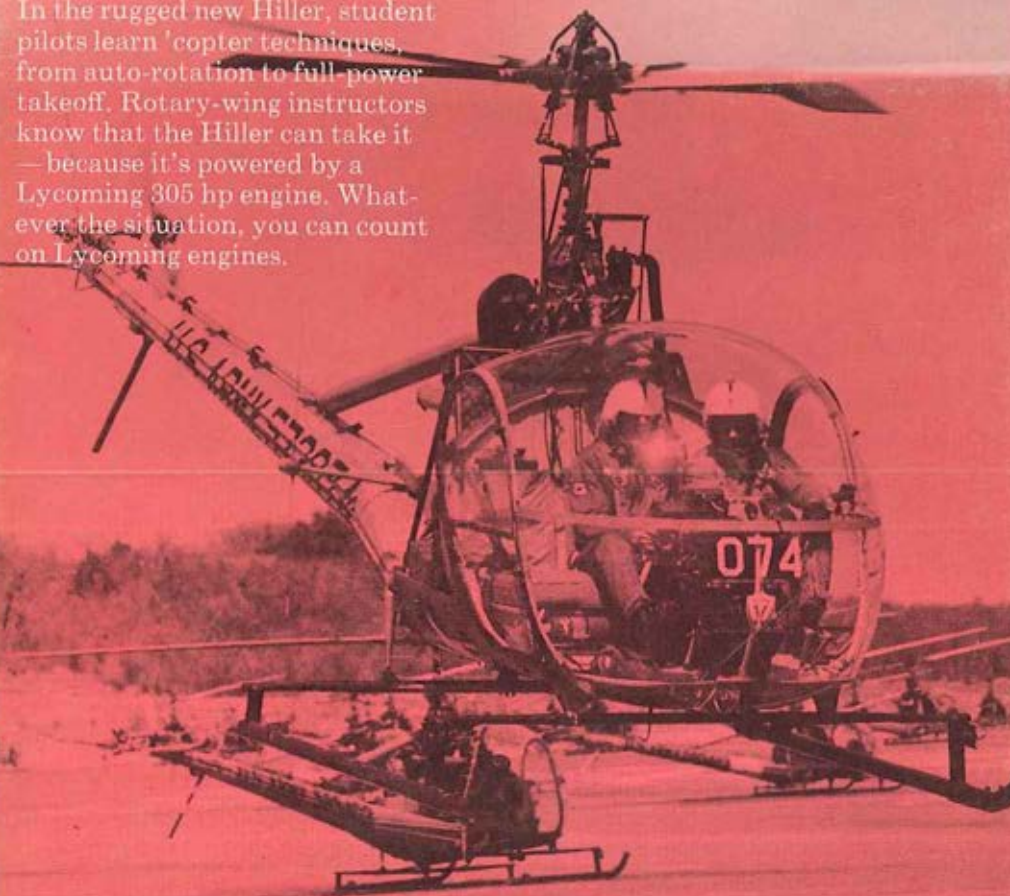


# ARMY AVIATION

FEBRUARY, 1965

## Beware: student driver

In the rugged new Hiller, student pilots learn 'copter techniques, from auto-rotation to full-power takeoff. Rotary-wing instructors know that the Hiller can take it — because it's powered by a Lycoming 305 hp engine. Whatever the situation, you can count on Lycoming engines.



# Lycoming

Division—Avco Corporation  
Williamsport, Pennsylvania

*chipook*

PROGRESS



# SUMMARY

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## **CH-47A CHINOOK CONTINUES WATER LANDING OPERATIONS AT FORT BENNING . . . .**

On 22 January, the 228th Assault Support Battalion of the 11th Air Assault Division began water operations with their CH-47A Chinook assault transport helicopters. These water landings, which were the first to be executed by an operational Chinook battalion, were repeated to allow pilots to gain maximum information. The photo above was taken during similar water landing tests at the Army Aviation Test and Evaluation Board at Fort Rucker. The Chinook on the left is the 11th Air Assault Division aircraft piloted by Lt. Col. Benjamin S. Silver, commanding officer of the 228th, and CWO Denver Kidd.

***BOEING***

**VERTOL DIVISION**

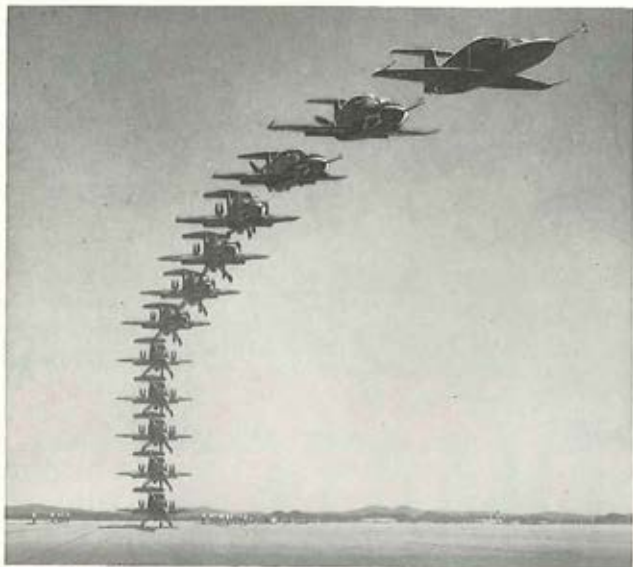
# ARMY AVIATION

**VOL. 15-NUMBER 2**  
**FEBRUARY, 1965**



- |                                                                                                             |                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ■ 1964 MILESTONES.....7<br>by Brigadier General John J. Tolson,<br>Director of Army Aviation, OACSFOR       | ■ AAAA NEWS .....35<br>National, Regional and Chapter Activ-<br>ities within the Army Aviation Ass'n                                                                                                                                                                                     |
| ■ USAPHS TESTS TH-55A.....13<br>by Colonel Kemuel K. Blacker, Com-<br>mandant, USAPHS, Fort Wolters, Tex.   | ■ SCIENCE FAIR AWARDS.....36<br>Participation by AAAA in the State,<br>Regional and National Science Fairs                                                                                                                                                                               |
| ■ SPACE UTILIZATION.....17<br>by Capt. Gerald D. MacDowell, 228th<br>Assault Support Helicopter Battalion   | ■ AAAA PHOTOCHART.....37-38<br>The CONUS and APO Chapter Presi-<br>dents of the Army Aviation Association                                                                                                                                                                                |
| ■ THE MONTH'S TAKEOFFS.....23<br>Permanent and Temporary Changes<br>of Residence during Dec., '64-Jan., '65 | ■ COMMAND CHANGES .....40<br>General Tolson, Colonel Seneff assume<br>key assignments within Army aviation                                                                                                                                                                               |
| ■ PHOTOCHART .....29<br>Aviation Elements, U.S. Army John F.<br>Kennedy Center for Special Warfare          | ■ STAFF<br>Editor.....Arthur H. Kesten<br>Associate Editor.....William E. McGee<br>Editorial Assistant.....Jessie R. Borck<br>Business Manager.....Dorothy Kesten<br>Reader Service.....Mary Wallace<br>Circulation Assistant...Dorothy DeVack<br>Circulation Assistant...Phyllis Hanson |
| ■ AA IN PHOTOS .....24-34<br>January-February News Photographs<br>of activities within U.S. Army aviation   |                                                                                                                                                                                                                                                                                          |
| ■ NECROLOGY ..... 34<br>Obituary Notices for January, 1965                                                  |                                                                                                                                                                                                                                                                                          |
| ■ ADVERTISERS                                                                                               | De Havilland Aircraft of Canada.....11<br>General Precision Decca Systems.....6<br>Grumman Aircraft Engrg. Corp.....39<br>Lockheed California Company.....14-15<br>Lycoming Division.....Front Cover<br>Ryan Aeronautical Company.....5                                                  |
| Aircraft Radio Corporation.....19                                                                           |                                                                                                                                                                                                                                                                                          |
| Allison Division.....16                                                                                     |                                                                                                                                                                                                                                                                                          |
| Beech Aircraft Corporation.....26-27                                                                        |                                                                                                                                                                                                                                                                                          |
| Bell Helicopter Company.....20-21                                                                           |                                                                                                                                                                                                                                                                                          |
| Boeing Vertol Division.....2-3                                                                              |                                                                                                                                                                                                                                                                                          |

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**NEWEST RYAN V/STOL** is Army's XV-5A which uses fans in wing to augment thrust of General Electric jet engines by nearly 300 percent. This makes possible vertical take-off, hovering and transition to normal horizontal flight using no more power or fuel than needed for high speed cruise.



**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 in areas where terrain conditions are rugged.

## FROM RYAN'S SPECTRUM OF CAPABILITIES: V/STOL AIRCRAFT



**TILT-WING V/STOL TRANSPORT XC-142A** has been developed by the three-company team of Ling-Temco-Vought, Hiller and Ryan for Army, Navy and Air Force. It will be capable of transporting troops and equipment into unprepared areas under all weather conditions.

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 these, 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.

**RYAN**



The Decca Flight Log indicator continuously presents current position and past track of the aircraft . . . the ultimate in pictorial presentation.

# The ULTIMATE . . .

**T**O SEE one's present position and past track on a map is the ultimate in position fixing presentation . . . and Decca provides that now!

The Decca Flight Log traces the aircraft position on a plastic roller map with a wash-off ink pen synchronized by any two of three ground stations. Since first placed in service in 1950, the Decca aerial navigation system has been constantly improved. It is now in use by civil and military aircraft in many parts of the world.

Not subject to VHF line-of-sight

disadvantages and inaccuracies, the Decca principle works on a three-station low frequency grid. It provides a two dimensional navigation system of exceedingly high accuracy suitable for both nap-of-earth or high-level navigation. As an area system, Decca allows direct flight as opposed to dogleg courses from one fix to another. Holding patterns can be accomplished anywhere within Decca coverage.

More information on the ultimate in aerial navigation is yours for the asking.

... As provided by **DECCA**



GENERAL PRECISION DECCA SYSTEMS, INC.  
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TELEPHONE: AREA CODE 202, 296-7480

**N**OW that the new year is upon us, I thought I'd take a cue from the newspaper columnists to list a few of the milestones and accomplishments of 1964. For example, during the past year, the Army's aviation activities included:

- Continued outstanding Army aviation support in South Vietnam.
- Delivery of the first off-the-shelf primary helicopter trainer to Fort Wolters, Texas.
- Establishment of 21 helicopter world performance records with the UH-1 Iroquois.
- Accomplishment of full scale field testing of the Army's airmobile test units.
- First flight of de Havilland CV-7A.
- Army aviation of USARAL played major part in disaster relief activities during Alaskan earthquake.
- First flight deployment of Caribou to Vietnam via Pacific Ocean route.
- Delivery of first Sikorsky CH-54 Flying Crane.

- Incorporation of expanded instrument training in the initial entry helicopter course at Fort Rucker, Alabama.
- Army acceptance of plant cognizance for Hiller Aircraft Company.
- Approval for procurement of off-the-shelf twin engine fixed wing instrument trainers for U.S. Army Aviation School.
- Assignment of U.S. Army Aviation Flight Information and NAVAIDS Office as Class II Activity of OACSFOR.
- Army Primary Helicopter School wins annual Distinguished Safety Award from Flight Safety Foundation.
- LOH competition narrowed to Hiller and Hughes. Approval for procurement of production models in FY 65 budget.
- Bell Helicopter Company awarded contract to produce off-the-shelf helicopter instrument trainers.
- First transoceanic self-deployment of OV-1 Mohawk.
- FY 64 world-wide Army aviation major accident rate reduced 11 per cent below FY 63.

GEN. TOLSON COMMENTS ON:

1964

MILESTONES



I am sure that there were many other significant accomplishments in '64. Please forgive me for any omissions. Looking back over the list, I can see that the year was a pretty good one. The new year doesn't show any signs of a slackening of activity, so we all have plenty of work in the months ahead. Best of luck to all of you!

### **USABAAR SAFETY COURSE**

The U.S. Army Board for Aviation Accident Research recently graduated its first class in a newly organized Aviation Safety Orientation Course. This week-long, 35-hour course, taught by eight USABAAR Safety Specialists, has been established to provide instruction in practical aspects of aircraft accident investigation and prevention.

While the new course is not a substitute for the 10-week Army Aviation Safety Course presented at the University of Southern California, it will assist officers without previous safety training to establish accident prevention programs in their units. It will also improve the qualifications of those officers who participate in aircraft accident investigation boards.

The first graduating class consisted of 14 officers and 3 civilians. Their curriculum included instruction in aircraft structures and propulsion systems, pre-accident planning, aerodynamics, investigation technique, and aviation safety literature. Included was a field exercise in aircraft accident investigation and airfield safety survey.

We hope that this short course will pay dividends far out of proportion to the rather limited time

involved. Although the foundation of aviation safety is command supervision, the commander must have competent people at the operating level to assist him in carrying out a successful accident prevention program.

### **PREPARING DA FORM 1352**

Perhaps few aviators realize it, but more data are collected on aircraft, at all levels of management, than practically any other piece of Army equipment. However, trying to pin down authorizations and applicable assets has been a cause of serious concern.

Accordingly, in December of 1963, AR 710-12, Army Aircraft Inventory, Status and Flying Time, was published superseding AR 710-1500-8. The basic purpose of this regulation is to prescribe the procedures for reporting statistical data on inventory, assignment, status, gains, losses and flying time of Army aircraft and synthetic instrument flight trainers. Preparing agencies include each divisional and non-divisional TOE organization authorized aircraft, non-TOE units authorized aircraft and other TD type units holding accountability for Army aircraft, but not having a specific authorization.

Commencing on 1 January 1964, the regulation required that the status of aircraft activities be recorded daily utilizing the 24-hour day to the nearest hour and prepared monthly so as to include data for the entire calendar month.

Commanders and aviation personnel at all echelons should be aware of the importance of this form, and the requirement that it be accurate and timely. The requirement for



## XV-5A ACCEPTED



The U.S. Army has formally accepted two research XV-5A V/STOL lift fan aircraft at Edwards AFB, Cal. Built by GE and Ryan, the two aircraft have completed Phase I testing and are currently being readied for a six-month flight evaluation at Edwards under USATRECOM management. Test personnel will be provided by the U.S. Army Aviation Test Activity at Edwards AFB. (U.S. Army photo)

accuracy in its submission has a direct bearing on the number of aircraft which are distributed in broad numbers at DA level and are ultimately assigned at unit level.

Particular emphasis should be placed on properly filling in Column "C" - Assignment Code. While the AR offers sufficient definitions reflecting the assignment of each aircraft, commanders should insure that the description used reflects the basic mission of the unit and not what the aircraft is being utilized for.

The following are some examples of erroneous reporting. An aircraft is assigned to a combat unit for the direct accomplishment of a com-

bat mission. However, it is used partially for giving transition flights to new pilots within the unit and, consequently, is reported as a training aircraft. Or, an aircraft is used within a unit to develop a new SOP and on the 1352 is reported as a test aircraft. There are even instances where some units have failed to submit the 1352.

In summary, the 1352s must be

submitted monthly and submitted correctly if they are to be useful in the aviation program.

### **NAVY TEST PILOT SCHOOL**

Through the cooperation of the Department of the Navy a plan was recently approved whereby the Navy will train a number of Army aviators as engineering test pilots at the Navy Test Pilot School, Naval Air Test Center, Patuxent River, Maryland. This training will support increased Army participation in the field of engineering flight testing.

The 8-month course of instruction at the Test Pilot School is divided into academic and flight phases. The academic portion includes the study of aerothermodynamics, dynamic and longitudinal stability, aircraft and engine performance, and other selected aeronautical engineering subjects. The flight phase includes planning, flying test flights in a variety of aircraft, reciprocating, jet, and helicopters, and writing reports of these flights. All flights are test flights with the exception of jet transition, familiarization in new types, and instrument and night proficiency flights.

Classes are convened in Febru-

ary, July, and October of each year and each is composed of officers from all of the armed services as well as allied military officers and civilians. Primary factors considered in the selection of Army students will be the availability of quotas and applicants' academic and flight background. Essential qualities required of candidates are a high standard of flying proficiency, technical understanding and the ability to clearly express oneself orally and in writing. Mathematical background in college algebra, physics, and calculus is invaluable. Graduate engineers are considered most suited to meet the technical requirements of the course.

### **DUAL RATED AA's SOUGHT**

Applicants should have extensive flying experience in both fixed and rotary wing aircraft preferably accumulated through diversified aviation assignments. Applications are sought from highly qualified and motivated Army aviators from all branches through the rank of Lt. Colonel. Applicants must be dual rated Army aviators currently on flight status.

Application for assignment to the U.S. Navy Test Pilot School should be sent through normal command channels to Department of the Army, Office of Personnel Operations, ATTN: Career Branch concerned.

I understand that a Department of the Army circular, containing detailed information concerning this program, will be published soon. I am sure that many interesting assignments in the development and testing phase of Army aviation await the Army graduates of this program.

### **1,000 FLIGHT SPACES**

The Aviation Warrant Officer Branch of the Office of Personnel Operations is seeking qualified enlisted volunteers for warrant officer flight training. Approximately 1,000 flying "warrant" spaces are available. AR 611-110 provides additional information for warrant officer applications.



# ANY AIRSTRIP WILL DO

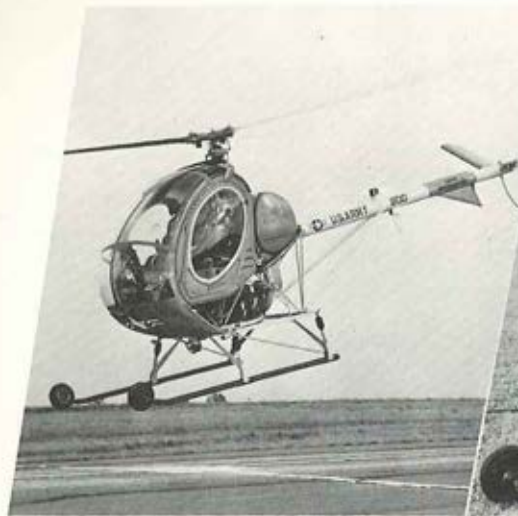
It costs almost nothing to make an airstrip for a Buffalo (CV-7A). With a 5½-ton load or 41 troops it can be airborne in 600 feet from a forest clearing or a farm field.

The Buffalo (CV-7A) is an excellent example of international co-operation in technology, trade and defence.

American experience produced the General Electric T64 turbine engine. Canadian experience evolved the de Havilland range of short-field transports. Result: the most efficient means of supporting forces in the combat zone.

The Buffalo (CV-7A) is the best investment in tactical mobility.

THE DE HAVILLAND  AIRCRAFT OF CANADA LIMITED  
DOWNSVIEW ONTARIO



ON 25 November 1964, officials of the U.S. Army Primary Helicopter School looked on as 10 Hughes TH-55A helicopters landed at the main heliport at Fort Wolters, Texas. The helicopters, flown by pilots assigned to Military Flight Evaluation and Southern Airways of Texas, Inc. instructor pilots, had just completed a four-day flight from Culver City, California.

The arrival of the helicopters at Fort Wolters marked a highlight in an Army program announced in 1962. At that time the Department of the Army announced that a requirement existed for a primary helicopter trainer of single rotor configuration, capable of carrying two persons and cruising 65 knots with an endurance range of at least 2-1/2 hours. DA further stipulated that the helicopter could be a commercially produced "off-the-shelf" item. This helicopter, if found suitable, would

then replace the OH-23D presently used by USAPHS. This would release the OH-23Ds at Fort Wolters to tactical units.

During the early part of 1964, the decision was made to evaluate the Hughes 269A commercial helicopter to determine whether or not it could meet Army requirements. This aircraft was modified with shoulder harness, dual controls and UHF radios.

#### **"OFF-THE-SHELF"**

The helicopter was then designated "Training Helicopter 55A (TH-55A)" and 20 were assigned to USAPHS to become the subject of "Off-the-shelf Primary Training Helicopter USATECOM Project Number 4-3-1000-01-A." The objective of the test is to evaluate the suitability of the U.S. Army Primary Helicopter School mission, as defined by the currently approved Programs of Instruction, when uti-

# USAPHS TESTS MISSION SUITABILITY OF TH-55A

BY

COLONEL

KEMUEL K. BLACKER

COMMANDANT, USAPHS



lizing the TH-55A helicopter as the primary trainer.

The USAPHS mission is to develop a qualified rotary wing student pilot within the allotted 85 flight hour course as prescribed by US-CONARC. It is significant to note that the helicopter will not be tested by comparison with another helicopter, but will be pitted against the requirement to turn out a satisfactory student as compared to the performance standards of students previously trained at Fort Wolters.

The suitability test as approved provides for the Commandant, USAPHS to be the test director. The Chief of Military Flight Evaluation, Major Melvin K. Goulding, has been designated as the test project officer.

Upon receipt of the first 10 TH-55A's on 25 November 1964, standardization training of selected Military Flight Evaluation and Southern Airways instructor pilots was initi-

ated to qualify them to perform their respective duties in this helicopter.

## TWO PHASE TESTING

The actual mission suitability test involving the TH-55A will be conducted in two phases. Phase Alpha, scheduled to begin 12 January 1965, will be of four weeks and approximately 17 flight hours' duration. Forty-two initial entry students will be placed in the test group.

Phase Bravo will start immediately upon completion of Phase Alpha and will be administered within the time frame of 40 flight hours and six weeks. Phase Bravo is a continuation of Phase Alpha and will use as a test group those students who soloed during Phase Alpha. Phase Bravo will be completed when all students in the test group either obtain 60 flying hours or successfully accomplish their primary check ride.

LOCKHEED'S  
RIGID ROTOR HELICOPTERS:



## Three that changed helicopter history

The first Lockheed Rigid Rotor helicopter flew six years ago. Ever since, research achievements of the revolutionary rotor system have been changing conventional concepts of what a helicopter can do.

Two XH-51A Rigid Rotor research helicopters, built and flight tested under a joint Army/Navy contract, proved that the Rigid Rotor is

less complex and easier to handle than conventional hinged rotor helicopters, that it is inherently stable (requiring no black boxes), and that it has a much higher degree of maneuverability.

A follow-on study program for the Army's Transportation Research Command evaluated Rigid Rotor speed capabilities. The result: A

four-bladed XH-51A was flown at 201 mph, highest known speed for its weight class, and a compound version — with stub wings and auxiliary jet — reached a speed of 242 mph, using only two-thirds of available jet thrust. The compound's speed marks any revealed for either "pure" or compound-winged helicopters.

Last December, Lockheed de-



delivered an XH-51N Rigid Rotor helicopter to NASA-Langley for continued research and evaluation in their own overall rotary wing research program.

In other research, wind tunnel tests have shown the feasibility of a rigid-stopped rotor for advanced VTOL vehicles capable of 400 mph forward speed with rotor blades stopped and

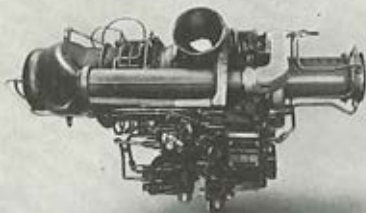
folded, and normal helicopter take-off and landing with rotor turning. Another variation of the Rigid Rotor — the matched stiffness rotor — promises significant advantages, especially for heavy lift vehicle applications.

As research continues, Lockheed is building two five-place Rigid Rotor helicopters for FAA certification in

1965 to provide off-the-shelf availability for civil and military requirements.

The Rigid Rotor is rewriting helicopter history. And this is only the beginning. *Lockheed-California Company, Burbank, Calif.* A Division of Lockheed Aircraft Corporation.

**LOCKHEED**



250

SHAFT HORSEPOWER

317

SHAFT HORSEPOWER

350

SHAFT HORSEPOWER

Allison's T63 turbine engine is designed to "grow" in power.

Now ready to go into production for the Army's new LOH, the T63 is currently flat rated at 250 shp.

With a slight turbine temperature increase, it produces 317 shp.

By increasing airflow and turbine temperature, it can step up to 350 shp.

And while horsepower increases,

weight and dimensions remain the same.

The T63 also has the potential to "grow" in economy. With a regenerator, fuel consumption could be reduced as much as one-third.

The T63 can power fixed- and tilting aircraft as efficiently as it powers the Army's LOH. Allison is prepared to offer variations of this

performance-proved engine.

If you have any questions about the T63 or its growth versions, write: T63, Allison Division of General Motors, Box AA-3, Indianapolis, Indiana 46206.

**Allison** 

THE ENERGY CONVERSION DIVISION OF  
GENERAL MOTORS, INDIANAPOLIS, INDIANA





# SPACE UTILIZATION

BY CAPTAIN GERALD D. MacDOWELL

Do you have space problems?

Does your aircraft have you all fidgety and nervous  
and rundown?

Do you find yourself stumbling over the junk you moved  
to make room for the goodies  
that you had to change around so that you could  
load the gear that you needed the last time,  
but left behind BECAUSE someone else's stuff  
was put there FIRST?

Is that what's bothering you, bunkie?

Well, rejoice, dear friends, because I'm here  
to tell you that . . .



... the 228th Assault Support Helicopter Battalion of Fort Benning, Ga., commanded by Lt. Colonel Benjamin S. Silver, has the solution for you . . .

### EXCESS SPACE

A few of the 228th's Winged Warriors put their heads together and took a new look at the old problem of how to utilize the excess space inside an aircraft and applied it to the CH-47A Chinook.

In keeping with the lean and mean look of the Air Assault Concept, all equipment has been scrutinized. Unnecessary vehicles and nice-to-have items have been culled from the TOE. The emphasis has been on trimming the overall weight of the battalion, improving its responsiveness and making it completely airborne by the employment of organic helicopters.

As a result of this "weight" review, smaller, lighter, more com-

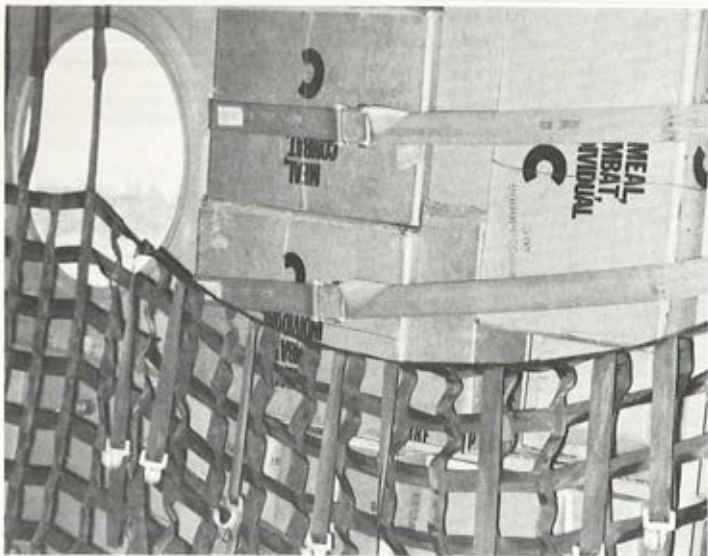
pact substitute items have come into being all along the line.

The men of the Winged Warrior Battalion then examined their Chinook aircraft very carefully, and found considerable space that could be utilized for repositioned items, without in any way restricting the cargo-carrying capability of their helicopters.

For example, they found many compartmented areas suitable for storing items, the depth of which did not exceed six inches. Where? Along both sides of the helicopter behind the troop seats!

Here, PRC 25 radios, C rations, ammunition boxes, field cook sets, survival kits and many other similar items could be stored easily. (See photo). Simple tie-downs were employed and held the items firmly against the aircraft side and out of the way.

Larger items posed more of a problem. To solve this, the unit



BEHIND  
THE  
TROOP  
SEATS!

# ADF HOMING

AIR-to-GROUND... AIR-to-AIR... AIR-to-SEA



with the



## 40A ADF

Equivalent of Military AN/ARN-73 Automatic Direction Finder

***In Use by the U.S. Coast Guard and U.S. Army***

- 4 bands (100 to 3000 kc) permits homing on HF (2-3 mc) airborne or ground transmitters, plus standard ADF capability.
- Continuous compensation means accurate bearings.
- Integral receiver and control unit. Fits standard military console (5 $\frac{3}{4}$ " wide), only 3 $\frac{3}{4}$ " high.
- Completely transistorized. Weighs only 17.55 pounds.
- Modular design for easy servicing.
- Operates as ADF or low-frequency receiver.
- Environmental-tested to severe conditions (MIL-E-5400 Class 1).
- Usable with all ARINC and MIL standard ADF and RMI indicators.
- BFO operation for CW signal identification.

Contact ARC for Details



**Aircraft Radio Corporation**  
BOONTON, NEW JERSEY

DEPENDABLE AIRBORNE ELECTRONIC EQUIPMENT SINCE 1928

21 World Records . . . 4 For Distance



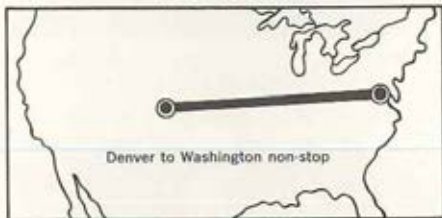
## BELL UH-1D

**FLIES FARTHER!**  
1,614.6 miles

U. S. Army pilots of the Army Aviation Test Activity flying for the record have matched their skill to the Iroquois performance capabilities, setting new marks for both closed circuit (1,614.6 miles) and straight line (1,348.8 miles) categories.

In terms of tactical measures of performance, these runs demonstrate ferrying capabilities of the UH-1D . . . for trans-ocean or extended cross-country deployment.

### CROSS COUNTRY



### OVERSEAS



**UH-1D HOLDS MORE RECORDS  
THAN EVER HELD  
BY ANY MILITARY COMBAT AIRCRAFT!**



**BELL HELICOPTER  
COMPANY**

FORT WORTH, TEXAS • A DIVISION OF BELL AEROSPACE CORPORATION • A **Textron** COMPANY

21 World Records . . . 5 F



**BELL**  
**CLIMBS**  
**FLIES**  
35,1

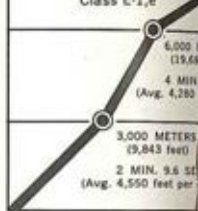
During record flights in the UH-1D up to 35,150 feet in the Mount Everest . . . almost to the Peak. The UH-1D also set records for climb to altitude.

These records demonstrate performance in reserve in operational altitudes.

### RECORDS

★ 35,150 feet (10,717 meters)  
Altitude Record Class E-1,e

★ 25,418 feet (7,747 meters)  
Class E-1,e



**UH-1D HOLDS MORE RECORDS  
THAN EVER HELD  
BY ANY MILITARY COMBAT AIRCRAFT!**

**BELL HELICOPTER  
COMPANY**

FORT WORTH, TEXAS • A DIVISION OF BELL AEROSPACE CORPORATION • A **Textron** COMPANY

## Altitude and Rate of Climb



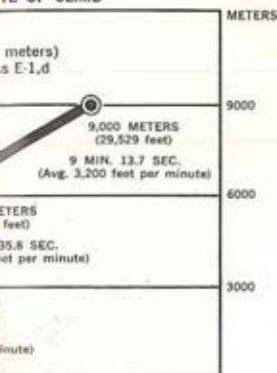
# UH-1D

**FASTER!  
HIGHER!  
10 feet**

In 1964, an Army pilot took  
... one mile higher than  
... four miles higher than Pikes  
... three new marks in rate-of-

... the Delta's tremendous  
... climb and maneuver at all

### RATE OF CLIMB



**MORE RECORDS  
EVER HELD  
COMBAT AIRCRAFT!**

**BELL HELICOPTER  
COMPANY**

BELL HELICOPTER COMPANY • A **textron** COMPANY

## 21 World Records . . 12 For Speed



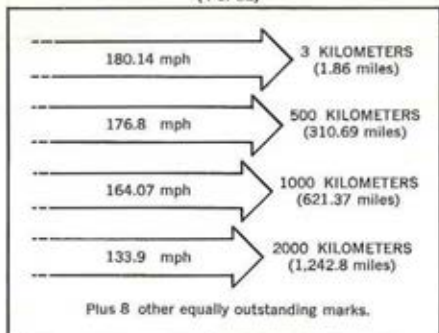
# BELL UH-1D

**FLIES FASTER!  
180.14 MPH**

In setting speed records, the Iroquois proved its reserve *dash capability* for surprise assault tactics . . . faster mission response . . . evasive action.

These achievements are a tribute to the skill of Army pilots and demonstrate Bell's unique capability to design and produce military helicopters of unequalled performance.

### SPEED RECORDS (4 of 12)



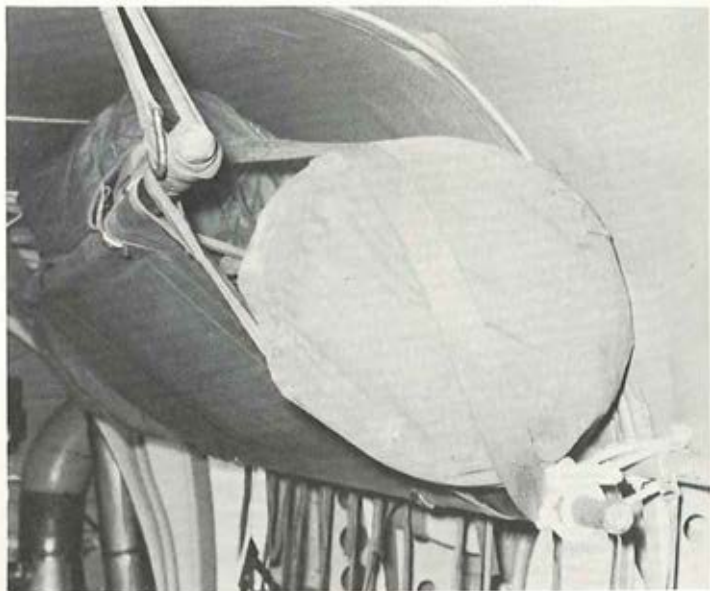
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borrowed an overhead rack arrangement from the design of inter-city buses. However, while the racks were to be used, they could not be rigged as a fixed installation should a mission require the use of the full floor to ceiling space. The requirement was obvious: a rack had to be developed that could be stowed easily when not in use. After some experimentation, it was found that litters from the aircraft litter kit could be used. (Photo above).

### OVERHEAD STORAGE

Bulky items - such as TA 21, aviator kits, 10-man tents, etc. - could be pre-positioned on these litters that were suspended over the troop seats. By using adjustable straps, the items would be held firmly against the ceiling of the aircraft, and would require a minimum of other securing devices.

In utilizing these space arrangements and loading the Chinook aircraft in this manner, the men of the 228th found that they could expect the following results:

By providing a place aboard the aircraft for items of equipment necessary for the crew in the performance of normal operations, the overall efficiency of the crew was increased. Necessary items were stored in accessible areas, ready for use; little or no time was spent in locating and getting these items when needed.

Secondly, the crew would be amply prepared to survive for extended periods in the event of an emergency landing.

Lastly, by utilizing pre-positioned supplies and items of equipment the Assault Helicopter Battalion would be one step closer to the ultimate in air mobility.

# months takeoffs

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## NOMINATED

■ COLONEL GEORGE P. SENEFF, JR., LEFT, COMMANDER OF THE 11TH AVIATION GROUP, 11TH AIR ASSAULT DIVISION, FORT BENNING, GA., AND COLONEL FRANK MESZAR, OPERATIONS DIVISION, HEADQUARTERS, U.S. ARMY, EUROPE, HAVE BEEN NOMINATED BY PRESIDENT JOHNSON FOR THE RANK OF BRIGADIER GENERAL. A THIRD ARMY AVIATOR, COLONEL ALVIN E. COWAN, OFFICE, CHIEF OF RESEARCH AND DEVELOPMENT, DEPARTMENT OF THE ARMY, WAS ALSO NOMINATED FOR THE RANK OF BRIGADIER GENERAL ON THE SAME LIST. THE THREE OFFICERS WERE AMONG 38 COLONEL ADVANCEMENTS TO BRIGADIER GENERAL NOW AWAITING SENATE CONFIRMATION. (USA)

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## FLOOD RESCUE

■ EMERGENCY OPERATIONS IN THE FLOOD ARKAS OF OREGON AND NORTHERN CALIFORNIA HAVE BEEN AIDED BY THE WORK OF EIGHT OH-23G HELICOPTERS THAT WERE DONATED BY THE ARMY AND HILLER AIRCRAFT. THE OH-23 CREWS WERE THE FIRST TO START RESCUE FLIGHTS IN THE HARDEST HIT AREA OF CALIFORNIA'S EEL RIVER. DOCTORS AND MEDICAL SUPPLIES WERE FLOWN INTO THE MOST SEVERELY DEVASTATED COMMUNITIES. THE OH-23G PILOTS RETURNED TO ROHNERVILLE AIRPORT (RIGHT PHOTO) WITH CRITICALLY ILL VICTIMS AND REPORTED RECONNAISSANCE DATA THAT SERVED AS THE BASIS FOR LATER RESCUE AND RESUPPLY MISSIONS. (HILLER)



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## MASTER WINGS

■ CAPTAIN FRANK A. DRUYOR, COMMANDING OFFICER OF HEADQUARTERS DETACHMENT, 16TH AVIATION BATTALION, IS SHOWN BEING CONGRATULATED ON HAVING RECEIVED HIS MASTER ARMY AVIATOR'S WINGS FROM COL. WILLIAM G. THOMAS, III, SEVENTH ARMY AVIATION OFFICER. DRUYOR IS QUALIFIED TO FLY BOTH FIXED WING AND ROTARY WING AIRCRAFT. A RATED ARMY AVIATOR FOR OVER FIFTEEN YEARS, CAPTAIN DRUYOR HOLDS A SPECIAL INSTRUMENT CARD AND HAS LOGGED OVER 3,000 HOURS OF FLIGHT TIME DURING HIS MILITARY CAREER. (U.S. ARMY PHOTO)

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# SPECIAL WARFARE AVIATION

U.S. ARMY JOHN F. KENNEDY CENTER FOR SPECIAL WARFARE

FORT BRAGG, NORTH CAROLINA



BRIGADIER GENERAL  
JOSEPH W. STILWELL  
Commanding General



COLONEL  
JOSEPH A. MCCULLOCH  
Assistant Chief of Staff, G-3



MAJOR  
MARK D. HILBERT  
Aviation Officer



MAJOR  
WELDON C. BHITTON  
Deputy Aviation Officer



# SPECIAL WARFARE AVIATION

USAJFKCNSPWAR



MAJOR CHARLES A. DAWDY  
Special Warf Applications Officer  
Aviation Section

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MAJOR DAVID H. WEDDINGTON  
Plans Officer, Aviation Section

USAJFKCNSPWAR



MAJOR HARVEY C. MAYSE  
Aircraft Maintenance Officer

USAJFKCNSPWAR



MAJOR ATHOL M. SMITH  
Operations Officer, Aviation Section

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MAJOR ERNEST E. BRUCE, JR.  
Mission Effectiveness Officer  
Aviation Section

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CAPTAIN DONALD G. ANDREWS  
Training Officer, Aviation Sect

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CAPT. MARVIN C. LAYFIELD  
Safety Officer, Aviation Section

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MAJOR ASA A. MCCRANIE  
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MAJOR JAMES L. EVANS  
CO, Aviation Company  
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MAJOR L. W. BROCKWELL, JR.  
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Avn Advisor, Special Warfare  
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MAJ. HOWARD B. BLANCHARD  
Orgn & Eqp Plans Officer (Avn)  
Spec. Warfare & Civil Affairs Gp.

USACDC



CAPTAIN JOHN R. JETER, JR.  
CON Air Operations Officer  
Special Warfare Agency

## "HOT CYCLE" DEBUT

■ NEWSMEN FOR THE FIRST TIME (JANUARY 28) VIEWED AN ENGINEERING FLIGHT TEST OF A HELICOPTER USING THE HUGHES "HOT CYCLE" PRINCIPLE, WHICH JETS HIGH ENERGY GASES FROM THE ROTOR BLADE TIP LOUVRES (TOP OF PHOTO). THE FLIGHT OCCURRED AT HUGHES TOOL COMPANY'S AIRCRAFT DIVISION IN CULVER CITY, CALIF. PILOTING THE AIRCRAFT DURING ITS FIRST PUBLIC FLIGHT WAS ROBERT G. FERRY (PICTURED), CHIEF ENGINEERING TEST PILOT FOR THE AIRCRAFT DIVISION. DESIGNATED THE XV-9A, THE RESEARCH "TEST BED" WAS DEVELOPED FOR USATRECOM, BUT ALSO HAS COMMERCIAL AIRLINER APPLICATIONS FOR THE FUTURE. THE "HOT CYCLE" CONCEPT IS INTENDED TO ELIMINATE THE COMPLEX, HEAVY GEAR BOXES ON NORMAL SHAFT ENGINE AIRCRAFT, ALLOWING FOR A MORE POWERFUL HELICOPTER WHICH CAN LIFT MORE THAN TWICE ITS EMPTY WEIGHT IN CARGO OR PASSENGERS. (HUGHES)



### LIEUTENANTS (CONT.)

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## NEW TRAINER

■ BRISTLING WITH ANTENNAE, THE ARMY'S NEW TH-13T INSTRUMENT TRAINER IS AMPLY EQUIPPED FOR ALL-WEATHER FLIGHT. NAVIGATION INSTRUMENTS ABOARD THE BELL SHIP INCLUDE OMNIRANGE, AUTOMATIC DIRECTION FINDING, MARKER BEACON, GLIDE SLOPE, SLAVED GYRO COMPASS AND AN ATTITUDE SYSTEM. USAAVNS' DEPT. OF ROTARY WING TRAINING TOOK DELIVERY OF THE FIRST OF 103 OF THE TRAINERS IN JANUARY, IN PICKING UP THE FIRST SHIP AT BELL'S FORT WORTH PLANT AND FLYING IT TO FT. RUCKER WHERE IT WILL BE BASED. THE TWO-PLACE TH-13T IS BASICALLY THE SAME AS THE ARMY'S OTHER OH-13 OBSERVATION HELICOPTERS, WITH THE ADDITION OF AVIONICS EQUIPMENT. (BELL)

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## HEAVY-LIFT CRANE

■ THIS HEAVY-LIFT CRANE-TYPE HELICOPTER, WHICH COULD BE FLYING IN FIVE YEARS ACCORDING TO LOCKHEED-CALIFORNIA ENGINEERS, HAS THE CAPABILITY OF CARRYING 100 TROOPS OR 12 TO 20 TONS OF CARGO IN A CRANE CONFIGURATION. DESPITE ITS BIG PAYLOAD AND SIZE (90,000 LBS., 100-FOOT LENGTH, AND 120-FOOT ROTOR BLADES), THE HELICOPTER WOULD HAVE INHERENT STABILITY DUE TO ITS RIGID-ROTOR SYSTEM. PASSENGER OR CARGO PODS COULD BE INTERCHANGED OR REMOVED TO SUIT THE MISSION. A MILITARY VERSION OF THE CRANE COULD CARRY PERSONNEL, TANKS, OR SUPPLIES IN VIRTUALLY ALL-WEATHER CONDITIONS, OR SERVE AS A STABLE GUN PLATFORM. (LOCKHEED)



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## NASSA SYMPOSIUM

WELCOMING SEVERAL OF THE SPEAKERS AND HEAD TABLE GUESTS AT THE SEVENTH ANNUAL ARMY AVIATION CONTRACT SERVICES SYMPOSIUM LUNCHEON HELD IN WASHINGTON, D.C., IS W.N. "BUCK" HALL, PRESIDENT OF NATIONAL AEROSPACE SERVICES ASS'N, WHICH SPONSORED THE MEETING. PICTURED, L. TO R., ARE COL. BOLICK A. SAHOLSKY, USA MISSILE COMMAND, REDSTONE ARSENAL; BRIG. GEN. ROBERT E. PETERS, ASST DCSLOG (MR); MAJ. GEN. CLIFTON P. VON KANN, CG, USAAC, FORT RUCKER, ALA.; BUCK HALL, PRES., NASSA; MAJ. GEN. JOHN M. CONE, DIRECTOR OF QUALITY ASSURANCE, HQ, AMC; AND BRIG. GEN. JOHN J. TOLSON, DIRECTOR OF ARMY AVIATION, OACSFOR. (NASSA PHOTO)

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### OBITUARIES

#### LYAL H. ERWIN

Captain Lyal H. Erwin, assigned to the 68th Aviation Company, APO San Francisco 96307 (Vietnam), sustained fatal injuries when his UH-1B helicopter crashed during the conduct of a service mission near Bien Hoa, Vietnam, on January 15, 1965. He is survived by his widow, Mrs. Theresa Erwin, of 739 Wright Drive, Columbus, Georgia.

### CORRECTION

The 1963-1964 "Outstanding Unit Award" was presented to the 11th Air Assault Division and the attached 10th Air Transport Brigade. The staff regrets that the 4-page photochart accompanying the award article may have given "AA" readers the impression that the 10th ATB was a part of the 11th Air Assault Division. The unit is attached to the division only for administration and training, as a matter of convenience.



## AAAA SOLICITS AVIATION TECH TRAINING SCHOOLS FOR VIEWS

Expressing concern for the increasing lack of trained and certificated FAA A & P Mechanics that are entering military service, Carl D. Stephenson, national Vice President for Public Affairs, AAAA, contacted the 43 members of the Aviation Technical Educational Council, a technical association representing schools that offer instruction in aeronautical engineering and A & P Mechanic training.

In his correspondence, Stephenson solicited the thoughts or suggestions of each institution on how the AAAA as a professional organization could assist in any way to alleviate what appears to be a mutual problem of the Educational Council and the Aeronautical Training Division of the U.S. Army.

The initial replies received by Stephenson indicated that Association assistance should be in one or more of the following forms:

Glamorize (or upgrade) the name of "mechanic" - help in securing Army assistance in the provision of training aids, mock-ups, etc. - help in securing a closer coordination between the ATEC schools and Army training and recruiters - have the AAAA assist by counseling students - have the AAAA assist by promoting the A & P Program - help to attain military recognition of the A & P rating.

It is expected that Stephenson and

other AAAA representatives will continue to work closely with the Council in this problem area.

## REP. HUDDLESTON CITES PROFESSIONALISM OF AA

A distinguished guest at a recent luncheon meeting of the Washington, D.C. Chapter of AAAA, Representative George Huddleston, Jr. (D-Ala.) sent the following note of appreciation to Lewis E. Casner, president of the D.C. Chapter:

" . . . Just a note to express my appreciation to the membership of the Army Aviation Association of America for their courtesy in having me as a guest at the 11 December luncheon meeting of the Washington, D.C. Chapter. It was indeed a pleasure to meet on an informal basis so many participants in the Army Aviation program.

My ten years' affiliation with the House Armed Services Committee has brought me in close contact with the development of the Army Aviation program. As a representative to Congress from the State of Alabama, the home of Fort Rucker and Army Aviation, I understandably hold a keen interest in the future of this important aspect of our defense establishment. The high degree of professionalism displayed by the military members of your association, as well as the obvious integrity of those representatives of the aviation industry whom I met at your luncheon, was most grati-

fying and leaves little doubt as to the ability of Army Aviation to meet either the technological or tactical challenges with which it may be faced in the future.

Please relay my personal regards to the members of your association, and to all the officers and men of Army Aviation, wherever they may be serving."

### USAREUR REGION COMPLETES 1965 SURVEY OF ACTIVITIES

Prior to participating in its 1965 Annual Meeting at the U.S. Army Recreation Center located at Garmisch, Germany, the USAREUR Region conducted a membership survey as part of its annual review of Regional activities held during the April, 1964-March, 1965 period.

Nine hundred and fifty-two (952) AAAA members are affiliated with



■ Colonel Edward McMaken (left), president of the Army Aviation Center Chapter, is shown presenting a "Class Membership Incentive Refund Check" of \$159 to Capt. Duane A. Bartholmey, class leader of OF-WAC 65-1, upon the class attainment of 100 per cent membership in AAAA before the completion of "A" phase training at USAAVNS. ■■

twelve (12) Chapters located in the USAREUR Region while an additional one hundred and eighty-seven (187) AAAA members reside within the Regional area, but are not affiliated with an active AAAA Chapter.

The USAREUR Chapters and their degree of '64-'65 activity are as follows:

(1) Stuttgart Chapter, 183 members, 5 membership meetings; (2) Hanau Chapter, 173 members and 3 meetings; (3) Rhine Valley Chapter, 154 members/2 meetings; (4) Nurnberg Chapter, 107 members/1 meeting; (5) Main River Valley Chapter, 77 members/2 meetings; (6) Munich Chapter, 57 members/2 meetings; (7) Mainz Chapter, 51 memb/4 mtgs; (8) Lech River Chapter, 50 members/1 mtg; (9) Illesheim Chapter, 38 members/1 mtg; (10) Fulda Chapter, 28 members/2 mtgs; (11) Northern Italy Chapter, 21 members/1 meeting; (12) Berlin Chapter (probationary), 13 members/1 meeting.

### MAPS - MILITARY AVIATION PLACEMENT SERVICE

■ MAJOR, 41 years old, desires position in maintenance, quality or prod'n control, flight test, afld management, pilot/mechanic. Excellent health. 22 yrs experience. Com'1 SMEL, instrument, rotorcraft (Vertol 44) ratings; A&P license. For resume, write AAAA, Box 1236. ■

■ DUAL RATED Army captain, age 27, with 1000+ rotary wing hours + instrument rtg, desires position in R/W flying, sales, or with manufacturer. Graduate of Wharton School of Finance and Commerce with BS in Economics, major in Transportation. Available after April 1. For resume and photo, write AAAA, Attn: Box 5174. ■

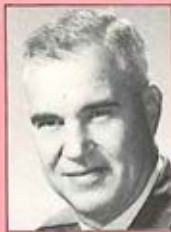
# '64 AAAA CHAPTER PRESIDENTS



Major  
Charles E. Connaway  
Alaska Chapter



Colonel  
Edward McMahon  
Army Aviation Center Chapter



Colonel  
David G. Cogswell  
Atlanta Chapter



Lieutenant Colonel  
John Bergner  
Bluegrass Chapter



Colonel  
Albert A. Wilson  
David E. Condon Chapter



Colonel  
Hugh W. Webb  
Davison AAF Chapter



Major  
Roger H. Coye  
Fort Bragg Chapter



Lieutenant Colonel  
Van T. Barfoot  
Fort Hood Chapter



Colonel  
J. Elmore Svenson  
Fort Monroe Chapter



Major  
Melvin K. Goulding  
Fort Wolters Chapter



Colonel  
William H. Tuck  
Fort Benning Chapter



Colonel  
Harold F. Via  
Grand Canyon Chapter



Major  
Billy C. Hall  
Hawaii Chapter



Colonel  
Frederick C. Goodwin  
Jimmie L. Hilton Chapter



Major  
Thomas H. Small  
Keystone Chapter



Major  
Bernard D. Thompson  
Korean Chapter

# '64 AAAA CHAPTER PRESIDENTS



Captain  
Robert E. Alaxie  
Latin American Chapter



Lieutenant Colonel  
George E. Handley  
Lech River Chapter



Eric H. Petersen  
Lindbergh Chapter



Major  
Gordon H. House  
Mainz Chapter



Chief Warrant Officer  
Alvin Lee, Jr.  
Manich Chapter



Chief Warrant Officer  
Charles H. Steffasi, Jr.  
Northern Italy Chapter



Lieutenant Colonel  
Stephen G. Martin  
Nursberg Chapter



Colonel  
Albert Newton  
Rhine Valley Chapter



Colonel  
Floyd H. Bach  
Richard H. Bitter Chapter



William E. Johnson  
Rutgers University Chapter



Major  
Jesse F. Van Sand  
Stuttgart Chapter



Major  
George J. Young  
Vinh Long Chapter

## AAAA CHAPTER ACTIVITIES



Lewis E. Casner  
Washington, D.C. Chapter

■ FEBRUARY 18. Lindbergh Chapter professional dinner meeting. Bovo Mill, 4749 Gravois, Col. Robert M. Hamilton, Director of USARAAH, Ft. Rucker, Ala., Guest Speaker. 7 p.m.

■ FEBRUARY 19. Richard H. Bitter professional dinner meeting. Petroleum Club. Henry Naulion, Service Manager, Boeing Vertol Division, Guest Speaker. Refreshments at 6:30 p.m.

■ FEBRUARY 15. Professional meeting. Rutgers University Chapter. Showing of "Wings at the Tree Tops."

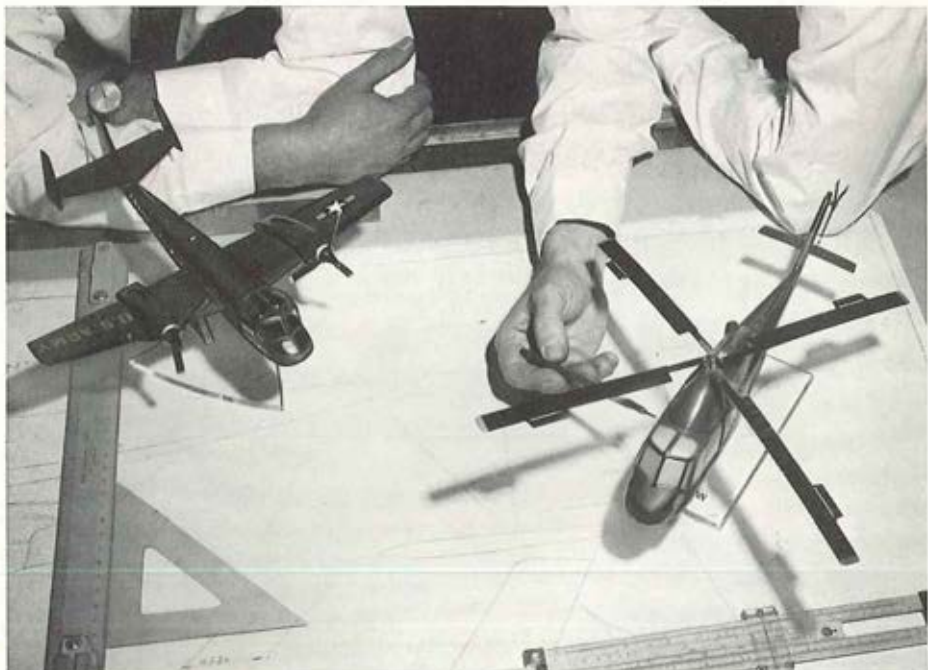
■ FEBRUARY 24. Hawaii Chapter combined business and social meeting. Schofield Barracks Officers' Club. Election of Chapter Officers for '65-'67 term. Refreshments, 1830 hours.

■ FEBRUARY 27. Alamo Chapter combined business meeting and dinner-dance. Fort Sam Houston Officers' Open Mess. Installation of '65-'67 Chapter Officers. Refreshments, 1830 hours; dinner, 2000 hours.

■ MARCH 3. Fort Bragg Chapter professional dinner meeting. 82d Airborne Division Officers' Club. Brig. General Joseph W. Stilwell, Jr., Commanding General, USAJFKCENSPWAR, Guest Speaker. Refreshments, 1830 hours; dinner, 1930 hours.

■ MARCH 3-7. USABEUR Region Annual Meeting. Garmisch, Germany. Detailed programming from C.O., Company B, 3d Avn. Bn, 3d Inf Div, APO U.S. Forces 99026.

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# ARMY AVIATION MAGAZINE

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**POSTMASTER:** If this magazine is addressed to a member of the United States Military Service, whose address has been changed by official orders, it should be forwarded — except to overseas APO's — without additional postage.

See section 157.4 of the postal manual.

"RETURN REQUESTED" applies in those instances wherein forwarding is not permissible. The publisher requests the return of the entire issue under the "RETURN REQUEST" provisions of the postal manual.

## GEN. VON KANN TO RETIRE, ENDING 26-YEAR CAREER

Major General Clifton F. von Kann, commanding general of the U.S. Army Aviation Center and commandant of the U.S. Army Aviation School, announced his retirement from the Army, effective Feb. 28.

His retirement ends a military career which began with being commissioned in the Regular Army in 1938. He came to Fort Rucker in August, 1963, after commanding the 1st Cavalry Division. He has not announced his retirement plans.

## GEN. TOLSON, COL. SENEFF ASSUME NEW COMMANDS

Brig. Gen. John J. Tolson (right), Director of Army Aviation, OACSFOR, has been nominated for the rank of major general and will



von Kann



Tolson

assume the duties of Commanding General of the U.S. Army Aviation Center on or about March 1. Col. George P. Seneff, Jr., 11th Air Assault Division, Ft. Benning, Ga., has been nominated for brigadier general and will replace Gen. Tolson as Director of Army Aviation.