

SPECIAL REPORT: THE LIGHT HELICOPTER EXPERIMENTAL (LHX) PROGRAM

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LHX: Cornerstone of the Army Aviation Modernization Plan

by the Honorable Michael P. W. Stone
Under Secretary of the Army
Department of the Army
Washington, DC

It is an honor for me to present the LHX story, from the perspective of the Army Acquisition Executive, to the designers, the builders, and the future pilots and maintainers of the world's most advanced helicopter.

In medieval days, an artisan worked for years under the tutelage of a great master to learn the rigors of a trade. When he was ready for advancement, the artisan, at the pinnacle of his training, would create his best work — the most exalted fruit of his years of diligent training. This work was known as the "centerpiece" of his collection — that which highlighted all of his previous efforts and would bring recognition to him for years to come.

The Army's Centerpiece

The LHX program is the centerpiece of the Army's Aviation Modernization Program — the highlight and recognition of years of planning and effort to bring to the battlefield the finest aircraft that technology can produce.

In a time of dwindling resources and strongly competing alternatives, the LHX and the entire Aviation Modernization Program are essential to the success of our modern warfighting doctrine. The fact that LHX and the Army Aviation Modernization Program (AAMP) are solidly established today is a substantial accomplishment.

As little as 12 months ago, I could not have provided such an optimistic view of any of the Army's aviation initiatives. The LHX story, at that stage of its development, presented a blurred image. LHX then lacked support both from the Defense Department and the Congress, and was perceived to be bogged down in a lengthy Demonstration/Validation (DEM/VAL) program. It became clear during the Budget reviews earlier

this year that the LHX acquisition program would have to be streamlined. What emerged is a program designed to "develop and acquire a lightweight, low-cost helicopter for the light attack/armed reconnaissance missions to replace the aging AH-1, OH-58 and OH-6 fleets."

New Focus

Additionally, major emphasis is to be placed upon "developing and integrating LHX mission equipment package (MEP) technology"... "structured for the use of avionics architecture/components common with Air Force ATF and Navy A-12 aircraft." This phraseology presents a more focused acquisition picture, and the DEM/VAL element has itself been modified to conform to the new focus.

For example, the LHX program now includes a shortened (18 vs 56 month) and more affordable (\$367M vs \$2.8B) demonstration/validation phase focused on the mission equipment package (MEP) without flying prototypes. The goal is to support a Full-Scale Development decision in FY91.

Today's reality of a Soviet Bloc with superiority in conventional forces is accentuated by the ratification of the Intermediate Nuclear Force (INF) treaty. Concurrently, legislation aimed at reducing the national deficit has mandated a close examination of all programs to assure that missions are prioritized and are being programmed in the most affordable, cost-effective manner.

The LHX meets these imperatives, just as the artisan's centerpiece met the challenge for progress and recognition so many years ago. The LHX represents progress and increased capability for our rapidly modernizing Army. It is the cornerstone of the Army's Aviation Modernization Program. ■■■■

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Tactical Roles and Missions of LHX

by Major General Ellis D. Parker, Chief,
Aviation Branch and Commanding General,
U.S. Army Aviation Center and Ft. Rucker, AL

Recently we received approval for one of the Army's biggest undertakings — the Light Helicopter (LHX) and the Army Aviation Modernization Plan (AAMP). LHX is the centerpiece of the AAMP, and its technological advances will be incorporated into other aircraft. This issue of Army Aviation contains the latest information on LHX. My topics are the roles and missions of the LHX and how it will improve our contribution to the AirLand Battle.

Historically, aviation operations have served a supporting function. The current need is for operations that balance the supporting function with a maneuver capability founded in the concentrated employment of combat aviation. Army Aviation provides a third tier to mobility by adding air

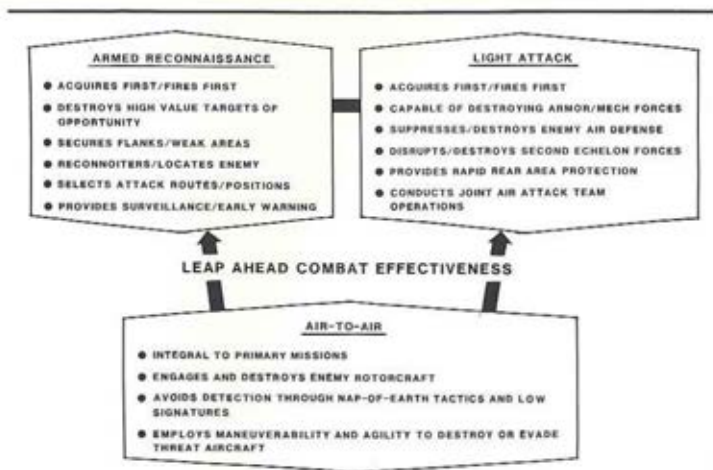
mobility to foot and vehicular transportation. Air-mobility allows the commander to create opportunities whereby he can force the enemy to react.

LHX will allow Army Aviation to exploit the third dimension (airspace) and the fourth dimension (time) of the AirLand battlefield. This is achieved by accelerating the pace of operations, securing the advantage of position, massing overwhelming strength against enemy weaknesses, and repeating the process faster than the enemy can react.

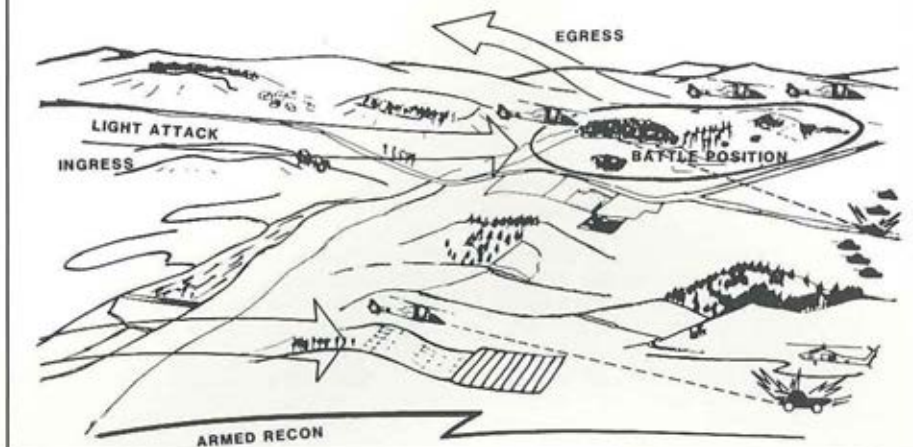
The Mission

The missions for LHX, as depicted below, are threefold — armed reconnaissance, light attack, and air combat. The LHX will perform these

LHX PRIMARY MISSIONS



LIGHT ATTACK/ARMED RECONNAISSANCE



missions as the primary aircraft in attack helicopter battalions (in Light Divisions) and in air cavalry troops. In Heavy Divisions the attack helicopter battalions will be equipped with the LHX as well as the AH-64 Apache.

Light Attack/Armed Recon

The diagram above depicts LHX in the light attack and in the armed reconnaissance missions. As aircraft move forward, stealth must be employed to avoid detection by enemy acquisition systems. That stealth is achieved by using the cover of darkness and/or adverse weather, flying at nap-of-the-earth altitudes, engaging at standoff range, and employing aircraft signature reduction.

The bottom of the diagram shows the LHX performing its armed reconnaissance mission. Techniques and procedures basically will remain the same but will change slightly as we learn to optimize the capabilities of the LHX.

Doctrine and tactics will not change. The standoff abilities and sensor packages of the LHX enable it to perform intelligence gathering with less chance of detection. When belligerence is necessary to help the commander develop the situation, the LHX has the firepower required. Its speed will enable reconnaissance elements to quickly cover assigned

areas or zones, and the communication of tactically significant data will occur rapidly over secure radio links. Traveling, traveling overwatch, and bounding overwatch will still be the methods of movement. Routes and air corridors will take advantage of existing cover and concealment.

Mission Equipment Package

The LHX Mission Equipment Package (MEP) will expand our ability to operate in conditions of reduced visibility. Its Night Vision Pilotage System (NVPS) provides switching capability between Image Intensification (II) and Forward Looking Infrared (FLIR). The field of view is broader and the resolution is better than that employed on existing systems. LHX's digital map and Global Positioning System (GPS) will facilitate navigation.

When coupled to its automatic flight control and hover-hold abilities it will reduce pilot workload, enabling the pilot to devote a greater share of his attention to tactics and mission accomplishment. Passive signature reduction measures will be complemented by active countermeasures. Their combined effect will counter the 1990s threat and enable the LHX to operate close to threat targets without being detected.

A second generation Target Acquisition System (TAS) will provide improved sensitivity and improved resolution over existing systems, particularly important in adverse weather. The TAS will provide target acquisition at greater ranges and with greater accuracy. It will be capable of rapid scan and automatic search to detect, classify and prioritize targets. Because the TAS stores target imagery in memory the LHX aircrew can "replay" the targets while at a masked hover.

Attack teams will fly from forward assembly areas to battle positions (top of second diagram) using current tactics movement techniques. They will choose battle positions to take advantage of superior standoff range, thereby increasing stealth and survivability.

Attack routes will still take advantage of available cover and concealment, and the LHX MEP will provide aircrews with standoff fightability. Some situations will require operation closer to the enemy. Signature reduction, and active countermeasure will enable attack teams to operate in closer proximity to threat targets. Closer proximity reduces the flyout

time of our weapons and also increases probability of kill (Pk).

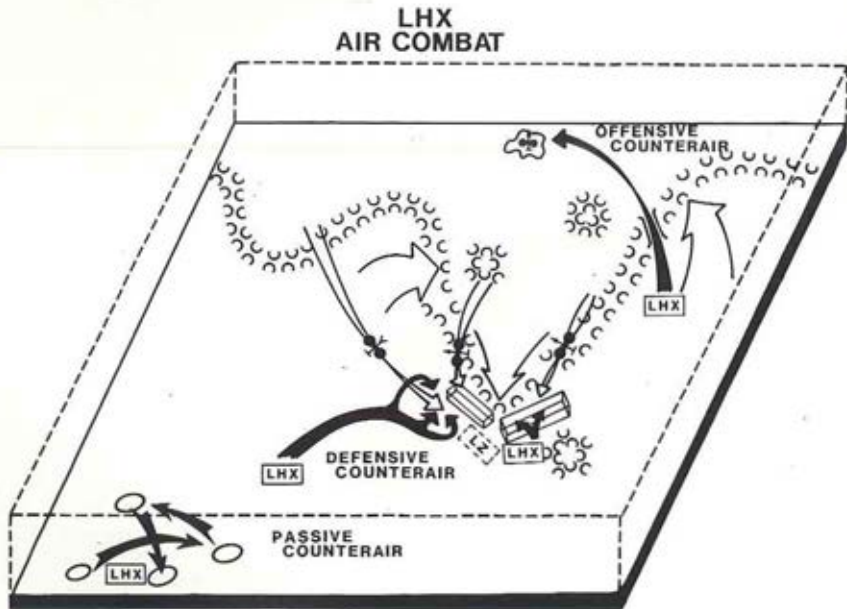
Target Detection

Target detection and classification with the TAS will be rapid and accurate even in adverse weather. The LHX TAS and armaments will allow accurate target engagement at greater ranges. Since the LHX will be an attack aircraft as well as an armed scout, there will be fewer instances of target hand-off.

When hand-off is necessary it will be by digital data sent in a secure data burst. The crew will not have to spend valuable time encoding and decoding. LHX's flexibility to be mission configured will provide the commander the ability to apply Mission, Enemy, Terrain, Troops and Time Available in task organizing and in developing armament loads based on the mission requirement.

The figure below represents the air combat role of the LHX. It will perform offensive, defensive and passive counter air missions. These air combat operations will occur as part of the

(Roles — continued on page 28)



HUNTER or PREY?

A black AH-64 Apache helicopter is shown in flight, viewed from a low angle. The helicopter is positioned in the center-left of the frame, with its main rotor blades blurred from motion. The background consists of a hazy, desert-like landscape with green and brown hills under a clear sky. The overall tone is serious and military.

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The LHX Moves Army Aviation Into the 21st Century

by General Carl E. Vuono,
Chief of Staff, U.S. Army
Washington, DC

Today, our Army is a trained and ready force, for several reasons. We understand that our mission is to deter war and, should deterrence fail, to fight and win — as part of a joint or combined force — across the spectrum of conflict anywhere in the world. We are properly structured and understand how we will fight. We are highly trained and working hard to get even better. We have superb soldiers who are extremely well led by competent and confident noncommissioned officers and officers. And, we continue to modernize to meet the challenges of today and tomorrow.

Pacesetter for Modernization

In this article, I want to focus on modernization. If we expect to be a trained and ready force tomorrow, we must continue to maintain the momentum in this and other areas. The LHX program is a pacesetter for our modernization efforts. It helps link the present with the future, allowing us to meet the challenges of an evolving strategic environment.

In the years ahead, the strategic environment will change in many important ways, the full significance of which may not be perfectly clear to us now. First, we face a threat that is moving in new directions. The Soviets continue to expand and modernize their military forces, even though Soviet leadership appears less threatening. Potential adversaries among the Third World countries are acquiring more lethal conventional military capabilities. Thus, the Army must continue to field modern forces capable of defeating increasingly sophisticated threats throughout the world.

Secondly, we face a tremendous array of technologies that offer great potential for enhan-

cing our ability to defeat the threat. Dramatic changes in microelectronics, automation and robotics, directed energy, and genetic engineering promise to provide useful military applications.

Finally, we foresee an era of continued tight budgets. The Army, as well as its sister services and other agencies of the government, will be obliged to ensure maximum value is extracted from each dollar in line with priorities that focus on improving warfighting capabilities.

Significant Challenges

As a result of these and other changes, we will confront significant challenges in maintaining a trained and ready force in the future. One of the most important of these involves modernization.

The modernization challenge requires the Army to postulate the correct threat and select the proper warfighting concepts, unit designs, emerging technologies and educational and training programs to defeat this threat on the future battlefield. We will have many options but never enough resources to develop them all. We, therefore, have to be selective as we pick the combinations of concepts, designs, technologies and programs that will give us the edge in the 21st Century.

To meet this set of challenging circumstances, the Army has developed an equipment modernization strategy that seeks to fund the procurement of systems necessary for readiness today while setting aside sufficient resources for research and development needed for readiness tomorrow.

The Army Aviation Modernization Plan provided the impetus for the development of this strategy and serves as the prototype for plans in other functional areas, such as armor-antiarmor,

fire support, air defense, command and control, and combat service support systems. First developed several years ago, this Plan was refined and updated this year to account for new developments in the threat, advances in our technologies, refinements in our force designs and force structure, and changes in fiscal guidance.

This Plan is known and widely accepted throughout the Army, the Office of the Secretary of Defense, and Congress. I discussed it in an address to the AAAA Convention last April, excerpts of which are in the May 31, 1988 issue of this magazine. The principal features of the 1988 edition of the Plan are:

- Establishment of a concept for developing and fielding current and future combat capabilities required of Army Aviation by the threat, Army doctrine, and warfighting needs of the unified and specified commands.

- Establishment of stable and constrained funding levels that encourage the optimum use of resources made available for Army Aviation modernization.

- Establishment of initial criteria for Army aircraft useful life which will facilitate decisions on improvements and aircraft replacement over time in a way that allows the Army to get the most out of its investment and also ensure the needed combat capabilities are present in the field.

LHX

Central to this plan in particular, and Army modernization in general, is the continued development of the LHX. There are several reasons for this:

First, the LHX will provide the Army a light aircraft capable of operating across the spectrum of conflict in the projected threat environments of the mid-1990's and beyond. The LHX will have a multimission versatility and will be used to perform both reconnaissance and attack roles.

Second, when fielded, the LHX will allow us to achieve greater combat power with fewer aircraft. This will promote the best use of advanced technologies and our human and fiscal resources. The net effect should be more combat effective and resource efficient Army Aviation units.

Finally, the LHX program will improve

capabilities of aircraft currently in the inventory. As research and development continue, breakthroughs achieved in the LHX program will be applied to existing airframes when cost effective, allowing the Army to get the maximum value from our overall aviation investment.

Thus, the LHX program not only gives us an aircraft that will help us fight and win on the 21st Century battlefield but also assists in keeping Army Aviation combat ready in the intervening years. In short, it links our trained and ready Army today with our trained and ready Army tomorrow.

Not Without Challenges

Yet, this program is not without its own challenges. For one, the Army must effectively articulate the requirement. Many continue to view this aircraft as a replacement for the AH-64. Others wonder why the OH-58 aircraft cannot accomplish the mission at hand. In fact, the LHX will complement the Apache, not replace it. And, the OH-58 airframe cannot be improved sufficiently to provide an aircraft that will be both survivable and lethal on the 21st Century battlefield.

Another continuing challenge concerns funding. To date, we have succeeded in obtaining adequate funds for this program. However, there are those who are skeptical of the requirement for a new aircraft. Their views cannot be ignored. Their substantive concerns must be answered adequately to avoid undermining our efforts.

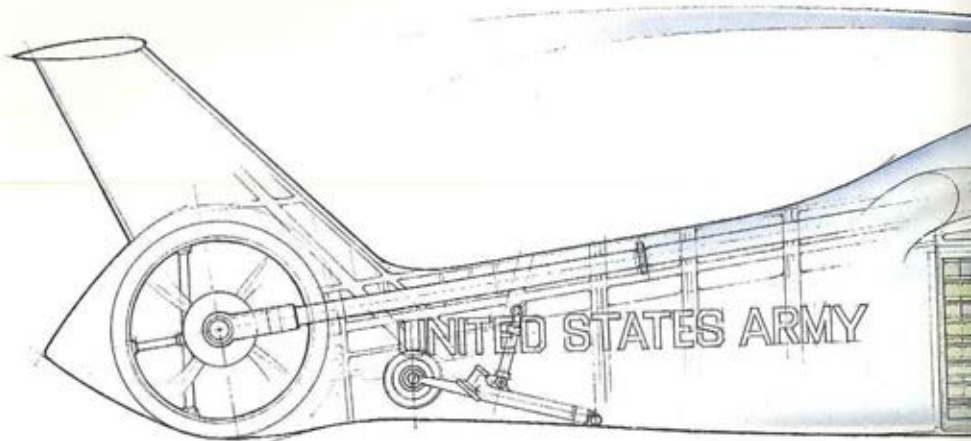
The final challenge, then, if this program is to fulfill its potential, is to get the undivided support of the aviation industry. Industry must develop the technologies that will give us the edge. Industry must be able to adapt to sensible refinements in the requirement. And, industry must compete to provide us the best possible product in a timely manner.

The LHX program is one of the most important programs in our Army today and in the years ahead. It will lead to the fielding of an aircraft that significantly improves our warfighting capabilities. More important, as a key element in the Army Aviation Modernization Plan, it is essential to our entire modernization effort. Clearly, this Plan is moving the Army and Army Aviation into the 21st Century. I am totally committed to the LHX. ■■■■

Team Member	LHX Role(s)	Applicable Experience
Boeing Helicopters	Team co-leader; avionics system integrator; Integrated Logistics Support management.	Design, development, production and management of large-scale weapon systems including CH-47, V-22; R&D programs including Model 360, Advanced Digital Optical Control System (ADOCS).
Sikorsky Aircraft	Team co-leader; air vehicle integrator; simulation management.	Design, development, production and management of large-scale weapon systems including UH-60, SH-60, H-53; R&D programs such as Advanced Composite Airframe Program (ACAP).
Boeing Military Airplanes	Mission Equipment Package (MEP)/avionics system integrator.	B-1B, B-52 and Advanced Tactical Fighter (ATF) avionics integration.
Boeing Electronics	Flight control computer.	Sea Lance, SRAM II, ADOCS, V-22, 737, 747, 757, 767 flight control computers.
Collins Avionics	Integrated Comm/Nav/Ident, Avionics (ICNIA); multifunction displays and controls.	ICNIA developer for A-12 Advanced Tactical Aircraft P ³ and ATF.
GE Armament	Lightweight turreted gun system.	High-rate-of-fire weapon and ammunition handling systems; AH-1 Cobra turret system; helicopter air-to-air effectiveness studies.
Hamilton Standard	Flight control computer; Wide-Field-of-View Helmet Mounted Display system (HMD).	UH-60, SH-60, H-53, X-Wing and ATF flight controls development; Army infantry helmet display.

THE FIRST TEAM. THE

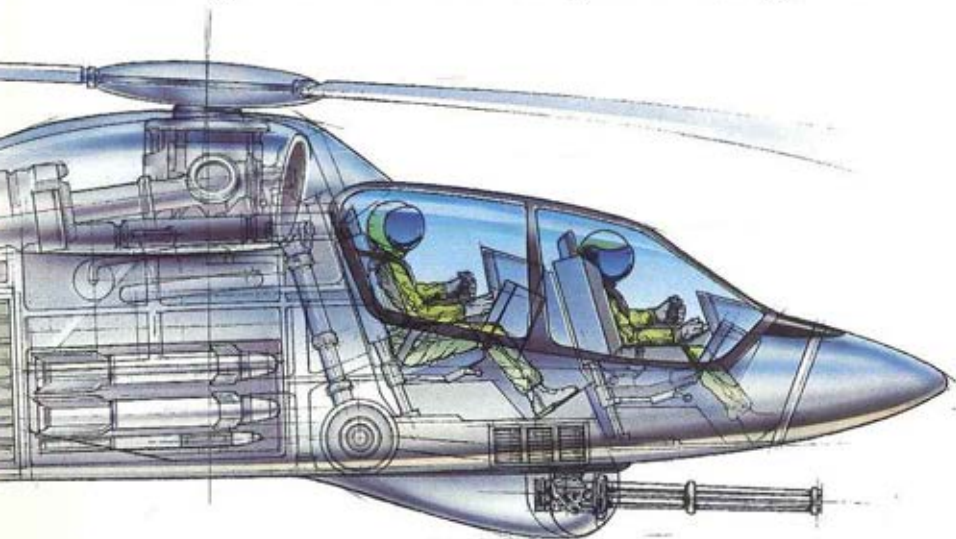
Unequaled skills, systems management experience



Team Member	LHX Role(s)	Applicable Experience
Harris	3-D digital map display; super high-speed data bus; sensor data distribution network.	Digital map displays for F-16, Fiber Optic Guided Missile (FOG-M), A-12 and ATF; common modules for A-12 and ATF.
IBM	VHSIC-based processor.	Common Signal Processor development program; VHSIC/VLSI modular signal processor; A-12 VHSIC processor.
Kaiser Electronics	Wide-Field-of-View Helmet Mounted Display system (HMD).	"Agile Eye" HMD; AH-1W full-function symbol processor; helmet tracking system integration for SHADOW research helicopter.
Link Flight Simulation	Operator training systems.	AH-64 Combat Mission Simulator (CMS); AH-1, UH-60 simulators; C-130 turnkey Aircrew Training System (ATS).
Martin Marietta	Electro-Optic Target Acquisition/Designation System (EOTADS); radar.	TADS/PNVS for AH-64; Airborne Adverse Weather Weapons System (AAWWS) co-developer; LANTIRN: Standardized Infrared Sensor (SAIRS).
TRW	VHSIC-based signal and data processors; ICNA; Aircraft Survivability Equipment (ASE).	ICNA developer for A-12 P3 and ATF; ATF common signal processor; Integrated Electronic Warfare System (IEWS) co-developer.
Westinghouse	VHSIC-based computers; EOTADS; radar; ASE.	AAWWS co-developer for AH-64; F-16 VHSIC programmable signal processor; F-16 and B-1B radar; IEWS co-developer.

BEST TEAM FOR LHX.

and technologies for the U.S. Army's LHX program.



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LHX: Man, Machine and Mission

by General Maxwell R. Thurman
Commanding General, U.S. Army Training
and Doctrine Command, Ft. Monroe, VA

In May of this year, the Army unveiled its strategy to modernize Army Aviation, a strategy to take us into the 21st Century. Called the Army Aviation Modernization Plan (AAMP), it reflects the Army's resolve to meet its worldwide mission requirements today and tomorrow.

The AAMP has several major parts critical to the continued production at efficient rates of AH-64 Apaches, UH-60 Black Hawks, rebuilt OH-58 Kiowas, CH-47 Chinooks, and various SOF aircraft. We will protect these investments through planned product improvements to meet the threat and incorporate technical enhancements. We will retire aging aircraft, like the UH-1 Iroquois, OH-58 Kiowa, and AH1 Cobra systematically. Most importantly, the research and development of new aviation systems for the next decade will continue. The centerpiece of this research and development effort is the Light Helicopter or LHX.

TRADOC's Missions

The Training and Doctrine Command's (TRADOC) missions are:

- to prepare the Army for war, and
- to be the architect of the future.

Accomplishing these missions involves the TRADOC functions of doctrine, training, force design, equipment requirements, leader development, and training. Doctrine guides our employment of forces. We analyze technology and measure the threat to modify force design and determine equipment requirements. Training and leader development for soldiers and civilians is key to improving capabilities to operate equipment and execute doctrine. We do all of these against the backdrop of today's battlefield and a vision of tomorrow's battlefield. The LHX is an

Army aviation system that responds to our vision of the future battlefield.

That battlefield will require day and night, adverse weather operations in a highly lethal and constantly changing environment. Potential enemies will field sophisticated, numerically superior forces equipped with vastly improved air defense systems and air-to-air combat capable helicopters. The age, limited night and adverse weather capabilities, and questionable battlefield survivability of our current light attack (AH-1) and reconnaissance (OH-58) make clear the need for an LHX aircraft.

Major Deficiencies

Figure 1 depicts the light fleet major deficiencies as we have defined them in our Aviation Mission Area Analysis. The LHX will correct these deficiencies. It will meet the increasing quantitative and qualitative air defense and air-to-air capability of a threat capable of using emerging weapons systems. The LHX will capitalize on the fluidity of the future battlefield with effective weapons, designed agility, and communication and information systems that will expand the commander's visibility and control of the battlefield.

The LHX program evolved through an eight-step problem solving process that serves as the model for most of our major combat development programs. It begins with challenges that may come from national strategy directions, changing technological and threat information, war-fighting commanders in the field, and recommendations from brigade, battalion and company commanders. Responses to these challenges are possible through changes to doctrine, force design, equipment requirements, leader develop-

ment, and training. Analysis of the threat and assessment of current and emerging technologies help us develop conceptual alternatives to address a problem. We develop operational and organizational plans for each alternative.

These plans consider all related effects that may result from the anticipated changes. We assess the alternatives in an analysis process that incorporates professional military judgment, leading to a decision on which one to implement.

Powerful Tool

The eight-step problem solving process is a powerful tool. It has helped the Army integrate aviation doctrine, training, force design, equipment requirements, and leader development. This synergy among these five domains has produced new capabilities, like the LHX, that will allow the combined arms commander to exploit army aviation on the future battlefield.

Other authors within this special edition of ARMY AVIATION will address LHX tactical roles/missions and force design. My focus is on the LHX requirement for "user friendly" operations and support.

Central to making LHX user friendly has been the rigid application of Manpower and Personnel Integration (MANPRINT) and computer simulations. The LHX design has pivoted on man-machine considerations. Take, for example, how we determine the need for two pilots.

Complex Tasks

Consider for a moment the diverse and complex tasks required to operate the LHX. At a minimum, the pilot must control a multitude of flight systems such as data transfer, flight control, navigation, and communications. He must also manage target acquisition and designation systems, weapons systems, threat identification systems, and electronic countermeasure (ECM) systems.

Place these tasks on a pilot operating in a low level or nap-of-the-earth (NOE) flight at night in adverse weather. The result is substantial workload in a combat environment.

Our analysis of the LHX piloting alternatives was done by the Army Research Institute (ARI) between 1983 and 1985 and by the Aviation Applied Technology Directorate with the single pilot Advanced Rotorcraft Technology Integra-

AVIATION MISSION AREA ANALYSIS LIGHT FLEET MAJOR DEFICIENCIES

- **CURRENT FLEET AGE/OBSOLESCENCE**
- **ECONOMIC AND LOGISTIC SUPPORTABILITY**
- **BATTLEFIELD SURVIVABILITY**
- **OPERATE IN HIGH/HOT ENVIRONMENT WITH MISSION PAYLOAD**
- **ADVERSE WEATHER AND NIGHT CAPABILITY**
- **STANDOFF RANGE, MULTI-TARGET ENGAGEMENT CAPABILITY**
- **STRATEGIC DEPLOYMENT CAPABILITY**
- **AIR-TO-AIR SELF DEFENSE CAPABILITY**

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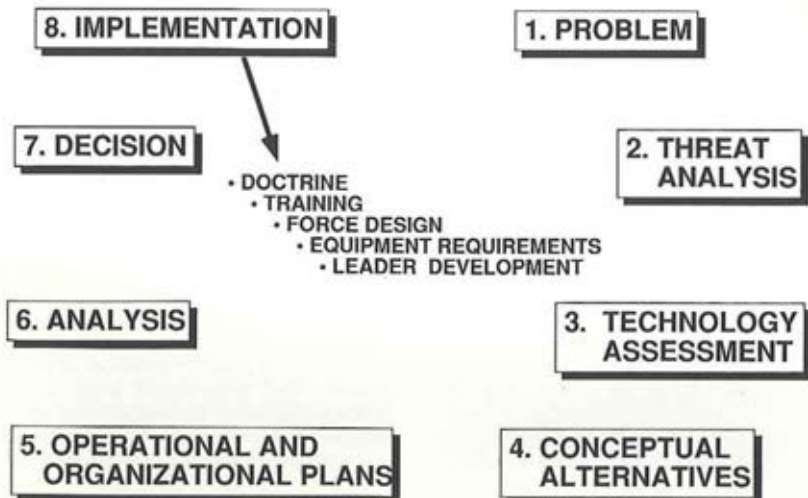
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tion (ARTI) simulations in 1986. We learned that the complexity of the tasks, especially during combat or degraded flight/weapons systems operations was substantial. The tasks and technology quickly saturated the single pilot's ability to manage both time and information. This analysis continues as the maturation of technical aids continues.

MANPRINT and computer simulations generated numerous LHX technological solutions. Our MANPRINT goal is to reduce the number of manual tasks the LHX pilot has to perform by automating routine or redundant tasks.

Enhancements

Enhancements were written into the LHX requirement for multi-functional video displays, limited flight control input requirements, reduced manual data input using a "management-by-exception" design and maximum use of systems integration. As a result, LHX pilots will have more time to concentrate on wartime tasks of target acquisition, successful target engagement—and killing the enemy!

The LHX will be fielded as a total package, including logistics. Using the two-level maintenance support concept, we have incorporated requirements that use line replacement units (LRU) architecture, on-board test

and diagnostic equipment, and embedded training for maintainers. Component design will require only common tools rather than elaborate test measurement and diagnostic equipment (TMDE). Reliability and availability will also be a function of design.

Maintenance MOS Reductions

As a result of early design influence, we will be able to reduce the number of aviation maintenance Military Operational Specialties (MOS) by 50 percent. Additionally, because of supportability and MANPRINT considerations, the primary skill levels of LHX supporting personnel will be reduced from three and four to levels one and two. Overall, support manpower requirements of the LHX compared to those of the current fleet of aircraft will be significantly reduced.

Our inquiry into an Army aviation problem against the threat and technology of 1996 and beyond has resulted in a material solution to a doctrinal problem. There will, however, be some major effects on the other four domains.

Our AirLand doctrine is sound. As with any new weapons system we will need to refine our warfighting techniques and procedures to fully exploit LHX capabilities. We will need to

(Man — continued on page 29)



LHX: AMC's Role

by General Louis C. Wagner, Jr.
Commander, U.S. Army Materiel Command,
Alexandria, VA

I'm pleased to have the opportunity to tell you a bit about the Army Materiel Command's (AMC's) role in the development of one of the Army's most exciting development programs for the soldier - the LHX. The LHX is a good example of AMC's functional support to the systems being developed through the Army's Program Executive Officers (PEO's) and, in this case, by a Program Manager (PM) reporting directly to the Army's Acquisition Executive.

AMC's role spans the entire life cycle of the LHX, from concept formulation, through fielding and operation, to eventual retirement of the aircraft. While most of our support comes from the Aviation Systems Command (AVSCOM), several of our other major subordinate commands are heavily involved, as is our headquarters.

Technical Base Activity

Even before LHX concept formulation, AMC's Laboratory Command (LABCOM) was developing a technical base that would ensure the viability of that concept. The tech base includes programs in advanced composite materials, propulsion, digital/optical flight controls, advanced rotor systems, digital avionics/displays, target acquisitions, and fire control/weapons.

As LHX concept formulation began, these LABCOM-managed tech base programs in AVSCOM and other AMC major subordinate commands were already focussing on LHX mission equipment and air vehicle requirements, and even on the technology for future aircraft beyond LHX.

The Advanced Rotorcraft Technology Integration (ARTI) program addressed cockpit man-machine issues and the possibility of single pilot operation for the scout/attack mission. Because

of the complexity and automation required in LHX mission operations, both the AMC community and industry studied a number of technologies, including Very High Speed Integrated Circuit (VHSIC) processors, automated target acquisition systems, wide-field-of-view night vision pilotage, and helmet-mounted display systems.

FLIR Technology

The Communications-Electronics Command's Center for Night Vision and Electro-optics is pursuing focal plane array forward-looking infrared (FLIR) detector technology and second generation FLIR systems, both crucial to the electro-optical target acquisition designation system and the night pilotage system.

In the area of man-machine integration and human factors engineering, AMC established the Crew Station Research and Development Facility at NASA's Ames Research Center. Operated by AVSCOM, it will help us with automation, man-machine interaction, and combat effectiveness evaluations.



AVSCOM's Avionics Research and Development Activity is exploiting the Defense Mapping Agency's database to develop a full-color digital map and display for use in the night navigation and pilotage system. This will improve the crew's ability to fly at night in adverse weather.

For the air vehicle, the Advanced Composite Airframe Program demonstrated the feasibility of an all-composite-material airframe, with improved ballistic tolerance, crashworthiness, and simplified battle damage repair.

Another tech base program with potential for the LHX is the Advanced Digital/Optical Control System. This effort uses fiber-optic cables, digital processors, and optical transducers to eliminate bulky, heavier mechanical flight control systems of current helicopters. Redundant fiber-optic cables can add survivability and still reduce overall weight and provide protection from electromagnetic interference.

The advanced technology demonstrator engine gave birth to the T-800, currently in full-scale development. The T-800 will be provided as Government Furnished Equipment to the LHX program. This lightweight, fuel-efficient, highly reliable, and low-maintenance engine is a showcase of tech base accomplishments.

The tech base activities I've just described are only a handful of AMC's programs that are contributing to better systems for our soldiers. Working closely with the combat developer, we have concentrated on technologies that will make the greatest contribution to our soldier's ability to deter any further battle or to win if they must fight.

AMC's Engineering Support

Working with the LHX Program Management Office, AVSCOM's Engineering Directorate supported the T-800 engine and air vehicle system developments. Directorate employees translated user requirements into designable, testable, producible, and affordable technical specifications.

Requirements were refined by incorporating industry and government comments, reissuing draft requests for proposal (RFP's) for additional comment, and finally issuing formal RFP's for contractor response.

Future AVSCOM engineering efforts will include monitoring the air vehicle demonstration-



validation phase and T-800 engine development, supporting the full-scale development, qualifying the air vehicle, and issuing a full engine airworthiness qualification in 1991.

Procurement Support

The support of experienced procurement and legal specialists is essential to full compliance with the Federal Acquisition Regulations, other applicable Department of Defense and Army regulations, and, of course, Congressional requirements.

The entire contracting process, from preparation of RFP's, evaluation of proposals, pre-award surveys, award of contracts, to considerable post-award support, is provided by several functional matrix elements in AVSCOM, including the Procurement and Production and Product Assurance Directorates and their counterparts at Headquarters, AMC.

Let me now highlight some of the logistical support areas where AMC, with primary focus on AVSCOM's Readiness and Maintenance Directorates, has been and will be supporting the LHX program. The Depot System Command (DESCOM), along with AVSCOM, will ultimately be responsible for AMC's large logistic support role, and we want our logistic plans to be an integral part of the LHX program
(AMC — continued on page 29)



LHX: Designed to be Supported and Sustained

by Mr. Joseph P. Cribbins
Special Assistant to the DCSLOG and Chief,
Aviation Logistics Office, Washington, DC

In 1985 and again in 1987, Army Aviation Magazine published articles I wrote on LHX Sustainability (RAM/ILS) and LHX Support Concept, respectively.

The objective was to address Reliability, Availability, and Maintainability (RAM) concepts designed, developed, and produced in the LHX to establish Inherent Availability (Ai). It is the combined task of the producer and the Army, as the customer, to maximize Operational Availability (Ao) throughout the life of the system.

An important element has always been the capability of soldiers in the field to support a weapon system. This requirement has been more clearly defined and elevated as a major element called MANPRINT/Training. Thus, it is recognized as a major element in achieving Ao.

Assessment Elements

There are five major assessment elements for the LHX. They are Technical, Production Competition, RAM/ILS, MANPRINT/Training, and Costs. My intent is to show that with integration of RAM and MANPRINT/Training into all the elements, there has been much greater importance now given these two elements when producing a total weapon system that can meet Army warfighting requirements.

As was pointed out in the two previous articles, attention to support and sustain initial fielding and throughout life cycle must be more than just a gleam in the eye of the designer and must be followed through in great detail by the developer and producer. That is where the LHX is going as the following will show.

Technical has always been an extremely important element in the assessment of any aviation weapon system. The evaluation of this ele-

ment determines the proposed aircraft's capability as a total weapons system to meet requirements including the Mission Equipment Package, the comprehensiveness of the system test and evaluation, and total system integration.

The elements of Technical that most clearly incorporate RAM/ILS and MANPRINT/Training are operational suitability, survivability, and deployability. These are directly related to the fielded aircraft. Total system integration evaluates the ability to totally integrate the LHX system and the soldier with the Mission Equipment Package. System test and evaluation must clearly show how the LHX will perform when supported by soldiers in the field.

Production Competition

Production Competition is a relatively new major element. It has been given much greater emphasis and strength during a highly competitive procurement. Importance will be placed on the methods and techniques to be used to effectively integrate subsystems into the LHX as a total weapon system.

Strong consideration is given to minimizing the prime contractor as the only source of high dollar and high usage parts during production. Emphasis is given to using commercially available components, military standard parts, aviation common items, and competitively available, non-proprietary parts.

We have found from experience, that what may appear to the prime contractor as being a highly desirable manufacturing procedure during production may not lend to supportability in the field. For example, I remember when a producer proposed to amalgamate several airframe parts into one whole structure that would reduce manu-

“...only The Almighty can make men. Therefore, we must make the machine fit the man.”

facturing costs. However, this production saving would preclude the soldier from being able to repair, remove, or replace this part in the field.

Costs

Costs as a major element have always been extremely important and often the determinant in selecting a producer. We have always focused on design to cost (DTC) which includes costs associated with procuring the fly-away aircraft. In the past, we have not been able to effectively establish operational and support (O&S) costs in such a manner that we have been able to hold the producers feet to the fire with warranties that can be enforced.

O&S costs for the LHX include depot maintenance, labor and material, field maintenance, and spares and will be covered by warranties. This places the Army in the position of being able for the first time to go beyond design to cost and look forward to a weapons system fielded with maintenance, parts, people, and skills whose numbers are not driven only by optimistic engineering estimates but are backed up by down-to-earth O&S costs. This is a significant breakthrough.

Logisticians

It is often perceived that we in logistics only talk to one another; i.e., like the two families in Boston who allegedly only spoke to one another or to God. That perception is far from the truth. We logisticians do talk to others. The LHX is a fine example of how the entire community has gotten together to assure that this will be the finest helicopter ever, one that will greatly enhance Army warfighting capability, and one the soldier can live with in the field.

The LHX program outlined above is more easily written about than done. The concept is the result of many years of experience with design, development, and production of many major weapons systems.

In the past, principal drivers have been performance, operational requirements, and design to production costs (DTC). This has sometimes resulted in fielding systems that are not as reliable, available, and maintainable as needed. Further, in some instances when this happened, meeting operational requirements suffered in reduced readiness and flying hours.

In order to overcome these shortfalls, MG Ronald K. Andreson, LHX PM has an organization with Mr. Charles Reading (Logistician), Chief, Integrated Logistics Support Management Division and Mr. Darrel Harrison (Engineer), Chief, Technical Division on an equal footing reporting directly to the PM.

The four Assistant PM's are military officers (Lieutenant Colonel or Major). They are responsible for Requirements/RSI (Rationalization, Standardization, Interoperability), T-800 Engine, MANPRINT, and Test/Evaluation. With this organization, the first of its kind to my knowledge, General Andreson will have the wherewithal to assure that an LHX will be produced at best value, can meet Army mission requirements, and retain best value throughout its life cycle.

Close Relationship

In looking at the major elements, it should become clear that relationship of RAM/ILS and MANPRINT/Training is very close and each one of these elements is included throughout. Again, to emphasize, RAM is that inherent availability designed into the product as a total weapon system. ILS is the capability of the customer to sustain Ai when fielded.

MANPRINT is the single greatest driver of ILS and Operational Availability, and the ability of the Army to train its soldiers is also dependent on all the above. To simplistically define the absolute importance of MANPRINT, I would suggest that man makes machines; only The Almighty can make men. Therefore, we must make the machine fit the man. IIIII



Program Manager Update

by Major General Ronald K. Andreson
Program Manager, Light Helicopter Program,
St. Louis, MO

The past year has been most significant for the LHX program. The Defense Acquisition Board (DAB) met in June 1988 for the LHX Milestone I Demonstration/Validation (DEM/VAL) phase of the program.

An Acquisition Decision Memorandum signed by the Deputy Secretary of Defense provided approval for the LHX program baseline. The subsequent Defense Resources Board (DRB) fully funded the LHX program as presented in the Army Aviation Modernization Plan (AAMP). In other words...LHX is a go!

This success was the result of a lot of hard work by a dedicated group of individuals. People in the LHX program office, TRADOC, AVSCOM, AMC, DA, OSD and most certainly in industry, worked toward this event with unwavering dedication because they believed in the rationale and need for LHX.

Independent Assessments

At the time of the last update, the program was in the middle of two parallel independent assessments which were being performed by the Rand Corporation and the Institute for Defense Analysis (IDA). The objective of the assessments was to gauge the relative merit of each of the four airframe alternatives which were under consideration for LHX. OSD had directed that these assessments be completed prior to the LHX DAB review.

In November 1987, the final reports were received from Rand and IDA. Both substantiated the earlier findings by the Army (in the Cost and Operational Effectiveness Analysis) that the optimum solution to the LHX question is a lightweight, new development helicopter with twin 1200 shaft horsepower T800 engines.

Subsequent to the receipt of the independent assessment final reports, the LHX program, comprising Scout/Attack and Assault variants, was briefed to OSD's Conventional Systems Committee (CSC) in December 1987. Because of overall affordability problems within the Army's acquisition programs, an Army Aviation Modernization Plan DAB was held in January 1988.

As a result of that DAB and ensuing Army decisions, the LHX program was refocused to the light attack/armed reconnaissance role with a program composed of a single variant LHX with a total procurement quantity of approximately 2,100 aircraft. It was this refocused LHX program that was presented to and approved by the DAB in June 1988.

Proposals Solicited

Immediately following the DAB decision and the approval of program funding by the DRB, the DEM/VAL solicitation was released to industry. The contractor teams' proposals were received in September 1988 and the Army is currently in the process of evaluating those proposals. Planned award date for the two competitive DEM/VAL contracts is October 1988.

These contracts will be awarded to teamed aircraft system manufacturers (Boeing/Sikorsky and McDonnell Douglas/Bell). The results of the DEM/VAL phase effort will be evaluated and used to finalize the Required Operational Capability (ROC) document and the Full Scale Development (FSD) requirements.

Toward the end of DEM/VAL, a Request For Proposal (RFP) will be issued for the FSD phase, culminating with a downselection to one contractor team. The winning team will complete the FSD phase of the program. FSD contract award

“FSD contract award is planned for December 1990, the first flight in August 1993...”

is planned for December 1990, the first flight in August 1993, Low Rate Initial Productions (LRIP) contract award in November 1994, and an Initial Operational Capability (IOC) date of November 1996.

The focus of the LHX DEM/VAL program is to:

- define the Mission Equipment Package (MEP) and electronics system architecture for the LHX as well as future upgrades of the AH-64 APACHE, UH-60 BLACKHAWK, CH-47 CHINOOK, and OH-58D AHIP aircraft;

- demonstrate the performance of key MEP components with brassboard and breadboard hardware; and

- define performance requirements for a light-weight, low-cost LHX helicopter through design, analysis and selected demonstrations.

The competitive, 18 month DEM/VAL phase effort will include design and engineering, essential total system planning and trade-offs necessary to provide the best solution to the total system requirement.

Integrated Performance

The contractors have been directed to base their electronics architecture designs on the triservice Advanced Avionics Architecture developed by the Joint Integrated Avionics Working Group (JIAWG). The goal is to use common, modular, integrated performance, reduce operational and support costs, and reduce avionics weight. The LHX program is unified with the Air Force Advanced Tactical Fighter (ATF) and the Navy Advanced Tactical Aircraft (A-12, formerly ATA) via the JIAWG to accomplish that goal.

LHX T800 engine development is proceeding on track. In July 1985 the Army awarded competitive firm fixed-price contracts for the development of the 900 kilowatt/1200 horsepower class, metric design T800-xx-800 turboshaft engine which will be installed on the LHX in a twin engine configuration.

The contractor teams of APW comprising Textron Lycoming/Pratt & Whitney and The Light Helicopter Turbine Engine Company (LHTEC) comprising Garrett Turbine Engine Co./Allison Gas Turbine Division, General Motors Corporation were awarded contracts which will continue until October 1988 when selection of the winning design will be made based on progress toward fulfilling all program requirements.

Both of the engine programs have been tremendously successful. Each engine has already demonstrated achievement of the planned 1200 shaft horsepower level and over 10,000 hours of engine testing have been conducted. The preliminary and critical hardware and software design reviews have been successfully completed.

The Key System

The supportability community's direct involvement with the T800 development has resulted in either T800 design being more supportable in the field than any previous aircraft engine. No matter which engine is selected the soldier is a winner.

The LHX has emerged as the key system within the Army Aviation Modernization Plan. The introduction of the LHX at a rate of about 200 aircraft a year will allow the Army to replace the aging light Scout and Attack aircraft and to upgrade current aircraft with an advanced MEP, both of which are essential to achieving the main thesis of the AAMP, i.e., maintenance of an average fleet age of 10 years for attack aircraft.

We are looking forward to this next phase in the development of LHX. Concept exploration was a long and sometimes rocky road but the time and effort expended over the last several years is an investment which will pay great dividends in the LHX development program and the future capabilities of Army Aviation. IIII



LHX — Operational Testing

by Major General Jerome B. Hilmes
Commanding General, U.S. Army Operational
Test and Evaluation Agency, Falls Church, VA

The Light Helicopter (LHX) program provides both unique challenges and excellent opportunities for innovation to the operational test and evaluation community. The challenges are most familiar — cost, schedule, system complexity and high technology, and the continuing requirement for truly realistic operational testing.

While the challenges are many, the opportunities are equally great and the LHX program will certainly not be "business as usual." Its program development and subsequent fielding demand an innovative and effective operational test and evaluation concept which will insure the Army receives the maximum benefit possible in assessing LHX system operational effectiveness and suitability.

Early Involvement

During the concept exploration phase, "early user involvement" became the watchwords for the program's test concept and planning. This emphasis continues as the LHX enters into the demonstration/validation (DEM/VAL) development phase.

Initiated in December 1983, the Advanced Rotorcraft Technology Integration (ARTI) program demonstrated the technical feasibility and benefits of an integrated/automated cockpit and support architecture to enhance helicopter mission/aircrew capabilities and reduce the risk of Full Scale Development (FSD) through cockpit design. Vital elements of the ARTI program were the contribution of Army user flight personnel, and the oversight of the independent operational evaluator through continuous comprehensive evaluation (C2E).

Building upon these early evaluations and assessments, the C2E process will continue

throughout the development program with the US Army Operational Test and Evaluation Agency (OTEA) providing progressive assessments of the potential operational effectiveness and suitability of the LHX system.

Specifically during DEM/VAL, contractor mock-up reviews, logistics/maintainability demonstrations, and other contractor activities will provide valuable data for an early operational assessment. Progress of the program will be cited; potential problem areas associated with the man-machine interface will be surfaced; and the user's ability to maintain the LHX system to appropriate standards under the concept of two-level maintenance will be explored.

Formal Testing

The Early User Test and Experimentation (EUT&E) (Sep-Oct 94) and the Initial Operational Test and Evaluation (IOT&E) (Jul-Sep 96) are the formal testing events of the LHX FSD program. The EUT&E will be conducted with three LHX prototypes flying approximately 300 test hours. The specific objectives of the EUT&E will be to:

- provide data to support an independent operational assessment of the potential effectiveness and suitability of the LHX system for the Milestone IIIA Low Rate Initial Production (LRIP) decision; and

- provide a limited assessment of the LHX Integrated Training System (ITS) as formulated to date during development.

In addition, the EUT&E will include a Force Development Test and Experimentation (FDT&E) or Concept Evaluation Program (CEP) to insure doctrine and tactics are in synch. These tests, coupled with the early user test involvement, will yield up-front test and evaluation experience and

“...we are planning, coordinating and executing a LHX test and evaluation program which will serve as the Army standard...”

data which will provide the foundation for the IOT&E. The IOT&E, using four production LHX aircraft flying approximately 750 test hours, will provide data to support an evaluation of the operational effectiveness and suitability of the LHX system, the ITS and its associated components, using the LHX tactics and doctrine with particular emphasis on battlefield employment and integration. This evaluation will support the Milestone III full production decision.

In support of the formal operational testing, the US Army Training and Doctrine Command (TRADOC) plans to conduct a series of FDT&Es which will develop and refine LHX battle drills, team member responsibilities, small unit tactics, organization, and means of employment.

As these test and experimentations are conducted, an increased perspective on LHX training requirements and structure will become further refined. These TRADOC efforts will use organic or surrogate LHX aircraft to accomplish their objectives.

The EOC Unit

Current conceptual test and evaluation planning includes the use of an Early Operational Capability (EOC) unit located at Ft Rucker, AL, consisting of user operators, maintainers and support personnel who would be available to directly influence the equipment design, operability and tactical employment. This unit would grow over the life of the LHX program from an initial cadre for early user involvement to a complete, combat ready aviation unit for deployment at Initial Operational Capability (IOC). Resourcing this concept is a current challenge, but has substantial benefits for

ushering a new capability into the Army. It also provides operational insights during the DEM/VAL phase prior to a down-select to a winning contractor team for FSD. It will then support the subsequent formal operational testing during the FSD phase. This EOC concept is new, but a “cousin” to it, Task Force 1-112, formed at Ft Rucker, worked well for the Army Aerial Scout Test, which successfully restored the OH-58D program.

The Bottom Line

While test and evaluation planning and coordination will continue to be an evolutionary process as the LHX system continues to mature, much has been accomplished to date. The Test and Evaluation Master Plan (TEMP) has been submitted, briefed and approved by the office of the Secretary of Defense (OSD); and the operational testing community, as a full partner in the LHX development program, enjoys a mutually beneficial relationship with both the material and combat developers.

The real objective of this material development process is to acquire the most effective and suitable equipment to meet the combat needs of the soldier. Through the efficient use of early user participation, the EOC unit or something like it, and the proper design and execution of the EUT&E and IOT&E, there is an excellent opportunity to meet the varied challenges of the LHX program head-on and improve the end result for the ultimate user — the soldier. With this in mind, we are planning, coordinating and executing a LHX test and evaluation program which will serve as the Army standard for future complex weapons systems development programs. ■■■■

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Roles (continued from page 8)

deep battles. In coordination with Air Defense Artillery and other combined arms, LHX will protect friendly forces by denying enemy aircraft unconstrained use of low level airspace.

When intelligence identifies lucrative aircraft targets on the ground the task force commander will direct the aviation commander to launch a preemptive strike — offensive counter air. Defensive counter air will occur when LHX aircraft are launched to engage threat aircraft that are conducting an air assault into our rear area or are attacking our forces.

It will also occur as a meeting engagement between helicopters. Passive counter air operations deny the enemy knowledge of our aviation dispositions and locations. Deception techniques and frequent relocations are two such operations.

Its senior package and weapons will allow the LHX to engage enemy aircraft at stand-off ranges to the maximum extent feasible. Its maneuverability and agility will make the LHX a formidable counter air fighter when stand-off and stealth no longer are options.

Fielding the LHX will not entail a shift in Army Aviation doctrinal tenets or in our tactics. Techniques and procedures eventually will be modified as we learn to fully exploit the capabilities of the LHX. The AirLand Battle philosophy is coherent and viable.

With the LHX, the maneuver commander can retain the initiative and disrupt the enemy's fighting capability in depth with decisive maneuver, effective firepower and deep attack. The LHX provides the technological edge necessary to counter the advances and numerical superiority of the 1990s threat and improves our ability to successfully carry out Army Aviation responsibilities on the modern battlefield. ■■■■

LHTEC Chosen to Qualify Army's T800 Engine

by Lieutenant Colonel Arnold E. (Sandy) Weand

On October 31, 1988 the U.S. Army Aviation Systems Command awarded a \$75.4 million modification to the existing T800 engine contract with the Light Helicopter Turbine Engine Company (LHTEC). LHTEC is a partnership of Allison Gas Turbine Division of General Motors Corporation and the Garrett Engine Division of Allied Signal. LHTEC will complete joint development and qualification of the T800 engine over the next 30 months.

In July 1985, competitive firm fixed price contracts for Full Scale Development (FSD) of the T800 engine were awarded to LHTEC and to the team of Textron Lycoming and United Technologies, Pratt and Whitney Aircraft Group. These five year FSD contracts specified selecting one team approximately three years into the program to finish engine development, qualify the engine, and to produce the engine for the Government. This first three year phase, or Preliminary Flight Rating (PFR) phase, ended in June 1988. To facilitate the final source selection by October, the Army issued a Letter of Instruction (LOI) to both teams in May 1988. The purpose of this LOI was to realign the T800 engine acquisition with the refocused Light Helicopter (LHX) program and to reiterate the selection criteria given to the teams three years ago. The major changes were a reduction in the total number of engines the Army planned to buy (from 10,000 to 5,000) based on a reduction in LHX aircraft and revise the development schedule to match the LHX.

The T800 Source Selection Evaluation Board was convened in June 1988 to evaluate the two contractor teams' performance during the PFR phase and their proposals for the remaining qualification phase of FSD. This evaluation was completed in accordance with the Source Selection Plan approved by the Source Selection Advisory Council. These results have been reviewed and approved by the Army Acquisition Executive and the Source Selection Authority. The Secretary of the Army signed the Decision Memorandum October 27, 1988.

Once in production, each company will compete against the other for the larger share of full rate engine production and support. This 20 year program has a total potential value of \$4 billion.

AMC (continued from page 19)

from the start.

A Maintenance Management Plan (MMP) will assure timely and proper spares support, technical manual preparation, support equipment identification, and future publication reviews.

Other plans are incorporated into the MMP, including the Logistics Support Analysis/Logistics Support Analysis Record, training, maintenance engineering, support equipment, depot maintenance, and interim contractor logistic support.

A Depot Support Plan will lay out the architecture for sustaining the LHX system through overhaul and rebuild of components and airframes.

The New Equipment Training (NET) plan describes personnel and equipment required for fielding and sustaining new systems. This NET plan was staffed and approved in November 1987 to meet Defense Acquisition Board requirements and will be updated as needed.

While the areas I have just discussed are by no means all-inclusive, they give you some idea of our widespread efforts. The LHX is one of our first major systems that will undergo the major-

ity of its development within the PEO-PM structure, and it's a good example of AMC's outstanding functional support role at its best. ■■■■

Man (continued from page 17)

integrate the LHX fully into our training strategy. The demands of leader development for our Army aviation professionals will continue to increase as we more fully integrate Army aviation modernization into AirLand Battle doctrine.

Of all the domains, force design impacts will be the most dramatic. We will gain economies within the force through the reduction of the total fleet size while increasing combat capability. Units will be downsized as more capable, newer aircraft replace less capable, older aircraft. There will be a corresponding reduction in the Army aviation personnel structure. The bottom line will be a trim Army aviation force far more capable than today's force.

In sum, the LHX is the centerpiece of the multifaceted Army Aviation Modernization Plan. As the Army enters the 21st Century, we can expect LHX to be a lethal and combat capable total aircraft system truly designed "user friendly." ■■■■

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FOR INFORMATION CONTACT:

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FUEL FOR THOUGHT: "It is customary in democratic countries to deplore expenditures on armaments as conflicting with the requirements of social services. There is a tendency to forget that the most important social service that a government can do for its people is to keep them alive and free."

British Air Marshal, Sir John Slessor

RESERVE COMPONENTS

ROSTER CODE

Last Name, First Name, MI (Rank)
 (First Year AAAA Membership)
 (Nickname)
 Address
 Duty Phone Number
 Residence Phone Number
 Name of Spouse
 AA - Army Aviator
 SAA - Senior Army Aviator
 MAA - Master Army Aviator
 IFE - Instrument Fit Examiner

IP - Test Pilot
 TP - Test Pilot
PROFESSIONAL DATA:
 Primary Assignment - Location
 Rating
 Maintenance Courses
 Qualification
 Flight Time
 Year Graduated
 DFCs/Air Medals
 Professional Organizations

1988 ARNG/USAR "High Timers"

CW4 Robert H. Rows.....	26,000	LTC Joseph G. Labrie.....	8,000	CW4 Charles A. Spillner.....	6,000
CW4 Robert L. Baird, USAR.....	15,340	CW4 Douglas W. Cuzeman.....	8,000	COL Robert J. Kopecky.....	6,000
CW4 George L. Senne.....	15,269	MAJ James Marlin Sikes.....	7,900	CW4 Michael F. Harbin.....	6,000
MAJ Frame J. Bowers III, USAR.....	15,007	CW2 Robert F. Rench.....	7,800	CW3/P Paul D. Fretts.....	6,000
CW3 Richard E. Loynachan.....	15,000	MAJ Ray R. Norris.....	7,800	LTC Charles E. Martin.....	5,800
WO1 Patricia A. Waltermeyer.....	15,010	CW4 Corey J. Ferguson.....	7,550	CW2 Frederick E. Ferguson.....	5,800
CW3 Jerry L. Brantley.....	12,400	LTC Michael P. O'Connor.....	7,500	CW4 Aaron N. Senne.....	5,600
CW4 John V. Fowler.....	12,018	LTC Bruce R. Bodin.....	7,500	CW4 Charles T. Robbins.....	5,600
CW3 William A. Pruzan.....	12,000	COL Robert J. Brandt.....	7,400	CW3 William N. Page.....	5,600
CW4 James A. Patterson.....	10,900	LTC Robert Poland.....	7,350	LTC Winfield S. Williams, Jr.....	5,500
CW2 William G. Radovich.....	10,720	CW3 Casto L. Brewer.....	7,300	COL Ronald B. Stewart.....	5,500
CW4 Clarence R. Clarkson, Jr.....	10,600	CW2 Michael R. Phillips.....	7,016	MAJ Thomas E. Lesser.....	5,500
LTC Leroy A. Wall.....	10,500	LTC Andrew A. Alston.....	7,005	LTC Roger H. Greenwood.....	5,500
LTC Kenneth E. Shuman.....	10,000	LTC James E. Siegman.....	7,000	LTC Robert D. Frazier.....	5,500
MAJ Dennis J. Lord.....	10,000	COL Thomas L. Orr.....	7,000	CW4 Donald R. Chapman.....	5,500
LTC Jose F. Campos.....	10,000	COL George F. Francioni.....	7,000	LTC Martin K. Sheaffer.....	5,200
LTC Ronald J. McDaniel.....	9,687	LTC Charles S. Finch, Jr.....	7,000	CW3 Joe Beaver, Jr.....	5,100
CW4 Angelo Spellos.....	9,166	CW4 Robert J. Schurr.....	6,950	CW4 Kenneth W. Bording.....	5,000
COL John E. Davis.....	9,010	CW4 Steven P. Rhule.....	6,878	CW3 Martin J. Adams.....	5,000
CPT Albert E. Bauman, III.....	9,000	CW4 Ed Rountree, Jr.....	6,800	LTC Geary W. Hancock.....	4,905
*W4 Felix Olmos.....	8,600	LTC Stephen R. Jackson.....	6,800	LTC Ronald R. Tamaccio.....	4,500
CW4 Gerry F. Ventrella.....	8,500	CW4 John M. Harris.....	6,700	CW4 William C. Gilmore.....	4,500
LTC Kerry G. Denson.....	8,500	CW2 Douglas Johnson.....	6,500	CW4 Richard I. Blount.....	4,400
CW3 Ronald H. Stern.....	8,253	MAJ Robert A. Bean, Jr.....	6,500	MAJ Stephen M. Harris.....	4,400
CW4 Curtis W. Lee.....	8,100	CW4 James I. Crippen, Sr.....	6,337	CW4 Gerald Hess.....	4,300
CW4 Thomas M. Johnson.....	8,100	COL William Westerdahl.....	6,200	COL Thomas E. Beauchamp.....	4,286
COL David P. Rataczak.....	8,000	LTC Craig E. Charles.....	6,200	LTC Robert J. Hayes.....	4,100
LTC Mario Macia.....	8,000	LTC Cecil B. Hengevald.....	6,175	LTC Thomas R. Brackett.....	4,100
COL Robert D. Mabey.....	8,000	COL Claude P. Riddle.....	6,100	MAJ Martin Weaver.....	4,000

* **ABRAM, Kal**, (SPC) (M88) 158 Main Street, Glen Carbon, IL 62034. Dy: (314) 275-6666. Res: (618) 288-5153. Dy: Avionics Mech, 219th Trans Co, Scott AFBIL.

ADAMS, Martin J., (CW3) (M86) Rt 2, Box 100J, Manor, TX 78653. Dy: (512) 473-9367. Res: (512) 272-4512. S: Irma. Dy: F CO 149th Avn Reg T ARNG, Austin. Rtg: MAA TP. Time: 5,000 Hrs./Cbt 100 Grad: May 72. AM/2. AUSA.

* **ADEE, Steven L.**, (CW4) (M84) P.O. Box 430, Fayetteville, AR 72702-0430. Res: (501) 442-0676. S: Prillia. Dy: Indiv Ready Reserve (IRR). Rtg: AA. Saf Crs: Mil Civ. Time: 2,830 Hrs./Cbt 1,728 Grad: Nov 69. AM/49.

ADKISON, Donald L., (COL) (M86) 11245 Portside Drive, Jacksonville, FL 32225. Dy: (904) 641-6003. Res: (904) 641-7350. Dy: FLARNG, Jacksonville, FL. Rtg: MAA SIP. Time: 9,000 Hrs. Grad: Oct 61.

ALEXANDER, Roland C., (MAJ) (M88) (R.C.) 207 Foxhall Dr, Apt. D, Bel Air, MD 21014. Dy: (301) 671-8100. Res: (301) 838-107. Dy: Avn Logistics Off, Nat'l Guard Bureau, Avn Div. Maint Crs: UH-1. Time: 700 Hrs. Grad: May 79.

ALLEN, Michael L., (CW3) (M78) 9109 Bluegrass Drive, Austin, TX 78759-7173. Dy: (512) 465-5167. Res: (512) 346-1928. S: Linda. Dy: C-12UH-1H Pilot, HQ STARC TXARNG. Rtg: SAA IP. Saf Crs: Mil. Time: 3,000 Hrs. Grad: Feb 80.

ALLEN, William C., (CPT) (M86) (Charlie) 11807 Midlight Pkwy, Austin, TX 78750. Dy: (512) 465-5015. Res: (512) 258-9810. S: Isabel. Dy: Det 1, STARC, Camp Mabry. Time: 1,500 Hrs. Grad: Mar 78.

ALSTON, Andrew A., (LTC) (M82) (Andy) 8744 SW 51st Street, Cooper City, FL 33328. Dy: (305) 536-5067. S: Ann. Dy: IMA, DAAR Eastern & NE FAA Region, NY. Rtg: MAA IFE SIP. Saf Crs: Civ. Time: 7,005 Hrs./Cbt 925 Grad: May 86. DFC/1, AM/21.

ANDERSON, Bruce W., (CW4) (M89) (Andy) 4125 S Spring Creek Trail, Lawrence, IA 46350. Dy: (312) 657-2283. Res: (219) 362-3241. S: Jane. Dy: Safety Off, 3/158th Avn Reg, NAS. Rtg: MAA IP TP. Maint Crs: UH-1. Saf Crs: Mil. Time: 3,300 Hrs./Cbt 1,140 Grad: Oct 69. AM/34.

ANDREW, William J., (CW3) (M69) 40330 Spitz Drive, Sterling Hts, MI 48078. Dy: (517) 627-5680. S: Maria. Dy: E Co, 238th Avn, MIPANG Grand Rapids. Rtg: AA. Maint Crs: UH-1. Time: 2,000 Hrs./Cbt 300 Grad: May 70.

* **ARCHER, Harry R.**, (MAJ) (M79) 1000 Mary Jane Circle, Killeen, TX 76541-7661. Dy: Itr. Rtg: SAA IP. Qual: AH-1S. Time: 1,700 Hrs. Grad: Feb 75. AUSA.

* **AUTHIER, Rick J.**, (CW2) (M85) Rotech Inc, 1327 Cresco Road, South, Spanaway, WA 98387. Dy: (206) 537-4991. Res: (206) 535-2650. S: Roberta. Dy: Pres, Rotech Inc. Qual: UH-60A. Time: 1,135 Hrs. Grad: Jul 81.

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BAILEY, Paul W., (COL) (M87) 805 Kemp Rd, West, Greensboro, NC 27410. Dy: Cdr, 449th Avn Gp, Kingstons.

* **BAIRD, Robert L.**, (CW4) (M78) (Hawk) 24429 Watt Road, Ramona, CA 92065. Dy: (619) 789-0162. S: Marlene. Capt, 6747, Flying Tiger Lines. Rtg: MAA. Maint Crs: UH-1. Time: 15,340 Hrs./Cbt 452 Grad: Mar 66. AM/15. AFA.

Aviation Reserve Component

* **BALMOS, Edward J.**, (LTC) (M64) (E.J.) P.O. Box 134, Mober, UT 84532. Dy: (801) 259-8054. Res: (801) 259-8513. S: Yoshiko. Grad: Apr 66.

BARBEE, Paul D., (2LT) (M84) Rt. 9, Box 429, Salisbury, NC 28144. Dy: (919) 333-4309. Dy: ACO 1/130th Atk Hel Bn, Morrisville. Qual: AH-64A.

BARTH, Perry E., (MAJ) (M88) 5309 Pony Ave, Boise, ID 83709. Dy: (208) 389-5175. Dy: Ft Instructor/Avn Safety Off, ID Army NG. Rtg: SAA IP. Saf Crs: Mil. Qual: UH-60A. Time: 1,000 Hrs. Grad: Apr 81.

BARTOS, Alan J., (1LT) (M84) 14510 Circlewood Way, Houston, TX 77062. Dy: (712) 484-6183. Res: (712) 480-6221. S: Marianne. Dy: 1/149th Avn Bn, Ellington Airfield, AHS, AUSA.

BAUMAN, Al E., III, (CPT) (M81) P.O. Box 60164, Fairbanks, AK 99706-0164. Dy: (907) 474-0278. Dy: A/1207 Avn Regt, Ft. Richardson. Rtg: SAA. Saf Crs: Civ. Qual: AH-1S. Time: 9,000 Hrs./Cbt 250 Grad: Dec 70. AM/11.

* **BEAMAN, Gregory N.**, (MAJ) (M67) (Greg) 600 Melbourne Drive, Enterprise, AL 36330. Dy: (205) 255-2615. Res: (205) 347-5896. S: Lorraine. Dy: 5-3 6/159th Avn Regt, Ft. Benning. Rtg: MAA IP. Qual: UH-60. Time: 4,000 Hrs./Cbt 840 Grad: Mar 71. AM/30.

* **BEAN, Robt. A. Jr.**, (MAJ) (M79) (Bob) 26026 Tierra Drive, Valencia, CA 91355. Res: (805) 254-6706. S: Jennifer. Dy: Adjutant, 168th Avn Gr (Cbt). Rtg: MAA IP IFE. Saf Crs: Mil. Time: 6,500 Hrs. Grad: Aug 70. AUSA, AFA.

BEATTY, Donald E., (CW4) (M83) (Duck) 61 Crestview Drive, Lebanon, PA 17042. Dy: (717) 865-8535. Res: (717) 272-2451. S: Margaret. Dy: Itr, Eastern AA Trng Site, Ft. Indiantown Gap. Rtg: MAA IP. Saf Crs: Mil. Qual: AH-1S. Time: 3,200 Hrs./Cbt 934 Grad: Sep 70. AM/24. Past Pres, Chesapeake Bay Chapter.

BEAUCHAMP, Thomas E., (COL) (M63) 123 ARCOM Bldg, 126, Ft. Harrison, IN 46216. Dy: (317) 549-5025. Res: (317) 773-6011. S: Bobbe. Dy: Cdr, 416th USARF School, Kingsbury. Rtg: MAA IP. Time: 4,286 Hrs./Cbt 1,246 Grad: Nov 63. DFC/3, AM/40. AUSA, AFA.

* **BEAVER, Joe, Jr.**, (CW3) (M87) 1006 California Tr, Grand Prairie, TX 75052. Dy: (214) 263-0570. Res: (214) 641-2478. Dy: C Co 1 Bn 158th Avn Regt. Rtg: SAA. Time: 5,100 Hrs. Grad: Jul 78. AM/13. AFA.

BECK, Thomas, (1LT) (M85) 681 Jamestown Blvd, No. 1027, Alta Monte Springs, FL 32714. Dy: (407) 660-3217. Res: (407) 774-6649. Dy: 1st Airflt Plt Ldr, DO B (-), 1st Bn, 131st Avn (Combat), Jacksonville. Time: 500 Hrs. Grad: Feb 85.

BENDA, Raymond L., (CW2) (M84) (Ray-Jay) 405 Tee Court, Arnold, MD 21012. Dy: (301) 765-1526. Res: (301) 974-1591. S: Phyllis. Dy: 224th AHB, MDARNG, APG. Rtg: SAA. Qual: AH-1S. Time: 2,100 Hrs. Grad: Mar 81.

BENKOSKY, David C., (LTC) (M86) (Moose) 6031 Elersee Drive, Carmichael, CA 95608. Dy: (916) 972-1210. S: Pamela. Dy: USAR. Cbt 600 Grad: Mar 68. AM/15, DFC/3.

BENSON, Terry W., (MAJ) (M85) 6 Amberwood Road, Haw River, NC 27258. Dy: (919) 840-0518. Res: (919) 376-8140. S: Toni H. Dy:

BHXO, HQ 1/130th Avn Bn NCARNG, Morrisville. Time: 1,400 Hrs. Grad: Jun 72. AUSA.

* **BERNHARD, William N.**, (COL) (M86) (Doc) 228 East Churchill St, Baltimore, MD 21230. Dy: (301) 328-2628. Res: (301) 727-3592. Dy: First Army Augmentation Det, Ft. George Meade.

BERTRAM, William K., (CW2) (M85) P.O. Box 331, Angier, NC 27501-0331. Dy: (919) 733-2555. Res: (919) 639-2181. S: Cynthia M. Dy: Scout Instr Pilot, Co C, 1/130 Avn NCARNG, Raleigh. Rtg: AA SIP. Time: 1,200 Hrs.

BISCOMB, David A., (LTC) (M86) 607 Park Wood Circle, Duncanville, TX 75116. Dy: (214) 337-1622. Res: (214) 298-8506. S: Lucretia. Dy: Armor Bn Cdr, B-112 Armor, Dallas. Time: 1,125 Hrs. Grad: Apr 70.

BISHOP, Michael P., (CPT) (M83) (Bish) 321 Maitland Street, Belair, MD 21010. Dy: (301) 676-2530. Res: (301) 893-1947. S: Sandra. Dy: ARNG Avn, NGB-AMV-OS, Edgewood. Rtg: AA. Time: 900 Hrs. Grad: Mar 83.

BLOUNT, Richard I., (CW4) (M87) 5109 W. Malchite Place, Tucson, AZ 85741. Dy: (602) 267-2540. Res: (602) 744-6377. S: Rebecca. Dy: Nat'l Guard Trng Off, Marana. Qual: AH-1S. Time: 4,500 Hrs./Cbt 680 AM/12.

* **BLOUNK, James B.**, (MAJ) (M87) (Jim) SLASCO 205-25-1, Granite City, IL 62040. Dy: (314) 263-7564. Res: (618) 451-9146. S: Lannis. Dy: Avn Personnel Mgt Off, ARPERCON. Qual: UH-60. Time: 850 Hrs. Grad: Feb 80. AUSA.

BODIN, Bruce R., (LTC) (M85) 11626 N. 110th Place, Scottsdale, AZ 85259. Dy: (602) 267-2794. Res: (602) 860-0856. S: Gail. Dy: AASF Cdr, Phoenix. Rtg: MAA IFE IP. Maint Crs: UH-1. Saf Crs: Mil. Time: 7,500 Hrs./Cbt 900 Grad: Jun 70. DFC/1, AM/28.

BOLEY, Kenneth O., (LTC) (M83) (Ken) 305-8 Forsythia Drive, Abingdon, MD 21009. Dy: (305) 671-8154. Res: (305) 671-9655. Dy: Chief, Safety Branch, National Guard Bureau. Rtg: MAA IP. Maint Crs: UH-1, FW. Saf Crs: Mil & Civ. Time: 3,400 Hrs./Cbt 1,200 Grad: Jan 69. AM/19. AHS, AUSA.

BOND, Craig A., (CPT) (M84) 6520 Camino de la Karina, Tucson, AZ 85718. Dy: (602) 624-9189. S: Pat. Dy: Cdr, WFSB (DES) WAATS, Marana. Rtg: MAA, SIP. Qual: AH-1S. Time: 3,900 Hrs./Cbt 600 Grad: Dec 69. AM/18.

BORA, Rodney H., (LTC) (M85) (Rod) 1827 Wexford Road, Palmyra, PA 17078. Dy: (717) 865-8929. Res: (717) 534-1170. Dy: Plans, Trng & Mobilization Off, Ft. Indiantown Gap. Saf Crs: Mil. Time: 1,760 Hrs. Grad: Feb 72. AUSA.

BORING, Kenneth, (CW4) (M86) (Ken) 4338 Springmoor Drive E., Jacksonville, FL 32225. Dy: (904) 641-8377. Res: (904) 642-2195. S: Colleen. Dy: HSC, 1 Bn, 111 Avn, FLARNG. Rtg: MAA IFE. Maint Crs: UH-1, CH-47, UH-60. Saf Crs: Mil. Qual: UH-60A. Time: 5,000 Hrs./Cbt 2,121 Grad: Nov 66. AM/32.

BORDNER, Thomas, (LTC) (M87) (Gron) 7877 Gordon Airport, 139 Tower Ave, Groton, CT 06340-1409. Dy: (203) 441-2900. S: James. Dy: AVCRAD-CT. Time: 2,500 Hrs./Cbt 1,008 Grad: Dec 69. AM/16.

* **BOSCO, Thomas L.**, (CPT) (M87) 56 Spring St, No. 2, Staten Island, NY 10304. Dy: (212) 466-4970. Res: (718) 981-6121. Dy: Airport Engr, The Port Authority Of NY&NJ. Time: 1,200 Hrs. Grad: Feb 81.

* **BOWERS, Frame J. III**, (MAJ) (M69) (John) 106 Fieldstone Drive, Terrace Park, OH 45174.

Dy: (513) 552-2722. Res: (513) 831-8652. S: Judy. Dy: Manager, CFM56 Navy Prog. GE AEG. Rtg: AA SAA. Time: 1,500 Hrs./Cbt 600 Grad: Dec 71. AM/23. AUSA.

BOYE, Guy S., (SSG) (M83) 1182 Knollwood Drive, Carl Stream, IL 60188-2943. Dy: (312) 657-2883. Res: (312) 213-2040. S: Patricia. Dy: Ft Pil Sgr., C Co. 3rd/158th, NAS Glenview.

BRACKETT, Thomas R., (LTC) (M85) (Tom) Riverhouse Apts, No. A-507, 1111 Army Navy Drive, Arlington, VA 22202. Dy: (202) 694-0265. Res: (703) 979-2732. S: Virginia. Dy: Staff Action Off, National Guard Bureau, Pentagon. Rtg: MAA. Maint Crs: AMOC. Time: 4,100 Hrs./Cbt 1,200 Grad: Sep 65. DFC/3, AM/29. Past Sec, Aloha Chapter.

BRADLEY, Jackie J., (1SG) (M87) P.O. Box 155, Coffee Springs, AL 36318. Dy: (205) 255-2515. Res: (205) 884-3167. S: Johnnie. Dy: B CO 6F159th.

BRADSHAW, Larry F., (CW2) (M81) Route 3, Box 39, Rougemont, NC 27572. Dy: (919) 228-4272. Res: (919) 477-2746. S: Betty. Dy: 1204th Trans Co, Salisbury. Rtg: AA TP. Maint Crs: UH-1. Qual: AH-1S. Time: 715 Hrs. Grad: Aug 82. AM/3. AHS.

BRANDT, Robert J., (COL) (M72) (Bob) 8817 Cardinal Street, Fountain Valley, CA 92708. Dy: (213) 493-8561. Res: (714) 962-0971. S: Dorothy. Dy: Airfield Commander, Los Alamitos. Rtg: MAA SIP. Maint Crs: UH-1. Time: 7,400 Hrs./Cbt 212 Grad: Apr 61. AM/4. Purple Heart. Past Vp, Southern California Chapter.

BRANTLEY, Jerry L., (CW3) (M67) 3005 Sandy Lane, Rocky Mount, NC 27803. Dy: (919) 733-2555. Res: (919) 446-2761. S: Margie. Dy: NCARPNG, C12 IP, Raleigh. Rtg: MAA IFE IP TP. Time: 1,400 Hrs./Cbt 2,037 Grad: Feb 67. AM/37. AUSA.

BREITHAUP, Michael P., (MAJ) (M74) (Mike) 14630 Estate Drive, Woodbridge, VA 22193-3224. Dy: (703) 355-3285. Res: (703) 670-3319. S: Theresa. Dy: Co Cdr, Co C, 1st Bn, 131st Avn, Davison AAF, Ft Belvoir, DCAWNG. Rtg: SAA. Time: 2,000 Hrs. Grad: Oct 75. NGAUS.

BRENDEL, Marlin D., (MAJ) (M73) Va Hospital, Quarters 26, Hot Springs, SD 57747. Dy: (605) 393-2436. Res: (605) 745-3670. S: Sherry. Dy: Cdr, 1085th Med Det (Helicopter Amb). Rtg: MAA. Time: 2,100 Hrs. Grad: Jan 74.

BREWER, Casto L., (CW3) (M79) Rt 3, Sunny Acres, 303 Circle Drive, Crossville, TN 38555. Dy: (615) 892-0439. Res: (615) 484-9001. S: Julie Anne. Dy: Pilot, A Co RAS, Smyrna, TN. Rtg: SAA. Saf Crs: Civ. Time: 7,300 Hrs. AFA.

BRYANT, Michael N., (CPT) (M86) (Mike) 1050 Marine St, Clearwater, FL 34615. Res: (813) 443-0070. S: Kandil. Dy: S-2 Int 164th ADA Bde, Orlando. Rtg: AA. Maint Crs: UH-1. Time: 1,172 Hrs. Grad: Sep 70.

BURNS, Harvey G., (1LT) (M88) 912 Dartmouth Glen Way, Baltimore, MD 21212. Dy: (301) 871-6811. Res: (301) 453-6043. S: Anne. Dy: Sr. Architect. Qual: AH-1S. Time: 500 Hrs. Grad: Mar 86.

BUSCHOW, Monte C., (1LT) (M87) P.O. Box 1954, Round Rock, TX 78680. Dy: (512) 480-4415. Res: (512) 388-2620. S: Jeanne. Dy: Trp D, 1/124 Cav TXARNG AANAF, Austin.

C Aviation Reserve Component

Time: 900 Hrs. Grad: Jan 85.

CALVERLEY, Roderick K., (LTC) (M88) (Rod) 3213 Mil. Carol Drive, San Diego, CA 92111. Dy: (619) 453-7500. Res: (619) 279-3683. S: Janeen. Dy: Anesthesiologist-reserve & civilian. Grad: Nov 87.

CAMPOS, Jose F., (LTC) (M87) Army Avn Support Facility, P.O. Box 3786, San Juan, PR 00904-3786. Dy: (809) 722-2120. Res: (809) 789-6954. S: Eiba. Rtg: AA IFE. Maint Crs: UH-1. Saf Crs: Mil. Time: 10,000 Hrs. Grad: Oct 70.

CARLBEG, Douglas F., (CW4) (M87) (Doug) 12350E Suttermill St, Tucson, AZ 85749. Dy: (602) 794-7342. Res: (604) 788-4468. Dy: Avn Maint Off, Co C, 4th Bn, 157th Regt, Ft. Eustis, Va. Rtg: AA.

CARROLL, Edward I., (MAJ) (M67) (Eddie) 2612 E Fox Street, Mesa, AZ 85213. Dy: (602) 891-5850. Res: (602) 898-7086. S: Barbara. Dy: McDonnell Douglas, Engineering Mgr. Rtg: AA. Saf Crs: Civ. Time: 1,800 Hrs./Cbt 800 Grad: Jun 68. DFC/2, AM/13. AHS, RAA.

CARSTENS, Brian D., (WO1) (M88) 810 Eglon Pkwy., NE, No. 9, Fort Walton Beach, FL 32548. Dy: (205) 690-6292. Res: (904) 862-5670. S: Ann. Dy: Army Aviator, Co. A, 1/131 Avn. Rtg: AA. Time: 200 Hrs. Grad: Jul 88.

CHAPMAN, Donald R., (CW4) (M88) (Nasty) P.O. Box 148, Orange Springs, FL 32682. Dy: (904) 685-2887. Res: (904) 546-5491. Dy: Sgt County Sheriff Dept, FLNG, Ocala, FL. Rtg: AA IP. Qual: AH-1S. Time: 5,500 Hrs./Cbt 1,226 Grad: Apr 70. DFC/1, AM/49.

CHARLES, Craig E., (LTC) (M81) Rd No. 1, Box 7035, Graniteville, VA 17028. Dy: (717) 865-8918. Res: (717) 865-6598. S: Diane. Dy: Plans & Ops Off, Hq STARC, PAARNG, Ft. Indiantown Gap. Rtg: MAA SIP IP. Maint Crs: UH-1. Saf Crs: Mil. Time: 6,200 Hrs./Cbt 845 Grad: Feb 66. DFC/1, AM/16. AHS, AUSA.

CHILDS, Theodore, (CW3) (M81) 300 W. Rosedale Avenue, West Chester, PA 19382. Dy: (717) 963-4344. S: Susan. Dy: Co 6, 104th Avn (Cbt) Ch47/COG, AVCOA. Rtg: SAA IP. Qual: CH-47. Time: 3,500 Hrs. Grad: Jan 76.

CHRISTENSEN, John H., (MAJ) (M85) (Jack) P.O. Box 8942, So. Lake Tahoe, CA 95731. Dy: (209) 982-3881. Res: (916) 541-6195. Dy: CA AVCRAD PC Offr, Fresno CAARNG. Rtg: AA IP. Maint Crs: CH-47. Time: 3,500 Hrs./Cbt 525 Grad: Mar 82. AM/11.

CHUNG, Russell, (LTC) (M81) 10480 Sunland Bl, No. 10, Sunland, CA 91040-1987. Dy: (818) 703-4547. Res: (818) 957-4925. Dy: Avn Log Off, Hq, 63d ARCOM. Rtg: SAA TP. Maint Crs: UH-1. Time: 2,000 Hrs./Cbt 558 Grad: Sep 68. AM/4.

CLARK, David L., (WOC) (M88) 104 Woodland Drive, Ozark, AL 36360. Dy: (205) 555-6591. Res: (205) 774-8790. Dy: B Co, 1-145 Avn, Ft Rucker.

CLARKSON, Clarence R., (CW4) (M71) (Clay) 1612 Cambridge Drive, Norman, OK 73069. Dy: (405) 527-5601. Res: (405) 364-6005. S: Beverly. Dy: IP/OKARNG, Army Avn Spt Fac, Lexington. Rtg: MAA SIP IP TP. Maint Crs:

AMOC. Saf Crs: USC. Time: 10,600 Hrs. Grad: Nov 61. Past Pres.

CLEMO, John E., (E7) (M73) P.O. Box 795, Claypool, AZ 85524. Dy: (602) 723-3970. Res: (602) 425-9755. S: Charlotte. Dy: 2221st QM Co.

CONRAD, Eugene B. Jr., (MAJ) (M84) (Blair) 7795 Wildcreek Trail, Huntsville, AL 35802. Dy: (205) 772-9395. Res: (205) 860-3730. S: Nancy. Dy: Co A Co 158th MI Bn GAARNG. Rtg: IP SIP. Time: 3,800 Hrs./Cbt 602 Grad: Aug 70. AM/13. AUSA.

COOK, David A., (CPT) (M85) (Dave) 1601 E. Spring Valley Rd., Richardson, TX 75081. Res: (214) 437-8524. S: Kelly. Dy: Product Engr, Texas Instruments. Rtg: AA. Qual: CH-47D. Time: 500 Hrs. Grad: Mar 82. AUSA.

COWART, Billy R., (E9) (M86) 6325 Kellow Drive, Jacksonville, FL 32216. Dy: (904) 396-3579. Res: (904) 725-0584. S: Angela. Dy: 1st Bn, 111th Avn (Alk Hel), FLARNG.

COY, Chris A., (CPT) (M84) 3733 Rochford Bridge Dr., Columbus, OH 43026. Dy: (614) 889-7146. Res: (614) 876-2732. S: Susan. Dy: 5-3, 4th Sqn, 107 Armored Cavalry Greenburg. Rtg: SAA. Qual: AH-1S. Time: 1,700 Hrs. Grad: Jun 80. AUSA.

CREECH, John B., (2LT) (M86) E-201 Sutherland Apt, 3500 Sutherland Ave, Knoxville, TN 37919-3165. Dy: (601) 842-1378. Res: (615) 588-8672. S: Tracy. Dy: Pil Ldr, Co D, 1-185th Avn Gp, Tulepe, Ms. Rtg: AA. Time: 380 Hrs. Grad: Sep 87. AUSA.

CRIPPEN, James L. Sr., (CW4) (M78) (Red) 4408 Rainbow Road, Montgomery, AL 36116. Dy: (205) 281-7722. Res: (205) 288-5274. S: Carol. Dy: Acrtt Maint Off, AASF 1, ALARNG. TP. Rtg: SIP IP TP. Maint Crs: UH-1, AH-1. Saf Crs: Mil. Qual: UH-60A. Time: 6,337 Hrs. Grad: Jun 65.

CULP, Jeffrey R., (CSM) (M83) (Jeff) 178 Norway Lane, Lebanon, PA 17042. Dy: (717) 865-8795. Res: (717) 274-1904. S: Bonnie. Dy: Esmr ARNG Avn Trng Site, Ft. Indiantown Gap. Treas, Indiantown Gap Chapter.

CUNZEMAN, Douglas W., (CW4) (M84) 1670 Greenleaf, Des Plaines, IL 60018. Dy: (312) 298-6340. S: Darlene. Dy: 185th TC (AVIM), NAS Glenview Prod Control Off. Rtg: TP. Maint Crs: UH-1. Saf Crs: Civ. Mil. Time: 8,000 Hrs./Cbt 1,100 Grad: Jun 64. DFC/1, AM/26. AHS.

CURLISS, Tim A., (CW2) (M88) 14171 North State Road, No. 53, Demotte, IN 46310. Dy: (219) 696-9777. Res: (219) 987-3052. S: Janet. Dy: Pilot, ILANG Chicago. Time: 1,650 Hrs. Grad: Jul 88.

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DAVIS, John E., (COL) (M77) P.O. Box 1008, St Augustine, FL 32085-1008. Dy: (904) 824-8461. S: Shirley. Dy: FLARNG, Avn Offcr. Rtg: MAA IFE. Qual: AH-1S. Time: 9,010 Hrs. Grad: Dec 62.

DAVIES, William J., (LTC) (M86) (Bill) 19741 Sepovia Lane, Yorba Linda, CA 92686. S: Dolores. Dy: Cdr 40th SPTBN, 40th ID. Rtg: MAA. Time: 2,500 Hrs. Grad: Nov 70. AHS, AUSA, NGAUS.

DAWSON, James R., (CPT) (M83) (J.R.) P.O. Box 730, Middleton, IL 83644-0730. Dy: (208) 389-5271. S: Lucia. Dy: Aero Wpns Cdr, 116

ACR Boise, Idaho. Rtg: AA. Saf Crs: Mil. Time: 1,000 Hrs.

*** DEISS, Bobby R.**, (W01) (M86) 11000 Gateden, No. 504, Tomball, TX 77375. Res: (713) 376-3020. S: Donna. Dy: 273rd Med Det, Tomball, Texas USAR.

DENSON, Kerry G., (LTC) (M87) AASF #2, 1950 Pearson St, Madison, WI 53704-2517. Dy: (608) 241-6386. S: Susan. Dy: Facility & Bn Cdr. Rtg: MAA IP. Maint Crs: UH-1. Saf Crs: C. V. Time: 8,500 Hrs./Cbt 1,100 Grad: Mar 67. DFC/1, AM/35.

*** DEVOR, Charles L.**, (W01) (M86) 367 Center St, Chambersburg, PA 17201. Res: (717) 263-5875. Dy: 357th Trans Co (AVIM), Greenbelt. Time: 350 Hrs. Grad: Sep 86.

*** DOBSON, Ronald W.**, (LTC) (M72) 4 Derbyshire, Derby, CT 06416. Dy: (203) 386-6830. Res: (203) 732-2563. S: Linda. Dy: Ima, Yuma Proving Grounds, Rtg: AA IP. Saf Crs: Mil. Qual: AH-1S. AHS, AUSA.

*** DODGE, George S.**, (LTC) (M88) 517 Tenby Terrace, Manchester, MO 63011. Dy: (314) 253-7564. S: Barbara. Dy: Chief, Avn Br ARPERCEN, St Louis. Rtg: AA IFE, SIP. Maint Crs: UH-1. DFC/1, AM/27.

*** DOUGLAS, Michael E.**, (CPT) (M86) c/o Chattahoochee Cleaner, 8540 Roswell Road, Atlanta, GA 30338. Dy: (404) 992-7177. Res: (404) 992-2456. Dy: 145th Med Det (Sic Ldr), Dobbins AFB. Rtg: AA TP. Maint Crs: AH-1. Qual: AH-1S. Time: 600 Hrs.

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ECKERSON, Bruce N., (CPT) (M84) 3810 Brylton Lane, Harrisburg, PA 17110. Dy: (717) 865-8610. S: Dinny. Dy: EAATS, FTIG. Rtg: MAA IFE, IP. Grad: Jun 68.

EIDEM, Jon C., (W01) (M87) 8144 5th Ave. South, Bloomington, MN 55420. Dy: (612) 296-4686. Res: (612) 889-8150. Dy: Pilot ALSE OFC Co D, 147th Avn Mn Ng. Time: 500 Hrs. Grad: Sep 86.

ELLIS, Bradford N., (1LT) (M85) (Brad) 2840 Mary Marvin Trail, Foggys-Varina, NC 27526. Dy: (919) 733-3770. Res: (914) 639-0381. S: Nancy. Dy: Asst S-2, HSC 1/130th Avn, Morrisville. Time: 360 Hrs. Grad: Jun 86.

ENRIGHT, John L., (LTC) (M69) 21 Sykes Road, Seekonk, MA 02771. Dy: (401) 267-3007. S: Karen. Dy: AASF Quonset State Airport, RI. Rtg: MAA IFE, SIP. Saf Crs: Mil. Qual: AH-1S. Time: Cbt 998 Grad: Mar 69. AM/22.

EVANGELISTA, Robert F., (SFC) (M88) 167 Webster Ave, Apt. 3, Providence, RI 02909. Dy: (401) 267-3031. Res: (401) 944-8044. S: Gale. Dy: Ft Ops, Chief Trng NCO, HHS 1st Bn, 126th Avn, RIARNG.

EVERETT, Leslie T., (COL) (M85) (Les) 1200 Keith Drive, Cary, NC 27511. Dy: (919) 733-3770. Res: (919) 467-0644. S: Sylvia. Dy: State Avn Off, NCAIRNG. Rtg: MAA SIP. Time: 4,000 Hrs. Grad: Dec 69.

EWING, Earl P., (LTC) (M83) 6 Christopher Court West, Hummelstown, PA 17036. Dy: (717) 865-8878. Res: (717) 566-6182. S: Trudy. Dy: XO, Eastern ARNG Avn Trng Site, Ft Indiantown Gap. Rtg: MAA IP TP. Maint Crs: UH-1. Time: 3,800 Hrs./Cbt 244 Grad: Feb 70.

EXLEY, Cliff D., (2LT) (M88) (Axe) 519 Scott Street, Boise, ID 83705. Dy: (208) 389-5064.

D Aviation Reserve Component

Res: (206) 345-8871. S: Joanne. Dy: Plt Cmr, Aeroweapons Airtpr, 116th ACR. Rtg: AA TP. Time: 600 Hrs. AUSA.

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*** FAST, Peter**, (CPT) (M86) (Pete) 2440 Woodfield Circle, Lexington, KY 40515. Dy: (606) 293-3554. Res: (606) 273-2519. S: Cynthia. Dy: 412th Medical Detachment (USAR), Hangar #7, Bowman Field, Louisville. Rtg: AA. Time: 600 Hrs. Grad: Jul 83. AUSA.

*** FEAGIN, Clinton J.**, (CW2) (M86) (Clint) 611 Ash Street, Copperas Cove, TX 76522. Dy: (817) 288-9945. S: Rita Kay. Dy: Act Armament Tech, 151 AE, Fort Hood.

FELDERMAN, Robert J., (CPT) (M88) (Bob) 1280 Mr. Loretta, Dubuque, IA 52001. Dy: (319) 557-1465. Res: (319) 582-4545. S: Nancy. Dy: Cdr, Det 2, HHT 1/194 Cav. Time: 1,500 Hrs. Grad: Jul 78.

FELL, Richard R., (CW2) (M85) 619 South Pugh Street, Apt. 28, State College, PA 16801. Dy: (717) 963-4343. Dy: Unit Avn Safety Off, G Co, 104 AVNPA ARNG. Rtg: AA. Time: 1,400 Hrs.

*** FENNEL, John C.**, (W01) (M86) (Pup) P.O. Box 13301, Monroe, LA 71213. Dy: (318) 646-2080. Res: (318) 342-3727. Dy: Det 1 256th Inf, Pineville. Time: 300 Hrs. Grad: Nov 86.

*** FERGUSON, Corey J.**, (CW4) (M73) 28382 Ronea, Mission Viejo, CA 92692. Dy: (213) 646-4111. Res: (714) 768-5484. S: Barbara. Dy: OV-1 Aviator, A Co, 641st MI Bn, Salem, Or. Rtg: MAA IFE SIP. Time: 7,550 Hrs. Grad: Apr 73.

FERGUSON, Frederick E., (CW2) (M84) 106 South Stellar Pkwy., Chandler, AZ 85226. Dy: (602) 267-2797. Res: (602) 961-9634. S: Ann. Dy: SIP, Co C, 1 Bn, 108 Avn, Rtg: MAA SIP. Maint Crs: UH-1. Time: 5,800 Hrs./Cbt 1,009 Grad: May 67. DFC, AM/IV, 39 SS/OLC, M/1 Avn Vp, Arizona Chapter. HOF, Aviator Of Yr.

*** FINCH, Charles S.**, (LTC) (M86) 2349 Rugby Avenue, College Park, GA 30337. Dy: (404) 559-5507. Res: (404) 765-0486. S: Nancy. Dy: Army Reserve, HQ 81st ARCOM. Rtg: AA IP. Time: 7,000 Hrs./Cbt 1,428 Grad: Jun 68. DFC/1, AM/38, AUSA.

FLEISCHACKER, Ronald R., (W01) (M85) 801 Edward, No. 3, Anchorage, AK 99504. Dy: (907) 338-7960. Dy: 100B, Ft. Rich. Maint Crs: UH-1. Time: 700 Hrs. Grad: Aug 85.

FLYNN, Timothy M., (LTC) (M85) 9141 Crescent Valley, NW, Gig Harbor, WA 98335. Dy: (206) 581-8836. Res: (206) 858-6277. S: Jean. Dy: Wa Arm, Ex Offcr, 540th Avn Gp Atk. Rtg: MAA IP. Maint Crs: AMOC. Saf Crs: Mil. Qual: C-47. Time: 3,700 Hrs./Cbt 1,271 Grad: Apr 85. DFC/1, AM/18 OLC. Vp, Mount Rainier Chapter.

*** FOGLI, Philip J.**, (LTC) (M75) 720 Lynn Lane, Galph Mills, PA 19406. Dy: (215) 354-0288. Res: (215) 687-4090. S: Michaelene. Dy: Chf Plans & Movements Div, 79th ARCOM, NAS Willow Grove. Grad: Feb 68. OLC/16.

FOWLER, John V., (CW4) (M83) 1015 Yager Lane, No 135, Austin, TX 78753. Dy: (512) 465-5635. Res: (512) 835-6765. Dy: C-12 Pilot, HQ STARC TXARNG. Rtg: MAA SIP. Maint Crs: UH-1. Time: 12,018 Hrs./Cbt 826 Grad: Mar 68. AM/IV, 30 OLC. Pres, Lone Star Chapter.

*** FRANCONI, George F.**, (COL) (M87) 2001 Midshipman Drive, Stafford, VA 22554. S: Bonnie. Dy: Office Chf Army Reserve, Chf Prog, Mgmt Office, Pentagon. Rtg: MAA IFE SIP. Maint Crs: UH-1. Saf Crs: Mil. Time: 7,000 Hrs./Cbt 1,600 Grad: Jun 67. DFC/1, AM/22. AHS, AUSA.

*** FRAZIER, Robert D.**, (LTC) (M75) 1716 Ashbury Court, Bedford, TX 76021. Dy: (817) 280-3601. Res: (817) 571-2853. S: Carolyn. Dy: IRR, St. Louis, MO. Rtg: AA IP. Maint Crs: UH-1. Time: 5,500 Hrs./Cbt 1,200 Grad: Sep 66. DFC/2, AM/28.

*** FRETTS, Paul D.**, (CW3/P) (M79) 804 Eastwood Drive, Dothan, AL 36301. Dy: (205) 598-6346. Res: (205) 792-1690. S: Zelpha. Dy: Pilot, B Co, 6th Bn, 159th Avn Regt. Rtg: MAA. Qual: UH-60A. Time: 6,000 Hrs./Cbt 1,500 Grad: Aug 68. AM/33/IV, AHS, AFA.

FRISKEL, Mark H., (CW3) (M82) 9368 N. Hampshire, Tucson, AZ 85741. Res: (602) 742-5589. S: Karen. Dy: Westrn ARNG Avn Trng Site Silverbell AHP. Rtg: SAA SIP. Time: 3,500 Hrs. Grad: Jul 80. AUSA.

*** FRYE, Ronald D.**, (CPT) (M88) (Ron) Harris Corp, M/S 1014701, P.O. Box 94000, Melbourne, FL 32902. Dy: (407) 729-3134. Res: (407) 857-0234. S: Marian. Dy: 348th Med Det (HA), Orlando. Qual: AH-1S. Time: 700 Hrs. Grad: Apr 80.

FULKERSON, Lewis, (CSM) (M86) P.O. Box 30475, Stockton, CA 95213-0475. Dy: (209) 445-6134. Res: (209) 772-2436. S: Joanne. Dy: Avn Bde, 40th Id (Mech) Fresno.

FULLER, George D., (COL) (M67) (Don) 4805 Robinhood Drive, Winthrop, ME 04364. Dy: (207) 626-4286. Res: (207) 377-2611. S: Charlie. Dy: Sr Army Aviator, Maine ARNG. Rtg: MAA IP. Maint Crs: UH-1, AH-1, FW. Qual: AH-1S. Time: 3,500 Hrs./Cbt 1,000 Grad: Nov 65. AM/38 OLC. Past Pres, Leavenworth Chapter. Past Vp Mem USAREUR.

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*** GALFORD, Greg P.**, (W01) (M86) 627 West Mercer Place, Apt. 2, Seattle, WA 98119. Dy: (206) 281-3143. Res: (206) 284-7027. Dy: Pilot, 341st ASA Co (BS), Paine Field, Everett. Time: 500 Hrs. Grad: Dec 86.

GAUGHAN, Wm. G., Jr., (CW4) (M71) (Bill) 60 Goosenock Point Road, Oceanport, NJ 07757. Dy: (201) 724-4551. Res: (201) 222-0148. S: Janna. Dy: IP, Trp D, 5/11th Cav, NJARNG, Westfield. Rtg: MAA SIP TP IFE. Maint Crs: UH-1. Time: 4,000 Hrs./Cbt 385 Grad: Oct 71.

GERSTENKORN, Edward F., (SGT) (M87) 1087 Davis Street, Vacaville, CA 95688. Dy: OH 58 Aeroscout Observer.

*** GILMORE, William C.**, (CW4) (M87) 7117 Birkshire Drive, Amarillo, TX 79109-6499. Dy: (506) 353-7478. Res: (806) 354-2720. S: Mary. Dy: B Co, 1/158th Avn Regt, USAR, Grand Prairie. Rtg: AA IP. Time: 4,500 Hrs./Cbt 1,300 Grad: Dec 67.

GIPSON, J. David, (CPT) (M87) (Dave) 645 W. Orange Grove Road, Tucson, AZ 85704. Dy:

(602) 624-9189. Res: (602) 797-1283. S: Tanya. Dy: Chief Trng Svc Support Sec, West ARNG Avn Trng Site, Marana. Rtg: AA. Saf Crs: Civ. Qual: AH-1S UH-60A. Time: 2,100 Hrs.

GLASGOW, Frank L., (MAJ) (M71) Box 183, Scott AFB, IL 62225-0183. Dy: (314) 263-3025. Res: (618) 632-2868. Dy: Chf. Avn Div, 102d ARCDM, St Louis. Rtg: MAA IP TP. Maint Crs: UH-1 CH-47. Qual: UH-60A. Time: 2,450 Hrs. Grad: Nov 72. AUSA.

GOODWIN, Robert E., (MAJ) (M86) (Bob) 1/111 Avn, Box 8268, Jacksonville, FL 32239-0628. Dy: (904) 641-8875. Res: (904) 645-0158. S: Carol. Dy: Cdr 1-111 Avn AAHB, FLARNG. Rtg: AA. Maint Crs: UH-1. Qual: AH-1S, AH-64. Time: 2,000 Hrs. Grad: Jun 76. AUSA.

GOODRICH, Roger L., (COL) (M79) 14705 Rabbit Run Ct, Centerville, VA 22020. Dy: (202) 695-0270. Res: (703) 266-9478. S: Roberta. Dy: National Guard Bureau, Pentagon, Wash., DC. Time: 1,400 Hrs. Grad: Jun 70. Past VP, Greater-Atlanta Chapter, NGAUS.

GOODWIN, Andrew W., (CPT) (M85) (Drew) 5005 Elkwood Court, Raleigh, NC 27613. Dy: (919) 731-2555. Res: (919) 787-2977. S: Sue. Dy: Maint Off, NCRANG, Durham. Rtg: AA TP. Maint Crs: OH-58, AH-64. Saf Crs: MIL. Qual: AH-1S AH-64A. Time: 1,700 Hrs. Grad: Feb 79.

GOTTLIEB, Norman, (MAJ) (M81) (Norm) 3332 Elm Terrace, Falls Church, VA 22042. Dy: (202) 696-3971. Res: (703) 560-8380. S: Joan. Dy: Avn Organizational Integrator, Office Chief Army Reserve. Rtg: AA IP. Time: 1,575 Hrs./Cbt 760 Grad: Oct 70. AM/5.

GRAY, David L., (1LT) (M86) 4501 Oak Creek Drive, Austin, TX 78727. Dy: (512) 250-6012. Res: (512) 255-0746. S: Carl Lyn. Dy: AdR Aerospaceops 1/124 Cav, Austin. Qual: AH-1S. Time: 950 Hrs. Grad: Mar 86.

GREENLEE, George T., (CPT) (M81) 1204 Glenwood Rd, Vestal, NY 13850-3243. Dy: (607) 721-4086. Res: (607) 757-0970. S: Encarnita. Dy: Flight Spec, Link Flt Simulation Corp. Rtg: SAA IP. Time: 1,600 Hrs. Grad: Mar 79. AUSA.

GREENWOOD, Roger H., (COL) (M72) (Roger) N2696 Richard Drive, Lodi, WI 53555. Dy: (608) 241-6404. Res: (608) 592-3483. S: Heidi. Dy: WSAFNG Avn Officer. Rtg: MAA IP. Saf Crs: MIL. Time: 5,500 Hrs./Cbt 1,072 Grad: Sep 80. DFC/3, AM/31.

GRIFFIN, Kenneth W., (E8) (M86) 421 Lafayette Ave, Baltimore, MD 21228. Dy: (301) 252-3030. Res: (301) 789-3188. S: Marleen. Dy: Mace MD. ARNG, Havre de Grace.

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HADLEY, Morris R., (MSG) (M85) P.O. Box 1392, 122 Pond Drive, Atlantic Beach, NC 28512-1392. Dy: (919) 466-7145. Res: (919) 247-2475. S: Lieu. Dy: 1SG, HSC, 1/130th AFB, Morrisville.

HALCOVAGE, Jonathan P., (MAJ) (M84) Rtd 2, Box 469, Annville, PA 17003-9802. Dy: (717) 865-8840. Res: (717) 865-6199. S: Mary Ann. Dy: Chf. Avn Med Div, Eastern Army Avn Trng Site, Fort Indiantown Gap. Rtg: AA. Maint Crs: FW. Time: 600 Hrs.

HANCOCK, Geary W., (LTC) (M84) 2769 McManus Place, Ft Eustis, VA 23604-1310. Dy: (804) 878-6664. Res: (804) 888-2392. S: Joyce. Dy: USAR Advisor To USAALS. Rtg:

H Aviation Reserve Component

AA. Saf Crs: MIL. Time: 4,905 Hrs./Cbt 836 Grad: May 68. DFC/1, AM/29. VP, Reserve Affairs, Colonial VA Chapter.

HANSEN, Richard N., (CPT) (M74) (Rick) 9728 Ruskin Circle, Sandy, UT 84092. Dy: (801) 488-2550. Res: (801) 943-5261. S: Colleen. Dy: VP Employee Benefits, Bayly, Martin & Fay, Salt Lake City. Rtg: SAA. Time: 2,000 Hrs. Grad: May 73.

HANSEN, Susan D., (SSG) (M87) (Sue) P.O. Box 32, Little Falls, MN 56345-0032. Dy: (612) 632-6631. Res: (612) 632-5940. Dy: MAAF Medevac NCOIC, MN ARNG, Camp Ripley, AUSA.

HARBIN, Michael F., (CW4) (M83) P.O. Box 34104, Ft Buchanan, PR 00934-0104. Dy: (809) 783-2424. Res: (809) 729-2621. S: Grisselle. Dy: Cmd Pilot, Rtg: MAA IFE IP TP. Maint Crs: UH-1. Time: 6,000 Hrs./Cbt 1,210 Grad: Apr 70. AUSA.

HARRIS, John M., (CW4) (M71) c/o U.S. Embassy-Jingston, Jamaica, Dept. of State, Washington, DC 20520. Dy: (809) 929-4850 est. 288. Res: (809) 927-4977. UH-1R-IRP-ARPERCEN, St. Louis, MO. Rtg: SIP. Qual: AH-1S. Time: 6,700 Hrs./Cbt 337 Grad: Jan 72. AM/6. Past VP, So. California Chapter.

HARRIS, Keith G., (CW4) (M82) 604 Winslow Drive, Bel Air, MD 21014. Dy: (301) 671-3536. Res: (301) 838-9333. S: Mary. Dy: MD AASF. Rtg: MAA SIP. Saf Crs: MIL. Time: 3,200 Hrs./Cbt 956 Grad: Oct 70. AM/40, V. Past Pres, Chesapeake Bay Chapter.

HARRIS, Stephen M., (MAJ) (M77) 105 Nottingham Court, Enterprise, AL 36330. Dy: (205) 255-4770. Res: (205) 347-2090. S: Arnie. Dy: Flt Inst/Staff Spec, for Dir of Stand & Eval, Ft. Rucker. Rtg: AA IP, IFE, Saf Crs: Civ. Qual: AH-1S. Time: 4,400 Hrs./Cbt 600 Grad: Apr 70. AM/14. AUSA, ROA.

HATTON, Edward T., (LTC) (M68) 890 Contention Lane, Berwyn, PA 19312. Dy: (215) 443-1620. Res: (215) 647-2030. S: Ruth. Dy: DCSIM, 79th ARCDM NAS Willow Grove. Rtg: AA. Maint Crs: FW. Time: 1,200 Hrs./Cbt 300 Grad: Mar 68.

HAUG-BERNATZ, Beverly M., (CW2) (M83) (Mrs. Peggy) 5141 Hickory Circle, Cypress, CA 90630. Dy: (213) 943-8001. Res: (714) 821-0712. S: John. Dy: Act Pilot, Los Alamitos Army Airfield, Los Alamitos. Rtg: AA. Maint Crs: UH-1. Time: 1,450 Hrs. Grad: Mar 83. Past VP, Washington DC Chapter.

HAYES, Robert J., (LTC) (M87) P.O. Box 60640, Reno, NV 89506-0640. Dy: (702) 677-3300. S: Peggy. Dy: St Army Avn Off, NV Army Ng. Rtg: MAA IFE, IP. Time: 4,100 Hrs./Cbt 960 Grad: Oct 68. DFC/1, AM/19.

HENGEVELD, Cecil B., (LTC) (M81) 16 Ardmore Drive, Hummelstown, PA 17036. Dy: (717) 783-3450. Res: (717) 566-8941. S: Peggy. Dy: AASF-FTIG/PAARNG. Rtg: MAA IP. IFE. Saf Crs: MIL. Time: 6,175 Hrs./Cbt 960 Grad: Dec 66. AM/28.

HESS, Gerald, (CW4) (M82) (Gerry) 2008 Laurel Glen Drive, Harrisburg, PA 17110. Dy: (717) 865-8535. Res: (717) 657-3595. S: Sheryl. Dy: EAATS, FTIG. Rtg: MAA SIP IFE. Maint Crs: UH-1. Saf Crs: MIL. Time: 4,300

Hrs./Cbt 400 Grad: Oct 67. DFC, AM/16.
HEWITT, James C., (CW2) (M86) 1368 Sherman Street, Watertown, NY 13681. Dy: (315) 782-6608. S: Margaret. Rtg: AA IP. Time: 3,700 Hrs./Cbt 1,000 DFC, AM/37.

HILL, Howard D. III, (COL) (M70) (Doug) 2311 Haddon Place, Bowie, MD 20716. Dy: (202) 697-3391. Res: (301) 464-9209. S: Brenda. Dy: XO, Army Reserve Forces Policy Comm, OSA The Pentagon, DC. Rtg: MAA. Time: 3,000 Hrs./Cbt 650 Grad: Mar 65. AM/11. Past Sec, Chesapeake Bay Chapter.

HOLLEY, Charles D., (MAJ) (M84) (S.D.) 7525 Nine Mile Bridge Rd., Fort Worth, TX 76135. Dy: (817) 237-4108. Res: (817) 237-4442. S: Monica. Dy: AARTA Moffet Field, CA. Rtg: MAA IP. Time: 3,600 Hrs./Cbt 1,200 Grad: Oct 67. DFC/1, AM/18. AHS.

HORNE-FIELDING, Nancy, (CPT) (M80) 16 Regency Road, Salisbury, NC 28144-2119. Dy: (704) 636-9240. Res: (704) 633-5348. S: William. Dy: Pilot, NCRANG, 105th Eng Gp. Rtg: AA. Time: 1,000 Hrs. Grad: Mar 80.

HULL, David L., (CPT) (M82) (Dave) 4 Rose St, Apt 6E2, OceanSIDE, NY 11572-2806. Dy: (516) 420-9304. S: Shari. Dy: Exec VP, Advantage Planning Inc., Rtg: AA TP. Maint Crs: CH-47. Qual: CH-47D. Time: 800 Hrs. AUSA.

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IDOL, Tony G., (COL) (M80) (Tony) 105-B Forbes Avenue, Carlisle, PA 17013. Dy: (717) 243-6022. S: Katherine. Dy: Student, USAWC, Carlisle Barracks, CEW. Rtg: MAA. Time: 3,500 Hrs./Cbt 750 Grad: Nov 64. AM/16. AUSA.

INGALLS, Kevin N., (1LT) (M86) Rt 6, Box 805-IF, Troy, AL 36081-9619. Dy: (205) 566-3000. Res: (205) 566-4459. Dy: 113rd Medical Co (AA), (Medevac), ALNG, Dannelly Field, Montgomery. Time: 300 Hrs. Grad: Jun 87.

INNES, Douglas D., (COL) (M60) (Doug) HQ USEUCOM, J4 (LPA), PSC Box 555, APO NY 09128. S: Hiltrud. Dy: Plans, Patch Bks. Rtg: AA. Time: 1,600 Hrs. Grad: Aug 60. AUSA.

IWATA, Allen R., (MSG) (M71) (Al) 3072 Ursula Street, Aurora CO 80011-2009. Dy: (303) 340-9855. S: June. Dy: HQ STARC (-) COARNG, ACRFT Maint.

JACKSON, Stephen R., (LTC) (M86) (Stick) 3585 East Bengal Blvd, Salt Lake City, UT 84121. Dy: (801) 524-3708. S: Shauna. Dy: S-3, 211th Avn Gp (Attack Hel), West Jordan. Rtg: MAA SIP IP. Saf Crs: MIL. Qual: AH-1S. Time: 6,800 Hrs. Grad: Dec 67. AM/7.

JIMENEZ, Alberto J., (MAJ) (M83) 1209 Mystic Court, Churchville, MD 21028. Dy: (301) 671-8144. S: Maria T. Dy: Co, Co F, 224th Avn Regt, MD ARNG. Rtg: MAA TP. Maint Crs: UH-1, AH-1, FW. Time: 3,550 Hrs./Cbt 750 Grad: Dec 69. AM/1. AUSA.

JOHNSON, Charles F., (MAJ) (M86) 5419 Brookview Court, Acworth, GA 30101. Dy: (404) 624-6500. Res: (404) 974-5786. S: Carrie. Dy: Asst Facilities Mgmt Off, GA, ANG, HQ STARC, GAARNG, Atlanta. Rtg: SAA IP. Maint Crs: AMOC. Qual: AH-1. Time: 2,080 Hrs./Cbt 1,021 Grad: Mar 69. AM/37. AUSA.

JOHNSON, Douglas, (CW2) (M86) (Doug) 2567 Shadyridge Drive, Bedford, TX 76021. Dy: (713) 484-8137. Res: (817) 540-3431. Dy: Aik Helcpr Pilot, TX-ARNG, 149th. Rtg: SAA. Qual:

AH-1S. Time: 6,500 Hrs. Grad: Aug 76. AFA.

JOHNSON, Phillip G., (MAJ) (M73) 8305 N. 125th St E. Ave., Owasso, OK 74055. Dy: (918) 288-7391. S: Pam. Dy: Cdr C Co 45th Avn Bn (Hco) Okarang. Rtg: SAA TP. Maint Crs: UH-1, UH-60. Saf Crs: Mil. Qual: UH-1 OH-60A. Time: 3,000 Hrs. Grad: May 74. AUSA, NGAUS.

JOHNSON, Thomas M., (CW4) (M66) (TJ) 85-A Greenleaf Road, Huntington, NY 11743. Dy: (516) 752-7034. Res: (516) 549-2305. S: Virginia. Dy: AASF No. 1, NYARNG, MacArthur Airport, Ronkonoma. Rtg: MAA IFE SIP. Time: 8,100 Hrs./Cbt 914 Grad: Dec 66. AM/23.

JONAS, Larry M., (MAJ) (M70) 9586 Hagel Circle, Lorton, VA 22079. Dy: (703) 664-1028. Res: (703) 339-3791. S: Faye. Dy: Mobilization Staff Officer, NGB, Ft. Belvoir. Rtg: SAA. Maint Crs: UH-1. Time: 1,700 Hrs./Cbt 322 Grad: May 70. AM/7. AUSA, AFA, NGAUS.

JONES, Leonard R., (E6) (M88) Hilltop Village Lot 14A, Shelbyville, IN 46778. Dy: (317) 835-2537. Res: (317) 392-4656. Dy: NBC NCO, HHC, 38 Avn Bde, INARNG.

JULIAN, Mark D., (CPT) (M81) 157 N. Estelle St, Wichita, KS 67214. Dy: Training Evaluator, 89th ARCOM, Wichita. Rtg: AA. Qual: UH-60A. Time: 824 Hrs. Grad: May 81. AUSA.

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KAMIMURA, Dennis A., (LTC) (M81) 836 16th Avenue, Honolulu, HI 96816. Dy: (808) 624-9300. S: Diane. Dy: Hq 1st Bn 193rd Avn Bn Cdr, Wheeler AFB. Rtg: MAA IP. Qual: AH-1S. Time: 4,000 Hrs./Cbt 400 Grad: Jan 70. AM/15.

KASPRZYK, Daniel S., (CW4) (M71) (Starsky) 2256 E. Ingleswood Street, Mesa, AZ 85213. Dy: (602) 891-3405. Res: (602) 964-3890. Dy: Chf. Mfg Engrg McDonnell Douglas Helicopter Co. Rtg: MAA. Qual: AH-1S. Time: 2,489 Hrs. Grad: Jun 71. AHS.

KAVANAUGH, Lawrence. (SGT) (M88) 26 Kingswood, Pittsburg, CA 94565. Dy: (415) 464-0555. Res: (415) 439-3531. Dy: Stockton Support Facility, HSC 1/140th 40th Inf Div (Mech), Stockton.

KEYES, Thomas W., (1SG) (M85) (Tom) 1816 Longwood Drive, Raleigh, NC 27612. Dy: (919) 733-4309. Res: (919) 848-8085. S: Anne. Dy: 1SG, Co C, 1/130th Avn Regt, Morrisville.

KNAPP, Kent A., (CW3) (M87) 2832 E. Sierra Vista Road, Tucson, AZ 85716. Dy: (606) 624-9189. Res: (606) 322-6539. Dy: Attack Helicopter Instr Pilot, Watts. Rtg: AA SIP. Qual: AH-1S. Time: 3,000 Hrs. Grad: Aug 72.

KOPECKY, Robert J., (COL) (M73) (Bob) 517 Foreman Avenue, Norman, OK 73069. Dy: (405) 329-1058. Res: (405) 321-0290. S: Paula. Dy: 95th Maneuver Trng Cnd, USAR. Rtg: MAA. Time: 6,000 Hrs./Cbt 900 Grad: Feb 63. DFC/2, AM/22.

LABRIE, Joseph G., (LTC) (M85) (Joe) 45 Woodland Avenue, Smithfield, RI 02917. Dy: (401) 267-3000. Res: (401) 231-8487. S: Ann. Dy: Ft Facility Super, RIARNG. Rtg: AA IFE SIP. Time: 8,000 Hrs./Cbt 950 Grad: May 67. AM/22.

LASSER, Thomas E., (MAJ) (M67) (Tom) 5313 Grove Run, Stockton, CA 95207-5336. Dy: (209) 982-3881. Res: (209) 478-2420. S: Laura. Dy: 1-40th Attack, CAARNG. Rtg: MAA



Aviation Reserve Component

IP, Saf Crs: Mil. Time: 5,500 Hrs./Cbt 1,715 Grad: Dec 66. DFC/1, AM/35. NGAUS.

LAVERDIERE, David A., (1LT) (M77) 921 Gardiner, Royal Oak, MI 48067. Dy: (313) 466-5152. Res: (313) 547-7343. S: Grace. Dy: Opns Off, Detroit RCTG Bn. Rtg: SAA IP. Maint Crs: UH-1H FW. Saf Crs: Mil. Time: 2,000 Hrs. Grad: May 76. AHS, AUSA, AFA.

LEE, Curtis W., (CW4) (M87) 9280 N. Kanawha St, Tucson, AZ 85741. Dy: (602) 624-9189. S: Evelyn. Dy: Western Army Avn Trng Site, Instr Pilot. Rtg: AA IFE, SIP, IP. Qual: AH-1S, CH-47. Time: 8,100 Hrs./Cbt 900 Grad: Sep 66. AM/11.

LEE, James M., (CW2) (M75) 30966 Old Baton Rouge Hwy, Hammond, LA 70403. Dy: (504) 241-2374. Res: (504) 567-1120. S: Margaret. Dy: UH-1 Pilot, CO A 1-244th Avn, Lakefront Airport, New Orleans. Rtg: SAA. Qual: UH-60A. Time: 1,850 Hrs. Grad: Dec 74. AUSA.

LEIST, Edward G.S., (CPT) (M84) (Ed) 2432 Chetwood Circle, Apt. 104, Timonium, MD 21093. Dy: (301) 561-8509. S: Sam. Rtg: AA. Time: 500 Hrs. Grad: Jan 82.

LIERLY, Darin E., (WO1) (M86) (Gordo) 8606 No. Maple, Fresno, CA 93710. Dy: (209) 454-5340. Res: (209) 323-0113. Dy: Scout Pilot, CF/1140, Stockton, CA. Rtg: AA TP. Maint Crs: OH-58. Time: 325 Hrs.

LONG, Meade G., (CPT) (M87) (Buz) 1420 W. Canada Verde Dr, Tucson, AZ 85737. Dy: (602) 794-9162. Res: (602) 742-4342. Dy: Hughes Aircraft Corp. Rtg: AA. Maint Crs: UH-1. Time: 1,900 Hrs. Grad: Aug 72.

LORD, Dennis J., (MAJ) (M87) (Denny) 206 Airport Road, St Paul Downtown Airport, St Paul, MN 55107-1090. Dy: (612) 296-4585. S: Karon. Dy: Mn Army NG, St Avn Off/Facility Cdr. Rtg: AA IFE, SIP. Maint Crs: UH-1. Saf Crs: Mil. Time: 10,000 Hrs./Cbt 1,100 Grad: Dec 67. DFC/1, AUSA.

LOYNACHAN, Richard E., (CW3) (M78) (Studs) 2505 Redpath Drive, Marinette, WI 54143. Dy: (906) 863-9971. Res: (715) 732-1117. S: Georjann. Dy: Vp Sales/Service, the Enstrom Helicopter Corp. Rtg: MAA. Maint Crs: UH-1. Time: 15,000 Hrs./Cbt 1,100 Grad: Mar 58. AM/11.

LYKENS, Robert W., (SFC) (M81) (Bob) P.O. Box 91, Ono, PA 17077-0091. Dy: (717) 865-8570. Res: (717) 533-8743. Dy: Estm Armg Avn Trng Site, Ft Indiantown Gap.

MMMMMMMMM

MABEY, Robert D., (COL) (M86) 556 Indian Springs Road, Bountiful, UT 84010. Dy: (801) 524-3710. Res: (801) 292-3106. S: Pat. Dy: State Army Avn Off For Utah. Rtg: MAA. Qual: AH-1S. Time: 8,000 Hrs./Cbt 1,053 Grad: Dec 67. DFC/3, AM/53.

MACMILLAN, Richard H., (MG) (M57) (Dick) 3840 Courtyard Drive, Atlanta, GA 30339. Dy: (404) 588-3000. Res: (404) 434-1903. S: Judy. Dy: USAR, Cmdr, 81st USA Reserve Command, Eastpt. Rtg: MAA. Time: 4,000 Hrs. Grad: Mar 57. AUSA.

MAC VAY, James W., (COL) (M82) Rd 2, Box

4480, Jonestown, PA 17038. Dy: (717) 787-6705. Res: (717) 865-5559. Dy: Chief Of Staff, 28th ID, AUSA.

MAESTAS, Reinhold S., (CPT) (M85) (Ron) P.O. Box 60968, Savannah, GA 31402. Dy: (912) 352-5532. S: Charlotte. Dy: Cdr, AASF 3d Gs. Army Nat'l Guard. Rtg: AA TP. Maint Crs: UH-1, CH-54A. Time: 2,150 Hrs./Cbt 750 Grad: Feb 69. AM/10, AUSA.

MAGILL, David F., (MSG) (M86) 2825 E. Los Altos, Fresno, CA 93710. Dy: (209) 445-6131. Res: (209) 299-0349. S: Joan. Dy: 40th Avn, Bde, 40 ID (M), CA NG.

MANN, Ronald B., (SSG) (M77) 5041 SW 117th Way, Cooper City, FL 33330-4402. Dy: (305) 685-7080. Res: (305) 544-1121. S: Nancy. Dy: Crew Chief, UH-IV, 347th Med Det (HA), Miami.

MARTIN, Charles E., (LTC) (M82) (Chuck) 1331 Mill Pond Way, Palmyra, PA 17078. Dy: (717) 865-8919. Res: (717) 839-1671. S: Maggie. Dy: Cdr, 1/104th Avn Bn, Alk Helicopt. Rtg: MAA SIP. Maint Crs: CH-47, FW. Saf Crs: Mil. Time: 5,800 Hrs. Grad: Apr 70. Vp, Indiantown Gap Chapter.

MARTIN, Frank, (SSG) (M82) (Frank) 25 Duke St, Hershey, PA 17033-1951. Dy: (717) 865-8967. Res: (717) 534-1583. S: Darlene. Dy: Hcptr Mech Co H, 104th Avn, Harrisburg. Past Vp, Indiantown Gap Chapter.

MASON, Dwayne H., (CPT) (Ship) (M83) 2518 Lisa Lane, Nashville, TN 37210. Res: (615) 391-3527. S: Sandra. Dy: Comptrol R, 4/278th ACR, Smyrna. Rtg: AA. Time: 500 Hrs. Grad: Apr 83.

MAYROSE, David F., (MAJ) (M81) (Dave) P.O. Box 10114, Alexandria, VA 22310-0114. Dy: (202) 447-4137. Res: (703) 922-6743. Dy: Avn Staff Off (IMA) 1st Army HQ, Ft Meade. Rtg: SAA IP. Qual: CH-47. Time: 1,900 Hrs. Grad: Jul 72.

McDANIEL, Ronald J., (LTC) (M87) P.O. Box 10218, Daytona Beach, FL 32020. Dy: (904) 234-2324. Res: (904) 677-4383. Dy: GE Aerospace. Rtg: AA IFE, SIP, TP. Time: 9,687 Hrs./Cbt 11,000 Grad: Oct 66. DFC/1, AM/41. AHS, AUSA.

McGRATH, Philip S., (2LT) (M87) Little Pond County Road, Cumberland, RI 02864. Dy: (401) 267-3037. Res: (401) 333-5717. Dy: S2, 1/126 Avn RIARNG, AASF Quonset Point. Rtg: AA. Maint Crs: UH-1. Time: 225 Hrs. Grad: Apr 88.

McMURTRY, Cletus J., (CW4) (M87) 1420 W. Dawn Drive, Tucson, AZ 85704. Dy: (602) 624-9189. Dy: Instr Pilot, Western ARNG Avn Trng Site. Rtg: AA IP. Maint Crs: UH-1. Time: 2,850 Hrs./Cbt 865 AM/26.

MEOLA, Mario, (LTC) (M81) (Butch) 4 Dogwood Drive, Rd 3, Anville, PA 17003. Dy: (717) 865-8878. Res: (717) 638-8998. S: Janice. Dy: XO, Eastern Army Avn Training Site, Ft Indiantown Gap. Rtg: MAA IFE SIP TP. Maint Crs: MIL. Time: 8,000 Hrs./Cbt 1,300 Grad: Aug 67. AM/22. Sec, Indiantown Gap Chapter. Past Pres, Indiantown Gap Chapter.

MIECZKOWSKI, Ronald W., (MAJ) (M87) P.O. Box 5062, Parris Island, SC 29905. Dy: (803) 525-2615. Dy: Computer Prog Supervisor. Qual: AH-1S.

MILLER, John R., (CW4) (M82) Rd 4, Box 4499, Benwick, PA 18603. Res: (717) 759-9157. S: Bonnie L. Dy: Co H, 104th Aviation, Ft Indiantown Gap. Rtg: SAA. Maint Crs:

CH-54. Time: 3,100 Hrs./Cbt 1,043 Grad: Oct 68.

HONG, James J., (MAJ) (M71) P.O. Box 598, Burlingame, CA 94011-0589. Res: (415) 347-4470. Dy: OC Div CH CA AVCRAD. Time: 3,500 Hrs./Cbt 1,247 Grad: Oct 67. AM/25.

MOORE, Windsor W., (CW4) (M88) (Duke) 7802 E. Culver, Mesa, AZ 85207. Dy: (602) 223-2182. Res: (602) 855-7323. Dy: Law Enforcement Off. Sr. Pilot, Az. Dept. Of Public Safety.

*** MORONEY, Brian E., (WO1) (M87) 34 Worcester Lane, Waltham, MA 02154. Dy: (302) 324-2156. Res: (617) 893-2608. Dy: DEARING E Co. 150th Avn, Wilmington Airport, DE. Time: 350 Hrs. Grad: Jan 87.**

MORDWCZYNSKI, Stephen, (CW4) (M84) 8803 Briarwood Lane, Orland Park, IL 60462. S: Nancil. Dy: ILARNG, Chicago. Rtg: MAA.

*** MURPHY, John F., (CPT) (M81) (Murt) 3248 Sapphire Street, Bedford, TX 76021. Dy: (714) 280-8700. S: Karen. Dy: Program Mgr. Bell Helicopter Textron. Rtg: AA. Qual: AH-1S. Time: 1,350 Hrs. Grad: Dec 81. AUSA.**

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NATHE, David, (COL) (M80) 103 Elmwood Lane, Helena, MT 59601. Dy: (406) 444-7936. Res: (406) 443-1452. S: Betty J. Dy: Chief of Staff, MTRANG. Time: 3,764 Hrs. Grad: Jun 71. AUSA.

*** NELSON, James K., (1LT) (M87) (Nelmin) Rt 1, Box 321, Appling, GA 30802. Res: (404) 541-1605. Dy: Student Medical College Of Georgia. Time: 404 Hrs.**

NORRIS, Ray R., (MAJ) (M73) 612 West Pleasant Lane, Lombard, IL 60148. Dy: (312) 767-9263. Res: (312) 495-1047. S: Dale. Dy: Bdg Avn Ofcr, Chicago, IL. Rtg: AA/IFE. Maint Crc: UH-1. Time: 7,800 Hrs./Cbt 1,200 Grad: Dec 15.

*** O'BRIEN, Kevin M., (CW2) (M81) (OB) 2710 Goldspring Lane, Spring, TX 77373. Dy: (713) 376-2990. Res: (713) 353-2362. S: Elizabeth. Dy: 273rd Med Det (HA), Montgomery City Airport, Conroe, Rtg: AA IP. Saf Crc: Mil & Civ. Time: 1,300 Hrs. Grad: Oct 81. AUSA.**

O'BRIEN, Kevin M., (2LT) (M85) 2800 Belcamp Road, Bel Air, MD 21014. Dy: (301) 671-2423. Res: (301) 636-2829. S: Sherry. Dy: Co F, 224th Avn, Edgewood. Time: 300 Hrs.

OLLISON, Robert P., (CW3) (M82) R2, McClure, PA 17841. Dy: (717) 865-8922. Dy: H CO 104th Avn, Harrisburg. Rtg: SAA TP. Maint Crc: UH-1 CH-54. Time: 2,600 Hrs. Grad: Mar 78.

O'CONNOR, Michael P., (LTC) (M70) (Mike) 104 Murphy Drive, Pennington, NJ 08534. Dy: (609) 530-6945. Res: (609) 737-8092. S: Ronnie. Dy: NJARNG. Rtg: MAA IFE SIP. Maint Crc: UH-1. Saf Crc: Civ. Time: 7,500 Hrs./Cbt 950 Grad: Dec 67. AM/25.

*** OLMOS, Felix, (CW4) (M86) 1300 N. Gentry Circle, Mesa, AZ 85203. Dy: (602) 891-3512. Res: (602) 827-0413. Dy: Aviator, COC, 1st Bn, 108th Avn, Phoenix. Rtg: MAA IP. Maint Crc: UH-1, CH-47. Saf Crc: Mil. Time: 8,600 Hrs. Grad: Aug 62. AHS.**

OLSON, Cynthia A., (2LT) (M89) (Pyndy) 65 Whitefield Ave., Unit 226, Ocean Grove, NJ 07756. Dy: (201) 758-7622. Res: (201) 775-6189. Dy: Technical Writer, Concurrent

P Aviation Reserve Component

Computer Corp. Tinton Falls. Time: 330 Hrs. Grad: Jan 68.

*** ORR, Thomas L., (COL) (M62) (Tom) 345 Cedar Blvd., Pittsburgh, PA 15228. Dy: (412) 644-5406. Res: (412) 563-5404. S: Sandra. Dy: Cdr, 1024th CA Gr. Rtg: IFE IP. Maint Crc: AMOC. Saf Crc: Mil. Time: 7,000 Hrs./Cbt 1,000 Grad: Jul 61. AM/11.**

OTTLEY, Barry G., (COL) (M86) 2511 Coaltbridge Drive, Austin, TX 78745. Dy: (512) 465-5077. Res: (512) 442-8109. S: Sandra. Dy: CS HQ Top Card, Texas NG, Camp Mabry, Austin, TX. Rtg: MAA. Time: 3,600 Hrs. Grad: Apr 66.

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PAGE, William N., (CW3) (M86) 6240 Placida Pomona, Tucson, AZ 85704. Dy: (602) 624-9204. S: Vicki. Dy: Instructor Pilot, Arizona Army NG. Rtg: SAA IP. Time: 5,600 Hrs. Grad: Mar 76. Treas. Old Tucson.

PAPIER, John, (LTC) (M82) 1601 Wildwood Drive, Fallston, MD 21047. Dy: (301) 396-2444. Res: (301) 877-3762. S: Joan. Dy: USAR. Rtg: SAA. Time: 2,100 Hrs. Grad: Dec 65. AUSA. NEB. Pres. Chesapeake Bay Chapter. Past Treas, Chesapeake Bay Chapter.

*** PARRACK, Robert A., (LTC) (M73) P.O. Box 1009, Elkton, MD 21921. Dy: (301) 398-8764. Res: (301) 398-8575. S: Janet. Dy: Ops Off STARC, DEARNG. Qual: CH-47. Time: 2,500 Hrs./Cbt 788 Grad: AM/16.**

PATTERSON, James A., (CW4) (M85) P.O. Box 5, Morrisville, NC 27560. Dy: (919) 733-2553. Dy: Scout Pilot, Raleigh. Qual: CH-47. Time: 10,900 Hrs./Cbt 1,640 Grad: Jan 70. AUSA.

*** PAVLATOS, George E., (MSG) (M88) 8 Kanigos Street, Piraeus 185 3-B4-Greece. Dy: Helinikon Air Base, 128 Ctg Wing, Athens Greece.**

PEARCE, Hugh B., (CW2) (M82) 1034 Governor Circle, Wilmington, DE 19809. Res: (302) 782-7374. Dy: DEARNG. Time: 1,570 Hrs. Grad: Sep 82. AUSA.

PECK, Eric C., (CPT) (M88) RR1, Box 261A, Fredericksburg, PA 17026. Dy: IFE. Dy: Ft Ops Offr EAATS, Ft. Indiantown Gap. Rtg: MAA IP. Maint Crc: UH-1. Time: 1,300 Hrs. Grad: Jul 78.

PETRIK, Thomas G., (MAJ) (M77) 5076 Carrollton Drive, Harrisburg, PA 17112-9576. Dy: (717) 865-5444. Res: (717) 545-5298. Dy: Br Commander, DES, Fort Indiantown Gap. Rtg: SAA SIP. Time: 3,200 Hrs./Cbt 654 Grad: June 67.

PFITZER, Karl F., (LTC) (M87) 6808 E. Valley Vista Lane, Scottsdale, AZ 85253. Dy: (602) 231-4233. S: Vickie. Dy: Exec Off, 385th Avn Gp, AZARNG. Time: 4,000 Hrs./Cbt 1,000 Grad: May 69. DFC/1, AM/29.

PHILLIPS, Michael R., (CW2) (M86) (Mike) 11931 Tobler Trail, Austin, TX 78753. Dy: (512) 465-5088. Res: (512) 837-9770. S: Kathryn. Dy: AH-1S Pilot, Unit Safety Offr, Army Avn Support Facility. Qual: AH-1S. Time: 7,016 Hrs./Cbt 1,360 Grad: Apr 70. AM/5.

PLASKY, Alan, (SSG) (M74) (F.A.) 75 Barnard Drive, Newtoning, CT 06111. Dy: (000) 521-6296. S: Debra. Dy: Co D 169th Avn Regt, 1st Hel, Ctang, Camp Hartel, Windsor Locks.

*** POLAND, Robert, (LTC) (M79) (Bob) 16215 North Trail Drive, Houston, TX 77073. Dy: (713) 230-1385. Res: (713) 443-1478. S: Vicki. Dy: Cdr Squadron Cav Regt AH 5th USA Maneuver Area Cmdr. Rtg: AA IP. Time: 7,350 Hrs./Cbt 700 Grad: Apr 69. DFC/1, AM/25.**

POPE, Chalmers D., (CW2) (M85) 1523 Homewood Avenue, High Point, NC 27260-3256. Res: (919) 884-4250. S: Kacy. Dy: Co A, 1/130th Avn Bn, Raleigh. Rtg: AA. Qual: AH-1S AH-64A. Time: 750 Hrs.

POWELL, Dane W., (2LT) (M87) 114 Edmund Drive, Long Beach, MS 39560. Dy: (601) 584-2709. Res: (601) 863-1989. Dy: ARNG 1/165th Avn Bn, Jackson, MS. Time: 458 Hrs. Grad: Jul 87.

*** PRANGER, Robert L., (2LT) (M87) 9 Candletree Drive, Apt 1, Springfield, IL 62704. Res: (217) 787-8467. Dy: HHC 7th Bn, 158th Avn Regt (C) 84th Air Force Base. Time: 300 Hrs. Grad: Oct 87.**

*** PRESTON, Samuel D., (CPT) (M86) (Dave) 2429 Broad Bay Road, Virginia Beach, VA 23451. Dy: Ft Ldn, C Co, 194th CAB.**

*** PROST, Timothy J., (CW3) (M83) 180 Pinedale Dr, Belleville, IL 62221. Dy: (314) 263-1941. Res: (618) 235-5799. S: Diane. Dy: B Co, 7th Bn, 158th Avn Regt, Scott AFB. Time: 1,400 Hrs./Cbt 550 Grad: Oct 78. AM/16.**

PROTACIO, Jeffrey, (1LT) (M85) 94-528 Mulehu Street, Mililani, HI 96789. Dy: (808) 624-9300. Res: (808) 623-8713. Dy: A Co Cdr, 1st Bn, 1930 Avn, Wheeler AFB. Rtg: AA. Time: 450 Hrs. Grad: Dec 86.

PRUITT, Jeffrey J., (SSG) (M83) 1009 Yorkshire Street, Plaquemine, TX 78660. Dy: (512) 465-5013. Res: (512) 251-2829. S: Shirley. Dy: 129th TC.

*** PRUZAN, William A., (CW3) (M85) (Bill) 545 E Merle, Wheeling, IL 60080. Dy: (312) 676-1681. Res: (312) 541-1235. S: Rose. Dy: Pilot, 305th Avn Co, Stand IP, C Co 3-158, Glenview. Rtg: AA SIP. Maint Crc: UH-1. Time: 12,000 Hrs./Cbt 800 Grad: Oct 69. AM/14.**

PUIEK, Joseph B., (MAJ) (M73) 151 N. 630 Street, Milwaukee, WI 53213. Dy: (414) 229-0221. Res: (414) 257-0454. Dy: S-3 Air, 320 Inf Bde (SEP) WIARNG. Rtg: MAA. Time: 1,100 Hrs. Grad: Jun 72.

*** QUALLS, Michael L., (MAJ) (M83) A.T.U. PO Box 1303, Russellville, AR 28001-2222. Dy: (701) 771-0324. Res: (501) 968-8905. S: Rebecca. Dy: Director Public Safety, AR Tech U; HQ, 122d ARCOM, Little Rock. Rtg: SAA. Time: 1,630 Hrs. Grad: Jul 83.**

*** QUINONES, Raymond A., (1LT) (M86) (Tony) 11693 San Vicente Bl, No. 152, Los Angeles, CA 90049. Dy: (213) 463-6232. Res: (618) 703-8537. Dy: 1214th Avn Reg., Los Alamitos, Ca. Time: 500 Hrs. Grad: Jul 87.**

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RABER, Terry L., (E8) (M82) 301 Brandy Lane, Mechanicsburg, PA 17055. Dy: (717) 790-1430. Res: (717) 697-4955. S: Beverly. Dy: Ops Sgr, USAR Control Gp Reserve, St Louis.

RADOVICH, William G., (CW2) (M83) (Bill) 106

Grant St. Box 331, Stillman Valley, IL 61084. Dy: (312) 735-0070. Res: (815) 645-8449. S: Sue. Dy: RW Aviator, Bde Avn Det OH-58 IL-ARNG. Chicago. Rtg: SAA. Time: 10,720 Hrs./Cbt 350 Grad: Jun 71. AM/1.

RAMER, Albert W., (MAJ) (M81) (Bill) Rd 2, Bx 1938, Newport, PA 17074. Dy: (717) 567-7103. Res: (717) 567-3491. S: Marcia. Dy: Dep Dir Avn Log Sch., Ft Eustis. Rtg: AA. Mnt Crs: CH-54. Time: 2,000 Hrs. Grad: Oct 73.

RATACZAK, David P., (COL) (M87) 5730 E. Aster Drive, Scottsdale, AZ 85254. Dy: (602) 267-2854. S: Cheryl. Dy: State Avn Off, 385th Avn Grp Cdr. Rtg: AA IFE, SIP. Time: 8,000 Hrs./Cbt 924 Grad: Feb 86. DFC/1, AM/36.

RAYL, Charles R., (LTC) (M86) Route 1, Strong City, KS 66869. Dy: (316) 273-6333. Res: (316) 273-8630. S: Merry. Dy: Bn Cdr, 2d Bn, 635th Army KSRARNG, Salina. Time: 2,500 Hrs./Cbt 500 Grad: May 67. AM/16.

READ, James M., (2LT) (M88) (Mac) 27 Logan, Fort Rucker, AL 36362. Dy: (205) 255-5226. Res: (205) 598-5254. S: Rachae. Dy: OBC Student, E, Co, 1-145.

REDMAN, Richard S., (2LT) (M86) (Diligaf) 100 Auburn Drive, Enterprise, AL 36330. Res: (205) 383-6373. Dy: Pk Ldr, D Co, 224th Av, VA NS. Rtg: AA. Maint Crs: UH1, UH90. Time: 43 Hrs. Grad: Apr 88.

REED, Calvin E., (CW2) (M78) (Cal) 6202 Elmer Avenue, Lingiestown, PA 17112. Dy: (717) 780-6295. Res: (717) 545-0250. S: Ada. Dy: UH-1 Pilot, Fort Indiantown Gap. Rtg: SAA. Time: 2,000 Hrs.

REGALADO, Raul L., (LTC) (M81) 1519 Oak Canyon Drive, San Jose, CA 95120. Dy: (408) 277-5386. Res: (408) 997-1363. S: Christa. Dy: Deputy Gr Cdr, 7th FSYOP Gr, Presidio of SF. Rtg: MAA. Time: 3,400 Hrs./Cbt 1,803 Grad: Apr 67. DFC/1, AM/49. AUSA.

REIGLE, Hans H., (2LT) (M87) 111 W. Camden-Wyoming Ave, Wyoming, DE 19934. Dy: (302) 324-2363. Res: (302) 697-6214. Dy: Delaware NG. Time: 510 Hrs. Grad: Sep 87.

REISINGER, Charles N., (SFC) (M84) (Chuck) 8028 Manada View Drive, Harrisburg, PA 17112. Dy: (717) 865-8965. S: Dori. Dy: RW Br UTFLY Section Sgt, Eastern AATS, Annullive.

* **RENCH, Robert F.**, (CW2) (M76) 20 Verna Cir, Daleville, AL 36322. Res: (205) 598-4146. Dy: 1133rd Med Co, AA, ALARNG, Montgomery. Rtg: AA TP. Maint Crs: UH-1. Time: 7,800 Hrs./Cbt 1,900 Grad: Jun 67. AM/52.

RHULE, Steven P., (CW4) (M83) Box 175, Mt. Gretna, PA 17064. Res: (717) 964-2149. S: Michele. Dy: CH-54A Pilot, H Co 104th Avn, Ft. Indiantown Gap. Rtg: SAA SIP. Maint Crs: AH-1 FW. Saf Crs: Mil Civ. Time: 6,878 Hrs./Cbt 1,009 Grad: Jul 68. AM/15.

RIDDLE, Claude P., (COL) (M87) (CP) P.O. Box 331, French Camp, CA 95231. Dy: (209) 982-2692. S: Joanne. Dy: Cdr, CA AVCRAD, CAARNG. Rtg: MAA IFE SIP. Saf Crs: Mil, Civ. Qual: CH-47. Time: 6,100 Hrs. Grad: Oct 65. AUSA, NGAC, NGAUS.

RIES, Arthur W., (COL) (M81) (Art) 571 Roastire Drive, Hummelstown, PA 17036. Dy: (717) 865-8864. Res: (717) 774-1573. S: Jamie. Dy: Eastern ARNG Avn Trng Site, Annullive. Rtg: MAA IP. Maint Crs: AMOC. Saf Crs: Mil. Time: 2,200 Hrs./Cbt 800 Grad: Nov 69. AM/11.

ROBBINS, Charles T., (CW4) (M87) P.O. Box

S Aviation Reserve Component

64685, Tucson, AZ 85740. Dy: (602) 624-9189. Dy: Western Arng Avn Trng Site. Rtg: AA IP. Qual: AH-1S. Time: 5,600 Hrs./Cbt 907 Grad: Feb 67.

ROBERTS, Lloyd C., (MAJ) (M87) 3611 Beaver Ford Rd, Woodbridge, VA 22192-4917. Dy: (703) 664-2221. Res: (703) 540-9561. S: Shelley. Dy: AASF Commander, Fort Belvoir. Rtg: AA SP. TP. Maint Crs: UH-1. Time: 3,800 Hrs. Grad: Nov 70.

* **ROLAND, Jeffery J.**, (WO1) (M87) (Godzilla) 7724 Maple, Prairie Villa, KS 66208. Dy: (913) 782-4545. Res: (913) 341-3831. S: Barbara. Dy: C Co, 2nd Bn 158th Avn Rgt, Industrial Airport. Rtg: AA. Time: 340 Hrs. Grad: Mar 87.

ROSENFELD, Michael M., (COL) (M82) (Mike) 2001 Fairview Street, Alentown, PA 18104. Dy: (215) 437-7733. Res: (215) 432-8952. S: Linda. Dy: Dir, Post Mobilization State HQ, PAARNG. Rtg: AA UH-1. Maint Crs: CV. Time: 2,000 Hrs. Grad: Mar 70.

ROUNTREE, Ed., (CW4) (M85) 3706 Raintree Drive, Tucson, AZ 85741. Dy: (602) 889-1555. Res: (602) 742-0038. S: Laurel. Dy: Atk Helicopter Pilot, Silverbell Army Heliport. Rtg: MAA. Qual: AH-1S. Time: 6,800 Hrs. Grad: Mar 70.

ROWE, Robert H., (CW4) (M73) (Bob) 8804 Paragon Circle, Grantwood Village, MO 63123. Dy: (312) 735-0070. Res: (314) 849-6644. S: Marion. Dy: Det 1, HHC, 33rd Bde, Midway-Chicago. Rtg: TP. Maint Crs: UH-1. Time: 2,000 Hrs. Grad: Jun 72. Past Vp.

RUSSELL, Dennis R., (1SG) (M88) 1022d Medical Detachment, Wyoming Army Gd, Cheyenne, WY 82001. Dy: (307) 772-6260. Res: (307) 632-6130. Dy: Flight Operations Coordinator.

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SCANLAN, Francis G., (LTC) (M83) (Jerry) 8200 S. Kostner, Chicago, IL 60652-2198. Dy: (312) 582-9100. Res: (312) 582-9100. Dy: 33rd Bde Chaplain, ILARNG. AUSA.

* **SCHALIN, J. Gunnar.**, (COL) (M72) 4846 Valinda Way, San Diego, CA 92124. Dy: (619) 569-2437. Res: (619) 565-4852. Dy: Cdr, 168th Avn Gr (Cbt), AFRC, Los Alamitos. Rtg: MAA. Qual: OH-58, AH-1. Time: 2,200 Hrs./Cbt 800 Grad: Jun 69. DFC/2, AM/23. HCA, AUSA.

SCHANBACHER, Grant T., (2LT) (M88) 12227 Canterbury Way, Houston, TX 77065. Dy: (713) 650-6080. Res: (713) 894-4868. S: Laurie. Dy: C Co, 1-149IMCI Telecommunication San Antonio/Houston.

* **SCHURR, Robert J.**, (CW4) (M76) (Bob) Co B, 6th Bn, 158th Avn Rgt, APO NY 09028-0816. Dy: (621) 798-5764. Res: (621) 620-4246. S: Sylvia. Dy: Co B, 6th Bn, 158 Avn Rgt. Rtg: MAA. Qual: CH-47. Time: 6,950 Hrs./Cbt 1,500 Grad: Sep 66. AM/36. AHS, AUSA.

SELLING, William J., (CSM) (M85) (Bill) 715 York, Westport, Lodi, CA 95240. Dy: (209) 736-2589. Res: (209) 358-3574. S: Darlene. Dy: CSM IRR USAR, APPERCEN, St Louis.

* **SENNE, Aaron N.**, (CW4) (M86) 200 Lodge

Drive, No. 502, Lafayette, LA 70506. Dy: (318) 365-7639. Res: (318) 964-7392. S: R. Dona. Dy: Aviation Safety Officer, 872d Med Detach, New Iberia. Rtg: SAA. Saf Crs: Mil. Time: 5,600 Hrs. Grad: Oct 70.

* **SENNE, George L.**, (CW4) (M75) Flight Det (OKARNG), 2232 Goddard Ave, Norman, OK 73069. Dy: (405) 360-1281. Res: (405) 672-5655. S: Rita. Dy: Det. Supv, IP, OKNG, HQ STARC. Rtg: MAA IFE SIP TP. Maint Crs: UH1 AMOC. Saf Crs: Mil. Qual: CH-47. Time: 15,269 Hrs. Grad: Jun 55.

SHEAFFER, Martin K., (LTC) (M64) (Kent) 12 Beech Tree Lane, Moonville, PA 17554. Dy: (717) 865-8452. Res: (713) 285-3332. S: Corinne. Dy: Cnt, Flight Training Div, Eastern Army Avn Trng Site, Ft. Indiantown Gap. Rtg: MAA SIP. Time: 5,200 Hrs./Cbt 1,200 Grad: Jun 64. AM/27. AUSA. Sr Vp, Indiantown Gap Chapter. Past Pres, Indiantown Gap Chapter.

* **SHUMAN, Kenneth E.**, (LTC) (M67) 5691 Marilynne Drive, Pittsburgh, PA 15236. Dy: (412) 462-5507. S: Diana. Dy: Aviation Staff Officer HQ 88th ARDCOM, Oakdale, Rtg: MAA SIP. Maint Crs: UH-1, FW. Time: 10,000 Hrs./Cbt 2,450 Grad: Aug 65. AM/35.

SHUTT, Geraldine E., (2LT) (M88) Camelot Villa, Apt. 118, Enterprise, AL 36330. Dy: (302) 324-2366. Res: (205) 347-4196. S: Gerry. Dy: Avn Off Basic Course Student, C Co, 1st Bn, 106th Avn, DEARNG.

SIEGMAN, James E., (LTC) (M85) (Jim) 3495 Ingram Drive, Haymarket, VA 22069. Dy: (202) 267-3796. Res: (703) 754-2594. S: Mary Lou. Dy: G3 31st Gp, Ft. Meade, MD. Rtg: AA SIP TP. Maint Crs: UH-1, AH-1, FW. Time: 7,000 Hrs./Cbt 900 Grad: Jul 84. AM/27. AUSA.

SIKES, James M., (MAJ) (M84) (Jim) P.O. Box B, Monticello, NC 27560. Dy: (919) 733-3770. Res: (919) 385-2479. S: Laura. Dy: 1/130th AAH Bn. Rtg: MAA IFE SIP. Maint Crs: UH-1, AH-1. Saf Crs: Mil. Qual: AH-1S AH-64A. Time: 7,900 Hrs./Cbt 1,691 Grad: Sep 83. AM/38. DFC/1. Past Sr Vp.

SKAMANICH, Ronald., (SFC) (M81) 15 Fairview Street, Pino Grove, PA 17963. Dy: (717) 865-8470. Res: (717) 345-3828. Dy: Estm Arng Avn Trng Site, Acft Maint Supervisor. Vp, Indiantown Gap Chapter.

* **SKEEN, Robert S.**, (MAJ) (M81) (Rob) 7055 Summit Wood Drive, Kennesaw, GA 30144-3374. Dy: (404) 633-2600. Res: (404) 424-9230. S: Beverly. Dy: Corp Recruiter, Cap Gemini America, Atlanta. Rtg: SAA IFE. Qual: AH-1S. Time: 1,625 Hrs. Grad: Oct 74. AUSA.

SMIDT, Orville B., (COL) (M76) (Orv) 117th 4th Street, Brookings, SD 57006. Dy: (605) 688-6151. Res: (605) 697-5826. S: Charlotte. Dy: Prof Mil Science, SD State U. Rtg: MAA IP. Time: 2,500 Hrs./Cbt 400 Grad: Sep 68. AM/7. AUSA.

* **SMITH, Craig L.**, (CW4) (M87) (C.L.) 3040 N. Farrell Avenue, Milwaukee, WI 53211. Dy: (312) 567-2118. Res: (414) 332-8768. Dy: 305th CSAC, NAS Glenview, IL. Rtg: MAA. Time: 3,600 Hrs./Cbt 1,077 Grad: Sep 67. DFC/1.

* **SNOW, Gil W.**, (CW4) (M83) (Gil) 2101 Executive Dr. Box 52, Hampton, VA 23666. Dy: (804) 826-9696. S: Dee. Dy: Area Mgr, AMY/NASA PROUSAR. GE. Rtg: MAA TP. Maint Crs: UH-1 AMOC. Qual: AH-1S. Time:

3,500 Hrs./Cbt 550 Grad: Oct 66 Am/17. AHS, AUSA. Vp, Colonial Virginia Chapter.

SOTOMAYOR, Luis, (CPT) (M87) P.O. Box 309, Fort Belvoir, VA 22060-2406. Dy: (703) 664-2221. Res: (703) 781-8608. Rtg: Pilot, Usarng DC Rtg: AA. Maint Crs: UH-1, AMOC. Time: 1,100 Hrs. Grad: May 80.

SPARKS, Richard A., (CW3) (M57) (Dick) 945 W Edmondson Ave., Morgan Hill CA 95037. Dy: (209) 982-3680. Res: (408) 779-5821. S: Jeannie. Dy: ASD Co A 1-140, Atk Bn, 51st. Rtg: MA. Time: 3,550 Hrs. Grad: Apr 87.

SPEESE, Andrew J., (CW3) (M81) 1105 Luanaela Street, Kailua, HI 96734. Dy: (808) 624-9300. Res: (808) 261-4236. Dy: Co A 1st Bn 1930 Avn, Wheeler AFB. Rtg: SAA. Saf Crs: MIL. Qual: AH-1S. Grad: Oct 80.

SPELIOS, Angela, (CW4) (M84) (Ang) 110 Camelot Drive, Weatherford, TX 76086. Dy: (214) 357-0142. Res: (817) 599-8814. S: Sue. Dy: Co A, 1/15th Air Bde, 1st AF, NAS, Dallas. Rtg: MAA IFE SIP. Time: 9,166 Hrs./Cbt 899 Grad: Jun 64. AM/220LC.

SPENCE, Philip W., (LTC) (M71) (Phil) 36 John Nell Dr, Norwell, MA 02061. Dy: (617) 495-0867. Res: (617) 659-2435. S: Sandra. Dy: Nat'l Sec Prog, JFK Sch, Harvard U. Rtg: SAA. Time: 1,500 Hrs./Cbt 500 Grad: Apr 70. AUSA.

SPILLNER, Charles A., (CW4) (M80) (Charlie) 5804 Plich Pine Dr, Orlando, FL 32819. Dy: (305) 648-6617. Res: (305) 352-7721. S: Debbie. Dy: 138th Avn Cd. Rtg: AA IFE IP. Maint Crs: UH-1 FW. Time: 6,000 Hrs./Cbt 800 Grad: Jul 70. AM/4.

STAADT, Thomas A., (LTC) (M81) 2840 Woodland Drive, Northbrook, IL 60062. Dy: (312) 833-3133. Res: (312) 272-7166. S: Katherine. Dy: Avn Team Ldr, 85th Div, MTC, Ft. Sheridan. Rtg: SAA. Qual: CH-47. Time: 1,500 Hrs./Cbt 300 Grad: Nov 68. AM/7. ROA.

STAFFORD, John A., (1LT) (M87) C Co, 3rd Bn 4th Avn Regt, Box 024, APO NY 09185. Dy: Liaison Off. Time: 375 Hrs. Grad: Jun 87.

STANGLE, Morgan G., (MAJ) (M84) Quarters 26-1 (SLASC), Granite City, IL 62040. Dy: Avscm, St. Louis, MO. Time: 1,007 Hrs. Grad: Nov 79.

STARKMAN, S. Michael, (MAJ) (M82) (Mike) 1409 Ashford Drive, Downingtown, PA 19335. Dy: (717) 865-8659. Res: (215) 873-0536. S: Mary E. Dy: Cdr, Co F, Aclt Maint, 104th Avn PAARNG. Rtg: SAA. Maint Crs: UH-1. Time: 1,000 Hrs. Grad: Feb 74.

STEARNS, Bryan F., (MAJ) (M86) 1911 Murrayhill Rd, Grimsboro, NC 27403-3726. Res: (919) 373-8875. Dy: Com/elec Stl Off. HQ 449th Avn Gp (AF) Kinston, NC. AUSA, NGAUS.

STEPHENS, W. Richmond, (CW4) (M88) 3263 Yellowstone Dr, Birmingham, AL 35210. Dy: (205) 699-3700. Res: (205) 956-6188. Dy: Atty At Law, Sectn Ldr Det 1, HHC 131st Sig Bde. Time: 3,900 Hrs./Cbt 1,799 Grad: Aug 68. AM/72.

STERN, Ronald H., (CW3) (M87) 394 Arroyo Road, Santa Barbara, CA 93110. Dy: (805) 568-3077. Res: (805) 464-3215. S: Barbara. Dy: 305th Int/Avn Bn, Van Nuys, CA. Rtg: IP. Time: 8,253 Hrs.

STEWART, Ronald B., (COL) (M88) 33 Corporate Circle, New Castle, DE 19720-2493. Dy: (302) 324-2150. Res: (302) 798-2448. Dy: State Army Avn Officer, Delaware Army

T Aviation Reserve Component

National Guard. Rtg: AA SIP. Time: 5,500 Hrs./Cbt 450 11/AM.

STEWART, Walter L., (COL) (M82) Rd 2, Box 58A, Bernville, PA 19506. Dy: (215) 376-6361. Res: (215) 488-7741. S: Sheila. Dy: Cdr Avn Bde, 28th Inf, Div, 21st & Herr Sts., Harrisburg. Grad: Feb 68.

STOEN, John, (CPT) (M86) (John Boy) 2331 Tattersall Drive, Charlotte, NC 28210-6771. Res: (704) 553-9638. S: Cheryl. Dy: HSC, 1/130th Avn Bn, NCARNG. Rtg: SAA IP. Maint Crs: UH-1, AH-1. Qual: AH-1S. Time: 2,000 Hrs./Cbt 975 Grad: Oct 68. DFC1, AM/39.

STONE, Richard D., (MAJ) (M78) (Rick) 18528 SE 283rd Street, Kent, WA 98042. Dy: (206) 773-7782. Res: (206) 830-2212. S: Donna. Dy: Bde S-4, 68th Avn Bde I Corps, Ft. Lewis, WAARNG. Rtg: MAA TP. Maint Crs: UH-1. Qual: AH-1S. Time: 2,100 Hrs./Cbt 1,000 Grad: Oct 68. AM/22. AUSA, NGA.

STONE, Shepard B., (CW3) (M87) 712 Robert Frost Drive, Branford, CT 06405. Dy: (203) 785-2802. Res: (203) 481-7009. S: Marlene. Dy: Aeromedical Physician Asst, 340th General Hospital, New Haven. AHS.

STROZIER, Samuel W., Jr., (CW4) (M76) 1443 Alford Avenue, Birmingham, AL 35228. Dy: 307th Transportation Company, ALARNG. Rtg: SAA IP. Time: 2,300 Hrs. Grad: Aug 71. Past Treas.

STULTS, Theodore M., (COL) (M65) (Ted) 5351 St. Andrews N.W., Canton, OH 44708. Dy: (614) 889-7147. Res: (216) 477-6132. S: Marilyn. Dy: Chief of Staff, HQ 112th Medical Brigade, OHARNG, Worthington. Time: 3,102 Hrs. Grad: Jun 59.

STUNTZNER, Mark C., (1LT) (M87) 609 Bridgewood Circle, No. 814, Fort Worth, TX 76112. Dy: (214) 263-9453. Res: (817) 457-5910. Dy: TXARNG, E Co 149th Avn. Time: 300 Hrs. Grad: Apr 88.

SWANN, Thomas B., Jr., (CPT) (M85) 1201 Brookgreen Drive, Cary, NC 27511. Dy: (919) 840-0518. Dy: S-4 30th AHB. Qual: AH-1S UH-60A. Time: 1,200 Hrs. Grad: Aug 79.

TTTTT - WWWW

TAMACCO, Ronald R., (LTC) (M75) (Ron) 5018 Buckline Crossing, Dumwoody, GA 30038. Dy: (404) 396-5420. S: Pat. Dy: IRR. Rtg: MAA IFE IP. Maint Crs: UH-1. Time: 4,500 Hrs./Cbt 900 Grad: Dec 86. AM/22. Vp, Greater-Atlanta Chapter. Past Sec, Greater-Atlanta Chapter.

TAYLOR, Robert D., (COL) (M82) 1937 Lincoln Road, Stockton, CA 95207. Dy: (209) 576-6300. Res: (209) 477-6011. AUSA.

THOMAS, Samuel E., (W01) (M85) (Sam) 613 Red Oak Avenue, Edgewood, MD 21040. Dy: (301) 671-3536. Res: (301) 678-3646. S: Ann Marie. Dy: Scout Pilot, OH-6A, MARNG. Time: 480 Hrs..

THOMPSON, Richard W., (MAJ) (M87) (Rich) 4901 Donovan Drive, Carmichael, CA 95608-5450. Dy: (209) 982-2080. Res: (916) 486-9241. S: Barbara. Dy: HHC, 3rd Bn 140th Avn. Saf Crs: MIL. Time: 2,200 Hrs./Cbt 1,025

Grad: Jan 67. AM/21.

TREADWAY, Charles D., (CPT) (M85) (Chuck) 1325 A Werner Park, Ft Campbell, KY 42223-1179. Dy: (502) 798-5857. S: LaDonna. Dy: Supt Plt Ldr, HSC 3-1010 Avn. Rtg: AA. Qual: AH-1S. Time: 625 Hrs. Grad: Sep 86. AUSA.

VAN DYKE, Anthony J., (W01) (M82) (Tony) 537 W. Stocker, No. 1, Glendale, CA 91202. Dy: (213) 493-9444. Res: (818) 243-3479. S: Carol. Dy: C Trp 1 18 Cav (Air) AFRC, Los Alamitos. Time: 520 Hrs. Grad: Apr 86.

VAN ROPE, Jeffrey W., (MAJ) (M65) (Jeff) 3532 E. Emerald, Mesa, AZ 85204. Dy: (602) 891-7068. Res: (602) 830-8642. S: Kathy. Dy: IRR Avn, St. Louis. Rtg: AA TP. Maint Crs: CH-47. Qual: AH-1, AH-64. Time: 2,371 Hrs./Cbt 1,472 Grad: Nov 65. AM/4.

VANVELZEN, Joedy G., (W01) (M87) 9938 E. 23rd St, No. 8, Des Moines, IA 50317. Dy: (515) 262-8627. S: Michelle. Dy: IAARNG Co E, 14th Avn Davenport. Rtg: AA. Maint Crs: UH-1. Grad: Nov 87.

VAUGHT, Johnny W., (E7) (M87) P.O. Box 81146, Las Vegas, NV 89180-1146. Dy: (702) 483-3303. Res: (702) 366-7909. Dy: Recruiter, HQ STARC-NVARNG.

VENTRELLA, Gerry F., (CW4) (M74) 6140 N. Francisco Avenue, Chicago, IL 60659. Dy: (312) 377-4500. Res: (312) 274-7825. Dy: 12th Spec Forces Gp Avn Flt, USAR. Rtg: AA IFE SIP TP. Maint Crs: UH-1, FW. Saf Crs: CV. Time: 8,500 Hrs./Cbt 813 Grad: Feb 69. AM/18.

WWWWW - ZZZZ

WALL, Leroy A., (LTC) (M79) Route 1, Box 89, Purcell, OK 73080. Dy: (405) 427-4294. Res: (405) 527-7306. S: Tommie. Dy: Cdr, Troop Cnd (Avn), State Avn Officer, OKARNG. Rtg: MAA IFE, SIP. Saf Crs: CV. Time: 10,500 Hrs. Grad: Jan 65. Past Sec, AA of The Yr 78.

WALTERMYER, Patricia, (W01) (M85) (Pat) P.O. Box 402, Jonestown, PA 17038. Dy: (717) 865-8961. Res: (717) 865-5040. Dy: ATC Tech, 28th Avn Platoon, Harrisburg.

WANDEL, Warren V., (CW4) (M78) NTSB, Fed Bldg Rm 7407, 819 Taylor Street, Fort Worth, TX 76102. Dy: (817) 334-2616. Res: (817) 496-1979. S: Dara. Dy: Air Safety Investigator, Civ Safety Specialist, IRR-MIL. Rtg: SAA. Saf Crs: MIL. Qual: AH-1S. Time: 3,400 Hrs./Cbt 700 Grad: Mar 68. DFC, AM/13.

WARREN, Dennis J., (CW3) (M83) (DJ) 3452 Prieby Avenue, Joliet, IL 60435. Dy: (312) 735-7825. Res: (815) 439-1429. S: Ingrid. Dy: Acft Pilot IARNG, Avn Safety Officer/PI, Chl TP. Rtg: AA IP. Maint Crs: UH-1. Saf Crs: MIL & Civ. Time: 3,000 Hrs. Grad: May 75.

WARREN, Russell L., (SFC) (M88) (Rusty) 904 Ridgewood Drive, Plainfield, IN 46168. Dy: (317) 835-2537. Res: (317) 839-8666. S: Karen. Dy: Flight Ops Chf, HQ 38 Avn Bde. AUSA.

WEAVER, Martin, (MAJ) (M88) (Marty) 4445 Dynasty Lane, Martinsville, IN 46151. Dy: (317) 537-2509. S: Jane. Dy: Pilot American Airlines (INARNG). Qual: AH-1. Time: 4,000 Hrs. Grad: Oct 73.

WEAVER, Roger L., (CW4) (M84) (Fuzzy) 9047

Reserve Components:

ARNG Aviation Update

by Colonel John J. Stanko, Jr., Ret.



ABERDEEN PG, MD — For many years Army Aviation Magazine ran a column in every issue called the "Bureau Drawer." It was authorized by the Aviation Branch Chief in the National Guard Bureau. It began when the ARNG Aviation Branch consisted of a Branch Chief, one Aviation Staff Officer and a Secretary.

Somewhere along the way the column was sacrificed to exigencies of the service, relocation from the Pentagon to an Army National Guard Operating Activity Center at Edgewood Arsenal and growth.

Full Blown Division

The three person branch is now a full blown division with

COL Stanko is Chief, Army Aviation Division, National Guard Bureau, Aberdeen Proving Ground, MD

five functional branches, one located in the heart of Fort Rucker in its own building, an office in the Pentagon and four branches at Edgewood.

"...changes in the near future...involve relocating the Aviation Division..."

More changes are in the near future which involve relocating the Aviation Division with its Logistics Branch, the Standardization and Training Branch and the Safety Branch to the Capitol Region area and the Centralized Scheduling Branch to Olney, Maryland.

The ARNG force has grown from 1,500 contingency and training aircraft to 2,700 aircraft and includes CH-47D and our first, combat certified AH-64 battalion. The aviator population is more than 6,000.

Obviously, it's time to reinstitute the "Bureau Drawer." In this issue are two articles by the Commanding Officers of the ARNG Aviation Training Sites, EAATS at Fort In-diantown Gap, Pennsylvania

and WAATS at Marana, Arizona.

Each future issue of the Army Aviation Magazine will carry at least one National Guard article so that over the coming months we can tell you the Guard's aviation story. It should be interesting. IIIII

Aviation Reserve Components Directory

Furrow Ave., Ellicott City, MD 21043. Dy: (301) 347-6791. Res: (301) 455-0221. S: Rebecca. Dy: 1/158th Cav. 29th Div. Weida AAF. Rtg: MAA IP. Time: 3,882 Hrs./Cbt 945 Grad: Aug 67. AMV, OLC/29.

WELLS, John F., (MAJ) (M87) 1250 Everette Road, Aberdeen PG, MD 21010. Dy: (301) 671-6846. Res: (301) 676-0370. S: Janet. Dy: NGB Training Officer, Edgewood. Rtg: AA IP. Time: 2,000 Hrs. Grad: Jun 78. Past Treas, Connecticut Chapter.

* **WEST, J. B.**, (COL) (M83) USAED - Europe, CEED-ED-MH, APO NY 09757. S: Barbara. Dy: Chief Medical & Housing Section, US Army Corps of Engineers. Time: 1,681 Hrs./Cbt 637 Grad: Apr 67. AM/22.

WESTERDAHL, William, (COL) (M88) (Bil) 7145 Village Road, Parker, CO 80134. Dy:

(303) 340-9844. Res: (303) 841-4938. S: Susan. Dy: Colorado ARNG, Buckley Ang Base, Aurora. Rtg: AA IP. TP. Maint Crs: UH-1, AH-1. Saf Crs: Mil. Qual: AH-1S. Time: 6,200 Hrs./Cbt 800 Grad: Mar 68. DFC/1, AM/12.

WHITE, Phillip D., (LTC) (M65) 1630 South 77th Street, Lincoln, NE 68506. Res: (402) 488-4431. S: Ina. Dy: Opts & Training Offr, NEARNG. Rtg: MAA, Maint Crs: UH-1. Saf Crs: Mil. Time: 2,000 Hrs. Grad: Sep 65. Past VP.

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WINDHAM, Daniel O., (MAJ) (M73) (Dan) 969 Vestavia Way, Gulf Breeze, FL 32561. S: Claire. Dy: Safety Offr, HQ STARC, ALARNG. Rtg: MAA IP. Maint Crs: UH-1. Time: 3,000 Hrs./Cbt 300 Grad: Sep 69. AM/9. Past Pres.

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Reserve Components:

ARNG Attack Helicopter Training

by Colonel William D. Badger



challenge of training combat ready aviation units, and today the National Guard has 21 Attack Helicopter Battalions, ten Air Cavalry squadrons, and two Regimental Aviation Squadrons.

This represents over 400 Attack aircraft and 1000 Attack pilots. The units are organized with UH-1M, AH-1S (MOD), AH-1S (MC), and AH-64 aircraft. However, the implementation of the Army Aviation Modernization Plan (AAMP) supports the

MARANA, AZ — In October of 1986, the Western ARNG Aviation Training Site became a reality to COL John J. Stanko Jr. (Ret), the Chief of the National Guard Bureau's Aviation Division. COL Stanko has served in that capacity for the past twelve years and is also a member of the AAAA National Executive Board.

One of Two Sites

The Western ARNG Aviation Training Site is one of two Aviation Training Sites under the operational control of the National Guard Bureau. The Eastern Training Site is located at Fort Indiantown Gap, PA and is designed to conduct utility, cargo, and fixed wing aviation training. The Western Training Site is located at Marana, AZ and is designed to conduct Attack and Aeroscout training. Both sites align with the TRADOC training base, conducting individual training as opposed to unit training.

To accurately look at the Attack Helicopter training for the Army National Guard, we have to go back in history and review how we got to where we are today. Just a little over a decade ago, there were no Attack Helicopter units in the Reserve Components. Then in 1976, three Attack Helicopter Companies

were organized in the National Guard. The new units, with a company in Utah, Colorado and Maryland, were organized with UH-1M model gunships. The

challenge was to train our soldiers and pilots on Attack helicopter operations, weapons systems, range safety, and ammunition resupply.

Twenty-one Cobras

About a year after the UH-1M equipped units were activated, Department of the Army approved 21 AH-1G Cobras for the National Guard. Each of the three Attack companies were assigned seven Cobras. This was a significant step in modernizing and equipping the Total Army, of which the National Guard is an integral part.

The National Guard met the

phase-out of the UH-1M Attack Helicopters from the National Guard and replacement with newer Attack aircraft.

How does the Army Aviation Modernization Plan affect the Western ARNG Aviation Training Site? First, I want to state that I strongly support the plan. I commend all of those who developed the plan that is being viewed as a model for Force Modernization. The decision to retire the non-deployable UH-1M model aircraft from the National Guard is one of the best things that has happened to improve the combat readiness of National Guard aviation units. However, the im-

AERIAL GUNNERY TRAINING RANGES



COL Badger is Commander, Western Army National Guard Aviation Training Site, Marana, AZ

pact of phasing out the UH-1M aircraft and replacing these aircraft will result in an increase in the training requirement at a time when we are faced with great resource constraints.

Within the National Guard, one Attack Battalion in North Carolina has AH-64 Apache aircraft. The second unit to get Apaches is located in South Carolina, and they are currently receiving their AH-64 aircraft. The next unit, in Florida, will start receiving their AH-64's in March of 1989. In all, 15 Attack Helicopter units in the National Guard are programmed to get AH-64 Apaches, subject to budget constraints.

AH-1S Equipped

The National Guard also has four Attack Helicopter Battalions that are equipped with the AH-1S (MC) Cobra. All of the Apache and most of the AH-1S (MC) Cobra Qualification training is conducted at Ft. Rucker.

When AH-1S (MC) Cobra training demand exceeds the availability of quotas at Fort Rucker, the Army National Guard Aviation Support Facilities, co-located with ARNG units, conduct this qualification training.

The remainder of the Attack Helicopter training is conducted at the Western ARNG Aviation Training Site, or one of the Army National Guard Aviation Support Facilities that is co-located with the Attack units nationwide. The training requirement continues to exceed the capabilities of Fort Rucker, the Western ARNG Aviation Training Site and the Army National Guard Aviation Support Facilities. During Fiscal Year 89, the Western

ARNG Aviation Training Site is programmed to increase its training output to 144 AH-1S (MOD) Qualifications.

Transitioning Required

Exchanging the UH-1M model aircraft will result in over 350 pilots requiring transition into the other attack aircraft. Some pilots, like the ones in South Carolina, will receive training in the AH-64. Other pilots will receive training in the AH-1S (MC), and yet others in the AH-1S (MOD).

This will be a challenge for the Training Base, whether it is Fort Rucker, the Western ARNG Aviation Training Site, or the ARNG Aviation Support Facilities.

Here, at the Western ARNG Aviation Training Training Site, the mission will be to train the trainer. The Director of Evaluation and Standardization (DES) at Fort Rucker has a section located at the WAATS. This section will provide quality assurance by giving final

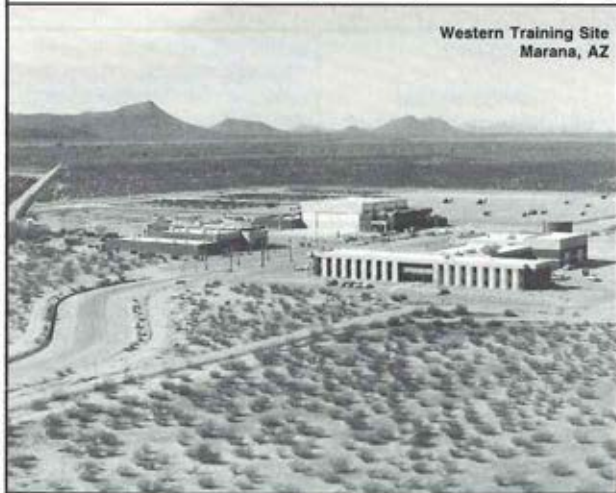
evaluation for the AH-1S (MOD) Instructor Pilot Course, and conduct spot evaluations for a percentage of all the pilots that transition into the AH-1S.

Geographically, the WAATS Attack helicopter training benefits from the availability of vast acres of tactical training areas, and extensive use of the aerial gunnery ranges located in the southwestern United States, which provide a real potential for large scale Joint Service operations.

Another significant asset of the WAATS, is our new AH-1S Flight and Weapons Simulator (FWS). The FWS provides independent training for the pilot or gunner plus simultaneous training of both crew members in the integrated mode.

The simulator is used for both qualification and continuation training. The device has the capability to simulate nap-of-the-earth flying, unmasking, engagement, electronic countermeasures, weapons sys-
(Training — cont. on p. 52)

Western Training Site
Marana, AZ



Reserve Components:

First ARNG Apache Units Combat Ready

by 1LT Thomas M. Camacho



maintenance schools at Fort Eustis, VA, and the AH-64 Aviator Qualification at Fort Rucker, AL. These long schools produced some significant problems for soldiers unable to leave their civilian jobs for several weeks.

After a year of individual training and qualification, the battalion began its Unit Training Plan (UTP) in October of 1987. Weapons qualification, common task training, and basic company-level operations were completed in the fall as the battalion was receiving all of its required equipment, including its 18 Apaches.

Upon receipt of all its aircraft, the individual companies began to conduct more advanced company-level training. All this training was accomplished during the battalion's monthly training weekends and at scheduled extra training periods.

Once at Fort Hood, the 1/130th completed its company- and battalion-level training during the first three weeks before taking an external ARTEP (evaluation) with III Corps' Apache Training Brigade (ATB) from August 1 to 6. At the battalion's final debriefing by ATB, LTC Stephens and his staff were told that the 1/130th had passed its evaluation and was "combat ready."

The Guard is Different

To appreciate the significance of forming the first Guard Apache battalion, one must realize the unique challenges which the typical Guardsman meets. Guardsmen face a three-fold challenge: How to juggle family, civilian job, and the National Guard. When the Guard demands too much of his time, the Guardsman's family and employer suffer.

RALEIGH-DURHAM, NC — Marching toward the colonial war supplies at Lexington and Concord, the Redcoats were confident. A ragged band of resistant colonists would be no match for these highly-trained, professional British soldiers. Or so they thought.

When thousands of local citizens armed with flintlock muskets and hatchets rallied to repel the Redcoats' advance, British officers were amazed at the effectiveness of this local militia. These partly-trained citizen soldiers, filled with patriotism and a sense of purpose, proved to be a tough opponent in battle. Throughout the remainder of the Revolution, the militia, or "minutemen" as they were sometimes called, fought bravely alongside the colonies' active fighting force.

Tradition Upheld

Two centuries later, the National Guard upholds its proud tradition as a prominent force in America's defense.

One Guard unit, the 1st Battalion, 130th Aviation Regiment is striving to preserve the Guard's rich heritage. As the nation's first Guard unit to receive the AH-64 Apache attack helicopter, the 1/130th is setting high standards for future Guard Apache battalions.

The 1/130th, commanded by LTC Duncan M. Stephens, deployed to Ft Hood, TX, from July 9 to August 7, 1988, for a month of intense training and an external evaluation. They were challenged by the complexity of their mission and the tightness of their schedule. But when the dust cleared after the evaluation, the 1/130th was deemed "combat ready."

Combat Effective Unit

"We have taken individuals from all walks of life and molded them into a combat effective AH-64 unit that can stand up beside our active duty counterparts in any mission, anywhere," Stephens said.

COL Leslie T. Everett, Jr., State Army Aviation Officer for the North Carolina Army National Guard (NCARNG), echoed LTC Stephens' thoughts. "The performance and accomplishments of the 1/130th have proven beyond any doubt that the Reserve Components can receive and train up on the Army's most sophisticated and demanding equipment," he said.

History of the 1/130th

The 1/130th was officially reorganized in October 1986 from an AH-1 company to an AH-64 battalion. At this point, unit personnel began to attend their appropriate MOS-producing schools. The most demanding of these were the AH-64-specific

1LT Camacho is an Aeroscout Platoon Leader in Co. C, 1/130th Avn., Raleigh-Durham Airport, NC

1/130th members made extraordinary sacrifices during the unit's first two years. They attended long MOS-producing courses, participated in additional training weekends and, to top it off, performed 30 days of Annual Training 1800 miles from home.

"There are unusual aspects of a National Guard AH-64 battalion," said MAJ Bill W. Stevens, S-3 of the Apache Training Brigade. "There was a lot of extraordinary effort made by the members of the NCARNG to get (to Fort Hood) ready to train," he said. "And while they were here, they made uncommon sacrifices to get ready for the ARTEP."

"The Apache program is extremely demanding," said Everett. "It is taxing on the individual Guardsmen, families and employers."

Why Do They Do It?

Reid Hadley is the 1SG of Headquarters and Service Company, 1/130th Avn. In civilian life, he is an Aerospace Engineer Technician at MCAS Cherry Point, in eastern North Carolina.

He has to drive 167 miles one way from his home on the coast to where he performs his National Guard drills. A Vietnam Veteran and 18-year member of the Guard, he is the father of three daughters.

The pay he receives for an average drill weekend barely covers his expenses to and from his home. During his Guard career, he has missed anniversaries, birthdays, and graduations.

"Money has nothing to do with it," said Hadley. "As long as I wear this uniform, I want

to give all I've got. It weighs heavy on me when I miss so much of my daughters' lives, but my family supports my Guard commitment."

Hadley said the days of the "weekend warrior" are gone. To maintain their professionalism and exceed the standards set at Fort Hood this summer, the soldiers of the 1/130th will have to spend more time in training, he said.

"We all know that with the Apaches, the one-weekend-a-month drills and the two-week Annual Training periods are a thing of the past," he said.

A Real Challenge

CW2 Scott Smith is an AH-64 pilot in Company C, 1/130th Avn. He recently graduated from business school in Greensboro, NC. He drives 75 miles each way to attend drills and then again when he flies each of his 48 annual flight training periods.

"I enjoy flying this country's most advanced attack helicopter," he said. "It's a responsive and powerful aircraft, and it's pleasurable to fly. Learning to fly the Apache's Night Vision System is probably the most challenging thing any Apache pilot faces."

"We have individuals with a variety of skills and experiences in our unit," said LTC Stephens. "We have doctors, lawyers, factory workers, chemical engineers, civil engineers, electrical engineers, salespeople, professional pilots, farmers, and just about any other profession that you could imagine."

"The sacrifices made by our personnel have been many," Stephens said. "We have had

people lose jobs and families over the past two years due to the comprehensive nature of the AH-64 program. You must have people that are very dedicated, and you must have the support of families and employers. The task of forming an AH-64 battalion is a very demanding one. It is definitely not a once-a-month proposition."

The Rewards

"When I sat in the final debrief after our battalion had passed the ARTEP, it made me feel good to have trained our soldiers to such high standards," 1SG Hadley said.

"To see the faces and attitudes of the soldiers in the 1/130th makes everything that I have personally been through well worth it," said LTC Stephens.

"To watch the 1/130th develop, train, and achieve its high standards has been an extremely rewarding experience," said COL Everett. "We have learned many valuable lessons, and we will be happy to share our experiences in the development of this program with any of our sister units."

1/130th has proven that the mission of equipping reserve units with the AH-64 is attainable. Soldiers in future Guard Apache battalions will be forced to make many sacrifices and work long hours. The weapons may have changed since Washington's day, but the militia remains willing and ready to fight at a moment's notice. As the accomplishments of the 1/130th Avn have shown, the National Guard is well able to meet the demands of today's Army. IIII

Reserve Components:

Premobilization Performance

by Colonel Arthur W. Ries II



ANNVILLE, PA — The Eastern ARNG Aviation Training Site (EAATS), organized on August 1, 1981, completed its fifth full operational year at the conclusion of FY88. Since inception, over 3,200 students have trained in formal flight training courses of instruction; 1,000 students have completed Aircraft Mishap Prevention Orientation Courses; over 30,000 class A & B mishap-free flying hours have been flown; and over 79,000 hours of simulator operation have been provided.

The UH-1 SFTS utilization rate is second only to Ft. Rucker. Flight training is monitored by an ARNG manned, Directorate of Evaluation and Standardization

Colonel Ries is Commander, Eastern ARNG Aviation Training Site, Annullve, PA.

(DES) Branch, directly responsible to the Director, DES. This provides for on-site quality assurance by USAAVNC.

IP Evaluations

All end-of-course IP evaluations are conducted by DES. As an ARNG augmentation to the Army's Aviation Training Base, we provide quality training in mature aircraft systems commensurate with the time available to our ARNG aviators.

Student in-processing and out-processing occur during the first and last days of training and encompass no more than one hour of time, to include pay call. Arrivals and departures occur on the weekends.

Premobilization, the EAATS is a Pennsylvania ARNG Unit mis-

sioned by the National Guard Bureau. Flight training, simulation, academics, and student support activities are conducted by the EAATS. Flight operations and aircraft maintenance support are provided through ARNG technician augmentation to the Ft. Indiantown Gap, AASF manning.

This specialization time, sharing, and mutual use of the largest ARNG AASF supports the training of units of Pennsylvania's 28th Aviation Brigade, Company F (DISCOM), and Company H (Corps), as well as EAATS students from the 50 states and territories.

Mobilization

What is fully utilized, weekday and weekend, prior to mobilization, becomes available to Ft. Rucker upon mobilization. A mobilized EAATS expands to incorporate the total AASF and AATS Complex into a single mobilization entity, under USAAVNC. The EAATS Mobilization Complex consists of a 40 (Performance - cont. on p. 52)

EASTERN AATS AIRCRAFT FLIGHT TRAINING COURSES OF INSTRUCTION

Aviator Qualification

Acft	Instr	Terrain Flt	NVG	Aero- Scout
------	-------	----------------	-----	----------------

Fixed Wing

U-21	X			
U-8F	X			
T-42	X			
C-7A	X			

Instructor Pilot Qualification

IP	IP Refresh	IP Stan	NVG
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	X		
X	X		
X	X		
X			

Rotary Wing

OH-6	X		X	N/A	X
OH-5B	X		X	X	X
UH-1		X	X	X	
CH-54	X		X	N/A	N/A

X	X	X	X
	X	X	X
	X	X	X
X	X	N/A	N/A

Reserve Components:

Fourth U.S. Army Reserve Aviation Update

by Lieutenant Colonel Larry E. Johnson

FORT SHERIDAN, IL — The years 1988 and 1989 will go down as one of the most significant periods in the history of USAR Aviation in Fourth U.S. Army. During this time we will completely reorganize USAR Aviation into the Army of Excellence (AOE) structure.

The old days of small aviation sections and detachments will go away, and we will activate an aviation group, two battalions, and several smaller units.

New Aviation Structure

The new aviation structure will not have come about without a lot of work on the part of many people. In fact, the planning for the restructuring of Army Aviation in Fourth U.S. Army actually began in early 1986.

At that time, the approved force structure included an aviation group headquarters, an assault helicopter battalion, a theater aviation company, and one additional helicopter medical detachment. These units were all scheduled for activation in Fiscal Year (FY) 1987. Later, an attack helicopter battalion was added to the force structure, for activation in FY89.

Because of funding constraints, the scheduled FY87 activations did not occur, and all were delayed into FY88. In February of this year, we were finally given the go-ahead by

Forces Command to conduct the 1988 activations.

Transition

The spring and summer of 1988 have been a time of meetings, conferences, and planning sessions during which all concerned have worked to ensure that the deactivations of the old force structure, scheduled for September 15th, and the activations of the new units, scheduled for September 16th, all happened smoothly.

The majority of the new aviation force structure in Fourth U.S. Army will come under command and control of the 86th U.S. Army Reserve Command (ARCOM) and its subordinate headquarters, the 244th Theater Aviation Group.

Both the ARCOM and aviation group staff have been working with the CONUS Army to bring about the new force structure, and do it with a minimum of personal disruption to those aviation personnel in the field who will be assimilated into the new units.

At the same time that the new force structure was being established, the aircrew personnel were beginning their individual and crew training programs to prepare them to fly the missions of the new units. Aviators who once flew primarily VIP missions in ARCOM or Engineer Group aviation sections now began to train for missions in either an assault heli-

copter company or a medical detachment.

New task lists had to be developed, and new chains of command established for units. This training program will continue into FY 1989, with inactive duty training weekend assemblies and additional flight training periods being utilized to prepare aircrews for their new missions. Our goal is to be prepared to conduct meaningful collective training during annual training 1989.

Maintenance

Just as training programs had to be revised, aircraft maintenance programs had to be adjusted because of different numbers and types of aircraft at the various aviation support facilities. (ASFs). Although extensive retraining will not be required, the number and mix of maintenance skills required will change at many of the locations.

Although 1988 will have been a year of significant change, 1989 should prove to have even more challenges awaiting. In 1989 we will activate an attack helicopter battalion. This activation will result in considerable new training requirements as we field the AH-1S (Cobra) in Fourth U.S. Army for the first time. Training for aviators and maintenance personnel on this aircraft has already begun, and will continue throughout 1989.

USAR aviation in Fourth U.S. Army has made significant improvements in training readiness and support capability with this reorganization. The move to AOE structure has not been without its problems, but the enhanced capability that has been brought about will increase support available to the Total Force. ■■■■

LTC Johnson is Fourth U.S. Army Aviation Officer, Fort Sheridan, IL.

Reserve Components:

Army Reserve Aviation in Transition

by Major Norman P. Gottlieb

WASHINGTON, DC — It seems fitting that this October, the Army Reserve had the honor of receiving the 1000th UH-60 Black Hawk manufactured. This event underscores the tremendous progress made by the Army Reserve in reshaping and modernizing its aviation force.

Only four short years ago aviation units in the Army Reserve consisted primarily of small detachments and separate companies. Peacetime command and control structure and training plan development was accomplished almost entirely by non-aviation units.

The most modern aircraft was the A Model CH-47, while the earlier models of UH-1H comprised the bulk of the fleet.

Bold and visionary decisions made by the Chief of Staff of the Army in 1984 made the Army Reserve an active participant in the exciting changes and growth which came to the Army through the "Army of Excellence".

Moving quickly, the Chief of the Army Reserve developed a master plan, titled "Force 2000," which broadly outlined the transformation of the old aviation structure into a new and viable structure between 1985 and 1992. This force is to provide warfighting commanders-in-chief with early deploying reserve

aviation units that are able to survive and win on the modern battlefield.

"Force 2000"

Since 1985, U.S. Army Forces Command has activated more than 80 percent of "Force 2000". These new units include:

- * Attack and Combat Aviation Group Headquarters
- * Aviation Brigade Headquarters
- * Corps Attack Helicopter Bns
- * Division Attack Helicopter Battalion
- * Medium Lift Helicopter Battalions
- * Theater Aviation Battalion
- * Command Aviation Battalion
- * Theater Aviation Maintenance Battalion Headquarters
- * Theater Aviation Maintenance Companies
- * Corps Aviation Maintenance Companies
- * Assault Helicopter Bns (UH-60)
- * Assault Helicopter Battalions (UH-1)

These units now provide the Army Reserve with a peacetime structure that allows for career progression, and for training that is planned, conducted and supervised through an aviation chain of command.

With these new units comes modernized equipment. Already the Army Reserve has fielded the UH-60 Black Hawk, the AH-1S Cobra and the CH-47C Chinook. In the early 1990s, the Army Reserve will begin the conversion from the Cobra to the

AH-64 Apache and will begin fielding the "D" model Chinook.

Efforts are underway to replace our dated fleet of fixed wing aircraft with a more modern model, in order to meet the mission profiles of our new theater aviation companies.

The Army Reserve's Black Hawk assault helicopter battalions are scheduled to receive the Extended Range Fuel System and to be the first in the Army to receive the Hellfire missile system.

In addition, fielding of the Stinger missile in the attack helicopter battalions is planned along with the replacement of specified UH-1Hs with a modernized version of its substitute.

A Number of Challenges

As one might expect, the turbulence created by a 90 percent change in our TOEs, a 58 percent increase in personnel, a 33 percent increase in aircraft and the modernization of the aircraft fleet have provided us with a number of challenges. Issues in the areas of MOS qualification, training, full-time support, equipment availability and distribution, and facility suitability have all demanded attention.

Through the dedicated team efforts of our Citizen Soldiers, our full-time Army Reserve Technicians and those Active Guard/Reserve (AGR) and Active Component aviation personnel who are assigned in support of the Army Reserve aviation program, solutions have been found.

Today, after the activation of 25 of our 30 new units, the Army Reserve stands ready to complete the transition and to fulfill its significant role as a member of the Army's theater and corps aviation forces. ■■■■

Major Norman P. Gottlieb is an Active Guard/Reserve officer serving as Aviation Organizational Integrator, Office of Chief, Army Reserve, Washington, DC.



MOS 93P Changes

by Command Sergeant Major John P. Traylor
Aviation Branch Command Sergeant Major
Ft. Rucker, AL

The Deputy Chief of Staff for Personnel recently approved a revision to military occupational specialty (MOS) 93P, Flight Operations Coordinator. This action culminates a two and a half-year effort on the part of the Aviation Center to correct the grade inequities associated with this MOS. This MOS has had promotion problems for years due to the limited number of sergeant and staff sergeant positions in Table(s) of Organization and Equipment (TOE).

This limited number of positions created a bottleneck that made it almost impossible for soldiers to be promoted to sergeant and staff sergeant even though there were shortages in senior grade positions. This resulted in soldiers migrating into the MOS in the senior grades with virtually no experience in Aviation operations.

Growth of Positions

In order to correct this inequity, the revision entails a growth of over two hundred positions at the sergeant and staff sergeant grades. It took two and a half years since this revision was initiated to secure this amount of growth, in this era of constrained resources.

The growth eventually was justified to the Deputy Chief of Staff for Personnel's (DCSPER) satisfaction through the efforts of the Aviation Center and the diligence of the personnel staff officer for Aviation in the Office of Deputy Chief of Staff for Personnel, LTC Roy Eichler.

Our MOS 93P revision has changed the title of the MOS to Aviation Operations Specialist. This brings the title more in line with the actual duties of the position. The most significant changes in this revision center around the standards of grade. The new Standard of Grade Authorization (SGA) is actually two distinct patterns.

First there is a TOE SGA and second, a tables of distribution and allowances (TDA) SGA. Common to both SGAs is the authorization for units in which there is only one 93P authorization. Here the new SGA provides for a sergeant instead of a specialist four.

The TDA SGA also provides clear instructions for grading TDA airfield operations positions based on the size of units assigned to the airfield. Airfields with less than a Combat Aviation Brigade assigned will require a staff sergeant position. A sergeant first class position will be authorized at airfields with a minimum of one Combat Aviation Brigade.

Experienced Soldiers

An Army airfield with two or more Combat Aviation Brigades will be authorized a master sergeant as the airfield operations sergeant. Additionally, there is a substantial increase of sergeant and staff sergeant TOE positions.

This increase in sergeant and staff sergeant positions will open up the promotions at that level and ensure that we will have experienced soldiers at all levels of Aviation operations. This has been accomplished by changing the grade patterns of the assistant operations sergeant.

For example, in a battalion headquarters, where there has been one master sergeant and a sergeant first class as his assistant, there now will be the same master sergeant but with a staff sergeant as his assistant.

In company operations sections, where the pattern went from sergeant first class to specialist four assistant, it will be sergeant first class with a sergeant assistant. This pattern will allow positive and progressive career development

(MOS 93P — continued on page 52)



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AAAA ANNUAL DUES NEW AND RENEWAL DUES FOR ENLISTED; GS 4 & BELOW; WAIVE BOARD 12 DAC'S AND BELOW: () 1 YR, \$10; () 2 YRS, \$15; () 3 YRS, \$28 NEW AND RENEWAL DUES FOR ALL OTHER THAN ABOVE: () 1 YR, \$15; () 2 YRS, \$28; () 3 YRS, \$43 ADD \$5 PER YEAR FOR ADD'L POSTAGE IF YOU HAVE A FOREIGN, NON-APO ADDRESS. ADD \$15 IF YOUR CHECK IS DRAWN ON A FOREIGN BANK. <input type="checkbox"/> CHECK ENCLOSED MAKE PAYABLE TO "AAAA." OR CHARGE TO: <input type="checkbox"/> MASTERCARD; <input type="checkbox"/> VISA CARD NO. _____ AMT \$ _____ EXP. DATE _____ SIGNATURE _____			
CHECK (✓) YOUR PROF'L QUALIFICATION <input type="checkbox"/> USA ACTIVE DUTY <input type="checkbox"/> MANUFACTURERS* <input type="checkbox"/> USA CIVILIAN <input type="checkbox"/> CONSULTANT* <input type="checkbox"/> ARMY NAT'L GUARD* <input type="checkbox"/> PROFESSIONAL* <input type="checkbox"/> ARMY RESERVE* <input type="checkbox"/> PROFESSIONAL U.S. SERVICE <input type="checkbox"/> ARMY RETIRED* <input type="checkbox"/> OTHER _____ *BE CERTAIN TO LIST YOUR CURRENT JOB TITLE AT THE LEFT.			
PRINT NAME OF RECRUITER			

Training - cont. from p. 41

tems operation, ordnance delivery, and emergency procedure training. The system has full color digital computer imagery, with a daylight, dusk, night, NVG (both ANVIS and PVS-5 compatible), weather, and interactive visual system.

The bottom line for Attack helicopter training in the National Guard is that we are an integral part of the war fighting team. We have the facilities, the ranges, and the personnel to meet the challenge of preparation for a war we hope we never have to fight. IIIII

Performance - from p. 44

million dollar aviation complex adjacent to over 1,000 square miles of tactical training areas. The tactical training areas provide for training in all modes of tactical helicopter flight, to include JAATS with Air National

Guard A-7s and A-10s, on terrain which mirrors Western Europe.

The proposed Mobilization TDA and Concept Plan for the Eastern AATS mobilization mission is currently under review by the National Guard Bureau.

Opportunity

At a time of force structure constraints and shrinking resources, the ARNG AATS provide the Army Aviation Community with a capability to maximize available resources both pre-mobilization and when mobilized. The ARNG maximizes its pre-mobilization capabilities through intensive management and utilization of scarce resources.

These same manned facilities provide an excellent capability for an immediate mobilization expansion of the TRADOC Aviation Training Base. IIIII

MOS 93P - cont. from p. 47

through all levels of Aviation.

The memorandum of approved change to AR 611-201 was published June 3, 1988 and the changes will be published in the October 1988 Update to AR 611-201. Changes to TOE will be included in the consolidated TOE update in October of 1988.

Position reclassification, including position titles, and the revised SGA will be accomplished during the January-March 1989 management of change (MOC) window in all modified tables of organization and equipment (MTOE) and TDA in effect on April 1, 1989.

Any required revision of personnel records and/or submission of Standard Installation Division Personnel System's transactions will be accomplished Sept 1-23, 1989. This revision will be fully implemented on Oct 1, 1989. IIIII

EASTERN AATS MOB COMPLEX

TRAINING COMPLEX

Admin/Tng Bldg	21,000 sq ft
UH-1 SFTS (2B24)	10,000 sq ft
AH-1 SFTS (2B33)	19,000 sq ft

SUPPORT FACILITIES

Aircrew Dormitory
Dining Facility
Aeromedical Clinic
Motor Pool

AIRFIELD FACILITIES

Control Tower	
Air Force Wx Svc	
Firefighting/Crash Rescue	
Hangar Space	96,000 sq ft
Ramp Space	216,000 sq ft
Hel pads:	
Cargo	8
Utility	56
Fixed Wing	6
Fuel Farm:	
JP4	100,000 gal
AVGAS	10,000 gal

BRIEFINGS

MG Ellis D. Parker, Fort Rucker commander, was awarded the Distinguished Service Medal July 20 by **GEN Maxwell R. Thurman**, commander of the Training and Doctrine Command. The award, which was authorized by the President through the Secretary of the Army, was presented to Parker for distinguishing himself as the Chief of the Aviation Branch and commander of the Army Aviation Center and Fort Rucker from January 1985 through May 1988.

1SG Frederick W. De La Roche, assigned to the U.S. Army Aviation Research and Technology Activity's Aviation Applied Technology Directorate (AATD), Fort Eustis, VA, receives the Army Commendation Medal with the fourth oak leaf cluster from **COL John E. Kempster**, director/commander of AATD. De La Roche of AATD's Aviation Support Facility was recognized for his meritorious service as the noncommissioned officer in charge of the forward test area, Armed OH-58D test program.

WORLD HELICOPTER CHAMPIONSHIP UPDATE! The U.S. National Championship will be held at Ft. Rucker April 17-21, 1989. The selected crews will return to Ft. Rucker on May 1 for extensive training. The U.S. Precision Helicopter team will deploy to Europe on or about August 15 and continue training there. The Team will then deploy to the World Helicopter Championship site in Paris on September 5, 1989. For further information contact: LTC Robert Harry at (205) 255-5600/5481/5308.



Increase Flight Time and Reduce Costs with **VIBRALOG...** a New Computerized Vibration Maintenance System

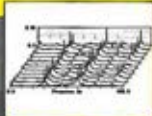
Chadwick-Helmuth's integrated approach uses the New Model 8500 Balancer-Analyzer and an IBM PC[®] compatible software program. The result is Vibralog, a comprehensive analysis and control system for airframe and powerplant vibration problem solving, predictive maintenance, rotor track and balance, propeller balance, and turbofan balance.

- Reduce costs by performing maintenance based on condition.
- Minimize flight down-time by performing repairs before failure using predictive maintenance data.
- Centralize set-up and maintenance scheduling for consistent results.
- Eliminate the guesswork of gathering, storing, interpreting and comparing vibration data.
- Develop an on-going vibration profile of each aircraft, or group of same model aircraft, to monitor vibration trends.

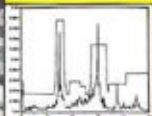
Instructions are formatted for insertion into and display by the Model 8500. These instructions automatically set up any number of 8500s to collect vibration data in a predefined sequence. The data is then automatically stored and labeled to be received by the post processing system for analysis and display.

The four printouts at the right are typical of the almost unlimited ways in which data can be compiled and displayed.

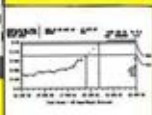
Find out more about this powerful, yet easy to use tool to keep flight time up and repair cost down.



Spectrum Map



Spectrum alarm envelope



Overall trend plot



Frequency band trend plot



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Manufacturers of industry standard vibration analysis and control equipment for helicopters and aircraft since 1957.

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SSG John R. Daniels
1LT Timothy P. Devito
CW2 Thomas R. Drew
CW2 Shaws J. Hoban
CPT Essie Holt-Jordan
WO1 Mark B. Ivey
CW4 Sandor M. Kalemien
LTC/P J. Stephen Koons
1LT Steven D. Mathias
1LT Frank Perlman
WO1 Lester W. Ramsey
SPC Kent E. Russell

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SPC Harold E. Christian
1LT Daniel J. Curtin
1LT Harry R. Ford, III
CPT Duward H. Galbreath
SPC Angelo J. Guarino, Jr.
2LT Jeffrey R. Hazelwood
SPC Jarrod W. Kalderman
CPT Robert L. Massie
CW3 Michael A. McMullen
1LT Michael O. Murphy
CW2 Kirk A. O'Donnell
MAJ Ronald J. Porter
1LT Alfred J. Vigna
SGT Craig A. Watkins

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Mr. Phil Cammack
Mr. William P. Cusack
Mr. Theodore Gettinger, Phd
CW4 David W. Gollen, Ret.
MAJ Thomas M. Harrison
CW4 Carl R. Heinze
Mr. Joseph P. Howrka
Ms. Georgia A. Howrky
Mr. Robert L. Jones
Mr. Robert V. March
Mr. John W. Patton
MAJ Gary E. Salminen, Ret.
Mr. Kenneth A. Wroblewski

ARMY AVN CENTER CHAPTER FORT RUCKER, AL

LTC Thomas E. Allen
CPT Billy J. Anderson
2LT Gregory A. Barth
2LT Patrick L. Beaman
CW4 Harold E. Bennett
WOC John R. Bering
2LT James E. Bird
CW2 Jon W. Blake
LTC Fred A. Boswell, Ret.

WOC Timothy D. Bricker
WOC Kevin H. Brookins
WOC George W. Brooks
2LT Mark J. Cincotta
MAJ Robert Cole
CPT Stephen D. Combs
CPT Kenneth E. Cozzie
1LT Bobby G. Crawford
1LT Dale W. Demmin
WOC Greg A. Dobbs
Mr. G.C./Don/ Donaldson
Mr. Donald P. Donohoo
CSM Robert F. Dyer, Jr.
CW2 William G. Eichenberger
WOC Michael W. Escueta

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2LT Michael A. Fleetwood
2LT Albert L. Flood, III
SGT Dennis E. Forsee
1LT Michael B. Gibson, Jr.
Mr. Vernon J. Greenwood
Mr. Washington Grey
WOC David L. Harrison
CW4 Dennis C. Hendrix
WO1 William E. Horton
CPL April N. Howard
CW3 James R. Hudson
Mr. Gene Hughes
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SFC Keith C. Klehn
WOC Michael K. Knigge
Mr. Williams F. Kodadek
Mr. Joe Lapham
CPT Roy G. Laporte
1LT Timothy S. Ledford
MSG Kenneth A. Lewis, Jr.
1LT James I. McLain
WOC David E. Miller
2LT Carl R. Muller
MAJ Raymond F.O'Neill, Jr, Ret.

SSG Robert M. Ort
2LT Craig A. Paske
1LT Timothy S. Paul
1SG Louis R. Rios
WOC Lawrence A. Rock
PFC David B. Rogers
CW2 Gregory A. Rogers
CPT Christopher C. Romig
Mr. Michael C. Russell, Jr.
CW2 Harley J. Ryan
1LT David B. Scott
1LT John M. Sevion
CPT William P. Shea
1LT Jeff D. Sorallo
2LT James R. Spitznas
LTC Chris Stoffels
LTC/P William G. Stolarcek
CW2 David L. StPierre
2LT Jeffrey T. Stretch
2LT Daniel S. Sullivan

CW2 David P. Taylor
LTC Melvin N. Thaler
1LT James G. Walker
2LT Cheryl A. Willman
Mr. Henry L. Witmer
CW3 Lawrence T. Wright
2LT Robert J. Young
Mr. Roy G. Young, Jr.
WOC Fernando L. Zayas, Jr.

BLACK KNIGHTS CHAPTER WEST POINT, NY

CDT Mehmet A. Agasoglu
CW4 Richard R. Bell, Jr.
CDT Dennis W. Blaker
CDT Marshall B. Cain, Jr.
CDT Paul C. Davidson
CDT Roger F. Kashaninejad
CPT Brian W. Magerkurth
CPT Edwin D. Patterson, Jr.
CDT Richard J. Spinelli, Jr.

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2LT Alexander Hanekamp
SFC Roland W. Root, Ret.

CHECKPOINT CHARLIE CHAPTER GERMANY

Mr. Robert Jannaschik
Mr. Billy G. Johnson
CW3 Ellery W. Sayers, Ret.
Mr. Robert Walter Vater
Mr. Andreas Thomas Zenk

CHESAPEAKE BAY CHAPTER FORT MEADE, MD

Mr. Harry Brown
SGT Gregory H. Cook

CITADEL CHAPTER CHARLESTON, SC

Cadet Keith Brownell

COASTAL EMPIRE CHAPTER FT STEWART/HUNTER AAF, GA

1LT Robert T. Campbell, II
2LT Andrew C. Forgy
1LT Marc D. Moquin
1LT Bruce W. Olstein
CPT Edward W. Thompson
CW2 Craig S. Wagoner

COLONIAL VIRGINIA CHAPTER FORT EUSTIS, VA

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LTC Donald A. Dalrymple, Ret.
Mr. James N. McLadden
Ms. Margaret P. Owens
Mr. Rodney J. Schulz
CPT Louise V. Terrell

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LTC Patuel J. Flagg, II
WO1 Richard D. Todd

CORPUS CHRISTI CHAPTER CORPUS CHRISTI, TX

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Ms. Barbara W. Evans
Mr. Robert F. Flores
Mr. Marlin Garcia, Jr.
Ms. Martha S. Hawkins
Ms. Tammy J. Jennings
Mr. Daniel R. Meza
Mr. Fermin E. Sanchez
Ms. Anna M. Varela
Mr. Hector C. Vela
Ms. Sandra Villarreal

DELAWARE VALLEY CHAPTER PHILADELPHIA, PA

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Mr. George J. Lordi, Jr. EDWIN A LINK MEMORIAL CHAP BINGHAMTON NY AREA

Mr. William A. Bohan
Mr. Thomas J. Molanda
Mr. Stephen M. Sedot, Jr.
Mr. David J. Simkins
Mr. Stephen J. Skapik

FOLLOW ME CHAPTER FORT BENNING, GA

WO1 Bryan Branham
1LT Michael E. King
MAJ Randall P. Maschek

FORT BRAGG CHAPTER FORT BRAGG, NC

WOC Gayle K. Braesicke, Jr.
CW2 Albert J. Maes, Jr.
CW2 Andrew P. McKeown
CW2 Kurt B. Whalen

GREATER-ATLANTA CHAPTER ATLANTA, GA

2LT Michael L. Pruitt
Mr. F. Gary Sherman

HANAU CHAPTER GERMANY

BG James R. Harding
CW2 Henry G. Hays
SSG Orlando Perez
SPC Edgar A. Pineros
SFC Bruce C. Sumner

LINDBERGH CHAPTER ST. LOUIS, MO

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Mr. Karl B. Carler
Ms. Cheryl Leah Cosat
Ms. Ninta V. Fugus
Ms. Amy L. Ise
Mr. Bennie E. Young

LONE STAR CHAPTER AUSTIN, TX

MAJ Lynn S. Hansen

MAINE CHAPTER MAINE, GERMANY

MAJ James W. Ball
2LT John T. Smith

MONMOUTH CHAPTER FORT MONMOUTH, NJ

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Mr. Raymond Allen Irwin
WOC James Schuetzler, Jr.

MORNING CALM CHAPTER SEOUL, KOREA

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CSM Roop C. Sharma

MOUNT RAINIER CHAPTER FORT LEWIS, WA

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SSG Paul L. Ah-Ching
Mr. Michael W. Callahan
Mr. Randall J. McSmith
Mr. Michael Ohanian
Mr. Robert Samuel
Mr. Steven J. Winter

NORTH TEXAS CHAPTER DALLAS/FORT WORTH

Mr. Charles E. Larson

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CSM Gerald E. Cooper
1LT Douglas K. Lang
CW2 Fernando Martinez

CPT David L. Riley
 WO1 William M. Schuermann
 WO1 Edward J. Shea
 CPT Nancy Annell Scoler
 LTC Charles F. Sparks
 CPT Paul J. Ward
 CPT Randall T. White

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 MARANA, AZ**

LTC Terrell W. Hansen
 CW2 Bruce K. McWhorter

**PHANTOM CORPS CHAPTER
 FORT HOOD, TX**

1LT Richard P. Adams
 1LT Brian J. Barklage
 MAJ Roy B. Barton
 1LT Michael L. Brewer
 CW2 Dexter K. Chun
 CW2 Marc P. Cournoyer
 2LT Michael J. Garshak
 CWA Ronald W. Gerner
 CPT Robert D. Hurley
 CPT Christine B. Knighton
 LTC Bronislaw R. Maca
 CPT Anthony L. Malagrino
 CPT Edwin C. Miller
 MAJ Steven R. Misseldine
 CPT James F. Mulvehill
 CW2 Tommy V. Starkey
 CPT Ronald K. Taylor, Jr.
 CW2 Todd A. Toth

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 NURNBERG, GERMANY**

PF2 Wargs J. Bakich
 SGT Joseph G. Balingit
 PF2 Warren Greg Banach
 SPC James S. Baus
 SGT John S. Bell
 PFC Nicholas S. Beller
 CW2/PF Bruce D. Benson
 SPC James George Bushinger
 SGT Shelton Roger Butler
 SSG Keith R. Carpenter

2LT John J. Combs
 CW2 Pennington Coy
 SPC Diouri D. Dominguez
 PFC Jeffery W. Evans
 SPC Joseph E. Ford
 SPC Gregory A. Ganz
 SPC Brian L. Godbey
 SSG Thomas J. James
 PF2 Patrick R. Jarock
 SPC Patrick S. Kmetz
 SPC James Scott Lacoetic
 PFC Michael L. Larson
 2LT James C. Laughrey
 SGT Lawrence W. Londer
 SPC Donald J. Mayo, II
 SGT Jeffery J. McCloud
 PVT Steven G. McRann
 SSG Stuart L. Meredith
 SPC Aaron S. Orland
 SPC Steven E. Powondra
 PF2 Christopher R. Ross
 SPC Derrick L. Sampson
 SSG William G. Sargent
 SSG William M. Shockley
 PFC John S. Siewert
 SGT Mark E. Smith
 SGT Ricky E. Smith
 SPC Edward F. Turner
 PV2 Thomas E. Vanmeter
 WO1 Nick A. Venezia
 PFC Brian Keith Webb
 SPC Bryan S. Whelan
 PV2 Michael E. Williams
 PFC Christopher S. Wilson

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 GERMANY**

CPT Jeffrey L. Pangallo

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 Mr. Lynn A. Carlson
 Ms. C. Quinn Crowell
 SGT Donald A. Eldridge
 Mr. Harvey L. Gregory

Mr. Okan M. Henseri
 WOC Mark A. Langerkamp
 Mr. Robert L. Palmer
 Mr. Joseph L. Piotrowski
 Mr. Rodger W. Rhinehart

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 STUTTIGART, GERMANY**

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 CPT James P. Beckmann
 CW2 Willard J. Borland
 PFC George A. Curtis
 SPC James Anthony Dansereau
 MAJ Russell S. Forshag
 SSG George S. Leary
 CPT Alan M. Phanuet
 CPT Edward M. Szeman

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 SOUTHWEST FLORIDA**

WOC Jack F. Rostetter, Jr.

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 GERMANY**

E7 Kevin T. Bryan
 SFC David K. Domesey
 SGM Paul E. Gahley
 CPT Joe Hosack
 SGT Peter L. Mayer
 SGT James B. Ross
 SPC George A. Rossatti
 SGT Robert E. Salmon
 CSM Kenny R. Vegoren

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 HUNTSVILLE, AL**

Mr. Michael Hartwell

**THUNDERHORSE CHAPTER
 FULDA, GERMANY**

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 WO1 Michael R. Houser
 PFC Darryl A. Mahan
 PV2 Kerlis Olivier
 1LT John P. Roberts
 SGT Kathleen A. Suppe

CW4 Jimmy G. Thompson
 PV2 Luis A. Villarreal

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 WASHINGTON, DC**

MAJ Alan J. Bacon
 Mr. James W. Elliott
 Mr. Edward N. Hatheway
 SFC Matthew B. Petroni
 Ms. Ellen A. Stueber
 GEN Louis C. Wagner, Jr.

**WINGS OF THE DEVIL CHAP
 FORT POLK, LA**

2LT Constance M. Bennett

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 CHAPTER AFFILIATIONS**

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 1LT Byron K. Bradley
 MAJ Matthew C. Brockway
 1LT Jim J. Burton
 SGT Bradford B. Chambers
 WOC Suzanne C. Danielson
 LTC Gary L. Elliott
 WOC Steven M. Esposito
 1LT William R. Fipps
 CW4 Paul Glavay
 2LT Bruce E. Goff
 Mr. Roman Gonzales, III
 WOC Rodney H. Harris
 2LT Andrew R. Hoppelmann
 Mr. William M. House
 CPT William C. Jacobson
 1LT William J. Kail
 Mr. Harvey L. Lange
 Mr. Ronald J. Langatti
 CPT Robert K. Lytle
 MAJ C. Brock McCloskey
 SGT Timothy P. Mellin
 LTC Warren E. Norris
 WOC Curtis R. Phipps
 WOC Norman F. Pickett
 Mr. Charles R. Steffler
 1LT John A. Thomson
 WOC Victor J. Vrazel



AAAA OVERVIEW



TOP GUNS

The member who sponsors the greatest number of new members during the contest year ending December 31, 1988 wins an expense-paid trip to the AAAA National Convention, including airfare, hotel accommodations, registration, tickets to all social functions, and a \$300 cash award. The winner also receives a plaque presented at the AAAA Membership Luncheon.

Ms. S Barnes, Lind	76
CW2 D McDonald, Thund	69
1SG F Oxendine, Redc	63
MAJ G Kaufmann, Bik Kn	40
Ms. J Garmon, Lind	33
Ms. P Caraway, Lind	28
Ms. V Avenoli, Lind	27
Ms. K Losse, Lind	23
CSM J Pate, Lind	23
Ms. M Weaks, Lind	21
2LT S Hurst, Avn Ctr	20

LTC W Robert, Bik Kn	18
LTC J Magrosky, Lind	15
MAJ Gary S. Coleman, Bik Kn	14
1LT Russell P. Butler, Tauns ...	13
LTC (P) F Edwards, Avn Ctr ...	13
Ms. T Roosman, Lind	13
CPT O Juarbe, Mainz	12
LTC M Byington, Avn Ctr	11
Ms. G Crenshaw, Mont Bay	11
Ms. M Gordon, Lind	11
MAJ J Adams, Old Iron	10
MSG J Bae, Morn Calm	10
COL Clinton B. Boyd, ArmAA ..	10
Ms. Deborah L. Horne, Ches..	10
MAJ D Miller, Lind	10
LTC John Papier, Ches	10
MAJ R Phillips, Indy	10
LTC C Sautter, Bik Kn	10
Ms. Nancy A. Alexander, Corpu	9
Mr. F Khemchand, Check	9
1SG James F. Shelton, Redc ...	9
LTC I Sloan, Avn Ctr	9
1LT Jack E. Sturgeon, Aloha ...	9
Ms. T Cunningham, Lind	8

CW3 William E. Kranz, Stutt ...	8
MAJ Michael K. Minich, Aloha	8
Ms. C Pippins, Lind	8
Mr. D Platt, Lind	8

ACES

The following members have recently sponsored a total of five new members during this year. Each "ACE" receives an AAAA "ACES" coffee mug in appreciation of the effort and is eligible to win the AAAA's "TOP GUN" Contest.

LTC James R. Boren
COL Clinton B. Boyd
1LT Russell P. Butler
1SG Robert E. Cheever
CW3 Bernard R. Lusk
CW2 Bryan D. Newland
1SG Herb C. Stanley
Ms. Karen G. Thompson
COL Jerry F. Wade
CSM Hartwell B. Wilson

Aviation Soldiers of the Month

SGT Craig A. Watkins,
Aloha Chapter (October)

SPC Jarrod W. Kelderman,
Aloha Chapter (November)

New Industry Members

Intermec Corporation,
Federal Systems Group of
Lynnwood, Washington

New AAAA Officers

The following members were
elected to the Executive Boards
of their respective Chapters:

LTC William K. Bryant
(Secretary), MAJ(P) Jack
Smith (Treasurer), MAJ Dale
Carter, (VP Student Affairs),
Leavenworth Chapter

CPT(P) Robert Birm-
ingham, (Senior Vice Presi-
dent), Jan Garmon, (VP
Membership), CPT(P) Thomas
Kolb, (VP Programming),
CPT(P) Jim Bundy, (VP
Military Aff.), Lindbergh Chap.

MAJ John F. Finan, Jr., (VP
Membership), Mount Rainier
Chapter

CPT(P) Brad Mason, (Presi-
dent), CPT Jim Mayre,
(Treasurer), Tucan Chapter



Fl. Rucker, AL. Left to Right: Lieutenants Christian B. Grinsell, Rosanne F. Ott, Kurt Bruggemeyer, Bo Bonvoullour and Ralph Meyers discuss proper techniques used in conducting communication between companies within a battalion net. These five lieutenants successfully completed their OBC training on September 9, 1988 and began flight school on October 19, 1988.



CHAPTER NEWS



CHESAPEAKE BAY CHAPTER, FORT MEADE, MD — A Chapter Executive Board meeting was held on June 30, 1988. The 3rd Annual Lobster Bake was declared a success. Approximately 180 persons attended, and many compliments were received.

Another Chapter Executive Board meeting was held on August 13, 1988. Old Business discussed included the need to get more enlisted members. A murder mystery theme for the Halloween party was agreed on. Suggestions for prizes were: Free or reduced price for one of the Chapter's ski trips, dinners from local restaurants, or an overnight package at the Sheraton. Suggestions were requested for what could be done for a community service project during the holidays.

CONNECTICUT CHAPTER, STRATFORD, CT Lieutenant General Jimmy D. Ross (r), Deputy Chief of Staff for

Logistics, USA Washington, DC, was the guest speaker at a Connecticut Chapter professional dinner meeting Sept. 27, 1988. General Ross is seen here accepting a model of the VS-300, Igor Sikorsky's first successful helicopter from Bill Stuck (l), CT Chapter President.



TAUNUS CHAPTER, APO NY

— The Executive Board of the Taunus Chapter convened on August 31, 1988. Plans were made for the September 30 General Membership meeting. Raffle prizes included a color television and a VCR. It was also announced that the annual AAAA Ski Week is Scheduled for March 11-18, 1989 and will be hosted by the 12th Avn Bde.

Captured On Corregidor Diary of an American P.O.W. in World War II

Past AAAA National President and current National Executive Board member, **Lieutenant General John M. Wright, Jr., Ret.**, has written a detailed account of his three and a half years as a POW captured by the Japanese on Corregidor, Philippine Islands. The book is built on a diary he smuggled through countless inspections during his imprisonment. The book is available for \$20.95. For further information contact:

McFarland & Company, Inc., Publishers
Box 611, Jefferson, NC 28640 (919) 246-4460

EXPERIENCED



SHORTS SHERPA. From Kwajalein Island where this rugged, STOL aircraft is meeting the short haul transport needs of the US Army — to Europe where the C-23A cargo version has helped USAF 10 MAS win "Outstanding Military Air Command Support Squadron" for the second year in a row — the Shorts Sherpa has proven itself to be an extremely capable and versatile performer.

Fact is, with the high payload capacity, advanced avionics, proven Pratt & Whitney turboprop engines, unrivaled reliability record and lowest purchase and operating costs, the Shorts Sherpa is eminently qualified for military service — anywhere in the world.

Understandably, these advantages are also important to civilian commuter airline operators worldwide, who've made Shorts aircraft a popular choice in the 20 and over seat category.

Whatever the medium-lift, short haul mission, put Shorts experience to work for you. Contact Short Brothers (USA), Inc., 2011 Crystal Drive, Suite 713, Arlington, VA 22202-3719. Or call us at (703) 769-8700.

SHORTS

Last call for CY88 AAAA National Awards: Jan. 15, 1989 suspense date set

"Award Presentations"

Up to eight AAAA National Awards for accomplishments made during Calendar Year 1988 will be presented at the 1989 AAAA National Convention in Atlanta, GA. The individual AAAA National Awards will be made on Friday; the unit AAAA National Awards will be made on Saturday. Senior members of the U.S. Army will be invited to present the AAAA's top awards on both occasions.



"Outstanding Aviation Unit Award"

Sponsored by the McDonnell Douglas Helicopter Company, this award is presented annually by AAAA "to the Active Army aviation unit that has made an outstanding contribution to or innovation in the employment of Army Aviation over and above the normal mission assigned to the unit during the awards period encompassing the previous calendar year." Any Active Army Aviation unit that has met the foregoing criteria is eligible for consideration.

"ARNG Aviation Unit of the Year Award"

Sponsored by Textron Lycoming, this award is presented annually by the AAAA "to the Army National Guard aviation unit that has made an outstanding contribution to or innovation in the employment of Army Aviation over and above the normal mission assigned to the unit during the awards period encompassing the previous calendar year." Any Army National Guard aviation unit or organization that has met the foregoing criteria is eligible for consideration.

"USAR Aviation Unit of the Year Award"

Sponsored by Textron Lycoming, this award is presented annually by the AAAA "to the U.S. Army Reserve aviation unit that has made an outstanding contribution to or innovation in the employment of Army Aviation over and above the normal mission assigned to the unit during the awards period encompassing the previous calendar year." Any U.S. Army Reserve aviation unit or organization that has met the foregoing criteria is eligible for this award.

"The Robert M. Leich Award"

Sponsored by the Grumman Corporation, this award is named in memory of Brigadier General Robert M. Leich, USAR, the AAAA's first president (1957-1959) and its Awards Committee Chairman for 23 years. It is presented periodically to a unit or an individual for sustained contributions to Army Aviation, or for a unique, one-time outstanding performance.

"Army Aviator of the Year Award"

Sponsored by the Sikorsky Aircraft Division of United Technologies Corporation, this award is presented annually through the AAAA "to the Army Aviator who has made an outstanding individual contribution to Army Aviation during the Awards period encompassing the previous calendar year." Membership in AAAA is not a requirement for consideration. A candidate for this award must be a rated Army Aviator in the Active U.S. Army or Reserve Components, and must have made an outstanding individual achievement.

"Aviation Soldier of the Year Award"

Sponsored by Bell Helicopter Textron, this award is presented annually by AAAA "to the enlisted man serving in an Army Aviation assignment who has made an outstanding individual contribution to Army Aviation during the awards period encompassing the previous calendar year." Membership in AAAA is not a requirement. A candidate for this award must be serving in an Army Aviation assignment in the Active U.S. Army or the Reserve Components, and must have made an outstanding individual achievement.

"James H. McClellan Aviation Safety Award"

Sponsored by General Electric Aircraft Engines in memory of James H. McClellan, a former Army Aviator who was killed in a civil aviation accident in 1958, this award is presented annually to an individual who has made an outstanding individual contribution to Army Aviation safety in the previous calendar year. The award is NOT intended to be given for the accumulation of operational hours without accidents by any aviation unit.



"Outstanding DAC of the Year Award"

Sponsored by the Boeing Helicopter Company, this award is presented annually by AAAA "to the DAC who has made an outstanding individual contribution to Army Aviation in the awards period encompassing the previous CY." Membership in AAAA is not a requirement. A candidate for this award must be a current Department of the Army Civilian.

Administrative Details

ACCOMPANYING DATA FOR INDIVIDUAL AWARDS: A standardized "Nomination Form for Submission of All AAAA National Awards" is the sole form utilized by the Awards Committee in its selection of annual AAAA National Awards Winners. Copies may be obtained directly from any Chapter Secretary or by writing to AAAA, 49 Richmondville Avenue, Westport, CT 06880-2000. The form should be accompanied by a recent photo and biographical sketch of the nominee. Photos of the commander and the senior NCO must accompany each unit nomination. The "Nomination Form for Submission of All AAAA National Awards" and the accompanying photo(s) should be mailed ON OR BEFORE the January 15 suspense date. Please use stiffeners to protect the photo(s) being submitted. While "nomination" material cannot be returned, photos may be returned on request. The receipt of each nomination will be acknowledged by the Awards Committee Chairman.



Top Chapters

The September 30 Membership Enrollment Competition standings have the following chapters ahead with three months left in the CY88 contest ending December 31. The rankings are based on CY88 net membership gain.

Master Chapters (271 or more members)

Rank	Net gain
1	Lindbergh 337
2	Redcatcher 38
3	North Texas 24
4	Monmouth 21
5	Southern California 11
6	Colonial Virginia 7
7	Washington DC 6

(The other Master Chapters show a current net loss during Jan-Sept period.)

Senior Chapters (131-270 members)

Rank	Net gain
1	Aloha 32
2	Chesapeake Bay 19
3	Suncoast 11
4	Arizona 2

(The other Senior Chapters show a current net loss during Jan-Sept period.)

AAAA Chapters (42-130 members)

Rank	Net gain
1	Leavenworth 32
2	Cedar Rapids 18
3	Tennessee Valley 5
4	Bonn Area 4

(The other AAAA Chapters show a current net loss during Jan-Sept period)



AAAA CALENDAR



A listing of recent past AAAA Chapter Events and upcoming National dates

October, 1988

■ ■ Oct. 4 Washington DC Chapter. Prof. Social Mtg. Speaker: Congressman Denny Smith.

■ ■ Oct. 13. Tennessee Valley Chapter. Prof. Dinner Mtg. Speaker: MG August Cianciolo.

■ ■ Oct. 15. Washington DC Chapter. Tour of Restoration and Storage Facility. National Air & Space Museum's Paul E. Garber Restoration Facility

■ ■ Oct. 20. Edwin A. Link Memorial Chapter. Prof. Dinner Mtg. Speaker: MG Ellis D. Parker.

■ ■ Oct. 21. Aloha Chapter. Prof. Social Mtg. Wheeler AFB Park. Speaker: Chapter Pres, COL Theodore A. Duck.

■ ■ Oct. 26. Army Aviation Chapter. General Membership Mtg. Ft Rucker Officers Club.

■ ■ Oct. 29. Chesapeake Chapter. Fourth Annual Halloween Costume Party. Rathskeller Lounge, Aberdeen Officer's Club.

■ ■ Oct. 29. Lindbergh Chapter. President's Dinner Dance. Bevo Mill - Gravois & Morganford

November, 1988

■ ■ Nov. 1. Cedar Rapids Chapter. Prof. Dinner Mtg. Zach's. Guest Speaker: USMC COL Edward E. Seifert.

■ ■ Nov. 3. Mainz Chapter. Prof. Social Mtg. Village Club Inn. Speaker: CPT William Wallin.

■ ■ Nov. 4. Black Knights Chapter. West Point Officer's Club "Mule Bar". Guest Speaker: MAJ Gary Bishop.

■ ■ Nov. 10. Lindbergh Chapter. 4th Annual Mash Bash. The Bunker.

■ ■ Nov. 10. S. California Chapter. Golf Tournament/Dinner.

Los Alamitos Naval Station.

■ ■ Nov. 19. Leavenworth Chapter. Aviation Ball. Officer's Club, Main Ball Room. Guest Speaker: MG Wayne C. Knudson.

■ ■ Nov. 19. Phantom Corps Chapter. Fifth Annual Pegasus Run and Chili Cook-off. Yellow Ribbon Park. General Membership Meeting prior to Chili cook-off.

December, 1988

■ ■ Dec. 8. 1988 Aviation Trainer of the Year Award Presentation, Ft Rucker, AL.

■ ■ Dec. 8. 1988 ROTC Award Presentation, Ft Rucker, AL.

■ ■ Dec. 9. AAAA National Exec Brd Meeting, Ft Rucker, AL.

February, 1989

■ ■ Feb. 3-4. AAAA National Awards Committee Mtgs to select CY88 National Award Winners and CY89 National Scholarship Award Winners.

■ ■ Feb. 14-16. 15th Annual Joseph P. Cribbins Product Support Symposium sponsored by the Lindbergh Chapter. Stouffer Concourse Hotel, St. Louis, MO.

■ ■ Feb. 15. Outstanding Avn Logistics Support Unit of the Year Award Presentation, Stouffer Concourse Hotel, St. Louis, MO.

■ ■ Feb. 15. Industry Award Presentations, Stouffer Concourse Hotel, St. Louis, MO.

March, 1989

■ ■ Mar. 11-18. AAAA Ski Week in Garmisch hosted by the 12th Avn Bde.

April, 1989

■ ■ Apr. 5-9. AAAA National Convention, Georgia World Congress Center, Atlanta.



AAAA Overview



Mr. Joseph P. Cribbins, Special Assistant to the Deputy Chief of Staff for Logistics, U.S. Army, is presented with a "Blue Box" replica by Fred Belyea, President of the AAAA's Edwin A. Link Memorial Chapter. Mr. Cribbins was guest speaker at the Chapter's September Meeting in Binghamton, New York.

The delivery of the 1000th UH-60 BLACK HAWK was marked with a roll out ceremony at the Stratford, CT plant on October 11, 1988. Left to right: MAJ Frank Glasgow, Aviation Officer, 102d ARCOM, St. Louis, MO and LTC Robert Lorenz, Commander, 7/158 Aviation Regiment, Scott AFB, IL, accept the Logbook from William A. Minter, Vice President BLACK HAWK Program, Sikorsky Aircraft Division, UTC.



Pictured at left from right to left are COL John J. Stanko, Ret., Chief, Army Aviation Division, National Guard Bureau and Mrs. Stanko, who recently visited the National Headquarters and were hosted by AAAA staff members Lynn and Terry Coakley.

Pictured from left to right are CW4 William Radford, LTC Michael J. Vanairsdale and CW4 Larry Osburn receiving their Senior Aviator Wings from COL William D. Loftin, Aviation Brigade Commander, 101st Airborne Division, on August 1, 1988. These three officers attended flight school together and are presently assigned to the 7th Bn, 101st Aviation Regiment. LTC Vanairsdale is currently the Battalion Commander, has been a member of AAAA since 1983 and is Air Assault Chapter VP Sustaining Membership.





1989 AAAA Joseph P. Cribbins Annual Product Support Symposium Advance Registration Form



STOFFER CONCOURSE HOTEL — ST. LOUIS, MO — FEBRUARY 14-16, 1989

SPONSORED BY THE LINDBERGH CHAPTER OF THE ARMY AVIATION ASSOCIATION

I plan to attend the 1989 AAAA PRODUCT SUPPORT SYMPOSIUM functions indicated below. The Advance Registration Deadline is **MONDAY, FEBRUARY 6, 1989**. Please **PRINT or TYPE** all information. **NOTE:** Military fees apply only to Active Army and DAC personnel and to those Reserve Component and retired AAAA members who are **NOT** in current employ of defense contractors or suppliers on a full-time, part-time, or consulting basis. Please make checks payable to AAAA PRODUCT SUPPORT SYMPOSIUM.

FULL NAME _____

RANK/TITLE _____

UNIT/FIRM NAME _____

UNIT/FIRM MAILING ADDRESS _____

CITY _____ STATE _____ ZIP _____

OFFICE TEL. () _____ NICKNAME FOR BADGE _____

REGISTRATION FORM

SPECIFIC FUNCTION HELD AT THE AAAA PRODUCT SUPPORT SYMPOSIUM	MIL/DAC MEMBER	INDUSTRY MEMBER	ITEM TOTAL	OFFICE USE
REGISTRATION FOR PROFESSIONAL SESSIONS _____	<input type="checkbox"/> \$10	<input type="checkbox"/> \$150	\$ _____	_____
① MEMBERSHIP FEE FOR NON-AAAA MEMBERS _____	<input type="checkbox"/> \$15	<input type="checkbox"/> \$15	\$ _____	_____
② FUNCTION TICKETS: LUNCHEON (Wednesday, February 17) _____	<input type="checkbox"/> \$10	<input checked="" type="checkbox"/> ②	\$ _____	_____
DINNER (Wednesday, February 17) _____	<input type="checkbox"/> \$20	<input checked="" type="checkbox"/> ②	\$ _____	_____
COPY OF PROCEEDINGS _____	<input type="checkbox"/> \$10	<input checked="" type="checkbox"/> ②	\$ _____	_____
③ CIRCLE METHOD OF PAYMENT: Cash Personal Check Business Check Total:			\$ _____	_____

① The Registrant must be a member of the Army Aviation Association to attend the PRODUCT SUPPORT SYMPOSIUM. The \$15 membership fee will be applied to a one year's membership in the AAAA. ② The **Industry Registration Fee** includes one ticket to the Luncheon and the Dinner and a copy of the proceedings. If you are registering as an industry member, do NOT purchase tickets to the Luncheon or the Dinner. If your spouse plans to attend the Luncheon or the Dinner or if you want an extra copy of the proceedings, use the **Military/DAC** section to purchase individual tickets. The **Military Registration Fee** does **NOT** include tickets to the Luncheon or the Dinner or a copy of the proceedings. Military Registrants must purchase tickets to the Luncheon or the Dinner if they wish to attend. Military Registrants must also purchase a copy of the proceedings if they should desire a copy. ③ Please make your check payable to the **AAAA PRODUCT SUPPORT SYMPOSIUM**.

HOTEL RESERVATIONS

It will be necessary for you to make your own hotel reservations at the **STOFFER CONCOURSE HOTEL**, 9801 Natural Bridge Road, St. Louis, Missouri 63134. Telephone: (314) 429-1100 or 1-800-468-3571. Please identify that you are attending the AAAA Product Support Symposium to receive reduced rates.

Please complete and return this form by **Monday, February 6, 1989** to: **Ann Canterbery, 4534 North Lindbergh Blvd., Suite 303, St. Louis, Missouri 63044**. For further information, please call Ann Canterbery at (314) 731-5813.



1989 AAAA Joseph P. Cribbins Annual Product Support Symposium Schedule of Events



STOUFFER CONCOURSE HOTEL — ST. LOUIS, MO — FEBRUARY 14-16, 1989

SPONSORED BY THE LINDBERGH CHAPTER OF THE ARMY AVIATION ASSOCIATION

TUESDAY, FEBRUARY 14, 1989

1600-2000 Registration and Ticket Sales
1800-2000 Early Birds Reception

1400-1430 AVSCOM Method of Doing Business
1430-1600 Panel Presentation by Wednesday Speakers

WEDNESDAY, FEBRUARY 15, 1989

Morning Session

0730-1600 Registration
0830-0915 Keynote Address By Senior Industry Official
0915-0945 Keynote Address by Senior Army Official
0945-1100 Army Aviation Modernization Program Annexes
1100-1300 Awards Luncheon

Evening Session

1800-1930 Reception
1930-2030 Dinner
2030-2100 Industry Awards
2100-2130 Speaker (Industry Speaker)

Afternoon Session

1300-1330 Army Aviation Modernization Program Annexes (continued)
1330-1400 Industry View of Doing Business with AVSCOM

THURSDAY, FEBRUARY 16, 1989

0800-0830 Program Executive Officer for Aviation
0830-1030 AVSCOM Fielded Systems PM Flight Safety Parts, Industry and AVSCOM Viewpoints
Aviation Mishap Investigation Lessons Learned in Quality Assurance
1030-1045 LHX Update
1045-1145 Panel Presentation by Thursday's Speakers
1145-1200 Closing Remarks

CASL Workshop Precedes AAAA Symposium

The 1989 AVSCOM Competition Advocate's Shopping List (CASL) Workshop will precede the AAAA Product Support Symposium at the Stouffer's Concourse Hotel in St. Louis. Come participate in an opportunity to debate competition issues in Army Aviation and obtain AVSCOM's projected spare parts and overhaul buys for the next three years. There will also be an opportunity to view approximately 300 aviation parts and gather information for source qualification.

The Workshop will commence at 7:00 am, February 14, 1989 and conclude at 4:00 pm. AAAA Product Support Symposium attendees are encouraged to attend. For more information, please call Annamaria Przygoda at (314) 263-1712 or Judy McCullough at (314) 263-1046.

APACHE WEATHER



In sleet or snow or rain, no other aircraft can see and fight so well. Even when the weather closes in, the AH-64 Apache can hunt out hostile armor. Its eyes: The Target Acquisition and Designation Sight and the Pilot Night Vision Sensor.

With these eyes, the Apache crew can search out and engage targets in bad weather as well as in good. An on-board video recording system enables the crew to pop up from cover, record target image and location, then return to hiding to verify target identification and plan the attack.

The Apache is the first attack helicopter capable of taking on targets *behind* enemy lines. With low radar, infrared, visual and acoustic signatures, the Apache is well qualified to handle deep

attack missions. It can prowl as far as 100 miles into enemy territory to disrupt, delay and destroy advancing threat forces.

Now in service at U.S. bases and with NATO Forces in Europe, the Apache is exceeding Army expectations and requirements. It's brightening the day for U.S. Army commanders while darkening the prospects of those who like us least.

APACHE

Apache owns the night.

MCDONNELL DOUGLAS

For more information, write: McDonnell Douglas
Helicopter Company, 5000 E. McDowell Rd., Mesa, AZ 85205.