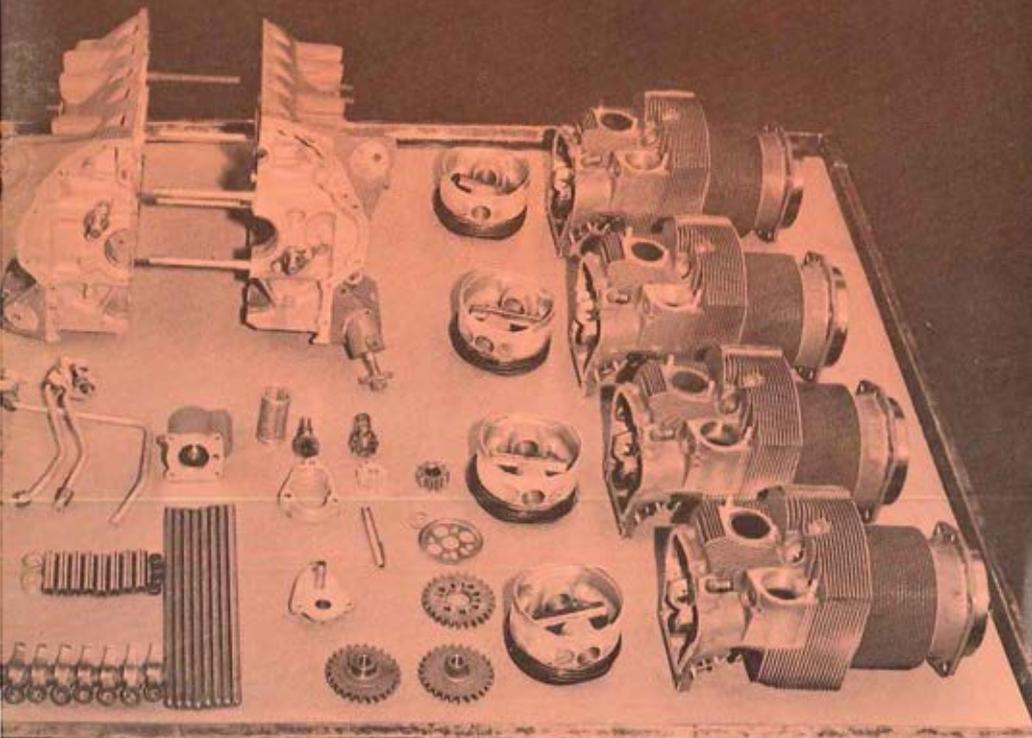


ARMY AVIATION

JUNE-JULY 1964



To Insure Dependability and Reliability

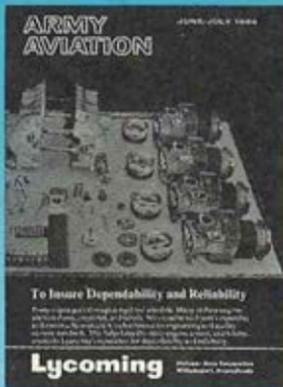
Every engine goes through a rigid test schedule. Many of these engines are torn down, inspected, and rebuilt. We examine each part's capability and continually evaluate it with reference to engineering and quality-control standards. This helps keep the other engines honest, and it helps maintain Lycoming's reputation for dependability and reliability.

Lycoming

Division—Avco Corporation
Williamsport, Pennsylvania

ARMY AVIATION

VOL. 13-NUMBER 6
JUNE-JULY, 1964



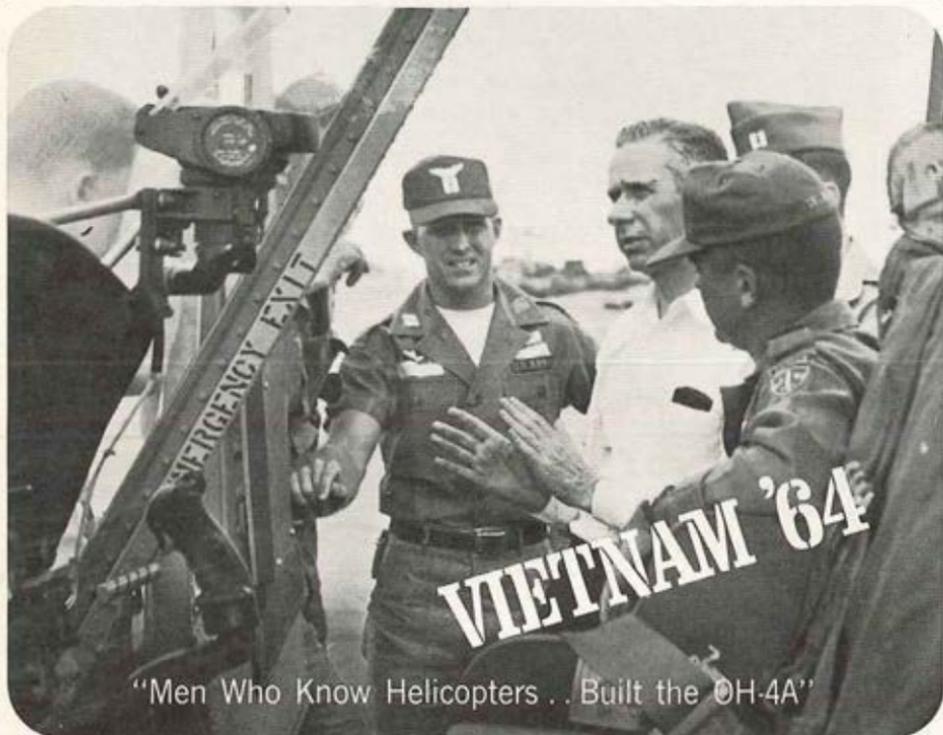
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Bell's president wanted to see for himself . .

E. J. DUCAYET, president of Bell Helicopter Company, went to Vietnam to see the Bell "Huey" in operation. ■ Visiting most of the operating units throughout Vietnam, Ducayet had the opportunity to get first-hand comments and reactions from the pilots, mechanics and operations personnel serving there. He was impressed with the high availability rate of the Bell ships and gave credit to the Army crews for this accomplishment. Performance of the ships in the heat, dust and swamps was "outstanding." ■ "This experience challenges all of us at Bell to continue our good spare parts record," he said, "and to maintain our perfect delivery schedule and even surpass the quality of our present helicopters."



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MILITARY & COMMERCIAL HELICOPTERS



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FAA CERTIFICATION OF ARMY AIRCRAFT

BY JAKE FORTNER
U.S. ARMY AVIATION TEST BOARD

IT is my purpose to discuss Federal Aviation Agency - FAA - certification of Army aircraft. The procedures establishing the engineering integrity of Army aircraft are peculiar to Army aviation and different from engineering testing of other Army equipment. Current policies prohibit the Army from duplicating Navy or Air Force aviation engineering test facilities. We are authorized to procure "off-the-shelf" aircraft, i.e., aircraft on which the engineering integrity is proven through FAA participation. This leaves the Army the choice of using the Navy, Air Force or FAA as its aviation engineering agent. Development using the Navy or Air Force from the outset is cumbersome and unwieldy. Disadvantages include:

1. The Army places a middleman between itself and the contractor. This significantly limits direct communications.

2. The engineering service be-

comes the Army's procuring agent - the Army's voice - and the dominant voice.

3. Army requirements become garbled. The most conscientious Navy or Air Force personnel do not really have a feel for Army requirements or its tactical environment. Their thinking is oriented to the requirements of their own service.

4. Both are prone to develop "mil spec" aircraft by using military specifications developed specifically for Navy or Air Force designs.

Army tests in 1942 led to approval on 6 June 1942 of organic Army aviation. Civilian versions of the L-4 airplane were used. The success of the test can be attributed in part to the use of this low speed, simple, and reliable aircraft.

During WW II, the Air Corps developed the L-5. The Army used this airplane to supplement its L-4's and L-2's. The L-5 was bigger, heavier, and more complicated. Nat-

(Continued on Page 47)



KNOW WOT?



**THE T65 is FAA
TYPE CERTIFICATED
AT 310 HP
THAT'S WOT!**

For detailed information on the CAE T65, write or phone Mr. Seymour Genden, 12700 Kercheval Ave., Detroit, Michigan 48215. Phone: Area Code 313-822-1500.

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CONTINENTAL AVIATION AND ENGINEERING CORP.

25,000 EXPECTED TO ATTEND 8TH ANNUAL AHS AIRSHOW

The 8th Annual New England Region Clambake and Air Show, to be sponsored by Sikorsky Aircraft, will be held at Sherwood Island State Park in Westport, Conn., on Saturday, September 12, 1964.

Last year's AHS air show and helicopter static display was attended by more than 1,100 members and their guests, and nearly 14,000 general public. This year's show may be attended by as many as 2,200 members and guests, and 25,000 general public.

HELICOPTER COMPETITION

This year's show will be enhanced by an international helicopter competition to be conducted under the rules of the Federation Aeronautique International, represented in the United States by the National Aeronautic Association. All of the Aero clubs affiliated with the F.A.I. have been invited to participate in the Competition.



RAIN OR SHINE, THE 1964 A.H.S. CLAMBAKE and helicopter Air Show will be held on September 12, 1964, at Sherwood Island State Park, Westport, Connecticut. Tents capable of accommodating 2,500 persons will be provided for the largest gathering of members and guests in the Clambake's history.

Attendance at the 10 a.m.-7:30 p.m. Clambake and Air Show is limited to members of the American Helicopter Society, the members' families, and official guests. The \$10.00 Clambake Fee includes a luncheon, the clambake, a cocktail party, and beer all day. Others desiring to attend may do so by joining the Society at this time. New membership applications will be mailed directly on request by writing to AHS, 141 E. 44th St., N.Y., N.Y.

RESERVATIONS NECESSARY

Reservations must be made in advance and due to the great number of members expected to attend, reservations will be closed after: 1) September 9, 1964 (or) (2) after 1,800 paid reservations have been received. Reservations should be accompanied by full payment and directed to: John E. Ryan, General Chairman, c/o Sikorsky Aircraft Division, Stratford, Connecticut.



HELICOPTER STATIC DISPLAY is shown here. Several hundred acres of beautiful park and unobstructed areas make this site an ideal location for an international helicopter competition. Approximately 25,000 people will view the 1964 helicopter air show and industry exhibits.

NEW LOOK IN AIR MOBILITY

Powered by the new General Electric T.64 turbo engines, each developing 2,850 ESHP, the versatile rugged BUFFALO is designed to operate as a short haul transport from make-shift strips anywhere in the world.

This latest design from de Havilland Canada features

- MORE SPEED _____ 274 MPH
- MORE RANGE _____ 1,880 N. MILES
- MORE LOAD _____ 11,600 LBS.
- MORE SPACE _____ 1,580 CU.FT.



The DHC-5 BUFFALO performs a STOL Landing in a confined area.

THE DE HAVILLAND



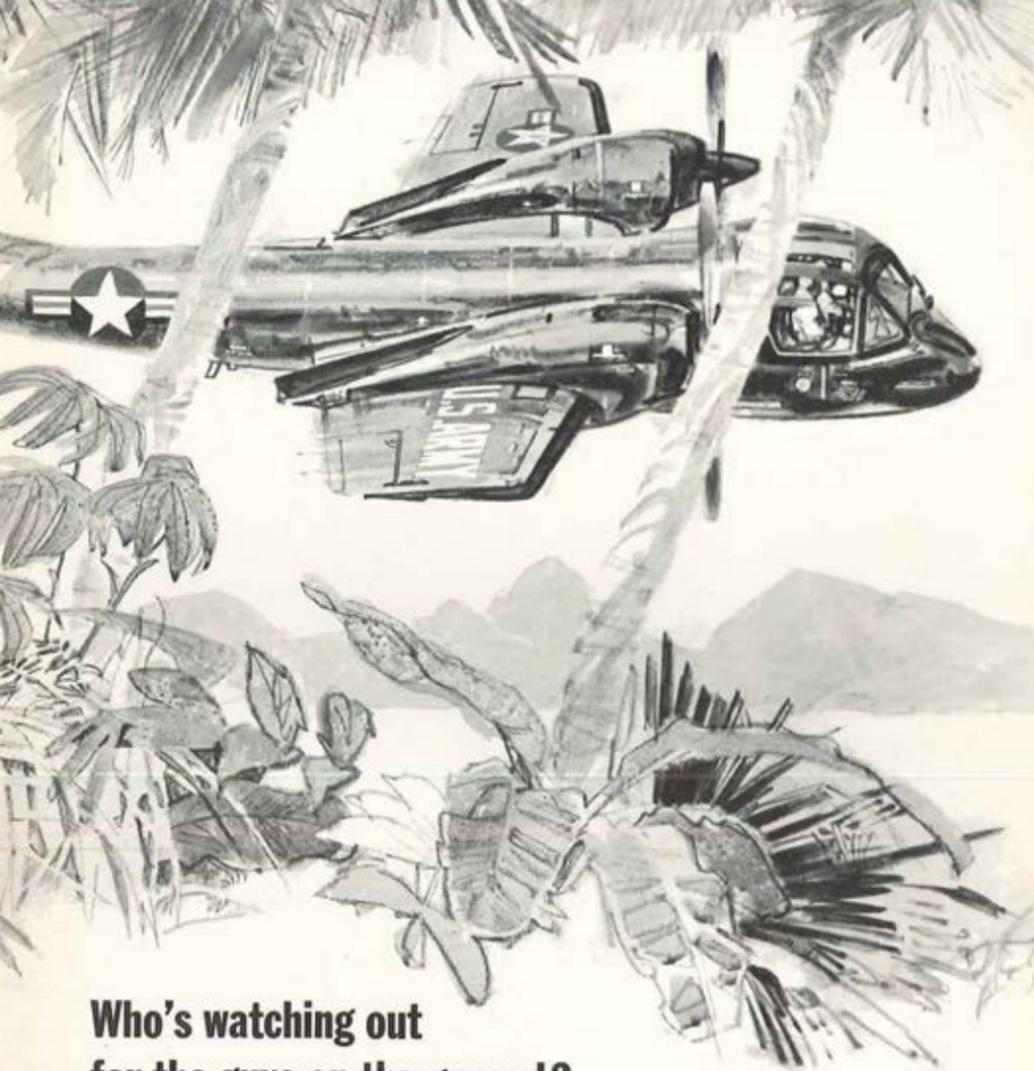
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Who's watching out for the guys on the ground?

The men in the Mohawk . . . the "elevated eyes" of the Army. The STOL Mohawk lives in the front lines with the troops. • Coming in under enemy radar at treetop level—as fast as needed—the all-weather, twin-turboprop Mohawk provides quick response to the men who are in immediate command of the in-fighting on the ground. In brushfire tactics you want intelligence now. • Trigger-fast responsiveness . . . sharp-eyed observation . . . that's the Grumman Mohawk. And that's what you call close support.

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said the pilot to the engineer...

I KID YOU NOT, WE NEED MAP OF THE EARTH, Vmax EVASIVE FLYING TO GET THE LOH MISSION DONE WHEN THINGS ARE HAIRY. LIKE VIETNAM, I CALL IT "COST EFFECTIVENESS" - BECAUSE PILOTS AND AIRCRAFT AREN'T WORTH MUCH AFTER THEY'VE BOUGHT THE FARM. YOU READ?

1.



YOU NEED SPECIAL AIRCRAFT CAPABILITY FOR THAT MISSION. IN THE OH-5A WE GAVE YOU THE MAXIMUM PERMISSIBLE ROTOR DIAMETER AND THE CLEANEST, MOST STABLE OF HELICOPTER CONFIGURATIONS.

LIKE I'M CARRYING BRASS OR AN OBSERVER OR ARMAMENT, ENEMY ACTION. I FLY CONTOUR AT OVER 100 KNOTS. I WANT POSITIVE CONTROL RESPONSE, BUT I'M REAL BUSY-- I WANT NO SKITTISH SQUIRRELY SHIP. I NEED A FORGIVING SHIP AND IF THEY HIT MY FUEL OR OIL LINE OR ENGINE, I WANT AUTOROTATION THAT'S BETTER THAN WE'VE EVER HAD BEFORE

YOU SEE, FOR THE EXTRA 8 FT. OF ROTOR ON THE OH-5A, YOU GOT 2 1/2 TIMES MORE ROTOR INERTIA-- MEANING 30% MORE TIME FOR PILOT REACTION, PLUS 3 TIMES MORE USABLE ROTOR ENERGY TO MANUEVER WITH AFTER ENGINE LOSS, PLUS A POWER-OFF DESCENT RATE 600 FT. PER MINUTE SLOWER.

2.



LOOK! SAY YOU'RE NAP OF THE EARTH AT 100 KNOTS. YOUR POWER IS CUT. YOU CAN STILL CLIMB TO 300 FT., CHECK YOUR ENVIRONMENT, PICK A SPOT, AND TOUCHDOWN SAFELY-- ALL WITHOUT POWER.

3.



OH-5A

FIRST THINGS FIRST. Years of designing, developing, building, testing, delivering and servicing light observation helicopters for the U.S. Army taught Hiller technicians that *mission capability* must be at the top of the LOH characteristics list. That's where the Army put it. That's where the OH-5A has it.

HILLER
AIRCRAFT COMPANY
PALO ALTO, CALIFORNIA WASHINGTON, D.C.

HEY, YOU SPEAK WITH PILOT TONGUE!

YOU BETTER BELIEVE IT. I'M SPEAKING MISSION CAPABILITY ... FIRST THINGS FIRST.

4.



By BRIG. GEN. JOHN J. TOLSON
DIRECTOR OF ARMY AVIATION,
OACSFOR



ANNUAL REFRESHER: THE WRITTEN EXAM

I know all of you join me in extending congratulations to two Army Aviators, Brigadier General Delk M. Oden, Headquarters, U.S. Army Support Command, Vietnam, and Brigadier General David B. Parker, Secretary of the Staff, SHAPE, on their recent nominations for promotion to Major General.

ANNUAL WRITTEN EXAM

It may cause a few hours of inconvenience. It tends to serve as an irritant to some of us. I doubt, however, that any of us suffers extremes of mental anguish. But there is one thing it does accomplish: The annual written exam refreshes us (at least academically) on rules, procedures and the Echo-Six-Bravo, the latter fondly or unfondly known by aviators as the "whiz wheel."

We may take issue with certain questions, and we are vociferous in our complaints about some of the answers. But the fact remains that the exam serves its purpose in at least getting us to talk and think about IFR and VFR flight items, some of which we seldom use but are charged with the responsibility of knowing how to use, should the occasion arise.

chipook

PROGRESS



CH-47A CHINOOKS INCREASE MOBILITY OF ARMORED UNITS

In future breakthroughs of U.S. Army armored units, exploitation need not be limited by dependence on land lines of communication. A single company of CH-47A Chinook medium transport helicopters can supply the daily food, fuel, and ammunition requirements of the combat elements of a full tank battalion. The utilization of the Chinook in the resupply role will give armored units a degree of flexibility heretofore not available.

BOEING

VERTOL DIVISION

I look at the exam and its value this way: Sure, it's open book and all of the answers are available in the material issued to us when we take the exam (oddly enough, there are few who "max" the exam); there are certainly many aviators who know most of the stuff cold, and there are those of us who do not know some of the items even lukewarm. A person will forget.

Changes will have been made which have not been brought to our attention or with which we have not had the chance to familiarize ourselves. But, most of us will dig into the books, regardless of whether or not we know the answer. We do this for two reasons: (1) We do not know the correct answer and must, therefore, look it up; (2) We know the

answer, but want to verify it - to make certain that a change has not been slipped in on us. In either case, the purpose of the exam has been accomplished. The aviator, with or without his consent, is getting "refreshed."

SAFETY

I am concerned about the growing number of accidents from under-shooting and overshooting landing-approaches. As we all know, these accidents do not happen on and off the ends of runways and strips - they happen when we make decisions to try and salvage bad approaches. What follows is inevitable whether we label them accidents, incidents, or, if we are lucky, near accidents.

The point is that we have used up two strikes anytime we make a bad approach, from and to the ground we are apt to swing at anything, high or low as though it was a blazer down the middle. The solution and the only answer to a bad approach is to go around.

The weekly summary for 8-14 June 1964 contains several examples of this type accident. It makes us wonder if we are using our flying time to good advantage with a professional approach to flying. By professional approach, I mean a continuous process of practicing and learning.

Do we get the most from every take-off and landing? Do we analyze our mistakes? Do we take it around and correct the bad approaches? Or do we surrender to impatience and pride? I ask you to consider these questions the next time an approach does not look right.

POSTHUMOUS AWARD



Shown receiving the citation for the Legion of Merit awarded posthumously to her late husband, Colonel Mansell A. Walker, United States Army, is Mrs. Doris Walker and her son, Scott Sanford Cairns, age 13. Major General Philip C. Wehle, commanding general of the Military District of Washington, presented the citation to Mrs. Walker in a July 14 ceremony. Mrs. Walker and her son live at 5333 Tansy Avenue, Alexandria, Virginia. (U.S. Army photo)

MOHAWK OPERATION

I have received reports indicating that the OV-1B Mohawks are being operated in the field in a manner not commensurate with the radar mission. Violent, abrupt pull ups are not considered requirements to accomplish side-looking airborne radar missions. The B model differs in many respects from the A and C model Mohawks.

Primarily due to the high gross weight and 48-foot wing span of the B, the maximum allowable load limit is four "G" versus five "G" for the A and C models. If you exceed the four "G" limit, failure of airframe components could well be the result.

The B model Mohawk is an excellent aircraft equipped with a fine surveillance system. When it is flown within the design envelope, neither the airframe nor the surveillance equipment will be damaged. I point this out because it is quite possible that operators in the field are not aware of the load limit restrictions applicable to the B. If it is flown in accordance with the design envelope of the A and C models, it is possible that overstressing of the airframe could occur.

ARMAMENT SYSTEMS

Recent visits to Army aviation units have revealed that some commanders feel that the armament systems (XM-3, 2.75 inch rocket system and M-6, 7.62mm quad gun system) authorized for airmobile companies detract from the primary mission of the company. They feel that the excessive weight imposed by

the armament systems reduces the company capability of airlifting the assault elements of an Infantry Rifle Company.

Although the TOE authorizes both the XM-3 and M-6 armament for the airmobile company, this does not mean that these systems must be carried at all times by all aircraft. The TOE provides the commander with the flexibility to arm his aircraft to the extent considered necessary to accomplish his mission.

I would hasten to add that no one feels that either the XM-3 or M-6 is the optimum armament system for troop carrying aircraft. A Small Development Requirement is presently being staffed by Combat Developments Command which indicates a requirement for a lightweight, small caliber protective system which will not compromise the primary mission of the troop-carrying helicopters of the airmobile company.

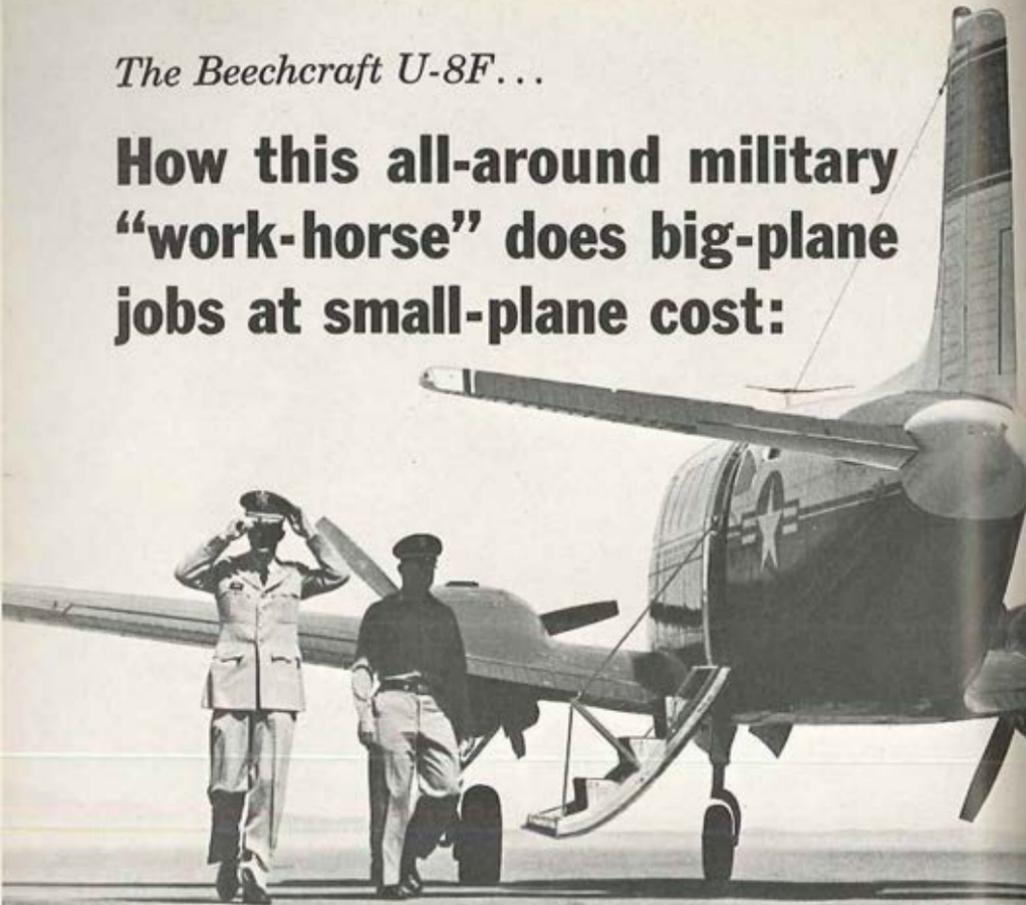
HELICOPTER COMPETITION

I would like to clarify some recent publicity concerning Army participation in the 12 September 1964 helicopter competition sponsored by the American Helicopter Society in Westport, Connecticut. (See additional details on page 6 of this issue.)

In accordance with Department of Defense decision, the Army, Navy and Air Force will NOT compete in this event. It is possible that the Services may provide helicopters for static display and/or flight demonstration. However, the exact extent of this participation has not been determined as yet.

The Beechcraft U-8F...

How this all-around military "work-horse" does big-plane jobs at small-plane cost:



Doing rugged jobs for the U. S. Army —jobs usually reserved for "big planes" —is the specialty of this Beechcraft U-8F. Yet it costs far *less* to buy and operate than the big ones. Military commanders say the U-8F is the most versatile plane ever assigned to them. It gives them reliable all-weather transportation to meet a wide variety of military needs.

Even with big loads this U-8F operates safely from small, unimproved fields. Built the rugged Beechcraft way, it holds one of the best safety records in aviation today. Also, the U-8F is extremely popular as a multi-engine instrument trainer. It holds all the elec-

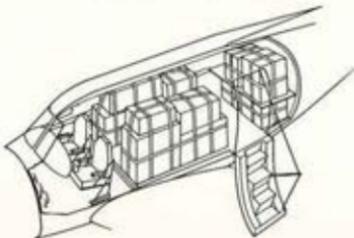
tronic navigation and communications equipment normally used for instrument flying on even the largest aircraft. When your pilots maintain their instrument proficiency on this plane with its lower initial cost, lower operating cost and lower maintenance cost, the savings quickly run into hundreds of thousands of dollars.

What about power? This Beechcraft U-8F has twin 340 hp Lycoming supercharged fuel injection engines. Cruises smoothly at 190 knots with 70% power. Push it and you're over 200 knots. In worldwide use by the U. S. Army, additional U-8Fs are quickly and economically available.

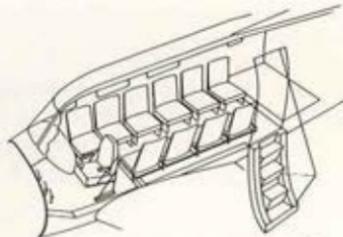
BEECH "IMAGINIVITY" IN AIR MOBILITY



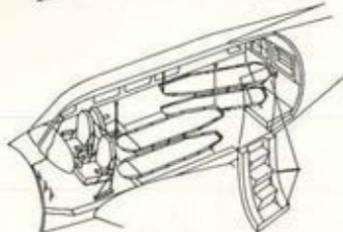
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come out quickly
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seating for 4-5;
converts to high
density seating for
eleven persons.



This versatile "work-
horse" converts
easily into a roomy
aerial ambulance.



Beech Aerospace Division projects include R & D on manned aircraft; missile target and reconnaissance systems; complete missile systems; space systems management; programs pertaining to liquid hydrogen propellants and cryogenic tankage systems; environmental testing of missile systems and components; and GSE.

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CONARC REPORT

1ST DIVISION AVIATION BROUGHT TO STRENGTH

BY COLONEL J. ELMORE SWENSON

CHIEF, AVIATION DIVISION, DCSUTR, HQS, USCONARC

AVIATION activities in the 1st Infantry Division have increased tremendously since "The Big Red One" was selected as the Army division to participate in the USAF air mobility tests.

The aviation elements of the division under the direction of Lt. Colonel "Lou" Williams are being brought to the full ROAD TOE in both men and equipment. New OH-23G's have been assigned in lieu of the LOH. UH-1B's will form the bulwark of the rotary wing transport.

The division is undergoing a series of exercises within its home maneuver area. These exercises are designated "TUTTLE CREEK" I, II, and III. Joint exercises with the Air Force are being held in the Eglin AFB complex and are titled "INDIAN RIVER" I, II, and III. All of this preliminary training will culminate in a Joint Evaluation under direction of USSTRICOM called GOLDFIRE I, to be held on the Fort Leonard Wood, Mo., reservation during October and November.

Within the 1st Aviation Battalion, Major W. Wainer, recently returned from Southeast Asia is Executive Officer; Major Ken Stanley, the

S-3, and Captain Bill Jones, the S-4. Captains Ivey and Crowfoot fill the S-1 and S-2 slots respectively, and Battalion S/Major Floyd was recently departed, leaving the reins of the "first soldier" to S/Major Bell.

Additional key officers in the 1st Division aviation picture are Company Commanders Majors Licha - A Company (Airmobile), Dial - B Company (General Support), and Hover - Maintenance. Captain Lilly recently of Eagle Flight fame in Vietnam heads the Air Cavalry Troop - (Troop D 4th Cavalry).

The participation of the 1st Division in the USAF airmobile concepts will be another interesting chapter in Army aviation.

AREA CONFERENCE

Colonel Henry H. McKee, the Fourth Army Aviation Officer, received many well deserved congratulations on the outstanding conference recently held in the Fourth Army area. The conference was held at Fort Sill, Oklahoma in accordance with Colonel McKee's policy of holding the conference at a separate installation each year.

With Lt. Colonel Frederick C. Goodwin, Commanding Officer, Artillery Aviation Command, Fort Sill, acting as host, the 200 conferees were able to view two excellent artillery and aviation demonstrations held on the Fort Sill Reservation. Major F.W. Johnson, Fourth Army Aviation Training Officer, was the Project Officer for this event which included participation by numerous civilian agencies as well as Army Aviators throughout Fourth Army.

Aside from the social and personal relations which were afforded, this meeting fulfilled professional requirement in bringing Army Aviators up to date with the latest developments in all areas of the Aviation Program.

"ONE ARMY"

Regular Army aviators and aviation units have an excellent "back-up" from the Reserve forces. Both the Army National Guard and the Army Reserve possess many highly skilled individuals and well trained units. Many of these are ready to serve upon call to duty and can perform outstandingly. A recent ex-

ample is the 217th Transportation Battalion (Aircraft Maintenance) of the California National Guard.

The 217th, commanded by Lt. Colonel Pinkarton with home station at Fresno, California, was recently called to provide all necessary back-up aircraft maintenance support for Exercise DESERT STRIKE. The battalion headquarters and its three companies set up shop at Kingman, Arizona, and processed approximately 200 work orders for Exercise units working on almost every aircraft model in the Army inventory.

By staggering their two weeks' summer ANACDUTRA among the companies and utilizing some 48 full-time technicians, the 217th averaged better than 225 men present at all times and operated for 18 hours a day throughout the maneuver.

The companies in the 217th are the 1112th Maintenance Company commanded by Capt. Lockwood; the 1113th Maintenance Company under command of Capt. Rizzolo; and the 1114th Supply Company with Capt. Delk in command. Major Miller is the Battalion S-3 and Capt. Workman is Maintenance Officer.

Fourth Army Conference





To complete the Army Team

for all observation and utility missions

The Army OH-6A, together with the UH-1B and UH-1D will cover the complete spectrum of observation and utility missions without "gaps" which might require other aircraft types in the future. At the same time, each helicopter is optimized for its primary missions, insuring maximum cost effectiveness.

The UH-1D does the larger utility jobs—carrying 12 troops or 6 litters or 3,500 lbs. of cargo.

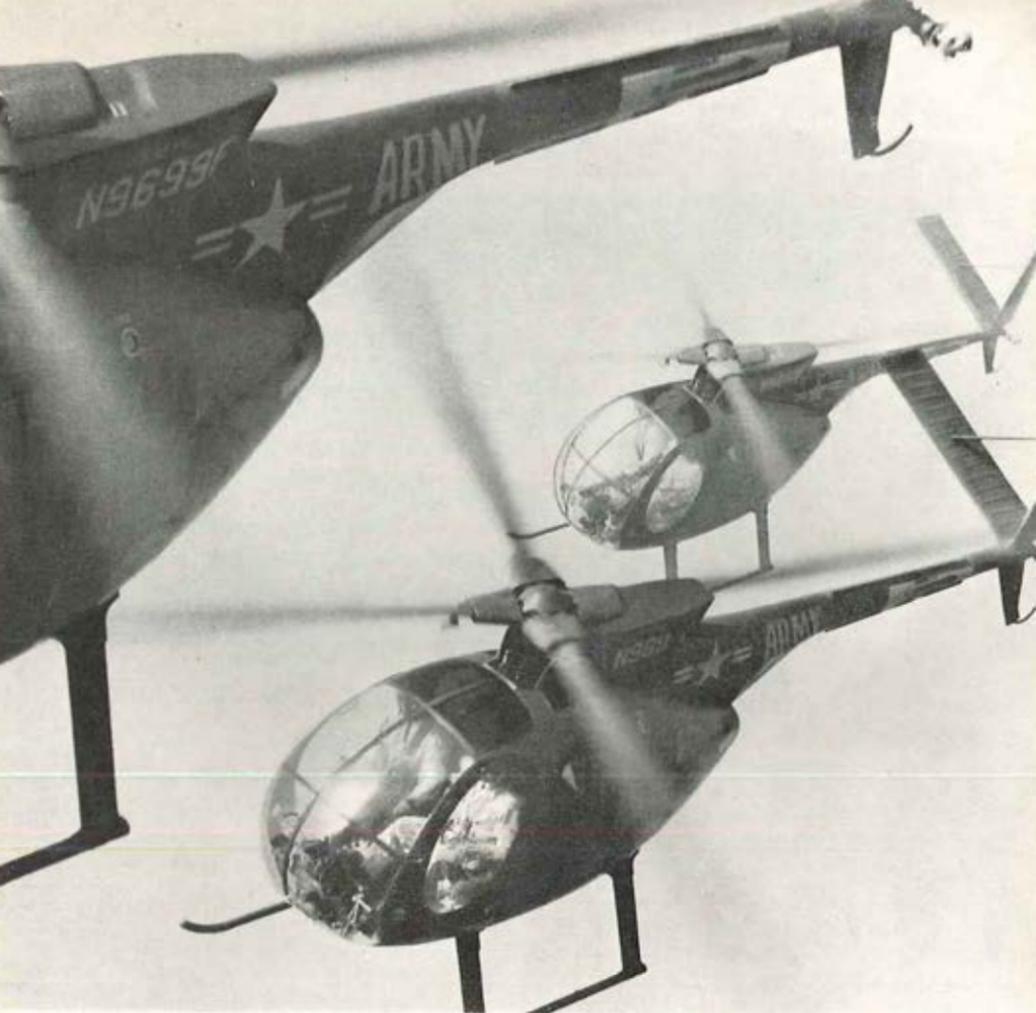
The UH-1B does the middleweight missions—carrying 8 troops or 3 litters or 3,300 lbs. of cargo.

The new OH-6A is now being evaluated by the U.S. Army Materiel Command along with the OH-4 and OH-5 for the Light Observation Helicopter program. *With only 250 HP* the OH-6A is optimized for the

observation missions yet it also has a unique capability for light utility operations anywhere in the combat area. It will carry a complete infantry fire team (5 troops) or 2 litters or 1,350 lbs. of cargo.

Small outside, big inside, the OH-6A has a full 40 cubic feet of space in its cargo compartment. Yet it is only 23 feet long and has a rotor diameter of only 26 feet.

Built into this compact configuration are load carrying capability and performance to spare: At design gross weight the OH-6A delivers 400 lbs. of cargo and personnel over 300 nautical miles. At overload gross, the aircraft delivers 1,000 lbs. over 300 miles. The OH-6A is capable of cruising at 128 knots and can



be flown at 140 knots in level flight under combat emergency conditions.

Tomorrow's LOH "growth" missions in payload, speed, and range can be performed *today* by the OH-6A with only 250 HP. With its vital LUH (Light Utility Helicopter) features, the OH-6A could supplement the UH-1B and UH-1D to provide complete mission capability in the Modern Army Team for all observation and utility missions.

HUGHES TOOL COMPANY

AIRCRAFT



DIVISION



ARMY OH-6A—
*Smallest, lightest,
 simplest, fastest,
 lowest cost, lowest
 maintenance, lowest
 fuel consumption,
 largest load capacity.
 LOH/LUH*

This fine Army National Guard unit has earned the praise and respect of all of the active Army Aviators whom it has served and is truly an excellent example of the "One Army" concept in the aviation field.

FIRST FLYING CRANE

In a very colorful ceremony at the Stratford Plant of the Sikorsky Aircraft Company on 30 June, the first CH-54 (Flying Crane) was accepted by the Army. Five more of these cranes will be delivered within the next few months and will see extensive duty in the field with the 10th Air Transport Brigade and aviation test activities.

The day preceeding the "roll out" of this largest helicopter in the Army inventory, a meeting was held by the AVCOM Project Officer to resolve details on support, maintenance, and operations. A great deal of credit must be given to Carl Stephenson for his excellent planning and to Jay Rickmeyer as the AVCOM Project Officer for this aircraft. Army Aviators can look forward to many new innovations in heavy lift through the use of the crane.

USCONARC has completed a study on requirements for heavy lift helicopters and copies of this study were distributed at the Coordinating Meeting. Both officers and enlisted personnel will presently be receiving instructions in the maintenance and operation of the CH-54.

STUDY ON CRANE

The desirability and utilization of heavy lift devices has been under study by many Army agencies for a number of years without resulting

in real "hardware." Headquarters, USCONARC as the ultimate user of such equipment recently completed a study on requirements for the aerial crane.

This study was based on both engineering data and actual statistics obtained from existing aircraft which might be considered fulfilling this role. The general conclusions of the CONARC study are that there is a requirement for heavy lift devices and that we should obtain a sufficient number of some production models at the earliest possible date. This approach is based on the thought that obtaining actual equipment and using it provides a better basis for development than continued use of the "drawing board" without actually producing any prototypes.

PERSONALS

The summer months are always a great period of turnover within units and Headquarters, USCONARC is no exception. Major Ralph Benefield recently departed the USCONARC Flight Detachment for an assignment with MAAG, Iran. Colonel Robert R. Corey, your erstwhile reporter, also departed during the middle of July to attend the Army War College. Major R.J. Murray plans to complete his Army career on 31 August, but is still a "tiger" to the very end. Our Flight Surgeon, Captain White, plans to accept a medical residency in the fall. On the credit side of the ledger, we have recently received Major Ben Johnson from Europe and Lieutenant F.S. White from Vietnam. Another gain in August will be Captain M.D. Herzer.

FT. RUCKER REPORT

BY COLONEL ROBERT F. CASSIDY, ASSISTANT COMMANDANT, USAAVNS



USA AVNS INCREASES SPECIALIST TRAINING

ENLISTED Specialist training at USAAVNS increased recently from 7,005 students to 11,545 students programmed for FY 65. Two hundred and eighty-eight (288) classes are scheduled for the 13 enlisted courses with the first class beginning July 1. The enlisted student will be trained in organizational maintenance of all types of Army aircraft in 11 of the courses.

In addition to the maintenance courses, the Flight Simulator Oper-

ator and Maintenance Course trains the soldier to operate and maintain synthetic instrument trainers for both rotary and fixed wing simulators. The Flight Operations Specialist Course trains them to schedule and coordinate aircraft flights and to perform administrative functions pertaining to air field operations.

Emphasis on improving the effectiveness of instruction at USAAVNS is portrayed in Braman Hall, the recently completed classroom

This VTOL hovers...

transitions...



and jets away!



It really works! Here's how:

The XV-4A Hummingbird, developed for the Army by Lockheed-Georgia, works on a principle called the *Augmented Jet Ejector Vertical Lift System*. It is based on a physical law that has been known for thousands of years—the effect of moving a large mass of inert fluid such as water or air by means of a high-velocity/low-pressure jet.

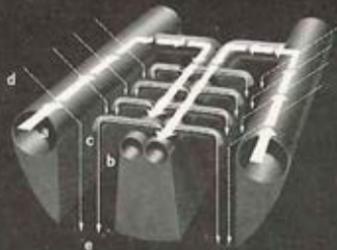
The diagram below shows how it works in the Hummingbird: For vertical lift, the engine thrust is directed through a simple, reliable system of ducts and nozzles downward through fuselage ejector chambers and out the bottom doors. This action draws large volumes of outside air through the ejectors, mixes it with the engine gases, and thus greatly increases the mass air flow through the ejector chambers. The result is a 40 percent augmentation in lift, which allows the Hummingbird's gross VTOL takeoff weight to exceed the installed thrust of the engines.

The Hummingbird has demonstrated its ability to make a complete transition from vertical takeoff—to horizontal flight—to vertical landings. The amazing H-bird is now undergoing an extensive Army test program.

Lockheed Hummingbird

Lockheed-Georgia Company, Marietta, Georgia: A Division of Lockheed Aircraft Corp.

a. engine thrust b. ejector chambers
c. nozzles d. outside air e. augmented thrust



building to be used for teaching aviation maintenance subjects. These new air-conditioned classrooms are ultra modern in every respect and contain the latest training aids and instructional equipment.

TRAINING FILMS

In the near future, several training films will be produced under the direction of the Department of Tactics. For the first time, training films are being developed on "Aerial Observation" and "Tactical Landing Areas," training subjects that have needed further development for quite some time.

"Aerial Observation" will be in color and will be filmed in two parts. Part I will present the sequence of conducting an aerial observation mission, to include the processing of a mission request; the assignment of the mission; preflight briefing; preflight planning; the conduct of the mission; and mission debriefing.

Part II will emphasize aerial observation theory and the techniques employed in accomplishing an observation mission. The expected release time for "Aerial Observation" is about October of this year, and it should be available in the field shortly thereafter.

By the time this article reaches the press, "Tactical Landing Areas" will be in production and well on its way toward completion. This film is unique in that it is the first project to be processed through the Army's new "quick channel" production approval system.

With the dispersion necessitated by nuclear warfare and the increase in aircraft in our system, more

and more landing areas are needed to satisfy our aviation requirement. Because of this increased emphasis, "Tactical Landing Areas" is being developed to carry the news to aviators in the field. It is in black and white and encompasses the classification of landing areas, an analysis of tactical and technical considerations, and the reconnaissance, selection, and occupation of the area. Prints of this film should be received in the field around the first of the year.

CROWDED FACILITIES

With the expansion of training at USAAVNS, facilities for support of Rotary Wing Training are bursting at the seams. The result is that maintenance and parking requirements for aircraft are spilling over to one of the stagefields. Knox Field, a familiar name to thousands of aviators, has assumed a dual role. It will soon be the home of over sixty UH-19s still being used for training.

During the month of June, a new stagefield was completed and turned over to the school. The new field has been named "Toth Stagefield" and is a welcome addition to our crowded training facilities.

MALFUNCTIONS, INC.

Considerable activity was noted recently at Guthrie Field as 17 rebuilt O-470-11 engines were installed in the test cell maintenance trainers.

There's an amazing story behind the replaced engines. These engines quite possibly have received more punishment than the manufacturer ever believed possible. They were

operated statically - a condition which does not provide for adequate and even cooling - for an average of four hours per day at a sustained high rpm. As if these factors didn't provide enough punishment, continuous "malfunctions" were placed in the engines deliberately in the form of crossed ignition leads, out-of-time magnetos, fouled spark plugs, and improper fuel-air mixtures.

Numerous roars, sputters, and coughs continue to be heard when driving past Guthrie Field as the new engines begin accumulating hours of torturous instructional service.

TRAINING AIDS

New UH-1D training aids received recently by the Department of Maintenance now make it possible to present the most up-to-date instruction on the UH-1D helicopter. These trainers consist of a composite flight control trainer, an electrical systems trainer, a fuel systems trainer and a T-53-L11 cutaway engine.

By utilizing these training aids, the student mechanics and pilots can readily understand the principles of operation and maintenance procedures for the famed "Huey." In addition, virtually every malfunction can be simulated in the trainers, giving the student valuable training in trouble shooting and in the correction of aircraft malfunctions.

THE WRITTEN WORD

The Department of Tactics portion of USAAVNS training literature output during fiscal 1965 will be heavy. The new Aviation Common Subjects Packet will be completed in December, 1964. An annex to the

EXTRICATE!



A CH-34 Choctaw helicopter of the 110th Aviation Company of the U.S. Army's Southern European Task Force (SETAF) begins a 14-mile flight from the Apennine foothills to an airfield in Sarzana, Italy. Its cargo is the fuselage of an Italian Army Model 204 helicopter that had suffered an engine failure. The recovery operation was performed jointly by members of the Italian Army's 2d Tactical Air Recon unit and SETAF's 17th Trans Det and 110th Aviation Co.

packet, entitled "Common Subjects Instructional Syllabus for Army Aviation in the Field Army," will provide suggested outlines for use by branch schools in the preparation of Army aviation input to their programs of instruction.

All ATT's and ATP's of Army aviation units are under initial preparation or revision. Comments from the field from all aviation units on the adequacy of current ATT's and ATP's are desired and should be sent Attn: Department of Pub. & NRI. A new field manual, FM 1-105, entitled "Army Aviation Techniques and Procedures," is under preparation. Its purpose is to provide a ready pocket-sized reference for use by the individual aviator as a guide in planning Army aviation tasks.

DOI



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**NEXT MONTH..
U.S. ARMY
PRIMARY
HELICOPTER SCHOOL**



Congressional Record

PROCEEDINGS AND DEBATES OF THE 88th CONGRESS, SECOND SESSION

A Tribute to the Army Aviation Song

SPEECH

OF

HON. SEYMOUR HALPERN

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Thursday, February 27, 1964

Mr. HALPERN. Mr. Speaker, American patriotism and the American way of life are effectively expressed in our music. Our hearts beat, our pulses throb, and our feet move to the swing of the great American songs that have grown out of love of country, and that inspire in us the same feelings that impelled their gifted authors. It is the vast promise of America that opens before us as we listen to the strains of such songs as the national anthem, "The Stars and Stripes Forever," "The Marine Hymn," and "Anchors Aweigh."

These compositions, and many others, sing their way into our hearts, and become one with our love for home, for family, for land, and friends. Music is a vital part of the American heritage, and any worthy addition to this great heritage is to be greeted with rejoicing.

The latest contribution to the musical tradition of America is the new "Army Aviation Song," by one of America's great modern composers, James Van Heusen. The lyrics are a tribute to the talents of Sammy Cahn, Mr. Van Heusen's partner in the creation of many renowned songs of recent years.

This new patriotic piece captures the spirit expressed in our great national songs, and in the songs so dear to the various branches of our armed services. It magnificently captures in music the thrill of flying, the intensity of combat, the friendly warmth of comradeship and the undying love for country.

It is a fervent expression of America as she is and as she must be maintained—a land of glory and bravery.

I bring this subject to the attention of the Congress as a noted example of patriotic service on the part of American musicmakers, whose contributions to our Nation's greatness are only too often too little recognized.

I had the privilege of being present at the official dedication of the "Army Aviation Song" last October 24, and I should like to share with my distinguished colleagues the excitement and inspiration I experienced at the event. The impressive ceremony was the climax of the annual meeting of the Army Aviation Association of America, held at the Sheraton Park Hotel in Washington.

Hearing the song magnificently performed, and seeing the honor paid to it by the outstanding guests who participated, I gained a deep appreciation of the musical genius and patriotic spirit of Mr. Van Heusen and of the poetic skill of Mr. Cahn, whose lyrics match the feeling of Mr. Van Heusen's melody.

I was struck by the contagious enthusiasm the song embodied—an enthusiasm which is phenomenally American—and by the same fervor and pride that have been characteristic of American music since the time "Yankee Doodle" was the tune behind which patriots rallied and marched for love of country into history.

The song is indeed an inspired piece of work which captures in music the spirit of an incomparable military organization, Army aviation.

The history of Army aviation is the thrilling story of a vital part of America's defense. It is the saga of an indispensable and invaluable component of our great Army team. In Vietnam alone,



Bell Helicopters—Military UH-1, Commercial 204B

From an original painting for CECO by R. T. Handrick

CECO's TA-2 Fuel Control System "feeds" the **LYCOMING T53 Gas Turbine** which powers the **BELL Helicopter** known variously as the Iroquois, the "Huey," the UH-1, the ASH, the 204B.

Together, they spell **SUCCESS** wherever and however they are used—and there is plenty of diversity in the use.

Take Vietnam, for example. Here, the world's first operational armed helicopter operates day in and day out under conditions sometimes adverse in the extreme. The Lycoming T53 (which has logged more than a half million flight hours and has a TBO of 1,200 hrs.) must ingest sand, dust, mud and yet be depended upon to power the UH-1 not only as a weapons platform but also to perform a number of other battlefield tasks.

This exceptional combination—**BELL-LYCOMING-CECO**—is in active use as a commercial vehicle and is relied on by all three branches of the armed forces. Ease of maintenance, economy of operation and dependability of performance are being proved in North America, South America, Europe, Asia, Australia.

There are many reasons for this "success story." Not the least of these is the extraordinary performance record of the Chandler Evans TA fuel control and pumping system. Components of the system are *simple, reliable, lightweight and low-cost*. And they are backed up by a reputation that has been earned through superior quality, above-average dependability and excellent field service.

But then, that's just as it should be, for . . .
CONTROL IS OUR BUSINESS.

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A Major Industrial Component of Fairbanks Whittier Corp.

WEST HARTFORD 1, CONNECTICUT

GAS TURBINE FUEL CONTROLS/PUMPS • MISSILE CONTROL SYSTEMS/SERVOS • AIRCRAFT/ENGINE ACCESSORIES



the story of this splendid organization of brave men is written in letters of blood and fire. And Vietnam is but one of the many areas in which Army aviation has given devoted and heroic service.

It has long been evident that Army aviation deserved the kind of aid to its morale and cohesiveness that would be provided by a stirring, representative song, similar to those that celebrate and inspire the other branches of the services. To secure such a song fittingly representative to this vital segment of the Armed Forces, a special committee of the Army Aviation Association was named under the chairmanship of Albert W. Bayer, president of A. W. Bayer Associates of Los Angeles.

Mr. Bayer, a pioneer and stalwart of the association, deserves our gratitude for his wisdom in enlisting Jimmy Van Heusen, a former test pilot, and as skilled an aviator as he is a great composer, to create a song appropriate to the tradition of Army aviation. And, he is to be complimented for securing Mr. Cahn to write the stirring words. Now, all one has to do is to hear the song to know that the mission has been accomplished.

The song is truly music which will take its place among the other great compositions by which Americans have expressed their love of country and will-

ingness to give their all in its defense.

In a typical gesture of great patriotic dedication, composer Jimmy Van Heusen and lyricist Sammy Cahn have devoted all their royalties to the AAAA Scholarship Foundation, which will provide scholarships for the sons and daughters of AAAA members. Through these scholarships, the Army Aviation Association is helping to educate the sons and daughters of those who have risked their lives, in flying and in combat, in the service of their country.

This great song has been recorded, in a spirited rendition worthy of its quality, in a splendid performance by Mitch Miller and his noted chorus. It may be confidently expected that the song, so well introduced, will attain the immortality it so richly deserves. Mr. Miller has joined the song's creators in the generous deed of turning over to the AAAA Scholarship Foundation all the royalties realized from the sale of his recording.

Again, I want to say it was truly a privilege, Mr. Speaker, to be at the official dedication of this great new contribution to American patriotic music. Surely, the "Army Aviation Song" is destined to take its place in the musical heritage of America with the other compositions by which America has sung its patriotic ardor and affection.

CLIP OUT AND MAIL TODAY!

TO: AAAA Scholarship Foundation, Inc.
1 Crestwood Road, Westport, Conn. 06882

Please forward me.....record(s);copies of the sheet music of the new official "Army Aviation Song." I have enclosed \$1 per record/sheet music copy in cash or a check made payable to the AAAA Scholarship Foundation, Inc.

Name (Printed)

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GO, NO GO

A "traffic light in-the-sky" to help Army planes find tiny battlezone airfields is being developed by the Bulova Watch Company.

A tri-colored shaft of light that beams into the sky shows incoming pilots a glide path for safe landings on airstrips in remote and rugged terrain, say Army development engineers. The light source device is about the size of a film projector and it operates in the same manner. The beam - called the "Glide Angle Indicator Light" - can be spotted three miles from the airstrip.

"It operates like a searchlight," explained Harry R. Gewertz, manager of Bulova's Systems and Instruments Division, "except that its beam is stationary and it is split into three bands of color - like a stop-and-go traffic light. When the pilot flies into the beam, he continues right on down the green path of light to a safe landing. If he sees a yellow beam, that means he's too high; if he sees red, that means he's too low and will crash on the near side of the field unless he pulls up into the green light."

LIGHTWEIGHT UNIT

The Glide Angle Indicator is portable, can operate on batteries or power from a jeep, can be set up by one man, weighs only 25 pounds, and can be dropped safely by parachute. The indicator light is designed to be completely set up, leveled, and aligned in azimuth and elevation by one man in the field in a very brief time.

Bulova has been working on the development for several years under a contract to the U.S. Army Mobility Command's Engineer Research and Development Laboratories. A prototype has been tested at Fort Belvoir, Va., and the present model, an advanced design, will be tested in the field shortly.

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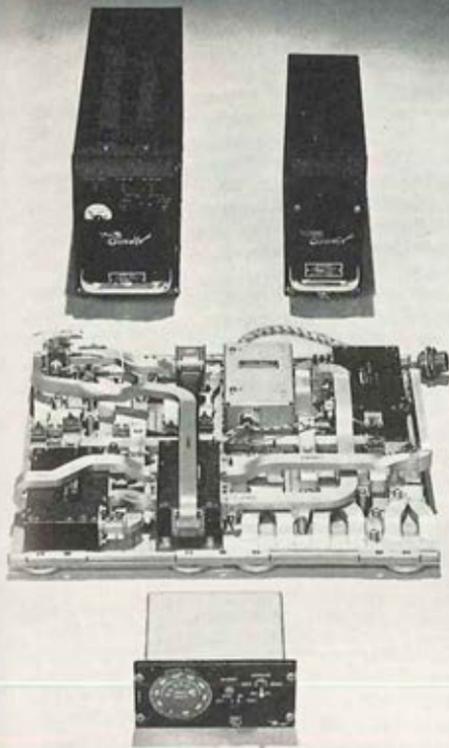
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**Can you guess the minimum altitude
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navigation system will track?**

Here's a hint.

Actually, it will track all the way down to ground level . . . zero altitude. And most important, its accuracy is not affected by altitude. It's the same at zero or 50,000 feet. This makes the DRA-13 especially valuable for low-level activities such as reconnaissance, surprise attack or logistic support.

But that's not the only important feature. It will track even when the aircraft is in a 60° roll or a 45° pitch attitude. It's because we use a nonmovable, planar array antenna and derive ground speed and drift angle data completely by electronics . . . no correction is required for pitch and roll. Also, because this method is so reliable, we recommend operating dual systems from a single antenna.

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When it comes to experience, we've got it. Hundreds of Bendix dopplers are now flying in NATO fighters, in USAF transports, with the FAA, and with 13 international airlines.

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Bendix Radio Division



AAAA SCHOLARSHIP WINNERS



That one dollar bill that you paid for your record of the "Army Aviation Song" - where did it go?

You donated the dollar to the AAAA Scholarship Foundation in buying the record, and the Foundation will assist in defraying the college tuition of the youngsters of four members this Fall.

Who are the youngsters? . . . There's Robert Spears (top left), the son of Lt. Col. and Mrs. Leroy C. Spears, of Morrow, Ga., who received a 1964 AAAA Scholarship of \$500.00 and who'll enter Georgia Tech later this year as a freshman.

There's Cheryl Cretin, the daughter of Capt. and Mrs. Theodore D. Cretin, of Ozark, Ala., who received a \$100 Honorarium and who'll enter MIT this Fall.

Danny Barrett (3d from the top), the son of Maj. and Mrs. Ernest F. Barrett, APO 185, N.Y., N.Y., was awarded a 1964 AAAA Scholarship of \$500 and will enter the University of Missouri in September.

Roger Moseley, the son of Maj. and Mrs. Lonnie L. Moseley, of Fort Sill, Okla., received a \$100 Honorarium and will enter the Air Force Academy this Fall.

The 1963 Scholarship Winner? Joel Graft (bottom photo), the son of Lt. Col. and Mrs. Charles V. Graft, Jr., of Springfield, Va. and the recipient of the single AAAA '63 Scholarship of \$1,500, won honors at the University of Oklahoma in his freshman year.



CHANGE OF COMMAND

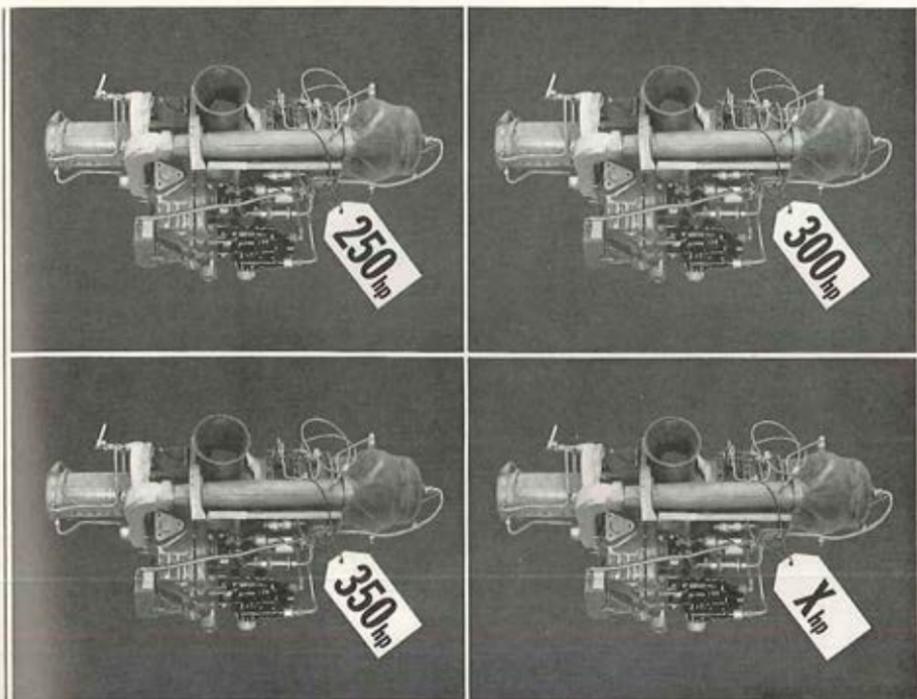
Lt. Col. Robert K. Moore (center, below) is shown accepting the command flag from Col. William B. Dyer, commander of the 7th U.S. Army Transportation (Aviation) Group, Sandhofen, Germany, prior to the latter's rotation to a new assignment with Hqs. AMC. Col. Moore assumed the command after having served as Deputy Commander for the past year. (USAP)



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"TUG" DEVELOPMENT

The addition of another member of the growing family of military flexible wing vehicles - a Towed Universal Glider known as "TUG" - was announced in late July with the award of a \$325,000 contract to the Ryan Aeronautical Company, San Diego, California. The contract was issued by the U.S. Army Transportation Research Command (USATRECOM), Fort Eustis, Va., for the Defense Department's Advanced Research Projects Agency (ARPA).

Under the contract, Ryan will design, fabricate, and test the TUG system as a further step in the development of this unique method of unmanned delivery of high priority cargoes into remote areas.

The TUG vehicles will be designed to deliver 4,000-pound payloads into combat areas, a capacity several times greater than that of earlier air cargo gliders tested by the Army and ARPA.

The cargo body suspended beneath the flexible wing will be able to carry liquid petroleum or high priority dry cargo, including ammunition, food, machinery, and other essential items.

A testing program will be conducted at the Army's Yuma, Arizona, Test Facility when the TUG vehicles are completed at Ryan's Lindbergh Field plant in San Diego.

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THE LIGHT SIDE . . .



“ . . . and check the brakes!”

SEVENTH ARMY AVIATION ORGANIZATIONAL CHART



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LCol Wm. G. Thomas, III



VII Corps Aviation Off
Major Robert Peterson



V Corps Aviation Off
LCol William F. Usher



8th Avn Battalion CO
LCol Harlow G. Clark, Jr.



504th Avn Battalion CO
LCol Paul R. Wagner



503rd Avn Battalion CO
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24th Avn Battalion CO
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FOURTH ARMY CONDUCTS AVIATION CONFERENCE

The Annual Fourth U.S. Army Aviation Conference was concluded at Fort Sill, Okla., with the presentation of a plaque, commemorating the conference, to the Fort Sill Commanding General, Major General Harry H. Critz, by Colonel Henry H. McKee, Aviation Officer, Fourth U.S. Army.

The conference was attended by aviators from throughout CONUS, civilian aviation officials, and industry representatives. The three-day conference ended with a morning of committee sessions on Programs & Budget, Flight Safety & Standardization, Supply & Maintenance, Operations & Training, and Airspace activities.

During the course of the conference, the attendees viewed an Artillery Firepower Demonstration, which consisted of all artillery weapons now available to the troops - from the 105 mm through the 'Honest John' Rocket.

The importance of Fort Sill's role in the development of aerial

artillery was further stressed in a Press & TV conference by Col. Conrad Stansberry, who attended the conference as the representative of Brig. Gen. John J. Tolson, the Director of Army Aviation. The conference followed an aerial demonstration, which included the use of helicopters in transporting troops and weapons and indirect and direct fire from CH-34 Choc-taws. Army CV-2 Caribous also demonstrated their versatility in low level cargo extractions.

Other distinguished speakers included Col. Robert Corey, (then) Aviation Officer, Hq, USCONARC; Col. Joseph Gude, LOH Project Officer, Hq, AMC; Col. Robert Hamilton, Director of USABAAR; and Lt. Colonel James Neumann, Executive for Aviation OPO, OPD, DA. A team from the Test and Evaluation Control Group, Ft. Benning, Georgia, explained "Project Team" as well as the Air Mobility Test concept utilized by the 11th Air Assault Division.



NEW CREST AND MOTTO ADOPTED BY USAPHS

The United States Army Primary Helicopter School has a new crest and a new motto.

"Above the Finest" is the new motto decided upon by the school, replacing the former "Above the Best." The old motto was felt inappropriate because it included all of Army aviation and did not apply directly to the school.

The familiar blue and orange crest of USAPHS was felt inadequate in that all branches of the service train at Ft Wolters, and the old crest was not representative of all of the branches.

Mottos were solicited at the School and a list was submitted to the U.S. Army Heraldry Department in Washington, D.C. The list included such suggestions as "Up and Atom," "The Flying Cadets," "Wheeling Eagles," and "Into the Blue." Other suggested mottos included "GIVE 'EM HELICOPTERS," "Gay Blades," "First to Whirl," and "Whirling Dervishes."

The Army Department of Heraldry came up with "Finem Fespice," which in Latin means "To look towards the end." Col. Jules E. Gonseth, Jr., school commandant, felt this motto could too easily be confused with "Rest in Peace," or "Finished," and suggested a change. Col. Gonseth's suggested motto was "Helix Volera Optera," a Latin phrase meaning "Flying, spirally, upwards." This motto is attributed to Leonardo da Vinci, father of the modern helicopter.

While the motto was being chosen by the school and the Department of Heraldry, design of a crest continued with the ultimate crest containing - on the shield - the pattern of helicopter blades in black and white. The white represented the air; the black the compressed air which forces the helicopter upwards; the chevron represents the military aspect of the school; and the stars representing com-



mand and control. The torch, as always, represents man's striving for knowledge.

The device above the shield contains a shakefork representative of helicopter blades. It also signifies the three phases of instruction given at USAPHS - the selection and in-processing of prospective helicopter pilots; two, the training of these pilots; and three, their graduation. The shakefork is also symbolic of the action of separating the wheat from the chaff - the selection of the good pilots by the school.

The circle and star refer to the school, with the star also to be found on all American military aircraft. The national colors of red, white, and blue are utilized in the new crest.

The crest is expected to be worked into a distinctive flag for the school at a later date and will be worn by all members of the USAPHS.

NGB AUTHORIZES 24 EXTRA FLIGHT DRILLS

The Military Pay and Allowance Committee of DOD has authorized the 1,770 Army Aviators in the ARNG an additional twenty-four paid flight training periods, bringing the total number of authorized paid drills for ARNG aviators to 72. Details of the authorization are spelled out in NGR 95-3. Under the new authorization, ARNG pilots are only permitted to fly one flying drill in any 24-hour period. The

NGB has stipulated that all 72 drill periods be at least four hours long. Helicopter pilots are to log a minimum of 1-1/2 hours during each assembly while fixed wing pilots are to log a minimum of 2-1/2 hours per flight drill. The National Guard aims to reduce its accident rate and to improve its combat readiness by establishing the new "frequency of flight requirements." (NGB)

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COMPOUND

■ Here's a new look at Lockheed's XH-51A "compound helicopter" now undergoing design refinements prior to its upcoming first flight. The compound features a 4-bladed rigid rotor system that is supplemented by the addition of a fixed wing and an auxiliary jet engine delivering approximately 2,600 pounds of thrust. Now being evaluated under a research contract for the U.S. Army, the XH-51A compound is expected to exceed speeds of 220 mph in level flight. The aircraft's wing has been increased in span and area over an earlier design - the present wing measuring 16 feet, 5 inches; formerly it was 14 feet, 9 inches. A Pratt & Whitney PT-6 turbine engine provides the basic power for the research vehicle. (Lockheed)

OBITUARIES

WILLIAM B. CAWTHORNE

Second Lieutenant William Bayles Cawthorne, assigned to the Headquarters Company of the 52d Aviation Battalion (Vietnam), was killed in action on June 30, 1964, while serving in South Vietnam. He is survived by his widow, Mrs. Earlene G. Cawthorne of 193 Wakita, Marietta, Georgia.

FRED DAMERON

Major Fred Dameron, USA-Ret., died in the Veterans Administration Hospital at Columbia, South Carolina, on June 28, 1964. He is survived by his widow, Mrs. Ruth Causby of Dameron, and two daughters, Leigh and Ann, of 3505 Hanson Road, Columbia, South Carolina; his parents, Mr. and Mrs. L.C. Dameron of Bessemer City, North Carolina; a brother, Col. Ernest C. Dameron of the Naval War College, Newport, R.I., five other brothers, and three sisters.

ROBERT G. DASSLER

First Lieutenant Robert G. Dassler, assigned to the 516th Trans. Airplane Company, 11th Air Assault Division, Fort Benning, Ga., sustained fatal injuries in the crash of a CV-2 Caribou aircraft in South Carolina on June 24, 1964. He is survived by his widow, Mrs. Jacqueline Jo Dassler of 3430 Matilda Lane, Columbia, Ga.

GERALD W. DAVIDSON

First Lieutenant Gerald W. Davidson, assigned to the 114th Aviation Company (AML), sustained fatal injuries in the crash of a UH-1B Iroquois helicopter in South Vietnam on June 29, 1964. He is survived by his parents, Mr. and Mrs. Hester Davidson of 400 New York Avenue, Oak Ridge, Tennessee.

RALPH A. DUNN

Warrant Officer (WO-1) Ralph A. Dunn, assigned to the 114th Aviation Company (AML), was killed in the crash of a UH-1B helicopter in South Vietnam on June 29, 1964. He is survived by his widow, Mrs. Sandra Lee Dunn of 2915 Westwood Avenue, Colorado Springs, Colo.

JOE J. EBROM

Chief Warrant Officer Joe J. Ebrom, assigned to the 516th Trans Airplane Company, 11th Air Assault Division, Fort Benning, Ga., sustained fatal injuries in the crash of an Army CV-2 Caribou aircraft in South Carolina on June 24, 1964. He is survived by his widow, Mrs. Massye Jane Ebrom of 1019 Rosewood, Columbus, Ga.

RONALD F. ESTES

Captain Ronald F. Estes, an Army Aviator assigned to the 516th Trans Airplane Company, 11th Air Assault Division, Fort Benning, Ga., was killed in the crash of a CV-2 aircraft in South Carolina on June 24, 1964. The Caribou crashed during the conduct of a service mission. He is survived by his widow, Mrs. Elizabeth Estes of 2909 Luckie St., Columbus, Ga.

CHARLES L. KELLY

Major Charles L. Kelly, an Army Aviator assigned to the 57th Medical Detachment (Helicopter Ambulance) (Vietnam), was killed in action on July 1, 1964 while serving in South Vietnam. He is survived by his widow, Mrs. Jessie H. Kelly, of 609 South Main Street, Sylvania, Ga.

CHARLES D. MARTIN

Warrant Officer (WO-1) Charles D. Martin, assigned to the 516th Trans Airplane Company, 11th Air Assault Division, Ft. Benning, Ga.,

sustained fatal injuries in the crash of an Army CV-2 Caribou aircraft in South Carolina on June 24, 1964. He is survived by his widow, Mrs. Helen S. Martin, of Highland Avenue, Columbus, Georgia.

ROBERT J. OGDEN

Major Robert J. Ogden, AUS-Ret., a veteran Army Aviator with last duty assignment at Fort Devens, Massachusetts, died June 25, 1964. He is survived by his widow, Mrs. Robert J. Ogden of 810 N.W. 104th Street, Miami, Florida.

ROBERT G. RAGSDALE

Second Lt. Robert G. Ragsdale, assigned to the 114th Aviation Company (AML)(Vietnam), was killed in the crash of a UH-1B helicopter in South Vietnam on June 26, 1964, while engaged in the conduct of a service mission. He is survived by his widow, Mrs. Patricia Ann Ragsdale of 539 Hotwells Boulevard, San Antonio, Texas.

JOHN B. ROSE

Captain John B. Rose, an Army Aviator assigned to the 3rd Transportation Company (Lt Hel), Fort Belvoir, Virginia, sustained fatal injuries when his CH-34 Choctaw helicopter crashed during the conduct of a training mission. The fatal accident occurred at Fort Belvoir, Va., on June 29, 1964. He is survived by his father, John E. Rose of Carrsville, Virginia.

JAMES P. WRIGHT

First Lieutenant James P. Wright, assigned to the 114th Aviation Company (AML)(Vietnam), died as a result of injuries suffered in the crash of a UH-1B in South Vietnam on June 26, 1964. He is survived by his widow, Mrs. Donna Lee Wright of Custer, South Dakota.

urally, our Army pilots liked this airplane; however, it could not perform the primary aerial observation mission any better than the L-4 and was not as operationally suitable because of its extra weight and operating cost.

Later, the Army tested the L-13 developed by the Air Force and concluded that ". . . the L-13 airplane is not suitable for use by Army Field Forces units." It was too complex and required an abnormal amount of maintenance.

At the Army's request and with Army guidance, the Air Force developed the L-15. The Army concluded that the YL-15 "does not adequately fulfill the military characteristics for which it was developed" and "is not suitable for extended use in combat by Army units."

The current standard observation airplane - the L-19 (O-1), resulted from an Army competition and was an "off-the-shelf" procurement.

ENGINEERING INTEGRITY

The FAA depends upon the manufacturer to prove the integrity of his aircraft. The FAA generally looks over the manufacturer's shoulder and, after engineering integrity has been proven, performs engineering flight checks and ultimately issues a type certificate constituting engineering approval. Should the Army establish a requirement for an FAA certificated airplane, procurement is on a direct basis. The manufacturer will tailor the configuration to Army desires by installation of specified avionics equipment, instruments, shoulder harness, etc. Such has been the case with the U-8 series.

Use of the FAA as its engineering

FAA CERTIFICATION

CONTINUED FROM PAGE 4

agency opens still another route for Army procurement of aircraft. If the Army desires to procure an aircraft not currently being manufactured, but which takes full advantage of the state-of-the-art and is specifically tailored for Army use, this program can be an "off-the-shelf" buy. In this case, the Army provides R&D costs and procures direct. Such a program eliminates the "middleman" and permits maximum communication between the Army and the manufacturer. One by-product is that the Army funds a program that may have civil potential. If a civil market is found, the Army not only benefits aviation in general, but realizes a reduction in cost due to increased volume of production.

A LOOK AT THE LOH

This leads us to a discussion of the Light Observation Helicopter - LOH. Several items about this program are significant, namely:

1. At the inception of this program, the exact helicopter desired was nonexistent.
 2. The Army is funding development, through FAA type certification, of three prototype models with separate contractors.
 3. Competition between reliable manufacturers is assured by the announced intent of procuring only one model.
 4. The Army's cost for the prototype airframe development was pre-
- (Continued on the Next Page)

determined in that each manufacturer was given a fixed-price contract. No overruns on this program!

It is expected that the LOH program will set a precedent. Questions we expect to be answered include:

1. Is FAA certified "off-the-shelf" development best suited for Army needs as compared to development by the Navy or Air Force?

2. Does "off-the-shelf" competition truly produce a better product for Army use?

3. Does the Army save money with this method of procurement? Using the Navy, Air Force or FAA as its engineering development agent does not relieve the Army of its basic procurement responsibility. We must make sound decisions upon which to base the expenditure of Army funds. We must monitor engineering test programs and provide a timely capability to curtail nice-to-have engineering tests. We must assure that tests are Army oriented and not oriented to the developing agency. An engineering capability is required to fulfill this basic responsibility.

FAA AS AGENT

A basic problem exists with regard to FAA type programs. For example, should Army pilots have flown the LOH's prior to type certification? If not, the Army's program would have been delayed. I do not believe this is or should be a problem. Pilots of the Aviation Test Board fly aircraft prior to final engineering approval. For example, the Air Force established, through engineering tests, a limited flight envelope for the CH-47A Chinook.

The Aviation Test Board was then authorized to initiate its tests within the flight restrictions imposed. As engineering tests progressed, the envelope was expanded. This procedure should be as suitable for FAA programs. Once the manufacturer has established even a limited flight envelope which is sanctioned by the FAA, then the Army should initiate its testing within this envelope. Then, as the envelope is expanded, the scope of Army tests can be expanded.

SUMMARY

1. The engineering integrity of Army aircraft currently must be established by the Navy, Air Force, or FAA.

2. Many inter-service problems are created when the Navy or Air Force is the Army's engineering agent.

3. Procurement using the FAA as its engineering agent appears to be the best authorized procedure from an Army viewpoint. The current LOH program should prove this point.

4. Use of the Navy, Air Force, or FAA as its engineering agency does not relieve the Army of its responsibility to provide a sound basis upon which to make procurement decisions. This responsibility requires an Army engineering capability.

5. Some question exists as to when Army pilots should fly aircraft being developed under FAA auspices. I submit that this is not a problem - that Army tests should proceed concurrently, but follow engineering tests using flight envelopes approved by the engineering agency - be it Navy, Air Force, or FAA.

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- △ Expansion and acceleration of Army research and development programs
- △ Support of a more effective national Civil Defense program
- △ Support of Mutual Security and Mutual Assistance programs

ALAMO CHAPTER

Pres.....Lt. Col. Robert B. McGhee
The Chapter installed its '64-'65 slate of Chapter officers during the course of a February 21 business "social" held at the Brooke AFB Officers' Club in San Antonio, Tex.

AA CENTER CHAPTER

Pres.....Colonel Edward McMaken
A September 15 "Shrimp Grab & Beer Bust" - "All you can eat and drink for \$1.25" has been planned for 400 members at the Lake Lodge. Stag and for "Members Only."

ATLANTA CHAPTER

Pres.....Colonel David G. Cogswell
The Chapter installed its '64-'65 slate of Chapter officers during the course of a May 11 business "social" conducted at the Atlanta Army Depot Officers' Club.

DAVID E. CONDON CHAPTER (Fort Eustis, Va.)

Pres.....Colonel Albert A. Wilson
The Chapter elected its '64-'65 slate of Chapter officers by a mail ballot conducted in April, and held "AAAA Scholarship Fund" Dinner-Dance on March 5 at the Fort Eustis NCO Open Mess.

DAVISON AAF CHAPTER (Fort Belvoir, Va.)

Pres.....Major Laurence F. McKay
The Chapter has not submitted copies of its 1964 Chapter Minutes

FORT BENNING CHAPTER

Pres.....Colonel William R. Tuck
The Chapter installed its '64-'65 slate of Chapter officers during the course of a February 27 business-professional meeting held at the Ft. Benning Main Officers' Open Mess. Mr. Russell Bannock, Director and Vice-President Sales of de Havilland Aircraft of Canada, was guest speaker at the meeting.

FORT BRAGG CHAPTER

Pres.....Major Roger H. Coye
The Chapter Executive Board conducted a meeting on June 18 to elect officers to fill the vacancies existing on the Board.

FORT CAMPBELL CHAPTER

Acting Pres....Capt. Robert H. Bean
The Chapter conducted an afternoon business meeting on April 25 at which the '64-'65 officer slate was installed and the Chapter meeting plans for the remainder of '64 were discussed.

FORT HOOD CHAPTER

Pres.....Lt. Col. Ralph O. Bennett
The Chapter held a combined business-professional meeting and dinner-dance on March 20 at which it presented local Science Fair awards

CHAPTER



CALENDAR

and heard Col. John Dibble, Jr., of OCRD, speak on future aircraft.

FORT MONROE CHAPTER

Pres.....Col. J. Elmore Swenson
The Chapter installed its '64-'65 slate of Chapter officers during the course of an April 4 business-social meeting held at the Fort Monroe Officers' Open Mess, and reviewed its accomplishments during the '62-'64 period.

FORT RILEY CHAPTER

Acting Pres....Capt. Duane F. Kocik
The Chapter has not submitted a report of a general membership meeting activity conducted in 1964.

FORT WOLTERS CHAPTER

Pres.....Major Melvin K. Goulding
The Chapter conducted an afternoon membership business meeting on May 14 to discuss the Chapter meeting program for the ensuing three-month period.

GRAND CANYON CHAPTER

(Fort Huachuca, Arizona)
Pres.....Major James L. Burke
The Chapter held an AAAA Beef Barbecue at the Lakeside Officers Club on July 30 and conducted an election of Chapter officers following a Safety Meeting.

HAWAII CHAPTER

Pres.....Major Billy C. Hall
The Chapter Executive Board held a meeting on July 24 to consider the election of officers to fill the vacancies existing in the Chapter Executive Board slate.

JIMMIE L. HILTON CHAPTER

(Fort Sill, Oklahoma)
Pres.....Lt. Col. Fred'k G. Goodwin
The Chapter installed its slate of '64-'65 Chapter officers at a business meeting conducted on Mar. 26.

KEYSTONE CHAPTER

(New Cumberland, Pa.)
Pres.....Major Thomas H. Small
The Chapter conducted a professional-social meeting on Feb. 22 at which Joseph F. Kilch of the Department of Military Affairs, Commonwealth of Pennsylvania, was the guest speaker.

LINDBERGH CHAPTER

(St. Louis, Mo.)
Pres.....Mr. Eric H. Petersen
The Chapter held a professional-social meeting on June 18 at which Maj. Gen. William B. Bunker, Deputy Commanding General, Hqs, AMC, Washington, D.C., was the guest speaker.

MONTREY CHAPTER

(Fort Ord, Calif.)
Pres.....Major Marvin M. Morgan
The Chapter conducted a professional luncheon meeting on April 8 at the Fort Ord Officers' Club. Mr. Jack Ruby of the Military Requirements Office of the Hiller Aircraft Company, was the guest speaker for the luncheon meeting.

PIKES PEAK CHAPTER

(Fort Carson, Colo.)
Actg Pres....Capt Leo E. Gomolchak
The Chapter conducted a membership luncheon on February 28 at the Fort Carson Officers' Open Mess. Lt. Colonel James D. Bowen, Aviation Officer of ARADCOM, was the guest speaker at the luncheon.

WASHINGTON, D.C. CHAPTER

Pres.....Mr. Lewis E. Cassner
The Chapter conducted its Third Annual Science Awards Luncheon on May 19 honoring 13 youngsters of the Greater Washington, D.C. Area. Maj. Gen. William B. Bunker, DCG, Hqs, AMC, was the Luncheon Guest Speaker and presented the awards to the youngsters.

(Continued on the Next Page)

PARTICIPATION

■ Within the framework of the Army Aviation Association, 36 Chapter activities represent the interests of more than 70 per cent of the total membership. These Chapters - which reflect all degrees of membership participation and activity - are governed by 7-9 member Chapter Executive Boards, patterned along the functional lines of the Association's National Executive Board. In the 1963-1964 membership year just ended, the Chapter activities engaged in well over 200 professional and social AAAA gatherings.

A YOUNG TRADITION



■ Lt. Col. Orval H. Sheppard (2d from right), ExecO at USABAAR, Ft. Rucker, Ala., receives the Master AA wings of Lt. Col. Willie W.J. Barrios as the 15th Master Aviator to receive the "original Master wings" awarded to Brig. Gen. Robert R. Williams. Observing the new tradition - that of passing along Wings #1 until Gen. William retires - are, l. to r., Lt. Col. Henry N. Wegeland, Jr., Lt. Col. William D.C. Jones, and Col. Robert M. Hamilton (far right). (U.S. Army photo)

OVERSEAS CHAPTERS

ALASKA CHAPTER

Pres.....Maj. Charles E. Connaway
An August 29 Chapter Dinner-Dance has been scheduled by the combined "north" and "south" membership of the Alaska Chapter. A cocktail hour will precede the buffet dinner and brief business meeting and will be followed by dancing. The meeting will be held at the Fort Wainwright Officers' Open Mess.

CAP ST. JACQUES CHAPTER

Pres.....Major Marcus W. Coyte
The Chapter conducted a professional-business meeting on April 24 at which the 61st Aviation Company and the 330th Transportation Company presented the evening's "program." A letter from Father Jacques Huberdeau was read to the attendees acknowledging the Chapter donation to aid the Montagnard tribes.

BERLIN CHAPTER

The "activation meeting" of an AAAA Chapter within the Berlin area was held on May 15 at Tempelhof Airport. Mr. W.A. Haas, U.S. Administrator for Aeronautics in Berlin, American Embassy, was the guest speaker at the initial meeting.

FULDA CHAPTER

Pres.....Capt. Gerald D. Lippert
The Chapter elected its '64-'65 officer slate at a general membership meeting held on April 17 at

the Fulda (Germany) Officers Club.

HANAU CHAPTER

Actg Pres.....Capt. Berry Henderson
The Chapter elected and installed its '64-'65 slate of officers at a business meeting conducted at the Fliegerhorst Officers' Open Mess on February 20.

ILLESHEIM CHAPTER

President.....Capt. Roger J. Sulzer
The Chapter installed its '64-'65 slate of officers at a general membership meeting held at the Illesheim Officers' Club on March 21, and heard a report on the Chapter membership's participation at the 1964 USAREUR Region Convention.

KOREAN CHAPTER

Pres.....Maj. Richard K. Mukaeda
The June 6 meeting of the Chapter was cancelled due to the curfew and martial law imposed during that period, and the Chapter installed its '64-'65 slate of officers at a business meeting held on August 22.

LATIN AMERICAN CHAPTER

(Howard AFB, Canal Zone)
President.....Capt. Robert E. Ainslie
The Chapter held a general membership luncheon on April 17 at which the outgoing president, Maj. William H. Dill, and the new president, Capt. Robert E. Ainslie, went through an informal change of office ceremony prior to the introduction of the other new Chapter officers.

The members approved the presidential suggestion that the Chapter conduct a monthly luncheon meeting on the third Friday of each month.

LECH RIVER CHAPTER

Pres.....Lt. Col. Geo. E. Handley, Jr.
The Chapter elected and installed its slate of '64-'65 officers at a business meeting conducted at the Gablingen Officers Club, Augsburg, Germany, on August 25, enjoying Chapter refreshments upon the adjournment of the meeting.

MAIN RIVER VALLEY CHAPTER

Pres.....Captain Wilbur E. Reid
The Chapter conducted a brief membership meeting on June 24 at the Kitzingen Officers Club, devoting its discussion to plans to enlarge the Chapter membership and to increase the frequency of membership meetings. The Chapter Executive Board was appointed as the committee to review these areas.

MAINZ CHAPTER

Pres.....Major Gordon H. House
The Chapter held a special meeting on May 13 to cover pertinent Chapter administrative and fiscal matters and to consolidate the individual nominations for AAAA National Awards prior to submission.

MUNICH CHAPTER

President.....CWO Alvin Lee, Jr.
The Chapter has not submitted copies of its 1964 Chapter Minutes.

NORTHERN ITALY CHAPTER

Pres...CWO Charles H. Steffani, Jr.
The Chapter has not submitted a report of any general membership meeting activity held in 1964.

NURNBERG CHAPTER

Pres.....Lt. Col. Paul R. Wagner
The Chapter has not submitted copies of its 1964 Chapter Minutes.

RHINE VALLEY CHAPTER

Pres.....Colonel Albert Newton
The Chapter celebrated the June 6 Birthday of Army Aviation by conducting a professional-social get-together at the Patrick Henry Village Officers Club in Heidelberg, Germany, on June 6. Chapter officers for the '64-'65 term were installed at the informal birthday celebration.

STUTTGART CHAPTER

Pres.....Maj. Jesse F. Van Sant
The Chapter Executive Board held a special meeting at the Patch Officers Open Mess in Vaihingen on July 31 to elect Maj. Jesse F. Van Sant to fill the unexpired term of office of Lt. Col. Charles S. Black, who was transferred from the Stuttgart area.

BASED upon the signed Acceptance Forms received at the National Office of AAAAA, the following Chapter Executive Boards are announced. Members elected to Chapter office are elected for a two-year term ending 31 March 1966. Elections within the Chapter activities of the Association follow a two-year staggered election plan with half of the elected slate being replaced in office during the 1 Jan.-31 Mar. period of each membership year.

OFFICES

PresPresident
 ExVP.....Executive Vice President
 SecSecretary
 TreaTreasurer
 VPA.... Vice Pres., Army Affairs
 VPR...Vice Pres., Reserve Affairs
 VPG...Vice Pres., Nat'l Guard Aff.
 VPI...Vice Pres., Industrial Affairs
 VPP.....Vice Pres., Public Affairs

FT. HOOD

Pres.....Lt. Col. Ralph O. Bennett
 ExVP.....Capt. Harry J. Zellmer
 Sec.....Maj. Jack H. Dibrell
 Trea.....To Be Elected
 VPA.....To Be Elected
 VPI.....To Be Elected
 VPP.....CWO James A. Bartley

FULDA

Pres.....Capt. Gerald D. Lippert
 ExVP.....Capt. William B. Wash
 Sec.....Capt. Orous L. Ellis, Jr.
 Trea.....Capt. Leman O. Busby
 VPA.....Capt. William A. Goer
 VPI.....Capt. William B. Owens
 VPP.....Capt. Joseph P. Gallagher
 VPR.....Capt. William B. Long, Jr.

HANAU

Pres.....Maj. J.J. Morris
 ExVP.....Capt. Berry H. Henderson
 Sec.....Capt. Lawrence N. Sutliff
 Trea.....Lt. Paul J. Clemens
 VPA.....Capt. Emory W. Bush
 VPG.....Capt. Allen M. Carlisle
 VPI.....Capt. James O. Rymus
 VPP.....Capt. Richard D. Akre
 VPR.....Capt. Gene R. Rasmussen

FT. MONROE

Pres.....Col. J. Elmore Swenson
 ExVP.....Lt. Col. Gustave A. Peyer
 Sec.....Lt. Col. R.G. Culbertson
 Trea.....Lt. Col. William C. Edler
 VPA.....Lt. Col. Ralph E. Hill
 VPG.....Lt. Col. F.W. Holden, Jr.
 VPI.....To Be Elected
 VPP.....Maj. Charles V. Shores, Jr.
 VPR.....Capt. John W. McKinney



FT. WOLTERS

Pres.....Maj. Melvin K. Goulding
 ExVP.....Mr. Joseph H. Shields
 Sec.....Capt. John E. Caron
 Trea.....Capt. Eugene R. Kelley
 VPA.....Maj. John L. Jennings
 VPG.....Capt. Carl L. Burleson
 VPI.....Lt. Col. James W. Hill, Ret.
 VPP.....To Be Elected
 VPR.....Capt. William B. Long, Jr.



INCENTIVE

■ Captain Joseph Page (right), class leader of ORWAC 64-1, is shown receiving a membership incentive check of \$192.00 from Col. Edwin McMaken, president of the Army Aviation Center Chapter. The class check - which may be used for any purpose the class sees fit - represents a partial refund of first year membership fees for 100 per cent class enrollment in the AAAAA.

ACHIEVEMENT

■ AAAAA Science Fair Award Winner Gene Morgan (right) is shown receiving an AAAAA Science Award Certificate of Achievement from Major Charles E. Connaway, president of the Alaska Chapter of the Association. The youngster was one of 174 recipients of the 1964 Certificate of Achievement awarded by the AAAAA and its Chapter activities in recognition of an outstanding aviation Science Fair exhibit. (U.S. Army photo)



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■ AVIATION MANAGEMENT

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■ EDITORIAL/PUBLICATIONS

GROWING COMPANY seeks young journalist to assist in the staff preparation of periodicals, booklets, etc. dealing with Army aviation. Must have broad experience in Army aviation matters, and be knowledgeable in all phases of graphic arts & magazine production. Please furnish a personal resume outlining your experience, starting and future salary desired, and date of availability. Write AAAA, Attn: Box 4329, Westport, Conn. 7



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