Simulation technology must be harnessed for training and combat development purposes. Sophisticated networks are now available and will be matured to link combined arms elements in real, constructive, and virtual environments. In the future, much of our individual, crew, and collective training will be done in a simulation environment; we can and should trade off some OPTEMPO to accomplish this.

The simulation environment will permit mission rehearsal on terrain developed from a worldwide database containing natural and manmade terrain; dynamic terrain will be commonplace in our training environments. Sophisticated opposing forces with blue-gray technologies will offer a significant challenge in these simulation environments. The time is not far off when aviators will go "on line" with their home personal computers and interact with other warriors on a simulation network. This Information Age technology has significant implications for the National

Guard and the USAR components.

Central to our 21st Century modernization strategy is the retirement of older systems. We remain committed to reducing the helicopter fleet from ten systems to an objective of four; the fixed wing fleet from eight to four. UH-60 procurement should continue so the aging UH-1 can be replaced. Apache is being modernized and Longbow will be brought on line. All OH-58Ds will be converted to Kiowa Warrior configuration, and we must continue to press for CH-47D modernization. Comanche remains the centerprice for 21st Century Army Aviation. Research and development should be focused on advanced composites, propulsion, sensors, missiles, avionics, visionics, and electronic survivability.

We must harness information technologies to sustain the force. Smaller, high technology forces must be complemented with state-of-the-art diagnostic equipment in the hands of highly trained technical specialists. Aviation's "Stripes on the Flight Line" and Technical Career Track for our noncommissioned officers are exactly on target and will do much to harness the scare resources available. The notebook computer has nearly limitless possibilities, and will make electronic logbooks commonplace; technical manuals and parts requisition can become paperless. Data buses on our aircraft will record usage data and help predict fatigue and failure parameters. Twisting, bending and torsion moments experienced by the aircraft will be compared instantaneously with engineering designs to determine when the component should be changed.

We must manage risk and eliminate avoidable accidents. Our crew coordination initiative will help greatly in raising cockpit awareness when operating complex systems.

So as I wait for the two minute cool down period to lapse at the end of my final flight and fill out the logbook, my thoughts are on what a privilege it has been to serve as Chief of Army Aviation. Your contributions make me immensely proud. While there are future uncertainties, I believe there are undeniable opportunities. Success and growth seldom come from mountaintop experiences; ideas and innovations are best nurtured in the valleys and tempered by fire.

So it has been in the past and so it shall be in the future; challenge fosters opportunity and growth. It is clear to me Army Aviation will be on point, leading the U.S. Army into the next century.

★★

MG Robinson is Chief, Aviation Branch and Commanding General, U.S. Army Aviation Center (USAAVNC) and Ft. Rucker, AL and Commandant, U.S. Army Aviation Logistics School.

Fly First Class For Half Price.

Now, TEAC makes first class, ruggedized commercial video recording affordable. Our new V-80 Hi-8mm airborne video recorder is small, lightweight, and delivers superior resolution and 120 minutes of recording time. It incorporates a built-in 28 VDC power supply and automatic internal heater. And we'll guarantee production and logistics support for the life of your program.

All at less than half the price of other military airborne recorders.

Designed for new applications or retrofit, the V-80 meets or exceeds most military requirements. Yet you can use it with inexpensive consumer ground playback units and videocassettes.

Our V-80 carries on the tradition of proven quality and unequaled performance that has made TEAC the world standard. TEAC recorders are used on the Space Shuttle, RPVs, ground vehicles and over 80% of the free world's military aircraft.

The V-80 is in full production in support of a variety of military programs, including Cobra and Blackhawk retrofits, and has already been flight proven on the Apache.

TEAC's V-80 — the first class choice for Apache, Cobra, Blackhawk and Comanche!

TEAC®

INDUSTRIAL VIDEO PRODUCTS DIVISION
7733 Telegraph Road, Montebello, CA 90640
(213) 726-0303 • Fax: (213) 727-7621

AIR ASSAULT CHAPTER
FORT CAMPBELL, KY

LTC Craig T. Abington
1LT Brian D. Almquist
WO1 Robert M. Bolton
CSM Lewis E. Buchanan, Ret.
CW4 Paul K. DeMilia
1LT Ryan W. Emerson
LTC Tony R. Franklin
CW4 Ralph P. Lageman
MAJ William K. Sorrell, Jr.
CW4 Terry J. Spencer
CW2 Randall M. Tatum
SSG Robin M. Vozar

ALOHA CHAPTER
HONOLULU, HI

MAJ Daniel A. Oshiro
MAJ Jimmy C. Stewart
CW2 Jerry A. Walters II

AMERICA'S FIRST COAST CHAPTER
JACKSONVILLE, FL

Mr. Jim Gallogly

ARIZONA CHAPTER
MESA, AZ

CW2 Daniel L. Toporek

AVIATION CENTER CHAPTER
FORT RUCKER, AL

2LT Jennifer L. Andress-Saul
SFC Galo M. Ballon
WO1 Damian D. Balthaser
CW3 Duward C. Bean
CPT Darren W. Behm
WO1 David S. Bergeron
CPT Patrick E. Blair
WO1 Jeffrey H. Blunden
WO1 Michael P. Boyle
MSG Gregory C. Brooks
CPT Timothy D. Brown
SFC Ruben Burgos
1LT Ronald W. Burkett
CW2 Jason M. Caban
Mr. William J. Cannon
WO1 Leonte I. Cardona
WO1 Gerard P. Conklin
SGM John W. Conyers
1LT William R. Cristy
1LT John CW. Curley
WO1 Mark J. Dominguez
WO1 Patrick B. Duzan
MAJ William J. Ewell
CW4 Billy F. Fletcher
CPT James R. Foxworth
WO1 Christopher J. Frey
2LT Collin H. Frisbin
MSG Barry D. Fuller
WO1 Brian L. Gillespie
CPT Paul F. Grace
WO1 Michael V. Griffin
2LT Robert C. Griffin
CW2 Milo W. Hachtel
CW2 Kurt W. Hammond
MAJ Charles Hardy
WO1 Jolly J. Harper
2LT Oliver L. Hasse
CPT Harvey A. Henningtion
CW3 Irene Holmes
Mr. Joe J. Hudgens, Jr.
SSG Eric L. Ivey
WO1 Dwight J. Johnson, Jr.
Mr. Neal E. Johnson
WO1 Stephen J. Kaye
CPT Mary B. Kinder
WOC Richard W. Knowlton
CW4 Jerry A. Krometis
CW2 Vladmir Kultschizky
WO1 Michael M. LaGrave
CW3 Joseph A. Lane
2LT Jason A. Lange
2LT Grover J. LaPorte
WO1 Harold J. LeBlanc
2LT Donald J. Lee
LTC Lance J. Luftman
CW3 Michael S. Mace
MAJ Steven M. Mahoney
2LT Dale P. Marchand II
WO1 Daniel A. Mariscal
MAJ Oscar V. Martinez
2LT Robert A. Martinez
1SG Frank M. Matsko
2LT Laurel I. McFarland
CPT Jeanette M. McMahon
CPT Michael J. McMahon, Jr.
CW3 Michael L. McNamara
Mr. Cecil C. Money
2LT Charles I. Montana
Chaplain (MAJ) Henry B. Moreau
WO1 Terrence A. Morisi
CW4 Jerry Mosley
2LT Christopher J. O'Donnell
CW3 Rafael A. Olivera
2LT Michael J. O'Neill
CW3 John K. Patterson
CW2 Robert A. Pupalaikis
2LT Milton S. Quiros
WO1 William M. Ragle
MAJ Walter P. Rainey
MAJ Eugene W. Reaves, IV
WO1 Michael V. Register
CW3 Donald W. Rice
CW2 David A. Ruddell
CPT Robert G. Saale
MSG Jerry D. Seimer
CW3 Mariano Sepulveda
2LT Richard J. Shannan
CPT(P) Newman D Shuffebarger
SFC Willis R. Simmons
WO1 Dirk E. Stack
PFC David J. Smith
2LT Matthew J. Spiess
SSG Thomas P. Steber
WO1 John D. Steverton
WO1 Dennis D. Sutton
CW3 Howard L. Swan
CW3 Norris H. Taylor
WO1 James D. Theissen
WO1 Eric J. Thompson
Mr. Robert D. Thompson
WO1 Peter G. Trafas
CW2 Alan D. Vangroll
MAJ George A. Vidal, Jr.
CPT Rodolfo Villarreal, Jr.
CW3 Frank C. Vincent
WO1 John H. Wall, IV
1LT Neal A. West
2LT Harold H. Whitten
SGM Daniel L. White
WO1 James E. Williams
SFC Alexander A. Yamamoto
Mr. Kevin T. Zemetis

BLACK KNIGHTS CHAPTER
WEST POINT, NY

2LT Brad D. Barker
CDT Kenneth C. Cole
CDT James E. Dimon
CDT Sean E. Farrar
2LT Brian D. Forrest
2LT Nicholas H. Gist
CDT Jennifer A. Henderson
2LT Christian H. Huettemeyer
2LT Michael Krause
CDT Juan D. Lane
CDT Jason L. Miller
CDT Stephanie M. Natale
CDT Daniel M. Ruiz
CDT Gerald D. Sentell
CDT Aaron A. Wagner
CDT James G. Wideman
CDT Marc D. Wood
CDT Christopher M. Zinill

CENTRAL AMERICAN CHAPTER
FT. CLAYTON, PANAMA

CW2 Todd A. Clark
SPC Christopher T. Glatz
SGT James R. Hamm
CW2 Thomas V. Higgins, II
CSM Manuel Marrero

CENTRAL FLORIDA CHAPTER
ORLANDO, FL

Mr. George E. Hoyt
Mr. James S. Keeler
Ms. Gail Lenz
Mr. Dave Manning
LTC John W. Schachleiter, Ret.
Mr. Kenneth W. Starnes
Mr. Donald L. Stiver
COL Delloyd Voorhees, Jr.

CHECKPOINT CHARLIE CHAPTER
BERLIN, GERMANY

Mr. George Bowling

CHESAPEAKE BAY CHAPTER

Mr. Rod T. Bachman
Mr. Frank S. Calcaterra
Mr. Bruce D. Malone
Ms. Rowemary M. Mirabelle

COLONIAL VIRGINIA CHAPTER
FORT EUSTIS, VA

MAJ Waldo F. Carmona
MAJ Eugene A. Pawlk, Jr.
Mr. Daniel W. Sullivan

CONNECTICUT CHAPTER
STRATFORD, CT

Mr. Rudy Beckert

CORPUS CHRISTI CHAPTER
CORPUS CHRISTI, TX

Mr. Donald B. Cole
Mr. Dwight Martin
Ms. Maria G. McLaurin
Mr. Fernando Salinas
Mr. Clayton D. Vance

DELAWARE VALLEY CHAPTER
PHILADELPHIA, PA

Mr. James M. Olfky

EDWIN A. LINK MEMORIAL CHAPTER
BINGHAMTON, NY AREA

Mr. William L. McHenry

GIEBELSTADT CHAPTER
GIEBELSTADT, GERMANY

CW3 James H. Garst

GREATER ATLANTA CHAPTER
ATLANTA, GA

CDT Clair A. Gill

GREATER CHICAGO AREA CHAPTER
CHICAGO, IL

LTC Ossie L. Hendrix
LTC Clay C. Hinderliter
CW2 Mark A. Jackson
LTC James G. Jenke
WO1 Keith Joseph Koca
CPT Maxcy B. O'Tuel, Jr.
CW2 Michael G. Schweizer

HIGH DESERT CHAPTER
FORT IRWIN, CA

CPT Joseph E. Thome

INDIANTOWN GAP CHAPTER
INDIANTOWN GAP, PA

Mr. Ira D. Carson

IRON EAGLE CHAPTER
HANAU, GERMANY

SPC Erick G. Thek

IRON MIKE CHAPTER
FORT BRAGG, NC

WO1 Bruce D. Boggs
CW2 John D. Collins
CW3 Reed D. Fail
CW3 Edwin E. Heidtke
2LT Scot R. Hodgdon
CW2 Bruce K. Irwin
1LT Thomas Joseph Jacobs
MAJ Theodore C. Johnson
MAJ Richard E. MacNealy
SPC Frank G. Smith III
CPT Robert A. Spuhl
CW2 Cecil S. Stuart
CPT John Woodbery

JACK H. DIBRELL (ALAMO)
FORT SAM HOUSTON, TX

CDT Keith W. Haufler

LEAVENWORTH CHAPTER
FORT LEAVENWORTH, KS

CPT Gregory M. Haug

LINDBERGH CHAPTER
ST. LOUIS, MO

Ms. Christine A. Bennett
Ms. Angela R. Biekert
MAJ Robert J. Bourlier
Mr. James N. Cadell
CPT Michael D. Cummins
Mr. Chris C. Holden
Mr. Gary L. Johnston
Mr. Dan J. Kardell
LTC Sidney E. Lyons, Jr., Ret
Ms. Leslie M. Neel
Mr. Ronald F. Nemeth
Mr. Reed I. Shafer
Mr. John Small
LTC Laurence E. Thomas, Jr.
Mr. James A. Warsaw

MID-AMERICA CHAPTER
FORT RILEY, KS

WO1 Stacy L. Owens

MINUTEMAN CHAPTER
WESTOVER AFB, MA

SSG Donna M. Beal

MONMOUTH CHAPTER
FORT MONMOUTH, NJ

Mr. Robert A. Alexander
Mr. Charles S. Goldy, Jr.
Mr. Charles B. Hodell
Ms. Ping Nar Lau
Mr. David M. Orth
CDT Stephen T. Shore
Mr. Joseph A. Urquhart
COL Paul J. Wicklife, Ret.

MORNING CALM CHAPTER
SEOUL, KOREA

Mr. Bog Hyun Han
Mr. Yong Soo Jung
Mr. Yoon Kyum Kim
COL Steven J. Moody
Mr. Sun Young Song
MAJ Michael L. Stark

NORTH COUNTRY CHAPTER
FORT DRUM, NY

Mr. Warren L. Imhof
1SG James R. McCombs, Jr.
CW2 Brian S. Patton

NORTH TEXAS CHAPTER
DALLAS/FORT WORTH

PSG Francis G. Furrie
2LT Jack C. Hunnicut
Mr. Bill Wissore
Mr. Dennis R. Wyrick

NORTHERN LIGHTS CHAPTER
FORT WAINWRIGHT/
FAIRBANKS AK

CPT William R. Newcombe

OLD BILL CHAPTER
FORT BLISS, TX

2LT Patrick C. Petray

PHANTOM CORPS CHAPTER
FORT HOOD, TX

CPT James A. Bryant
2LT Scott R. Colcord
CW3 Dodd M. Day
CW2 Paul M. Dean
CW2 Bobby W. Hall, II
CPT Curtis W. Hoffman
CPT Ronald F. Lewis
CW2 Dennis M. Long
SSG Gary McKeehan
CW3 Ellis McRoberts
SPC Christopher J. Mech
CPT Steven P. Milliron
CW3 John F. Reno
CPT George W. Shafer
CW2 Dennis C. Sorey
PFC Charles J. Stackhouse
PFC Gid A. Townsend
CW3 David E. Unruh
CSM Abe West, Ret.
SPC Joey R. White
2LT Brian P. Zarchin

PIKES PEAK CHAPTER
FORT CARSON, CO

CDT Paul D. Moga

ROCHESTER CHAPTER
ROCHESTER, NY

Mr. Robert K. Robbins

SOUTHERN CALIFORNIA CHAP.
LOS ANGELES, CA

Mr. Lodie A. Gutterman
Mr. Stephen J. Ignat
Mr. John A. Male
Ms. Anita Phillips
Mr. Victor Rios

TALON CHAPTER
ILLESHEIM, GERMANY

CSM Lawrence J. Owens

WASHINGTON DC CHAPTER
WASHINGTON, DC

CDT Derek A. Kovacsy
LTC Alan H. Ray
Mr. Todd A. Weiler

WINGS OF THE WARRIORS
CAMP STANLEY, KOREA

WO1 Ronald D. Pelot
Mr. David P. Swanson

WRIGHT BROTHERS CHAPTER
COLUMBUS, OHIO

MAJ Craig T. Cenesiie

MEMBERS WITHOUT CHAPTER AFFILIATION

Mr. Charles R. Aker
Mr. David W. Anderson
Mr. Tom Austin
SSG Linda K. Burgess
Mr. Rene J. Chikhani
Mr. J. Roger Chouinard, Jr.
Ms. Gail V. Clark
Mr. James C. Crouch
OPT Cary G. Cuyler
CDT Philip E. Graham
Mr. John R. Hanson
Mr. Paul Janok
Mr. George E. Kane
2LT Joshua S. Kennedy
CW2 Joseph M. Klein
Mr. Marcus S. Kim
MAJ James W. Macaleese
CW2 David L. Meyers
Mr. Larry A. Monson
Mr. Gary K. Morris
Mr. James J. Murphy
Mr. Erik Otheten
CW2 Michael E. Shay
CW3 Jeffrey D. Smith
Mr. Rob Speijer
MAJ Robert J. Straub
Mr. Brad Taylor
Mr. Fred W. Waldmann
MAJ Curtis G. Whiteford
Mr. George B. Williams

ARMY AVIATION ASSOCIATION OF AMERICA (AAAA)

49 RICHMONDVILLE AVE., WESTPORT, CT 06880 • PHONE: (203) 226-8184 • FAX (203) 222-9863

Please check one: ☐ **Change of Address;** ☐ **New Membership Application**

I wish to join the Army Aviation Association of America (AAAA). My past or current duties affiliate me with U.S. Army Aviation and I wish to further the aims and purposes of the AAAA. I understand that my membership includes a subscription to the AAAA-endorsed magazine "Army Aviation", and that my membership will start on the subsequent first of the month. Contributions or gifts to AAAA are not deductible as charitable contributions for federal income tax purposes. Dues payments are deductible by members as ordinary and necessary business expenses.

Rank/GS Grade _____ First Name _____ MI _____ Last Name _____ Sex _____

Mailing Address _____

Mailing Address _____

City _____ State _____ Zip + 4 Code _____

Active Duty or Civilian Job Title and Unit or Firm Name _____

( ) _____ Area Code Office Phone ( ) _____ Area Code Residence Phone

Consent: ☐ I do ☐ I do not consent to the publication or release of the above information to third parties.

Signature _____ Date _____

Nickname _____ Spouse's Name _____

Date of Birth (Mo/Yr) _____ Social Security No. _____

AAAA ANNUAL DUES

Applicants other than those listed below:
( )1 yr, $21; ( )2 yrs, $39; ( )3 yrs, $57

Full-Time Students; Enlisted; WOCs; GS-8 DACs & Below; Wage Board 12 DACs & Below:
( )1 yr, $14; ( )2 yrs, $25; ( )3 yrs, $36

Add $5 per year if you have a foreign, non-APO address.
Add $15 if your check is drawn on a foreign bank.

☐ Check enclosed payable to "AAAA" or charge to:
☐ AMEX ☐ Diners Club ☐ Mastercard ☐ Visa

Card No. _____

Amt $ _____ Exp. Date _____

Signature: _____

Date: _____

Check (✓) Your Professional Qualification:

( ) Army Active Duty
( ) DA/DOD Civilian
( ) Army Nat'l Guard
( ) Army Reserve
( ) Army Retired
( ) Other US Military Service
( ) US Defense Industry
( ) Consultant
( ) Publishing/Other Aviation
( ) Foreign Military Service
( ) Foreign Defense Industry
( ) Other _____

Are you a former AAAA member? ☐ Yes ☐ No

If yes, what year did you join? _____

Chapter Affiliation Preferred _____

Print Name of Recruiter _____

ARRIVALS DEPARTURES

Colonels

Ricketts, Allan
5 Kirby Street
Fort Leonard Wood, MO 65473

Lt. Colonels

Colcord, Kevin T.
c/o General Delivery
Davidson, NC 28036
Decker, John E.
Dept. of Military Science
St. John's University
Collegeville, MN 56321
Garrity, Beth
4501 N. Jordan Court
Alexandria, VA 22304
Meis, Emil F. III
5107 Skyline Village Ct.
Alexandria, VA 22302
Mundt, Stephen D.
614 Citation Loop
Harker Heights, TX 76543
Scherrer, Kevin G.
HHC, Avn Bde 2ID
Unit 15435
APO AP 96257

Majors

Carroll, Gerald A.
1215 Cobblestone Lane
Clarksville, TN 37042
Filip, Carl S.
5241 Shewsbury Road
Leitchfield, KY 42754
Matson, Jerry F.
2-2 Aviation, Unit 15427
APO AP 96257
Owen, Edward H.
c/o Ron Estep
724 N.E. 70th Street
Boca Raton, FL 33487
Simmons, James M.
237 Andover Road
Fayetteville, NC 28311
Wells, Stephen M.
HHC, 3-25th Assit Hel Bn
Fort Drum, NY 13602

Captains

Bheodari, Balram J.
PO. Box 399
Jolon, CA 93928
Dangle, John W. Jr.
1429 Gill Street
Bldg. 438D
Watertown, NY 13601
Johnson, David A.
2404 Raspberry Circle
Manhattan, KS 66502
Korycinski, Donna K.
2101 Hazeltine Lane
Austin, TX 78747
Merkel, Kenneth O.
669th Sqdn, 4th Army Air
BFPO 41 Hobart Brcks FRG
APO AE 09103
Pope, Talmadge D.
126 Coachman Drive
Aiken, SC 29803
Reinwald, Allison R.
HHC, 5-158th Avn Regt
Unit 26439, Box 331
APO AE 09182
Ruedisueli, John P.
2506 Rampart Loop
Killeen, TX 76542
Vanasse, Meg
Route 3, Box 32
Cameron, NC 28326
Wing, John M.
123 Thornell
San Antonio, TX 78235

1st Lieutenants

Kuppich, Laura A.
6213 Lakeway Drive
Fayetteville, NC 28306

2d Lieutenants

Jackson, James W.
133 Parkside Avenue
Rochester, NY 14609
Jenkins, Harold A.
114 Woodfield Place
Enterprise, AL 36330
Mitchell, Darren S.
3309 Melba Drive
Fayetteville, NC 28301
Reilly, Neil A.
2649 Westminster Way
Albany, OR 97321
Williamson, Jack W.
HHC Avn Bde, Unit 15435
APO AP 96257

CW4s

Church, James R.
B Co, 7-227th Avn
Unit 20197, Box 187
APO AE 09165
Darnell, William T.
2991 Blue Pine Lane
Niceville, FL 32578

CW3s

Pascalar, Michael C.
B Co. 1st MI Bn, CMR 430
APO AE 09096
Roose, Daniel J.
413 Grand Pine Avenue
Enterprise, AL 36330
Stegmeyer, Michael W.
308 Cooper Street
Merrill, WI 54452
Taulbee, Robert A.
6419 Fireside Court
Alexandria, VA 22310
Trigger, Michael E.
P.O. Box 30253
Enterprise, AL 36330

CW2s

Baker, Keith S.
4911 Hathaway
Lebanon, OH 45036
Mercado, David
1259 Araiia Drive
Fayetteville, NC 28314
Reyes, Gregory S.
1427 Janet Lane
Copperas Cove, TX 76522

WO1s

Graham, Charles G.
P.O. Box 421514
Kissimmee, FL 34742
Hebert, Steven A.
P.O. Box 174
Fort Campbell, KY 42223
Heimback, Douglas A.
B Co, 3/227th Avn
Unit 20196
APO AE 09165
Kelly, Colin W.
3216 Periwinkle Drive
Fayetteville, NC 28306
Miller, Monty
P.O. Box 73352
Fort Bragg, NC 28307
Richards, Brett A.
C Co, 2-2 Avn Regt
Unit 15430, Box 916
APO AP 96257

Sergeants

Marvin, Robert A. SGT
HHT,3/4 Cav
CMR 464, Box 302
APO AE 09226
Ortiz, Joseph M. SGT
15415 35th Avenue West
Apt. E101
Lynwood, WA 98037

Specialists

Tait, Christian SPC
B Co, 2/58th Avn
Fort Hood, TX 76544

DACs

Cobb, Bernard A. Mr.
1536 Eagle Nest Circle
Winter Springs, FL 32708

Civilian

Weaver, Mark C.
9610 Alisa Brooke
San Antonio, TX 78250

Retired/Other

Lester, Rodney D. LTC
2034 Carrie Way Lane
St. Louis, MO 63138
Shaver, Thomas J. LTC
226th Med Bn
CMR 434, Box 422
APO AE 09138

Above: BG Walter L. Stewart, Jr. (left), Assistant Division Commander-Support, 28th Infantry Division (Combat), receives an Order of St. Michael Bronze Award from COL Gregory D. Parrish (right), Deputy Assistant Commandant-Army National Guard, USAAVNC, Ft. Rucker, AL on 14 May 1994 during the 28th Aviation Brigade's Dining Out.

Below: COL William J. Elder (left), President of the Morning Calm Chapter, presents Dr. Park Hae-Bock (right) with a AAAA Certificate of Appreciation for his support of Army Aviation Day, 14 May 1994. Dr. Park is the President of the Yongsan Korean-American Friendship Council and contributed prizes to the top male and female runners in four age groups.

New AAAA Chapter Officers

Aviation Center:
CPT Richard T. Phillips (VP, Awards).

Checkpoint Charlie:
Billy Johnson (Pres.); Gert Knecht (SrVP); Heike Behrendt (Secy); Frank M. Reynolds (Treas.); Eddie Gayle (VP, Memb.); Kurt Behrendt (VP, Prog.).

Colonial Virginia:
LTC Peter A. Notarianni (SrVP); CPT Deborah L. Snyder (VP, Memb.); CPT Lisa S. Glen (VP, Prog.); COL Clifford E. Letts, Jr. (VP-at-Large).

Connecticut:
Mr. Anthony C. Patti (SrVP).

Greater Chicago:
CW4 James A. Carlsen, (Treas.); LTC Clay C. Hinderliter (VP, Memb.); Gerry F. Ventrella (VP, Civilian Affrs.); CPT Robert A. Knuth (VP, Scholarship); WO1 Michael B. Milroy (VP, Chapter Awards).

Iron Eagle:
LTC Tony S. Lieto (Secy); LTC Robert E. Cox, Jr. (VP, Memb).

Leavenworth:
MAJ James W. McKnight, Jr. (VP, Membership).

Midnight Sun:
CPT Stephen E. Joyce (Pres.); CW3 John F. Amerson (Treasurer).

Talon:
CW3 James E. Thompson (Pres); CW3 Gregory A. McDonald (Secy); 1LT Shane E. Bartee (Treasurer); 1LT Donald R. Baker (VP, Public Affrs); 1LT Jonathan O. Gass (VP, Prog); 1SG Timothy W. Deck (VP, Sr. Enlisted Affrs).

Obituary

MG JOHN W. SEIGLE

MG John W. Seigle, Ret., vice president for planning and business development of Sikorsky Aircraft of Stratford, CT, died on April 3 at St. Raphael's Hospital in New Haven.

MG Seigle, who was born in Cincinnati, OH joined the Ohio National Guard and spent 33 years in the U.S. Army. He entered West Point in 1949, was commissioned in 1953 and earned a master's degree and a Ph.D. in philosophy from Harvard University in the 1960s.

Twice wounded, he received a Silver Star and other citations for bravery in the Vietnam War as commander of an armored cavalry squadron. Later, he headed a cavalry regiment that guarded a sector of the East-West German border.

In the 1970s, he took part in planning for the training and conditioning of the all-volunteer Army. He retired from the service in 1982.

In 1983, he joined United Technologies Corporation, of which Sikorsky Aircraft is a subsidiary.

MG Seigle is survived by his wife, Marilyn Johnson Seigle; two sons, John W. Seigle II and Gregory P. Seigle; a daughter, Sally C. Seigle; two brothers, COL Robert N. Seigle, Ret. and Thomas R. Seigle; three sisters, Carole J. Holland, Sylvia D. Stayton, and Nancy Sue Stratman; and two grandchildren.

The AAAA USAREUR Corporate Tour, hosted by the Iron Eagle Chapter, was held 21-24 March 1994. The tour was an outstanding success, reaching every aviation brigade in USAREUR. Corporate representatives included Mr. Russ Rumney, Bell Helicopter-Textron, Inc., Mr. Frank Lake, Boeing Defense and Space Group, Mr. Phil Mooney, McDonnell Douglas Helicopter Systems, LTC Rich Langhorst, RAH-66 Comanche PMO, Mr. Bill Pollard, Sikorsky Aircraft, and COL Stephen Cook, AAAA USAREUR Region President. The representatives travelled through Germany briefing all of the aviation brigades on the latest developments in the aviation industry and the Comanche program. The tour ended in Heidelberg just in time for the corporate representatives to set up displays for the 1994 AAAA USAREUR Professional Day. The representatives had a great time and really appreciated the warm welcome they received from each brigade. Iron Eagle members are already looking forward to the next year's event and hope all of the corporate representatives can once again travel to USAREUR and "spread the word"!

AAAA COINS

Each member who sponsors a New Member will NOW receive a AAAA Coin as a token of appreciation and credit towards recognition as an "Ace". Each member who sponsors a total of five new members each year will continue to receive a AAAA Coffee Mug in appreciation of the effort and is eligible to win the AAAA's "Top Gun" contest. Don't forget, the Two For One offer is still in effect for all new first time AAAA members. Pay for one year and get the second one FREE! See the application on page 89 of this issue.

The AAAA USAREUR Professional Day, hosted by the Iron Eagle Chapter, was held 25 March 1994 at the Heidelberg Officer's and Civilian's Club. Over 1,000 people attended the Professional Day, making it an outstanding success! There were ten speakers at the event, including (first row, left to right) MG Ben Harrison, Ret., AAAA President, BG Orlin L. Mullen, RAH-66 Comanche PM, MG Dewitt T. Irby, Jr., PEO Aviation, BG John M. Riggs, DCG, USAAVNC, and LTC Short, SF. Back row: Mr. Nenninger, Deputy PM, Advanced Attack Helicopter, COL Edwin P. Goosen, PM Kiowa Warrior, COL Al Sullivan, Deputy Commander, USAATCOM, LTC Jerry K. Hill, Chief, ARI Team, USAAVNC, and MSG David Long, Aviation Proponency, USAAVNC. Below, the Phototelesis display by 1st Battalion, 4th Aviation Brigade generated a great amount of interest during the Professional Day.

New Life Members

Nathan Ralph Keith
CW2 Dale A. Yoder

New AAAA Sustaining Members

Andalusia-Opp Airport Authority
Andalusia, AL

The City of Daleville
Daleville, AL

Larry's Bar B-Q
Daleville, AL

Realty World-Town & Country Unlimited, Inc.
Enterprise, AL

Time Out For Travel
Enterprise, AL

Aces

The following members have been declared Aces in recognition of their signing up five new members each.

CPT Curt S. Cooper
MAJ Edward A. Healy
COL Joseph G. Labrie
Willie D. Lapham
CPT Gordon D. Mayes
CW3 Steven L. McConnell
Robert J. Szerszynski
WO1 David W. R. Wyatt II

AAAA Soldier of the Quarter

A Chapter Program to Recognize Outstanding Aviation Soldiers on a Monthly Basis

SPC Jonathan W. Spurlock
Aviation Center Chapter
3rd Quarter 1994

AAAA NCO of the Quarter

SGT David Foster Jr.
Aviation Center Chapter
3rd Quarter 1994

Obituaries

VINCENT C. O'DONNELL

Vincent C. O'Donnell, 67, died 1 May 1993. He had been a member of AAAA since 1963.

Mr. O'Donnell worked for and was a consultant to several defense contractors for the last 40 years.

Surviving are his wife, Dorothy; two sons; four daughters; his mother; and 19 grandchildren.

LTC HAROLD R. SNYDER, RET.

LTC Harold R. Snyder, 72, died on November 28, 1992 at his home in Ennis, TX after a long illness. He joined AAAA as a Charter Member in 1957.

He served as an Army pilot in WWII and Korea, and retired from the Army in 1962.

Besides his wife, Katy, he leaves one daughter, one brother, and a number of grandchildren and great grandchildren.

TERESA WILLIAMS

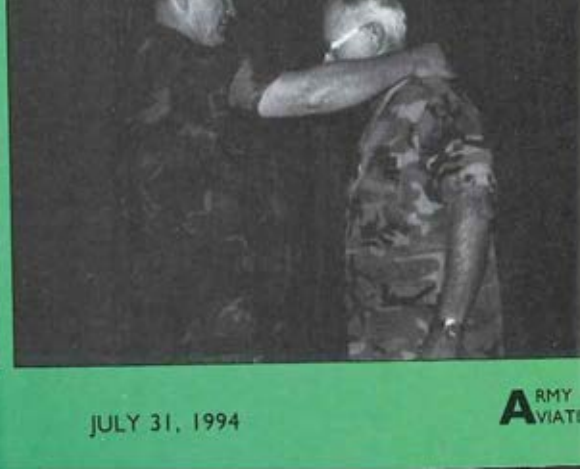
Mrs. Teresa Williams, 58, wife of AAAA member CW4 Ramon R. Williams, Ret., died of cancer June 4, 1993 at Wilford Hall, Lackland AFB, San Antonio, TX.

Mrs. Williams was an employee of the Department of the the Army for 21 years. She was Production Controller for the 6th Army Direct Support Maintenance Facility at Stockton, CA, and later at Ft. Ord, CA.

She is survived by her husband, one daughter, and four step-daughters.

Above: the 1994 AAAA Award for Top West Point Cadet who has branched Aviation went to CDT Spencer T. Kympton. MG Richard E. Stephenson, Ret., AAAA Senior Vice President, presents CDT Kympton with a Certificate of Appreciation at the Thayer Room, U.S. Military Academy at West Point, NY on 24 May 1994.

Below: LTG H.G. (Pete) Taylor (left), then Commanding General, III Corps and Ft. Hood, TX, presents MG William C. Page, Jr., then Deputy Commanding General, III Corps with an Order of St. Michael Gold Award at the AAA Phantom Corps Chapter General Membership Meeting on 16 September 1993.



Nominations Open

Nominations are now open for the **AAAA Army Aviation Fixed Wing Unit Award**, sponsored by FlightSafety International, the **AAAA Army Aviation Medicine Award**, sponsored by AAAA, the **AAAA Army Aviation Trainer of the Year Award**, sponsored by CAE-Link Corporation, Link Flight Simulation Division, and the **AAAA Army Aviation Air/Sea Rescue Award**, sponsored by Lucas Aerospace. These awards will be presented at the 1 December 1994 AAAA Aviation Center Chapter Annual Awards Banquet at Ft. Rucker, AL.

The awards period covers 1 September 1993 to 31 August 1994. Membership in the AAAA is not a requirement for consideration. Contact the AAAA National Office at (203) 226-8184 for the official nomination forms and requirements. The suspense date for all nominations for these awards to be received at the AAAA National Office is **30 September 1994.**

CALENDAR

A Listing of Recent Chapter Events and Upcoming National Dates.

July, 1994

July 15. AAAA Scholarship Board of Governors Executive Committee Meeting, Best Western, Arlington, VA.

July 16. AAAA National Scholarship Selection Committee Meeting to select 1994 scholarship recipients, Best Western, Arlington, VA.

August, 1994

Aug. 15-18. Army Aviation Electronics Symposium, "Digitizing Tomorrow's Battlefield", sponsored by the AAAA Monmouth Chapter, Gibbs Hall, Ft. Monmouth, NJ. Contact Kit Rosche, (908) 544-9280.

October, 1994

Oct. 17. AAAA National Executive Board Meeting, Sheraton Washington Hotel, Wash., D.C.

Oct. 17. AAAA Scholarship Board of Governors Executive Committee Meeting, Sheraton Washington Hotel, Wash., D.C.

November, 1994

Nov. 8-9. AAAA Aviation Electronic Combat Symposium, Adam's Mark, Charlotte, NC.

Nov. 9. AAAA ASE and Avionics Award Presentations, Adam's Mark, Charlotte, NC.

Nov. 30. AAAA National Executive Board Meeting, Ft. Rucker, AL.

December, 1994

Dec. 1. AAAA Army Aviation Trainer of the Year Award Presentation, AAAA Army Aviation Air/Sea Rescue Award Presentation, AAAA Army Aviation Fixed Wing Unit Award Presentation, AAAA Army Aviation Medicine Award Presentation, and AAAA ROTC Award Presentation, Ft. Rucker, AL.

March-April 1995

Mar. 29-Apr. 2. AAAA Annual Convention, Atlanta, Ga.

AAAA AEC Symposium Set

The 12th Annual Aviation Electronic Combat (AEC) Symposium will be held at the Adam's Mark Hotel, Charlotte, NC, 8-9 November 1994. This year's theme is "Electronics for the 21st Century".

The 1994 Symposium is open to all interested AAAA members and will NOT be classified this year. Contact the AAAA National Office at (203) 226-8184 for Registration and Housing Forms.

Avionics Award and ASE Award Nominations Open

Sponsored by Cubic Defense Systems, Inc., the AAAA Avionics Award will be presented at the 1994 AEC Symposium to "the person who has made an outstanding individual contribution to Army Aviation in the area of Avionics during the awards period encompassing 1 August 1993 through 31 July 1994."

Sponsored by Loral Electronic Systems, the AAAA Aircraft Survivability Equipment Award will also be presented at the 1994 AEC Symposium. It will be presented "to the person who has made an outstanding individual contribution to Army Aviation in the area of ASE during the awards period encompassing 1 August 1993 through 31 July 1994."

Contact the AAAA National Office at (203) 226-8184 for official forms. Suspense Date is **1 September 1994.**

WE'RE KEEPING YOU UP AT NIGHT.

Robertson Aviation's combat-proven auxiliary fuel systems can double, even triple your range or endurance.

When the mission is critical, there's no substitute for the Night Stalkers. And there's no substitute for Robertson's auxiliary fuel systems. Our combat proven readiness, NVG compatibility, and total commitment to quality means Night Stalkers don't have to give the reliability or survivability of Robertson systems a second thought. Just fly the mission.

Robertson auxiliary fuel systems exceed the most demanding U.S. Army crashworthy and functional requirements. Tanks with self-sealing bladders have passed .50 cal., 14.5mm and 20mm gunfire tests. They've even survived the 65 ft. drop test — *without leakage.*

Robertson 28.5 to 800 gal. auxiliary fuel systems are designed to maximize mission capability in minimum space. Once installed, each tank can be removed or reinstalled in about 5 minutes or less — *without tools.*

The *ROBERTSON FARE*® (Forward Area Refueling Equipment) kit includes a self-priming 120 gpm pump and all the hardware needed to use the high-capacity *GUARDIAN*® tanks to simultaneously refuel two aircraft, or other combat equipment, 200 feet away from the pump.

"Night Stalkers don't quit" — and Robertson's systems don't either. For more information call (602) 967-5185. Fax (602) 968-3019 anytime. Or write P.O. Box 968, Tempe, AZ 85280.

ROBERTSON
AVIATION
Range Extension Fuel Systems