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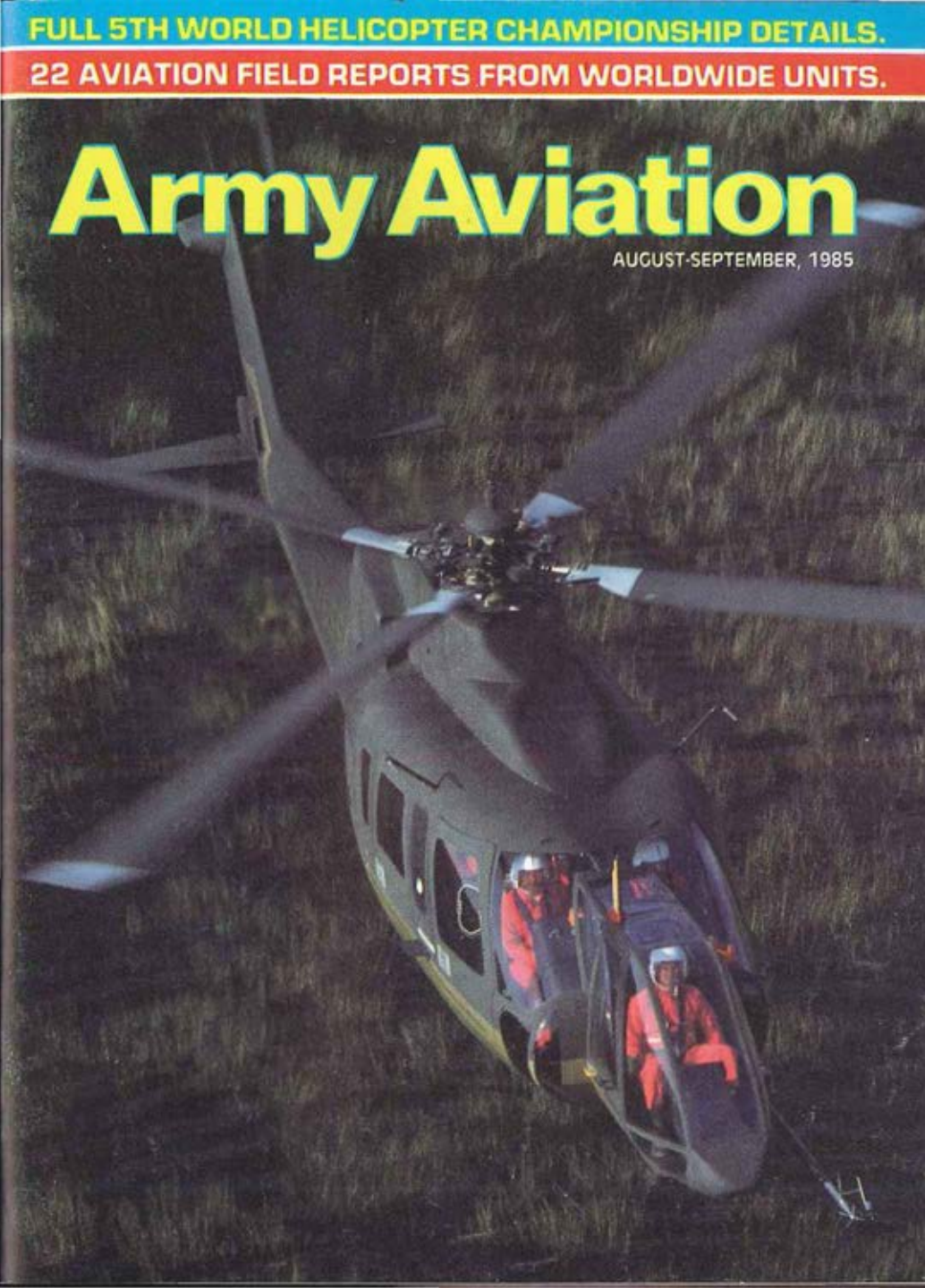
22 AVIATION FIELD REPORTS FROM WORLDWIDE UNITS.

Army Aviation

AUGUST-SEPTEMBER, 1985



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October 31, 1985—The "**1985 Army Aviation Blue Book**", detailing the major agencies, offices, and units within US Army Aviation.

November 30, 1985—A Special Issue devoted to **UH-60A BLACK HAWK,** and its worldwide use and acceptance.

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FRONT COVER
Sikorsky's flying test bed, designed to test new LHX cockpit technologies for the Army.

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Army Aviation

VOLUME 34 **NUMBERS 8 AND 9**

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OVERPRINT: The name of Hughes Helicopters, Inc., has been changed to the McDonnell Douglas Helicopter Company. The article is in error.

Hughes Helicopters renamed McDonnell Helicopter Co.

ST. LOUIS, MO., August 27, — Hughes Helicopters, Inc. is now the McDonnell Helicopter Company. The announcement was made today by McDonnell Douglas Chairman, **Sanford N. McDonnell;** HHI Chairman **Robert C. Little**; and HHI President **Jack G. Real.**

"The company's performance has been outstanding during its 19 months as a subsidiary of McDonnell Douglas," **McDonnell** said. "The name change acknowledges our pride in the fact that the people responsible for this success are valued members of the McDonnell family," he added. "It also emphasizes that McDonnell intends to be the world's leading producer of helicopters and ordnance systems."

Hughes Helicopters became a subsidiary of McDonnell on Jan. 6, 1984, its 50th anniversary year. The company was launched Feb. 14, 1934 by **Howard R. Hughes, Jr.**

"We will always have a special place in our hearts for the name 'Hughes'. However, our future clearly is with McDonnell," said **Real.**

The McDonnell Helicopter Company employs more than 7,000 people in California and Arizona. The company's worldwide sales were approximately $800 million in 1984. In a major expansion program, already underway, the company's headquarters will be moved from Culver City, Calif. to Mesa, Ariz., by late 1986. A manufacturing and ordnance center will remain in California.

The company's leading products are the AH-64A APACHE attack helicopter for the U.S. Army; Model 500 light commercal and military helicopters; and ordnance systems.

August Advertisers

From the Editor's desk:

This issue marks a major change in our editorial format and begins what we hope will be a more lively approach to covering developments in the dynamic field of U.S. Army Aviation.

Over the next few months, we'll be inviting about 120 offices, agencies, and units to submit brief 400 to 500 word "field reports" to update our 17,000+ readers on "what's new" in their area of expertise. This August-September issue contains interesting and informative reports from the first 22 authors to respond favorably to our appeal.

As the endorsed journal of the AAAA, **Army Aviation Magazine** is dedicated to serving the professional interests of those engaged in U.S. Army Aviation.

This is **your** professional journal. We rely on the aviation professionals in the U.S. Army and the industry team which supports them for the news and views we print. We have no staff of reporters who can go out and "get the facts".

The story of what's happening in this field can only be told in these pages by the people who are out there making it happen. We're all fortunate to be involved in a profession with people who care about what they're doing and are eager to share information and ideas with their professional peers.

From now on, we'll be asking many more of you to share your stories, two or three times a year. We hope this new approach will better meet the professional needs and desires of all our readers.

We're here to serve you, and I would warmly welcome your suggestions, criticism, and comments regarding your magazine.

Dale Kesten

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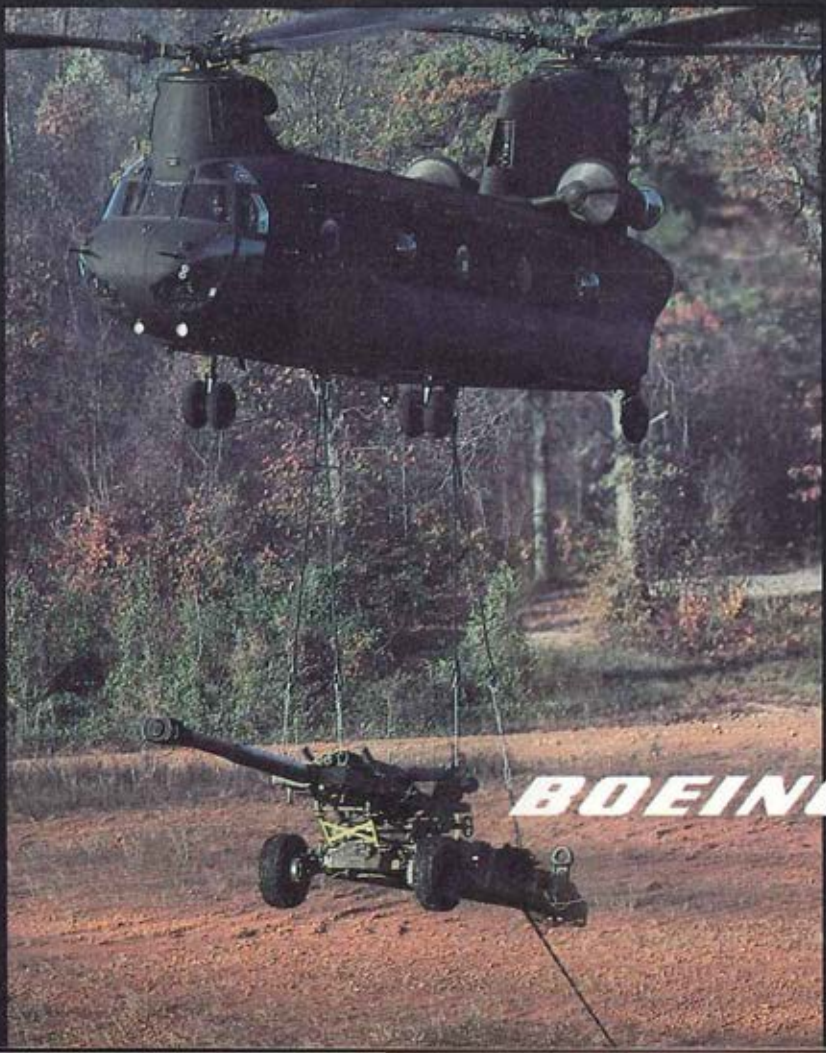

Building a Strong Foundation for the Future

By Major General Ellis D. Parker

Commanding General, U.S. Army Aviation Center and Fort Rucker, Alabama

THIS edition of the **Army Aviation** has incorporated major editorial changes which enhance the opportunity for reader participation. This new format, utilizing short field reports from a myriad of aviation related areas, will provide a forum to disseminate information of interest throughout the aviation community.

Warrant Officer study

A special area of interest to all members of the Aviation Branch has been the **Total Warrant Officer Study (TWOS).** On June 24, 1985, the TWOS group provided **General John A. Wickham, Jr.,** the **Chief of Staff Army (CSA),** with the findings of its study. At that time, **General Wickham** approved several proposals which will have a major impact on the management of all **warrant officers (WO),** especially **aviation warrant officers (AWO).**

The approved proposals were all important, but probably the most significant was the development of a new warrant officer definition:

> "An officer appointed by warrant by the Secretary of the Army, based on a sound level of technical and tactical competence. The Warrant Officer is the highly specialized expert and trainer who, by gaining progressive levels of expertise and leadership, operates, maintains, administers, and manages the Army's equipment, support activities, or technical systems for an entire career."

This definition identifies the fact that a warrant officer's expertise continues to expand throughout his career, and for that reason he will be ex-

pected to perform jobs of increased responsibility.

The ability to assign Warrant Officers to positions of increased responsibility will be accomplished by the use of the new position grading system. The system, which was approved by **General Wickham,** is similar to one designed by the Aviation Branch in 1983. For this reason, we will be able to implement this system with a minimum of delay. Positions will be coded to identify requirements within an aviation TDA or TOE for three separate skill levels: Warrant Officer positions possessing the basic skills and entry level of expertise (W1/W2) will be coded WO; Senior Warrant Officer positions (W3/W4) with the advanced skills, learned by years of experience and training, will be designated SWO; the highly specialized skill positions requiring the Master Warrant Officer, W5, will be designated as MWO.

Creation of the SWO and MWO categories has been approved in concept by CSA and a legislative package is under development by the TWOS. The combination of the new definition and the grading of positions will allow us to provide our aviation warrant officers with a full and productive 30-year career.

In an effort to ensure that the proposals approved by the CSA are implemented in a timely manner and that the benefits for our AWOs are maximized, I have directed the formation of the **Aviation Warrant Officer Advisory Board (AWOAB),** to be composed of warrant and commissioned officers from the Aviation Branch. The AWOAB will formulate and review the implementation of each proposal, tailoring the program to maximize the benefits for the AWO as well as the Aviation Branch.

Aviation personnel who would like to present their ideas to the AWOAB may forward them to the Aviation Proponency Office at the following address: Commander, U.S. Army Aviation Center, ATTN: ATZQ-P, Fort Rucker, Alabama, 36362-5000. The point of contact is **CW4 David Day**, Autovon: 558-3423/5706.

Space initiatives

As the TWOS moves toward the implementation phase, a new study group has been formed to study the Army's role in space. The **Army Space Initiatives Study (ASIS)** convened on July 8, 1985 at Ft. Leavenworth, Kan., with **BG William J. Fiorentino** directing the 30-member group. The goal of this study group is to develop the Army's Master Space Plan. The Army's requirements and space capabilities of today and the future will be closely scrutinized.

It is anticipated that the recommendations forthcoming from this study will have a significant impact on doctrine, organization and force structure, training, education and material. The impact on the Aviation Branch has already been evidenced by the designation of 55 aviators with the additional skill identifier 3Y (Space Activities). The findings and recommendations of this study are scheduled to be presented to VCSA **General Maxwell R. Thurman**, on December 13, 1985.

Functional area review

As the Space Initiatives Study strives to define our far term extraterrestrial role, we are concurrently seeking ways to improve the ability to manage personnel in support of present operational requirements. An example of this will be evidenced by the results of our functional area review.

We have reached a critical plateau in the maturation process of our Aviation Branch, with the upcoming Aviation Functional Area Review to be presented to the DCSPER on 24 September. The primary purpose of this functional area review is to identify those personnel issues within the branch which present themselves as problems that must be faced daily. Not only will we identify these issues, we will also propose short-term and long-term solutions to rectify inequities and inconsistencies within our personnel system. Many of these issues have far-reaching implications throughout the Army.

A great deal of effort by a great many people will be expended in support of the Aviation Functional Area Review. In the long term, it will serve to make our branch healthier and more operationally cohesive. It is just one more step towards solidifying of our position as a member of the Combined Arms Team.

The future of Army Aviation lies in the work of the individuals who participate in groups such as the TWOS and the ASIS. The impact of their recommendations will provide the foundation upon which we will organize and equip Army Aviation to fight on the battlefields of the 21st century. IIIII

It's on again! U.S. Helicopter Team to compete in 1986!

THE Fifth World Helicopter Championship (WHC) has been rescheduled and will be held at Castle Ashby, England, during June 22-28, 1986.

Originally planned for early 1985, the WHC was cancelled due to the failure of the various national flying clubs to meet the minimum five-club competition requirement established by the FAI. The **1986 Championship** will involve teams from the U.S., U.S.S.R., the Federal Republic of Germany, France, and the United Kingdom. There is a possibility of additional 1986 team participation by Malaysia, Brunei, and Singapore.

An extensive facility

Located some 40 miles northwest of London, Castle Ashby (shown below) dates back to 1306. Its more than 200 acres of English parklands and 7,000 square foot courtyard, as well as an airport located eight kilometres to the west, will be utilized during the **1986 Championship.**

Other than FAI officials and the national judging teams — who are expected to have accomodations in Castle Ashby's limited facilities, the teams and most attendees will be quartered in Ashby, a small hamlet adjoining the castle, or in the city of Northampton, some 15-18 miles to the northwest. Overall hosting and competition management will be handled by the **Helicopter Club of Great Britain** representing the **Royal Flying Club.**

The U.S. Helicopter Team will represent the **Helicopter Club of America (HCA)** at the 1986 WHC and will be coached by **LTC Robert E. Harry** of USAAVNC. A veteran of the 1981 competitions, **CW0 Nick Walters,** will assist **LTC Harry.** HCA President **John Zugschwert** is providing overall Club management and has appointed **COL Alexander J. Rankin, Ret.,** as Deputy Program Manager.

Some of the Americans who have met FAI qualifications as international judges and who may be a part of the U.S. judging team include **Charlotte Kelley, Sergei Sikorsky, Wes Moore, Al Hazard, Joe Mashman, Alec Rankin, Jean Ross Howard,** and **Jean Tinsley.** **(Cont. on Page 12).**

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A Need For Medals

A few years ago, on a magazine assignment, I interviewed the commandant of the Marine Corps, who at the time was **General Robert H. Barrow.** The general is a tall, handsome man, intelligent and eloquent with an almost courtly manner. But these were not the first things I noticed about him.

Instantly, my eyes were drawn to the rainbow array of ribbons above the general's left jacket pocket. Having served in the Marine Corps myself, I knew about the medals the ribbons represented, and thus, at a glance, I knew quite a lot about General Barrow: that he had been in combat in far-flung places, had been wounded, and had at least once displayed great valor in battle.

The rectangular patch of color and its silent proclamation of experience, accomplishment and fortitude impressed me. In my expensive Paul Stuart suit and bright silk tie—sartorial clues, in my world, to a certain degree of success and status—I felt anonymous and undistinguished. Not that I'd had a career comparable in any way to General Barrow's, but I had managed a few things I was proud of, and had nothing palpable to show for it other than the badges of age and wear we all earn for our time spent in life's trenches. It didn't seem fair.

Let me admit here that I know I should be above such petty feelings; that I ought to be smart enough to realize medals are atavistic, mere archaic mementos impressive to those who need material evidence to believe in a man's worth. Without the weight of tradition and the reflex of retrograde machismo, a chest full of medals is nothing more than a resume in 3-D and Technicolor. I should know all this, and I do, but that doesn't alter the fact that the force of the medals' symbolism was hard to resist.

Those who have served in the armed forces, at whatever level, tend to be aware that the modern military has more in common with General Motors than with General Patton, and I for one harbor no romantic notions about the brotherhood of boot camp or the virtues of the garrison life. But whenever I see high-ranking officers appearing before Congressional committees, their impressive rows of ribbons helping to elicit the respect and consent of Congressmen not necessarily immune to the medals' effect, I wish—just fleetingly—that civilians, who, after all, endure their share of mental and physical ordeals, might have some equivalent way to make their victories instantly visible to others.

There are civilian medals, of course. Most are connected with sports, though some, like the Carnegie Medal, are awarded for specific instances of heroism. And various fields have recognitions of achievement, from Nobels and Pulitizers to Oscars and Emmies. But they are not quite what I have in mind (though I hope the Pulitzer committee won't hold it against me). Well done, bravo and all that for the company softball trophies, marathon medallions, and gold watches for years of faithful service, but what's really needed is some way to designate the kinds of stalwart service and quotidian heroics that most of us are called upon to perform. It may not be the stuff of epics to put a kid or two through college, or to stand up for friends in trouble, or not to say "Right, chief" when the boss is wrong. It does take a kind of valor, though, and there ought to be more to show for it than lines in the face and graying (or thinning) hair.

Instead of medals, we're supposed to end up with money, fame and the adoration of women. The catch is that not all of us can get rich and famous; and often those who do find that wealth and celebrity, however nice, may have nothing

BY OWEN EDWARDS

to do with the kind of pluck it takes to quit a good job on a matter of principle or sit up all night to keep a friend from falling off the wagon.

I don't know, of course, who would be the accepted authority to hand out medals and ribbons to civilians. No doubt there'd be all kinds of chicanery and maybe a lot of deserving recipients would be overlooked, or opt not to wear

what they'd justly won. But surely we could think of a way to recognize the staunchness needed in the long battle to lead a decent life.

I didn't come out of the Marine Corps with any medals, other than some shooting badges that were decorative but not at all ennobling. There has been no great abundance of fine deeds since, so I'm not sure if I would have been put in for many decorations of the civilian sort I'm imagining. But I did, once, quit a good job on a matter of principle. And there was one moment, in another time and another country, when only I stood between a friend and danger, and, thoroughly frightened, I put myself in jeopardy to save him. Despite all the honors I don't have to show for my life, I wouldn't mind having a medal for that pinned to my chest.

Once I worked as the managing editor of a major women's magazine. My boss was a talented, demanding editor who frequently drove me to distraction. I was never able to do the job the way she wanted. For 10 months or so I put in long hours, convinced that if I worked hard enough I'd succeed. One afternoon before Christmas, the editor came into my office and put a small box on my desk. In it lay a medal, a preposterous white metal disk given originally to some no-doubt-deserving soul by the supreme council of an obscure organization. With the box was a note that said something like, "For all you've done, you deserve a medal!"

It seemed an odd gift at the time, when other editors were getting expensive boxes of chocolate and tickets to hit plays. In fact, it turned out to be the Legion of the Lost Cause, because before long I had lost my job. But I still have the medal, pinned up on a cork board over my desk right next to my Marine shooting medals. She was right; I did deserve a medal. And, silly as it may seem, I'm proud to have it. IIIII

A LOOK BACK!
CW2 George D. Chrest, left, and CPT Stephen G. Kee of the United States hold the World Helicopter Championship Trophy awarded for winning the First Place individual World Championship at the 1981 Flyoffs in Piotrkow Trybunalski, Poland. In the final Team standings in '81, the US topped the FRG by just two points — 2,253 to 2,251 — with Poland in third place (2,233 pts.)

IT'S ON AGAIN!

(Continued from Page 8)

The organization of the **1986 U.S. Helicopter Team** is similar to that of the 1981 team. A coach **(LTC Harry)** will head a 39-member unit. The **Flight Teams** will consist of eight two-member crews backed up by a **Maintenance Crew** consisting of a CWO and eight crewchiefs. Also included are **Administration** (1LT + Clerk + PAO), **Training** (Three CWO's with Poland-1981 Experience + Two Judges), **Operations** (CPT + SFC + Safety Officer), **Logistics** (CPT), and **Flight Surgeon** (MAJ).

1985-1986 Timetable

The timetable for the selection of the Team's coaching staff and the actual team members, and the dates of the pre-Championship and on site training, are as follows:

August 20.....Helicopter Club of America coordination meeting.
November 18.....Commander, Operations Officer, Logistics Officer, and Training Officer selected.
November 25.....Skeletal staff to write and organize the LOI and to initiate TASO requests.
December 6.....LOI distributed worldwide; skeletal staff returns to the directorate.
December 17.....Full staff identified and tasked.
December 30.....Cadre forms.
December 30-February 3, 1986.....Prepare for Ft. Rucker Flyoffs and U.S. Team Trials.
February 3-7.....Ft. Rucker Flyoffs.
February 10-14.....U.S. Team Trials.
February 24.....U.S. Team formed.
March 3-28.....Phase I training initiated (20 training days, 58 per crew).
March 31-April 23.....Phase II training initiated (17 training days, 49 per crew).
April 10.....Team Introduction and Sendoff. AAAA eneral Membership Luncheon, Atlanta, Ga.
April 24-25.....Team Flyoff in the form of an Air Show (Six hours flying time per crew).
April 28-May 2.....Team leave (R&R).
May 5-30.....Phase III training initiated.
June 2-3.....Team Flyoff in form of an Air Show (Six hours flying time per crew).
June 5-7.....Prepare for transit.
June 8.....U.S. Team departs for England.
June 9.....Team arrival in England.
June 10-21.....Phase IV training initiated (Practice in England). (Eight hours flying time per crew).
June 22-28.....World Helicopter Competition in England.
June 30.....Depart England—arrive U.S.
July 1-3.....Team outbriefs.
July 7-11.....Cadre stand down.

ACAP—Advanced Composite Airframe Program
ACR—Armored Cavalry Regiment
ADOCS—Advanced Digital/Optical Flight Control System
AHB—Attack Helicopter Battalion
AHIP—Army Helicopter Improvement Program
AIMI—Aviation Intensive Management Items
ALPA—Airline Pilots Association
AMC—US Army Materiel Command
AOE—Army of Excellence
AOPA—Aircraft Owners and Pilots Association
ARNG—Army National Guard
ARSTAF—Army Staff
ARTA—US Army Research and Technology Activity
ASARC—Army System Acquisition Review Council
LRIP—Low Rate Initial Production
LRU—Line Replaceable Unit
LSR—Logistic Status Review
MFP—Materiel Fielding Plan
MILES-AGES—Multiple Integrated Laser Engagement System/Air Ground Engagement System
MLS—Microwave Landing System
MOS—Military Occupational Specialty
MRSA—Materiel Readiness Support Activity
MTDE—Modern Technology Demonstrtor Engine
MWO—Master Warrant Officer
NAS—Naval Air Station
NAS—National Airspace System
NBAA—National Business Aircraft Association
NGB—National Guard Bureau

Alphabet Soup!

A bouillabaisse of the acronyms found in this issue!

ASE—Aircraft Survivability Equipment
ASET—Aircraft Survivability Equipment Trainer
ASIS—Army Space Initiatives Study
ASO—US Army Aeronautical Services Office
ATA—Air Transport Association of America
ATC—Air Traffic Control
ATPAC—Air Traffic Procedures Advisory Committee
AVIM—Aviation Intermediate Maintenance
AVSCOM—US Army Aviation Systems Command
AVUM—Aviation Unit Maintenance
AWO—Aviation Warrant Officer
AWOAB—Aviation Warrant Officer Advisory Board
BES—Budgeted End Strength
CAA—Concepts Analysis Agency
CAB—Combat Aviation Brigade
CAS—Combat Aviation Squadron
CAT—Crisis Action Team
CCA—Circuit Card Assembly
CCAD—Corpus Christi Army Depot
COMINT—Communications Intelligence
CNA—Communication, Navigation and Identification
CPX—Command Post Exercise
CSA—Chief of Staff Army
C^2—Command and Control
C^2E—Continuous, Comprehensive Evaluation
DAP—Designated Acquisition Programs
DARR—Department of the Army Regional Representative
DOD—Department of Defense
EAATS—Eastern Army National Guard Aviation Training Site
ECP—Engineering Change Proposal
FAA—Federal Aviation Administration
FDTE—Force Development Test and Evaluation
FORSCOM—US Army Forces Command
FS—Flight Simulator
FTX—Field Training Exercise
GPS—Global Positioning System
HBDR—Helicopter Battle Damage Repair
HQDA—Headquarters, Department of the Army
ICNIA—Integrated Communication Navigation Identification Avionics
IGRV—Improved GUARDRAIL V
IKPT—Initial Key Personnel Training
ILS—Integrated Logistic Support
LOA—Letter of Agreement
NTC—National Training Center
NVG—Night Vision Goggle
ODCSLOG—Office, Deputy Chief of Staff for Logistics
ODCSOPS—Office, Deputy Chief of Staff for Operations
ODCSPER—Office, Deputy Chief of Staff for Personnel
ODCSRDA—Office Deputy Chief of Staff for Research, Development and Acquisition
OT—Operational Test
OTEA—US Army Operational Test and Evaluation Agency
PIP—Product Improvement Programs
PL—Phase Line
POM—Program Objective Memorandum
RC—Reserve Component
RCAS—Regimental Combat Aviation Squadrons
RDF—Rapid Deployment Force
SAG—Study Advisory Group
SEMA—Special Electronic Mission Aircraft
SFTS—Synthetic Flight Training System
SOF—Safety of Flight
SRV—Shop Replaceable Unit
SURV/ELINT—Surveillance/Electronic Intelligence
SWO—Senior Warrant Officer
TAAB—Theater Army Aviation Brigade
THE—Transportable Helicopter Enclosure
TIWG—Test Integration Working Group
TMLS—Tactical Microwave Landing System
TOE—Table of Organization and Equipment
TSS—Test Support System
TWOS—Total Warrant Officer Study
USAATCA—US Army Air Traffic Control Activity
USAAVNC—US Army Aviation Center
USACC—US Army Communications Command
USAF—United States Air Force
USAR—US Army Reserve
USAREUR—US Army Europe
USASC—US Army Safety Center
USA STRATCOM—USA Strategic Communications Command
VCSA—Vice Chief of Staff Army
VHSIC—Very High Speed Integrated Circuits
WO—Warrant Officer
WSMT—Weapon System Management Team
WSSM—Weapon System Staff Manager
WSSO—Weapon System Support Officer

Air Traffic Control

'Controlling the best!' The Army's air traffic controllers serve all!

FT. HUACHUCA, ARIZ. — With Army Aviation's motto being "Above the Best!" it only seems appropriate that the U.S. Army's air traffic controllers motto be "Controlling the Best."

After the separation of the Army Air Corps from the Army and the creation of the USAF in 1947, it was determined that the Army retain an aviation mission. On 27 October 1954, an air traffic control and navigation systems ad hoc group was appointed for the purpose of recommending an air navigation and control system to support the Army's mission.

Colonel Charles L. Woodhurst

The Army's air traffic controller emerged from their recommendations. With the Army not having a formal school for controllers it was necessary to train these controllers at the formal schools of the sister services (Navy - Olathe, Kan., and Air Force - Keesler AFB, Biloxi, Miss.)

This training continued, predominantly with the Air Force, until 1969, when the Army established its own air traffic control school at Ft. Rucker, Ala., an activity that's recognized as a superb institute.

The establishment of the USA Air Traffic Control School was justified by the need for specialized air traffic controllers to support the Army Aviation mission in Vietnam. Many lessons were learned in Vietnam that changed aviation policies, procedures, and doctrine causing massive changes in air traffic control procedures and equipment.

Army Aviation's vast growth and increased air traffic control support requirements generated a study in 1972 (SAMOAN) that identified a need for the centralization of Army Air Traffic Control assets.

From the recommendations of the study, command and control (C^2) of fixed base operations was given to the **USA Strategic Communications Command (USASTRATCOM)** later to be called the **USA Communications Command (USACC)** and now the USA Information Systems Command.

Support requirements escalated and finally in 1978 the USACC was given C^2 responsibility for tactical air traffic control at which time the Army's current **table of organization and equipment (TOE)** units were formed and activated.

With the approval of the Aviation Branch in 1983 air traffic control was identified as a part of aviation and designated aviation as the proponent, with the USACC retaining C^2 responsibilities. Studies are currently being conducted to ensure the proper alignment of responsibilities with appropriate command and to develop an organizational structure to best serve the Army's needs.

Regardless of the U.S. Army's air traffic control heritage and its final residence, the U.S. Army air traffic controller must remain a highly trained professional and will continue "Controlling the Best."

Currently there are plans and programs to enhance air traffic control throughout the Army. Examples are the **microwave landing systems (MLS), tactical microwave landing system (TMLS), product improvement programs (PIP)** on existing equipments and possibly procurement of off the shelf state of the art equipment.

Additionally, training procedures for controllers and maintenance technicians have been changed to improve the quality of service provided.

In future issues of **Army Aviation** individual programs and issues will be addressed to keep the aviation community informed of significant actions and changes.

—COL Charles L. Woodhurst
Commander, USAATCA

Where does Army Aviation fit into the FAA picture?

ALEXANDRIA, VA — Have you ever wondered who looks out for Army Aviation's place in the sky with the **Federal Aviation Administration (FAA)**, the big regulator of the nation's airspace?

The FAA charter insures the safe and efficient use of the **National Airspace System (NAS).** That charter is the Federal Aviation Act of 1958, as amended, and is the law of the land. So, the FAA must consider all of the

aviation users of the NAS to achieve the best usage of a finite resource. Consider airspace as a national asset that's used for profit, pleasure, and the defense of the nation.

You can bet there are a lot of folks out there who want to use the stuff their way and don't really care about the needs of other users. They're looking out for their own interests and understandably so.

Aviation is an expensive business operation whether for civil or national defense purposes. Both civil and military users along with the FAA have little argument with the "SAFETY" portion of the FAA Act. No one wants to compromise Aviation safety under any circumstances. It is the efficient use of the limited airspace portion of the Act that brings on differing opinions.

It's this portion that yields a large amount of arm wrestling and intense negotiations. The heavy hitters show up at the table to look out for their group.

The airlines are represented by the **Air Transport Ass'n of America (ATA)**; the **Air Line Pilot Ass'n (ALPA)** represents the pilot union. Some of the other hitters are the **National Business Aircraft Ass'n (NBAA),** the **Aircraft Owners and Pilot's Ass'n (AOPA),** and the **Helicopter Ass'n International (HAI).**

There are others but you begin to get the picture of who is trying to assist the FAA when the topic of efficient use of airspace is debated during development/revision of flying procedures and regulations.

It amazes me that Army helicopter pilots are allowed to fly at all! It was suggested to me at one meeting that the Army just practice hovering in and around Army bases and leave the real flying to the real pilots. This suggestion was in jest; otherwise, the speaker would have suffered bodily harm from the COBRA gun run I planned upon his office! Sometimes my ability to negotiate and/or restrain myself amazes me under these circumstances.

What I'm getting around to is that Army Aviators have an active organization that's chartered to protect the Army's interests regarding airspace use: the **U.S. Army Aeronautical Services Office (ASO)** at Cameron Station, Alexandria, Va.

The ASO acts as the HQDA representative to the FAA, and is part of the **USA Air Traffic Control Activity (USAATCA)** under the USA Army Information System Command at Ft. Huachuca, Ariz.

Colonel John J. Berner

This office also provides Army membership on the DOD Advisory Committee on Federal Aviation and actively participates in the working group and subgroups of that organization. It's through this committee that all the services get together and provide DOD assistance to the FAA on managing the NAS.

ASO is also a member of a Federal Advisory Committee to the FAA known as the **Air Traffic Procedures Advisory Committee (ATPAC).** As such we negotiate those common pilot/air traffic controller procedures that promote air safety and common understanding. We're always looking for Aviator/ATC suggestions or problem areas that should be brought to the attention of the FAA.

Part of the ASO is the Aeronautical Information Division which manages all of the FLIP products used by Army Aviation personnel. Here again, we need your suggestions on how we can improve FLIP or make corrections. Do this through the COMM CARDs located in base operations; others have, and it works!

We have six field offices located at FAA regional headquarters in New York, Atlanta, Kansas City, Ft. Worth, Los Angeles, and Seattle. Each office is headed by a LTC who carries the title of **Dept. of Army Regional Representative (DARR).** These DARRs and their staffs are there to serve you in airspace, air traffic control, and general aviation matters requiring coordination within the FAA region.

Well I've blown my horn long and hard for the ASO and it's time to speak of the Army guys who work at the FAA on a full time basis. The ODCSOPS liaison officer to the FAA is **COL Dale Mason.** He hangs his hat in the Associate Administrator for Aviation Standards office and keeps the HQDA staff informed of current actions within the FAA that may impact upon the Army.

There are four other Army Officer Aviators on the FAA staff known as "reimbursibles". The FAA reimburses their salary to the DOD, and in turn, they serve a three-year tour as FAA Action Officers. More on this tour of duty in a later issue.

You may have noticed that there are aviation positions on the DARR staff; also a few Officer positions in the FAA headquarters that help the Army keep its piece of the sky. Looking for an interesting and challenging next assignment?

—COL John J. Berner
Director, USAATCAASO

Avionics

AVRADA: New faces and new development programs . .

FT. MONMOUTH, NJ — The **Avionics Research and Development Activity (AVRADA)**

Colonel David S. Grieshop

has acquired some new faces since **Army Aviation** published its special issue on "Avionics" a year ago.

Colonel Darrold D. Garrison, the former commander, departed for a new assignment as the Deputy Commander for the newly-established Laboratory Command in Adelphi, Md. Following a two year tour in Korea I was fortunate enough to assume command of the activity on July 12, 1985.

Joining AVRADA in the dual status of AVRADA Deputy Director and also as the Director of the Avionics Technology Directorate is another new arrival, **David Gaggin. Mr. Gaggin** comes to AVRADA from industry having gained extensive experience in avionics development while working for the Boeing Vertol Company.

Within the activity **Charles Elliott** was appointed the Deputy Director of the Avionics Technology Directorate.

AVRADA's work in the development of avionics for the fielded fleet, aircraft now in production, and future aircraft is expanding significantly. **MG Orlando E. Gonzales,** CG of the Aviation Systems Command, noted in a recent speech to our Monmouth AAAA Chapter, that the cost of aircraft electronics in new development aircraft now exceeds the cost of the airframe.

That marks a very dramatic change in aircraft design as avionics have traditionally amounted to a minor portion of the total aircraft cost. He also noted that only about 9% of the engineers assigned to AVSCOM are electronics engineers. The imbalance between the cost of the systems and the number of engineers assigned to those systems is one of AVSCOM's top priorities.

Although there are several new development programs in AVRADA, space limitations will only allow me to report on one this time around.

Among AVRADA's most urgent programs is the development of a symbology system for the ANVIS goggles. This system, called the **ANVIS Display Symbology System (ADSS),** promises to provide the pilot with an information display superimposed on the night vision goggle display.

The display will provide the pilot with altitude, attitude, airspeed, and other selected data. The great advantage is that it allows the pilot to fly the mission without having to refer to the instruments inside the cockpit. That will certainly provide an extra measure of safety in the already rigorous realm of flying under the goggles.

In a future issue of **Army Aviation,** AVRADA will report on this program in more detail. In forthcoming issues I will also review some of our other new programs and the impact I expect them to have on the future of Army Aviation.

Avionics and aviation electronics in general has become the most rapidly evolving science in aviation. We, at AVRADA, look forward to regular reports on what's new in this very exciting field.

—COL David S. Grieshop
Commander, USA AVRADA

FORT RUCKER, ALA. — Staff Sergeant Marco A. Calvo, right, August NCO of the Month at the U.S. Army Aviation Center, checks out an environmental control unit onboard an AH-64 APACHE helicopter, while Soldier of the Month SP4 Timothy W. Smith looks on.

For the next generation

When the Army demanded advanced technology, the Bell LHX team listened . . . and produced a cockpit that hears *and* responds.

SPERRY

TEXAS INSTRUMENTS

Honeywell

Bell Helicopter

The future is ours by design.

Awards and Honors

AWARDS

FORT HUACHUCA, ARIZ.
USA AIR TRAFFIC CONTROL ACTIVITY
(AAAA National Awards to be presented on Sept. 28, 1985, at Ft. Huachuca, Ariz., by a Member of AAAA's Nat'l Executive Board.)

Air Traffic Control Facility of the Year: Lawson Army Airfield Control Tower, Ft. Benning, Ga.
Air Traffic Control Combat Support Platoon of ther Year: 5th Platoon, 68th Air Traffic Control Company (FWD), 16th ATC Bn (Corps), Ft. Sill, Okla.
Air Traffic Controller of the Year: Specialist Five Derrick L. Dempsey, Giebelstadt Army Airfield Control Tower, APO N.Y.
Air Traffic Control Manager of the Year: CW2 Terry L. Van Steenbergen, 3d Platoon, 187th Air Traffic Control Company (FWD), APO N.Y.

FORT RUCKER, ALA.
ARMY AVIATION CENTER CHAPTER
(July, 1985 AAAA Chapter Awards)

NCO of the Month: SGT Stephen P. Gamache, Co B, 1st Bn, 1st Avn Bde.
Soldier of the Month: SP4 Abraham Pollack, Co E, 6th Avn Trng Bn, 1st Avn Bde.

HONORS

FORT RUCKER, ALA.
ARMY AVIATION SCHOOL
(Distinguished Graduates, unless otherwise indicated)

JULY 24, 1985 — Guest Speaker: MG John P. Henderson, Jr., Commander, 80th Division (Tng), Richmond, Va.
Officer RW Aviator Crs 85-4: 2LT David E. Hart; 1LT Rocky J. Tyler, 2LT Lawrence E. Iram, and 2 LT Lisa M. Mills*; CPT David W. Sullivan★.
Warrant Officer RW Aviator Crs 85-3: WO Stanley E. Harris; WO Matthew V. Restucci*; WO Daniel M. Skogen★.

AUGUST 6, 1985 — Guest Speaker: MG Carl H. McNair, Jr., Chief of Staff, TRADOC, Ft. Monroe, Va.
Aviation Officer Advanced Crs 85-2: CPT Frederick M. Maddox; CPTs Jeffrey L. Misner, Norman W. Kimata, and David A. Cook*; CPT Marilou S. Leckie★.

AUGUST 7, 1985 — Guest Speaker: BG Rudolph Ostovich, III, Assistant Commandant, USAAVNC.
Officer RW Aviator Crs 85-6: 2LT John D. Fellenzer; 2LT Keith R. Darrow, Jon A. Larsen, Thomas H. Harvey, and Frederick H. Finnell*; CPT John G. Keeton★.
Officer RW Aviator Crs 85-6 (USAF Section): 2LT Christopher D. Stewart; 2LT Timothy L. Reichart*; 2LT Guy C. Gleason★.
Warrant Officer RW Aviator Crs 86-5: WO Gary M. Reynolds; WO Stephen W. Shockney, Laura J. Hamm, and Timothy W. Slaton*; WO Scott W. Stout★.

*Honor Graduate; ★Class Leader.

FORT RUCKER, ALA. — Sergeant Stephen P. Gamache, right, July Non-commissioned Officer of the Month at the U.S. Army Aviation Center, inspects a stabilizer bar assembly on a UH-1 HUEY helicopter with the July Soldier of the Month, SP4 Abraham Pollock.

FORT EUSTIS, VA.
AVIATION LOGISTICS SCHOOL
(Distinguished Graduates, unless otherwise indicated)

Aircraft Armament Technical Inspector Crs 503-85: SSGt. Gary L. Wallace
Aircraft Fire Control Repairer Crs 3-85: PFC Steven L. Lambert
Aircraft Fire Control Systems Supervisor Basic Technical Crs 4-85: SSG David P. Griffith
Aircraft Maintenance NCO Advanced Crs 8-85: SSG David J. Baker; SSG James R. Sittler (Honor Grad.)
Aircraft Powerplant Repairer Crs 7-85: PFC James C. Miller
Aircraft Powertrain Repairer Crs 9-85: PFC James C. McCrum
506-85: PVT Karl E. Kromer
Aircraft Structural Repairer Crs 17-85: PVT Kurt D. Bryant, SP4 Richard A. Crowston
19-85: PVT Randall S. Fabian
Aircraft Weapon Systems Repairer Crs 10-85: PVT Rickey A. Brooks
Attack Helicopter Repairer Crs 23-85: PVT Timothy J. Cowin
24-85: PVT Justin R. Caudron
Attack Helicopter Repairer Basic Technical Crs 15-85: SGT James O. Holmes
Aviation Life Support Specialist Crs 18-85: SSG Brian J. Gallivan
19-85: WO1 Craig T. Schoenky
CH-47D Medium Helicopter Repairer Crs 6-85: SSG Frank L. Sullivan
Medium Helicopter (CH-47) Repairer Crs 17-85: PFC Shawn G. Welsh
502-85: SGT John W. Morris
Medium Helicopter Technical Inspector Crs 6-85: SGT Kenneth R. Gill
Observation Airplane Repairer Crs 5-85: SP4 Gregory S. Allen
Observation-Scout Helicopter Technical Inspector Crs 17-85: SSG Michael J. John son
23-85: SGT Paul J. Wolf
Tactical Transport Helicopter Repairer Crs 23-85: PFC Aaron B. Pusser
24-85: PVT David L. Childress
25-85: PVT John M. Palesch
26-85: PFC Leo V. Carr
Tactical Transport Helicopter Technical Inspector Crs 7-85: SGT David G. Darick
8-85: SGT David R. Laroche
UH-60A Helicopter Repairer Transition Crs 17-85: SP4 Wayne D. Willis
18-85: SP4 David L. Rodgers, SP4 Mark E. Surowiec
19-85: SP4 Ray A. Gallup
Utility/Cargo Airplane Inspector Crs 3-85: SSG Dennis D. Tilton
Utility Helicopter Repairer Basic Technical Crs 14-85: SGT Damon C. Beck
15-85: SGT Francisco Luna
Utility Helicopter Technical Inspector Crs 14-85: SGT David R. Morse
15-85: SGT George A. Parker
16-85: SGT James C. Goldberg

Command and Staff

Lieutenant General Charles W. Bagnal, as Commanding General, WESTCCOM.

Lieutenant General Charles W. Dyke, as Commanding General, US Army Japan and IX Corps.

Lieutenant General Vaughn O. Lang, as Deputy Asst Sec of Defense (Mobilization Planning & Requirements), Washington, D.C.

Major General Edwin M. Aguanno, as Director—J4/J7, USEUCOM.

Major General Jerry M. Bunyard, as Assistant Deputy Chief of Staff Research, Development and Acquisition, DA, Washington, D.C.

Major General Charles T. Ivey, as Deputy Commanding General , XVIII Airborne Corps & Ft. Bragg, Ft. Bragg, N.C.

Major General Richard D. Kenyon, as Chief of Legislative Liaison, DA, Washington, D.C.

Major General Carl H. McNair, Jr., as Chief of Staff, USA Training and Doctrine Command, Ft. Monroe, Va.

Major General Charles E. Teeter, Deputy Inspector General for Inspections, Office of the Inspector General, Washington, D.C.

Major General James E. Thompson, Jr., as Commandant, US Army War College, Carlisle Barracks, Pa.

Major General Francis J. Toner, as Deputy Director for Strategic Mobility, Office, Joint Chiefs of Staff, Washington, D.C.

Brigadier General Patrick H. Brady, as Chief of Staff, First US Army, Ft. George G. Meade, Md.

Brigadier General Richard E. Stephenson, as Deputy Commanding General for Procurement and Readiness, USA Aviation Systems Command, St. Louis, Mo.

Colonel Frederick R. Bisch, as Deputy Director, Produrement and Production, USA Missile Command, Redstone Arsenal, Ala.

Colonel Allen C. Cornell, to USADO-Panama, Box E, APO Miami.

Colonel Louis R. Jones, Jr., as Director of Unit Training, USA Logistics Center, Ft. Lee, Va.

Colonel John E. Kempster, as Commander/Deputy Director of the Army Materiels and Mechanics Research Center (AMMRC), Watertown, Mass.

Colonel Robert S. Young, as Deputy Community Commander, Frankfurt Military Community, APO N.Y.

Please note!

Senior AAAA Members (O-6's and above) are encouraged to submit their new duty assignments to the magazine for publication in this column, as well as their AAAA residence address of record.

MILPERCEN Orders 84-88 through 84-120, dated July 29, 1985, have authorized the promotion of the following Aviation Branch officers in September:

TO COLONEL:
Camia, Dante A.
Cox, Robert S.
Handy, Malvin L.
Russo, Alan M.
Sauer, James B.

TO LT. COLONEL:
Anderson, David J.
Barnhorst, William
Boger, Gene S.
Bowen, John E.
Brackett, Thomas R.
Brown, Michael L.
Bryan, John P.
Caesar, James M.
Carlson, Richard G.
Claxton, John D.
Cole, Christopher
Coleman, William E.
Deay,William R.
Dolan, Dennis L.
Edwards, John P.
Fichter, Thomas A.
Forbes, Tran L.
Foster, Ralph L.
Gary, Lloyd D.
Geis, Craig E.
Gunnin, Larry E.
Harris, Robert B.
Holmgren, Larry L.
Jacobus, Charles H.
Jesson, Bruce E.
Kahlert, Thomas A.
Kaiser, Van E.
Litchfield, John T.
McCarthy, Charles
Mclanahan, Carl E.
Merrill, Charles E.
Moore, Joel R.
Prins, Danny L.
Rath, Robert R.
Scherer, Robert J.
Sinclair, Thomas J.
Simowicz, Charles
Vancrden, Fred J.
Wade, Daniel E.
Zeier, Timothy M.

TO MAJOR:
Brown, Dennis C.
Brown, James D.
Coleman, Gary S.
Fabry, John R.
Gates, Robert M.
Kelley, James A.
Laughlin, James L.
Loy, James R.
Mainwaring, John
Mitcham, James R.
O'Sullivan, Paul F.
Peterson, Raymond
Prindle, Frank L.
Rogers, Michael W.
Rusho, Michael E.
Russell, Mark W.
Sargent, Christopher
Smith, Jeffery B.
Stellar, Frederick
Vincent, Richard L.
Wills, Thomas G.
Yezak, Herman R.

TO CAPTAIN:
Allard, Michael P.
Barnes, Timothy P.
Bilbrew, Mack W.
Brewer, Terrence P.
Brown, Victor D.
Carroll, Carolyn A.
Child, Candace J.
Clymer, Peter E.
Corley, Stephen E.
Daniel, Michael
Erickson, William
Franklin, Timothy
Garrison, Michael
Halligan, Edward F.
Hardy, Charles II
Holloman, William
Howden, John M.
Jarrett, Paul A.
Jason, David B.
Kerzie, Michael J.
Kornbrink, Thomas
Mallerich, Stephen
Marcenkus, Albert
Meaders, Clifton L.
Melville, John G.
Miller, Charles R.
Miller, James C.
Mobley, Raymond
Mull, Gary L.
Oliver, Stanford
Olliff, Kirk B.
Parris, John L.
Paul, Charles J.
Perkinson, T.
Pierce, William A.
Platz, William D.
Portela, Manuel R.
Primeau, Johnny
Reagor, Nancy E.
Reed, Charles R.
Robbins, Stephen D.
Schmitz, Mark K.
Smith, George R. II
Smith, Robert W.
Sylvestre, Marc A.
Tiongson, Glenn D.
Ware, James T.
Welch, Timothy J.
Wilburn, Raven M.
Williams, Victor K.
Williamson, James
Woodard, Gregory
Wright, Brian C.

TO CW4:
Albert, Ande J.
Alderson, Hugh Jr.
Ballis, Arthur H.
Bradley, Lawrence
Brown, Hugh J. Jr.
Burnsting, Clifford
Delo, Dennis A.
Dobesh, Robert E.
Donahue, Kenneth
Grant, Charles R.
Hartwick, Dwain D.
Hegland, Dennis A.
Hempel, Donald L.
Hogue, William G.
Humphreys, James
Jimenez, Luis, R.
Kanauka, Fernando
Martine, Richard E.
Meeking, Thomas A.
Nagy, Carl J.
Peden, Mark M.
Price, Robert A.
Rapp, Howard L.
Roland, Robert J.
Seaman, Daniel G.
Sheaffer, Clair J.
Smead, Robert H.
Smith, Charles L.
Stansell, Robin L.
Steffen, John J.
Thomas, Ralph L.
Tomlinson, Jimmie
Wilke, James R.
Wood, Dennis, I.

TO CW3:
Arthur, Richard G.
Bann, Alex H.
Brown, Stephen A.
Cunningham, Dnld
Davis, Thaddeus J.
Gainey, Michael D.
Hasenauer, William
Hayes, Herbert W.
Hendershot, George
Means, Sargent B.
Miller, Miachel D.
Morrison, George R.
Muller, William C.
Podurgiel, Frank J.
Rice, Terry Lee
Sadorus, Samuel R.
Schailey, Glen H.
Sheppard, Kim E.
Tanner, Carlis A.

Contract Awards

Two industry teams to compete for LHX engine contract

WASHINGTON, D.C. — Two teams of engine manufacturers have been awarded contracts by the U.S. Army for the full scale development of the T-800 advanced technology engine as part of the LHX advanced scout, attack, and utility helicopter development program.

The team of Pratt & Whitney and Avco Lycoming will compete against the Allison Gas Turbine Division of General Motors and the Garrett Turbine Engine Company for selection as the final manufacturing team for the T-800 engine.

General Electric and Williams International have been eliminated from the LHX engine competition with the announcement of these contract awards.

The final selection of a T-800 production team is currently scheduled for May, 1988, and will follow actual flight testing of the competing engine designs.

Following completion of qualification testing of the winning team's engine, now set for 1990, two equally competent engine production sources will be available to the Army since each team member will be capable of independently manufacturing the final engine design and meeting all reliability goals.

An initial production phase is expected to conclude in 1992, and the members of the winning engine manufacturing team will then begin to compete against each other for subsequent production contracts.

The current full-scale development contract awards amount to $240 million for Pratt & Whitney and Avco Lycoming (including $23.7 million for flight testing) and $263.95 million for the Light Helicopter Turbine Engine Company (the Allison and Garrett joint venture partnership) which includes $39.4 million for flight testing.

These are both firm fixed price contracts which limit the Government's liability and shift the cost risk to the industry teams for the succesful contract completion.

Altogether, the Army plans to purchase about 10,000 of the new 1,200-shaft horsepower T-800 turboshaft engines at a total program cost of approximately $3.8 billion.

Fathers and sons hold an unusual flight school reunion

FT. RUCKER, ALA. — Three Army flight school classmates held an unusual reunion over the 4th of July weekend: they were joined by their three sons, who were also attending flight school at Ft. Rucker together, although this time in different classes. All six are current AAAA members. **Colonel James P. Hunt**, currently Director of Training and Doctrine at the U.S. Army Aviation Center, was joined by his fellow Class 61-1A graduates **Lieutenant Colonel David E. Hill, Ret.**, and **Lieutenant Colonel Raymon L. Hardy, Ret.**, and by their sons **Second Lieutenant James P. Hunt, II, Second Lieutenant David E. Hill, Jr.**, and **Second Lieutenant Raymon L. Hardy, Jr.**

Upon completion of flight school, the three fathers were all assigned to the 4th Aviation Company, Ft. Lewis, Wash., where all three sons were born during 1961-62 in Madigan General Hospital.

The families have remained friends over the years, and 2LT Hardy's graduation with Class 85-2 on July 10 provided the occasion for this reunion.

Shown above, from left to right are: COL Hunt and 2LT Hunt, LTC Hill and 2LT Hill, LTC Hardy and 2LT Hardy.

Apache

Self-deployable...and ready to fight when it gets there!

Ready for battle, the U.S. Army's AH-64A Apache can fly for 1,000 nautical miles into a 10-knot headwind with a 20-minute fuel reserve.

The AH-64 can self-deploy to support armed forces almost anywhere in the free world. Its extended-range fuel tanks can be replaced by weapons in just minutes for a quick turnaround. Apache is ready for battle almost as soon as it touches down.

Capable of rapid strategic deployment worldwide, Apache is air-transportable in C-130, C-141, C-5A and C-17 aircraft.

For further information, contact Marketing, Hughes Helicopters, Inc., Bldg. 1/T137, Culver City, CA 90230, (213) 305-5172.
Telex 182436 HU HELI C CULV.

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Culver City, California 90230 USA
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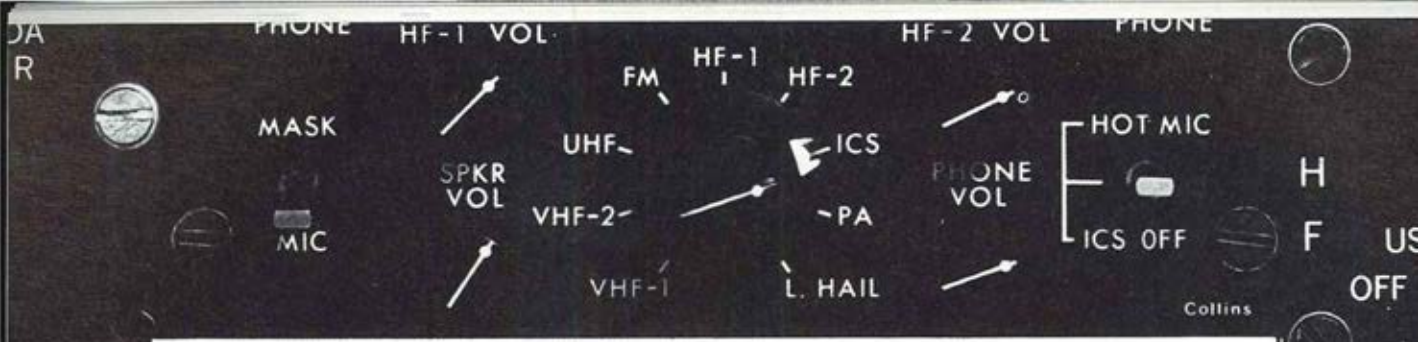


5.75"

Collins CMS-80 can put at least half your cockpit console into a space this big.

Next to the pilot, you know better than anyone that console space in a cockpit is at a premium. Still you have to make room for all the avionics vital to a successful mission.

Enter the Collins CMS-80 cockpit management system. A unit as small as this ad which uses a high resolution CRT and key-

125"

avionics systems. Including comm/nav position, target, velocity, fuel, weapons, and much more.

Using the military standard 1553 Multiplex Bus, CMS-80 is compatible with existing as well as new avionics. Which means mission capability and flexibility never before available.

We could go on, but like you, we're cramped for space. Contact us for more information: Collins Government Avionics Division, Rockwell International, Cedar Rapids, Iowa 52498. 319/395-2208.

Rockwell International

...where science gets down to business

Hardware

AMC's Aviation and Missile Systems Div is readiness oriented

ALEXANDRIA, VA. — **Army Aviation** offers an excellent opportunity to report on a portion of

Colonel Gerald E. Lethcoe

the **Army Materiel Command's (AMC)** aviation activities.

One staff agency that has remained basically unchanged through several reorganization and realignment efforts is the Aviation and Missile Systems Division.

This organization, consisting of a Missile and an Aviation Branch, is primarily readiness oriented with a mission to achieve a combat-ready, sustainable Army through integrated life cycle staff management of designated aviation and missile weapon systems and materiel.

The Division's implied mission is to act as a conduit between the Program, Product, or Project Managers' Office and the **Army Staff (ARSTAF).**

Division responsibilities are performed by discharging the following functions:

- Coordinated management of the Procurement Army Appropriation for aircraft and missile systems to insure optimal planning, programming, budgeting, and execution in support of approved force requirements.
- Provide guidance, technical direction, and staff surveillance for **Integrated Logistic Support (ILS)** to insure implementation of ILS elements during all phases of the materiel life cycle.
- Management of the **Logistic Status Review (LSR)** Program conducted by the **Materiel Readiness Support Activity (MRSA)** on selected aviation missile weapon systems to insure the effectiveness of ILS planning, programming, and execution.
- Providing a **Weapon System Staff Manager/Weapon System Support Officer (WSSM/WSSO)** for designated weapon systems and materiel to achieve a matrix management approach to weapon systems staff management.

The WSSM/WSSO concept of Weapons System matrix management is frequently misunderstood and warrants some additional comments.

If a weapon system is fielded, the WSSM is assigned to the readiness portion of the organization with the WSSO to the development part. The opposite holds true if a weapon system is in the development stage; then the WSSM is assigned to the development portion with the WSSO to the readiness part.

Major issues or problems are resolved through a joint effort, a **Weapons System Management Team (WSMT),** meeting, directed by the WSSM.

Although the two branches are organized alike and perform the same functions in their areas of responsibility, a more expanded explanation of the Aviation Systems Branch duties areas follows:

(1) To develop and present to HQDA an AMC recommended Aircraft Procurement Army Appropriation program for the **Program Objective Memorandum (POM)** and **Obligation Authority (TOA)** to include support equipment.

(2) To conduct and participate in program and IIS reviews of aviation weapon systems and materiel to insure integration and coordination of functional disciplines in system development, acquisition, and logistic support programs.

(3) To provide guidance and monitors the preparation and coordination of **Materiel Field-**

First Woman Graduate

CW2 Geraldine A. Siegel, a member of Detachment 1, HHC, 131st Signal Battalion, Birmingham, Ala., earlier this year became the first woman aviator to graduate from the one month OH-6 instructor pilot course at the Eastern Army National Guard Aviation Training Site at Fort Indiantown Gap, Penn.

Shown at right with her EAATS Instructor Pilot, CW3 Bernard Reth, Siegel is employed by Ace Aviation as an instrument instructor pilot at the U.S. Army Aviation Center, Ft. Rucker, Ala.

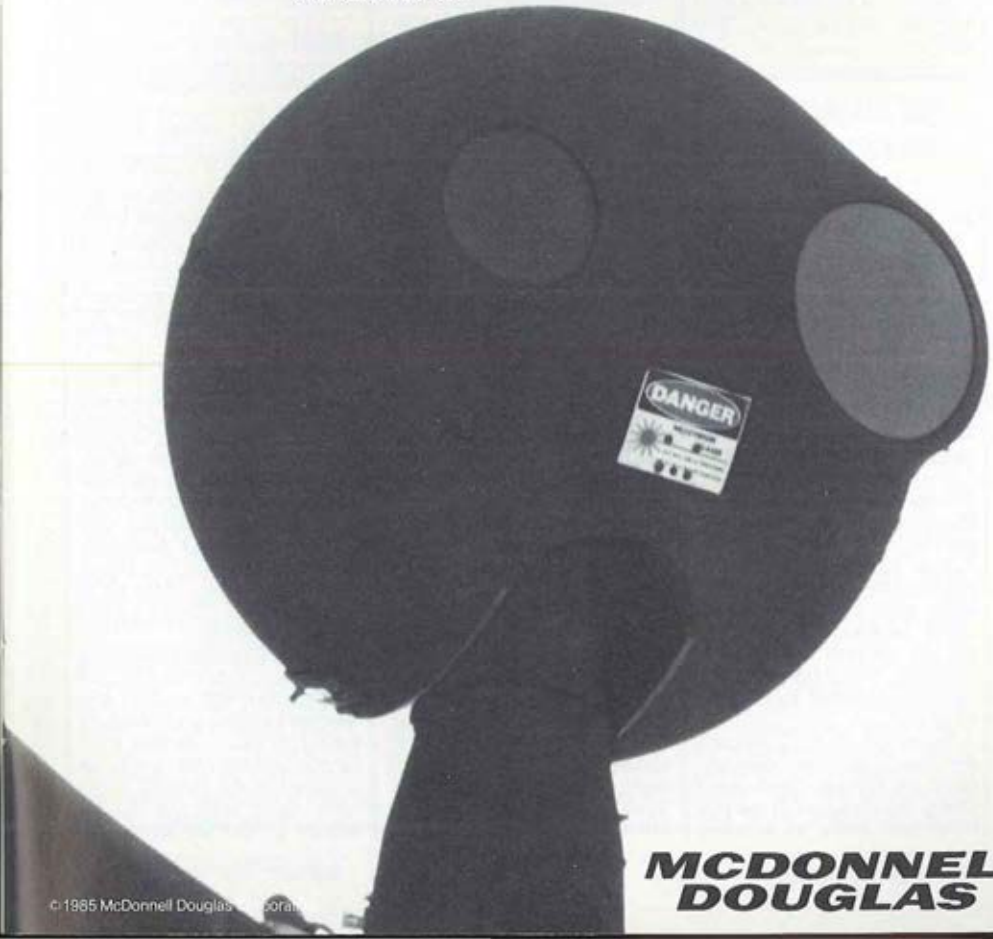
YOU'RE BEING WATCHED

...by the crew of an Army OH-58D Aeroscout helicopter equipped with a McDonnell Douglas Mast-Mounted Sight.

The sight is a system in itself for battle surveillance, target acquisition and handoff. It is field-supportable: Major components including sensors, electronics, and the upper shroud can all be replaced in the field.

The sight has exceeded performance specifications. It is now in production for the Army Helicopter Improvement Program.

Watch for it.



MCDONNELL DOUGLAS

ing Plans (MFPs) with gaining major commands to insure the successful deployment of sustainable weapon systems and materiel within a gaining command.

(4) To provide a WSSM/WSSO for designated weapon systems and materiel to achieve a headquarters matrix management approach to weapon systems staff management.

(5) To conduct and participate in reviews for the execution of aviation weapon systems and materiel distribution planning to achieve and maintain the most effective distribution of these systems.

(6) To maintain cognizance of:

- The DA Worldwide Flying Hour Program.
- The Aviation Intensive Manages Items.
- Aviation Operational Rates/ Standards.

(7) To develop and react to adverse trends identified, which impact the aviation weapon system fleet.

Realizing that **Organization and Functions** discussions are boring at best, I outlined this explanation to provide an insight to AMC Aviation Activities.

—COL Gerald E. Lethcoe
Chief, Avn & Missile Sys Div
Hqs, USA AMC

The OH-58D Advanced Scout Helicopter is moving into initial low rate production.

ST. LOUIS, MO. — During the past year, the OH-58D program has continued to successfully negotiate the major program milestones along the way to fielding production AHIPs.

Operational Testing (OT) was concluded at Ft. Hunter-Liggett in Feb., 1985 and a firm fixed price contract for **Low Rate Initial Production (LRIP)** of 16 aircraft was awarded to Bell Helicopter on Sept. 29, 1984.

The LRIP contract included initial spares, training devices and courses and system peculiar ground support equipment. In August, the **Army System Acquisition Review Council (ASARC)** gave the OH-58D a go-ahead for full scale production and by the time this article is published, we hope to have awarded a contract for the next 44 aircraft.

As of Aug. 1, 1985, the first ten OH-58A airframes were prepared by Corpus Christi Army Depot and delivered to the Bell Helicopter facility in Amarillo, Tex., for the modification. These aircraft are in progressive stages of assembly with the first two production aircraft scheduled for delivery in Dec., 1985.

Lieutenant Colonel John D. Miller

Subsequent production rates will rise to two per month and gradually increase over several years to rate production of ten per month. The end result we're seeking is that ideal . . a smooth transition from Full Scale Engineering Development into efficient production.

Our five prototype aircraft have accumulated over 2,700 accident/incident-free flight hours in rigorous contractor and Government testing with over 870 flight hours flown in support of OT without a single precautionary landing. All of the testing to date shows this aircraft provides the user what was asked for . . and much more.

The RAM-D record attained in OT exceeded our fondest expectations and might prove out during fielding as the best in the fleet. Further, several more changes are being incorporated into the production aircraft to improve maintainability, reliability, and operational utility of the airframe and systems.

These changes are the result of improvements recommended by Army pilots, observers, and maintenance personnel to enhance their respective areas and design changes resulting from reliability growth testing. Also, we've worked closely with the contractor to ensure as many as possible of these improvements are implemented on the first production aircraft to provide uniformity in the field and preclude the costs of retrofits where possible.

To provide an automatic test capability for the Mast Mounted Sight and the Controls Display System components at AVIM level, a **Test Support System (TSS)** will be provided in support of the OH-58D.

The TSS is housed in a S-280 shelter and will automatically test the eight major **Line Replaceable Units (LRU's)** and identify which **Shop Replaceable Unit (SRU)/Circuit Card Assembly (CCA)** is faulty. The TSS is supported by existing AVIM MOS 35R; thus no additional personnel are necessary.

TSS accumulated 1,450 hours during Government testing and approximately 900 hours in subsequent reliability and validation testing. A total of 28 TSS's will be procured with the first to be delivered to the Army in Sept., 1985. Each TSS can handily support up to three attack bat-

talions. Six additional test program sets are planned for development in addition to the eight already developed.

Current plans call for the first production aircraft to undergo Production Verification Testing beginning Dec., 1985 and continuing through June, 1986.

The following five production aircraft will support **Initial Key Personnel Training (IKPT)** at Bell Helicopter, Ft. Worth, Tex. from Jan. through June, 1986. Fts. Rucker and Eustis will begin receiving the OH-58D in Apr., 1986 with Ft. Hood scheduled to receive their first aircraft in Sept., 1986.

As you can see, the OH-58D (AHIP) is well on its way to full production and deployment. To give you a better picture of AHIP, what it will do for you, and how it contributes to the attack team, we'll have a **"Road Show"** in the near future to brief you on all aspects of this important modernization program.

—LTC John D. Miller
Assistant PM-Programs
Proj Manager's Office-ASH

The CH-47D Modernization Program: D-Model CHINOOKs are back in the air.

ST. LOUIS, MO.—The CH-47D Modernization Program is moving forward with impressive strides and the fielded aircraft continue to excel in reliability and maintainability. A total of 65 D-models in the field have achieved a cumulative mission capable rate of 76% after more than 18,000 flight hours. In an unprecedented procurement, a five year multiyear procurement contract for 240 modernized Chinooks was signed with Boeing Vertol April 8, 1985, at the U.S. Army Aviation Systems Command, St. Louis, Mo.

The $1.2 billion multiyear contract will provide a savings of more than $123 million over single year contracts for the same work. A number of significant activities have taken place within the program recently. The following serves only as an illustration of some of these activities:

CH-47D aircraft are flying again after being grounded on May 4, 1985, following a Class A mishap. A CH-47D aircraft experienced a drive train desynchronization while ground taxiing. All D-model aircraft were grounded while a cause and fix were established. This mishap was caused by the disengagement of a bearing retainer bolt from the second stage planetary carrier, and its subsequent lodging between critical ring and planet gears. As it turned out, the bolt had only been partially engaged during assembly.

COLONEL NORBERT I. PATLA

Six Army/contractor teams were dispatched to conduct fiber-optic borescope inspections of the forward and aft transmissions of all CH-47D aircraft. The retainers of all six second stage planetary gears in both the forward and aft transmissions were inspected for proper engagement and photo made of each retainer as proof and verification. No further discrepancies were discovered during these inspections.

An **Engineering Change Proposal (ECP)** is currently being incorporatd by the Army and Boeing Vertol concerning **Night Vision Goggle (NVG)** lighting for the CH-47D. Changes under this proposed ECP include: all red cockpits to be eliminated and replaced by blue-green lighting, to include NVG compatible bezels for the attitude indicators, horizontal situation indicators, and radar altimeters. Overhead console modified to incorporate blue-green electroluminescent panel lighting. Additionally, an NVG compatible landing light filter will be installed on the copilot's landing light and the existing 450 watt bulb will be changed to a 150 watt bulb. Dual red and blue-green lighting will also be available in the cargo compartment.

Eight infrared-emitting diodes, only visible with NVGs, will be installed on the exterior of the aircraft permitting night formation flying under NVG conditions.

A joint Army/Air Force/Boeing Vertol test designed to demonstrate the feasibility of aerial refueling operations utilizing CH-47D and HC-130 aircraft was conducted in August 1985.

During the flight demonstration, pilots from Boeing Vertol, the Army's Engineering Flight Activity, and Fort Campbell, Ky., all demonstrated that a CH-47D with a 32 feet long probe can easily link with the 81 foot long refueling hose of an HC-130 aircraft. The tests were conducted during day-VFR conditions and included hook-ups with both left and right wing drogues, maneuvering stability, low speed maneuverability, and tanker crossover maneuvers. This successful accomplishment will clearly demonstrate the versatility of the CH-47D and its potential candidacy in the long-range mission

scenario.

The CH-47 Delta Chinook FY 85 fieldings to Fort Campbell, Ky. and Fort Stewart, Ga. are continuing on track and detailed planning is underway for fielding at Fort Bragg, N.C., in 1st Quarter FY 86.

The modernized Chinook, with its increased readiness, effectiveness, and supportability, continues to provide the Army an increased medium lift capability while reducing both its maintenance workload and operating and support costs.

— COL Norbert I. Patla
Project Manager,
CH-47 Modernization Program

Special Electronic Mission Aircraft modernization efforts

ST. LOUIS, MO — The force modernization efforts of the US Army and the tremendous strides in US communication-electronics and avionics technology have set the pace for upgrading the **Special Electronic Mission Aircraft (SEMA)** fleet.

In response, SEMA has contracted to field the most current technology available to keep the "eyes and ears" of the combat commander sharp and clear. The PM's greatest challenge is to define the final product while it's still in the development stage.

In December 1984, SEMA, in coordination with the Project Manager—Intelligence and Electronic Warfare, fielded the first of two upgraded **Communication Intelligence (COMINT)** systems to Europe called **Improved Guardrail V (IGR V).**

The approved press release for fielding the system states:

"Improved Guardrail V is a combined airborne/ground remotely-controlled communications intelligence system designed to intercept ground emitters and initiate a direction finding process on the emitters. Processed messages are relayed to tactical commanders in the field."

The airborne element consists of six RC-12D aircraft fully capable of self-deployment. For the December fielding, the aircraft departed Moffett NAS, Calif., on Sept. 24, 1984 and arrived in USAREUR six days later. The ground processing facility (van complex) was delivered by C-5A during the same week.

With the arrival of IGRV System #1, Guardrail V was released by USAREUR for distribution to FORSCOM. The Guardrail V RU-21H aircraft self-deployed in two flights of three each last June 3 and 10. In March, a seventh RU-21H float aircraft was ferried to the USA Electronics Proving Grounds, Ft. Huachuca, Ariz., for participation in "Lead the Fleet" ASE testing.

Major (P) Joseph D. Buchheit

Guardrail V will receive an on-condition-maintenance inspection, an MWO update and an improved avionics/navigation package. This package will include a new flight director, autopilot, TACAN, Inertial Navigation System and SINCGARS. Provisioning will be in place for the final version of the **Microwave Landing System (MLS)** and **Global Positioning System (GPS).**

IGRV System #2 was scheduled to be fielded to USAREUR beginning with the self-deployment of six RC-12Ds and several C-5As containing the ground processing facility on June 21, 1985. The system is operational to date and provides USAREUR with the most outstanding COMINT capability available today.

These Force Modernization efforts are in conjunction with the new **Army of Excellence (AOE)** initiatives which restructure the aerial Military Intelligence Battalions.

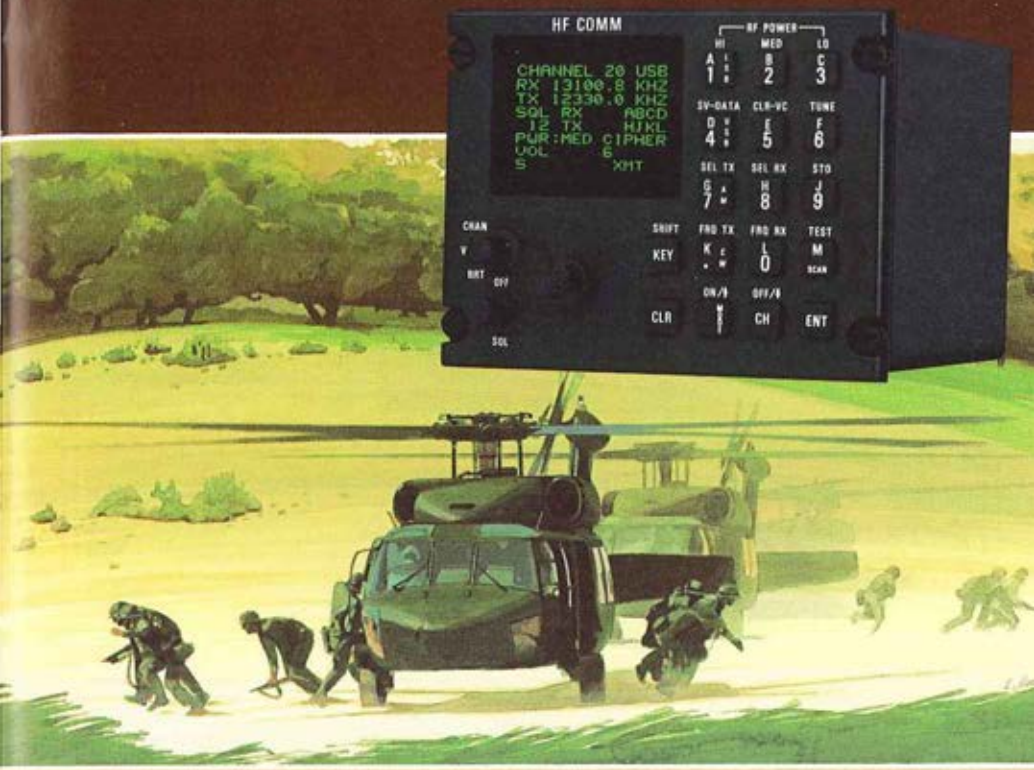
Each battalion will have three companies: Hq, Headquarters and Service Company, "A" & "B" Company. "A" Company will retain the surveillance mission with 10 OV-1D's, "B" Company will have the ELINT/COMINT mission with six RV-1D's, and 6 RC-12D's. RU-21H's will be retained & issued in lieu of RC-12D's until sufficient numbers are available in the system to fill the Army's needs.

With the fielding of IGR V System #2, both of USAREUR's Corps have their authorized COMINT assets. V Corps, which received IGR V System #1, will shortly have its full complement of Mohawks in the 1st MI Battalion, 205th MI Gp, bringing it to full AOE TOE strength. The 2d MI Battalion, 207th MI Gp, VII Corps is at strength, fully prepared to meet today's mission "On the Frontier of Freedom".

SEMA's plan for the future includes two more IGR V systems with updated technology, an improved electronic warfare capability in "Quick Fix" with the EH-60A platform and a block improved version of the Mohawk to meet the Surveillance/Electronic Intelligence (SURV/ELINT) needs of the 1990's.

—MAJ(P) Joseph D. Buchheit
Fielding & Readiness
Officer, PMO-SEMA

KING RADIO'S AN/ARC-199
THE LATEST WORD IN TACTICAL HF



The latest word in tactical HF is now in production and will be available to the U.S. Army later this year.

King Radio's AN/ARC-199 will provide Army helicopters (including the UH-60 Black Hawk, OH-58 Kiowa, the CH-47D Chinook, the new AHIP and the UH-1 Huey) with advanced radios for the demanding nap of the earth (NOE) mission.

What does the U.S. Army find so appealing about King HF? Several features make the AN/ARC-199 stand out. One is the MIL-STD 1553B data bus interface which provides compatibility with the new avionic systems architecture. Other points in King's favor include the small size and light weight of the AN/ARC-199 (approximately 30 pounds including the CDU) and the reliability associated with King equipment. These weight and space savings allow for the addition of other mission payloads.

Using four microprocessor chips, the AN/ARC-199 is able to automatically scan up to 20 preset channels and will then break squelch only when it receives a transmission containing its unique address. Add to this feature BITE, selectable power output, secure voice and data compatibility plus the growth potential for frequency agility, frequency link analysis, anti-jam circuits, automated communications and electronic operating instructions—and you have the capability for a truly ADAPTIVE HF SYSTEM.

King Radio is also producing the companion radio to the AN/ARC-199—the AN/VRC-86. This radio, which is functionally identical to the AN/ARC-199, will be installed at fixed sites or in Army vehicles. Both radios work with telephone-like simplicity, allowing helicopter pilots to keep in touch with ground forces during tactical operations.

Since winning the initial Army contract, King Radio's successes in tactical HF haven't gone unnoticed. Another HF contract has come our way—this time to build an advanced HF for use in the rugged operational environment of tactical fighter aircraft. King is now producing this radio, the AN/ARC-200 (a derivative of the AN/ARC-199), which will be used in an RAAF version of the F/A-18 strike fighter aircraft.

If King's tactical HF story interests you either from the standpoint of off-the-shelf products or adaptations of the systems we are building, contact: Director, Special Programs Department, King Radio Corporation, 400 North Rogers Road, Olathe, Kansas 66062. (800) 255-6243. Telex WUD (0) 4-2299. Cable: KINGRAD.

KING

Historical

ARLINGTON, VA. — The National Executive Board of the AAAA recently approved a substantial donation toward the construction of a new building for the U.S. Army Aviation Museum at Ft. Rucker, Ala. AAAA President MG George W. Putnam, Jr., Ret., (left) presented a check for $40,000 to the Museum Foundation's President LTG John J. Tolson, Ret., on behalf of all AAAA members at the Ass'n Board meeting June 28 in Virginia.

FT. RUCKER, ALA. — Hughes Helicopters, Inc. has donated an AH-64 APACHE prototype for permanent display at the U.S. Army Aviation Museum. Shown from left to right at the presentation ceremonies on June 14 are HHI Vice President and General Manager Norman B. Hirsh; Museum Curator Thomas J. Sabiston; APACHE Program Manager MG Charles Drenz; and U.S. Army Aviation Center Assistant Commandant BG Rudolph Ostovich, III.

FT. EUSTIS, VA. — The General Electric Aircraft Engine Business Group donated a T700 engine which powered a UH-60A in Grenada, and a check for $1,000, to the Army Transportation Museum at an AAAA Colonial Virginia Chapter luncheon June 27. L to R: Museum Foundation President COL Phillip Whitley, Ret.; GE T700 General Manager Louis A. Bevilacqua; and COL H.K. Stevenson, Ass't Commandant, USA Transportation and Logistics Schools.

International

How the British Army uses Anti-Tank helicopters . .

LONDON, ENGLAND . . . The geography of Western Europe has not changed and will have a major effect on any future battles fought by the British Army based in West Germany. Fields of fire are still limited by trees and hills, and high ground remains of tactical importance. In most areas, the line of sight is less than 1,000 meters.

The introduction of the helicopter carrying weapons has overcome this limitation and provided ground forces with the first major new concept in conventional land warfare since the introduction of the tank.

The speed of helicopters enables commanders to move them rapidly around the battlefield to counter enemy armor. A regiment of helicopters can be moved from one end of Germany to the other in less than three hours. Enemy armor moves can now be effectively and quickly countered by the rapid reinforcement of an area by anti-tank helicopters.

The major doubt in many people's minds about the use of helicopters as weapons platforms concerns their vulnerability. The helicopter, largely unarmored, must rely on concealment for its survival.

At two miles distance, a helicopter is difficult to detect even if fully exposed. High-powered optics are needed to detect a helicopter hidden behind trees, with only its sight and rotor blades exposed.

In the course of EXERCISE LIONHEART, carried out last September in Germany, helicopters were umpired for the first time. There were many helicopter anti-tank engagements, but on only one occasion were the attacking helicopters detected in their fire positions.

The British Army's anti-tank helicopter, the LYNX, was designed as a utility aircraft and the decision to use it in an anti-tank role was made late in its development. It does, however, have many of the characteristics of a purpose-built anti-tank helicopter. It is small, fast, and very agile, with built-in redundancy that provides a certain amount of protection against hostile fire. It carries eight TOW missiles and a Ferranti weapon-sighting system.

Power is provided by two Rolls-Royce Gem 2 engines. These efficient powerplants are being progressively upgraded to the Gem 4 standard which will give a significant increase in the load-carrying capability and range performance of the LYNX. More than 100 LYNX helicopters are now in service; most are based in West Germany with the 1st British Corps.

Used in conjunction with the LYNX is the GAZELLE light observation helicopter. This Anglo-French aircraft is powered by the Astazou engine which is built by Rolls-Royce in conjunction with Turbomeca. More than 200 GAZELLES have been purchased by the British Army, and they are also in service with the Royal Navy and the Royal Air Force. The Army GAZELLES are being equipped with the Ferranti telescopic observation aid, which will give them a stand-off reconnaissance capability similar to that of the TOW-sighted LYNX.

Each British division in Germany is supported by two LYNX anti-tank squadrons and a GAZELLE reconnaissance squadron. The anti-tank squadrons consist of nine LYNX and three GAZELLE observation helicopter; the reconnaissance squadrons have 12 GAZELLES. In the build-up to possible hostilities, the LYNX can be used either in the utility role, carrying, stores and ammunition, or in the reconnaissance role. When hostilities begin they revert to their primary anti-tank role.

The helicopter has now become a major weapon system which will play an increasingly dominant role in the land battle of the future. Its stand-off range, coupled with concealment, and ability to move rapidly around the battlefield, will ensure its survivability well into the next century.

—Major Anthony Stansfield
Directorate of Army Air Corps
Great Britain

NEW TEETH

LEFT: A British Army ground crew rearms a LYNX attack helicopter with American built TOW missiles between missions. The first generation anti-tank missile to be used by the British was the French SS-11 which gunners had to fly toward the target rather like a radio-controlled model aircraft.

Originally published in March, 1985 issue of **The Rolls-Royce Magazine.**

Beech Model 2000: Special as its mission.

It gets there high and fast and then loiters for hours, a rock-steady airborne electronic listening post.

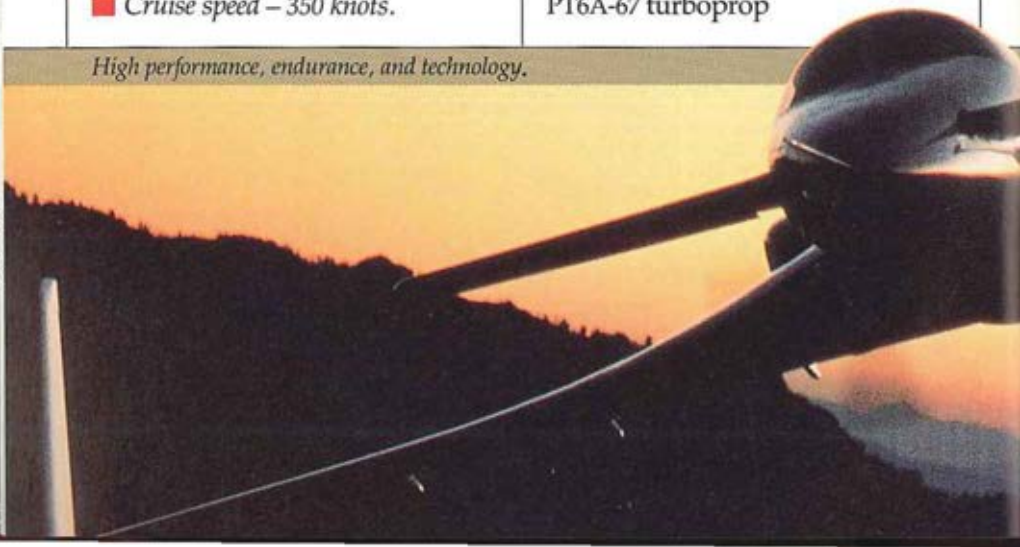
The Beech Model 2000 special missions aircraft is an exceptional aircraft. That's the way it was designed. Its unique tandem wing/pusher prop configuration and its lightweight, mirror-smooth graphite/epoxy composite construction make it a perfect match for SEMA requirements:

- *Cruise speed – 350 knots.*
- *Certified altitude – to 41,000 ft.*
- *Endurance – 9.5 hours.*
- *Range – 2,625 nautical miles.*
- *Short field capability – 2,400 ft.*
- *Cabin sound – Inherently low.*
- *Antenna platform – Superb.*

Utility advantages.

The 1000-shp. Pratt & Whitney PT6A-67 turboprop

High performance, endurance, and technology.



engines turn four-blade props at 1,500 rpm at cruise. This minimizes sound.

It has a large cabin, excellent empty weight/useful load ratio and c.g. range. Furthermore,

For the Army, new efficiency and versatility.

it is outstandingly flexible in utility/support mission roles.

Its inherent stability and low-drag aerodynamics give it highly desirable performance characteristics. The state of the art instrument panel provides important advantages in reducing pilot work load.

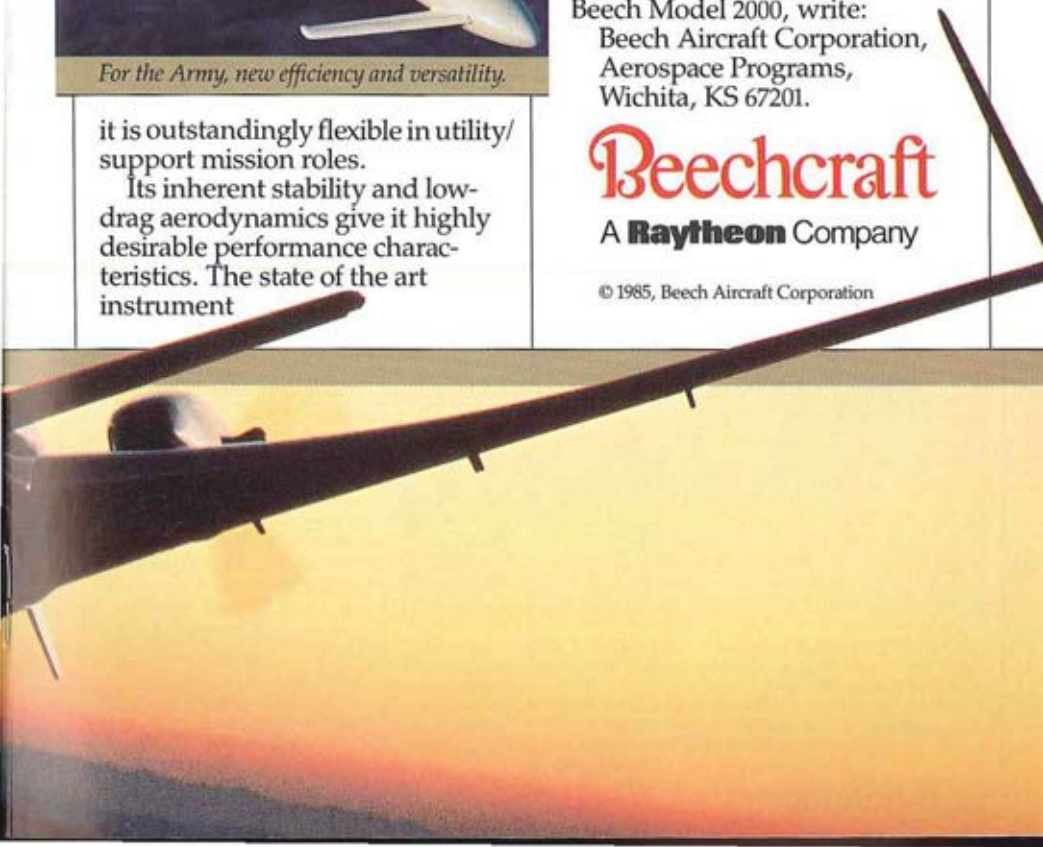
The pressurized Beech Model 2000 is the logical synthesis of advanced technology, aerodynamics and pusher propulsion. It offers military planners an airborne opportunity for a major advance in special and utility missions.

At Beech, tomorrow's technology is working today.

For more details on the Beech Model 2000, write:
Beech Aircraft Corporation,
Aerospace Programs,
Wichita, KS 67201.

Beechcraft

A **Raytheon** Company



Letters to the Editor

GIGANTIC STEP

Wholeheartedly concur with the changes you propose. Have long believed that AAAA, in general, and the magazine, in particular, needed to shift its orientation in order to become more meaningful to the junior aviation officers and enlisted soldiers. Believe your new approach will be a gigantic step in the right direction.

Colonel James W. Lloyd
Chief, Aviation Division
ODCSOPS, Hq, USAREUR

I perceive **Army Aviation Magazine** as an excellent means of presenting the role of U.S. Army air traffic control to the aviation community. The U.S. Army Air Traffic Control Activity will participate in any future editions of the magazine when afforded the opportunity.

Colonel Charles L. Woodhurst
Commander, USAATCA
Ft. Huachuca, Ariz.

Yes, the Avionics Research and Development Activity will participate! Thanks for the occasional opportunity to blow our own horn.

Colonel David S. Grieshop
Commander, USAAVRADA
Ft. Monmouth, N.J.

Here at the Corpus Christi Army Depot we look forward to quarterly input to **Army Aviation.** It's an excellent means to inform the aviation community of that's happening at CCAD.

Colonel Thomas M. Walker
Commander, CCAD
Corpus Christi, Tex.

The Aeronautical Services Office is pleased to participate in your endeavor to change the editorial look of **Army Aviation Magazine.** It will give us a chance to tell the ASO story to the AAAA membership. Thanks again for the invite.

Colonel John J. Berner
Aviation Director, USAATCA ASO
Alexandria, Va.

Thank you for the invitation to contribute periodic reports to your interesting and informative magazine. We in the office of the Product Manager for Aviation Training Devices have enjoyed **Army Aviation** for many years. As a matter of fact, one of our staff recalls when it was a newsletter published out of First Army Hqs at Governors Island, N.Y.

Lieutenant Colonel Michael F. McGaugh
Product Manager, Avn Trg Devices
Naval Training Center
Orlando, Fla.

ENLISTED ACHIEVEMENT

It's my understanding that the AAAA provides some form of Certificate to cite outstanding achievement by enlisted members at the unit level. If true, can you furnish them to us?

Captain Larry R. Dunavant
Commander, C Co, 229th AHC
Ft. Campbell, Ky.

(Editor's Note: The AAAA provides "Soldier (and/or NCO) of the Month (or Quarter)" Certificates of Achievements to its Chapters on request for local presentation, but it does not provide them to individual units; the Awards are Chapter Awards. See the AAAA section at the back of this issue for additional details.)

IT ISN'T FUNNY!

I've chosen not to participate in the '85 Directory of Retired AAAA members this year. I am irked by the ("SPOOF") title and take issue with it. It's a lousy name for a directory of retired soldier-aviators—people who served long and honorably to qualify for retirement. We don't deserve the title - nor is the lame, toothless caricuture used with the directory representative of the retired membership.

The "Society for the Preservation of Old Friends" (1) isn't a society and (2) it doesn't preserve old friends —friendships, perhaps. It's a group of words put together by some unthinking and insensitive soul to fit a supposedly humorous acronym or initialism. It isn't funny.

I hope you'll fix this goof so we retired aviators can feel good about participating in future directories.

Lieutenant Colonel George R. Catron, Ret.
St. Louis, Mo.

(Editor's Note: George, you really have a slow fuze. The '85 "SPOOF" Roster was the **eighth** published that used that title and caricuture, and you were listed in four of them ('81-'84) before you picked up your pen. Be that as it may, we **will** (1) kill off the toothless, old buzzard with the cane in subsequent rosters, but (2) **will not** change the acronym.

"SPOOF" has survived **eight years** as a roster title, and has a certain maturity of its own. Since you admit that the roster might, just might, preserve old "friendships," it'll be known in later years as the "Society for the Preservation of Old Friendships", thanks to you. You batted .667, George — don't go away mad.)

CORRECTION

Ref p. 56, July 31, 1985 of **Army Aviation.** Someone really blew it. My first name is not **Samuel,** but **Selmer** and not **Sunby,** but **Sundby. Sam** happens to be my nickname and is also the nickname for **Selmer** in Norway from where my father came.

Colonel Selmer A. Sundby, Ret.
Newport News, Va.

Logistics

Max Fly & Max Fly Off: The end result is 4 - 6 flying hours per day

WASHINGTON, D.C. — During Vietnam, aircraft in operational units were flying four to five

Joseph P. Cribbins

hours a day over extended periods of time. In fact, with about one-third of the Army Aviation fleet in Vietnam the total Flying Hour Program exceeded six million hours per year compared to the current peacetime program of 1.6 million hours.

With Vietnam nearly ten years behind us in March 1982, **General Edward C. Meyer** (then Chief of Staff) directed that DCSLOG take whatever action was needed to establish how we could maximize flying hours for first line aircraft in case of need.

He indicated that for starters we should take a critical look at simulator models backed up by all the experience and data we had gained over the years including Vietnam and project the Army into the future.

At that time, we consulted with the **Concepts Analysis Agency (CAA)** and developed a tasker for CAA to make an analysis of what was required to maximize flying hours. We labeled this initiative MAX FLY and established a General Officer **Study Advisory Group (SAG)** with members from ODCSOPS, ODCSRDA, Aviation Center, USAALS, and AVSCOM.

To date, the MAX FLY evaluation has looked at the OH-58 KIOWA, AH-1S COBRA, UH-60 BLACK HAWK, AH-64 APACHE, CH-47 CHINOOK, and a limited evaluation of the UH-1 HUEY. In addition, CAA did a Spares Sustainability Study based on a composite simulation model developed by CAA.

All the foregoing simulation indicates that with the right base of support, first line Army aircraft can operate four to six hours a day (per Mission Capable aircraft) in combat on a continuing basis for 60-90 days.

In September, 1984, **GEN Maxwell R. Thurman,** VCSA, directed that we take all that we had learned from the MAX FLY exercise with selected aircraft systems; e.g., BLACK HAWK, COBRA, and CHINOOK to establish what the delimeters would be in operating these aircraft as a total weapon system "for real."

As the result, we're now in process of establishing a field test which we are calling MAX FLY OFF. Our goal is to establish what is needed in the form of manning with air and ground crews, spares/repair parts, and maintenance requirements and capabilities in order to meet the four to six flying hours per day capabilities that the MAX FLY simulation models lead us to believe we can attain.

We're looking toward exercising BLACK HAWK helicopters in a MAX FLY OFF mode in '86 with a follow-on for other first line helicopters, if needed.

—Joseph P. Cribbins
Chief, Avn Logistics Office
ODCSLOG, DA

SIX IN ONE — APACHE helicopters were recently airlifted in a giant U.S. Air Force C-5A GALAXY transport for the first time ever in an operation designed to certify loading procedures for worldwide rapid deployment of the Army's newest attack aircraft. Six of the new AH-64A's were deployed from Arizona to their permanent base at Ft. Rucker, Ala. where they will be used for flight training.

Maintenance

Corpus Christi Army Depot's mission is singular: Readiness

CORPUS CHRISTI, TX—As I visit installations and aviation units worldwide, I'm continuously surprised at the number of aviation officers and soldiers who do not fully understand the scope of **Corpus Christi Army Depot's (CCAD)** mission.

Colonel Thomas M. Walker

Many people, quite naturally, focus on the overhaul mission as it relates to the three-level maintenance concept: **Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM),** and Depot.

Let me assure you, CCAD's mission goes well beyond that of the repair or overhaul of helicopters and their components. The purpose of this brief article is to outline the basic functions of CCAD and how they relate to the principal mission of supporting Army Aviation readiness worldwide.

To properly understand CCAD's role in support of aviation readiness, one must first examine the key functional elements used to establish the goals and objectives, and the direction for the depot. They are to:

- perform overhaul, repair, modification, and retrofit of helicopter systems and subsystems as assigned,
- maintain a mobilization and training base to provide capability for mission support during any contingency,
- perform receipt, storage, inventory, preservation/packaging, issue, and shipping of depot (retail) and mission (wholesale) supplies,
- provide maintenance support services (contact teams) for aeronautical equipment worldwide,
- provide project development and design service for special mission projects/task forces as assigned, and
- provide a worldwide maintenance telephone "hot-line" and on-site technical assistance for the inspection, maintenance, and repair of aviation unit aircraft and engines.

You must agree, that's a full plate, and it takes the dedication and expertise of 4,300 CCAD employees to meet the challenges of those functional areas. Each of these functions has a very significant impact on the productivity and efficiency of the depot.

From an operational standpoint, CCAD is no different from its commercial competitors in that aircraft, engine, and component production schedules must be met and revenue goals achieved; but there's where the comparison usually stops.

By that I mean, such functions as training 1,600+ plus ARNG and USAR soldiers annually, manning of 24-hour maintenance "hot-lines," storing of **Aviation Intensive Management Items (AIMI),** and responding to aviation maintenance emergencies worldwide are not the responsibility of commercial contractors. It's organic maintenance facilities like CCAD that the Army looks to for this type of support.

It's in support of the **Army Readiness Goal** that CCAD relentlessly drives for excellence in each of the six functional areas. Every overhauled/repaired helicopter or component, every trained soldier, every answered "hot-line" call, every AIMI item delivered, and every contact team dispatched to the field enhances aviation readiness.

While there are many ingredients that go into a successful depot-level maintenance operation like CCAD, the four most important are:

(1) a highly motivated and well-qualified work force;

(2) a clearly defined mission that all employees can relate to;

(3) a sufficient number of special tools and equipment to accomplish assigned tasks; and

(4) an adequate physical plant to accommodate the workload.

With the exception of military construction requirements, CCAD has all these ingredients in spades, the strongest of which is well-qualified and highly motivated people. CCAD'ers fully understand the importance of aviation readiness and are committed to that goal. Our soldiers expect and deserve nothing less than excellence from those who support **readiness.**

—COL Thomas M. Walker
Commander, CCAD

Tips

Army Aviation welcomes any approved and field-tested maintenance procedure, shortcut, field expedient, etc. that you might wish to pass along to others!

SCIENCE/SCOPE

Army Cobra attack helicopters will be able to fly combat missions around the clock and defeat advanced enemy armor, thanks to a night vision device and a new antitank missile. About 500 Cobras, or half the Army's fleet, will be modified to remain effective through the 1990s. A forward-looking infrared (FLIR) device will be installed in the telescopic sight of the Cobra's airborne TOW missile system, allowing gunners to see through darkness, smoke, or haze. (In addition to firing the missile, the sight is used to direct cannon and rocket fire.)

Modifications will also let the Cobra fire and guide the new TOW 2 missile, which features improved guidance and a more potent warhead. In official tests of a FLIR-augmented TOW sight at several Army installations, gunners scored more than 90% hits in both day and night TOW missile firings. Hughes Aircraft Company will begin deliveries next year.

A night vision system can be switched quickly and easily among different kinds of helicopters, thanks to a unique electronic module. The Hughes Night Vision System (HNVS) is a low-cost, forward-looking infrared (FLIR) system that provides excellent imagery and object detection in any weather, day or night. A microprocessor-based "personality" module allows a single system to be moved within a fleet of helicopters, providing more flexible operations and better cost effectiveness.

HNVS tailors its data processing to a specific helicopter once the system is installed and a simple aircraft identification code has been entered into the personality module.

For more information write to: P.O. Box 45068, Dept. 72-17, Los Angeles, CA 90045-0068

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Obituaries

GEN Frank S. Besson, aviation logistician, dies at 75 . .

WASHINGTON, DC—**General Frank S. Besson, Ret.,** 75, the first commander of the Army Materiel Command and a major force in aviation logistics, died of cancer July 15 at the Walter Reed Army Medical Center.

A 1932 USMA graduate, he was commissioned in the Corps of Engineers. In 1962, **Gen. Besson** was named head of a group to set up the Army Materiel Command, and later that year, was named as its commander.

Two years later, he became the 75th officer to hold the rank of full general.

Earlier, in 1958, he returned to Washington from a NATO assignment to become the Chief of Transportation.

General Frank S. Besson

A longtime associate, **Joseph P. Cribbins,** described **Gen. Besson** as "the person most responsible for transferring aviation maintenance from the Ordnance Corps to the Transportation Corps in 1952, and pushing for a solid aviation maintenance support base in Army Aviation."

He is survived by his wife, the former Betty Wheeler; three sons, Frank S., Jr., Toliver, and Peter; a stepson; four stepchildren; three grandsons; and eight stepgrandchildren.

Interment was at West Point, N.Y.

Robert S. Patton dies at 56

KENT, OHIO—A veteran of the Korean War, **Colonel Robert S. Patton,** died April 24. A former commander of the 229th AHB and Deputy Commander of the 11th Aviation Group, **Patton** served two tours of duty in Vietnam.

Later he served in ODCSPER in the Pentagon and a Professor of Military Science & Tactics at Kent State University, Kent, Ohio.

He is survived by his wife, Virginia, of 1310 Mockingbird Drive, Kent, Ohio, 44240; a son, Robert, Jr.; a daughter, Linda; a brother; and four grandchildren.

Michael L. Brown dies in Bright Star helicopter accident

CAIRO, EGYPT—**CWO Michael L. Brown,** 27, was killed August 6 when his helicopter crashed in the Sahara Desert west of Cairo.

Brown was taking part in the joint U.S.-Egyptian "Bright Star" military exercises when the crash occurred. The cause of the crash is under investigation by a team from the U.S. Army Safety Center at Ft. Rucker, Ala.

LOOKING BACKWARD — A flight of L-4 Piper CUB's passes in review at Fort Sill, Okla., during the early years of U.S. Army Aviation.

Operations

USAREUR Aviation is best described as being dynamic

APO NY 09403 — Dynamic is probably the single word which best describes Army Aviation in

Colonel James W. Lloyd

Europe. All of the soldiers who fly, maintain, and support the fleet of over 1,200 Army aircraft are busy. The challenges of modernization and restructure, long in the planning stage, are now upon us and the months ahead will be rewarding and exciting.

Almost every day some new aviation system is fielded to some unit within the theater. From MILES-AGES to RC-12D's, modernization is underway. Planning for fielding APACHE Battalions has been and continues to be our **Number One** priority.

APACHE was designed, built, and purchased to fight the AirLand Battle in Europe. That aircraft represents an enhancement to the NATO conventional combat power which many still do not fully appreciate. **General Glenn K. Otis,** Commander-in-Chief of U.S. Army, Europe certainly recognizes the potential of APACHE and the associated OH-58D SCOUT, and he and the Staff are 110% dedicated to fielding the new attack battalions in the smartest and most efficient manner possible.

While AH-64 fielding is **Number One** on the priority list, planning for the modernization of other critical systems also is receiving a significant amount of attention. Swap out of RU-21's for RC-12D in VII Corps' 2d MI Battalion (AEB) is progressing nicely. Our intelligence capability will be vastly upgraded when the RC-12D becomes operational.

CH-47C models will be swapped out for the much needed "D" model in '87-'88. Concurrently, the three 20-ship medium lift companies will be restructured to four 16-ship companies—one for each Corps and two for Theater Army.

Aviation simulators now operate at three locations: Hanau (UH-1 and AH-1 FWS), Mannheim (CH-47), and Illesheim (AH-1 FWS). Construction on the AH-64 CMS building at Illesheim is underway. BLACK HAWK visual simulators will be fielded in '87 at Hanau and Illesheim.

Army of Excellence (AOE) initiatives require major changes in virtually every aviation organization in U.S. Army, Europe. Both Armored Cav regiments have restructured the aviation squadrons to the AOE design. Third Infantry Division converted its aviation battalion to 4th Brigade, 3 ID in March of this year. During FY 86 similar conversions within each of the remaining divisions will take place.

As APACHE is fielded, the aviation group now assigned to each Corps will become a brigade. On the drawing board at TRADOC is the basic design for a **Theater Army Aviation Brig-**

FIRST FLIGHT — The Sikorsky SHADOW single-pilot experimental research helicopter flew for the first time June 24 at the company's Flight Development Center at West Palm Beach, Fla. The aircraft is an S-76 with a single-seat evaluation cockpit joined to the nose, and will be used as part of the Sikorsky LHX development program.

ade (TAAB) for Europe. Though still in the early stages of development, the TAAB will provide a much needed command and control structure for aviation units at echelons above Corps during peace and war.

Finally, in an effort to facilitate better command and control of our aviation units and with thoughts of improving the quality of life and meshing unit location with General Defense Plans, the Army, Europe Staff is looking at stationing options which require close and continuous interface with host nation governmental agencies. Airspace and airfields are at a premium and unit moves require detailed coordination.

In subsequent reports on aviation in Army, Europe updates on REFORGER lessons learned, training strategies, and the health and vitality of AAAA within USAREUR will be provided.

—COL James W. Lloyd
Chief, Aviation Division
DCSOPS, Hq, USAREUR

Fifth Army: Training, training, and still more training . . .

FT. SAM HOUSTON, TX — Exciting progress! These words come to mind when describing Army Aviation in the Fifth U.S. Army.

Army National Guard (ARNG) and **U.S. Army Reserve (USAR)** aviation units in Nebraska, Kansas, Missouri, part of Illinois, N. Mexico, Oklahoma, Arkansas, Texas, and Louisiana constitute a significant and well trained force in the total Army structure.

Fifth U.S. Army, headquartered at historic Ft. Sam Houston, Tex., commands all USAR organizations and supervises training and mobilization readiness of ARNG units commanded in peacetime by the governors of their respective states.

What's Going On?—TRAINING! Many do not realize **Reserve Component (RC)** standards and goals equate to one Army standard. Reserve Component units require the same ARTEP, Soldiers Manual, and Aircrew Training Manuals' tasks, conditions, and standards as their active component counterpart.

These units must plan for maximum use of their precious time and they produce a product far better than one would think possible.

Over 97% of all RC aviators are fully qualified and current in all modes of terrain flight. Even with limited quantities of **night vision goggle (NVG)** assets, over 45% of assigned aviators are NVG-qualified.

Maintaining currency in NVG is more difficult, but a currency cell of NVG instructor pilots and key individuals in each combat unit provides a mobilization expansion capability.

An outstanding example of an excellent NVG program is the 45th Aviation Battalion (Light Helicopter), OKNG, Tulsa, Okla., where 95% of the aviators are current in NVG.

Maintenance Training - Key to Success. Full-time technicians or civilians maintain RC aircraft; they do a great job; but because of this arrangement, practical experience for part-time Reservists is hard to come by.

We've made some inroads in the past two years to improve this situation. Float UH-1 and OH-58 helicopters, assigned to USAR **Aviation Intermediate Maintenance (AVIM)** companies, are swapped with other units when brought to flyable status. Two float-equipped UH-60 BLACK HAWK rotate between the 219th Trans Co (AVIM), St. Louis, Mo., the 244th Trans Co (AVIM), Dallas, Tex., and the 101st Abn Div, Ft. Campbell, Ky.

This arrangement provides a unique, hands-on opportunity for RC soldiers on one of our most modern combat helicopters.

Colonel Engle J. Scott

Also, under new FORSCOM rules, support facilities now can hold down aircraft for repair by drilling Reservists without penalizing facility mission capable rates. More repair work for part-time aircraft mechanics ensues and results, in the end, in better trained soldiers.

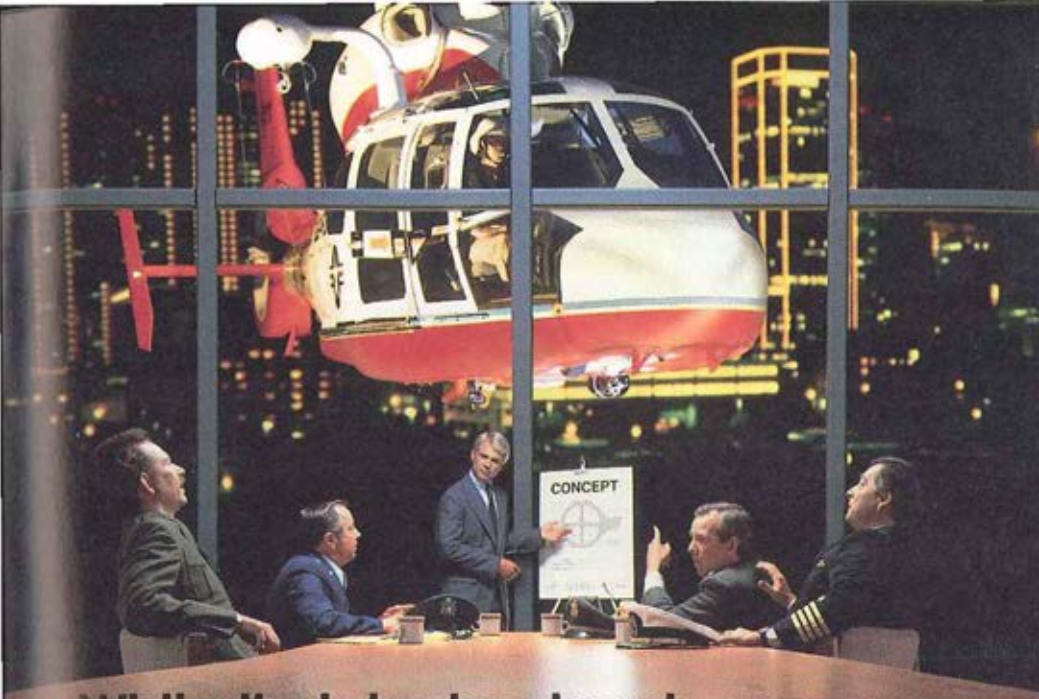
ATC Training at Ft. Chaffee. ARNG **air traffic control (ATC)** detachments upgraded their skills this summer at a special ATC training center operated at Ft. Chaffee, Ark. Personnel from USAAVNS and the 68th ATC Co, Ft. Sill, Okla., assisted.

After a diagnostic evaluation, units received classroom training and operated the 68th's equipment at tactical sites.

In addition to providing ATC services for aviation units at an-

New Facility Underway

MESA, ARIZ. — Construction crews have begun laying the foundation for a new 340,000 square-foot advanced development center for Hughes Helicopters, Inc., which will house all developmental resources for new rotorcraft programs. This is the first major addition in a 1.3 million square-foot expansion project at the APACHE assembly and flight test center.



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For more information contact Paul Domanovsky, Vice President — Programs/Government Requirements, Aerospatiale Helicopter Corporation, 2701 Forum Drive, Grand Prairie, Texas 75053-4005. (214) 641-0000.

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nual training, the ARNG controllers provided all range control deconfliction; many worked live traffic for the first time. This first year's effort was a resounding success and we plan to continue it each summer.

The Citizen Aviation Soldier. He or she is the heart of the program. These dedicated Guardsmen and Army Reservists, in addition to fulfilling requirements for their civilian jobs and service to their community, spend 38 to 50 days annually training with their RC aviation units (often at the expense of family time).

Fifth Army Reserve Component aviation units are responding to these challenges and standing tall. When called upon, they will acquit themselves well as full-fledged members of the combined arms team.

—COL Engle W. Scott
Aviation Officer
Hq, Fifth US Army

The 1st Cav Combat Avn Brigade looks back on a full year

FT. HOOD, TX — Nearly one year has passed since the 1st Cavalry Division formally activated its fourth maneuver brigade: the **Combat Aviation Brigade (CAB).**

The CAB was born out of the Division 86 concept of a Combat Brigade, Air Attack—a unit designed to exploit the speed, mobility, and lethality of the helicopter on the Combined Arms Team, of which Army Aviation is the newest member.

The Brigade was formed with the heritage of the 1st Cavalry Division's former 11th Avn Gp and is currently comprised of the 227th Avn Bn, the 228th Atk Helicopter Bn and the division's reconnaissance squadron, the 1st Squadron, 9th Cavalry.

During the past year, the Brigade has split its attention among force modernization, doctrinal development, and real world missions. Reorganization of the three subordinate battalions under the "J Series" MTOE for force modernization has been challenging and highly disruptive to our training.

However, this is a small price to pay considering the enormous benefit this Division will soon realize by its enhanced warfighting capability.

Colonel Robert A. Goodbary

The most radical change has occurred in the divisional cavalry squadron. The squadron's M60 tanks have been exchanged for the M3 Bradley; the large air troop has been divided into two small air cavalry troops; and one ground troop is now found in the Reserve Components. Much fine tuning remains to determine the best method by which the cavalry squadron trains and organizes for combat.

In addition to the force modernization, the Combat Aviation Brigade has actively participated in several challenging real world missions, including two rotations to the **National Training Center (NTC)** by the 228th Atk Helicopter Bn and deployments by the 227th Avn Bn for the multinational interoperability exercises "GRANADERO I" and "POST-GRANADERO I" conducted in Honduras.

Participation in several command post exercises such as MAN-O-WAR, GOLDEN SABRE, and BORDER STAR has helped to fully integrate the Brigade into the division's overall scheme of maneuver. These CPX's have been instrumental in developing coordination between the Combat Aviation Brigade and the 1st Cavalry Division in areas such as doctrine and tactics, logistical support, and command and control.

Additionally, these exercises have proven that this brigade can support the divisional scheme of maneuver while acting as a complete maneuver force. When given ground attachments, it has demonstrated the capability to successfully accomplish any assigned maneuver brigade-type mission.

Doctrine development has centered around five basic scenarios for which the CAB is ideally suited:

Cover Force, Rear Area Protection, Deep Attack, Pursuit/Exploitation, and the Reserve Force. Each of the contingencies fully exploit the mobility and lethality of the Combat Aviation Brigade as a maneuver force.

Additionally, nearly all other missions can also be accomplished by the CAB if properly task organized with other divisional or corps assets.

The Combat Aviation Brigade was specifically given the mission to find, fix, and destroy enemy forces: to conduct air assaults, aerial logistics, and reconnaissance operations; and provide command and control assets to the division.

The addition of the Combat Aviation Brigade to the 1st Cav Div has been a major step forward for Army Aviation's total integration as a fully capable and highly effective member of the Combined Arms Team.

—COL Robert A. Goodbary
Cdr, CAB, 1st Cav Div

2d Combat Aviation Squadron's combined arms exercises with the 2nd ACR increase

NURNBERG, FRG — The **2d Combat Aviation Squadron (2d CAS)** is the 4th Maneuver

Lieutenant Colonel Daniel J. Petrosky

Squadron of the 2d **Armored Cavalry Regiment (ACR),** located at Feucht Army Airfield.

The CAS has eight Troops, consisting of a H&H Troop, AVUM Troop, Cbt Avn Troop, two Atk Helo Troops, and three Air Cav Troops. It conducts daily combined arms training in the Regiment which routinely uses the 2d CAS to conduct offensive and defensive missions in an economy of force role. The standard cavalry missions of reconnaissance and security are also conducted.

The combined arms nature of an aviation squadron working in an ACR may best be illustrated with a recent example:

D56: "SO3. This is D56 (Air Cav Battle Captain, 2d CAS, 2d ACR). Screen established phase line (PL) Bear."

SO3 (S-3, 2/2 ACR): "D56, SO3. Roger. Out."

D56: "SO3, D56. Spot report. Four BMPs, three T72 tanks. Grid PA530196. Moving west. Time 1415. Observing."

SO3: "D56, SO3. Engage targets. Out."

D56: "SO3, D56. Targets destroyed. Break. Observing main body, enemy recon battalion. Grid PA5502, stationary. Time 1440. Observing."

SO3: "D56, SO3. Line up with CO6 (1st Plt, F Trp, 2/2 ACR) at PA 106541. Move CO6 to PL Bear. Engage targets at your command. You have priority of fire with C Btry, 3/5th FA. A10's are on station. Over.

D56: "SO3, D56. Authenticate SN. Over."

SO3: "D56, SO3. Authenticate R. Over. D56 out."

What's happened here? The Air Cav Battle Captain moves to ground and cavalry leader's location. He briefs the platoon leader — face to face. SCOUTS and COBRAs are still at PL Bear monitoring enemy situation. Platoon leader moves to battle positions in the vicinity of PL Bear. Battle Captain contacts and coordinates A-10's, Field Artillery, Tank Platoon, and COBRA fires to destroy the enemy.

Sounds farfetched? Could an Aviation Battle Captain take charge of ground and air assets? It's happening in the 2d ACR. Combined Arms Training has been successful at Range 30I, Grafenwoehr. It would be successful in war north of Bayreuth, Germany. The only required ingredient is to train realistically as you would fight in war. The assets are available and the Commanders are motivated and enthusiastic to train, implement, integrate a new combat arm: Aviation.

In the 2d CAS, 2d ACR, the effort is oriented toward integrating the operations and training of Army Aviation assets with those of the Regiment's ACRs. The method of integration is best described as habitual association of the three J-series ACTs with the three ACSs.

As an example, Delta Troop, 2d CAS, is habitually associated with 2/2 Squadron, Bamberg. 2/2 Squadron is responsible for continuous ground surveillance while Delta Troop, 2d CAS, is responsible for daily aerial surveillance. Significant training and better border surveillance is accomplished through frequent interaction.

In the case of D Trp, 2d CAS, and 2/2 Cav, the Armored Cavalry Squadron Commander, S-3, and the Air Cav Troop Commander know each other and are becoming increasingly familiar with the employment and integration of aviation and ground assets. Because of this habitual association, the three are getting better at using Army Aviation.

But, it doesn't stop there. The training trickles down to all soldiers. Air Cav assets are available daily to the ground Cav Troop Commander. Combined Arms exercises for both the J-series Air Cav and ground Cav Troops occupying the border have increased.

These exercises last from three to five days. In some cases, SCOUT-COBRA teams are under an Aviation Lieutenant and are OPCON to the ground Cav Squadron Commander. In other cases, the Air Cav Troop Commander and the ground Cav Troop Commander work side-by-side learning from each other while coming up with new ideas and methods to more effectively integrate Aviation and ground Cavalry.

As we learned in the '70's, shifting from pure units to Tank and Infantry teams and task forces required training. Alongside Armor and Infantry, Aviation is the other direct fire combat arms branch. Integration is essential and can be accomplished through training.

—LTC Daniel J. Petrosky
Cdr, 2d CAS, 2d ACR

The 24th CAB's mixed bag has an FTX, NVG, XM-40, and Honduras

HUNTER ARMY AIRFIELD, GA- Greetings from the 24th Combat Aviation Battalion! We're excited about this opportunity to share what's going on in the combat aviation community.

Photo not Received by Press Time

Captain Michael L. McGary

We'd like to introduce you to our battalion, discuss some significant activities the battalion has accomplished in the past year, and describe some upcoming events.

The mission of the 24th Combat Aviation Battalion is to provide aviation support for the division headquarters and other divisional units in support of tactical operations. It's comprised of an HHC, an Atk Helicopter Co (AH-1S MC), a Combat Support Avn Co (UH-60), a Div Avn Co and a Trans Acrft Maint Co.

Throughout the past year, the battalion has been involved in many and varied activities. Some of these events have been routine and others are unique to the battalion. Because our division is the heavy element of the **Rapid Deployment Force (RDF)** much of our training involves Emergency Deployment Readiness Exercises.

The 24th Combat Aviation Battalion is located at Hunter AAF in historic Savannah, Ga. This city, being a major port in the Southeastern U.S., serves as an optimum stepping stone for deployments. The 24th Inf Div (M) annually deploys each of its two brigades with appropriate support elements to the **National Training Center (NTC).**

The NTC affords us a great opportunity to train our attack, combat support, and general aviation units in a desert environment. Deployment is normally by rail/air, but in some cases, such as last year's GALLANT EAGLE JRX, the deployment was by rail, air, **and** sea. The NTC deployments are undoubtedly the most challenging and rewarding training we undertake and they contribute significantly to our combat readiness.

The division annually hosts an FTX at Ft. Stewart known as QUICK THRUST. Because aviation units from the 101st Abn Div (AASLT) and the 82d Abn Div participate in this FTX, different tactics and techniques are shared. Integrated aviation operations have often been planned and executed.

Additional field training for our battalion is much like other units. Internal battalion and company level FTX's, coupled with supporting the divisional units' training, keep us busy the entire year.

Of rather unique nature, the battalion participated in three separate Operational Tests, the most noteworthy being the XM-40 OT II (Protective Mask). During this test, which lasted from February to June, we flew under masked conditions 950 sorties (721 hours), fired a substantial amount of AH-1 ammunition, and accomplished 130 flight hours under Night Vision Goggle conditions.

Ongoing is the Operational Test for the **Transportable Helicopter Enclosure (THE).**

The most vital exercise of the year was the general aviation support of **Joint Task Force Bravo** in Honduras from March to June. The General Support Aviation Company formed the nucleus of the aviation company task force accompanied by elements of the 2/10th Cav from Ft. Ord and other support elements of the 24th, 101st, and 82d Divisions.

The aviation company task force flew over 2,500 hours of mission support. The more notable missions were for **Vice President George Bush,** the Secretary of the Army, the Chairman of the Joint Chiefs of Staff, several Ambassadors, and dozens of Congressmen and Senators.

Other missions included search and rescue operations, airmobile insertions, and extractions, rappelling, stabo, medical evacuations, and ship landings. For the aviators, the environment was much different from Ft. Stewart and very demanding with mountain flying, high density altitude, and adverse wind conditions being the norm.

In addition to the flying, the maintenance and other logistic support proved to be an equal challenge. Aircraft were maintained to consistently meet flying hour requirements twice that of current FORSCOM experience.

About a year from now our battalion will convert to a Combat Aviation Brigade. We're excited about this transformation for many reasons.

First to Fly!

—CPT Michael L. McGary
HHC, 24th Combat Avn Bn

Reunion

The 116th Assault Helicopter Company Gunship Platoon (known as the STINGERS), is having its first unit reunion, March 7-9, 1986, in Las Vegas, Nev. All company members are invited. Contact George Cathey, 5817 #2 E. Berry Street, Ft. Worth, TX 76119. Phone (817) 457-7365 (day); (817) 737-9651 (night).

Personnel

The Warrant Officer Corps: going strong with a bright future!

ALEXANDRIA, VA. — After four months on the job I am pleased to have the opportunity to briefly share with you my assessment of the Warrant Officer Corps and my view on the direction we are going.

First, I am tremendously impressed with the individual warrant officers with whom I come in contact. My visits to the field and the many records I review reinforce my belief that warrant officers are a highly professional, dedicated group that is making a significant contribution to the Army.

Lieutenant Colonel Joel H. Hinson

My assessment of the Corps in general is that it is in excellent shape. In the November, 1984, issue of **Army Aviation**, my predecessor, Colonel Bunting, explained the challenge of recent years to develop plans to first overcome severe shortages, then adjust those plans to meet budgetary constraints.

The success of those efforts permits me to predict ending FY 1985 within one percent of our **Budgeted End Strength (BES)**, the budgetary limit imposed by Congress.

I recognize that all TOE/TDA authorizations are not filled, but from a management perspective 100% of mandated BES is the best we can achieve. Meeting the "numbers" objective, in place military and civilian training, and education programs, and individual and collective professionalism lead me to conclude that we have a strong Warrant Officer Corps — strong in number, in competence, in commitment, and strong in contribution.

Several factors cause me to see a very bright future for the Corps. The authorization documents for the Army of Excellence and beyond reveal growing requirements for warrant officers. This reflects the confidence of the Army leadership in warrant officers' ability to operate, maintain, and manage the Army's increasing complex equipment, support activities, and technical systems.

Unfortunately, the predicted BES does not keep pace with requirements. At this point there is no final resolution to that problem, but I can assure you distribution of assets will have the clear purpose of achieivng what is best for the Army.

General Wickham's recent decisions resulting from the very fine work of the Total Warrant Officer Study Group shows great promise for the Warrant Officer Corps. It is a slow process to obtain and implement legislative and policy changes, but anticipated changes such as management by warrant officer service, mandatory RA integration, coding of TOE/TDA positions by rank, and refinement of the WO training system will result in improved management and an even stronger Corps.

My assessment and outlook certainly pertain to the aviation segment of the Warrant Officer Corps. Aviation has been an important part of the Army for decades and the **Aviation Warrant Officer (AWO)** has been its backbone. Doctrinal, organizational and equipment developments such as Combat Aviation Brigades, APACHE, and AHIP indicate increasing aviation responsibilities for the preparedness of the Army. And the contributions of the AWO will continue to be crucial to successfully meeting those responsibilities.

In summary, I see a strong Warrant Officer Corps in place with increasing requirements for the future. We in Warrant Officer Division pledge our best effort in fulfilling our responsibilities to this essential segment of the military population.

— LTC (P) Joel H. Hinson
Chief, Warrant Officer Division, MILPERCEN

RTL Name Changes

MOFFET FIELD, CALIF. — The U.S. Army Research and Technology Laboratories (RTL) located at the NASA Ames Research Center has changed its name to become the U.S. Army Research and Technology Activity (ARTA).

Four subordinate research units of the Activity have also undergone name changes: the Aeromechanics Laboratory at Ames is now the Aeroflightdynamics Directorate; the Propulsion Laboratory at NASA Lewis in Cleveland, Ohio, is now the Propulsion Directorate; the Structures Laboratory at NASA Langley, Hampton, Va., is now the Aerostructures Directorate; and the Applied Technology Laboratory at Ft. Eustis, Va., is now the Applied Technology Directorate.

ARTA is the research arm of the USA Aviation Systems Command.

R & D

ODCSRDA: Making technology flow out of exploratory R & D

WASHINGTON, D.C. — The Army's aviation technology base of universities, laboratories, and in-

Colonel John E. Kempster

dustry has been vigorously pursuing new materials, concepts, and technologies to provide the Army with the ability to capitalize on breakthroughs and scientific discoveries to insert into existing systems or for leap-ahead systems in a timely manner.

The Army has recently been devoting considerable time and personnel to make technology flow out of exploratory development into demonstration programs and ultimately into new systems. Some recent examples of technology transferred out of exploratory development include:

the advanced composite rotor hub which transitioned to a technology demonstration program following extensive lab and industry testing to include radar cross section evaluations, repairability, static stress surveys, etc.;

the completion of an advanced technology helicopter landing gear preliminary design which will influence the landing gear requirements for the LHX; and

the UH-60 wire strike protection system tests which provided the necessary data to support a product improvement for incorporation of wire cutters on the UH-60.

There are many on-going technology demonstrations which involve lab and contractor personnel:

- The **Advanced Digital/Optical Flight Control System (ADOCS)** is a component technology development and flight demonstration program scheduled for completion in FY 87. Its objective is to increase mission effectiveness and reduce crew workload while reducing life cycle costs, and improve survivability and reliability.
- The **Modern Technology Demonstrator Engine (MTDE),** scheduled for completion in FY 86, is a 5,000 SHP class turboshaft engine. Its design is based on modern technology considering all engine design factors, such as reliability, availability, maintainability, cost, weight, performance, and configuration. It could also have multi-service use as a turboprop version.
- The **Advanced Composite Airframe Program (ACAP),** scheduled for completion this fiscal year, is designed to demonstrate improvements in airframe performance and capability utilizing advanced materials and structural design concepts. This will enable industry to establish confidence in primary airframe structures which could reduce airframe production costs 17% and save 22% in airframe structural weight.
- An **Integrated Communication Navigation Identification Avionics (ICNIA)** program being worked jointly with the Air Force will develop a capability to replace dedicated **communication, navigation, and identification (CNI)** equipment by making use of common modules, time sharing and advanced technologies such as **Very High Speed Integrated Circuits (VHSIC).**

The ICNIA program has the potential to reduce CNI component size by 49%, weight by 41%, and cost by 63% over current methods of performing those functions. The **Helicopter Battle Damage Repair (HBDR)** program will result in kits and special tools for battle-damaged aircraft structures, fluid lines, and electrical lines emphasizing diagnostics/inspection/repair to improve aircraft readiness and sortie rates.

Today's Army Aviator has seen the fruits of the tech base labors of yesterday incorporated in the modern technology of the BLACK HAWK and the APACHE.

Tomorrow's crews will see similar quantum jumps in the capabilities, realiability, maintainability, and survivability of their aircraft as we push technology through the development cycle and into hardware.

—COL John E. Kempster
(Former) Acting Director
Army R&T, ODCSDRA

Delivery

FT. WORTH, TX—Deliveries of an improved tail rotor configuration kit to the US Army for OH-58A and OH-58C helicopters began last month. The Army placed orders for the kit following extensive investigation by a Joint Special Study Group to identify and isolate a phenomenon — associated with single rotor helicopters — that the Army had characterized as "Loss of Tail Rotor Effectiveness (LTE)".

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Reserve Components

The National Guard Bureau: 'Burning the Midnight Oil'

ABERDEEN PG, MD. — The Aviation Division, **National Guard Bureau (NGB)** is burning a lot of "midnight oil" coming to grips with force modernization, force integration, aviation branch implementation, flying hour allocation, combined arms training, total package fielding, single station fielding and special operations — just as are the aviation offices in other MACOMs and staff agencies.

In the Army National Guard it's necessary to make the aviation force structure fit existing assets. Aviation facilities, once constructed, are sunk costs and expensive. Trained personnel cannot be transferred from state to state. The recruiting apparatus is in place, is producing, and is expensive to reconstruct.

The ARNG Aviation Program received a significant impetus in the early 1970's with the receipt of aviation equipment being returned from Vietnam. An energetic recruiting campaign was conducted among aviation personnel trained during that period. Since then we have seen significant achievements in individual aviator proficiency, aircraft maintenance, operational readiness, logistical support, and unit readiness.

ARNG anti-armor capability has become a reality with the redistribution of AH-1S modified and fully modernized COBRAs. As a result, ARNG aviation units have become increasingly compatible with their active component counterpart.

The ARNG aviation program constitutes approximately one third of the total Army Aviation force. The ten divisional and four armored cavalry regiment aviation organizations and other AOE design organizations contain the core of the Guard's 2,545 aircraft and 5,100 aviators.

The location of ARNG aviation support facilities in the population centers of each state provides a solid base that has provided a seasoned cadre of trainers and maintainers who consistently operate year round in the diverse geography and weather of the 50 states, District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

John J. Stanko

The retention rate of ARNG personnel who have attended initial entry flight training is over 87% after 10 years, a remarkable percentage which amortizes the high cost of producing an aviator. With over 50% of the Guard's aviator population possessing 11-15 years of service this force can make a significant contribution toward accomplishing the Army's Air-Land Battle mission in whatever structure the Army develops.

In 1983, we began working on a plan to reorganize the entire ARNG Aviation Force Structure to the new Army of Excellence design, which has been approved by the Vice Chief of Staff Army and the states with minor changes. A phased reorganization begins with the conversion of existing ARCSA III aviation battalions of the 40th, 49th, and 50th divisions, and activation of **Combat Aviation Brigades (CAB)** in the 29th and 35th divisions and two ACRs receiving **Regimental Combat Aviation Squadrons (RCAS)** in FY 86. CABs optimize employment of aviation assets and may vary slightly depending on the division to which they are assigned.

Phase II occurs during FY 87-88 and converts the remaining five Infantry Division Aviation Battalions to the AOE Combat Aviation Brigade design. The ARNG Infantry Division base and maneuver brigades are not programmed to convert to the Light Infantry Division design.

The reorganization of the divisional Combat Aviation Battalions to AOE Combat Aviation Brigades will accomplish the following:

- It generates in large part the spaces and airframes necessary to form the corps aviation organizations.
- It minimizes personnel turbulance thru maximum utilization of existing investment in trained personnel and facilities.
- It provides the ARNG with over 30% of the Total Army AOE aviation force structure against which modernized equipment can be fielded.

In future reports I'll address force modernization, new training initiatives, solutions to the problem of aging aviators, and APACHEs in the Army National Guard aviation program.

— John J. Stanko, Jr.
Chief, Aviation Division
National Guard Bureau

Safety

The grounding and the release of Army aircraft

FT. RUCKER, ALA.—In 1982, **General John A. Wickham, Jr.,** then VCSA, directed formation of a DA-level **Crisis Action Team (CAT).** The team includes members from ODCSRDA, ODCSOPS, ODCSLOG, and the **Army Safety Center (USASC).**

Headed by the Director of Army Safety, the CAT meets when there is a system crisis (predominantly aircraft) to make recommendations to the CSA and VCSA. During 1985, the CAT has recommended grounding of the UH-60 BLACK HAWK and CH-47D CHINOOK aircraft.

The CAT crosses all DA staff lines in its deliberations and discusses its concerns with agencies such as AVSCOM and the **Army Aviation Center (USAAVNC)** before making a recommendation to ground aircraft. Because of the importance of maintaining aircraft system credibility, DA PAO handles all media releases for the CAT.

Grounding—On July 12, 1985, a revision of AR 95-18 made the **Aviation Systems Command (AVSCOM)** responsible for issuing all **safety-of-flight (SOF)** messages. However, ODCSLOG must authorize release of all SOF messages that ground aircraft.

In addition to grounding aircraft, SOF messages report any defect or hazardous condition, actual or potential, that can cause personal injury or damage to aircraft, components, or repair parts. These messages may also authorize immediate use of technical changes to publications pending receipt of a DA-authenticated change.

- **Emergency messages** are used for grounding purposes only. An emergency message immediately grounds a fleet or part of a fleet of aircraft when a hazardous condition exists that has the potential to cause a catastrophic accident resulting in injury or death of personnel or damage or destruction of aircraft. They are followed by another message, such as an urgent modification work order or an urgent technical bulletin.
- **Operational messages** may ground an aircraft for reasons other than emergency including flight procedures, operating limitations, or operational policy.
- **Technical messages** may ground aircraft for materiel or noncatastrophic conditions.

Before an aircraft system is accepted by the Army, the project manager or materiel developer is responsible for aircraft flight safety. On the date of initial operating capability of the system, responsibility shifts to AVSCOM.

When an unsafe condition or practice is discovered in an aircraft component, repair part, or technical publication, the responsible commander notifies AVSCOM and USASC.

When a safety-of-flight condition is discovered, AVSCOM coordinates with USASC, USAAVNC, AMC, and ODCSLOG by telephone before issuing a message. Aircraft system managers at USASC work closely with AVSCOM on the content of SOF messages.

AVSCOM sends SOF messages to all major Army commands, the National Guard Bureau, and other Army activities. These organizations then notify their field units and furnish operating instructions to ensure compliance with the message.

Colonel Terence M. Henry

Some SOF messages that ground aircraft include actions to be taken and automatically release the aircraft once those actions have been completed. When the initial message does not contain corrective actions or instructions for release, AVSCOM issues followup instructions for release, AVSCOM issues followup instructions or authorizes a waiver.

The AVSCOM commander may approve one-time flight of grounded aircraft to repair facilities. MACOM commanders may authorize a temporary exception to SOF message requirements when combat operations or a matter of life or death in civil diasters or other emergencies are so urgent that they override the consequences of continued aircraft operations.

— COL Terence M. Henry
Deputy Director of Army Safety and Commander of the U.S. Army Safety Center, Ft. Rucker, Ala.

Survivability

ASE-PMO: "We're sending ASET I to many aviation units"

ST. LOUIS, MO — Fieldings of **Aircraft Survivability Equipment (ASE)** during the last 12 months have significantly multiplied the combat capability of the Army Aviation forces.

Worldwide deployment of the AN/ALQ-136 Radar Jammer has rounded out the protection suite on many COBRAs. Forward-deployed CH-47 CHINOOKs have been equipped with the AN/ALQ-156 Missile Detector that automatically triggers the M-130 General Purpose Dispenser to fire flares to decoy approaching enemy missiles.

Colonel Curtis J. Herrick, Jr.

The characteristics of the aircraft, the capabilities of the onboard equipment, and the skills of the pilot are combined to achieve combat effectiveness. We have to think and do more about helping to prepare the pilot for his combat missions so that he can optimize the capability of his equipment.

Army Aviation will need proven tactics and realistic training that builds and maintains our proficiency to the level of experienced combat pilots. We must carefully secure the techniques from the enemy that give us an edge in battle and practice our aviation tactics as we expect to fight against realistic threats.

Experience has shown that possessing better equipment alone is not enough to win battles. Proper tactics and knowledge of the enemy are essential.

This July, in response to this need for recognized training goals of better aviation tactics and ASE training, the Aviation Center and the ASE Project Office sent an **ASE Trainer (ASET I)** to many aviation units.

The purpose of ASET I is to provide needed training on a quick reaction basis and to obtain feedback to develop a follow-on laser and floppy disc computer system that is to be placed in each company. Aviators are to use the classified ASET I software package with the MICROFIX hardware in a cooperative time share arrangement with their supporting intelligence units.

The floppy disc based training program provides information on threat operation, ASE equipment, Army Aviation, and ASE tactics. A laser video disc augments this training with still pictures, sound, and motion sequence. Unit trainers have been sent instructions to assist in the implementation of this training.

The responsibility for improving our battle capabilities is with all of us. As a materiel developer at AVSCOM, the ASE Project Office will continue to work with the Aviation Center to improve Army Aviation tactics and ASE operations and training. We look forward to your feedback from the field concerning ASET I.

—COL Curtis J. Herrick, Jr.
Project Manager-ASE

Registration to Close for the Third AAAA ASE Symposium

Registration for the Third Annual **Aircraft Survivability Equipment (ASE)** Symposium sponsored by the **Army Aviation Association of America (AAAA)**, in cooperation with its industry member firms, will close on Monday, October 14, 1985.

The symposium will be hosted by **Sanders Associates, Inc.**, in Nashua, N.H., on November 12-13, 1985. The previous symposia in 1983 and 1984 were hosted by **Loral Electronics** and **E-Systems, Inc.**, respectively.

Brig. Gen. Rudolph Ostovich, III, Assistant Commandant, USAAVNC, will be the keynote speaker at the two-day conference; **Brig. Gen. Wayne Knudson,** Deputy Director of Requirements, ODCSOPS, DA, is expected to be the Symposium's dinner speaker.

The 1985 ASE gathering, which will explore "Modern ASE for Operations into Enemy Lines and against Hybrid Weapon Systems with Sensor Fusion", is open to all interested AAAA members who possess the appropriate level security clearance.

Registration / hotel details may be secured by contacting **Lynn Coakley** at the AAAA National Office, 1 Crestwood Road, Westport, Conn. 06880, if you would like any additional information. Telephone: (203) 226-8184.

Test & Evaluation

OTEA has a heavy involvement in many coming aviation tests

FALLS CHURCH, VA. — Since this is the first activity report from the USA **Operational Test and Evaluation Agency (OTEA)** to the AAAA membership, I'd like to briefly explain OTEA's mission and organization with respect to Army Aviation.

Colonel Pierre V. Brunelle

OTEA is a field operating agency reporting directly to the **Vice Chief of Staff of the Army (VCSA)** with the mission to support the materiel acquisition process by managing the Army's **Continuous Comprehensive Evaluation (C²E)** process and user testing programs. C²E was discussed in detail in an article by **MG William G.T. Tuttle,** the CG of OTEA, in the June 30 issue.

Essentially, selected major systems are subjected to a broader, more inclusive evaluation that assesses the system throughout the entire acquisition process, continually reviewing and frequently reporting system status to the decision makers. Additionally, the VCSA has directed OTEA to keep him informed on the major deficiencies and the status of corrective actions taken to resolve them on major systems and **designated acquisition programs (DAP).**

The Chief of the Aviation Systems Evaluation Division acts as the principal OTEA spokesman and point of contact for major and DAP aviation systems. Test and evaluation activities of major and DAP aviation systems are conducted by this Division and by the Test Division within OTEA. Agency efforts concerning non-major aviation systems are coordinated by OTEA's Combat Support and Non-major Systems Division.

Through interactive membership in system task forces, the support divisions within OTEA provide automatic data processing support, document test and evaluation policy, coordinate test resources and provide administrative support.

We recently completed the **Operational Test (OT)** II for the **Army Helicopter Improvement Program (AHIP)** in mid-February 1985 after five and one-half months of on site training and testing at Ft. Hunter-Liggett, Calif. Nearly all the OTEA divisions assisted in the planning and execution of the test which was conducted by the Combat Development Experimentation Center.

My evaluator for the AHIP, **LTC Bill Wallace,** briefed the results of the AHIP OT II to the **Army System Acquisition Review Council (ASARC)** on July 23. Since the completion of OT II the AHIP will be under the C²E concept of evaluation which will continue through to fielding and beyond, if necessary.

We're presently developing a plan with DA and TRADOC for an **Attack Helicopter Battalion (AHB) Force Development Test and Experimentation (FDTE)** tentatively scheduled to be conducted in Gagetown, Canada in late FY 87. This test is intended to provide the Army a clear assessment of the way we will put together the AHB as a system.

The test will be designed to address such issues as tactics and doctrine, adequacy of training, hardware performance, and supportability.

In the June 30 article by **MG Tuttle** the concept of C²E and how it applies to the LHX program was described. We're still very actively involved in the LHX program having recently completed our review of the RAM Rationale Report and the **Letter of Agreement (LOA).** We expect to attend the first **Test Integration Working Group (TIWG)** in August.

A recent initiative which we wholeheartedly support is a proposal to identify an operational unit to act as the LHX early operational capabilities unit. The unit designated would act as a source of operational expertise and manpower to assist in the timely development of the LHX. It would also provide early input from typical user troops for assessments involving mockups, simulators, surrogates, prototypes and tactics.

These assessments, conducted early in the development, would provide for the early identification of problems and their resolution before operational test.

—COL Pierre V. Brunelle
Chief, Avn Sys Evaluation Div
USA OTEA

NEXT MONTH – The BLUE BOOK
2nd annual worldwide directory of units, offices, and agencies in U.S. Army Aviation.

Training

SFTS: The more one has – the more one wants to have . .

ORLANDO, FLA — On this, the occasion of the first issue of **Army Aviation** in its new format, it seems appropriate to briefly chronicle the history of the **Synthetic Flight Training System (SFTS).**

All Army Aviators are intimately familiar with the UH-1 Flight Simulator which, incidentally, only recently surpassed one million hours of training utilization at Ft. Rucker. Many people consider this simulator as "the" SFTS although it really is only one of several subsystems comprising SFTS.

Lieutenant Colonel Michael F. McGaugh

The prototype UH-1 **Flight Simulator (FS),** which was delivered to Ft. Rucker, AL, in March 1971, was the first true helicopter simulator ever produced. Its resounding success during operational testing proved that helicopter simulators could be an effective and efficient adjunct to the all-important task of aviator training and opened the way for development of simulators for more complex aircraft. A total of 22 of these simulators are now in use by the Army worldwide.

Development of the CH-47 and AH-1 Flight Simulators expanded upon the technology achieved by the UH-1 FS through the addition of visual systems for contact flight maneuvers and, in the case of the COBRA, addition of weapons simulation.

Each of these systems, like the initial UH-1 FS, demonstrated a high transfer of training ratio and a significant reduction in the cost of training.

The next simulator development (BLACK HAWK) had as major objectives the delivery of the simulator early in the life cycle of the design basis aircraft and a determination of the ability of computer generated imagery visual systems to support aviator training. The contract for the UH60 simulators was actually awarded before selection of the aircraft manufacturer was made.

Additionally, two cockpits were procured; one equipped with a television camera/model board visual system similiar to that used on the early CH-47 and AH-1 simulators, and the other equipped with a first generation computer-generated visual system. Test results showed that the computer-generated visual system supported flight training equally as well as the conventional camera system.

Based upon this finding, the sixteen production units of the BLACK HAWK simulator will all be fielded with current technology computer-generated visual systems. Benefits include lower maintenance costs, shorter manufacturing lead times, lower facility costs, and a larger tactical gaming area.

The success of the computer-generated imagery visual system test in the BLACK HAWK simulator enabled the Army to accept the enormous challenge of developing a combat mission simulator for the AH-64. For the APACHE, the requirement was not only to provide a realistic out the window scene but also to provide visual scenes for all the on-board sensors.

Two of the major tasks were the development of a data base to provide terrain and tactical cues that would enable the APACHE crew to successfully employ all of the on-board aircraft capabilities in a (simulated) hostile environment and timely fielding of simulators to support training at Ft. Rucker and in the field.

The prototype APACHE simulator is currently undergoing preliminary pilot evaluation in preparation for Government acceptance testing and initiation of transition training. Meanwhile, manufacture of six production units is underway with delivery in the field scheduled to meld with delivery of the aircraft.

Because technology and training requirements have changed so radically since the SFTS training device requirement was written the decision has been made to retire the document. In its place a separate requirement document will be written as the need for each new simulator arises.

In retrospect, both the SFTS requirement document and the simulators that have resulted from its implementation stand as a tribute to those who saw the need for a better way of training and who had the courage to challenge technology to achieve their goal.

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APO SF 96224
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AAAA Overview

Briefs

Responding to the many requests made by its industry members who attended the 1985 National Convention in St. Louis, the AAAA National Board voted to:

(1) **increase** the 1986 National Convention **exhibit hall time** by 80% (from 10:30 hours to 18:30 hours), and

(2) provide attendees with the **option** of attending the exhibit hall during approximately half of the time devoted to professional sessions.

The action was taken on the basis of the post-Convention survey returns received from a large number of attending industry members.

A preponderance of the 400+ questionnaires returned by **both** military and industry 1985 Convention attendees called for a **shorter** Awards Banquet Program, and the Board's action in revising the function is covered in the adjoining column.

In a separate action, the Board also approved a proposal of the Awards Committee to present annual "Outstanding Aviation Unit Awards" to **both** the Army National Guard **and** the United States Army Reserve, effective with the 1986 National Awards Banquet.

The **Avco Lycoming Division,** sponsor of the earlier "Outstanding Reserve Component Aviation Unit Award," has agreed to sponsor each of the awards.

Name Change

With the recent reorganization of the Combat Aviation Squadron into the 11th Combat Aviation Squadron, the members of the **Fulda Chapter** have changed the name of their Chapter to "**Thunderhorse Chapter,**" effective July 22.

New Chapter on the way

AAAA members residing in the

New National Awards Procedures

At its June 29 Business Meeting, AAAA's National Executive Board approved procedures wherein the presentation of the Assn's **individual** national awards (Aviator, Soldier, DAC, Safety Awardee) will be made at a luncheon held on the Friday of Convention Week, and the presentation of the Army, ARNG, **and** USAR Outstanding Aviation Unit Awards will be made at a Saturday night banquet.

At the same time, the Board approved the presentation of the "Robert M. Leich Special Award", heretofore solely presented to **units,** to both units **and** individuals. Under the revised Banquet program, all national awardees — individual and unit — will be seated at the head table but the shortened Banquet program will only concern itself with unit award presentations and a 15- to 20-minute address by a senior Army commander.

Recognition of Accomplishment

Starting October 1, the Association will underwrite complimentary one-year memberships for a Chapter-chosen **"Aviation Soldier of the Month" (or Quarter) (or Year).**

Chapter Awards

Effective with the '86 Convention, the National AAAA's Board approved the presentation of **7' x 7' four-color AAAA felt banners** to CY 85's "Outstanding Chapter" and "USAREUR's Outstanding Chapter. At the same time, the National Office was instructed to provide each Chapter that has met in each quarter of CY 1985 with an individual 30-inch, four color masonite **lectern seal,** or to provide the same seal upon a Chapter's conduct of four consecutive quarterly meetings during CY 85-86. Hook: locally-publicized meetings do not qualify; "qualified" meetings are those publicized by National Office meeting notice distribution.

Speaker Support

Effective with the October-December membership quarter, the National Office will provide a Chapter with a **"courtesy" underwrite** of $12.50 for each AAAA professional meeting, other than a joint meeting, at which a speaker addresses its membership. This refund is intended to cover the AAAA guest speaker's **"luncheon/dinner" tab.**

New Nat'l Member-at-Large

Completing AAAA's slate of twelve National Members-at-Large serving on the National Board is **CW4 James T. "Ted" Hall (left),** a career management specialist assigned to Ft. Campbell, Ky. Appointed in July, **Hall** plans to participate in the Board's October 15 business meeting in Washington, D.C.

CSM Tilden R. Kirkland, the new command sergeant major at the Aviation Center and Ft. Rucker, has been appointed by **President Putnam** as an AAAA National Member-at-Large, replacing **CSM Roger W. Putnam** (right), who retired August 20 at USAAVNC ceremonies. Born and raised in Enterprise, Ala., **Kirkland** returns to Ft. Rucker from the position of Command Sergeant Major of the 17th Combat Aviation Group in Korea. Welcome aboard!

Mark your calendar!

The 27th **AAAA National Convention** will be held April 10-13, 1986, in Atlanta. Full Convention details will appear in next month's issue.

AAAA In Box

Over the top!

Dear General Putnam:

I have just learned of the generous $40,000 contribution by the AAAA to the **Army Aviation Museum Foundation.** This is a great contribution which should put us "over the top" in terms of paying for the first section of Phase 1.

As you may know, the plans for construction have been submitted and were endorsed by TRADOC to DA within the last month recommending approval. I cannot tell you how proud I am of you and AAAA for this vital addition to the financial resources required.

James O. Townsend, Treasurer
Army Aviation Museum Foundation
Fort Rucker, Ala.

Joint Meeting

Dear General Putnam:

Thank you for taking the time as AAAA President to travel to St. Louis to speak to us at our **Third Annual Meeting.** Your presentation concerning the AAAA was informative and challenging.

At our business meeting, we discussed your offer to have the **U.S. Army Black Aviators Association (USABAA)** and AAAA meet jointly at your next Annual Meeting (in Atlanta). Our members voted unanimously to support that idea with the understanding that our separate identities will be preserved. I sincerely hope that those members who are not now members of AAAA will join up in the near future.

Again, our warm thanks for your participation in our meeting. It was most heartwarming.

Lt. Colonel Charles H. Drummond, Jr., Ret.
President, USABAA
Carmel, Calif.

Planning ahead

To AAAA Members Everywhere:

An "open letter" to invite you to attend our **USAREUR Region—AAAA Aviation Ball** this November 9 at the Heidelberg Officers' and Civilians' Club. We've decided to make the ball the traditional "slate changeover" date for the changes in our Regional Executive Board. We've invited **Major General Ellis D. Parker** to be our guest speaker at the Ball, and we usually have around 1,000 people attend.

The **USAREUR Region's 1986 Convention** will be held at Garmisch during March 15-23 (professional program is March 20-23) and should be the best ever. Your National President has indicated he plans to attend, and we're delighted.

The theme for the 1986 gathering is "**Training and Tactics.**" We're contracting for a new convention hall which will allow the main program to be held in the main auditorium while a special program oriented on enlisted interests will occur in a second auditorium. In addition, a third room will contain the spouses' program and several small rooms will be used for the MILPERCEN Officer and Enlisted Interviews.

There are numerous nice areas for industry displays around all of the convention rooms -all under the same roof in a very classy facility. We look forward to having more industry displays under these arrangements as they are very popular with our attendees . . Everything considered, we've made major changes, each keyed to making our March, 1986 gathering a new and unique one. Come see us!

Colonel Robert S. Frix, President
USAREUR Region—AAAA
APO New York 09457

Greater Mesa Area of Arizona have petitioned the National Office to activate a Chapter, the geographical area of which will be the State of Arizona.

A "**Grand Canyon Chapter**" based at Ft. Huachuca represented the entire state during the best part of the '70's prior to its deactivation. The five petitioners ("Chargers") included Roger Gould; Jesse Leonard, LTC Robert Merrill, Ret., Laverne Foreman, and MAJ Lyle Monson.

New Chapter Officers

Stuttgart Chapter—LTC Danny Rhodes (Pres), CW4 Victor Rose (SrVP), CW3 Rene Meyndt (Sec), 1SG Herman Harper (Trea), 1LT Reynold Jordan (VP-Memb), SFC Lloyd Davison (VP-Prog), 1LT Patricia Vinson (VP-Publ), SSG Douglas Dunks (VP-at-Large).

Colonial Virginia Chapter—CW3 Charles Brady (VP-Memb),COL Emmett Knight, Ret.(VP-Ret), CPT Joe McKeon (VP-Student Aff), CPT Richard Hatch (VP-JO Aff), SFC Michael McEntee (VP-Enl Aff).

Ft. Hood Chapter—CPT Michael Miller (Trea), LTC Paul Hollowell (VP-Memb), LTC Dennis Cross (VP-Prog).

34 Members qualify as new "Aces"

Thirty-four AAAA members have joined the organization's "**Aces' Club**" in recent months. Each has since been sent a hand-lettered Certificate attesting to their having met the qualifications for membership in this aviation-oriented organization (See details on page 62).

Jo Ann Bridges.....Debbie Elmore
Robert Budd, Jr.....Betty Bryant
Lee Berry, III.....Vicki Faries
Margaret Mikulec.Sharon Rob'tson
Freddy Puckett.....Ramoro Saenz
Norman Holland.....Dewey Estes
Norba Painter.....Nolan Horton
Leo Botello.....Phillip Ridings
Isaiah Langford.....Ronald Kaba
William Angle.....Michael McMillion
Donald Rymer.....Barry Panza
Rudy Kintana, Jr....Rudy Escamilla
Eugene Klaus.....Theodore Naylor
O'Neill Quinlan.....Joe Maus
Thomas Walker.....Bill Fowler
Jimmie Thomas.....Stuart Dodge
David Hudzik.....Joyce Smith

Applicants for 1986 Scholarship Awards sought by the AAAA

$13,000.00 available for 1986 College-Entry Applicants

The AAAA Scholarship Foundation, a separate non-profit educational activity created to provide scholarship aid to the sons and daughters of AAAA members and deceased members, announces the availability of $13,000 in assistance funds for the 1986 college-entry year.

Award Philosophy

Operating on the premise that ample scholarship assistance is available to those in need, the AAAA National Scholarships are awarded primarily on the basis of academic merit and personal achievement. The AAAA seeks to honor those outstanding students whose well-rounded secondary school activities indicate solid career potential.

Application Procedure

Student-applicants are asked to request the appropriate application forms by writing to the AAAA Scholarship Foundation at 1 Crestwood Road, Westport, CT 06880. Requests for applications must be received on or before December 15. All forms, together with other supporting data, must be returned to the Foundation on or before January 20 to receive Awards Committee consideration. The student-prepared application should state the full name of the applicant's parent-member and address of student if different.

Eligibility Criteria

The AAAA applicant must also be unmarried, acitizen of the United States; and a high school senior who has applied to an accredited college or university for Fall, 1986 entry as a freshman. Program participation is limited to the children of members with an effective date of membership on or before March 31, 1985.

Selection and Notification

Selection of winners will be made by the 20-member AAAA National Awards Committee during the 15-28 February period with each applicant to receive a list of the winners not later than 1 April.

Overall Supervision

The 13-member AAAA Scholarship Foundation, Inc., Board of Governors includes Bryce Wilson, Glenbrook, Nev. MG John L. Klingenhagen, Ret., Alexandria, Va.; COL Rudolph D. Descoteau, Arlington, Va.; Dorothy Kesten, Westport, Conn., Donald F. Luce, Bridgeton, Mo.; Thyra Bonds, Webster Groves, Mo.; Mrs. William B. Bunker, McLean, Va.; CW4 Elmer M. Cook, Ret., Alexandria, Va.; Paul L. Hendrickson, Ferguson, Mo.; MAJ Linda M. Horan, Grass Valley, Calif., CSM Harmon Kennedy, Ret., Waynesville, Mo.; COL John W. Marr, Arlington, Va.; COL Wayne N. Phillips, Santa Rosa, Calif., Frank N. Piasecki, Haverford, Pa.; and Richard S. Steele, Freehold, N.J.

Application Form for AAAA National Scholarships

Applicant's Name (Please Print)

Street

City State ZIP

*Parent's Name Rank/Grade (if applicable)

Parent's Address

City State ZIP Residence Phone Number

Return application on or before December 15 to: AAAA Scholarship Foundation, Inc., 1 Crestwood Road, Westport, Conn, 06880.

*Program participation is limited to the children of those members who have an effective date of membership on or before March 31, 1985.

**SAT, test scores, senior year mid-term grades, and all other supporting data must be received not later than January 20, 1985.

CY 1986 Scholarship Awards aided by $40,000 donation

COGNIZANT of the need to provide scholarship aid in significant amounts, the **AAAA Scholarship Foundation,** a separate entity that works closely with the Army Aviation Association, has increased the amount of each of its individual scholarships substantially over the past two years with the total amount now being provided reaching $13,000 annually.

This ongoing program of increased scholarship assistance received a sizable boost with the receipt of a $40,000.00 donation from the AAAA this past June.

Second major award

Major General John L. Klingenhagen, Ret., the Foundation President, indicated that the new donation would be used in subsequent years to capitalize a second annual $4,000.00 scholarship.

The initial $4,000.00 scholarship, one that would be presented to the recipient in four $1,000.00 increments, will be awarded this coming February to the son or daughter of a member or deceased member of AAAA.

Engineering limitation

A separate lump sum $1,500.00 scholarship—named in memory of **Lt. Gen. William B. Bunker**—will be presented in February to the most outstanding Engineering School applicant with Fall, 1986 college entry.

Two additional $1,500.00 memorial scholarships will also be presented in early '86 in the names of **Robert M. Leich** and **O. Glenn Goodhand, while $1,000 memorial scholarships will honor B. Howard Dean** and **Rudolph Kahl-Winter.** An **Army Aviation Ass'n Scholarship** comprises the third $1,000.00 award.

Three additional $500.00 awards will be made in this year's $13,000 Scholarship Awards Program.

Penny L. Post, center, daughter of Mr. and Mrs. Martin Post (right), of Freehold, N.J., is shown accepting the $1,000.00 B. Howard Dean Memorial Scholarship Award from Dick Steele, Monmouth Chapter Vice President-Scholarship Awards (and a Governor of the AAAA Scholarship Foundation). Sherm DuBois, far left, Monmouth Chapter President, looks on at the presentation made during the Chapter's Birthday Ball, June 28.

North Texas, AA Center, and Rhine Valley Chapters in lead

Largest Membership Gain

(Standings as at I August 1985)

The 16 Master Chapters
($1,200 1st Prize-$600 Runner-Up)

Curr Rk	Chapter Name	Memb Gain
1	Army Avn Center Chap	+120
2	North Texas Chapter	+41
3	Washington, DC Chapter	+34
4	Southern California Chap	+20
5	Lindbergh Chapter	+14
6	Colonial Virginia Chapter	+12
7	Fort Hood Chapter	+11
8	Delaware Valley Chapter	0
9	Morning Calm Chapter	−3
10	Mount Rainier Chapter	−12
11	Monmouth Chapter	−13

The 18 Senior Chapters
($600 1st Prize—$300 Runner-Up)

Curr Rk	Chapter Name	Memb Gain
1	Rhine Valley Chapter	+32
2	Thunderhorse Chapter	+9
3	Suncoast Chapter	+7
4	Stuttgart Chapter	+5
5	Chesapeake Bay Chapter	+1
*6	Jack H. Dibrell (Alamo) Chap	−4
*6	Mainz Chapter	−4
*7	Greater-Atlanta Chapter	−5
*6	Bonn Area Chapter	−5
8	The Citadel Chapter	−8

The 13 AAAA Chapters
($200 1st Prize—$100 Runner-Up)

Curr Rk	Chapter Name	Memb Gain
1	Tu-Can Chapter	+50
2	Edwin A. Link Chapter	+23
3	Mid-America Chapter	+18
4	Nurnburg Chapter	+11
5	Tennessee Valley Chapter	+10
6	Checkpoint Charlie Chapter	+4
7	Schwaebisch Hall Chapter	+3

*Tie

Largest Percentage Gain

(Standings as at I August 1985)

The 16 Master Chapters
($800 1st Prize—$400 Runner-Up)

Curr Rk	Chapter Name	% Gain
1	North Texas Chapter	+17
2	Army Aviation Center Chap	+7
*3	Southern California Chapter	+5
*3	Washington, DC Chapter	+5
4	Colonial Virginia Chapter	+4
*5	Fort Hood Chapter	+2
*5	Lindbergh Chapter	+2
6	Delaware Valley Chapter	0
*7	Morning Calm Chapter	−1
*7	Corpus Christi Chapter	−1
8	Monmouth Chapter	−5

The 18 Senior Chapters
($400 1st Prize—$200 Runner-Up)

Curr Rk	Chapter Name	% Gain
1	Rhine Valley Chapter	+16
2	Thunderhorse Chapter	+7
3	Suncoast Chapter	+6
4	Stuttgart Chapter	+4
5	Chesapeake Bay Chapter	+1
*6	Jack H. Dibrell (Alamo) Chap	−3
*6	Greater-Atlanta Chapter	−3
*6	Mainz Chapter	−3
7	Bonn Area Chapter	−5
*8	Hanau Chapter	−7

The 13 AAAA Chapters
($200 1st Prize—$100 Runner-Up)

Curr Rk	Chapter Name	% Gain
1	Tu-Can Chapter	+93
2	Mid-America Chapter	+33
3	Edwin A. Link Chapter	+23
*4	Tennessee Valley Chapter	+16
*4	Nurnburg Chapter	+16
5	Checkpoint Charlie Chapter	+13
6	Schwaebisch Hall Chapter	+3

*Tie

Cash awards upped sixfold for '85-'86 Membership Enrollment Contest

At its June 29 meeting in Arlington, Va., the AAAA National Executive Board made major changes in its 1985-1986 **Chapter Membership Enrollment Competition:**

- The six **First Prize Cash Awards** have been increased substantially. The annual cash awards to the six winning Chapters now total $3,500.00.
- Six **Runner-Up Cash Awards** totaling $1,750 have been created. Together, the First Prize and Runner-Up Cash Awards now total $5,250.00 annually.
- The three categories of Chapters — Master, Senior, and AAAA — have been re-divided so that they are virtually equal in size. End result: Chapters won't compete against a disproportionate number of other Chapters.

The new division of the 50-odd AAAA Chapters has been made in this manner:

- Chapters with 1-99 members as at February 1, 1985 will compete in the **"AAAA Chapter"** category. There are 13 Chapters that will compete for $750.00 in prize money in this category. (At the outset, there were 15 Chapters in this category but two have undergone dissolution since March).
- Chapters with 100-199 members as at February 1, 1985 will compete in the **"Senior Chapter"** category. Eighteen Chapters will vie for the $1,500 in prize money in this category.
- Chapters with 200 or more members as at February 1, 1985 will compete in the **"Master Chapter"** category. Some $3,000 in cash awards is being offered to the 16 Chapters in the **"Master Chapter"** division.

Left unsaid: The February 1 starting totals of the Chapters are last year's "end of competition" totals. The big renewal lapses and follow-on re-ups in the past years' six-month competitions will have no effect on the current full year competition that ends on January 31, 1986.

The six Cash Awards will be presented at the Membership Luncheon to be held during the 1986 AAAA National Convention in Atlanta on Thursday, April 10.

All prizes are up for grabs! Each Chapter has just as good a chance to win a large cash award as the next!

Go for it!

August 1 AAAA Membership Analysis

RANK/GRADE	TOTAL
GENERALS	7
LIEUTENANT GENERALS	25
MAJOR GENERALS	58
BRIGADIER GENERALS	41
COLONELS	708
LIEUTENANT COLONELS	1,220
MAJORS	1,325
CAPTAINS	1,629
LIEUTENANTS	1063
CWO'S	1,940
WO'S-WOC'S	920
DAC'S	2,153
ENLISTED (E7-E9)	352
ENLISTED (E5-E6)	514
ENLISTED (E1-E4)	454
MILITARY TOTAL	12,409
INDUS MEMB (INDIV)	1,216
INDUS MEMB (CORP)	1,309
FOREIGN NATIONALS	295
NON-MILITARY TOTAL	2,820
TOTAL MEMBERSHIP	15,229

MG Parker named

Major General Ellis D. Parker, Commanding General, USAAVNC, Ft. Rucker, Ala., has been named by the AAAA as the Presentations Committee Chairman for its 27th National Convention in Atlanta, Ga., April 9-13, 1986. **LTC Robert E. Harry,** USAAVNC, will serve as the Vice Chairman.

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Support AAAA — Army Aviation's Only Professional Association.

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1 Crestwood Road, Westport, Conn. 06880

I wish to join the Army Aviation Ass'n of America [AAAA]. My past or current duties affiliate me with U.S. Army Aviation and I wish to further the aims and the purposes of AAAA. I understand that the annual membership includes a subscription to the AAAA-endorsed magazine, ARMY AVIATION, and that my membership starts on the subsequent 1st of the month.

Note: A home address is suggested, if one's military or firm address exceeds 25 characters.

RANK FIRST NAME LAST NAME

STREET ADDRESS

CITY STATE ZIP

List your AAAA Professional Qualification

Government	Non-Government*
[ ] USA Active Duty	[ ] Manufacturing*
[ ] DA Civilian*	[ ] Small Business*
[ ] Army Nat'l Guard*	[ ] Retailing*
[ ] Army Reserve*	[ ] Consultant*
[ ] Army Retired*	[ ] Professional*
[ ] Other Services	[ ] Other*

*Nat'l Office will request add'l information.

AAAA ANNUAL DUES

New & Renewal Dues for other than below:
[ ]1 Yr,$15-[ ]2 Yr,$29-[ ]3 Yr, $43

New & Renewal Dues for Enlisted; GS-6 & below; and Wage Board 12 DACs & below:
[ ] 1 Yr,$10-[ ] 2 Yr, $19-[ ] 3 Yr,$28

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GET FIVE! BECOME AN ACE!

Enroll five new members and receive AAAA's 'Aces Club' Certificate

Let us send you an attractive, two-color Certificate — handlettered with your name — when you become an "AAAA Ace". Suitable for framing, the document verifies that you are a "full-fledged ACE . . having "bagged" your quota of five. A pair of three-dimensional plastic feet atop the bonfire lend authenticity to the document. Join the ACES!

AAAA Calendar

JUNE 1985

■■JUNE 13. Pike's Peak Chapter, Professional Social Meeting. Fort Carson Officers' Club. Mr. Jim Brown, Director of LHX for Technical Marketing, Hughes Helicopter, Inc., Guest Speaker.

■■JUNE 19. Fort Bragg Chapter. General Membership Meeting. Ft. Bragg Officers' Club. Chapter Elections.

■■JUNE 21. Monterey Bay Chapter. General Membership Meeting. CAB Headquarters. "Airborne Weapon Systems".

■■JUNE 21. Southern California Chapter. Professional Meeting. Space Shuttle Landing. Edwards AFB

■■JUNE 22. Lindbergh Chapter. Scholarship Golf Tournament and Tournament Awards Dinner. Clubhouse, SLASC Golf Course.

■■JUNE 26. Connecticut Chapter. Professional Dinner Meeting. Three Door Restaurant. COL John E. (Jack) Kempster, Acting Director of Army Research and Technology, Guest Speaker. "Technology Advancement in Aviation R & D".

■■JUNE 26. Jack H. Dibrell (Alamo) Chapter. Gala Golf Scramble and General Membership Meeting. Fort Sam Houston Golf Course.

■■JUNE 27. Colonial Virginia Chapter. Professional Social Meeting. Fort Eustis Officers' Club. Mr. Dick Ruegg, manager of the GE T700 engine Program, Guest Speaker.

■■JUNE 27. Stuttgart Chapter. General Membership Meeting. Nelligen Officers' Club. Chapter Elections.

■■JUNE 28. Monmouth Chapter. Birthday Ball and Awards Dinner. Squires Pub, West Long Branch.

JULY 1985

■■JULY 4. Army Aviation Center Chapter. Social Meeting, Fort Rucker Officers' Club.

■■JULY 10. Cedar Rapids Chapter. Professional Social Meeting. Stouffer's Five Seasons Hotel. COL Frank H. Mayer, TRADOC System Manager, BLACK HAWK/LHX, Guest Speaker.

■■JULY 10. Lindbergh Chapter. Social Meeting. The Bunker.

■■JULY 10. Fort Hood Chapter. General Membership Meeting. Fort Hood Officer's Club. GEN Robert M. Shoemaker, Ret., Former Commanding General, FORSCOM, Guest Speaker. Election of Officers.

■■JULY 11. Corpus Christi Chapter. Professional Social Meeting. NAS Officers' Club Ballroom. MG Charles F. Drenz, AH-64 APACHE Program Manager, Guest Speaker. "Former Depot Commander".

■■JULY 12. Coastal Empire Chapter. General Membership Meeting. Hunter AAF Officers' Club. Special Elections.

■■JULY 13. Checkpoint Charlie Chapter. Annual Summer Picnic. TCA Picnic Area, Berlin.

■■JULY 16. Monmouth Chapter. General Membership Meeting. Fort Monmouth Officers' Club. MG Orlando E. Gonzales, Commanding General, AVSCOM, Guest Speaker. "Electronics & Army Aviation".

■■JULY 17. Air Assault Chapter. General Membership Meeting. Fort Campbell Officers' Club. Celeita McClean, Armament and Electronic Systems, GE, Guest Speaker. "Aero Weapons from GE".

■■JULY 18. Tennessee Valley Chapter. Professional Meeting. Redstone Civilian Lodge. MG Frank P. Ragano, USA Ret., Chairman of the Board BDI Defense Systems, Speaker. "The 2.75 Rocket Past & Present Development".

■■JULY 19. Fort Harrison Chapter. Chapter Activation Meeting. Fort Benjamin Harrison Officers' Club.

■■JULY 26. Corpus Christi Chapter. BBQ and Dance. Moravian Hall.

AUGUST 1985

■■AUG. 7. Aloha Chapter. General Membership Meeting. Schofield Barracks Officers' Club. Chapter Elections.

■■AUG. 7. Lindbergh Chapter. Social Meeting. Welcome the AIMI Conferees. King Henry VIII.

■■AUG. 8. Lone Star Chapter. General Memb. Meeting. Coors Hospitality Room. Mr. Willis Brown, Director of Marketing, HHI, Guest Speaker. "The AH-64 APACHE".

■■AUG. 10. Morning Calm Chapter. Professional Social Meeting. Frontier Club. COL Ernest F. Estes, Commander, 17th Avn Grp Cmbt, Guest Speaker. "Meet the New Chapter President".

■■AUG. 16. Thunderhorse Chapter. General Membership Meeting. Fulda Community Club. Election of New Officers.

■■AUG. 16. Corpus Christi Chapter. General Membership Meeting and Moonlight Boat Cruise. Aboard the Flagship, People's Street T-Head.

■■AUG. 23. Tennessee Valley Chapter. Professional Meeting. Redstone O-Club. MG Henry D. Canterbury, USAF Commander, U.S. Air Force, Panama, Guest Speaker.

■■AUG. 27. Stuttgart Chapter. General Membership Meeting. Nelligen Officers' Club. COL Marvin E. Mitchiner, Jr., VII Corps Aviation Officer, Guest Speaker.

■■AUG. 28-29. Monmouth Chapter. Scholarship Fund Benefit. Fort Monmouth Officers' Club Tennis Courts.

SEPTEMBER 1985

■■SEPT. 3. Rhine Valley Chapter. General Membership Meeting. Mannheim Officers' Club. Election of Officers.

■■SEPT. 4. Checkpoint Charlie Chapter. Professional Meeting. Columbia House. Elections.

■■SEPT. 4. Schwaebisch Hall Chapter. Professional Social Meeting. Dolan Barracks Officer/Sr. NCO Civilian Club. "EPMS and the Aviation Branch".

■■SEPT. 5 Bonn Area Chapter. Professional Social Meeting. Bad Godesberg American Embassy Club. Freg Kpt Manfred Rother, Guest Speaker. "German Naval Helicopters New Weapon Systems for Maritime Warfare".

■■SEPT. 6. Mount Rainier Chapter. General Membership Meeting. Fort Lewis Golf Club. MAJ James C. Adamson, U.S. Army Astronaut, Guest Speaker.

■■SEPT. 6. Mount Rainier Chapter. Golf Tourney. Fort Lewis Golf Club. MAJ James C. Adamson, U.S. Army Astronaut, Guest Speaker.

■■SEPT. 12. Nurnberg Chapter. General Memb. Meeting. P-Club. CWO Joe Manning, 1st PERSCOM, Guest Speaker.

■■SEPT. 14. Chesapeake Bay Chapter. Professional Social Meeting. Obie's.

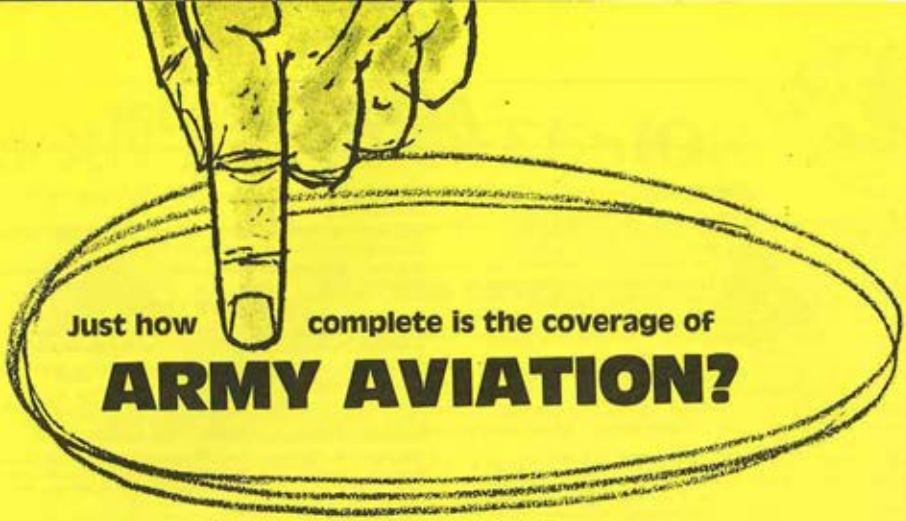
■■SEPT. 21. Chicago Chapter. Annual Summer Golf Tourney. Ft. Sheridan Golf Course.

OCTOBER 1985

■■OCT. 15. AAAA National Executive Board. Quarterly Business Meeting. 2:15-5:00 P.M. Sheraton Washington Hotel.

NOVEMBER 1985

■■NOV. 9. USAREUR Region - AAAA. 1985 Aviation Ball. Heidelberg Officers' Club. Patrick Henry Village.



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