MAY-JUNE, 1964

ARMY AVIATION

MR. HARDNOSE

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Lycoming

Division—Avco Corporation Stratford, Connecticut



PROGRESS



SUMMARY

July, 1964

CHINOOK: THE FLYING GASOLINE STATION

The CH-47A Chinook is a key element in complementing tactical mobility with logistic mobility. CH-47A Chinooks, assigned to the 44th Air Transport Battalion of the 10th Air Transport Brigade and the 228th Assault Support Battalion, can supply thousands of gallons of fuel in collapsible cells, thereby keeping aircraft supplied with fuel without dependence on trucks and fixed-wing aircraft tankers. This gives the Air Assault Division the capability of unrestrained mobility under the most severe conditions. A single Chinook with 2000 gallons of fuel can refuel ten HU-1D Iroquois helicopters in an assault area. Three HU-1Ds can be refueled simultaneously.

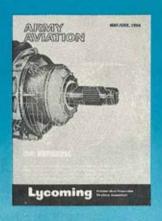
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VERTOL DIVISION

ARMY AVIATION

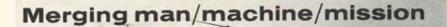
VOL. 13-NUMBER 5 MAY-JUNE, 1964

USAREUR ARMY AVIATION



by Brigadier General John J. Tolson, D. FORT RUCKER REPORT	Director of Army Aviation, OACSFOR 7
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THREE OF THE DESIGN SELECTIONS WHICH OPTIMIZE OH-SA FOR TODAY'S MISSIONS ...

... AND PROTECT COST EFFECTIVE NESS IN TOMORROW'S M15510N5

1 Ample votor diameter for top hovering, autovotational and speed performance ...

... and for gross weight and power increases in tuture

Engine location ermits open, one-station access to turbine and accessories . drives and controls ...

... and provides space for twin 2 or one 500H turbine substitution.

Low drag configuration and detail treatment has best need/power

... and adapts to advanced higher speed systems without basic tuselage change.

OH-5A DESIGN CHALLENGE: COST EFFECTIVENESS — Design of any new aircraft must be optimized for the mission it must perform. History proved, however, that missions change and grow — often unpredictably — in terms ensemy capability, climate, topography, and logistics. Because TOTAL COST EFFECTIVENESS was a primary design objective, the OH-5A is planned for growth in range, speed, and capability — not aircraft size — to meet the inevitably growing light observation mission.

HILLER AIRCRAFT COMPANY

DIVISION OF ELTRA CORPORATION

Lean and mean, that's what they say about the 11th. This tough air assault division of sky soldiers, depends on Bell UH-1B's and UH-1D's for their mobile, hard-hitting tactics. Heavily armed UH-1B's, sweeping in at tree-top level, provide enroute column protection for troop-carrying "Deltas".. provide shock action during troop assaults.. execute combat support missions during the engagement. ■ Bell, with the Army, designed the Iroquois to take front-line punishment, yet retain in-the-field maintenance ease. Combat experience in Vietnam is proving every day that the UH-1 Iroquois is the fighting man's choice.



In Action With the 11th.. The Armed Iroquois



GENERAL TOLSON COMMENTS ON:

USAREUR AVIATION

N April, I had the opportunity to visit many of our aviation units in Germany. During my travels, which included all of the divisional aviation units and a number of separate units, I was impressed by the characteristic enthusiasm and professionalism displayed by our people over there. They are doing a remarkable job of demonstrating the capabilities of Army aviation.

I feel that my visit has enabled me to get a better picture of the day-to-day activities and problems of these units. I want to thank all of the officers, warrant officers and men of the USAREUR units for the hospitality extended me and express my appreciation for the job they are doing so well.

HELICOPTER IFR FLIGHT

On page 1 of the May issue of the U.S. Army Aviation DIGEST, Major General Clifton F. von Kann, Commanding General, U.S. Army Aviation Center, asked for your literary contributions on the subject of "Helicopter Instrument Flying."

This is an excellent opportunity to air your views on some of the problems connected with all-weather helicopter flight and enable the Army to benefit from your ideas and



experience. While I am sure that no material incentive is necessary to stimulate your efforts, the \$100 award offered by General von Kann would be a worthwhile addition to anyone's Christmas Fund.

I would like to add my wholehearted support to this important endeavor and encourage you to submit your articles to the U.S. Army Aviation DIGEST, Fort Rucker, Ala., by 1 August 1964.

LOSS OF COMMUNICATIONS

Many Army Aviators have read the article "A Bucket of Worms" which was published in the February 1964 issue of the Army Aviation DIGEST. The article thoroughly discussed radio communications failure while under IFR conditions. Destination was Davison Army Airfield, Fort Belvoir, Virginia, which has no radio navigational facility. Included in the article was a comment that the Davison GCA procedure would be amended to require that a pilot experiencing loss of communications proceed to Wash-

May-June, 1964

ington National Airport and execute an ILS approach.

Such a procedure had been requested by the local commander; however, it was rejected by responsible authorities. It is believed by the authorities and technicians concerned that existing loss of communications procedures are sufficient and an alternate procedure was not justifiable. If a radio navigation capability exists with which to perform an ILS approach, instructions can normally be received and complied with. If such a navigational capability does not exist, the suggested approach could not be performed anyway and other highly undesirable problems would result.

FEW EXCEPTIONS

In cases where not otherwise instructed, FAR 91.127 procedures are to be followed unless an aviator elects to exercise his emergency authority. Considerable controller confusion is probable if an exception to standard procedures is allowed. ARTCC, approach control and tower facilities at or near large hub operations are heavily staffed and complex. An exception to standard procedures interrupts controller processes, induces hand-off problems and generally deteriorates control ability.

We all agree that loss of communications is a serious problem. ARTCC considers this to be an emergency and is prepared to respond accordingly. If standard procedures are followed, safety is reasonably assured, especially where radar controlled separation is exercised.

I am pleased to see articles such as "A Bucket of Worms" published by our aviators. This one has caused a hard look at a local problem which had been accepted as normal. As a result, GCA minimums were lowered and mission capability has been improved. A change to FAR 91.127 is expected to result which will clarify the procedural rule for IFR flight to an airfield equipped only with a GCA. Additionally, the Washington Approach Control now may issue a loss of communication procedure prior to hand-off to Davison GCA. Depending on many variables, the instructions may require an approach to Washington National, Dulles International or Andrews AFB.

An identical condition existed at Felker AAF prior to the recently approved ADF and TVOR procedures. It will also exist at any GCA airfield which suffers loss of its radio navigational facilities. The proposed change to the FARs, if approved, should improve this situation and should be welcomed by all concerned.

I am satisfied that the author of "A Bucket of Worms" has earned his day to fish and that the article served as good bait.

ARMY AVIATION ANNEX

I would like to invite your attention to the publication and distribution of the Aviation Annex to the Army Force Development Plan 1965-1984 (AFDP 65-84).

AFDP 65-84 was published and distributed during the last week in April. The purposes of the Plan are to insure that the Army resources are used in a manner to achieve the most effective Army capabilities; to identify the weaknesses in the Base Program stemming from resource limitations or imbalances and necessary changes and improvements; to offer alternate courses of action to achieve the goals of the Basic Army Strategic Estimate and the Army Strategic Plan; and to provide guidance concerning forecasts of manpower and dollar requirements, modernization and readiness. The Plan objective is to assure a systematic and progressive attainment of the proper balance among structures, modernization and readiness. The Plan also provides guidance for and evaluation of the combat development and research and development objectives.

The Aviation Annex, Annex E, was published and distributed on 8 May and supports the basic Plan. Our Annex covers the aviation program objectives, present and future. The Annex is neither as comprehensive nor as polished as I would like. The full scope and complexity of the AF-DP reflecting its 20-year long time frame, coupled with the rapid growth of Army aviation, compounded our difficulties in completing the Aviation Annex. I believe that it is a good first effort, and I intend to see that it is expanded in the future. Functionally, the Aviation Annex replaces our "Aviation Guidelines" which formerly contained much of the same data.

LIMITED DISTRIBUTION

Distribution of the AFDP and the Aviation Annex is limited to the major commands and it will be difficult for aviators in the lower units BIRTHDAY



On behalf of the men and women of the United States Army, I extend heartiest congratulations and best wishes to our Army pilots and crew members on the occasion of the twenty-second anniversary of Army aviation.

Since World War II, when our light aircraft proved their worth and versatility in extending the eyes of the commander and of his artillery, the Army has placed ever-increasing reliance upon aircraft as an essential ingredient of ground combat power. Again, during the Korean War, Army aircraft and Army pilots gave renewed evidence of their ability to fulfill important battlefield missions; Army helicopters, in combat for the first time, also proved their value in a variety of roles.

Today, Army pilots, crewmen, and aircraft are demonstrating anew the continually increasing effectiveness and flexibility of Army aviation — adding a new dimension to counterinsurgency operations, testing new concepts, and providing improved control and battlefield mobility for all elements of our modern combat forces.

In Vietnam and throughout our organizations around the world, Army pilots and crews have gained an enviable and deserved reputation for skill, courage, and resourcefulness in the face of all hazards.

As Army aviation begins its twenty-third year of service, all members of the Army join me in expressing pride in its many accomplishments and confidence in its ability to meet the challenge of the future.

> EARLE G. WHEELER General, United States Army Chief of Staff

The Beechcraft U-8F...

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



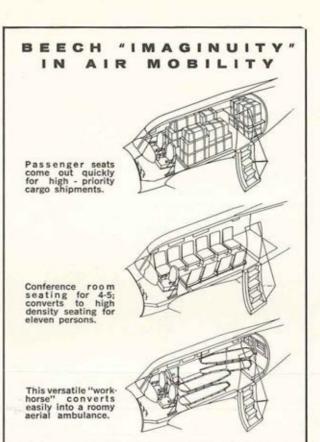
Doing rugged jobs for the U. S. Army—jobs usually reserved for "big planes"—is the specialty of this Beechcraft U-8F. Yet it costs far less to buy and operate than the big ones. Military commanders say the U-8F is the most versatile plane ever assigned to them. It gives them reliable all-weather transportation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

May we help you? Write, wire or phone Contract Administration, Beech Aircraft Corp., Wichita 1, Kansas—or nearest Area Office.

Beech Aerospace Division

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to obtain copies for study. However, this need not stop the flow of information. If you will recall, the distribution on Rogers Board and Howze Board Reports was also limited. Nevertheless, the energetic aviation officers at the higher headquarters prepared briefings on their own initiative and presented the significant subject material to aviators in lower units on every possible occasion. I hope the same will be accomplished on the Aviation Annex of the AFDP to familiarize aviators with our present status and plans for the future.

SAFETY

I call your attention to the Engine Accident Summary distributed by USABAAR with the Weekly Summary 4-10 May 1964. This summary shows that engine failure was a cause factor in 671 of 2,942 aircraft mishaps during the period 1 July 1961 - 30 September 1963. Of these 671 engine failures, 438 happened before the engines reached their normal life expectancy. While the summary shows a clear need for better quality control, we can prevent many of

these engine failures from becoming accidents by using an available method of warning pilots of impending engine failure.

One of these methods is the Chip Detector Warning Light. Three years of experience with warning lights installed in CH-21 aircraft have proved this to be a reliable system. We are currently equipping piston engine aircraft with magnetic Chip Detector Warning Lights. Each modification work order for installing this system will be published during the next several months. I urge all commanders to make every effort to have these warning lights installed as soon as possible.

The other method of predicting impending engine failure is the Oil Spectographic Analysis Program presently sponsored by the U.S. Army Aviation Test Board at Fort Rucker, Ala. Spectographic analysis of oil from aircraft engines and transmissions can, to a high degree, predict impending failure of aircraft engines and transmission. This oil analysis is available to all Army aviation units. I hope that you will take advantage of it.

PAGE AWARDED FT. RUCKER CONTRACTS

FORT RUCKER, ALA. -- Two contracts totaling more than \$13.5 million were awarded June 30 to Page Aircraft Maintenance, Inc., of Lawton, Okla., for operations at Fort Rucker. Both are for the fiscal year beginning July 1, 1964. The largest award, \$11,787,976, is for organizational and field maintenance of approximately 900 rotary and fixed wing aircraft assigned to or supported by the Army Aviation Center. This contract was issued by the Purchasing and Contracting Office of the Aviation Center.

The second agreement, issued by the Birmingham Procurement District of the Army Material Command, amounted to \$1,821,927 and is for aircraft maintenance and related services in support of the U.S. Army Aviation Test Board located at Fort Rucker.

THE first four months of 1964 have brought a far reaching change to the concept of training in the Army Aviation School at Fort Rucker, Alabama. The change in concept deals specifically with training objectives and involves careful analysis of the content of each course in the School. Members of the staff and faculty in all instructional departments are presently analyzing the course content within each area of responsibility and are writing or rewriting the lesson plans to include performance stated objectives. This project is scheduled to be completed by December 1965.

Performance objectives, which specifically describe the required knowledges and skills of a lesson, are beneficial to both the instructor and the student. They clearly identify what must be taught and what must be learned in each period or block of instruction.

INFORMATION SOURCES

The mechanics of implementing performance objectives into the training program includes a careful analysis of MOS descriptions, feedback reports and information obtained from personnel who have recently returned from the field. With this information to serve as the basis for developing instructional material on a particular subject, the specific knowledges and skills which are required of the graduate are identified. Each of these requirements are then written in performance stated terms to specifically identify the behavior (task) the student must perform, the conditions under which the behavior will be performed, and the criterion

FORT

RUCKER

REPORT

(standard) which must be met to be considered an acceptable performance.

Once the performance objectives are clearly defined for each subject the lesson plan is written using the objectives as main teaching points. To determine if these objectives are achieved, a performance check sheet containing questions based on each of the performance objectives is prepared and included in the lesson plan.

The performance objectives and performance check sheets will be issued to the students to serve as guide lines as to what will be expected of them during any particular period. The performance check sheets may be used at the end of the period or block of instruction as a spot quiz, or assigned as homestudy.

BY COLONEL ROBERT F. CASSIDY



This new concept of training is expected to increase the efficiency of instruction at the Aviation School and thereby increase the proficiency of the graduate in performing his job in the field.

QUALIFICATION COURSE

USAAVNS has recently submitted a proposed program of instruction to USCONARC for a MSC aviator medical qualification course to be conducted by the newly organized Department of Aeromedical Education and Training at Fort Rucker, Alabama. Medical support of future air mobility operations envisions an increased utilization of aeromedical evacuation for the movement of routine as well as emergency patients.

This increased reliance upon aeromedical evacuation, which affects hospitalization, medical supply, and utilization of highly specialized professional personnel and teams, dictates that commanders of air ambulances be substantially qualified in aviation medicine as well as completely proficient in aviation techniques and procedures.

FY-65 R/W TRAINING

The month of May, 1964 found US-AAVNS phasing into the FY 65 rotary wing training concept. All advanced contact flight training of the Officer/Warrant Officer Rotary Wing Aviator Course will be conducted with the UH-19 helicopter, the FY 65 training fleet aircraft for the Department of Rotary Wing Training.

Present flight training and maintenance ground school in the CH-34 helicopter will be terminated with class 64-5 as more UH-19 helicopters continue to arrive at USAAVNS from units in the field and the CH-34 helicopters at USAAVNS begin their phase out. However, aviation maintenance training for the enlisted personnel course in the CH-34 helicopter (MOS 675.3) will continue to be taught at USAAVNS during FY 65.

FOSC COURSE

The Expansion of the Army Aviation Program in fiscal year 63 and 64 has resulted in a proportionate increase in the number of personnel to support the Aviator. Among these key supporting personnel, the flight operations specialist plays an important role.

Within the Department of Advanced Fixed Wing Training, the Academic and Synthetic Trainer Division is fulfilling the requirement for additional flight operations specialists by graduating a record number of specialists during the current fiscal year (FY 64).

To date, 159 personnel have successfully completed the FOSC course, by the end of the current fiscal year this number could easily exceed the 200 mark. The classes are small in number (averaging about 14) and the course is extremely comprehensive and fast-moving, requiring attentive and diligent study on the part of the successful student. Graduates of the course receive the Flight Operations Specialist MOS (907.1) and are well equipped to support aviation in key positions all over the globe.

An interesting sideline concerning the FOSC course is the expanding number of WAC personnel being graduated from the course. The first WAC to graduate from such a course was graduated in February 1963.

During FY 64, 20 WAC personnel have already successfully completed the five and one-half (5-1/2) week course and several more will have been graduated by the end of June.

PRECISION FLIERS

The Department of Primary Fixed Wing's Training Evaluation Division was highly pleased by the outstanding precision flying demonstrated by Warrant Officers Craven and Hunt of OFWAC 64-5. Both students received grades of 99 on their military evaluation check rides, two of the highest grades ever recorded.

Incidentally, we might add that both Craven and Hunt had extensive flight experience behind them as Primary Flight Instructors. In fact, just a few short weeks ago Mr. Craven was a civilian flight instructor working for Ross Aviation, Inc., the present Army Primary Fixed Wing Training contractor.

NEW FM UNDER WAY

The USAAVNS has recently been assigned the responsibility for writing FM 1-105, Army Aviation Techniques and Procedures. The purpose of this manual is to provide the individual aviator with a book that will give him immediate access to the information he needs to perform the tasks of Army aviation.

The backbone of this manual is a series of checklists for each task. By referring to the checklist, the aviator will know what information he must receive at the briefing,

what action he must take in preparing to perform the task, and what he should do during the conduct of the task.

The appendix to this manual will contain subjects which are common to many of the tasks of Army aviation. It will also contain operating procedures for various pieces of equipment, such as bomb shackles and transponders, that the individual aviator must be able to operate.

Under the present program of development, the manual should be available for distribution in the fall in 1965.

TAC-1 IMPROVED

If you have not visited TAC-1 recently, you may not recognize the air strip. Extensive improvements have been accomplished during the past month. The engineers leveled the fixed wing landing area and removed several obstructions from the rotary wing side. The strip now allows simultaneous operation of both fixed and rotary wing aircraft for night and day training. Naturally, the person responsible for these improvements is Major Kerfoot, Chief, Aviation Tactics Branch, Department of Tactics, One-third of the area has received 1,500 pounds of grass seed and 18 tons of fertilizer which should produce sod that surpasses most lawns. If you should drop by, and you are invited to do so, don't trespass on the newly seeded area.

GRAVOUT

During gunnery runs in the OV-1 Mohawk, aviators occasionally experience grayout when exposed to



Why is the Mohawk so blunt and bug-eyed? To afford maximum visibility short of putting men in an open cockpit. This is called "eyeball observation," because the Mohawk is primarily an observation airplane. The pilots can see the same point directly under the airplane from only 37 feet up.

Why is landing gear so bulky? To attain a landing capability or sink speed of 17 feet per second (1020 fpm). If the average airplane landed this hard, it would crush the landing gear. This rugged landing gear gives the Grumman Mohawk unique and exceptional rough field capability.

Why a midwing? When a wing is high on the fuselage, the landing gear is necessarily longer—and weaker. If the wing is low on the fuselage, the propellers are close to the ground and may become fouled on rough fields. This also permits protection of engine and fuel tank from ground fire.

GRUMMAN AIRCRAFT ENGINEERING CORPORATION



Why is the wing attachment location between the engine and fuse-

lage? If the wing attachment location were outboard of the engines on the Grumman Mohawk, the "wings-off" component would be too wide for towing the aircraft on roads or shipping it by rail. Why is the landing gear tread so narrow? The Grumman Mohawk's main wheels are attached to the fuselage section rather than the wing. This, plus the wing attachment location, permits easy handling of the fuselage—which is, of course, the heaviest unassembled part.

Why three tails? A single tail would have to be massive and would present an extremely large silhouette. One large tail would also require power controls. Small tails facilitate manual controls, reduce radar reflectivity and permit low ceiling hangar storage and camouflage under low trees.

Bethpage · Long Island · New York



excessive g-forces. Instruction presented at Fort Rucker by qualified flight surgeons to aviators during the OV-1 pilot transition course, teach the aviator to recognize the symptoms, understand the effect, and increase his g-tolerance to g-forces through the execution of the M-1 maneuver.

An aviator subjected to sufficient positive g-stress is affected by well-known symptoms which consist of progressive loss of peripheral vision (grayout), loss of central vision (blackout) and finally unconsciousness. It is generally accepted that the lack of adequate blood supply to the retina of the eye and to the brain causes blackout and unconsciousness as the magnitude of acceleration of the aircraft is increased.

2-4 G'S EXPERIENCED

Tactical maneuvering of the Mohawk subjects occupants to a positive acceleration of 2-4 g for a period of 4-10 seconds. Although difficult to pinpoint the various levels of positive g-forces during the sustained positive acceleration encountered in a Mohawk, grayout occurs at about 3-4 g and blackout at about 4-4.5 g.

Individuals differ in their g-tolerance, and individual unconsciousness levels vary from 3-8 g. Any protection or procedure that will lessen the pooling of blood below

the heart will increase tolerance to positive g. Wearing an anti-g suit can raise positive g-tolerance 1-2g. An aviator during pullout in the Mohawk executing a maneuver which produces g in excess of 3-4 g can take certain measures to lessen the chance of grayout through a procedure called an M-1 maneuver. The M-1 maneuver can raise gtolerance by approximately 1-1.5 g. The effective application of the M-1 maneuver provides almost the same protective g-tolerance as a g-suit and when executed in conjunction with a g-suit, provides additional protection.

PRECAUTIONS

The manner that the M-1 maneuver is performed is as follows: Prior to the increase of g-forces, abdominal and chest muscles are contracted. At the same time take a deep breath appropriately and then let out gradually and continuously while vocalizing. This should be repeated every 5 to 10 seconds as long as increased g-forces are present. Caution should be taken not to hold the breath for any period of time, but rather a continual exhaling of breath to avoid adverse affects. In this manner, aviators are able to "eliminate the gray area" associated with increased g-forces through properly performing the M-1 maneuver.

A BRIGADIER WITH FOUR STARS

■ WARREN, Mich. -- Brig. Gen. Hallett D. Edson, DCG of the U.S. Army Mobility Command (MOCOM), may be the only brigadier general in history qualified to wear four stars. Having previously won stars on his combat infantryman's badge and jump wings, Edson received his "fourth" star in being awarded the designation of Senior Army Aviator.

FAA: A WORKING PARTNER!

NAJEEB E. HALABY
ADMINISTRATOR
FEDERAL AVIATION
AGENCY

M ORE than 100 years ago - while the ragged infantry of the Army of the Potomac drilled on the mud flats outside Washington preparing for disaster - Army aviation began with little more than a breath of hot air, a linen bag and the determination of a few farsighted individuals.

Another half century was to pass, however, before Army aviation became a significant weapon of war and even then its past and future role were suspect.

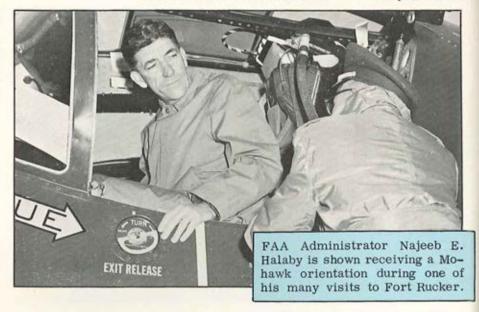
The growth of Army aviation in the United States parallelled and to a great extent contributed to the development of civil aviation. World War I not only demonstrated the extraordinary promise of air power - a lesson lost on many - but also greatly increased the general public's interest in flying. When the great War ended, thousands of sur-

plus military aircraft and pilots were available to spark an aviation craze in the zany and sometimes roaring twenties.

THE MITCHELL INFLUENCE

This increased activity spurred demands within Congress and without for effective Government regulation of aviation. Complicating the issue, however, was the controversy that swirled around Colonel Billy Mitchell.

By 1925 - the year of Mitchell's court martial - the controversy had become so acute that the Acting Secretary of War and the Secretary of the Navy jointly requested the President to appoint a special board to study the whole subject of national aviation. A Presidential aircraft board subsequently was established and recommended the separation of



military and civil aviation, the creation of a civilian bureau of air navigation, and the appointment of assistant secretaries of War, Navy and Commerce to supervise aviation in their respective areas.

As a result, Congress in May 1926 passed the Air Commerce Act "to encourage and regulate the use of aircraft in commerce and for other purposes." Additional legislation was enacted later that year implementing the recommendations of the Presidential board pertaining to military aviation.

GENESIS OF FAA

Despite these actions to separate civil and military aviation, Congress clearly recognized the pressing need for cooperation between the two. In July 1926, it adopted a joint resolution authorizing the President to detail officers of the Army Air Corps to duty with the Commerce Department in connection with the work of promoting civil aviation.

As a further testament, William P. MacCracken, Jr. - a veteran of the Army Air Service during World War I - was appointed the first Assistant Secretary of Commerce for Aeronautics. The FAA traces its lineage back to Mr. MacCracken and the Aeronautics Branch in the Department of Commerce he headed.

FAA was created in 1958 in response to demands for new, stronger, independent Government machinery to deal with the problems of aviation in the dawning jet age.

As early as 1948, the President's Air Coordinating Committee warned that the techniques and tools available for the control of air traffic were marginal even by pre-war standards. Nine years and several committees later, another Presidential group - headed by Edward P. Curtis, a former Major General in the Army Air Force - reported "a crisis in the making" as a result of the inability of our airspace management system to cope with complex patterns of civil and military traffic that filled the sky.

These and similar warnings were tragically underscored early in 1958 when 61 lives were lost in two midair collisions involving military and commercial aircraft. The two disasters expedited Congressional action on the Federal Aviation Act, and it was signed into law on August 23, 1958.

MILITARY PARTICIPATION

Following the recommendations of the Curtis report, the Act centralized in the newly-created FAA the responsibility for air safety which previously had been divided among a number of Government agencies and interagency committees. FAA was given full authority over certification of aircraft and airmen, operation of air navigation aids, allocation of airspace and control of both civil and military air traffic.

The Act specifically provided for the participation of military personnel in FAA "to insure that the interests of national defense are properly safeguarded and that the Administrator is properly advised as to the needs and special problems of the armed services." As a result, FAA has been able to draw upon some of the best military talent available in building a coordinated

air traffic management system and in carrying out other assigned tasks mutually beneficial to both civil and military aviation.

Approximately 300 members of the Armed Forces have served with the FAA since 1959, bringing to the Agency a know-how gained through years of experience in the field. These men - and one woman, a WAF Captain - have set a standard of achievement for all of our Civil Service employees to meet.

DOD/FAA TEAMWORK

It is also important to note that the first Administrator of FAA was Elwood R. Quesada, a retired Air Force Lt. General and one of the true pioneers of Army aviation, and that the present Deputy Administrator is another Lt. General with the Air Force, Harold W. Grant, who won his wings with the Army Air Corps in 1929.

Military officers on duty with FAA have been very active in the research and development field. An Army Captain, for example, is the development officer for our aircraft development programs.

The Agency currently is involved with the Department of Defense in 14 such programs designed to benefit both civil and military aviation and in the process enable the tax-payer to get double use of his defense dollars. The Army is manager of eight of these projects and a participant in four others.

Of particular interest is the Army's Light Observation Helicopter (LOH) program, calling for the development of a light, four-place, single turbine-engine craft. Al-

Big new aerial punch



It delivers 38 combat-equipped troops, or 8000 pounds of cargo 115 miles at 170 mph. It hardly notices the weather, and finds one terrain pretty much like another. It can even set down on water if it has to: its watertight fuselage is seaworthy.

For short hops it will lift up to 16,000

pounds. That works out to about 64 combat troops, Pershing missile components, a 155-mm howitzer, or three jeeps.

Designated CH-53A, this rugged, powerful helicopter will have its first flight this summer and will be joining the Marine striking force in the months to follow.

Sikorsky Aircraft DIVISION OF UNITED AIRCRAFT CORPORATION - STRATFORD, CONNECTICUT



though primarily built to meet military requirements, Army acceptance will require civil certification of these machines. The LOH promises to provide one of civil aviation's long time needs - a relatively lowcost, low-maintenance, high-performance helicopter. In short, the first true "compact" in the rotorcraft field.

LOH CERTIFICATION

FAA has been working closely with the Army in this program. As a result, the LOH will have the features many civil operators are looking for -a 250 horsepower engine, a useful load of approximately 1,000 pounds, cruising speed of 110 knots at sea level, ability to stay aloft three hours without refueling and to hover at 6,000 feet on a 95 degree day.

A helicopter possessing these features, available at the price allowed by quantity production, would have tremendous impact on future air transportation development. Optimistic estimates are that the sale price could come close to that of a four-place, fixed-wing airplane.

The Agency expects to complete civil certification later this year of all three LOH models - the Bell, Hiller and Hughes. These three will compete for an Army contract involving the eventual purchase of several thousand machines, a factor which should materially reduce the unit cost on both the civil and military markets.

FAA also is cooperating with the Army and the other military services on several V/STOL programs involving such concepts as the tilt wing, tilt propeller, tilt duct, lift fan, jet pump ejector, rigid rotor and hot cycle rotor. Most of these exotic aircraft are still in the early stages of development, but it is hoped they will lead to better machines for civil operators as well as the military.

These cooperative efforts are primarily intended to obtain civil benefits from military developments, but the Agency is able to return much valuable assistance to the military in the form of evaluations and recommendations, even when no civil certification is required or desired.

The Army's requirement for improved airlift capability, both tactical and strategic, is currently benefiting from two separate FAA certification programs. The Army's CV-7A tactical transport will receive civil certification as part of the contract requirements. Similarly, the Air Force C-141, which is now in the flight test stage, will receive civil certification prior to military acceptance. Both military and civil operators will reap substantial rewards from these programs.

PROJECT LITTLE GUY

Still another area of common interest is Project Little Guy - the development of simplified cockpit displays and controls for light aircraft together with improved training methods. The FAA-managed program should prove beneficial to both civil and military aviation. The Army, after all, is the world's largest operator of light aircraft.

Present light aircraft cockpits bear little relation to the needs of

husy husy husy DE MORITINO CANON busy Beaver gets even bu

Re-engined as the Turbo-Beaver, it now has the added power of the Pratt & Whitney Aircraft PT6. Gaining speed and operating economies, the Turbo-Beaver becomes the first turbine powered plane offered for commercial sale by de Havilland Canada. Since 1945, de Havilland have used more than 2,500 Pratt & Whitney Aircraft piston engines for the Beaver, Otter and Caribou. These aircraft have achieved an enviable reputation in world markets as the finest of their types.

United Aircraft—Canada's largest exporter of aircraft engines and components—Pratt & Whitney Aircraft Engines, Sikorsky Aircraft, Hamilton Standard Propellers, Norden Electronics.





OF CANADA LIMITED

the pilot and reflect a long history of haphazard development. Project Little Guy proposes to reverse the trend by designing the cockpit to fit the pilot. This surprisingly revolutionary concept should lessen training time and make flying safer and more efficient.

Work on "Little Guy" equipment, including advanced instrument displays, is continuing at FAA's National Aviation Facilities Experimental Center at Atlantic City, N.J., with actual flight tests scheduled to begin later this year. Results of test efforts will be made available to industry for incorporation in future aircraft and wherever applicable in today's aircraft.

In the air traffic control field, the Agency has been working with the Department of Defense on a plan to train military controllers at the FAA Academy in Oklahoma City. Military and civil controllers would go to school together with the result being greater standardization in the air traffic control system. The feasibility of a joint training program already has been demonstrated in trial efforts.

Under another agreement with DOD, FAA has assumed full responsibility for flight inspection of all military air navigation aids in addition to its regular task of checking all civil facilities. The Agency maintains a fleet of 80 specially-equipped aircraft for this job, including 2 C-135 jets, 5 Convair prop-jets, and 60 DC-3s.

CONTINUING EFFORT

FAA has been checking air navigation aids operated by the Army and Navy for a number of years. Those operated by the Air Force were phased into the flight inspection program over a one-year period beginning in September 1962.

In addition to the cooperative programs and policies mentioned here, FAA also will continue to explore other areas where joint efforts promise to advance the cause of aviation in the national interest. The realities of life in a divided world demand that our civil and military establishments work together in harmony to keep this nation first in space – inner space as well as outer space.

"MOST WOUNDED AMERICAN"

■ TAN SON NHUT, Vietnam -- The most wounded American in Vietnam has received the sixth Oak Leaf Cluster to the Purple Heart. Maj. Patrick J. Delavan, 35, commanding officer of the Army Utility Tactical Transport (UTT) Helicopter Company, was presented the award by Brig. Gen. Joseph W. Stilwell, CG, U.S. Army Support Command, Vietnam. The latest cluster to the Purple Heart was awarded for wounds Maj. Delavan received on a recent combat support mission. Since his arrival in Vietnam, he has flown more than 400 combat support hours and has been wounded in both arms, both legs, and one eye. He is scheduled to leave Vietnam in June on completing his tour.

ONE ARMY" CONCEPT

OF

STANDARDIZATION

TRAINING

AT

FORT WOLTERS

N 10 January 1964 the United States Army Primary Helicopter School welcomed the first class scheduled to attend the National Guard Officer Rotary Wing Standardization Course at Fort Wolters.

This event moved Army aviation into the One Army Concept of Standardization Training and stands as an example of the close relations that exist between the National Guard and the Active Army today.

A total of 12 classes are scheduled to be trained at Fort Wolters during FY 64. Each class will consist of from four to six selected National Guard helicopter rated aviators. The training will be conducted by the USAPHS, utilizing funds provided by the National Guard.

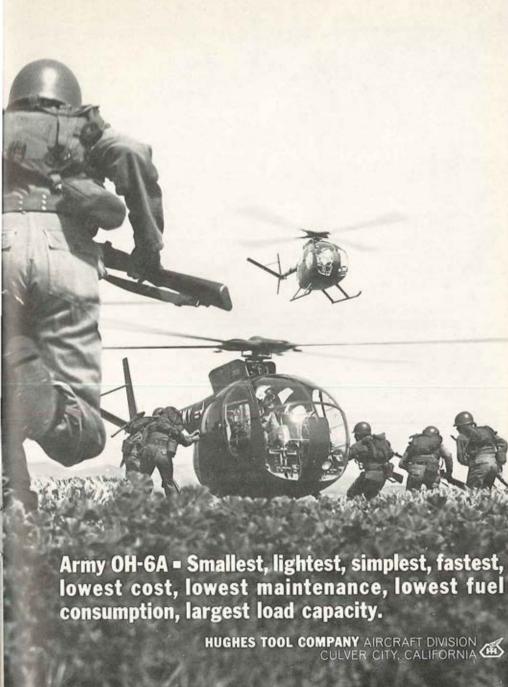
ACCENT ON TECHNIQUES

During the two weeks of training, these aviators will be brought up to date on the latest techniques of flying the observation helicopter. Upon graduation, the individual aviator will be standardized in all maneuvers performed in the OH-23D helicopter and will be qualified as a unit standardization pilot.



By
COL. JULES E. GONSETH, JR.
Commandant, U.S. Army
Primary Helicopter School





To prepare these aviators as standardization pilots, emphasis is placed on techniques of instruction as well as performance. Each class will receive 20 hours of academic instruction. Ten hours will be devoted to aerodynamics and 10 hours to maintenance subjects. Four hours of the maintenance instruction is devoted to test flight procedures. During this period the student will work on the test line with a test pilot and a mechanic. Here he will actually assist in performing the test flight inspection and the maintenance associated with it to include troubleshooting and correcting vibrations.

The student will receive 20 hours of flight instruction in the OH-23D helicopter. This will serve as a refresher course aimed towards complete standardization in all maneuvers flown in this helicopter.

The program of instruction for

the National Guard Officer Rotary Wing standardization Course covers a very large number of subjects, because USAPHS realizes accomplished aviators will be receiving this training. In order to enable these individuals to obtain maximum benefit from the program, it has been geared to the needs of the student. Emphasis has been placed on the conference and practical exercise which will permit the student to absorb all the training his ability and the time limit will allow.

Upon completion of their training at Fort Wolters, these aviators will return to their home states to put the knowledge they have gained to work in their unit standardization programs.

USAPHS takes great pride in its role in furthering the One Army Concept in Standardization Training and looks forward to increased activity in this field in the future.



XC-142A ROLLOUT

■ The world's first V/STOL transport prototype, the LTV-Hiller-Ryan XC-142A, was rolled out on June 17 at the Ling-Temco-Vought plant at Dallas. Five of the 18-1/2-ton tilt-wing transports will be turned over to the U.S. Army, Navy, and

Air Force for a tri-service operational evaluation. Designed to carry 32 fully-equipped troops, or 4 tons of cargo in the VTOL mode, the XC-142A can lift an additional 4,000 lbs. in STOL operations. The tri-service evaluation will start in January, 1965 with the full evaluation scheduled to be completed in July, 1966. (Hiller)



FROM RYAN'S SPECTRUM OF CAPABILITIES:

HIGH-PERFORMANCE V/STOL AIRCRAFT

Which V/STOL concept is best? That depends upon the mission to be flown.

Whatever the mission requirement, Ryan will continue to make significant contributions to successful V/STOL technology.

Three current Ryan V/STOL projects, each of a different technical approach, are illustrated here.

On those, and on such pioneering projects as the X-13 Vertijet, the VZ-3RY Vertiplane and the YO-51 Dragonfly, Ryan has expended nearly four million engineering-developmental manhours. Notable gains in V/STOL technology have resulted from Ryan's original work on direct thrust systems, variable nozzles, jet reaction controls, unique V/STOL simulation, auto-stabilization and deflected slipstream aerodynamics.

But V/STOL is only a single band in Ryan's broad spectrum of capabilities.

Ryan Firebees have tested more U.S. surface-to-air and air-to-air weaponry than any other jet target missile. Ryan Doppler equipment contributes to the navigation of fixed-wing aircraft, helicopters and space vehicles.

Lightweight Ryan structures support the solar cell panels on Mariner, Ranger and Transit V spacecraft. In many fields of aeronautics, electronics and astronautics, strength for tomorrow is being forged today — at Ryan!

RYAN AERONAUTICAL COMPANY . SAN DIEGO . CALIF.



FLEX WING STOL "FLEEP," popular name of the easy-to-fly XV-8A, is under study by Army's Transportation Research Command as an aerial "truck," capable of operating out of rugged areas.



NEWEST RYAN V/STOL is Army XV-5A, lift-fan research aircraft built under contract to General Electric. Designed to take off vertically on no more power or fuel than is needed for high speed cruise, the XV-5A is now in flight test.



TILT-WING V/STOL TRANSPORT XC-142A is being built by Ryan (jointly with Yought and Hilber) for Army, Navy and Air Force. It will be capable of transporting troops and equipment into unprepared areas under all weather conditions.



OPERATIONS DIVISION



COLONEL KEMUEL K. BLACKER Chief, Aviation Branch DCSOPS, USABEUR Aviation Officer

AVIATION OF HEADQUUS. ARM

Photo Chin



LT, COL. WILLIAM R. MATHEWS Chief Safety and Masshardization Section

(Botsted to ICB)



LT, COL. ROBERT N. MacKINNON Chief Operations and Training Section

(Botated to 22)



LT, COL, HAHOLD T, SMITH Special Projects

(Rotated to ZB



LT. COL. JAMES G. McFADDEN Chief, Organization Destrine and Facilities Section

TRANSPORTATION DIVISION



LT. COL. ERNEST H. PRANCES



LT, COLONEL LEBOY A, MEYER Aviation Supply



MAJOR BOBERT L., READ

La

MAJOR ATRIOL M. 38 Supply

P&A DIVISION



LT, COLONEL GEORGE C, CONNOR Avisition Personnel Assignments

INTELLIGENCE DIV



MAJ, WILLIAM A. ACKERMANN

AVIATION DETACH



LT. COLONEL A.T. PUMPHHEY



MAJOR CH

GANIZATION ARTERS , EUROPE

STAFF WEATHER



COLONEL WALTON L. HOGAN USAF Staff, Weather Office

at June 1, 1964



LT. COLONEL TED A. CHOZIER Facilities, Airspace and Air Traffic Control



MAJOR DONALD E. MULLIGAN



MAJOR HOBERT H. McCANDLISH According and Registress



MAJOR EUGENE F, CHOOKS Training and Aircraft Armamonts

SISTICS DIVISION



MAJOR EUGENE V. NORRES

SIGNAL DIVISION



MAJOR BOSSET C. JONES

MEDICAL DIVISION



MAJOR HOLAND H, SRAMBUREK Flight Surgeon

NIT



LES MORDON, JR.

7TH SIGNAL BRIGADE



MAJOR BAYMOND J. KANGAS Commoder Army Flight Operations Facilities



MAJOR JOHN P. BROWN Communder, Army Flight Information Detachment, Europe

SECRETARY G/S



CAPTAIN DON W. CHABOT Assistant Secretary of the General Staff

A new chapter of Army aviation history is being recorded at Fort Benning, Georgia, by the "Sky Soldiers" of the 11th Air Assault Division, under the command of Major General Harry W.O. Kinnard. This "Sky Soldier Report" will attempt to relate some of the important activities and the progress being made in air mobility.

DIVISION HEADQUARTERS

The headquarters of the 11th Air Assault Division is much like that of any other Army division. Of major interest is the fact that all general and most special staff sections have Army Aviator representation, either as the principal staff member or one of his assistants.

This is true throughout - with Major John H. Phillips, Assistant G1; Major Dale M. Liggett, Assistant G2; Lieutenant Colonel Robert M. Shoemaker, G3; Major Elsworth F. Vassar, G3 Air; and Majors Albert H. Becker and Joe O. Amberger, Assistant G4s. The Assistant Signal Officer is Major Chester R. Mead and the Assistant Divisional Engineer is Major Carl P. Rhodes. There is also a Special Staff Aviation Section, responsible directly to the Chief of Staff.

The Aviation Officer is Colonel George P. Seneff who also commands the 11th Air Assault Aviation Group. COMMAND

11TH AI

The author is the Assistant Aviation Officer with a section made up of Major Lawrence R. Fralick, Operations; Major Arthur K. Kinney, Training and Standardization; Major George C. Kuhl, Aviation Safety; Major Frederick Dawson, "A" Level Aircraft Maintenance; and Captain Charles G. Broom, Material Requirements.

AVIATION GROUP

The Aviation Group contains the major share of aircraft within the division. As previously mentioned, Colonel Seneff is Commanding Officer, with Lieutenant Colonel John Stockton, Deputy Commanding Officer, and Lieutenant Colonel James H. Nix, Executive Officer.

The Aviation Group consists of a General Support Company commanded by Major Paul F. Carpenter, equipped with UH-1Bs and OH-13s used for staff, command, and reconnaissance support of the Division and Group Headquarters as well as

> other divisional units without organic aircraft.

> In addition, a U-6 platoon is used for long-range airborne radio relay. There are two assault heli-

BY LT. COLONEL KENNETH D. MERTEL

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AND STAFF STRUCTURE AT THE R ASSAULT DIVISION

copter battalions commanded by Lieutenant Colonel Delbert Townsend and Lieutenant Colonel Jack Cranford that are equipped with UH-1D squad transports. These units provide the assault transport for the Infantry units who possess minimum numbers of vehicles.

Another unit is an assault support helicopter battalion equipped with CH-47 Chinooks, commanded by Lieutenant Colonel Benjamin S. Silver, Jr. This unit provides heavy lift for movement of the Artillery, Infantry and logistics support within the division area of operations. Last, but not least, is an aerial surveillance and escort battalion equipped with Mohawks, commanded by Major Robert F. Litle, Jr. As implied by its name, its mission is escort, reconnaissance, and surveillance.

ADDITIONAL UNITS

One of the next two largest units organic to the 11th Air Assault Division that is equipped on a full time basis with aircraft is the cavalry squadron. This squadron consists of three troops equipped with UH-1B, UH-1D, and OH-13S helicopters, plus a ground troop. This fighting unit is commanded by Lieutenant Colonel Harvey D. Hawley.

Next is the Artillery with an aerial rocket battalion equipped with the UH-1B, commanded by Lieutenant Colonel Francis Mahone. In addition, there are UH-1Bs and OH-13Ss in an aviation battery supporting Division Artillery.

A very important unit in the 11th is the medical air ambulance platoon within the medical battalion, commanded by Captain Virgil E. Mielke. This unit is equipped with UH-1B and UH-1D helicopters for medical evacuation and aerial crash rescue.

Last, but most important, is an aviation section in each brigade headquarters, consisting of UH-1B and UH-1Ds as well as OH-13S helicopters. Aviation Officer of the 1st Brigade is Captain Howard W. Mc-Gregor, the 2nd Brigade AO is Major William J. Meeham, and the 3rd Brigade AO is Captain John R. Beck.

Organic aircraft are also found in the aircraft maintenance and supply battalion commanded by Lieutenant Colonel Charles W. McQueary. These consist of UH-1B and OH-13S helicopters.

AIR TRANSPORT BRIGADE

The 10th Air Transport Brigade commanded by Colonel Delbert L. Bristol is not organic to the 11th Air Assault Division but is attached until the end of the training and field test period. This field army type unit consists of a transport helicopter battalion commanded by Lieutenant Colonel Frank L. Shaw, that con-

tains CH-37 Mojave, CH-47 Chinook, and CH-54 Flying Crane helicopters. There is also a transport airplane battalion commanded by Major John W. Lauterbach, that is equipped with Caribou aircraft.

These two battalions provide the heavy lift for primary logistical and troop movement. In addition, an air traffic control and regulating company is attached to the 10th Brigade. It is commanded by Major Richard A. Humes. The aircraft maintenance of the brigade is handled by another aircraft maintenance and supply battalion commanded by Lieutenant Colonel Lester C. Robertson.

AIRCRAFT ARMAMENT

In each assault helicopter battalion there is one gun company equipped with UH-1B helicopters armed with the XM-6 Quad 7.62mm machine guns. These helicopters also mount 2.75 inch rocket tubes on either side, and have similar missions, i.e., armed escort for the assault transports to and from the landing zone.

The Mohawk Battalion has a number of aircraft armed with various types of armament, to include 7.62 and 50 caliber machine guns as well as 2.75 aerial rockets. They are employed in an escort role to protect the assault helicopter transports, as well as providing aerial surveillance.

The aerial artillery consists of the XM-3, 2.75 rocket system, and is employed to supplement the normal fires of tube artillery. The Air Cavalry armament is the XM-6 and the SS-11 anti-tank guided missiles. In addition, the OH-13S mounts the XM-2, twin 7.62 machine guns, and some other UH-1B/D and OH-13 helicopters carry varying degrees of armament for self protection.

TRAINING

Training is progressing rapidly. UH-1B/D transition is conducted by units within the division with TC 1-10 spelling out the details. Transition to the OH-13S requires a minimum number of hours if the aviator is current in the "H" model. Mohawk and Caribou transition is conducted at the U.S. Army Aviation School at Fort Rucker, Alabama, with most of the quotas going to the 11th Division.

Chinook transition is conducted at Fort Rucker as well as by the Chinook units at Benning. To assure quality control, the ground school and final check ride is conducted at Fort Rucker.

There is no great problem in Mojave transition, for the division has been fortunate in receiving many qualified pilots. Initial transition for the CH-54 Flying Crane is being conducted at the factory.

MAINTENANCE

As you can imagine, maintenance of the large number of aircraft assigned the division is a problem. It is being successfully accomplished by two fine aircraft maintenance units in the division as well as "C" level support from the aircraft maintenance and supply unit at Atlanta General Depot.

The division is testing a concept of maintenance that does away with the old five echelon system. In its

Environics, new space age concept from AAF

Environics is American Air Filter Company's total-system approach to engineered environment for advanced weapons and command systems. R & D, production, and installation through a single engineer-manage-

ment team.

AAF Environics capability has been well demonstrated on the Minuteman program. A basic concept of the weapon is instant firing even under extreme conditions. It required a major new environmental control system. The AAF Defense Products Group first fulfilled the R & D contracts on the system, then followed through with production and with supervision of the rugged 18,000-square-mile field installation at Wing I. On both these big initial assignments and the Wing II installation, AAF kept on or ahead of schedule.

The Environics team is now nearing completion of the R & D contract for the advanced Minuteman environmental control system. Awarded as a

result of proved performance.

The highly successful Minuteman equipment will operate for three years without scheduled maintenance. Requirements met include reliability under severe ambient conditions, high shock resistance, radio interference suppression, explosion-proof operation, and CBR filtration.

AAF Environics project teams move quickly to solve any environmental control problem. Under a program manager, a team can include specialists in reliability and quality assurance, safety and human engineering, maintainability, and value engineering. AAF configuration control specialists monitor the equipment design to comply with space and



interface requirements. All areas of logistics support requirements are included in Environics.

The six manufacturing divisions backing up AAF Environics teams are also known as producers of Herman Nelson, American Air Filter, Amerglas, and other recognized products. Facilities include numerous production plants and five laboratory installations.

An AAF Environics team is ready to meet your requirements in engineered environment equipment. For discussion and AAF Bulletin D-240, phone or write Defense Products Group, American Air Filter Co., Inc., 1270 N. Price Road, St. Louis 32, Mo.

AAF

American Air Filter

R & D, COMPLETE SYSTEMS CAPABILITY IN HEATING HUMIDITY CONTROL - REFRIGERATION - AIR FILTERING PURIFICATION - VENTILATING - ENGINEERED ENVIRONMENT place are "A" - "B" - and "C" level maintenance. "A" level is user maintenance performed at unit level and encompasses the old1st echelon and a bit of the 2nd. "B" level is performed by the division aircraft maintenance and supply battalion and includes most of the old 2nd and 3rd echelons. "C" level is performed at the Atlanta General Depot by the 14th Aircraft Depot Battalion and includes the old 4th and 5th echelons.

The division is "Lean" in heavy equipment and almost wholly dependent on Army aviation for mobility practically everything it uses comes in by air - even the chow and bed rolls for the doughboys and redlegs. Recent brigade level field training at Fort Stewart, Georgia, revealed how "Mean" (Effective) the division will be. There is still a great deal to do, but the 11th Air Assault Division is "on the way."

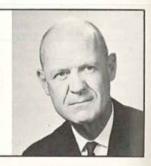


GENERAL GOODHAND RETIRES

■ A Master Army Aviator and one of 14 general officer AA's, Brig. Gen. O. Glenn Goodhand retired on May 31. The III Corps and Ft. Hood Chief of Staff at the time of his retirement, he graduated as an Army Liaison Pilot in December, 1942. On settling in the Washington, D.C. area, he plans to continue his close affiliation with Army aviation.

BEECHCRAFT APPOINTMENT

■ Beech Aircraft's Aerospace Division has appointed John L. Rowan as marketing manager - eastern region. Rowan, retired last year as Lieutenant Colonel after 21 years of service in Army aviation, will be located in the Beechcraft office in Washington, D.C., and will supervise all Beech programs with the U.S. Army in the eastern states.





AVCOM COMMANDER PROMOTED

■ Colonel Howard F. Schiltz, commander of the Army Aviation Materiel Command (AVCOM), St. Louis, Mo., was promoted to Brigadier General, effective July 1. He received his "stars" from Mrs. Schiltz and Gen. Frank S. Besson, Jr., AMC Commanding General, at a ceremony that took place at Army Mobility Command Hqs at Warren, Mich.

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SKYCRANE ACCEPTANCE

m Army acceptance of the first of six YCH-54A Skycrane helicopters took place June 30 in a special ceremony at Sikorsky's Stratford, Conn. plant. Standing before the YCH-54A on the flight field are (left to right), C.D. Stephenson, AMC representative; Brig. Gen. (then Col.) H.F. Schiltz, CO of AVCOM, St. Louis; Lee S. Johnson, Sikorsky division president; Brig. Gen. J.J. Tolson, Jr., Director of Army Aviation, D/A; Igor L. Sikorsky: Maj. Gen. C.W. Rich, commanding general, Ft. Benning, Ga., and Maj. Gen. C.F. von Kann, commanding general of Fort (Sikorsky photo) Rucker, Ala.



OBITUARIES

RICHARD H. BITTER

Captain Richard H. Bitter, 226th Aerial Surveillance and Escort Battalion, 11th Air Assault Division, Fort Benning, Georgia, was killed in an OV-1 Mohawk accident on 22 Ap. il 1964. He is survived by his widow, Mrs. Mona E. Bitter, of 3601 Cypress St., Corpus Christi, Tex.

FLOYD E. BRANCHFIELD

Chief Warrant Officer Floyd E. Branchfield, assigned to Company D, 801st Maintenance Battalion, Ft. Campbell, Kentucky, sustained fatal injuries when his UH-1B Iroquois helicopter crashed during the conduct of a service mission near Ft. Campbell, Kentucky, on April 29, 1964. He is survived by his widow, Mrs. Darlene O. Branchfield, of Lyons Trailer Court, Oak Grove, Ky.

JIMMY CARTWRIGHT

First Lieutenant Jimmy Cartwright, assigned to the 73d Aviation Company, Nha Trang, Vietnam, sustained fatal injuries when his O-1 Bird Dog crashed during the conduct of a service mission in South Vietnam on June 23, 1964. He is survived by his widow, Mrs. Barbara E. Cartwright of Box 299, Bradford, Arkansas.

ROBERT J. GILBERT

First Lieutenant Robert J. Glibert, assigned to the 80th Transportation Company (Li Hel), Fort Richardson, Alaska, sustained fatal injuries in the crash of an H-21 Shawnee helicopter near Whittier, Alaska, on April 28, 1964. Lt. Glibert was engaged in a service mission at the time of the crash. He is survived by his widow, Mrs. Isabelle P. Gilbert of 517 E. Seventh Street, Fort Richardson, Alaska.

ALFRED M. HERMS

First Lieutenant Alfred M. Herms, assigned to the 504th Aviation Company, Furth, Germany, was killed in the crash of an H-34 Choctaw helicopter on May 25, 1964. He is survived by his widow, Mrs. Pamela A. Herms of 2949 Hillsboro Highway, Route 1, Corsicana, Texas.

JOHN R. LEEDS

Second Lieutenant John R. Leeds, assigned to Company B, 82d Aviation Battalion, 82d Airborne Division, Pt. Bragg, North Carolina, died as a result of an aircraft accident when the plane he was piloting crashed near Ivanpah, California, on May 23, 1964. Lt. Leeds was participating in "Exercise Desert Strike" in the Mojave Desert at the time of his death, He is survived by his widow, Mrs. Marilyan K. Leeds, of 616 Bayview Drive, Abscoon, N.J.

WILLIAM G. LONDON

Captain William G. London, an Army Aviator assigned to the 12th Signal Group Aviation Section, APO 46. New York, N.Y., received fatal injuries in the crash of an H-13 helicopter in April while returning to Stuttgart, Germany, from Karlsruhe on a service mission. Capt. London is survived by his widow, Mrs. Theora London, a daughter, Shelley, 5, and a son, Adam, 20 mos., who reside at 191 Steamburg Road, Hillsdale, Mich. Services were conducted at the Ft. Benning Chapel with burial with full military honors being held at the Post Cemetery.

ROBERT L. MAYNARD

Chief Warrant Officer Robert L. Maynard, of the 80th Transportation Company (Light Helicopter), Fort Richardson, Alaska, was killed in the crash of an H-21 Shawnee helicopter near Whittier, Alaska, on April 28, 1964. He is survived by his widow, Mrs. Janice R. Maynard who resides at 420-H Sixth Street, Fort Richardson, Alaska.

MARLIN E. McCAHAN

Captain Marlin E. McCahan of the 73d Aviation Company, Nha Trang, Vietnam, sustained fatal injuries when his TO-1F Bird Dog crashed during the conduct of a service mission on June 24, 1964. Be is survived by his widow, Mrs. Patricia A. McCahan, of 5 Washburn Terrace, Saugerties, New York.

DAVID E. MILLER

Warrant Officer David E. Miller, assigned to the 11th Air Mobile Company, died on April 18, 1964 of injuries received in the crash of a UH-1B belicopter in South Vietnam on April 10, 1964. Mr. Miller was co-pilot of the Iroquois aircraft at the time of the crash. He is survived by his parents, Mr. and Mrs. Ray E. Miller, of 712 West Butler Street, Olney, Illinois.

WILLIAM C. OSBORN

Captain William C. Osborn, an Army Aviator assigned to the first Aviation Company, Vietnam, was killed in a CV-2 Caribou accident that occurred on May 5, 1964. He is survived by his wife, Mrs. Sherry A. Osborn, of 433-1/2 Oak Street, Tipton, Indiana.



CROSS-COUNTRY

■ CAPTAIN RICHARD S. FREEZE, 35-YEAR-OLD ARMY AVIATOR ASSIGNED TO THE U.S. ARMY JOHN F. KENNEDY CENTER FOR SPECIAL WARFARE FLIGHT DETACHMENT, SMILES A GREETING AFTER COMPLETING THE FIRST NON-STOP FLIGHT ACROSS THE COUNTRY IN AN ARMY SINGLE-ENGINE LIGHT AIRCRAFT, THE CAPTAIN FLEW THE U-10 UTILITY AIRCRAFT, A PRODUCT OF THE HELIO AIRCRAFT CORP., FROM SAN DIEGO TO FT. BRAGG, N.C., A 2,300 MILE HOP, IN 16 HOURS AND 45 MINUTES. ON HAND TO GREET HIM WERE HIS WIFE, EUVA, HIS THREE DAUGHTERS, AND MAJ, GEN. WILLIAM P, YARBOROUGH (BACK TO CAMERA), COMMANDER OF THE KENNEDY CENTER. (U.S. ARMY PHOTO)

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CONGO SERVICE

G. MOMURTRIE GODLEY (CENTER), U.S. AM-BASSADOR TO THE REPUBLIC OF THE CONGO. IS SHOWN ADDRESSING THE AMERICAN EMBASSY PERSONNEL IN LEOPOLDVILLE, AFTER HAVING AWARDED AIR MEDALS TO THE CREW MEMBERS OF THE U.S. ARMY ATTACHE U-8D AIRCRAFT STATIONED IN LEOPOLDVILLE. THE AIR MEDALS WERE AWARDED FOR PARTICIPATION OF THE AIR CREW IN THE EVACUATION OF MISSIONARIES FROM THE STRIFE-TORN PROVINCE OF KWILU EARLY THIS YEAR, FROM LEFT TO RIGHT ARE MAJ. HAROLD D. ASBURY, SSGT BOBBY TUCKER, AMBASSADOR GODLEY, MAJOR ROY A. HUDSON, AND COLONEL KNUT H. RAUDSTEIN (AT THE FAR RIGHT), U.S. ARMY ATTACHE, REPUBLIC OF (U.S. EMBASSY PHOTO) THE CONGO.



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SP/6'S

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LORD, M.D., Major 308 Arkansas Street West Monroe, Louisiana 71291

AA UNITS PROVIDE VIETNAM SUPPORT AROUND-THE-CLOCK

I N Operation "Hai Muoi Hai" (22), units of the 145th Aviation Battalion participated in the first around-the-clock support of ground forces in Vietnam, At 6:00 a.m. on June 2, the Vietnamese ground forces struck at a point some 15 miles northeast of Tay Minh. Taken by surprise, the Viet Cong retreated on masse to the nearby Cambodian border.

Termed a success, the operation was intended primarily to disrupt and destroy supply lines and supply

points along the Van Dong River.

In the evening of the first day of the two-day operation, CH-21 'copters of the 120th Aviation Company
airlifted reserve units of the ARVN forces in a buildup of night-time perimeter defenses. At the same
time, the 21's -in what was possibly their last mission
in Vietnam - picked up more than 1,000 refugce women
and children (photo, top right) and took them to the
safety of Tay Minh. Armed helicopters of the Utility
Tactical Transport (UTT) Helicopter Company provided aerial support throughout the refugee "lift."

VIETNAMESE DECORATE 70

Brig. Gen. Joseph W. Stilwell, 35 U.S. Armyofficers (photo, center right), and 34 enlisted men received decorations from the Vietnamese Airborne Brigade for their participation with the brigade in "Eagle Plight" operations in Vietnam. Gen. Stilwell received the Knight of the National Order award and the Gallantry Cross with Palm. The other officers received the Gallantry Cross with Star. Maj. Gen. Tran Thien Khiem, Vietnam's minister of defense, is shown presenting the awards to Gen. Stilwell.

SFC William J. Haney (left in photo at left, bottom), mess steward of the 118th Aviation Company, is shown dishing out an "airmobile salad" to Lt. Col. John C. Hughes (center), CO of the 145th Avn Bn, and to Maj. Vincent L. McNeese, CO of the 118th. Sgt. Haney designed the portable mess hall and constructed it with the help of Sp5 Ronald D. Gibson, 573rd Trans Det. Made of aluminum sheet metal, the facility can keep 60 individually packaged meals and drinks hot or cold for eight hours. Weighing 50 lbs (empty), the kitchen fits easily into the troop compartment of a UH-1B.









Above: Col. John L. Klingenhagen (left), DCO, U.S. Army Support Command, discusses the smoke pods on a HU-1B with Gen. (then Lt. Gen.) Harold K. Johnson, Chief of Staff, during the latter's recent Vietnam visit.



"EAGLES"

FORT EUSTIS, VIRGINIA -- COLONEL MICHAEL J, STROK, AN ARMY AVIATOR SINCE 1942 AND COMMANDING OFFICER OF THE U.S. ARMY TRANSPORTATION RESEARCH COMMAND, WAS PROMOTED TO THAT RANK IN EARLY JUNE CEREMONIES CONDUCTED BY MAJ, GENERAL JOHN J. LANE (LEFT), CG OF THE ARMY TRANSPORTATION SCHOOL AND FT. EUSTIS. HE IS SHOWN RECEIVING "EAGLES" FROM GENERAL LANE AND MRS. STROK IN THE JUNE 10 PINNING. A SENIOR ARMY AVIATOR, HE IS QUALIFIED IN BOTH ROTARY AND FIXED WING AIRCRAFT.

ACCEPTANCE

STRATFORD, CONN. -- A U.S. ARMY YCH-54A SKYCRANE HELICOPTER IS SHOWN CARRYING A 6 X 6 TRUCK, WEIGHING OVER 12,000 LBS. DURING A FLIGHT DEMONSTRATION AT THE SIKORSKY AIRCRAFT PLANT. THE AIRCRAFT, THE FIRST OF A QUANTITY OF SIX PURCHASED BY THE ARMY, WAS ACCEPTED JUNE 30 BY BRIG. GEN. (THEN COL.) H.F. SCHILTZ, CG OF THE U.S. ARMY AVIATION MATERIEL COMMAND, DELIVERY OF A NUMBER OF YCH-54A'S WILL BE MADE TO THE ARMY THIS FALL FOR FIELD TESTING OF THE HEAVY LIFT CONCEPT.



2,500TH

NEW CUMBERLAND, PA. -- LT. GENERALJEAN E. ENGLER (2ND FROM LEFT), CG OF THE U.S. ARMY SUPPLY AND MAINTENANCE COMMAND (SMC), PREPARES TO CUT THE RIBBON ON THE 2,500TH AIRCRAFT TO BE PROCESSED THROUGH THE NEW CUMBERLAND ARMY DEPOT'S AIR MAINTENANCE SHOPS SINCE THEIR OPENING IN JANUARY, 1980. LEPT TO RIGHT; COL. PRESTON M, MOTES, CO OF THE DEFOT; GEN. ENGLER; COL. RAMON F. D'ELOSUA, DIRECTOR FOR MAINTENANCE; AND CARL R. MYERS, SPECIAL ASSISTANT TO COLONEL D'ELOSUA.



ELECTEES

FORT WOLTERS, TEXAS -- NEW OFFICERS OF THE FORT WOLTERS CHAPTER OF THE ARMY AVIATION ASSOCIATION (AAAA) ARE SHOWN FOLLOWING A CHAPTER EXECUTIVE BOARD MEETING, PROM LEFT TO RIGHT ARE MAJOR MELVIN K. GOULDING, NEW PRESIDENT: MR. JOSEPH SHIELDS (OF SOUTHERN AIRWAYS CO), EXECUTIVE VICE PRESIDENT: CAPT. JOHN E. CARON, SECRETARY; AND CAPT. EUGENE R. KELLEY, CHAPTER TREASURER. THE NEW OFFICERS JOINED FOUR INCUMBENT OFFICERS TO COMPLETE THE '64-'65 CHAPTER SLATE.



SUBMERSION

VIETNAM -- CWO LUCIUS C. FRYE, A PILOT WITH THE 120TH AVIATION COMPANY, GOES UNDERWATER IN THE DUNKING MACHINE DESIGNED TO SIMULATE THE SUBMERSION OF A HELICOPTER COCKPIT. THE 120TH - PART OF THE 145TH AVN BN - SCORED A FIRST IN VIETNAM BY INSTALLING LIFE PRESERVERS IN ALL BN 'COPTERS AND CONDUCTING A WATER SURVIVAL SCHOOL FOR ALL BN AVIATORS, DESIGNED TO BUILD CONFIDENCE, THE SCHOOL WAS GREETED WITH ENTHUSIASM BY ALL, AND HAS ABETTED OVER-WATER OPERATIONS.



COMPOUND

STRATFORD, CONN. — A HIGH-SPEED TEST COMPOUND HELICOPTER, CALLED THE S-61F, IS SHOWN HERE IN DESIGN FORM WITH 32 FT. WINGS AND TWO AUXILIARY P&W J-60 ENGINES. THE TEST AIRCRAFT, TO BE BUILT UNDER ARMY, NAVY, AND COMPANY SPONSORSHIP, WILL ACCELERATE HIGH SPEED RESEARCH, THE PIRST FLIGHT WILL TAKE PLACE EARLY NEXT YEAR. A SPEED OF 230 MPH IS ANTICIPATED: A MAXIMUM OF 288 MPH IS POSSIBLE, THE TEST AIRCRAFT IS A MODIFICATION OF THE SH-3A, THE NAVY'S SUBMARINE HUNTER.



COUSINS

FORT RUCKER, ALA. -- FIRST LIEUTENANT JAMES W. MOUW (RIGHT), A PIXED-WING STUDENT AT USAAVNS, CHATS WITH HIS NEWLY DISCOVERED COUSIN, 2D LIEUTENANT JOHN D. MOUW, A ROTARY-WING STUDENT, ABOUT THEIR NEAR AND DISTANT RELATIVES. THE TWO OFFICERS DISCOVERED THAT THEY HAD GREAT-GRANDFATHERS WHO WERE BROTHERS AND THAT THEY HAD THE SAME GREAT-GREAT GRANDFATHER. THE TWO MET FOR THE FIRST TIME LAST MARCH IN A USAAVNS CLASSROOM, PRIOR TO STUDYING THEIR FAMILY TREES.



AEROGYRO

BURBANK, CALIF. — THE ADDITION OF STUBBY WINGS AND AN AUXILIARY JET ENGINE TO THE LOCKHEED XH-51A AEROGYRO (MODIFIED AS SHOWN AT THE RIGHT IN AN ARTIST'S SKETCH; WILL ENABLE THE VEHICLE TO PERFORM AT SPEEDS WELL IN EXCESS OF 200 MPH. THE WINGS OF THE NEW "COMPOUND HELICOPTER" (ROTOR SYSTEM AND FIXED WING, WITH AN AUXILIARY JET ENGINE) WILL MEASURE 14'9". A P&W J60-P-2 TURBOJET ENGINE, MOUNTED IN A PYLON POD, WILL SUPPLEMENT THE AEROGYRO'S REGULAR P&W PT 6 TURBINE.



AAAA IN PHOTOS

JUNE-JULY PHOTOS











■ TOP LEFT: Maj. Gen. William B. Bunker, DCG, Army Materiel Command, congratulates Steven L. Austin, one of four First Place winners at the Third Annual Science Awards Luncheon of the Washington, D.C. Chapter. Certificates were presented to 13 students with the four winners receiving AAAA Plaques as well. . CENTER LEFT: Chapter president Lewis E. Casner is shown addressing the luncheon attendees as Col. Harry L. Bush (seated), chairman of the Chapter's Science Awards Committee, looks on. BOTTOM LEFT: Col. Edward McMaken, AA Center Chapter president, presents "membership incentive checks totaling \$426 to WOC Alton Brown (left) of WOFWAC 64-1W and to WOC Alfred Brown of WOR-WAC 64-3W upon the attainment of 100 percent AAAA membership by each class. . TOP RIGHT: Darwin P. "Gerry" Gerard, AAAA president, cuts the cake at the June 6 AAAA Picnic held at Pt. Rucker's Lake Tholocco in celebration of the 22nd Anniversary of Army Aviation. ■ BOTTOM RIGHT: Members of the AAAA National Board attending the 22nd Anniversary Celebration at Ft. Rucker were, left to right, front row, Carl D. Stephenson, Col. Robert F. Cassidy, Darwin P. Gerard, Col. Edwin L. Powell, Jr., and Brig. Gen. Robert R. Williams. Back row: Col. Jack L. Marinelli, Ret., Arthur H. Kesten, Col. Edward L. McMaken, Brig. Gen. O. Glenn Goodhand, Ret., Lewis E. Casner, Jack E. Leonard, and Col. Alexander J. Rankin. The AAAA group is shown in front of the Hos of the U.S. Army Aviation Test Board where Col. Rankin, Test Board president, and key Board personnel had provided the group with a briefing on current Board projects.

Solar Titan gas turbine APU makes the CH-47A Chinook helicopter completely independent of ground support

Solar's potent, rugged *Titan®* T-62 gas turbine generates electric and hydraulic power aboard the Army's new Boeing-Vertol CH-47A Chinook helicopter. The lightweight, compact *Titan* turbine-powered unit makes it possible to start or service the Chinook anywhere in the world without ground support equipment.

Although it develops 80 hp, the Solar *Titan* gas turbine weighs just 61 lb and is only 25 inches long and 12½ inches in diameter. It has been qualified to military specifications. *Titan* gas turbine APU's may be equipped with alternators, generators, hydraulic pumps, pneumatic

compressors or any combination of these units.

Solar Titan gas turbines are currently used to supply power aboard a number of advanced Army, Navy, Air Force and Marine Corps helicopters, including Boeing and Vertol's CH-46A, Sikorsky's CH-3C, CH-53A and Flying Crane. Other Titan turbines drive easily portable ground power and checkout units. For more information about the Titan gas turbine, write Solar, a Division of International Harvester Company, Dept. M-167, San Diego, California 92112.



Another reason why the T63 engine that powers the LOH is so simple and compact



One of the simplest and most compact turbine engines ever built, the Allison T63-A-5 produces 250 shp., weighs less than 135 lbs., is barely a yard long.

The simplicity and compactness of the Allison T63-A-5 engine stem directly from the arrangement of its components, all of which are attached to the single gear case.

That case contains both the power output gear train and the accessory drive gear train. With both gear trains in one gearbox, the engine is more compact and simple — and its weight is kept low.

The compressor assembly is mounted on the front of the gear case - readily accessible as a complete unit for inspection and maintenance. In the interest of both simplicity and economy, the hub and blades of the six axial compressor stages and the single centrifugal stage are all cast, a practice which greatly reduces the number of engine parts and eliminates much blade machining and fitting. Turbine stages are also integrally cast.

Shorter shafts, fewer bearings

Location of the turbine section, particularly the power turbine unit, close to the gearbox, serves to eliminate much concentric shafting. Naturally, a lot of bearings are thus eliminated.



All components are mounted on the single gearbox and each is lightweight, compact and can easily be removed for repair or overhaul.

Reverse airflow

But it took some ingenious engineering to locate the compressor and the power output shaft at the front of the engine—and still keep the engine compact. That's why the T63's reverse airflow pattern was created.

Air enters the compressor at the front of the engine, flows from the compressor discharge to the rear of the engine, then reverses direction to flow forward through the combustor, turbine and out the exhaust. The engine arrangement permits use of a single combustion chamber of simple and efficient design with only I igniter plug and I fuel nozzle—both externally accessible.

Today the T63-A-5 is piling up flight hours in three manufacturers' LOH's as they go through Army light evaluation tests. Another T63powered helicopter has been flying at the Allison Indianapolis flight test facility for over a year, adding to the more than 30,000,000 turbine engine flight hours logged by 35,000 Allison engines.







If you'd like more information about this engine we'll be glad to send it to you. Just write LOH, Allison Division of General Motors, Box 894X, Indianapolis 6, Indiana.





AAAA NEWS

NAT'L AWARDS DEADLINE EXTENDED TO JULY 31

Having extended the deadline for the submission of nominations for the four National Awards of AAAA to July 31, 1964, the five-member AAAA National Awards Committee will undertake the task of selecting the '63-'64 winners at an August 14 Committee Meeting to be held in Washington, D.C.

The Awards Committee will consider nominations for the "Army Aviator of the Year Award," the Award to the "Aviation Soldier of the Year," the "Outstanding Aviation Unit" trophy, and the James H. McClellan Aviation Safety Award."

Nominations are welcomed from all sources - to include individual members, Chapter activities, industry, military units, etc. Members desiring to submit a nomination to cover the April 1, 1963-March 31, 1964 zone of consideration are requested to write to the National Office (AAAA, 1 Crestwood Road, Westport, Conn.) for an Association application form which spells out eligibility criteria and detailed information on the documentation required. Awards' presentation shall take place at the Annual Meeting.

81% OF AAAA'S 1963 MEMBERSHIP RENEWS

As at June 30, 1964, the cutoff date established for the renewal of the 7,931 1963-1964 memberships, 6,472 members - or more than 81 percent - had submitted their renewals for '64-'65. The Association experienced a net gain of 668 new members - 11.5 percent - during the period of April 1, 1963 through March 31, 1964. AAAA membership totaled 6,863 on June 30, 1964.

AAAA CHAPTERS SPONSOR 'BIRTHDAY' FUNCTIONS

Many AAAA Chapter activities acknowledged the June 6 "Twenty-Second Anniversary of Army Aviation," sponsoring birthday balls, membership picnics, and "Hail and Farewell" luncheons and dinners in conjunction with the birthday celebration.

Well over six hundred members, their families, and their guests attended a kingsize Bar-B-Q held at Fort Rucker's Lake Tholoccopicnic area, meeting the low Bar-B-Q tab set by the Chapter and contributing the \$329.14 in "excess" funds to the AAAA Scholarship Foundation.

COL. RAWLS APPOINTED PROGRAM CHAIRMAN

Colonel Robert M. Rawls, a veteran Army Aviator assigned to the Office of the Assistant Chief of Staff for Force Development, D/A, will serve as the Program and Protocol Chairman for the Sixth AAAA Annual Meeting. The 1964 Convention of the Army Aviation Association will be held at the Shoreham Hotel in Washington, D.C., on November 19-20.



MILITARY______

MARKETING/SALES

■ SENIOR ARMY AVIATOR, age 31, seeks opportunity with dynamic organization which will utilize his full potential. Graduate of an eastern university; presently employed by one of the nation's largest corporations with 9 years'administrative experience, 2,000 hours of rotarywing and fixed-wing flight time, plus prior aircraft sales experience. Instrument rated and type rated in Vertol 44; single engine land and sea, rotorcraft. Willing to relocate. Write AAAA, Athn: Box 7537, Westport, Cona. (6)

SALES/PUBLIC RELATIONS

■ YOUNG FAMILY MAN (Age 27) seeks sales or public relations opportunity with military aircraft or parts manufacturer. Previous Public Relations experience. Former Army captain and Army Aviator with 1,500 hours flying. FAA Com'l ASEL, helicopter, and instrument ratings. Prefers to locate in Northeastern U.S. but is willing to relocate. Available after June 1. For personal resume and photo, write AAAA. Attention: Box \$395.

ADMINISTRATIVE/OPERATIONS

MASTER Army Aviator, Major (Ret.), desires position with aviation industry in the field of aviation safety, operations, administration, or flight. 21 years of flying experience in Army aviation. ASEL and AMEL ratings; fixed-wing special instrument card; helicopter rating. A graduate of the Army Aviation Safety Course (Calif.), and the Crash Injury Investigators Course (Ariz.). Prefer location in Southwestern or Southeastern U.S. Available on August 1. For resume; write AAAA, Attention: Box 3025.

OVERSEAS ADMINS'VE - R&D

■RETIRED at 45, a Master Army Aviator with 5,000 operational hours and an equal or greater number of combat development hours which included aviation, desires employment in the manufacturing, administrative, or developmental field. Have a business education, technical competence, a record of successful accomplishment, and time for another career. For detailed resume, write AAAA, Box 4121, 1 Crestwood Road, Westport, Conn.

ST. LOUIS GATHERING

Some 200 members of the Lindbergh (St. Louis) Chapter of the AAAA and their guests attended the Chapter's social and business meeting June 18. The principal speaker at the Chapter meeting was Major General William B. Bunker, Deputy Commander of the Army Materiel Command, Washington, D.C., and the founder and first president of the Chapter.

General Bunker stressed the speed of today's operations and the necessity of considering and accepting new methods and concepts to fulfill the logistical and engineering functions associated with Army aviation.

Shown in the photo above are, left to right, Brigadier General Howard F. Schiltz, Commanding General, AVCOM, St. Louis; Mrs. Bunker; Mrs. Schiltz; Major General Bunker; Mrs. Hauschultz; Mrs. Petersen; Eric H. Petersen, president of the Lindbergh Chapter; and Colonel Earl H. Hauschultz, Deputy Commander, AVCOM, and the executive vice president of the chapter activity.

B ASED upon the signed Acceptance
Porms received at the National
Office of AAAA, the following Chapter Executive Boards are announced.
Members elected to Chapter office
are elected for a two-year term
ending 31 March 1986. 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

Pres	President
EXVP Executive Vice	President
Sec	
Trea	
VPA Vice Pres., At	
VPRVice Pres., Rese	
VPGVice Pres., Nat'l	
VPIVice Pres., Indust	
VPP Vice Pres., Pu	blic Affairs

ALASKA

Pres	Maj. Charles E. Connaway
EXVP	Maj. John P. Stapleton
Sec	Capt. Norman C. Toso
Trea	CWO Robert G. Warns
VPA	Maj. Russell L. Meek
VPI	Mr. Donald S. Wolfe
VPP	,Maj. Clarence L. Heiss

ARMY AVIATION CENTER

Pres	Col. Edward McMaken
	Col. Robert M. Hamilton
Sec	Lt. Col. Thomas J. Sabiston
TreaC	apt. Charles E. Parker, Jr.
VPA	Maj. Willie F. Dixon
VPI	Col. Roy E. Creek
VPP	Maj. Wallace H. Martin

BLUEGRASS

PresLt. Col. John Bergner
EXVPCapt. Robert A. Hefford
SecLt. Robert W. Johnson
TreaCapt. James O. Frownfelter
VPACapt. Richard A. Thompson
VPIMaj. James M. Peterson
VPF

CAP ST. JACQUES

PresMaj. Marcus W. Coyle
EXVP Maj. Joseph D. White
Sec Capt. Arthur L. Walters
TreaCWO Raymond V, Semora
VPAMaj. Charles E. Nickolls
VPICapt. Douglas L. Hutchens
VPPCapt. Harold L. Jones

FT. BENNING

PresCol. William R. Tuck
EXVPCol. Curtis L. Hankins
SecMaj. William L. Denend
TreaCapt. Lawrence B. Moeller
VPALt. Col. Frank L. Shaw
VPPCapt. Harold E. Gonyer
VPRCWO William McVeigl

CHAPTER



OFFICERS

ATLANTA

Pres.......Col. David G, Cogswell
EXVP.....Lt. Col. Jerome B, Feldt
Sec.....Capt. David H, Moffet, Jr.
Trea....Maj. George E, Morrison
VPA...Lt. Col. A.J., McDermott, Jr.
VPG......Capt. Roy C, Moore
VPI...Maj. Jesse M, Childress, Jr.
VPP.....Capt. John G, Mathews
VPR.....Mr. Ronald E, Johnston



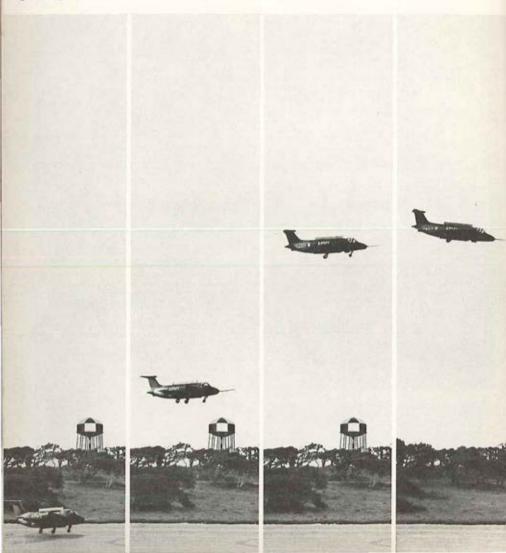
The occupants of the Army aircraft executing the two millionth touchdown autorotation at the U.S. Army Primary Helicopter School at Fort Wolters, Texas, are shown receiving Certificates of Honorary Membership in the FortWolters Chapter of AAAA as their aircraft touched down at the Fort Wolters main heliport. Shown, left to right, are Maj. Melvin K. Goulding, Chapter president; student pilot 2d Lt Thomas P. Barrett; instructor pilot Irwin G. Bonner; and Joseph Shields, Chapter Executive Vice Pres.

The Rt. Reverend William J. Gordon, Jr., (3rd from left), the "Flying Bishop of Alaska," was honored by Alaska Chapter members at their recent Chapter luncheon meeting in being made an Honorary Member of the Chapter. Shown, left to right, are Maj. Charles E. Connaway, Chapter president; the Reverend Lewis Hodgkins; Reverend Gordon of All Saints Episcopal Charch; Maj. General Ned D. Moore, CG, U.S. Army, Alaska; and Lt. Colonel Nicholas G. Psaki, CO of the USARAL Aviation Battalion.

Transition of the VTOL Lockheed Hummingbird

Vertical lift-off begins as thrust from twin jet engines is diverted down through ejectors and augmented by outside air... Straight up the new Lockheed Hummingbird rises to reach altitude for forward flight...

After reaching altitude sufficient for obstacle clearance, the amazing new Army VTOL jet starts to ease forward... Attitude becomes slight! nose-down to increase th forward speed...



Lockheed-Georgia Compa Ejector doors start to close as Up and awayl An operational The Hummingbird's speed the pilot switches from vertical version of the Hummingbird Marietta, Georgia-a divis begins to approach full transiof Lockheed Aircraft C to full forward thrust... would fly on the deck at more tional point of 120 knots... than 500 knots-or climb at more than 18,000 feet pur minute...

AAAA ENDS DUES PRO-RATING

FULL YEAR MEMBERSHIPS GO INTO EFFECT JULY 1

Effective 1 July 1964, the AAAA discontinued its system of pro-rating the payment of annual dues during the various quarters of each membership year.

Under the pro-rated dues system, the first-year applicant paid a first-year prorated increment sufficient to have his individual membership expire on the subsequent 31 March, the common membership cut-off date for renewal purposes.

With the new system of dues payments, today's applicants for membership in AAAA are to pay full year dues (and a first-year only Initiation Fee) at any point in a year with their memberships to run for a FULL YEAR from the first day of the month AFTER the month in which they make application for AAAA membership.

In the second and all subsequent renewal years, the annual dues would be \$6.00.

A revised membership application form appears on this page. Application forms bearing the table of prorated dues are no longer accepted at the Association National Office, in being replaced by the "full year" application form at the right.

ANNUAL AAAA DUES

ASSOCIATION

ARMY AVIATION

FOR MEMBERSHIP

the Army Aviation Association of America (AAAA). I have enclosed

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Army aviation or its allied pursuits

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Post Box Number, Residence or Quarters Address is

Please Print) Rank/Grade

failure to sign above invalidates this application.

■ GENERAL OFFICERS Parker, David B., BGen\$2,352 ■ COLONELS Dale, John R\$2,352 +Hanburger, Christian\$588 Stansberry, Conrad L\$2,352 Wells, James F\$2,352 ■ LT. COLONELS Bobo, Carl E., Jr\$2,352 Clark, John J\$1,081 Contole, William S\$2,352	Kuchera, Earl A. \$1,968 *Magney, Evan F. \$1,777 Maschmann, James W (2). \$2,220 +McClure, Joseph W. \$1,728 +McDermott, Francis P. \$640 +Metzger, Jeff J. \$1,408 +Mitchell, Erwin M. \$2,112 Mitchell, Malcom L. \$2,304 Ogden, Robert J. \$2,304 O'Grady, Patrick J. \$1,128 Parkinson, Ralph W. \$1,968 Pfeiffer, Francis. \$2,208 Pittinger, Ronald R. \$2,208	+Gibson, Melville D. \$74 *Golembieski, Frank E. \$63 +Graham, Jack C. \$82 Harris, Truitt W. \$1,96 Harrigan, Thomas Y. \$4,92 Hawklns, Edward S. \$1,55 Hawthorne, James D. \$49 Hendershot, Donald L. \$4,92 Henley, Raymon D. \$4,80 Isbell, Richard A. \$1,08 Jarvis, James W. \$44 Jarvis, Ronald J. \$1,77 Jenks, Allen R. \$1,47
	NNUAL R IT PAY CI	
Cranford, Jack \$2,304 Duffy, Jack W \$1,696 Filby, Robert A \$2,304 Gabardy, Robert L \$1,536 Gardner, William H \$1,398 Givens, John W \$1,960 *Harloff, Edwin L \$516 Hovland, Dennis A \$2,304 Jeffrey, Robert J \$565 Juhl, Milford L \$960 Kilmer, William G \$2,208 Larson, William B \$2,304 Mathews, William R \$2,352 +Murphy, Raymond H \$1,764 +Noland, Clifton M \$1,152 Shaffer, Lewis N \$1,960 Stover, Jacob R \$2,304 Whitney, Edwin F \$5,880	Premo, Oliver P	Jenkins, William H. \$49 Jones, James D. \$64 Jones, Joseph A. \$1,96 Keen, Donald E. \$1,96 Kelley, Edgar N. \$1,92 Keltz, Richard E. \$1,96 Kemp, Marvin E. \$1,96 Killo, William S. \$1,72 Knight, Daniel B. \$3,34 Koepp, Robert W. \$4,56 Kramer, Joseph A. \$1,96 Kunz, Joseph A. \$1,96 Kunz, Joseph F. \$1,97 Licha, Charles A. \$1,92 +Lightfoot, Robert H. \$3,02 Louis, John J. \$1,53 Lucas, Harlan S. \$1,96 Lynch, John A. \$78 Martellini, Carmen R. \$1,72 Maschmann, James W(1) \$61
MAJORS Ballantine, Laurence F. \$5,160 Barrett, Ernest F. \$2,870 Bowman, James \$3,840 Brooks, Frank B. \$2,304 Browne, Edward M. \$1,824 +Carney, Charles V. \$1,635 Cooke, Horace G. \$2,208 +Dalusky, George A. \$1,347 Dantzer, Laurence L. \$2,314 Dodd, William R. \$880 Dunham, John R. \$1,968 Eder, Herbert. \$2,208 +Fitts, William T. \$1,032 *Fitzgerald, Albert E. \$2,304 Fowser, Mark F. \$2,208 Gile, Richard E. \$950 Gilroy, John E (1). \$1,644 +Gilroy, John E (2). \$1,920 +Hammack, Earl J. \$1,536 Hamner, Louis. \$4,920 Heathcote, Carlyle J. \$1,968 Hennington, Harold M. \$1,968 Irby, Chester R. \$2,304 *Jones, Philip D. \$1,476 Kaylor, John O. \$656	Benson, Albert G. \$1,760 Berry, Henry J. \$1,824 Berry, Thomas P. \$1,522 Birkmeyer, Louis R. \$1,824 Bonifacio, Robert A. \$1,585 Bradley, Glenn W. \$1,968 Bransford, Thomas. \$1,728 Brinkley, Edwin T. \$1,184 Burton, James. \$432 Cantwell, Franklin D. \$1,776 Champagne, Edward. \$1,920 Coleman, Charles W. \$3,075 Conner, Joe P. \$4,560 +Cox, James A. \$912 Crumit, Ellis G. \$1,920 **Pameron Fred. \$1,920 Davis, Edward J. \$1,776 Dillinger, David R. \$288 **Doray, Paul D. \$960 Dunn, Jack A. \$484 Dupont, George J. \$1,968 Finnin, Richard H. \$3,456 Frandsen, Donald P. \$994 Frentz, Austin D. \$1,732 Freytag, Robert J. \$1,968 Gaffney, James J. \$396 +George, David M. \$1,672	Matos, Joseph A. \$52 McConnell, Delmer M. \$16 McIlwain, George W. \$1,87 Meehan, William J. \$1,77 Melton, William D. \$1,60 Meyer, Raleigh R. \$1,72 +Midgett, Carl G. \$86 Mitchell, Theodore L. \$63 Moyer, Kenneth G. \$4,71 Murdoch, William L. Jr. \$1,13 Murphy, Richard R. \$80 Nadeau, Clement P. \$1,72 Nash, Verna M. \$4,92 Nuttall, Richard W. \$1,82 +Oberg, Robert. \$1,58 Pappas, Ted R. \$74 Passano, John D. \$1,73 Peck, Michael \$1,92 Pergerson, Benard S. \$1,44 Phillips, Jack R. \$88 Pierce, Wilbur R. \$1,77 Riviere, George. \$65 Scharite, Frank W. \$1,92 Sims, Claude E. \$4,92 Sims, Claude E. \$4,92 Smith, Alfred R. \$1,92 Smith, Alfred R. \$1,92 Smith, Alfred R. \$1,92 Smith, Alfred R. \$1,92 Smith, Alfred R. \$1,92

m GENERAL OFFICERS

Kuchera, Earl A......\$1,968 +Gibson, Melville D......\$74

■ CAPTAINS (Continued)
Stewart, Clifford R\$3,936
Stewart, Cilitora Rimingo,
Sweeney, Alan F\$3,960
Taylor Billy H \$864
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Sweeney, Alan F\$3,960 +Taylor, Billy H\$864 Theriault, Bernard R.(1)\$1,280 Theriault, Bernard R.(2)\$990
Theriault, Bernard R.(2)\$990
Thomas Michael B \$1 968
I nomas, anchaer R
Thomas, Michael R\$1,968 Tidmore, Carl C\$1,776
Traver, Wallace H\$4,920
m i i militori mi or 100
Tryjankowski, Florian E\$1,480
Tussey, William J\$792 *Walker, Robert L\$2,760
#Walken Rebent I \$2.760
- Walker, Robert L
Ward, Charles E\$571
Wilson, Robert E\$1,229 Yenne, Walter D\$1,968
Venera Welter D 61 000
Yenne, Walter D\$1,366
■ LIEUTENANTS
- LABOTBIANTS
Beaulieu, Gary P\$1,440
Bender, Richard C\$600
Bower Duese M #1 000
Bower, Duane M
Bower, Duane M\$1,200 Clark, Robert H\$1,196 DeGeneffe, Delano E\$384
DeGeneffe Delano E \$384
Dedenette, Details Billingook
Dockler, Gordon S\$3,600
Drake, Harley L\$712
Eckstein, Philip L\$3,456
Beasten, Finnip Littiningo, 100
Hagler, Jon L\$960
Harris, Robert E\$1,200
James David C 93 600
Harris, Robert E\$1,200 Jayne, David G\$3,600 Lapinskes, George S\$1,536 Lefebvre, Joseph P\$1,012 Marshall, Thomas J\$1,440
Lapinskes, George S\$1,556
Lefebvre, Joseph P\$1,012
Marchall Thomas I \$1 440
Marchail, Indinas gillings, 41
Mason, Elijah F\$1,536
Mays, Luama W\$1,536
Mays, Luama W\$1,536 Miyamoto, A.A\$960
Perez, Roberto D\$960
Perez, Roberto D\$960
Peterson, Robert A\$1,700
Sanders Brian C \$762
Stein, Albert E\$3,840 Stevens, Merwin A\$2,400
Stelli, Albert E
Stevens, Merwin A\$2,400
Stump, Charles3288
Sullenbarger Louis \$406
m-1 million Fr 00 040
Sullenberger, Louis\$406 Tai, William K\$3,840
Ziegler, William E\$288
- CHIPP WARDANIE OPPIONS
CHIEF WARRANT OFFICERS
Allen, Dwight O\$1,296
Ahlstedt, Herbert A\$324
Beau, Henry R\$1,296
Beau, Henry R
Bieber, Harold J\$108
Bivens, Robert D\$1,296
+Coleman, Henry H\$1,508
+Coleman, hemy h
Cooper, Thomas E\$1,000
Crawford, George W\$1,296
Cooper, Thomas E\$1,000 Crawford, George W\$1,296 +Deegan, Michael\$960
Through it is a con-
Dugan, Richard A\$3,000
Ganey, Jerome\$1,296
Cibeon Took C \$1 195
Hown Debout D at 000
Harr, Robert B\$1,200
Havens, Oren D. (1)\$1,080
Harr, Robert B\$1,200 Havens, Oren D. (1)\$1,080 Havens, Oren D. (2)\$972
*Hendrix, John L\$1,169
Holt, Robert H\$450
Hoyt, William C., Jr., \$1 232
Venney Michael A 60 500
*Hendrix, John L\$1,169 Holt, Robert H\$450 Hoyt, William C., Jr\$1,232 Kenney, Michael A\$2,530 Kimak, Philip B\$110
Kimak, Philip B\$110
Wannes William A \$108

FLIGHT PAY PROTECTION PLAN - 30 JUNE 1964 TOTALS Number of Insureds holding individual policies	
LIFE INSURANCE PLAN - 30 JUNE 1964 TOTALS Number of Insureds holding individual policies	

+Kuntz, Joseph T	\$672
Lamb. William T	
LaRosa, Peter A	
Logan, John R	
Marks, Harold E	
Maxey, James H	
McCune, James P	
Miller, Lyle	
+O'Cain, Raymond F	
Parsons, Richard	
Price, Eugene	
Prouty, Richard W	
Reese, Edgar J	
Richards, Leroy E	
+Richardson, Rodney K	
+Roberts, William B	
Smith, Louis G	
Thurmond, Wymond N	

Townsend, James R\$3,240
Valdez, Isidro, Jr\$1,296
Valentine, George\$1,200
Whidden, Raleigh J\$3,240
Williams, William, Jr \$1,248
Woodbeck, Carol E\$1,248
Woodward, Herbert E\$3,240
■ SP/6'S
Colvin, Gordon W\$2,400
Roller, Robert W\$960

■ SP/5'S *Padgett, Bogus......\$701 ■ TOTAL CLAIMS PAID.....258





WIND TUNNEL EXHIBIT WINS AAAA AWARD

■ Viewing the award-winning "wind tunnel" exhibit of Richard Ericson at the Westchester Science & Engineering Fair at White Plains, N.Y. are Maj. Fred McGowan, AAAA judge and Asst AO of ARADCOM's 1st Region, headquartered at Ft. Totten, N.Y., and Miss Eleanor Ney of Westchester County Publishers, Inc.

TURBO-BEAVER IN UNIFORM

- MORE SPEED
- MORE LOAD
- BETTER STOL

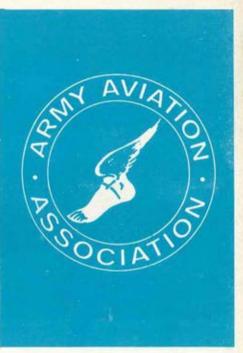


The Turbo-Beaver is now flying. The Pratt & Whitney PT6A-6 turbine engine combined with the dependability of the Beaver, make a unique STOL combination.

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SUSPENSE DATE:
JULY 31, 1964



ARMY AVIATION MAGAZINE

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