ARMY AVIATION

OCTOBER ★ 1959

ARMY AVIATION

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REVISION

A *new trend* has occurred within the life insurance business, the by-product of which is general reduction of rates for persons whose occupations were once considered so dangerous that insurance was either denied to them or issued at a heavy premium penalty.

Military pilots can now usually get insurance at *extra* charges ranging from $22.50 down to $2.85 per year, per $1,000 of coverage, depending upon their age, the type of aircraft they pilot, and the number of hours they fly annually. Still regarded as bad risks are *test pilots* who fly experimental aircraft.

This relaxation in the attitude of major underwriting firms springs in good part from today's *emphasis on safety* which has had a beneficial effect upon the general conditions in which the insured must work.

Of some interest is the growing practice of issuing coverage *without* the requirement of a preliminary medical examination. Underwriters now utilize application forms whose questions are so framed as to prevent the applicant from concealing any serious medical condition. They *double* this safeguard by setting rather low limits on the size of the policy they will issue without a medical examination.

ARTICLES

GENERAL NEWS

ADVERTISERS IN THIS ISSUE

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT AND CIRCULATION OF "Army Aviation Magazine" published monthly at Westport, Conn., for October 1, 1959.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Dorothy Kesten, 9 Elizabeth Drive, Westport, Conn. Editor Arthur H. Kesten, 9 Elizabeth Drive, Westport Conn. Managing editor, None. Business manager, None.

2. The owner is: Dorothy Kesten, 9 Elizabeth Drive, Westport, Conn.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: NONE.

4. Paragraph 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

DOROTHY KESTEN, Publisher

Sworn and subscribed to me this 1st day of October, 1959.

Paul Zadoff
Notary Public, State of Conn.
Commission expires April 1, 1962.

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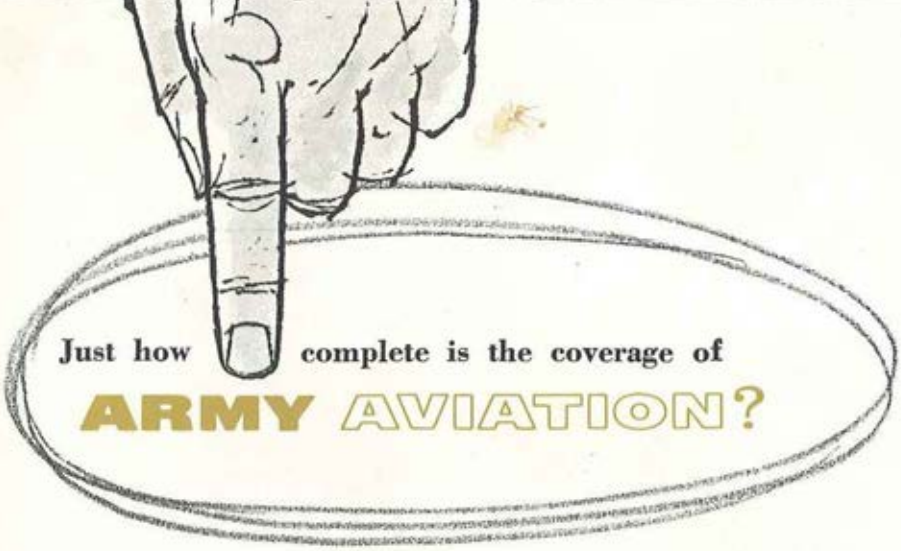


71% of the commissioned officers in this field individually subscribe to this advertising medium. The staff feels that the remaining 29% read most issues if for no other reasons than professional curiousity and a normal desire to follow the progress of their contemporaries.

ARMY AVIATION is the only unofficial publication that caters exclusively to the interests of those who participate in this segment of the military.

The key leaders in this field—the professionals in operations, maintenance, and procurement—support this magazine editorially. Their voluntary reports provide pertinent information on all facets of Army aviation.

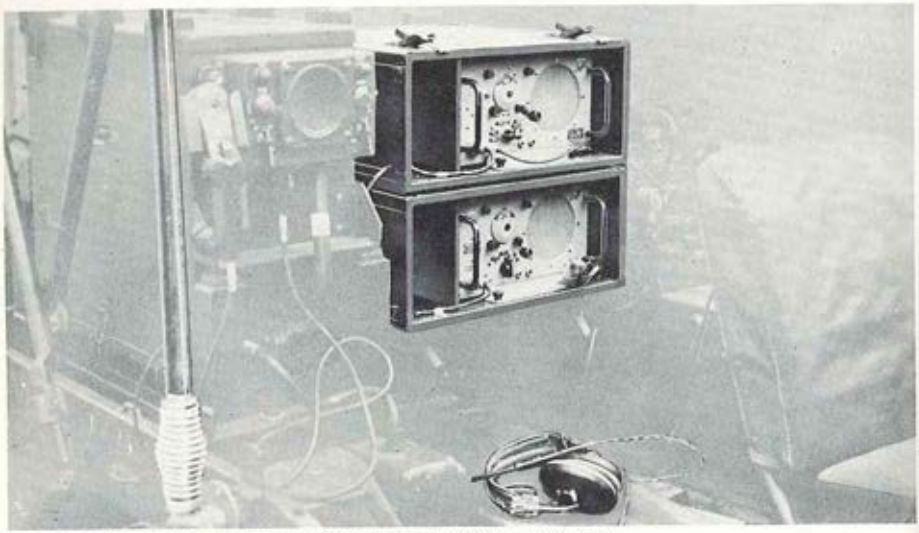
Advertising messages placed in ARMY AVIATION will be read across the board, by today's leaders in this field, and by the upcoming junior officers who most assuredly will lead Army aviation in the future.

The magazine, through expeditious, economical insertions, offers the advertiser a personal, "direct line" to this entire market.

ARMY AVIATION MAGAZINE

WESTPORT, CONNECTICUT

LIGHT...COMPACT



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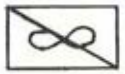
ARC

Dear Army Aviator,

We are going ahead with a test program to prove out our *Aerial Combat Reconnaissance (ACR) concept*, which many of you have seen demonstrated at Fort Rucker or elsewhere. With any luck at all we should start seeing ACR troops in some TOEs by Fiscal Year 1961. Schematically, the unit looks like this:



Troop HQ	Aero-Scout PLAT	Aero-Rifle PLAT	Aero-Weapons PLAT	Service PLAT

The troop, now referred to as an *Aerial Reconnaissance and Security (ARS)* troop, will contain between 150 and 200 personnel, about 14 reconnaissance helicopters, and 16 utility and/or light transport helicopters. All aircraft, except the air ambulance, will be armed to some degree.

Needless to say, we are looking for great things in this development. It appears to me that we are finally seeing the beginning of Army airmobile units in which every man is mounted in an air vehicle.

* * *

During the sixty days since my arrival we have had a number of important arrivals and departures from this office. *Lt. Colonel Pierce Fleming* has moved upstairs to the Office of the Assistant Secretary of the Army. The Command and General Staff College at Leavenworth gained a student in the person of *Captain George Connor* and gave us one of their recent graduates, *Major Jim Brockmyer*. *Lt. Colonel Bob Hoffman* recently of Headquarters, CONARC, is a new member of the Materiel Division and *Major Jack Aschoff* has just arrived from Combat Developments at Rucker.

* * *

The first class of the new initial fixed wing flight training course got off to a good start early in September. *Bevo Howard* states that he has a class full of potential tigers on his hands. He and all the personnel at Fort Rucker who worked hard and long to bring this in-resident course to reality are due a hearty vote of thanks.

* * *

Although I keep trying to avoid the subject of *safety* (since you receive much on this important subject from other sources), a number of good items on safety have crossed my desk this month. So I raise the subject again because here are some things every pilot should know:

BRIG. GEN. CLIFTON F. VON KANN

TOEs EXPECTED TO HAVE AERIAL COMBAT TROOPS BY FISCAL 1961

by BRIG. GEN. CLIFTON F. VON KANN
Director of Army Aviation, ODCSOPS, D/A

Competition in Safety: Experience, both in military and commercial aviation, has consistently proved that safety competition has only one eventual result—*reduced efficiency*. Competition among aviation units for low accident rates results in decreased acceptance of the calculated risks inherent in tactical flying. When an aviation company whose mission is to operate with heavy loads from unimproved strips is restricted to hard surface runways, an artificial accident rate will be reflected. If the occasion arises for such a company to operate in the manner for which it was intended, the fallacy of these restrictions is usually revealed in a rash of accidents.

To eliminate this type of competition from Army aviation, *paragraph 4c, AR* 385-220, has been rescinded. Accident rates and statistics serve one purpose—they help us to pinpoint those areas in which we need improvement. If we have accidents from a certain phase of tactical flying, it is an indication that we need increased proficiency, not increased restrictions. Every restriction which results from arbitrary measures to reflect a target accident rate is a detriment to the mission of Army aviation.

Adequate Accident Photographs: The value of adequate photographs in aircraft accident investigation was emphasized by a recent accident. In this case, the aircraft crashed in a street and it became necessary to move the wreckage before the investigation could be completed. Fortunately, the investigation board directed the taking of many photographs from all possible angles. From witness statements of an erratic flight path prior to impact, it was suspected that a control malfunction caused the accident. The pilot, who was killed in the crash, could supply no evidence, but examination of the wreckage revealed a missing bolt in a control linkage, which would have resulted in the erratic maneuvers described.

A blowup of one of the pictures taken before the wreckage was moved proved conclusively that this particular bolt had been missing prior to impact. Without this one picture, the cause factor for this accident could only have been suspected. As it was, the cause was proved beyond all doubt. Corrective action based on proved accident cause factors is much more effective than that based on suspected cause factors. The cost of photographs

is very small compared to the life-saving and dollar value of effective accident prevention.

A final item in the field of safety. *Do you know everything expected of you should you be called upon to investigate an accident?* Well, whether you do or not, the fact is that everyone doesn't. During the past year a few spectacular accidents have aroused unusual public and high-level interest; yet the actions taken after the crash tended to leave the Army open to embarrassment and left much to be desired in the way of a skilled investigation. Specifically your attention should be directed to:

a. *Use of skilled investigators.* Approximately 240 graduates of the *Army Aviation Safety Course* are dispersed throughout the Army. These people have been trained in aircraft accident investigation. There have been several cases where they were available to the command, yet not utilized.

b. *Protection of wreckage* from disturbance by unauthorized persons and prevention of removal before investigation is begun. In one case a wrecked aircraft was left on a busy public beach without a guard for several hours.

c. *Thorough familiarization with the Handbook for Aircraft Accident Investigators, DA Pamphlet* 95-5.

d. *Assuring that the accident is investigated.* It appears in many cases that the board has investigated the pilot under the provisions of AR 15-6 rather than investiagting the accident under the provisions of *AR* 385-40. This is manifest in reports which indicate that the pilot was given the right of counsel and the opportunity to challenge, rather than being interviewed as a witness.

To make progress in accident prevention and to preclude unwarranted adverse publicity, aircraft accidents must be skillfully handled. I therefore suggest that you give considerable emphasis to *DA Pamphlet* 95-5, as changed.

* * *

In telling the Army aviation story to the world it is essential that we all *"sing from the same sheet of music."* In other words, we are all responsible to know what is basic doctrine and adhere to it. One mark of the professional is a thorough background of the fundamental principles which govern his activity.

Conversely nothing points up the amateur as much as a display of ignorance toward these same principles. Three of the best sources on which to hang your official hat are *FM* 1-5, *"Army Aviation Organizations and Employment"; FM* 1-100, *"Army Aviation,"* and *FM* 57-35, *"Army Transport Aviation, Combat Operations."* I strongly urge that you locate, read, and retain these documents as standard references.

Sincerely,

CLIFTON F. VON KANN
Brigadier General, GS
Director of Army Aviation, ODCSOPS

USAREUR VISIT

Brig. General Clifton F. von Kann (center), Director of Army Aviation, gets a first-hand look at one of the 16th AOD's mobile control towers during a recent visit to Seventh Army's aviation units. Capt. Kenneth C. Stanley (left), 16th AOD commander, explains the operational procedures to the Director while Col. Russell E. Whetstone, Seventh Army Aviation officer, looks on. (U.S. Army photo).

BY AIR

President Syngman Rhee poses with General Carter B. Magruder, left, and crew members of the 13th Transportation Company Shawnee during a recent mission in Korea. L-R: General Magruder, President Rhee, Capt. Lawrence R. Frolick, CWO Blair Hileman, and Sgt D. L. Jones.

USASATSA LIGHTS THIRD CANDLE

The *U.S. Army Signal Aviation Test and Support Activity* (USASATSA), the avionics testing agency of the Chief Signal Officer, celebrated its third anniversary during the last weekend in September with a kingsize picnic for all hands.

The Fort Rucker facility is charged with determining the impact new Aviation Electronic (Avionic) equipment will have on the Signal Corps maintenance and supply system, and with support of the *U.S. Army Aviation Board.*

AIR MOUNTED RECON FOR THE NEW U.S. ARMY

and there's a BELL in the Picture

If nuclear war comes, Army Aviation will have a role all its own. It has been given a number of short range, low-level assignments that will augment all activities of ground forces. In such an event, observation will become a more exacting job than ever before; no longer will there be large concentrations of forces and well defined battle areas. Bell helicopters, with their jack-in-the-box agility, will help the new Army maintain such observation over the constantly changing battlefield. They will gather and transmit information for locating, verifying and evaluating targets for artillery and guided missiles; for adjusting fire. They will seek out enemy forces and provide commanders with close-up reconnaissance of atomic blast areas. These are, of course, jobs of the most vital importance. The abilities of the Bell, as of all Army aircraft, may hold the key not only to the new Army's mobility, but to victory on atomic battlefields.

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PALO ALTO, CALIF. / WASHINGTON, D.C.

Adhesive Engineering Division / San Carlos, Calif.

GEMs: GROUND EFFECT MACHINES

by BRIG. GEN. RICHARD D. MEYER
Deputy Chief of Transportation for Aviation, OCT

If many of you followed the headlines of last summer you probably read about the possible development of flying tanks, ocean going ships travelling at 100 miles per hour, trains which could achieve speeds in excess of 200 miles per hour, and automobiles and trucks which could travel overland without wheels.

These claims are not as fantastic as they must have sounded. All are soberly predicted by-products of the long known but never effectively harnessed *ground cushion phenomenon.*

The *ground cushion phenomenon* is attributable to certain characteristics of air such as compressibility and viscosity, or resistance to flow. Briefly, this is what happens: Air forced against a rigid surface, the ground, builds up a pressure or lift in the opposite direction. The greater the pressure, the greater the lift available. This phenomenon is present only in close proximity to the surface and thus affects conventional airplanes and helicopters only during take-off and landing. Once out of "ground effect" they depend upon aerodynamic lift produced by the rapid movement of properly shaped airfoils through the air.

The thought of harnessing the ground cushion as a primary means for support of a vehicle has only recently assumed real prominence although research was accomplished as early as the 1930's. Now it appears that we are entering an early phase of development of vehicles which can ride over land, sea, swamp, sand, or snow on a cushion of air held between the base of the vehicle and the surface over which it is traveling. We call them GEM'S or *Ground Effect Machines.* There are a number of methods for harnessing the ground cushion depending primarily upon the use intended but all form the air cushion upon which the vehicle rides by blowing air under pressure into the area between the base of the machine and the surface. Operating heights for the vehicles range from a fraction of an inch to as much as 50 feet and possible speeds are in excess of 100 miles per hour.

For centuries, armies of the world have used such terrain features as woods, hills, and ravines for cover and concealment. These same features, of course, seriously hampered their mobility and maneuverability. Thus, it is easy to appreciate the military implications of vehicles which can make advantageous use of the terrain features but still be free of their associated restrictions. Possible Army uses range from combat and cargo vehicles operating a few feet above the surface of either the water or land to personnel-carrying vehicles that can operate near the water and land surfaces and also fly high and fast. Navy researchers visualize assault boats, anti-submarine platforms, and transports riding at high speeds just above the wave top.

BRIG. GEN. RICHARD D. MEYER

All of the military services have an interest in ground cushion vehicles and are pursuing research work with several civilian companies. In an effort to coordinate efforts in the field and arrive at a determination of the additional research which might be required to keep abreast of the "state of the art," the Chief of Transportation sponsored a *Department of Defense GEM Symposium* at Princeton University from 21-23 October. All services participated, in addition to the National Aeronautical and Space Agency (NASA), representatives from industry, and from France, England, Finland, Switzerland, and Canada.

The Army Transportation Corps has four projects underway in connection with *ground effect machines:*

(1) A theoretical and experimental program with the *Forrestal Research Center* of Princeton University, which will provide additional information on lift, propulsion, stability, and control characteristics of annular jet configurations in hover and forward flight, both in and out of ground effect. (Princeton recently unveiled an air scooter which travels at a height of 3 or 4 inches above the ground on a cushion of air supplied by a propeller and 5 horsepower motor).

(2) A three phase investigation type contract with *Aeronutronics Division, Ford Motor Company* designed to assemble theoretical and analytical information of the various principles, configurations and performance characteristics leading to a design and fabrication of a laboratory test model. (The Ford Motor Company has conducted independent research for many years culminating in the *LEVACAR,* a wheel-less vehicle that glides along on a thin film of air emitted by annular jets).

(3) A jointly funded contract with the *Office of Naval Research* to provide coverage in many of the basic areas so that design refinements and evaluation for the future *GEM'S* are available. (Two *GEM's* have been

developed to test-bed stage and are now being tested by the Navy).

(4) A research vehicle known as *AVROCAR* being developed by *AVRO Aircraft Limited of Canada*. In addition to having the capability of riding the air cushion as in the case of the true ground effect vehicle, this vehicle will also have a high performance outside of the ground cushion. Thus, it will be capable of taking advantage of terrain cover but will be free of virtually all terrain obstacles such as trees, cliffs, enbankments, etc.

A number of *ground effects machines* built both under government auspices and by private industry were demonstrated during the Princeton Symposium. Upwards of 30 technical papers were read and discussed over the 2½ day period. Both military and civilian research people are optimistic about the future of ground cushion vehicles and we expect that much of the useful information produced at the Symposium will establish a firm basis for further progress against the traditional foes of Army mobility—sand, snow, swamp, mud and Arctic tundra.

NEW AERIAL JEEP UNDERWAY

Piasecki Aircraft Corporation, Philadelphia, Pa., builder of the Army's first *"aerial jeep"* has been authorized to proceed with construction of a new, higher-performance model.

Piasecki has completed over 59 hours of successful flight tests of the company's first *"aerial jeep,"* a wingless air-ground vehicle built and first flown by Piasecki in July of 1958, about which you have read and heard much.

Though the basic configuration of the new *"aerial jeep"* will remain similar to that of the first model, incorporating two ducted propellers, one at the front and one at the rear, a number of major refinements are called for. This aircraft will be powered by two 425 HP *Artouste II-C* gas turbine engines for twin-engine safety and reliability.

The two rotors will be slightly larger and tilted to permit higher speeds. However, the external dimensions of the machine will still permit stowage in the cargo compartment of the C-130 aircraft. Rotor props will be metal instead of wood. Co-pilot controls will be provided, and the control system will be considerably advanced.

Here's a close look at Ford's Levacar Mach I, as David J. Jay, senior development engineer, is set for a ride. The vehicle travels on a circular track 34 feet in diameter. Air for levitation through three levapads underneath is supplied by the two "arms" attached to a center hub. About 50 pounds of air pressure are needed to levitate the 450 pound vehicle. Once levitated, it is propelled by the air expelled by a jet principle from the rear, supplied by a 1½ horsepower blower motor.

Unlike the *"air cushion"* or *ground effect machines,"* the *Piasecki 59-H*, like its predecessor, the *VZ-8*, achieves free flight at considerable distance in the air, without being dependent on the ground or any flat surface for support of its air columns.

The first research *"aerial jeep"* is now being used for an instrumented flight test program to obtain data on the performance and flying qualities under varied flight and load conditions.

The second, more powerful model will be used at the Aviation School and other service schools for extensive field testing and evaluation. Practical demonstrations will be conducted to evaluate the contribution a small, compact air-ground vehicle, free of normal terrain restrictions, will provide to Army mobility.

TENTATIVE YAC-1 ASSIGNMENT

Lt. General Arthur G. Trudeau, Chief, Research and Development, Department of the Army, officially took acceptance of the first *YAC-1 Caribou* aircraft in ceremonies at de Havilland Aircraft Company, Toronto, Canada, on 8 October 1959.

The Department of Army has procured five (5) aircraft. *Three YAC-1 Caribou* have been delivered. Concurrently with the delivery of the aircraft de Havilland gave transition training to twelve Army pilots; in addition, twenty-four personnel were given maintenance training on the *Caribou*.

The five *Caribou* are slated for assignment as follows: One to *Edwards AFB* for performance and stability test; two to the *Army Aviation Board*, Ft. Rucker, Alabama for user test; and two to the *Transportation Aircraft Test and Support Activity*, Fort Rucker, Alabama, for logistical evaluation.

Upon completion of the above test, tentative plans call for assignment of a number of *Caribou* to a unit for troop testing at Fort Benning, Georgia; Fort Knox, Kentucky; and Fort Sill, Oklahoma, during the latter part of 1960.

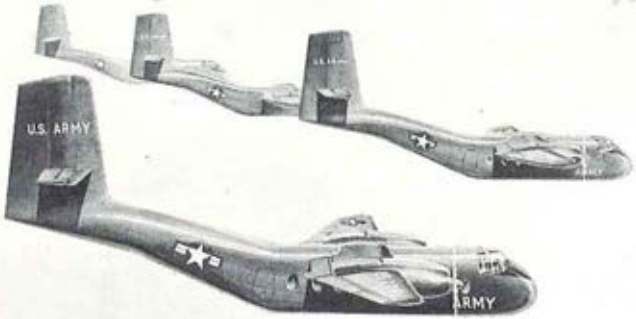
TC REQUIREMENT FOR AVIATORS

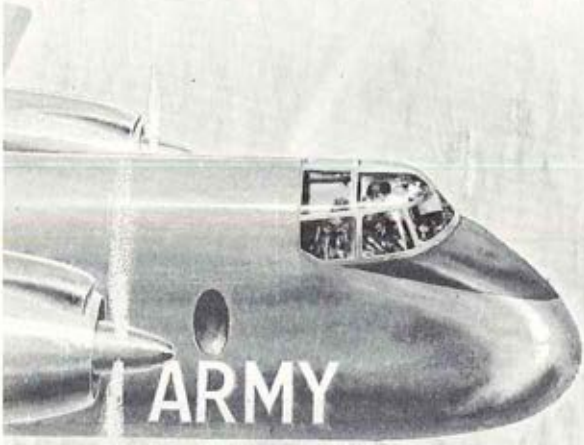
The Transportation Corps has increasing requirements for aviators, with *engineering* backgrounds, for challenging assignments in the expanding fields of aviation procurement, engineering and research and development. Graduate civil educational opportunities in nuclear, mechanical and aeronautical engineering are available to qualified officers. Interested officers are encouraged to visit or write the *Military Personnel Division, Office, Chief of Transportation, Building T-7, Washington 25, D.C.*, for additional information.

RECOMMENDED READING

All Army aviators should be thoroughly familiar with the provisions of *AR 600-105*, dated 21 August 1959, *"Army Aviation Officer Career Program."* The many facets of this regulation will have a major impact upon your future assignments and your career as an Army aviator.

The Caribou joins the U.S. Army





Designed by the de Havilland Aircraft of Canada as a civil transport for the world's less accessible areas, the Caribou's outstanding STOL and load-carrying capabilities made it the choice of the United States Army for its close support aircraft requirements.

The first Caribou went into service with the United States Army in October of 1959.

De Havilland Aircraft of Canada

DE HAVILLAND AIRCRAFT OF CANADA

DOWNSVIEW 14th & K STS., N. W., WASHINGTON, D. C. ONTARIO

Sikorsky S-60 —opens a new world of helicopter usefulness

PRIME MOVER—The Sikorsky S-60 crane helicopter, with a five-ton payload, is the prototype of a new family of UTVs (Universal Transport Vehicles) of almost unlimited usefulness. It is an aerial prime mover, an airborne cousin to such ground prime movers as locomotives and truck trailers.

INCREASED MOBILITY—Independent of roads, tracks and all surface obstacles, flying cranes will move passengers and cargoes with unprecedented speed and agility. New techniques, using hoists, platforms, bins and pods, will greatly reduce loading and unloading times.
(Above, the dump truck technique makes possible quick unloading of transported fuel drums.)

SMOOTH FLIGHT—Loads suspended under the S-60 fuselage are virtually free of vibration—a major advantage in carrying big passenger pods or in transporting sensitive cargoes such as missiles.

NEW POWER—Sikorsky crane helicopters now in design will have high-powered gas turbine engines and will carry payloads from eight to 40 tons.

SIKORSKY AIRCRAFT, Stratford, Connecticut
A division of United Aircraft Corporation

GENERAL RUFFNER ADDRESSES FIRST PRIMARY CLASS AT FORT RUCKER

by BRIG. GEN. ERNEST F. EASTERBROOK
Commanding General, U.S. Army Aviation Center

Students buckled on their parachutes and stepped into L-19's at Lowe Army Airfield here last month (Sept. 14) to begin their primary flight training thus opening a new era in the history of the Army Aviation Center.

The first class of 78 officers, ranging from lieutenants to colonels, officially began with an address by *Lt. Gen. Clark L. Ruffner*, Commanding General of the Third U.S. Army. He told the students, *"I believe in this program because, without it we aren't going anywhere on the modern battlefield. We must find our enemy and move supplies and men in there to take him."*

General Ruffner added, *"and to do that . . . you've got to get off the ground."* In his opening address, he also said, *"I'm delighted to find that the Army has finally been able to move all the fixed wing aviation training here under one roof."*

Immediately after his address, *General Ruffner* went on a tour of the facilities including renovated classrooms and an aerial tour of Fixed Wing Airfield No. 3 where much of the primary fixed wing student training will be accomplished. The briefings assured *General Ruffner* that Fort Rucker stands ready to carry out the training mission with maximum efficiency and I want to pay tribute to my staff and to the Avaition School for their perserverance and expediency in organizing for this new course of instruction. I believe that the new Officers' Fixed Wing Course will be the most popular in the military career of the students here. Perhaps it will open a new vista on their military horizon.

* * *

■ The S-60 *Flying Crane*, built by Sikorsky, made its debut here at the Army Avation Center. It offers many possibilities which look attractive to the Army. *Lt. Col. John W. Oswalt*, head of the Combat Development Office here, and *Col. Jack Marinelli* and his staff at the Army Aviation Board, are conducting studies on the machine. Concept tests will determine if the S-60 is feasible for Army use. The Army perhaps offers stiffer requirements for the the S-60 than civilian usage, since we must consider weather, terrain and other conditions for which war has no respect.

For all practical purposes, the crane is the locomotive or tractor truck of the air. It promises to assist materially in the transportation of very heavy loads to the most difficult and inaccessible places. *Igor Sikorsky*, who built the machine, said it is the prototype of a drawing board model which is reportedly capable of hauling a 50-ton load anywhere it is needed.

While discussing concepts of aircraft, I would like to point out we're looking forward to the arrival of the fixed wing counterpart of the giant H-37 *"Mojave"* helicopter—the *"Caribou"*—which is scheduled to arrive here in mid-October for extensive testing by the Army Aviation Board. It will be the largest fixed wing airplane the Army has in its inventory, with many attractive features to win it a prominent position in combat zone operations.

* * *

■ While eyes of the military are focused on Army aviation, newsmen, too, have it in their sights. On October 13, the Army Aviation Center will be host to 44 news writers representing virtually all national news media. Most of them have shown a keen interest in the experimental *Armed Helicopter Reconnaissance Company*, but the whole concept will be unfolded to them in the briefings to be held here October 14. In addition to rotary-wing and fixed-wing familiarization flights, the newsmen will have an opportunity to see armed helicopters in operation prior to their return to Washington, D.C. I am grateful to *Maj. Gen. William V. Quinn*, chief of information, who has assisted this headquarters in arranging the press visit. We have long known we have a story to tell, and it is through his efforts that we are able to do it collectively on a single date.

VISIT

Bevo Howard (left), president of Hawthorne School of Aeronautics; Brig. Gen. Ernest F. Easterbrook; and Lt. Gen. Clark L. Ruffner, commanding general of Third U.S. Army, view an Aircraft Flight Simulator at Lowe AAF during General Ruffner's recent visit to the U.S. Army Aviation Center. (U.S. Army photo).

PRESS VIEWS ACR TACTICS

Undaunted by inclement weather which abbreviaated a good part of the planned programming, U.S. Army Aviation Center authorities rolled out a red, but rather wet carpet for a sizable group of newsmen during the Center's October 13-14 *"Press Days."*

Flown to the Fort Rucker facility in a Special Air Missions flight arranged with OCINFO at the behest of *Brig. Gen. Ernest F. Easterbrook,* Commanding General, USAAC, the press representatives were given thorough briefings on the roles and missions of the Army Aviation Center and School during their visit.

With key Center and School authorities on hand to answer informal questions at all times, *General Easterbrook* opened the conference by outlining the broad functions of the Fort Rucker facility. *Lt. Colonel Walter Borden* then addressed the group presenting detailed facts on the scope of USAAC-USAAVNS. A third speaker, *Lt. Colonel John W. Oswalt,* head of the Combat Development Office, coordinated USSR film clips with a straightforward analysis of the Army's interest and progress in the Aerial Combat Reconnaissance concept.

* * *

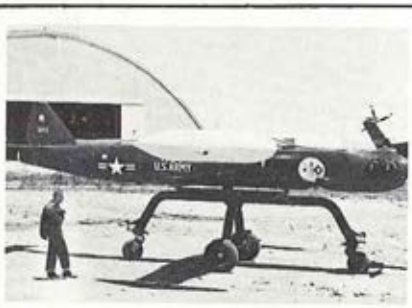
The newsmen were then airlifted to Matteson Range where they viewed a firepower demonstration illustrating ACR tactics. Low ceilings and intermittent rain marked the two-hour demonstration aptly described by *General Easterbrook* as *"broken field tactics."*

Returning by 'copter to a quick luncheon, the members of the press concluded their tour by visiting the U.S. Army Aviation Board, where they were addressed by *Colonel O. Glenn Goodhand.* The USAAB Deputy President briefed the press corps on the missions of the Board and described the latest equipment under current and pending service test and evaluation.

Representatives from Fort Monmouth and the Sperry Gyroscope Company then unveiled a display of the prototype of a new lightweight, self-contained radar navigator and flight instrumentation system. Advanced cockpit instrumentation concepts and new Doppler radar techniques are combined in the system to provide precise navigation.

Excellent hosts, the Fort Rucker staff closed the tour by following the theatrical "book"—*"Leave 'em laughing."* Delayed in their late afternoon departure by driving rains and low ceilings, the newsmen were delighted to view an impromptu rainy day fill-in, the parody *"The First Fifteen Years in Army Aviation."*

Shown viewing the SS-10 wire guided missile during a "break" in the rain-marked ACR firepower demonstration are, l-r, Brig. Gen. Ernest F. Easterbrook, Commanding General, U.S. Army Aviation Center; Capt. Walter Johnson, ACR Company; Dorothy Kesten, Publisher, ARMY AVIATION; and Arthur H. Kesten, Exec Sec'y, AAAA. (The lady has just completed a "toothbrush and raincoat travel kit" reference.) (U.S. Army photo.)



What appears to be a fairly massive, new Army aircraft in the photo above is an SD-1 Drone of "A" Troop, 16th Sky Cav, at Fort Carson, Colorado. Slick montage work reduced friend AA considerably and brought about this interesting photo. Lt. Owen Black, Jr., is the miniaturized pilot.

Always a pleasant experience, a visit to Fort Rucker is not unlike a return to a remembered campus. New buildings, new homes, and many more students bring home the point that the "old grad" has been away for a long time. We were particularly impressed by the extensive Copehart construction now underway . . . The panorama one views from the grandstand during an ACR firepower demonstration doesn't do justice to those demonstrating the suppressive fire. Given the opportunity to ride beside a "gunner" during his run, the observer quickly notices that the fire, which appears to be somewhat erratic from the grandstand, is actually right on the target. Considering the fact that these "believers" are working with off-the-shelf equipment and no stabilization gear, the remarkable results are more than sufficient to prove their point. The press group's common pilot-gunner, CWO Lawrence Hammond, went somewhat below the "nap of the earth" to demonstrate the stealth of his armed machine. All agreed he was at "nap" instead of "nap." If the average Army aviator can thread trees with a similar degree of skill, the Army indeed has a potent weapon at its disposal.
— Art Kesten

504TH LOGS R/W RECORD

Claiming a performance record in the division aviation company category, the 504*th Aviation Company* (Grafenwohr, Germany) flew 1,147 hours of rotary wing flight time in July. The 504*th*, commanded by *Maj. Frederick W. Theisman*, also logged 2,380 fixed wing flight hours in the same month. Heavy utilization in support of the division's field training accounted for the *'demand." "Supply"* was there when needed, less than 15% of the company's aircraft being grounded at any one time for organizational maintenance.

CAN WE GO BY AIR TODAY?

by LT. COLONEL MELVIN C. MONROE
Dept. of Adv. Fixed Wing Trng, USAAVNS

During the period 1954 to 1957 we produced several hundred transport helicopters and a few *Otters*. Since then we have produced several million words and only a few items of hardware.

Many people, other than those who fly, have suddenly decided the next time the Army should go by air. *I'm afraid we can't meet that expectation.*

* * *

When we take a close look at our combat divisions we see that they have dozens of aircraft buzzing around but their organic airlift capability is pitifully small. They can supplement this by drawing on a few transport helicopters from Corps at best.

Our present first generation transport helicopters are a constant source of wonder to those who grew up with boots and spurs. However, their cost, complexity, and small payload puts them in the Model T class of aerial vehicles. Our R & D effort, with its limited budget is giving us very little more than product improvement, i.e., better radios, transmissions, grease seals, etc. The present course of events will find us several years from now still with H-21's, H-34's and H-37's which are just a bit older and more weary. The new super dupers we read about are still on the drawing boards or test beds and the aviation people are hard put to find the funds needed to build and test the solid hardware, much less produce it in appreciable quantities.

It appears that even the aircraft we have aren't being fully utilized by the troops because it's just easier to do things in the same old way.

* * *

We in Army aviation are faced with two immediate and related problems. .The first is *to get more and better aircraft*. The other is *to obtain better utilization of the ones we have.*

Our present helicopter program was made possible only because of the Korean War and the fascinating job the little H-13's and H-19's were doing over there at that time. Now in peacetime, with a reduced budget, it's uphill all the way to get funds for even a plywood mockup, much less a battalion of aircraft.

When the budgetary pipe is cut, the aircraft receive a very small share. They seem to be playing second fiddle to the missiles which cost more and more per bang and don't even come back for a second trip. With more and more missiles becoming operational we may soon find our divisions and missile commands in a position analogous to the Lone Ranger with two fast shootin' .45's but no equally capable horse. By the time he gets to Eagle Pass afoot the villian will already have arrived and the farmer's daughter required to pay the price.

* * *

I believe that the Army will get more and better aircraft only when the Army as a whole wants them bad enough. On the theory that once you've tasted better things, you're never satisfied with less, it now appears that we as Army aviators must whet that appetite by increasing the use of Army aircraft in every way that we can. Much remains to be done to increase the utilization of our present aircraft.

As Army aviators we've been with the Army but not a part of it. We've made our progress through the ranks hauling mail and plotting the accident rate. In a division, the troops live in their end of camp and the air section in theirs, each happy in its own little world unless there's need for an R&R flight to the rear.

* * *

My proposal for consideration is to reverse these roles. Many recently qualified senior officers have been assigned to Division Aviation companies and this is fine. Now, perhaps some of us ancient aviators should be assigned to *general* (not special) staff duty with divisions, Corps, and missile commands. As G-3's and Assistant G-3's we should require the constant use of all attached, assigned and supporting transport aircraft. When a company goes to the range for rifle qualification we should make it go tactically by air. When the Division C.P. goes out tactically, we should make it go by air to include its communications or show why it can't. When a missile unit displaces tactically, we should make it move its launches, missiles, survey parties, support units, etc. by air. When an 8" howitzer battalion is spread across a front to provide atomic support, we should make that unit transport its ammunition, personnel, rations and administrative reports by air. Lastly, we should require certain units in the field to supply themselves by air.

* * *

Such actions will, no doubt, create pandemonium at first and Snafu will probably be the by-word. However, it will make the troops use their aricraft by making them

LT. COLONEL MELVIN C. MONROE

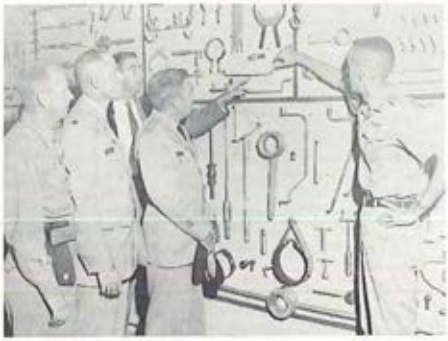
dependent upon them and it may make them face up to the conditions that may exist in a nuclear war fought over wide frontages. If the troops realize they must depend on aircraft they *may* demand more and better types.

This course of action would introduce many problems. Some of us would have a whale of a time cutting the mustard as a division G-3 and might get clobbered in the attempt. There's also the question of whether an aviator would be taken off flying status if attempting to perform on a division general staff.

The above impressions represent only one man's thoughts and are strictly unofficial. I am only disturbed by the feeling that unless we can make the troop units more dependent upon our aircraft we'll be talking a good fight in 1970 but will still be using the H-13's, H-21's, H-34's and H-37's we have today.

MELVIN C. MONROE
Lt Col Arty
Deputy Director
Dept of Adv F/W Trng

SERVICE CENTER NO. 1 HOSTS 3-DAY MAINTENANCE MEETING

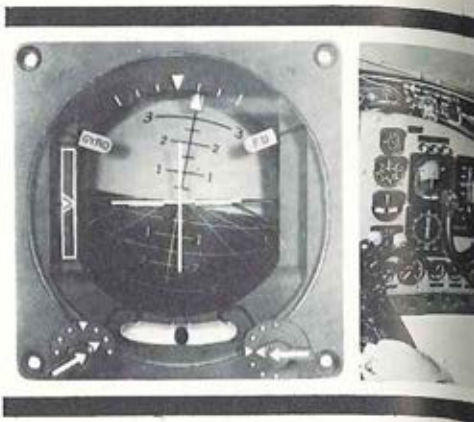


Playing host to key aviation personnel from major Army areas and National Guard units throughout the U.S., TSMC Aircraft Service Center No. 1 at Fort Eustis, Va., held a 3-day aviation supply and maintenance conference in early October.

Expected to become an annual event, the conference placed paramount emphasis on the standardization of approved streamlined procedures in scheduled maintenance, aircraft acceptance inspections, production control, and the implementation and proper utilization of the MASS supply system.

Project officer for the conference was Maj. Robert H. Reynolds, who will be succeeded as commanding officer of the Center by Maj. Leroy C. Spears following the completion of his current tour with industry.

PHOTO ABOVE: Maj. Robert H. Reynolds, right, project officer, explains a model setup and visual inventory of special tools to conferees at the 3-day aviation supply and maintenance conference held at Ft. Eustis, Va. L. to R. are Maj. W. R. Brown, Mass-ARNG; Capt. M. F. Goulding, Advisor, Va-ARNG; Mr. L. R. McGee, Richmond, Va.; and Maj. C. F. Woody, Va-ARNG. (U.S. Army photo.)



the AN/A

A lightweight, self-contained radar navigator and flight instrumentation system which will permit all-weather operation of aircraft and helicopters is under development for the Army by the *Sperry Gyroscope Company*.

The versatile and self-contained navigational system—designated the *AN/APN-118* by the Army—is being developed by *Sperry Gryoscope* under an *Army Signal Corps* contract. The company and the *U.S. Army Signal Research and Development Laboratory*, Fort Monmouth, N.J., spent more than four years in the continuous study and development of the system.

* * *

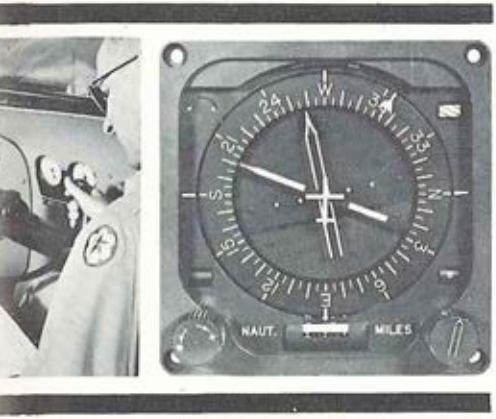
A prototype of the new system—capable of automatically guiding Army Aviators to pre-selected destinations accurately and dependably—was unveiled during *"Press Day"* displays at the U.S. Army Aviation Center, Fort Rucker, Ala., on October 13-14.

Through the incorporation of advanced cockpit instrumentation concepts and new Doppler radar techniques not prevously combined in a single lightweight self-contained system, precise navigation will be possible without dependency on ground based radio transmitters. This will give Army aviation the means for freedom of movement essential in meeting mobility requirements of the modern Army.

* * *

A novel feature of the system is a nine-inch-square map display which shows a pilot a visual picture of his aircraft's position and progress. Exact location of the plane and its heading or direction of flight are electronically indicated by a moving pointer against aeronautical or grid maps of the area. (see photo).

A special movable-tape display—considered far superior to the conventional dial indicators—gives the pilot his rate-of-climb and altitude both for maintaining level



PN-118

cruising and for absolute measurement above the ground. A second display of this type provides ground-speed and air-speed data on a single indicator.

A mode of operation described as "free gyro" permits precise navigation in high latitudes or other areas where magnetic references would be unreliable. This mode uses an extremely low-drift and directional gyroscope which points constantly to a fixed position in space and takes the place of normal magnetic sensing devices.

* * *

Although exact performance figures are classified, the system achieves accuracies better than presently employed radio navigational aids. The new Army universal system is designed to meet the expansive mission requirements for all types of Army aircraft over the next 10 years.

The completely integrated and transistorized system weighs 120 pounds or about half that of an assembly of conventional indicators and instruments which perform duplicate functions. The conventional system would also lack the accuracy and automatic capability of the *AN/APN/*-118.

* * *

Main sub-systems of the new Army system are a light-weight Doppler radar, (approximately 40 lbs.) a radar altimeter, the most accurate Gyrosyn compass known, and advanced flight instrument display that includes an auto-navigator with electronic memory to store and "remember" winds, ground-speed and other data.

While the system does not rely on current ground based navigational aids which normally would not be available in front-line warfare it has the capability of using them if desired. It provides for compatible operation with present and future auto-pilot systems and has a planned addition that will provide an ETA (estimated time of arrival) indicator that automatically computes and displays flight time to any destination.

ARCTIC DUTY BEHIND THEM, TREOG CREW LEAVES FOR ANTARCTICA

Five members of the *U.S. Army Transportation Environmental Operations Group (TREOG)*, Fort Eustis, Va., will gain the distinction of working for extended periods of time in a single year in both the Arctic and the Antarctic.

The men, *Lt. Charles G. Freeman, CWO George W. Fowler, Jr., SFC Oscar W. Gutherie, Sgt. Sidney J. Kanner* and *Sgt. Busby M. Winn* will depart Ft. Eustis this week to join in *"Operation Deep Freeze 60."* They will work with the US. Navy in a joint operation in the further exploration of the South Pole.

Exploration is no stranger to the men of *TREOG*. Last April, they took part in *Operation Lead Dog*, a 2000-mile trek into the previously unexplored areas of the Arctic in Northern Greenland. Here they developed special techniques and studied the dangers of over-the-snow operations. Thus, their ice cap experience should be an invaluable asset to the Navy in the exploration of Antarctica.

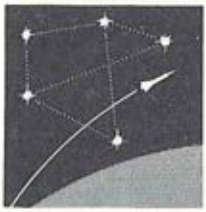
* * *

The south bound men arrived back at Ft. Eustis in late August after a five month mission to the Arctic on the Greenland Ice Cap. When they depart for the Antarctic they will be anticipating a six month stay at the bottom of the world.

In a brief departing ceremony *Maj. Gen. N. H. Vissering*, Commanding General of the U.S. Army Transportation Training Command, Ft. Eustis, inscribed a Transportation Corps flag which the departing expedition group will plant at the South Pole.

Lt. Charles G. Freeman, an Army Aviator, and *CWO George W. Fowler*, an Environmental Navigator, will assist in the aerial charting and topo missions to be performed by the expedition. In a new switch *Lt. Freeman* will be flying various types of naval aircraft assigned to the joint operation.

Maj. Gen. N. H. Vissering, Commanding General, U.S. Army Transportation Training Command, Fort Eustis, Va., inscribes a flag to be planted by a TREOG aviator in the Antarctic. Left to right, front row: Gen. Vissering, Maj. A. Havola, Lt. C. G. Freeman, CWO G. W. Fowler, Lt. Col. J. Y. Sandridge, Jr., Commanding Officer, TREOG. Second row: Sgt. S. Kanner, Sgt. B. M. Winn and SFC O. W. Gutherie. (US Army photo).



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ARMY ACCEPTS FIRST CARIBOU

In a brief but impressive acceptance ceremony held on October 8 at the Downsview plant of de Havilland Aircraft of Canada, *Lt. Gen. Arthur G. Trudeau*, Chief of Research and Development, officially accepted the first *YAC-1 Caribou* STOL transport aircraft for delivery to the U.S. Army.

Citing the Army's need for short field, high payload transport aircraft of this type, *General Trudeau* warmly welcomed the *Caribou* to the Army's stable of modern aircraft.

Several hundred interested spectators witnessed the turnover ceremony and flight demonstration, among them many top ranking military leaders from both American and Canadian Armed forces, government aviation experts, and a distinguished group of civil aviation executives and technicians.

Following a short address by *Philip C. Garratt*, the Company's Managing Director, *Russell Bannock*, de Havilland Canada's Military Sales Director, presented the log books of the first *Caribou YAC-1* to *General Trudeau*.

During the ensuing flight demonstration, company pilots demonstrated the short take-off and landing capabilities of the 26,000 pound aircraft despite extremely low visibility and ceilings. The inclement weather, which seems to accompany all well-planned demonstrations, did not detract from the *Caribou's* performance in the least. Quite to the contrary, the 200 foot ceiling called for low level flight maneuvers under maximum load conditions. Wet turf, akin to ice in so far as braking results are concerned, did not appear to reduce the *Caribou's* remarkable short landing capability.

Three *Caribou* aircraft were delivered to the U.S. Army at the time of the ceremony, with two more to follow in November, completing the Army's order for five aircraft for evaluation purposes. Selected Army personnel were given flight and maintenance instruction by DHC instructor personnel during October with the initial "fly-away" scheduled for mid-October.

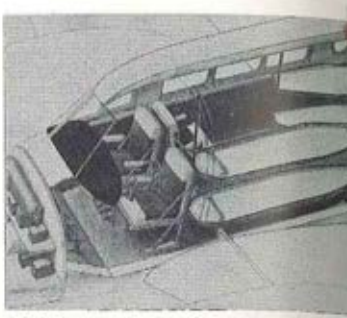
PHOTOS

TOP: Canadian Army troops that took part in the flight demonstration of the Caribou. CENTER: Chatting prior to the flight demonstration are, left to right, Mr. P. C. Garratt, Managing Director of DHC; Lt. Gen. Arthur G. Trudeau, Chief of Research & Development, USA; Sir Aubrey Burke, Chairman, de Havilland Holdings, Ltd, and Managing Director of de Havilland Aircraft Co., Hatfield, England; and Maj. Gen. J. V. Allard, Vice Chief of the General Staff, Canadian Army. BOTTOM: Mr. Russell Bannock, Military Sales Director of DHC, is shown during the presentation of the log books of the first YAC-1 to General Trudeau. (DHC photos.)

Why every officer who sees it

The New U. S. Army

Wide, roomy pilot compartment, separated from cabin by sliding doors, has plenty of room for instruments and radio. Adjustable crew seats and wide aisle, plus conveniently located controls and excellent flight characteristics make the new L-23F a pilot's dream.



Cabin seats can be removed in minutes to convert the L-23F to a flying ambulance.

Other Beechcraft projects today include advanced research and development work on launching and recovery systems for missiles and pilotless aircraft; target and reconnaissance aircraft; airborne radar surveillance systems; ground support equipment; and classified projects in the newer aerospace areas of aerodynamics, cryogenics, thermodynamics, and aircraft range extension.

or flies it votes for...

L-23F Transport

Although it looks much like an L-23D, the plane below has a completely new fuselage design which makes it longer, wider and higher on the inside. With separate pilot compartment—complete with sliding door—sunken center aisle and airliner-type air-stair door, it is winning spontaneous approval wherever it is shown or flown. Supercharged fuel injection engines also give it new high performance and extra-long range.

With a wide choice of interior arrangements, the new L-23F is quickly convertible for use as a command transport, a flying "bus" or ambulance or as a cargo-carrying aerial packhorse.

New air-stair door offers unexcelled convenience in entering or leaving the new L-23F. Unrestricted passenger and crew movement, in-flight baggage availability and pleasingly low cabin noise level are other L-23F plus features.

★ ★ ★ ★

Military commanders are invited to write for further information — Military Division, Beech Aircraft Corp., Wichita 1, Kansas, U. S. A.

Beechcraft

BEECH AIRCRAFT CORPORATION ● WICHITA, KANSAS, U.S.A.

MAINTENANCE TIPS...

...Mike Button

MIKE BUTTON, BOX 209, MAIN OFFICE, ST. LOUIS 66, MISSOURI

Shawnee Shenanigans?

Don't depend upon your Hibernicisms when dealing with this flying machine business, especially helicopters with their most important "wings," 'cause it'll get you in serious trouble.

No designing engineer, as yet, has been able to come up with rotor blades that'll last forever; however, they do spend a tremendous amount of effort and US's money to get the best blades humanly possible put on helicopters. Wtih proper handling, use, storage, maintenance, etc. and the loving care you would certainly give your car, air-conditioner, TV, or your pet hobby, *which you finance out of your own pocket*, we'll get our $Money's Worth$ out of the money we dip down into Uncle's pockets for. When Old Mike spends his "mazuma," believe you me I get, or try to get, 15¢ worth for each 10¢ spent (that's the "Old Smuggler" in me). Just got rid of a 1949 Pontiac with 131,000 miles on it and I didn't get that kind of service *without* the proper care. What's the point? 'Tis this—*Shawnee* (H-21) *Rotor Blades*, that's it.

Do you have any *Idea* how much time we get on H-21 blades? Sit down for this one—the average is about 300:00. Now does that make sense when we're suppposed to get twice that much usage out of them? *No, a real big fat NO.*

So there are a few things I'd like to prod you all with so that we can get the service life from these blades which we pay dearly for.

First off, and the most prevalent is, watch out for corrosive actions which cause the bonding to let go. We are constantly getting reports from field agencies stating that the trim tab unbonding is becoming serious. Improvements within the area are constantly being made but we need co-operation from all the people charged with good maintenance practices. A partial answer to this unbonding problem is: *Stop using unauthorized tools to bend these tabs.* Mishandling these tabs when making adjustments for tracking the blades has serious complications, so be sure you get that TM1-1H-21-3 out of the desk drawer and use it. Also, be sure to use the proper tools designed for the bending of trim tabs, *no pliers*. Too, follow the instructions and measure the angle of bend as specified in the -3.

Second point—Keep the blades clean—Use soap and water, that's all. Keep the blades waxed—this very important specific cannot be overemphasized—underline it in your -3.

3rd & last point—A well maintained blade using these above points can and will double the blade life on H-21s if other factors remain equal. So, by following good maintenance practices, you reduce the effect of the various corrosive actions imposed upon the blades and in turn get full value for all of us from the money spent.

Get an increase on life, lift, and logic by properly caring for those blades so that Army aviation gets its "Money's Worth."

WILLIAM D. BICKHAM

Lost Dash (nab it)

The "*Control Lock*" article in "Mike's" column, August 1959 with regard to *OTTERS*, should read, *TB AVN 23-5-3, under Project 13.*" *Old Mike* did not proof his own work after typing—Sorry I goofed.

Seminole Dealers, PLEASE!

If you got any carburetors up from them thar shelfs get 'em down pronto and send 'em back to be repaired. *SB* 1-15-5 gives you all the necessary poop.

The sitch-e-a-shon is exiguous and we can't do a dad blamed thing about the "Critical Short Supply" of L-23D & RL-23D carburetors until you all get on the stick. So, please, expedite all the following carburetors which are reparable:

AFSN	*FSN*
4305-391624- 8	2915-555-5161
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4305-391624-12	2915-555-5863
4305-391624-14	2915-527-8191
4305-391624-16	2915-652-4481

Need Publications???

No use UERing TO & E distribution lists when you want TMIs applicable to your air machines, cause it won't work.

Instead get with *AR*-310-2, 1 April 59, and read paragraphs 40, 41, and 42. Paragraph 40, c, especially, provides for initial distribution to using outfits which actually have a need for them. You establish your publications requirements with your nearest Adj. Gen. Pub. Center using *DA Form* 12 as explained in *AR* 310-2. Read in

your Technical Publication how the policy works, 'cause the pubs applicable to aircraft being printed now no longer carry a TO & E distribution—So, get out the Reg and the Form 12 and use it to get your needed publications, instead of screening *DA Pam* 310-4 when you requisition. Additional Copies?—Requisition them, naturally.

Mike's June column, *"Pub Check-Out,"* gave out with, what's with this capability Jazz when dealing with *Time Compliance Technical Manuals* (*TCTM*). So you did not like to set up as twz, eh?

Well, nothing's too good for our customers; we heard your "threats" and saw a lot of people scratching their heads over that *"Maintenance Responsibility"* with who's capable to do it in parenthesis, so now comes a change in format of our TCTMs as of 1 Aug 1959.

From this date on, the echelon assignment will be predetermined through capability by TSMC and the printed TCTM will state who, leaving *NO* doubt.

And as you know, all "Routines" were proposed under *TB AVN* 23-23, *"Fourth Echelon Aircraft Maintenance Annual Modification"* and Fourth was supposed to redelegate—through scheduling—to 3rd., those of which 3rd. was able to do, but the field squawked, so we simplified it. Another thing we found out, we weren't able to clearly specify lesser times required for "border line" preventive cases, which were not, as yet, flight safety but *could* be. Now the limits in "SAFETY" will be shown in days. So watch for them:

No later than 30, 60, 90. etc. days.

That's about it for now; be talkin' to you next month.

Informationally yours,
MIKE

VERTOL 107-LITTLE JOHN IN SHOOT & SCOOT SHOW

Typifying the efforts that the Ordance Corps and the Transportation Corps have jointly undertaken to marry firepower with air mobility, a tactical exercise employing a *Little John* rocket, its crew and a *Vertol* 107 demonstrated *"shoot and scoot"* tactics during the 41st Annual Meeting of the *American Ordnance Association* held at the Aberdeen Proving Grounds in early October.

Imparting a cross-country capability of about 150 miles per hour to battlefield rocket and missile systems, the "marriage" illustrated the rapidity with which missile crews can displace, move into pre-surveyed positions, fire, and displace again to new positions.

Transporting the *Little John* and its crew internally, the 107—prototype of the Army's *YAC-1A* light tactical helicopter—deployed quickly to a firing position where the rocket was unloaded and fired. The helicopter then moved in quickly to pick up the crew and the launching equipment for re-deployment, the total elapsed time from landing to take-off being slightly under 12 minutes.

The forerunner of the Army's somewhat larger and more powerful *YHC-1B "Chinook,"* the turbine-powered 107 remained approximately 100 yards from the scene of the firing site with engines running and ready for rapid deployment of the crew.

The Bureau Drawer

MAJOR HARRISON A. MORLEY
Army Aviation Section, National Guard Bureau

The *Annual Review Board* has convened, and the comments are the same song, third verse, for me:—*"Too many arithmetic errors"—"Some count Co-pilot time for minimums; some don't"—Incomplete remarks sections; accidents, suspensions, violations not entered"—This bird got promoted to Captain in* 1958, *and you're still carrying him as a 2d Lt."—"Four States' 759s not in yet"*—etc, etc, *ETC.*

Majors Grady Roberts, Texas, and *Clinton Johnson,* Washington, are the Senior ARNG aviator members of the Board this year. We are happy to have them, and feel sure that their review will be most beneficial to the program.

* * *

The *Second Army Area Conference* is past history at this writing, and it was quite an experience for YC. We hope it was as informative and profitable for the aviation personnel of the units. Sure was a pleasure to meet and gab with old friends, many of whom we had met only through correspondence before the conference. Travel for the next few conferences begins on the 18th of October, and we'll be looking for you ARNG aviation supervisors and advisors, along with some constructive questions and criticisms.

* * *

Quarterly review and analysis of the program reveals an ARNG aviator strength of 1,304, a new high and flying time of 55,540 aircraft hours, also a new high for a quarter. But, since a pat on the back is only 15 inches from a kick in the tail, this is also the place to mention that the accident rate for the quarter is soaring *upward* toward the old all-time high of FY 57, and the FY 59 rate indicated an upward trend, altho it was only 1.2 above the FY 58 rate.

Accident info received to date indicates that eighteen states experienced all of the major accidents reported by ARNG in FY 59, and six of these states had 60% of the 29 major accidents reported. More on this in the forthcoming safety brochure. Those states that contributed are certainly aware of it, and there isn't much more to say—one can't just tell people to be safe—aviation safety is in part an attitude that must be cultivated and kept alive by everyone concerned with the aviation program.

* * *

Dept. of Army has announced the availablity of a film for your Aviation Safety Program, called *"What Caused the Crash?"* Part I, running time 18 minutes, is concerned with the pre-accident plan; Part II, running time 38 minutes, deals with crash rescue and investigation. Primary audience: Army aviators and safety personnel. FR TF 20-2833 is the applicable instructors film reference, and the film is available as *TF* 20-2832 and *TF* 20-2833 in all Army Film and Equipment Exchanges. Widespread use by ARNG units is encouraged.

* * *

We would like very much to reinstate the *"ARNG Aviator Profile"* feature in this column. Help us by sending in head-shot photos and short profiles of your outstanding aviators. As usual, unit action photos, group pictures, and stories of *general* interest will be welcomed.

* * *

ARNG aviator of the month for this issue is *1st Lt. Joseph L. Schuster,* Colo. ARNG, who graduated first in a class of 23 in the 4th Army Contract Instrument Flying School. Another ARNG aviator, *1st Lt. Carroll E. Gammill,* Ill. ARNG, was third in the same class. Congratulations on a job well done, Guardsmen.

* * *

Our safety squib comes to us via *AIR FACTS* magazine, from which we extracted this little gem: *"When the hangar-flying drifts around to hairy stories, be proud that your narrative is too dull to relate. Let nothing happen to you worth telling about. Your own experience is the worst possible teacher despite the famous dictum. It is much too expensive. Go thou and grow old and stodgy."*

ARMY VZ-D4A COMPLETES X-C FLIGHT

Completing Acceptance Demonstrations at Oxnard AFB on the Pacific Coast, the Army VZ-D4a was flown to Washington, D.C. for its initial public and press demonstrations, becoming the first U.S. VTOL aircraft to successfully complete a cross-country trip. Dook Aircraft simultaneously announced the receipt of a new Army-AF-NASA contract for flight evaluations.

month's takeoffs

ACHEE, Sidney W., Capt., 26691 Campeche St. Parkwest Manor, Hayward, California.
ACKERMAN, Phillip W., Lt., 32nd Signal Bn, APO 175, New York, N.Y.
AIKMAN, Jim B., Capt., Quarters 1619A, Mt. Vernon, Ft. Belvoir, Va.
ALEXANDER, Rowan P., Lt. Col., 7th Avn Gp, APO 154, N.Y., N.Y.
ANDERSON, Alva, Mr., Flight Test Center, General Electric Co., 134 Saratoga Road, Schenectady, N.Y.
ANDERSON, Arthur J., Col., 1449-A Fifth Avenue, Fort Knox, Kentucky.
ARNOLD, Thomas C., Lt., Off R/W Qual Cr No 60-3, Camp Wolters, Mineral Wells, Texas.
AUGUST, Robert S., Lt., 236 Westwood Road, Manhattan, Kansas.
AUSTIN, Maynard A., Capt., Dept of Maint, USAAVNS, Ft. Rucker, Ala.
BACON, Eugene F., Lt. Col., CDO, USAAVNS, Fort Rucker, Alabama.
BAGGS, Thomas G., SFC, 25 Echo Valley Road, Salinas, California.
BAKER, Willie E., CWO, 525 3rd Street, Mamou, Louisiana.
BAKKEN, Clarence O., Lt., 43305-8 Gresham, Fort Huachuca, Arizona.
BAL, Rosclus I., Lt., 563 Fairview Street, Riverside, New Jersey.
BAMFORD, Malcolm, Capt., P.O. Box 163, Fort Kobbe, Canal Zone.
BARBOUR, Frank P., Maj., P.O. Box 396, Ft., Rucker, Alabama.
BARENDSE, Robert M., Maj. 506 Peace Valley Lane, Falls Church, Va.
BARRETT, James A., Capt., 2407 Bond Avenue, Columbia, Georgia.
BARRON, John W., Capt., 711 Concordia Street, Baton Rouge 6, La.
BASTIAN, Richard K., 52 Starling Street, Columbus, Ohio.
BEAMAN, Horace E., Lt. Col., Hq I Corps (Gp), APO 358, S.F., Calif.
BEAMONT, Edgar S., Maj., 1595 Lindbergh Street, Stockton, California.
BEARDEN, William A., Capt., Army Avn Saf Crs, Rm 261, Admin Bldg, Univ of S. California, Los Angeles, California.
BECHTOLD, John G., Lt., Engineer Topo Sect, US Army Engineer District, Gulf, APO 231, New York, New York.
BEINKE, Vernon R., Lt., 65th Trans Co (LH), Fort Eustis, Virginia.
BEINKE, Vernon R., Lt., Transportation Trng Command, Fort Eustis, Va.
BERRY, Bobbie G., Lt., 82nd Avn Co (Abn Div), Ft Bragg, N. C.
BLACK, Reuben, Lt., 709 West 1st Street, Junction City, Kansas.
BLEWSTER, James C., Lt., "C" Co, 1st BG, 16th Inf, APO 34, New York, New York.
BONNETT, William B., Lt., 3rd Aviation Co (Inf Div), APO 139, New York, New York.
BOWMAN, James E., Capt., EUSA Acrft Maint Ctr, APO 20, San Francisco, California.
BOSAN, George S., Capt., 26th, Trans Co (Lt Hel), APO 122, New York, New York.
BRADLEY, Glenn W., Capt., 5 Hoopes Road, Denbigh, Virginia.
BRADSHAW, John W., Capt., Hq First US Army, Governors Island, New York 4, New York.
BRAKE, John W., Capt., 63 Nicholson Road, Ft. Sheridan, Illinois.
BRAMEIER, Charles L., CWO, 13th Trans Co (LH), APO 358, San Francisco, California.
BRANNON, William W., Jr., Capt., 5328-D Fisher Avenue, Van Voorhis, Manor, Fort Knox, Kentucky.
BROFER, Duane R., Lt., Stu Off Co, Camp Wolters, Mineral Wells, Tex.
BROOKS, Frank B., Jr., Capt., 2843 Sannybrook Drive, S.W., Atlanta, Georgia.
BROWN, Charles E, Jr., WO, 1936 Hallum Avenue, Security Village, Colorado Springs, Colorado.
BROWN, Charles L., Jr., Lt., Route 1 c/o Worsham Trailer Park, Hopkinsville, Kenucky.
BROMAN, Ralph W., Lt., P.O. Box 1504, Fort Benning, Georgia.
BRYAN, Charles A., Jr., Lt., Hq Co Avn Sect, XVIII Abn Corps, Fort. Bragg, North Carolina.
BRZOSKA, Arthur J., Capt., DUSAA, Fort Belvoir, Virginia.
BUECHTER, Robert W., CWO, 13th Trans Co (Lt Hel), APO 358, San Francisco, California.
BUTLER, Olva B., Maj., 1-A Stillwell, Ft. Leavenworth, Kansas.
BURBULES, John G., Lt., Tyner Trailer Park, Hattiesburg, Mississippi.
BURNETT, C. A., Capt., 123 Harris Drive, Fort Rucker, Alabama.
BURROUGHS, Gerald D., Capt., 65th Trans Company, Fort Eustis, Va.
BURTH, Albert E., WO, 91st Trans Co (LH), Fort Campbell, Kentucky.
BUSH, Emory W., Lt., 103 McCaskill Place, Fort Bragg, North Carolina.
BYRNE, William H., Col., 30th Medical Group, APO 154, New York, New York.
CALENDER, Allie D., Maj., USATSMC, 12th & Spruce Sts, St. Louis 3, Missouri.
CALVERT, Charles L., Capt., 528-B South Valdez Drive, Custer Terrace, Fort Benning, Georgia.
CAMPBELL, George E., Lt., 516 Morton Avenue, Morton, Pennsylvania.
CAMPBELL, Harry M., CWO, 6h Trans Co (Lt Hel), APO 71, S.F., Calif.
CARLILE, Cecil O., Lt., Hq & Svc Co, USAAVNS Regt, Fort Rucker, Ala.
CARMICAL, William K., CWO, 29th TAAM Company, APO 29, New York, New York.
CARROLL, David A.., Mr., PEO, APO 152, San Francisco, California.
CARROLL, Walter J., CWO, 110th Trans Co (LH), APO 221, N.Y., N.Y.
CHAMBERLAIN, William C., Capt., 1st Off Stu Bttry, PO Box 1760, Fort Sill, Oklahoma.
CHARETTE, Normand A., CWO, Trans Supply Section, Aircraft Maintenance, NCGO, New Cumberland, Pennsylvania.
CHERNE, J., Mr, Shur-Lok Corp., 879 South East Street, Anaheim, Cal.
CHRISTIANSEN, Arthur A., Capt., Off Stu Co, Box C-10, Ft. Rucker, Alabama.
CLAYBOURN, Guy R., Jr., Capt., Box 9325, USARDSCH, Ft. Bliss, Texas.
CLARKE, Arthur M., Maj., 310-4 Third Street, Leavenworth, Kansas.
CLEMENT, Ralph W., Lt., 1216 White, Killeen, Texas.
COFFMAN, Jack C, Capt., 76 Third Street, Garden City Park, New York.
COLVIN, Gordon W., Sp-6, 4th Trans Co (MH), APO 165, N.Y., N.Y.
CONNOR, George C., Capt., 301-2 Third Street, Ft. Leavenworth, Kan.
CONRATH, Joseph G., Jr., Lt., 582d Trans Co (AAHM&S), APO 247, New York, New York.
COOK, Chester L., CWO, 6933-A Spaulding, Fort Sill, Oklahoma.
CONTOLE, William S., Lt. Col., 14 Lois Lane, Denbigh, Virginia.
COREY, Robert R., Lt. Col., 37 Dameson St., Ft. Bragg, N. C.
COYLE, Marcus W., Capt., 27 Third Infantry Road, Ft. Leavenworth, Kansas.
CRANFORD, Jack, Maj., 630 Ottawa Street, Fort Leavenworth, Kansas.
CRAWFORD, George S., Lt., 209 Mack Street, Enterprise, Alabama.
CREAMER, Edmund J., Jr., Capt., 14414-A Davis St., Ft. Huachuca, Arizona.
DALPINO, Milton D., Capt., 166 Orange Avenue, Milford, Connecticut.
DANIELS, George B., Mr., 84 South Battery, Charleston, S.C.
DANIELSON, Charles O., Lt., 1st Aviation Company, Fort Riley, Kan.
DANTZER, Laurence L., Maj., 8-8 Buckner, Fort Leavenworth, Kansas.
DARRAH, James T, Jr., Lt., 229 Godfrey, Mineral Wells, Texas.
DAVIS, Harold W., CWO, 120 Woodhaven Road, Denbigh, Virginia.
DAYRYMPLE, William C., Capt., AA C1 No. 1, 2nd Stu Co, 1st Stu Bn, Ft. Benning, Georgia.
DAVIS, Earl J., CWO, Maint Div, Director of Supp & Maint (TC), US Army Japan, Depot Complex, APO 343, San Francisco, California.
DAVIS, Harry Q., Jr., Capt., 3112 Plantation Dr., Columbus, Georgia.
DAVIS, Neece V., Capt., 2nd Aviation Company (Inf Div), Ft. Benning, Georgia.
DEEL, Arlie, Lt., USAPHS C1 60-02, Camp Wolters, Min Wells, Texas.
DeGENEFFE, Delano, Lt., Post Air Section, Fort Leonard Wood, Mo.
DEMPSTER, Robert N., Capt., 127th Sig Bn (Inf Div), APO 7, San Francisco, California.
DENIER, Ned E., Capt., 2177 Indian Street, Lansing, Illinois.
DODD, William R., Maj., 74 3rd Infantry Road, Ft. Leavenworth, Kan.
DORAY, Paul D., Capt., 5366-D Kelly Street, Van Voorhis Manor, Fort Knox, Kentucky.
DUKE, Walter Jr., Capt., 5644 E. Gilkey Street, Fort Knox, Kentucky.
DUNNE, Robert V., Capt., 2d Co., 1st Stu Bn, TSB, Fort Benning, Ga.
DYER, William B., Lt. Col., Truesdale Hall, R-237, Fort Leavenworth, Kansas.
EAKLEY, Richard L., Capt., c/o Intercol, Barrancabermeja, Colombia.
ERMONSON, George B., Capt., 54th Med Det (Hel Amb), APO 24, San Francisco, California.
EGNEY, Sonny E., Capt., 5370-H Fisher Avenue, Van Voorhis Manor, Fort Knox, Kentucky.
EPSARO, Austin F., Maj., USAAVNS, Fort Rucker, Alabama.
ESTEP, Willis H., Lt., 62 Red Cloud Road, Fort Rucker, Alabama.
EVANS, Thomas H., Jr., Lt. Col., 504th Avn Co, APO 326, N.Y., N.Y.
EYMAN, Robert F., Capt., 523-A S. Valdez, Custer Terrace, Ft. Benning, Georgia.
FARISH, Castle H., Lt., P.O. Box 412, Fort Rucker, Alabama.
FARMER, Fred E., Jr., CWO, 8305th Aerial Cmbt Recon Co [X], Ft. Rucker, Alabama.
FERRIS, Gordon F., Capt., Avn Sect, Hqs, XIV USA Corps (Rest), 1006 West Lake Street, Minneapolis, Minnesota.
FINLEY, Lester P., CWO, 18th Aviation Company, Fort Riley, Kansas.
FINLEY, Thomas O., Capt., USABAAR, Fort Rucker, Alabama.
FISH, Richard O., Lt., A Trp, 16th Sky Cav, 2d USAMC, Ft. Carson, Colorado.

A LOCATOR SERVICE ON ARMY AVIATION PERSONNEL
AS COMPILED FROM CHANGE OF ADDRESS NOTICES FORWARDED
TO "ARMY AVIATION MAGAZINE"

FITZGERALD, Edgar R., Capt., 13 Ballard Ave., Ft. Leavenworth, Kan.
FLINT, Robert W., Lt., Co "C," 70th Engr Bn (C), Ft. Campbell, Ky.
FLORENCE, David L., Lt., Box No. 204, AFABOC No. 2, 1st Off Stu Bloy, Fort Sill, Oklahoma.
FLOYD, Ralph H., Jr., Lt., AFABOC No. 2-60, Ft. Sill, Oklahoma.
FORD, John R., Capt., 20532 Stagg St., Canoga Park, California.
FOUNTAIN, Charles D., Lt., 520-A S. Valdez Court, Fort Benning, Ga.
FRAKER, William W., Lt., Hq & Hq Co, CCC Avn Sect, APO 39, New York, New York.
FRANDSEN, Donald P., Capt., Hq Electronic Prvg Ground, Ft. Huachuca, Arizona.
FREEL, Ralph G., M/Sgt, Co "B," Hq Gp, USAARMC (2128), Fort Knox, Kentucky.
FRENCH, Ernest D., Lt., 29504 Evergreen Avenue, Flat Rock, Michigan.
FREYTAG, R.J., Capt., 423 Thorain, San Antonio, Texas.
FRIZZELL, Harry P., Capt., Off Stu Bn, Sect 119-A, Box 105, Fort Monmouth, New Jersey.
FUGITT, Billy W., Lt., Hq, USACRAPAC, APO 323, S.F., California.
FUNK, David L., Lt., Off Stu Co, Box F-18, USAAVNS Regt, Ft. Rucker, Alabama.
GAFFNEY, James J., Lt., 5165 Walton Street, Long Beach 15, Calif.
GATES, Frederick R., Mr., Smoke Tree Ranch, Palm Springs, California.
GOFF, Richard D., Lt., AFABOC No. 3-60, Fort Sill, Oklahoma.
GOODHAND, O. G., Col.., 48 Red Cloud Road, Fort Rucker, Alabama.
GRANDELLI, Charles M., Maj., S & F, USAAVNS, Ft. Rucker, Alabama.
GUIDROZ, Evans J., Capt., 1st Aviation Co. (Inf Div), Ft. Riley, Kansas.
HAFFNER, Bert J., Lt., 4258 Adams Avenue, Baton Rouge, Louisiana.
HALL, Sayward N., Jr., Lt., 832-B Terry Drive, Ft. Benning, Georgia.
HANEY, Roy W., Maj., 725 Tarpon Lane, Yacht Haven Est., Alexandria, Virginia.
HANKINS, C.A., Capt., 522nd Engineer Company, Fort Knox, Kentucky.
HANNA, James S., Jr., Maj., 603 Meadowlark, Austin 5, Texas.
HARGETT, Claude E., Capt., Box 184, Howard AFB, Canal Zone.
HARPER, William B., Lt., 840-D Terry Drive, Fort Benning, Georgia.
HARRINGTON, Regis A., Jr., Lt., ORWQC, Camp Wolters, Min. Wells, Texas.
HASTINGS, James L., Lt., 27 Harris Drive, Fort Rucker, Alabama.
HAXTON, Owen Y., Capt., c/o Post Locator, Fort Eustis, Virginia.
HENDERSHOT, Donald L., Capt., 5713 Bellflower Blvd., Lakewood 11, California.
HENLEY, Rayman D., Capt., 6521 McGlachlin Street, Ft. Sill, Oklahoma.
HENSCHEL, Densmore F., Capt., 17 Olson Lane, Fort Rucker, Alabama.
HIERHOLZER, A. G., CWO, 21 Wood Haven Road, Denbigh, Virginia.
HILL, James R., Lt., 504th Avn Co., 4th AD, APO 69, New York, N.Y.
HILL, Ralph E., Maj., 7 Heintzelman Court, Ft. Leavenworth, Kansas.
HEISS, Clarence L., Capt., 106 Andrews Avenue, Enterprise, Alabama.
HODGES, Robert L., Capt., Trans Sect, Hq 6th US Army, Pres of SF, California.
HOEFENER, James R., Lt., DUSAA, Fort Belvoir, Virginia.
HOEFLER, LeRoy, Capt., 215 Remagen, Fort Ord, California.
HOLT, R. H., CWO, Meadow Brook Homes, Route 1, Daleville, Ala.
HOMAN, Brooks, Lt., Route 1, Box 1913, Browns Mills, New Jersey.
HORN, Horace, Mr., 2248 E. Lafayette Street, Detroit 7, Michigan.
HOYER, Charles E., Capt., Cypress Drive, Security, Colorado.
HOWARD, Wallace R., CWO, 18th Trans Co (LH), APO 29, N.Y., N.Y.
HOWSE, John B., Capt., Quarters 723, Area 1, APO 957, S.F., Calif.
HUESSER, John L., CWO, A Trp, 16th Sky Cav, 1st Recon Sq, 2d USAMC (M), Fort Carson, Colorado.
HILL, Billy L., Lt., FABOC C1 No. 3-60, USA Arty & Msl Sch, Ft. Sill, Oklahoma.
HULL, Donald R., Lt., 50th Med Det (Hel Amb), APO 358, S.F., Cal.
HUMPHREYS, James G., Capt., 3rd LAS, I Corps (Gp), APO 358, San Francisco, California.
HUMPHREYS, Russell W., Lt., Cal., Trans Div, USAREUR/USACOMZEUR, APO 58, New York, New York.
HUNT, Gordon M., Lt., 14 Kyle Avenue, Ft. Devens, Massachusetts.
HURD, Robert L., Capt., USA MAAG, Box CAM, APO 143, S.F., Calif.
INGHAM, James E., Maj., US Army Aviation Board, Fort Rucker, Ala.
JARNICHEN, Paul H., Lt., 174 Mayfair Avenue, Floral Park, New York.
JAGGERS, Joseph N., Jr., Capt., 16 Leenox Drive Columbus, Georgia.
JARRETT, Richard S., Lt., 24th Aviation Company, APO 112, N.Y., N.Y.
JAUBERT, G. Wilfred, Lt. Col., Box 636, Fort Rucker, Alabama.
JAYNE, David G., Lt., 221 Seford Drive, San Antonio, Texas.
JERSEY, Donald H., Capt., 1624 Maldon Lane, St. Louis 36, Missouri.
JESSUP, Morris M., Lt., 93rd Trans Co (Lt Hel), Fort. Devens, Mass.
JOHNS, John L.., Maj., 8th Transportation Bn, APO 29, N.Y., N.Y.
JOHNSON, L.H., Lt., Box 123, Tillicum Br., Tacoma 99, Washington.
JOHNSON, Raymond P., Maj., USABAAR, Fort Rucker, Alabama.
JOHNSON, Walter E., CWO, Hq & Hq Det, LAAC, Fort Benning, Ga.
JONES, Robert J., Lt., 1321 Northview Drive, Colorado Springs, Colo.
JOOST, Horst K., Maj., Avn Section, Hqs, EUSA, APO 301, S.F., Calif.
JOYCE, Donald R., CWO, 317 Outer Drive, Fort Benning, Georgia.
JOYCE, John J., Lt., Stu Off Co., Camp Wolters, Mineral Wells, Texas.
KAISERMAN, Donald S., Mr., 200 Parker Road, Elizabeth, New Jersey.
KAMMER, Karl P., Lt., USAATC, 40th Trans Bn, Fort Eustis, Virginia.
KEAN, Robert J., CWO, P.O. Box 6331, Dubuque, Iowa.
KETCHERSID, Foy R., CWO, TUSLOG Detach. 4, APO 254, N.Y., N.Y.
KILMAN, Howard T., Maj., Army Avn Sect., Hq Fifth US Army, 1660 E. Hyde Park Blvd, Chicago 15, Illinois.
KILPATRICK, Thomas M., Lt., 63 Kyle Avenue, Ayer, Massachusetts.
KINDER, Jimmie B., Capt., 4964 Alken Lane, El Paso, Texas.
KIRBY, William D., Jr., Lt., Box No. 4468, Va. Tech Station, Blacksburg, Virginia.
KIRKEGAARD, Martin L., Lt., 24th Avn Company, APO 112, N.Y., N.Y.
KLINGENBECK, Robert F., CWO, Executive Flight Det, DUSAA, Fort Belvoir, Virginia.
KNIGHT, Emmett F., Lt., c/o E. Kallman, P.O. Box 473, Burien, Wash.
KNIPP, Leroy E., Lt., Box 115, Plaza Trailer Park, Lawton, Oklahoma.
KOEHLER, Joseph R., Lt., 7604-A 29th Division Rd., Ft. G.G. Meade, Maryland.
KOEHNKE, Joseph A., Lt., c/o Post Locator, Fort Ord, California.
KOLB, Jerry W., Lt., 1st Avn Co (Inf Div), Fort Riley, Kansas.
KOONS, Everett A., Capt., 424 South 35th Street, Omaha, Nebraska.

NO. 1

Col Robert M. Hamilton (left) from Fort Leavenworth, Kansas, guest speaker at the U.S. Army Primary Helicopter School's class 60-01 graduation exercises, congratulates honor graduate 1st Lt. William E. Hornish. Col. John L. Inskeep (ctr), commanding officer of Camp Wolters, presented diplomas to the graduating officers in the early October exercises. (U.S. Army photo.)

KOWAL, Samuel J., Lt., 503rd Avn Company, APO 165, N.Y., N.Y.
LaROSA, Peter A., CWO, 110th Trans Co (LH), APO 29, N.Y., N.Y.
LARSON, Gerald W., Lt., AIOAC Cl No. 2 TSB, Fort Benning, Georgia.
LATTA, Charles R., Lt., Box L-27, Off Stu Co, USAAVNS, Ft. Rucker, Alabama.
LEFEBVRE, Bernard R., Capt., Quarters 1160-B, Ft. Eustis, Virginia.
LEIGHTY, William L., CWO, 6th Trans Co (LH), APO 71, S.F., Calif.
LeMAY, Melvin E, SFC, 227 N. Preston Street, Council Grove, Kansas.
LEWIS, Donald J., Capt., Officers Mail Room, Sect. 251, Box 419, Fort Monmouth, New Jersey.
LINDHOLM, James R., Capt., 2616 Wesley Avenue, Lawton, Oklahoma.
LORD, M. D., Capt., P.O. Box 2611, Fort Huachuca, Arizona.
LOUDERMILK, James R., Jr., Lt., 7A Kyle Ave., Devens Manor, Ayer, Massachusetts.
LOW, Larry E., Lt., 504th Avn Company, APO 696, New York, N.Y.
LOWE, James V., Capt., 20th Trans Co., APO 165, New York, N.Y.
LYNCH, Eugene M., Maj., Box 65, US Navy 100, FPO, New York, N.Y.
LYSNE, Paynee O., Maj., ARSEC MAAG Japan, APO 900, S.F., Calif.
McAULEY, Jack A., Lt. Col., Comd & Staff Dept, USAARMS, Ft .Knox, Kentucky.
McCONNELL, L.J., Lt., Hq, Mil District of Washgtn, Washgtn 25, D.C.
McGEE, Charles F., Capt., 59 Corregidor Road, Eatontown, New Jersey.
McGOWAN, James A., Lt., 350 South 42nd Street, Boulder, Colorado.
McKENSIE, Coy H., Mr., 219 East Rich, Norman, Oklahoma.
McLENNAN, Stuart G., Jr., Capt., 15th Avn Co., APO 24, S.F., Calif.
McNAMARA, Thomas F., Capt., Avn Comm Br., Sig Svc Bn, APO 403, New York, New York.
McPHAIL, Billy B., Capt., Qtrs 671-B, Infantry Post, Ft. Sam Houston, Texas.
MACMANUS, Frederick O., Lt., Avn Sect, USA ADCEN, Fort Bliss, Tex.
MARSH, Robert R., CWO, 90th Trans Co (MH), Fort Knox, Kentucky.
MEANS, John A., Lt., 4 North 27th Lawton, Oklahoma.
MIDDLETON, Wilbur A., Capt., 21 Olsen Lane, Fort Rucker, Alabama.
MILLER, James E., Capt., Hq Co, USAAVNS Regiment, Fort Rucker, Ala.
MEASIMER, Hoyt H., WO, 2d BCT, APO 81, New York, New York.
MITCHELL, Robert C., 3570 Saybrook Avenue, Cincinnati 8, Ohio.
MITCHELL, Theodore L., Capt., P.O. Box 606, Fort Rucker, Alabama.
MORROW, B.E., Lt., USA Trans School, TCOC 1-60, Fort Eustis, Va.
MOYER, Kenneth G., Capt., 3507 Heyward Street, Columbia, S. C.
MURRAY, Charles R., Col., 69 Ingalls Road, Fort Monroe, Virginia.
NELSON, Huey R., CWO 26th Trans Co (LH), APO 122, N.Y., N.Y.
NICHOLSON, Frederick C., CWO, Off Stu Co, USAAVNS Regt, Fort Rucker, Alabama.
NICHOLSON, Rowland J., Capt., 6805-B Snow Road, Fort Sill, Okla.
NIGHTINGALE, Joseph C., Mr., Box 1392, Anchorage, Alaska.
NIX, James H., Maj., 38 Harbord, Ft. Leavenworth, Kansas.
OAKLEY, Howard H., Lt., 221 Stuart Street, Martinsville, Virginia.
PAQUIN, Jean C., Capt., TUSLOG, Det 13, APO 224, N. Y., N. Y.
PETRY, John P., Jr., Lt., 865 1/2 So, 115th Street, Tacoma 44, Wash.
PICK, Rudolph, Lt., Army Airfield Command, Fort Campbell, Kentucky.

AF-ARMY-NAVY COORDINATE H-37 MOVE TO USAREUR

The joint AF-Navy-Army operation involving the sea transport of an entire Medium Helicopter Transportation Company was successfully completed when the 4th Trans Co. (Med Hel) hung up the "*Open for Business*" sign at Hanau, Germany.

Capt. Robert G. Cox pens a note from Hanau saying, "We've settled down after our move from Benning and have *passed* the mundane step of searching the economy housing lists for suitable quarters for our families."

"We have nothing but praise for the *Air Force* assistance rendered at Brookley AFB, Ala., the high sea transport provided by the *USNS Marine Fiddler*, and the 152*d Maintenance Detachment* crews who had all ten of our initial ships airborne within five days after arrival."

"Since our arrival on the morning of the sixth day we have been busy flying demonstrations while working into our normal tactical missions. In fact, I think, to the credit of the personnel and crews comprising the 4th, we have already reached the point where *H-37 Mojaves* are 'old hat' in USAREUR. Since we're here to do a job, we couldn't like it better."

PHOTOS AT LEFT

TOP TO BOTTOM: 1) Shown just after landing at Brookley AFB are, left to right, Capt. Sigurd A. Lund, 4th Trans Co Maintenance Officer; Lt. Col. Earle W. Kelley, Brookley AFB Deputy Commander; Col. L. W. Leeney, Commander of Lawson Army Airfield Command, Ft. Benning; and Major James R. Woods, Deputy C.O. of LAAFC. 2) Brookley AFB civilian maintenance personnel ready one of the 4th's H-37's for sea shipment. 3) At dockside, a Big Package (approximately 21,750 pounds) awaits a hoist aboard the USNS Marine Fiddler; 4) Hoisted aboard, the Mojave is lowered into the hold on the second deck. Three other H-37's were stowed directly below on the third deck. (Photos: Lt. John M. Slattery, USAF, Brookley AFB).

ROAD SHOW

Over 12,000 students in 14 major universities and colleges in a 15-state area were given the opportunity in September and October to inspect the Army's turbine-powered *Iroquois* helicopter, during a 4,000-mile endurance flight undertaken by *USATATSA* authorities.

In addition to the universities, the *Iroquois* made stopovers at 11 Army installations. *Lt. Franklin L. Duke, CWO Ronald D. Pampel, Sp-4 Thomas Harris, Jr.*, and *Don Barbarick, USATSMC*, comprised the 4-man crew that made the 15-state sweep.

CONGRESSMAN IN ACTION

Representative Stuyvesant Wainwright (R.-N.Y.), right, a reserve airborne Lt. Colonel, relaxes momentarily before he and Col. Michael Paulick, C.O., 10th Special Forces, Bad Tolz, Germany, go aloft to make a parachute jump from an Army Beaver at 1,200 feet. The New York Republican completed the jump while taking off a few days from his Congressional tour of Europe to serve on active duty for training with the 10th Special Forces Group. (U.S. Army photo.)

PLAMONDON, Robert P., Lt., USA Arty & Msl School, Ft. Sill, Okla.
POOLE, Arthur J., Lt, USA Arctic Test Center Air Sect, Ft. Churchill, Manitoba, Canada.
POTTER, Russell C., Capt., 838-C Terry Drive, Upatoi Terrace, Fort Benning, Georgia.
PRESTON, Richard L., Lt., 518 Ramsey Street, Stillwater, Oklahoma.
PURCELL, Charles A., Lt., 2801 Austin, Corpus Christi, Texas.
RATHBONE, William A., Capt., Hq, USATSMC, 12th & Spruce Sts., St. Louis 2, Missouri.
REID, Stuart W., Maj., Hq & Svc Co., USAAVNS Regt., Ft. Rucker, Ala.
REYNOLDS, Gean H., Maj., 5749 Bailey Street, Fort Hood, Texas.
REYNOLDS, Robert H., Maj., 7119 Glen Hills Rd., Ft. Worth 18, Tex.
RICHARDS, David A., Lt., 213 West George Street, Philadelphia 23, Pa.
RICHARDS, Everett D., Capt., 44409-A Meyer Ave., Ft. Huachuca, Ariz.
ROBINSON, Edwin K., Lt., 3rd Light Avn Section, APO 358, S.F., Cal.
ROGERS, Richard W., Lt., Co E, 1st Bn, 1st TREE, Ft. Leonard Wood, Missouri.
SABEY, Walter D., CWO, AMOC 2-60, USA Trans School, Ft. Eustis, Va.
SALMON, Ray W., Lt., 53rd Med Det (Hel Amb), APO 175, N.Y., N.Y.
SAUBERAN, Robert L., Capt., 52-D St. Lo Road, Fort Lee, Virginia.
SAUNDERS, Rodney V., Jr., Capt., 24th Avn Company, APO 112, New York, New York.
SCHAEFER, Richard B., Capt., 2480 Wise Street, Columbus, Georgia.
SCHARTAN, Melvin I., CWO, Hq & Hq Co., 2d USAMC (M), Fort Carson, Colorado.
SCOTT, Robert W., Lt., Box "S," Fort Kobbe, Canal Zone.
SETZER, Howard L., Jr., Lt., Apt 20-A, West Terrace Apts, West Asheville, North Carolina.
SEWELL, Andrew J., Lt., 501st Avn Co., 1st Armd Div, Fort Hood, Tex.
SHAW, Samuel M., Lt., 7th Aviation Company, APO 7, S.F., Calif.
SHRADER, Cecil L., Lt., 2d Armored Division, Fort Hood, Texas.
SINGER, Henry, CWO, 6th Trans Co (LH), APO 71, San Francisco, Cal.
SISK, Isaac R., Lt., Hq Co, 12th Cav, 1st Cav Div, APO 24, S.F., Cal.
SLATEN, Bernard A., Lt., 348 Sandry Drive, Ft. Benning Trailer Court, Fort Benning, Georgia.
SMART, John T., WO, 405 Green Meadow Drive, Lawton, Oklahoma.
SMITH, Bill G., Lt. Col., Student Off Co., USAAVNS Regt, Ft. Rucker, Alabama.
SMITH, H.M., WO, 105 Wilson Drive, Columbus, Georgia.
SMALL, Harold I., Capt., 1623 Lucas, Ft. Sill, Oklahoma.
SMITH, William D., Capt., Quarters 2580-D, Fort Lewis, Washington.
SMITH, William H., Lt., 26th Trans Co (LH), APO 122, New York, N.Y.
SPALDING, William W., Capt., 582d Trans Co (AAHM&S), APO 247, New York, New York.
SPEEDMAN, R.L., Capt., AFAOAC 1-60, Arty & Msl School, Ft. Sill, Oklahoma.
SPENCER, L.E., Capt., 306 Godfrey, Camp Wolters, Mineral Wells, Tex.
SPIVEY, Currie B., Jr., Lt., DSP, 82nd Avn Co (Abn Div), Ft. Bragg, North Carolina.
SPOTTS, Rodney W., Capt., 5372-D Kelly Street, Fort Knox, Kentucky.
ST. CLAIR, Cromwell D., Jr., Capt., Building 1-D Sunchon, Ft. Bragg, North Carolina.
STATON, Ollie G., CWO, 4th Trans Co (MH), APO 165, New York, N.Y.
STEELE, Clyde K., Capt., Qtrs., 5663-B, Corley Street, Fort Knox, Ky.
STEIBACK, William J., CWO, 1st Army Avn Co. (FW-TT), Ft. Benning, Georgia.
STEPHENS, Thomas W., Capt., 2138 Carrol Avenue, Lawton, Oklahoma.
STEVENS, Marvin A., Lt, Mount Carmel, Utah.
STEVES, Roy R., Lt., 3rd Light Avn Sect., APO 358, S.F., California.
STEWART, Robert C., Lt., 16th Cav, 2d USAMC, Fort Carson, Colorado.
STONE, Leon H., Jr., Lt., USAPHS Cl 60-03, Camp Wolters, Min. Wells, Texas.
STRAWN, Willis G., Capt, Brooke AMC, Fort Sam Houston, Texas.
STRAWN, W.M., Capt., 1218 Williams, Lawton, Oklahoma.
STYVE, Lester O., Maj., Avn Department, Trans School, Fort Eustis, Va.
SULLIVAN, John F., Maj., 538 N. Oxford Street, Arlington, Virginia.
SWANSON, R.B., Mr., CONVAIR Div of Gen Dynamics Corp, 1710 H Street N.W., Washington 6, D.C.
TARBOX, George E, Capt., 6006 Vernon Avenue, Lubbock, Texas.
TEMPLETON, W. M., Capt., 110th Aviation Co, APO 221, N.Y., N.Y.
THOMAS, Bruce A., Lt., 82nd Avn Company (Abn Div), Ft. Bragg, N.C.
THOMAS, Richard K., Lt, Aviation Section, Fort Monmouth, New Jersey.
THRAILKILL, George R., Sp-6, 4th Trans Co (MH), APO 165, N.Y., N.Y.
TOBIASON, A. R., Lt., Hq, 37th Engr Gp (C), APO 165, N. Y., N.Y.
TOW, James L., Capt, 101st Avn Company (Abn Div), Ft Campbell, Ky.
TRUBY, Allen G., Lt., 24th Aviation Co (Inf Div), APO 112, N.Y., N.Y.
TURNER, George M., Capt., 19 Malone Drive, Columbus, Georgia.
ULZHEIMER, Robert, Lt., 10607 Kendrick Street, Tacoma 99, Washington.
USSERY, Robert C., Lt, P.O. Box 11, Pike Road, Alabama.
VERINACE, Charles E., SFC, 103 7th Division Place, North Bay View Park, Fort Ord, California.
VOVILLA, Harold K., Lt., 3665-A Church Road, Fort McClellan, Ala.
WAGENHEIM, Herbert M., Lt., P.O. Box 5195, University, Alabama.
WALKER, Samuel S., Capt., Quarters 2565-B, Fort Eustis, Virginia.
WANN, Henry S., Maj., DOTL, USA Trans School, Fort Eustis, Virginia.
WARD, William E., Capt., 154 N. Daugherty, Ft. Bragg, N.C.
WEBB, Robert M., Maj., Box 176, Galva, Texas.
WEIBELT, Aubrey J., Jr., CWO, 17th Trans Det (AAR), APO 168, New York, New York.
WEST, Thomas C., Lt., P.O. Box 848, Blacksburg, Virginia.
WHALEN, John J., Jr., Lt., Flight Section, Fort Monmouth, New Jersey.
WHEELER, Robert J., Capt., 1st Co, TSB, Fort Benning, Georgia.
WHITE, Richard R., Capt., 5847-B Brett Drive, Fort Knox, Kentucky.
WIEGMAN, Donald J., Lt., Hq, EUSA Sig L.L. Bn, APO 59, S.F., Cal.
WILD, John E., Capt., 2120 Meadow Lane Drive S.W., Atlanta, Ga.
WILLIAMS, Ernest M., Capt., 10 Olson Lane, Fort Rucker, Alabama.
WILLIAMS, Norval K, Jr., Lt., Det "D" (Prov), KMAG, APO 358, San Francisco, California.
WILSON, Eugene A., Maj., USATSMC, 12th & Spruce Sts., St. Louis 3, Missouri.
WINDHAM, Willie H., CWO, c/o Gwins Trailer Court, Rt. No. 2, Yorktown, Virginia.
WINN, Frank B, Lt., Hq Trp, 16th Sky Cav, 2d USAMC, Ft. Carson, Colorado.
WITTEKIND, Wilfred H., Lt., 110th Avn Co., APO 221, N.Y., N.Y.
WOLFE, Alfred J., Capt., Route 6, 423, Parkville, Missouri.
WOLFF, William H., Capt., EUSA Acrft Maint Con, APO 20, S.F., Cal.
WOOD, Robert W., Capt., 119-B Butts, Fort Benning, Georgia.
WOODSON, Lewis S., Lt., 82nd Avn Co. (Inf Div), Ft. Bragg, N.C.
WOODWARD, Herbert E., CWO, Information Division, Fort Eustis, Va.
WRIGHT, Billy R., Capt., Btry "C," 3d How, 18th Arty, APO 175, New York, New York.
WYLIE, Donald L., Lt., 502nd Avn Co, 2nd Armd Div, Ft. Hood, Texas.
YOUNG, Mason, Lt., 326 East 45th Court, Tulsa, Oklahoma.
YUNKER, John L., Capt., Hq, USCONARC (Flt Section), Ft. Monroe, Va.

OBITUARIES

First Lieutenant George Donald Cobb was killed in a helicopter accident at Grafenwoehr, Germany on October 6, 1959. He is survived by his wife, Lila, a son, George, Jr., 4, and a daughter, Elizabeth, 2. The son of Mr. and Mrs. A. S. Cobb of Mobile, Ala., and the brother of Mrs. James Welden of Mobile, Lieutenant Cobb was buried at Thomasville, Ga.

First Lieutenant Richard R. Scott, 27, of 804 Wellesley Drive, Albuerque, N.M.; *Second Lieutenant Gerald D. Cyrus*, 23, of Rt. 1, Nicholasville, Frankfort, Ky.; *Second Lieutenant Jimmy N. Chamness*, 23, of 1520 Reynolds Street, El Paso, Texas; and *Second Lieutenant John N. Combs*, of 1617 Meridian Street, Columbus, Ind. were killed in the crash of an L-20 aircraft 35 miles from San Antonio, Texas, while engaged in a student cross-country instrument flight from Fort Rucker, Ala. The instructor and three student pilots all lived in Ozark, Ala.

CESSNA UNVEILS LOW-COST JET

Cessna Aircraft Company entered the military utility aircraft market wtih a four-place jet, unveiled at a recent closed showing to military officials.

The new aircraft, with a gross weight of 9,300 pounds, low-wing, pressurized jet. *"It is designed to fulfill military needs for a multi-mission, low-cost jet,"* according to Dwane L. Callace, Cessna President.

The new aircraft, with a gross weight of 9.300 pounds has a mission range up to 1,380 nautical miles, and cruising speeds of up to 404 knots (465 mph). The jet is powered by two Continental 356-9 jet engines which produce 1,400 pounds thrust each. Maximum level flight speed of the 407 is 423 knots (487 mph).

* * *

The *Continental* 356-9 jet engine which powers the 407 is the newest of the proven J-69 series. This engine series has been qualified up to 1,700 pounds of thrust. When especially adapted for the 407, the reduced thrust requirements have lowered turbine inlet temperatures by more than 100° F., assuring long engine life.

The cabin area of the 407 is extremely large for a four-place jet. Removable rear seats afford versatility for high priority cargo transportation, or installation of specialized mission equipment. The cabin is pressurized at a 7.5 psi differential, or about 8,000 feet cabin altitude at the aircraft's normal cruising altitude of 35,000 feet. Service ceiling for the new jet is 46,400 feet. Single engine ceiling is in excess of 25,000 ft.

* * *

The 407, by comparision to operational jets, is small and offers a low silhouette. Entrance and exit are made without ramps. Maintenance stands and special ground handling equipment are not required. Even auxiliary ground power equipment is unnecessary, for a nickel-cadmium battery fulfills power requirements for normal engine starting.

Provisions have been made for ice-free engine operation under all conditions. An especially designed ice and rain removal system has been employed for the aircraft's windshield.

Entrance and exit are made through a large door on the right side of the fuselage. An emergency window for ground exits is located on the left rear of the cabin. Baggage provisions for four persons are included within the pressurized compartment. A spacious panel display area is provided to accomodate all normal functional instrumentation at each flight station, plus complete communication and navigation installation at panel center line.

* * *

The use of *T*-37 tools, components, and systems provides a production base for the low initial cost of the airplane, according to Cessna officials. The *Model* 407 utilizes standard components of the T-37 with the exception of the cockpit. The center section has been redesigned to a large pressurized cabin, which seats four persons with their baggage.

"One important achievement which has made the new aircraft possible is the development of new, higher thrust, low-cost power plants," according to Cessna officials. The new engines provide increased speed, efficiency and range.

In commenting on the commercial potential of the 407, Wallace conceded *"The Model 407 could foreseeably be the forerunner of a modern commercial fleet in the next five to ten years."*

ON THE DOUBLE

Combat engineer troops are shown making a rapid exit from the "people pod" of the S-60 Flying Crane during a demonstration held at Fort Belvoir, Virginia. Utilizing six exits in the pod the troops lost no time in fanning out after touch-down. The demonstration took place during the S-60's tour of military installations.

QUICK ACTION

Capt. Navarro C. Stafford (l.) acting commander of the 13th Trans Co (Lt Hel), is shown presenting Letters of Commendation to CWO Barnett and William House. The two CWOs were cited for quick action in Korea when their helicopter lost power and plummeted to earth while carrying an 11-member group of the U.N. Armistice Commision.

CONFERENCE

Army aviation and safety experts compare notes before a First U.S. Army Air Safety Conference held at Governors Island, N.Y., in early October. Shown, left to right, are Col. Edgar C. Wood, USCONARC; D. S. Buck, Director of Safety, USCONARC; Lt. Col. Gordon L. Kinley, First U.S. Army Aviation Officer; and T. H. Ayers, First U.S. Army Safety Director. (U.S. Army photo.)

FIRST DELIVERIES

CWO Frank Donahoo and CWO Bob Day (not shown) were the pickup pilots for the initial delivery of two Bell HU-1A Iroquois to the 101st Airborne Division Aviation Company, Ft. Campbell, Ky. Expected to be utilized in division maneuvers early next year, the first aircraft will be employed to check out division pilots.

SAILPLANE FLYING FOR ARMY AVIATORS

A familiarization with current sailplanes and soaring techniques by Charles E. Haydock, Jr.

I am sure that many of you, like myself, have thought occasionally that it would be interesting and perhaps challenging to try your hand at flying a glider or sailplane. Probably you haven't tried it because there were no facilities immediately at hand, because there was no nearby source of information, or simply because there was nobody around to sell you on the idea.

* * *

Some weeks ago, while looking through a copy of *FLYING* magazine, my attention was caught by an article on gliding written by a commercial pilot who had recently completed a short familiarization course conducted in Elmira, New York, by the *Schweizer Aircraft Corporation* who manufacture sailplanes there. I wrote for the brochures which that company has prepared and, after poring over this material, visited the Hudson Valley Airport in Middletown, New York, one of several widely scattered operations where soaring is taught and sailplanes are rented and sold.

Steve Bennis, the operator and chief instructor, is a former Air Force and Navy pilot with World War II experience in the old CG-4A which many of you middle-aged ex-airborne types will remember with dismay and alarm. He first showed me the *Schweizer SGU 2-22C*, a two-place, high-wing trainer.

Grossing about 900 pounds with a wing span of 43 feet and a wing area of 210 square feet, the glide ratio is 18:1. The seating arrangement is tandem with dual controls comprising stick, rudder, and a fore-and-aft-moving handle actuating the spoilers and wheel brake. Minimum instrumentation provided will normally include altimeter, airspeed indicator and variometer. Stalling speed is about 30 miles/hour.

* * *

Also on hand were the *SGS* 1-26 and 1-23. These are single-place medium and high-performance mid-wing sailplanes. The former grosses 575 pounds, has a wing span of 40 feet, a wing area of 160 square feet and under conditions of normal wing loading (3.13 psf) has a minimum sinking speed of 2.50 ft/sec and glide ratio of 23:1. Instrumentation may be quite elaborate and radio and oxygen equipment are frequently included. This sailplane is widely use for contest flying.

The SGS 1-23 is the highest performance sailplane of the *Schweizer* family with a glide ratio of better than 30:1. The efficiency of this design becomes the more remarkable when one considers that the gliding radius under conditions of still and stable air is about 5 nautical miles for each 1000 feet of altitude. Rate of sink is less than 2 ft/sec.

This school, like many others, offers several courses designed to qualify students for FAA glider ratings. The course for active commercial power pilots provides at least 2 hours of flight time including 8 airplane-tow and 2 auto-tow or winch launches. Under favorable weather conditions, the course can easily be completed over a week-end. The courses for less experienced power pilots and for those with little or no flying experience are, of course, more complete and time-consuming.

I signed up for the first course arranging to spread it out over several days. The first session covered a general discussion of the "art-sport-science" of soaring and the initial ride in the 2-22. The trainer was towed by jeep from the hangar to the take-off position with one wing-walker to hold it level on the single main wheel and tail skid. The pre-flight inspection covered an external check of wings, struts, fuselage and empennage as will as control surfaces, hinge bolts, cables, etc. Access to the front seat is provided by a hinged plexiglass canopy. While safety-belt and shoulder harness are standard equipment, parachutes are normally carried only for test flights and for contest flying. After control and instrument check, the tow-rope (200-250 feet of manila or nylon rope with securing rings at both ends) was secured to a quick-release hook under the nose and then to the tow-plane. In order to preclude the possibility of pulling a pilotless sailplane into the air, the tow-rope is never secured to the sailplane until the pilot is at the controls and ready to go.

On a signal from the sailplane pilot, the wing-walker rocks the wings slowly up and down to instruct the tow-plane pilot to take up the slack in the tow-rope. When this is done, he holds the wings level to indicate that the sailplane pilot is ready for takeoff. As the tow-plane moves forward on its takeoff run, he continues to hold the glider level for a short distance until sufficient speed is reached to assure aileron control.

The sailplane pilot feels a slight jerk as he begins to move and hears the nose skid scraping on the runway. Slight back pressure on the stick brings the sailplane onto the wheel and after a roll of 100-200 feet it is in the air.

* * *

Climb-out is usually on "high tow" with the glider above and behind the tow-plane, clear of the upper limits of the prop wash and at an airspeed of about 55 mph. If the "low tow" is elected, the glider is held just off the ground until the tow-plane has climbed to about 50 feet when the climb-out is begun. As in formation flying the glider position is correlated to that of the tow-plane. This is normally slightly to the left of and about 10 feet above the longitudinal axis of the tow-plane. Maintenance of this relative position in turns requires a momentary delay in the initiation of banks and in resuming level flight. Turning inside the tow-plane will result in a slack rope with a subsequent lunge of the sailplane when slack is taken up, while turning ouside will result in increased airspeed with a resultant tendency to "kite" and skid.

While the airplane tow provides the greatest flexibility and assures a desirable altitude, other methods of launching are frequently used. A 2500-4000 foot length of wire is used to pull the sailplane into the air like a huge kite, either by a moving car or a stationary winch. Altitudes obtained are between 800 and 1500 feet. These methods are particularly suitable for the initiation of short flights to provide practice in airfield pattern flying and in approach and landing techniques.

* * *

By prior arrangement we had agreed to release at 3000 feet over the field which should, in stable air and in the absence of thermal upcurrents or orographic lifting, give us about 20 minutes in the air. The nose was dropped slightly to pick up airspeed and take the pull off the tow-rope and the release knob was pulled. On release a climbing turn was initiated to the right while the tow-plane turned to the left. As airspeed was reduced to about 40 mph, a pleasant calm settled over the cockpit. The quiet and lack of vibration seemed almost eerie. The wail of a locomotive whistle and the drone of the tow-plane were easily audible over the rustle of air around the canopy and over the wings.

We did a series of shallow and steep turns and stalls. The latter signalled by a slight tail buffeting, were smooth and easy and were accomplished with a negligible loss in altitude. During these maneuvers, Steve continued to emphasize the importance of remaining oriented and of keeping the location of the airfield in mind so as to remain within gilding distance of it at all times.

After using half of our release altitude, we headed back toward the airfield with the objective of being at our first key point (opposite the intended touchdown spot on a fairly wide downwind leg) at 800 feet. The approach was started from there with airspeed increased to 45 mph. As in other aircraft, excess speed provides an increased margin of safety. The approach pattern is planned so as to provide excess altitude which can be dissipated as desired by proper use of spoilers. In the trainer full spoiler setting will double the rate of sink while in higher performance types the effect is substantially greater. The turn to base was made at about 500-600 feet. A fairly long base leg is normally used so as to permit the pilot to play the turn to final. The final leg was then established and a sufficient degree of spoiler used to set up a glide path to the selected touchdown point. Release of the spoilers would, of course, extend the glide path while further application would steepen it. Since the landing has no shock-absorbent ability, the glider is not stalled onto but is flown onto the ground. This also assures increased effectiveness of controls in the event of crosswinds or turbulence. The landing run is reduced by brakes making sure that sufficient momentum is retained to carry the sailplane clear of the active runway.

* * *

The next several flights provided the opportunity for further familiarization with the sailplane and for the improvement of techniques. Increased emphasis was put on coordination in turns to minimize altitude loss and on airspeed control. Right and left hand approach patterns were flown and greater landing accuracy sought.

Two auto-tow launches were accomplished. With the trainer faced into the wind, 2500 feet of wire was extended forward to the tow-car. Slack was taken up on the rocked-wing signal and when the wings were held level, the tow-car accelerated rapidly. After breaking ground a gradual climb at about 55 knots was maintained to 100 feet altitude. From that point the glider was pulled up steeply. When the drag of the tow-line was felt the glider was levelled out and the rope released.

* * *

On the second day I was soloed in the 1-26 medium performance sailplane. It proved to be substantially more responsive to control pressures than the 2-22. Takeoff and climb-out were not unlike the 2-22 but the greater performance became apparent immediately after release. Stalling speed is about 26 knots. Gliding ratio of 23:1 is about 30% greater than the 2-22 providing an increase in duration and range potential. The approach pattern is similar except that it is flown at a slightly lower airspeed. Vertical control is increased through the greater effectiveness of the larger spoilers.

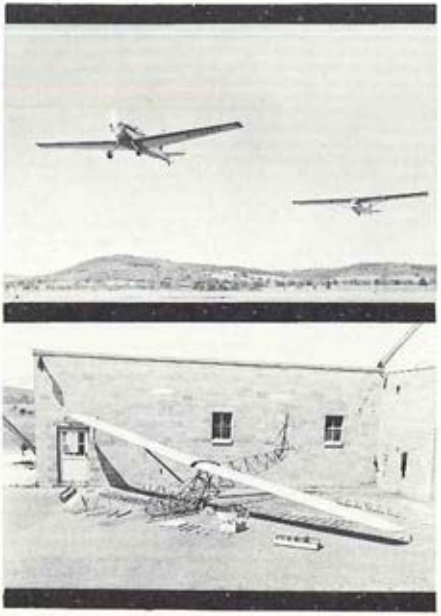
Once these fundamentals are mastered, the way is open to the real thrill and challenge of soaring flight. From your release point what altitude can you gain, what duration can you achieve, and what distances can you cover?

I plan in a later article to cover these aspects of soaring flight as well as contest flying and the requirement of the *Federation Aeronautique Internationale* for the award of the "C," Silver "C," and Gold "C," as well as the cherished Diamond "C."

For those who may be interested, *The Soaring Society of America*, a nonprofit organization which governs motorless flight in the USA, is located at 12536 Woodbine Street, Los Angeles 66, California (P.O. Box 66071). *SOARING Magazine* is published monthly. Associate memberships are $5.—and regular memberships $10—annually.

PHOTOS

OPPOSITE PAGE: the Schweizer 2-22C two-place training sailplane. BELOW (top to bottom): A Schweizer 1-30 powered airplane is shown towing the 2-22C two-place training sailplane . . . The Model 2-22C two-place training sailplane is shown in kit form.



The Nature of the Beast

Commonly accepted among the AA fraternity are such aeronautical terms as *dihedral, VTOL, clobber, RON,* and a host of technical and non-technical terms, all of which are somewhat confusing to the ground-bound layman.

Although comparatively new to the publishing business —six years do not a professional make—we perk up to another jargon, that of the *printing industry.*

In the event we tend to be a *term-dropper* from time to time, here's a brief glossary of the technical terms commonly used in *this shop*:

PICA — A publisher who never takes the editor to lunch.

FONT — Editorial copy that was formerly lost.

RETOUCH — Hitting the Boss Lady for another five spot.

SERIF — The man hanging around the back door.

* * *

CURSIVE — Editor who holds up an issue for 6 days waiting for an ad. (§).

ROMAN TYPE — Gina, who else?

WHITE SPACE — Something you'll never see in this publication.

STUFFER — What you'd like to tell an absentminded subscriber to do but don't when he doesn't notify you of his address change but reams you for not delivering his issues.

* * *

ILLUSTRATION BOARD — Editor who thought he'd received the final photo of a VIP boarding a helicopter.

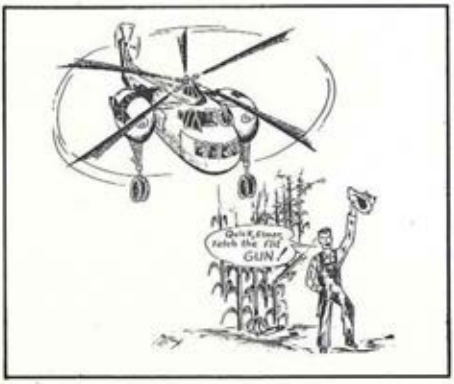
BROADSIDE — What the printer mails us each month in the form of an invoice.

BULLET — Brief bull sessions in the shop.

* * *

MASTHEAD — State of the shop's lavatory when said chamber is clogged by our staff, transient AA visitors, the usual relatives, several non-productive children, and the weak-kidneyed IBM repairman.

EM — Printers in general. As in "Let 'em wait for their money."



AERIAL "POINT" FOR MR. K

Pilots and six helicopters of the 33d *Transportation Company* of Fort Ord's 52d *Transportation Battalion* recently flew cover for the special train that carried Soviet Premier *Nikita Khrushchev* and many other foreign and United States dignitaries from Los Angeles to San Francisco Sunday, Sept., 30th. Their mission covered the checking of track ahead of the approaching train. The mission had Army pilots and the California Highway Patrol reviewing plans to fly cover from Van Nuys airfield, the starting point for the operation.

CIRCULAR — Approximate path of the editor with 3 pages to fill and no copy on hand.

VIGNETTE — Even a steady loser in this business is bound to in time.

* * *

NEGATIVE — A senior officers usual reply to our request for pertinent news copy.

STOCK — When the ads don't come in, the publisher (and editor) are . . .

ROLL FED — Editor who can't walk up one flight to the beanery for hot lunch.

* * *

FLAP — Conservative description of the state of the organization when the addressing machine breaks down.

TWO-FOLD FLAP — When the addressing machine *AND* the bundling machine break down.

* * *

SADDLE STITCH — Editor's rump discomfort when he overhears the Publisher phone for a Canasta partner.

BLEED — Condition on finding an empty mail box.

IN BED — An issue locked up, finished, done, completed.

THE
ARMY AVIATION ASSOCIATION
OF AMERICA, INC.

NATIONAL EXECUTIVE BOARD SCHEDULES NOVEMBER MEETING IN WASHINGTON

Bryce Wilson, President, AAAA, has scheduled a Fall meeting of the *National Executive Board* at the Marriott Motor Hotel on November 13th and 14th. Some fourteen National Board members are expected to attend the two-day meeting. Chapter Presidents are encouraged to attend, or are invited to forward Chapter or membership proposals to the National Office for inclusion in the meeting agenda. As in the past, the Board meeting will start with a Friday evening session and will conclude with the Saturday afternoon session.

MIDEASTERN MEMBERS ACTIVATE 7th REGION

The AAAA's seventh organized Region, the *MIDEASTERN REGION*, was activated in early October following a meeting of the officers of the *FORT EUSTIS* and *FORT MONROE CHAPTERS*. The new region, which embraces Association members in West Virginia, Delaware, and that part of the state of Virginia 60 miles distant from the District of Columbia, is the second Region to adopt the streamlined Regional structure calling for a President, an Executive Vice President, a Secretary, and a Member-at-Large from each of the Organized Chapters within the Regional area.

Col. Robert F. Cassidy, one of the thirty initial members of AAAA, was elected President of the new Region and represents *MIDEASTERN* membership at the National Board level.

PLANNING MARKS N.Y. CHAPTER ACTIVITIES

Increasing its membership appreciably following its initial social-educational meeting, the *METROPOLITAN NEW YORK CHAPTER* scheduled a follow-up *"stag"* at Governors Island, N.Y., on October 30th. *Cols. Charles E. Haydock* (Pres) and *Gordon L. Kinley* (VPA), and *Anthony Sacca* (Sec) developed the programming for the second meeting. Following a presentation by *Capt. Floyd Petty*, Fort Monmouth, Chapter members participated in an election to replace the Chapter's interim slate of officers.

The Chapter plans a large December or January meeting for members and their wives. *Brig. Gen. Clifton F. von Kann*, Director of Army Aviation, and *Col. Robert R. Williams*, Chief, Air Mobility Division, OCRD, are the tentative guest speakers for the third meeting.

FORT McCLELLAN CHAPTER ACTIVATED

The *ALABAMA REGION'S* third Chapter, the *FORT McCLELLAN CHAPTER*, has been activated, the Chapter to attain full recognition upon the completion of its initial Chapter slate. *Col. Robert H. Schulz, ALABAMA REGION* President, was instrumental in expanding Chapter activity throughout the Region, personally assisting Fort McClellan members in activation procedures.

GEN. MEYER ADDRESSES HEIDELBERG STAG

The *HEIDELBERG CHAPTER* held its quarterly meeting on 11 Sept. at the Molkenhur Restaurant, *Lt. Col. Russell Humphrey* presiding. There were 39 active members and three honored guests present; *Maj. General Thomas Van Natta*, USAREUR G-1 (Army Aviator), *Brig. General Richard D. Meyer*, Deputy Chief of Transportation for Aviation, and *Major Bywaters*, accompanying *Gen. Meyer*.

General Meyer was on a tour of Europe visiting Transportation Units, and the Chapter was fortunate in having the General on hand to give us some news from the "Marble Palace." *General Meyer* talked on Flight status "suspensions" and recent developments of new equipment for Army aviation. He also touched on a most important point, that of being an officer first and then an Aviator.

Col. Humphrey is leaving soon for Orleans, France, and *Maj. Colozzi* will be the new president. *Capt. Jowarren Shively*, was elected the new treasurer vice *Sgt. Geiser* who is also leaving for Orleans.

Major Colozzi has planned a meeting of all officers during October to outline our program for the coming year. We believe we now have an "operating" organization.

President	Major Carl A. Colozzi
Executive VP	Major Ralph O. Bennett
VP, Army Aff	Major Jack Denhart
VP, Pub Aff	Capt. John R. Brown
Treasurer	Capt. Jowarren Shively
Secretary	Capt. Algin S. Hawkins

— Capt. Algin S. Hawkins

PHOTO ABOVE: Gen. Meyer (2d from left) is shown chatting with, left to right, Chapter officers Lt Col. Russell Humphrey, Capt. Jowarren Shively, and Maj. Carl A. Colozzi during the recent HEIDELBERG CHAPTER meeting. (U.S. Army photo).

PROGRESS (AND PIZZA) IN PANAMA

(Ed. Note: We cannot account for the receipt of the following 29 June photo-story in early October. The bananas still seem to arrive on schedule and in the usual ripe green state, although the particular banana boat carrying this message may have had drop shipments at Bombay and Melbourne before hitting New Orleans. Here 'tis anyway.)

AAAA members of the 937th Engr Co (Avn) (IAGS) and USARAADC held their first meeting activating the USARCARIB CHAPTER in early June. Although our first meeting consisted of little more than electing Chapter Officers (See photo), we promptly initiated our social activities four days later with a *Pizza Party* at *Lt. Col. Jack W. Ruby's* quarters. A good time was had by all thanks to lots of excellent pizza, and the efforts of *Lt. Daniel L. Knotts* in organizing a witty skit, *"The Playhouse Players."*

Worthy of note is the fact that though our chapter is new we claim 97% AAAA membership of all aviators stationed in the USARCARIB area. We feel this is quite an achievement considering the distances involved, and we hope to go 100% AAAA shortly. Thanks to the 937th Engr Co we have members in Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, Panama Canal Zone, Colombia, Ecuador, Peru, Haiti, and the Dominican Republic. In addition to covering a fair sized pea patch we believe we have started the AAAA's southernmost chapter (Rebels, take note!)

The newly elected USARCARIB Chapter Officers in the photograph are from left to right: *Lt. Ronald C. Rex* (Sec), *Lt. Charles A. Spencer* (Trea), *Lt. Henry E. Schwarz* (VP, Pub Aff); *Capt. Eugene N. Jones* (VP, Indus Aff), *Capt. James C. Crawford* (VP, Army Aff), *Capt. Claude E. Hargett* (Exec VP), and *Lt. Col. Jark W. Ruby* (Pres).

CHEYENNE FLY-IN A SUCCESS

The *PIKES PEAK CHAPTER* held its first *Fly-In Get-Together* at Cheyenne, Wyoming, during mid-September and although we didn't have the turnout we had hoped for, everyone who attended had a fine time. A more detailed story on the *Fly-In* will follow. We were in Cheyenne with the Navy *"Blue Angels"* and enjoyed meeting this fine group of military pilots. The Cheyenne Chamber of Commerce gave the *AAAA* and the *Blue Angels* a Cocktail Party on the evening preceding the big weekend and our two groups were together off and on throughout the entire *Air Fair*. (Once airborne, however, these fellows and our low and slow members had a good bit of real estate between them.)

Board members who were present are found in the photo above. They are, left to right, your reporter, *Sgt. Edwards*, enlisted advisor to the Chapter Board; *Capt. Young*, ExVP; *Lt. Cass*, Sec; and *Capt. Gomolchak*, VPA.

— Major Harold G. Waddell
President, PIKES PEAK CHAPTER

ROUNDUP

Twenty-two Army aviators, including one ARNG pilot, are now receiving monthly indemnities under the Association's Flight Pay Protection Plan . . . Membership credentials for those members joining AAAA in September and October were delayed pending the receipt of the *improved Scotchlite Car Trunk Emblem*. The initial '58-'59 *Car Trunk Emblems* did not fare well under outside weather conditions. The new *Emblems* have been plasticized, this extra "coating" accounting for the longer production time . . . Some 320 members have earned and have been forwarded the distinctive *Booster Lapel Insignia* . . . Overall AAAA membership stands at 4,830 and should surpass the 5,000 total by January 1st . . . It's not too early to submit nominations for the "AA for 1959" Award. Who's your man?

NEW SLATES

MIDEASTERN REGION

(West Virginia, Delaware, Va. outside 60 mi. of D.C.)
President: Colonel Robert F. Cassidy (MONROE)
Executive Vice President: Major Alma Chamberlain (EUSTIS)
Secretary: Major Robert Filby (MONROE)
MEMBERS-AT-LARGE
Captain Gordon House, FORT EUSTIS CHAPTER
Lt. Colonel William G. Kilmer, FORT MONROE CHAPTER

CORRESPONDING ADDRESS
Colonel Robert F. Cassidy
President, MIDEASTERN REGION, AAAA
Randolph Hall
Fort Monroe, Virginia

31ST TRANSPORTATION COMPANY CHAPTER

(Fort Benning, Georgia)
President: Captain Woodrow W. Brown
Executive Vice President: Captian Robert E. Morris
VP, Army Affairs: CWO Lee R. O'Berry
VP, Industrial Affairs: CWO Walter L. Fisher
VP, Public Affairs: CWO Bruce C. Nicholson
Treasurer: WO William P.. Kegelmeyer
Secretary: Lieutenant Karl W. Seidl

CORRESPONDING ADDRESS
Captain Woodrow W. Brown
President, 31ST TRANSPORTATION COMPANY CHAPTER
31 Transportation Company (Lt Hel)
Fort Benning, Georgia

Officers of the FORT EUSTIS CHAPTER Board pose for an informal grouping during a past meeting. Front left to right are: Capt. Patrick N. Delavan (Sec); Capt. William F. Dobbins (VPA); Capt. John Bergner (ExVP, since departed on PCS); Lt. Col. Edwin L. Harloff (Pres); Capt. Arthur G. Keith (VPP); and CWO Martin A. Jetton (Treo). (U.S. Army photo).

LEAFLET

A four-page leaflet outlining the *Purposes, Programs, and Progress of the AAAA* is available should you require general information about the organization. Basic questions on the Association, its organizational structure, and its membership requirements are found in the leaflet. For a copy, write: AAAA, Westport, Connecticut.

100% AAAA
CLASS 59-13-2, USAAVNS
FORT RUCKER, ALABAMA

The Association is proud to publish this group photo of Class 59-13-2, the first and only 100% AAAA class now in attendance at Fort Rucker. "Togetherness" is more than just a slogan. They are from left to right, front row, Lts. H. Edmonds, Jr., P. J. O'Donohue, J. D. Bates, W. D. Gardner, R. E. Lindstedt, P. D. Vanture, T. L. Gordy, C. Teeter, N. W. Coleman, R. L. Burns, L. R. Sprowls, J. J. Harrington, & L. Weinberg. Back row: Lts. J. J. Berner, J. Kennedy, A. S. Budd, Jr., R. D. Renfro, & R. A. Herbold; Capts. R. W. Ruckland & W. M. Tantu; Lts. J. C. Tobias, J. D. Kincaid, M. E. Morris, J. M. Langston. (Photo: Wally Martin).

New Members Joining AAAA Within Recent Months

NORTHEAST AREA
(Mass-Conn-RI-NH-Me-Vt)

WO Robert T. Ramsbury
CWO Mike Rodriguez
Mr George E. Behlmer
Mr Edward E. Burritt, Jr.
Mr Robert A. Humphrey
Mr S. Vern Ellerthorpe

EASTERN AREA
(NY, NJ, Pennsylvania)

Capt William R. Lupton
Lt Frank J. Theaman
Mr W. E. Felty

WASHINGTON REGION
(Md., D.C., and Va within 60 mi. of D.C.)

WO Donald W. Dvorak
Capt Billy E. Rutherford
Lt Robert A. Lawson
PFC Arie A. Sinet
Capt Richard J. Read
Maj. John G. Cleveland
Lt Alfred Y. Edwards
Capt Richard L. Dawden
Capt James F. Haynes
WO Charles D. Robertson
Mr. Edwin C. Ward
Lt Carl Selavka
WO Donald W. McPeak
WO Joseph H. Murray
WO Wallace L. Sherwood
CWO Marvin D. Ficklin
Capt Edward J. Sunek
CWO Robert W. Johnson
CWO William J. O'Donnell
Sp/5 James H. Graham
Capt Harold L. Baker
WO Curtis W. Turner
WO Shiv K. Chopkar
Maj Samuel M. Drew
Capt Lubert Wing
CWO John L. Stewart
Capt John Roderick
Maj Jack D. Wells
Mr. John D. Foglesonger
Maj Robert M. Borenske
Capt James F. Hamlet
Mr E. A. Schneider
Mr R. D. Duttin
Mr John H. Bernhart

MIDEASTERN REGION
(W. Va., Del., and Va. outside 60 mi. of D.C.)

Capt Wallace J. McGuire
Mr. John Coffman
Capt Ray A. Hudson
Lt William A. Graham
CWO Joe W. Griffin
WO Albert F. Badia
Lt Donald N. Matheny
Maj Thomas B. Richey
Lt Clifton H. Manning
Capt James Sulpizi
Lt John G. Bupenske
Capt Patrick M. Delaven
WO Perry T. Yowell
Lt Lewis J. McConnell
Maj Robert Winkler

SOUTHEASTERN AREA
Florida, N.C., S.C.)

Lt Keith J. Rynott
Lt Thomas A. Stevenson
Lt Eugene G. Miller
Lt Ronald L. Baker
Lt Roy H. Olson
WO Roy L. Bennett
Capt Allie L. Junko
Maj John F. Barry
Capt John E. McGregor
Lt Charles A. Bryan, Jr.
Capt Jack C. Coffman
Lt Harold J. Kent
Lt James W. Bradin
Lt Jack S. Agnew
Capt Morris J. Brady
Lt Charles E. Richardson

GEORGIA REGION

Lt John W. Fust
Lt Charlie D. Hooks
CWO James Delaney
Lt John H. Ditzler
CWO Samuel F. Ellis
Maj John F. Barry
Lt Harold J. Kent
Lt Thomas J. Towle
WO Grady T. White
Lt Thomas R. Messick
CWO Jose Anarga
CWO Harold D. Herring
Capt Guy M. Covington

SOUTHERN AREA
(Okla-Tenn-Ark-La-Miss)

CWO Martin P. Merz
SFC Melvin E. LeMay
Lt Clinton B. Vestal
CWO Wilfred W. Welch
Capt George F. Kish
Mr Rex H. Madeira
Mr A. L. Charipar
Mr E. L. Storie
Mr T. C. Wadley
Mr C. A. Howard
Mr F. D. Butcher
Mr H. H. Schaaf
Mr C. P. Ellstrom
Mr J. H. Creighton
Mr M. P. Fitzgerald

CENTRAL AREA
(Ill., Ky., Mich., Ohio, Ind., Wisc)

Lt William R. Ellis
Lt Donald L. Hovda
WO Robert D. Smith
Lt Wilfred A. Jackson
Capt Rossie Rankin
Lt Alejandro F. Martinez
Lt Robert J. Albert
Mr. Perry A. Flemmin
Lt Sidney G. Gamon
Lt Carl R. Helber
Lt Gordon A. Hoppe
Lt Harry E. Jensen
Lt Francis J. Kadonsky
Lt Warren E. Lewis
Capt Gordon W. McMahon
Lt Richard E. Roador
Lt Lee A. Rohde
Capt William E. Walker
Lt Mason P. Young
Lt John T. Nornberg
Mr Robert H. Schwigel
Lt Charles A. Spees
Lt Fred A. Stranahan
Lt Harold E. Weiss
Lt Mark L. Fischer
Lt Anthony D. Crook
Lt Edmund L. Van Dervort
Capt Keith W. Oakes
CWO Frank M. Donahoo
Lt John W. Smith
Capt Wm. C. Dalrymple
Mr F. G. Compton
Mr G. R. Gehrkens
Mr J. L. Helms
Mr Arthur P. Adamson
Mr Donald E. Geehring
Mr Robert K. Olson
Mr Robert B. Johnson, Jr.

ALABAMA REGION

Lt Herbert T. Sisk
CWO Harold R. Scott
Lt William B. Bennett
Lt David D. Cottrell
Lt Robert W. Tallgren
Lt John D. Michael
Lt Richard R. Ballweber
Capt Joseph D. White
Lt Karl P. Kammer, Jr.
Lt Douglas M. Pryde
Lt Roger J. McEwen
Lt George W. Sibert
Lt Richard G. Adamski
Lt James W. Froelich
Capt Delyle G. Redmond
Lt David M. George
Lt William V. Vaughn
Lt Curry B. Spivey
Lt Robert J. Rodgers
Lt Robert A. Dey
Lt Joseph J. Shaute
Lt George B. Milburn
Lt Willard B. Morris
Maj Phillip J. Cole
Lt Robert N. Tredway
Lt Garret G. Roosma
Lt Winsfred F. Jones, Jr.
Capt William W. Schwartz
Maj James O. Townsend
Lt Theodore P. White
Lt Garry L. Petesch
Lt Gennaro J. Jacomino
Lt Duane L. Ginter
Lt Malcolm A. Maedeen
Lt John R. Deely
Lt John R. Davis
Lt Donald T. McDevitt
Lt William R. Creel
1/Col Robert I. Walton
Lt William M. Owings
Lt Robert B. Vanear
Lt William J. Carter
Lt Ernest D. French
Capt James A. Johnson
Lt Jeffrey D. Brock
Lt William D. Dantzler
1/Col Ritchie Garrison
Lt Paul W. Dumm
Lt Charles R. Knowlen
Lt Davies R. Powers
Lt Richard O. Fish
Lt Garry L. Clark
Capt Eugene F. Crooks
Lt Frederick G. Tripp
Capt June H. Stebbins

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Capt Preston G. Gant
Lt William S. Kilto
Lt Philip O. Wolf
Capt Charles A. Campbell
Lt Elijah F. Mason
Lt William I. Fox, Jr.
Lt Norman W. Vertrees
Lt Walter E. Parker
Lt Benj. L. Abromowitz
Lt Rodney D. Wolfe
Lt Harold M. Ramey
Maj James E. Ingram
Lt Carroll O. Durham
Lt George H. Pickett
Lt Gene B. Bill
Lt David Bowser
Lt Larry E. Lowe
Lt David L. Funk
Lt Walter A. Ratcliff
Lt Thomas W. Wheat, Jr.
Lt Richard H. Butler
Lt William S. Kilto
Capt Ulirich Herman
Lt Jack E. Davis
Capt Rayburn K. Hensley
Mr Robert L. Truax
Mr J. H. Boyle
Mr T. A. Campobasso
Mr J. B. Mathis

MIDWESTERN AREA
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Mr L. A. Edmonds
Mr Del Roskam
Mr W. D. Elkenberry
Mr William Marriott
Mr Derby D. Frye
Mr Jack L. Leonard
Mr J. J. Pahlen
Mr Robert L. Lair
Mr H. F. Waring
Mr M. F. Vanik
Mr Verne Hudson
Mr Don Hufford

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Mr Robert P. Norton, Jr.
Mr Robert W. Reynolds
Mr Charles M. Seibel
Mr N. D. Showalter
Mr J. J. Clark
Capt Wilbur G. Hudson
Maj Harley J. Finley
Capt Marion F. England
Lt Gary V. Dennison
Lt Gene T. Boyer
CWO Richard W. Brown

NORTHWEST AREA
(Wash., Ore., Idaho, Mont.

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M/Sgt William L. Farrow
Lt William A. Lesh
Lt Kay R. Larson
Lt Garry Farmer
Lt Martin J. L. King
Lt Harold L. Rose
M/Sgt Robert S. Caufield
Capt Neil C. Meir
Capt John A. Duvall
Capt David L. Huntley
WO Richard P. Smith, Jr.
Sp/5 Clarence E. Hayley

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Capt Warren C. Hale
Capt Harry W. Townsend
Capt John D. Kennedy
Ft Frank J. Havelka
Lt William F. McGrath
Lt Isaac R. Sisk
Lt Donald H. Pritchard
Lt Lester A. Willcox
Lt William J. Gorman
Lt Hubert B. Smith
Lt Russell N. Pitts
Col Franklin G. Smith
Capt Lorentz W. Fladmark
Lt Bruce R. Harris
Lt Lynn W. Gerten
Lt John P. Tweddell
Sp/5 Paul H. Clements
Mr. Nathan G. Hargraves
Mr. Frank Nesemeier
CWO Richard L. Hatter
Sp/5 James A. Davis
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Mr D. E. Hoffman
Mr H. A. Evans
Mr M. V. Barasch
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Capt Arnold H. Buxton
Capt Leroy H. Hoeffler
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Lt Bennett W. James
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Mr F. O. Wilson
Mr M. C. Haddon
Capt Lauren S. Davis
Capt Ben L. Harper
Mr Paul I. Wood
Mr G. E. Rice
Col Paul H. Kemmer
Mr L. K. Petersen
Mr W. G. Myers
Mr Ralph J. Osborn
Sp/4 John F. Martin
Sp/4 Oscar Ramirez
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Mr Malcolm S. Harned
CWO Paul F. Drummond
Capt James F. Hill
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Lt George R. Kuntz
CWO James C. Payne
WO Donald D. Rodgers
Sp/5 Carroll R. Yeary

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Lt Charles S. Zeigler
Lt Paul E. Jackson
Lt James A. Bond
CWO Artie A. Heape
CWO Horace P. McCulloch
CWO Raymond Powers
WO Joe G. Marrah
Sp/5 Charles H. Milligan
Sp/5 Edward F. Shortman
Sp/5 Preston Rogers
Lt W. S. Bayer
CWO Clifford F. Max
CWO Donald L. Dodson
Capt Paul L. Bauereis
Maj Frank P. Barbour
Capt August Jamnicki
Maj Harvey E. Gill
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Capt Ben C. Rebman
Lt John F. Grace
CWO Felix J. Cole, Jr.
Lt Eugene F. Vaslaw
CWO Elwood L. Smith
Lt John L. Middleton
CWO Hadley F. Kittredge, Sr.
Capt Edward S. Hawkins
Capt Richard L. Dismuke

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CWO James F. Cain
Lt Arden W. Edwards
WO Paul J. Murphy
Lt Glen R. Judd
Capt Wallace L. Tate
Maj Austin F. Epsure

Lt Robert P. Plamondon
Capt Paul Ankney
Lt Robert L. Johnson
Lt Theodore H. Townsend

USARCARIB AREA

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Lt Eugene N. Jones
Lt Louis G. Marinacci

USARAL AREA

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Capt Myron K. Strand

CANADIAN AREA

Maj R. E. R. Barland

the ticket for '59

Application for AAAA Membership

I wish to become a member of the Army Aviation Association. I am a U. S. citizen, qualified under classification checked below. Please start my annual ARMY AVIATION Magazine subscription and send my membership credentials immediately.

☐ MEMBER: I am or previously were engaged professionally in the field of U.S. Army aviation in the active Army or in one of the Army Civilian Component establishments.

☐ STUDENT Member: I am currently engaged in student training at a recognized U.S. Army primary flight training facility or an Army Basic Aviation Maintenance Instruction facility. (Non-voting, non-office-holding).

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Membership Year Terminates on March 31st

☐ $6.00 Enclosed: (Applications submitted from April 1st through June 30th).
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☐ $3.00 Enclosed: (Applications submitted from October 1st through December 31st).
☐ $1.50 Enclosed: (Applications submitted from January 1st through March 31st).

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(Please Print)

ADDRESS.....
(Post Box Number, Residence or Quarters Address if Desired)

CITY.....ZONE.....STATE.....

☐ Army ☐ NG ☐ USAR SIGNATURE.....

Failure to indicate category of membership or lack of signature will invalidate this application.

ARMY AVIATION ASS'N FLIGHT PAY PROTECTION PLAN

Exclusively for AAAA Members

.....
(Please Print) Rank Name ASN Yrs. Service for Pay Purposes

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(Post Box Number, Residence, or Quarters Address is Desired)

CITY.....ZONE.....STATE.....

AMOUNT OF ANNUAL FLIGHT PAY.....

I certify I am currently on flying status and entitled to receive incentive pay, and that to the best of my knowledge I am in good health, and that no action is pending to remove me from flying status for failure to meet required physical standards.

Signature of Applicant..... Date.....

APPLICATION MUST BE ACCOMPANIED BY CHECK OR MONEY ORDER FOR ANNUAL PREMIUM
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