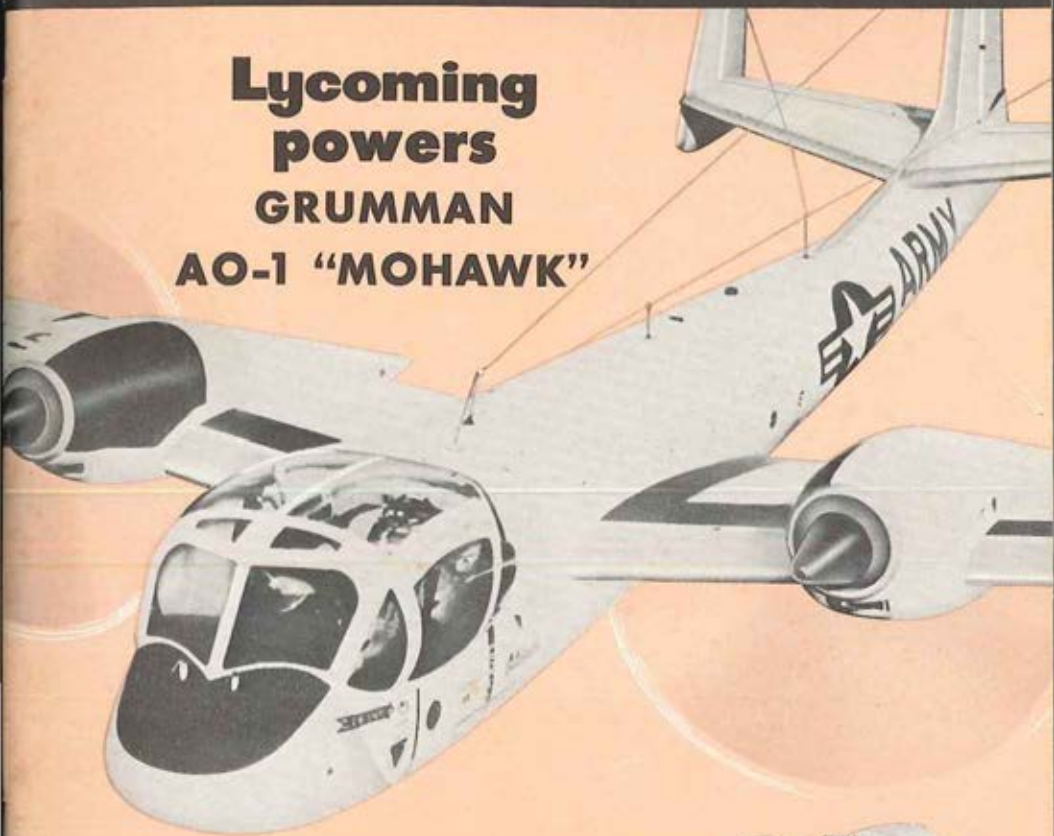


ARMY AVIATION

APRIL 1961

**Lycoming
powers
GRUMMAN
AO-1 "MOHAWK"**



Lycoming

Division— **Arco** Corporation
Stratford, Conn. • Williamsport, Pa.



Powered by two Lycoming T53-L-3 gas turbine engines rated 960 shp each.

Advancing helicopter design: *Dynamic Rotor*

In rotor development, as in all engineering progress, success comes to those dissatisfied with the limits of common practice.

By utilizing dynamic rotor models, McDonnell has avoided the disadvantages of common industry techniques. We have eliminated the lengthy, full scale, trial and error methods. McDonnell rotors are built full scale and whirlstand *proven* only after the designs have been perfected in model scale.

McDonnell rotor models simulate static and *dynamic* characteristics. They make possible dynamic wind-tunnel testing of complete helicopter models to the equivalent of 250 knots. This dynamic wind-tunnel testing allows rapid evaluation of design changes in conjunction with the use of analog computers and permits thorough correlation of theory and experiment.

Personnel experienced in production and production tooling enable a swift transition from design concepts to full scale production.

MCDONNELL

Designers and builders of F-101 Voodoos

Phantom II • Project Mercury Space Capsules • Talos Airframes and Propulsion Systems • Quail Decoy Missiles • Rotorcraft • Electronics Systems

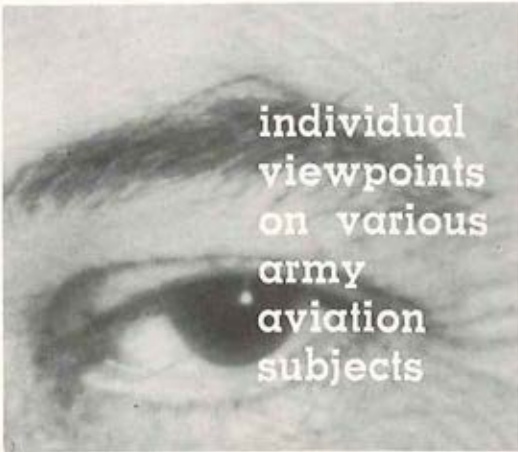
MCDONNELL AIRCRAFT

ST. LOUIS, MO.

Model



Instrumented
Rotor Mode



individual
viewpoints
on various
army
aviation
subjects

OPEN LINE

BLESSINGS OF COMMAND

Every aviator should seek and obtain *command experience*. It will be an eye-opener to him and, if he survives, will leave him completely injured to the physical hardships, dangers, and uncertainties of field combat whenever it may come. He will need no combat seasoning or anything else to make him ready to fight.

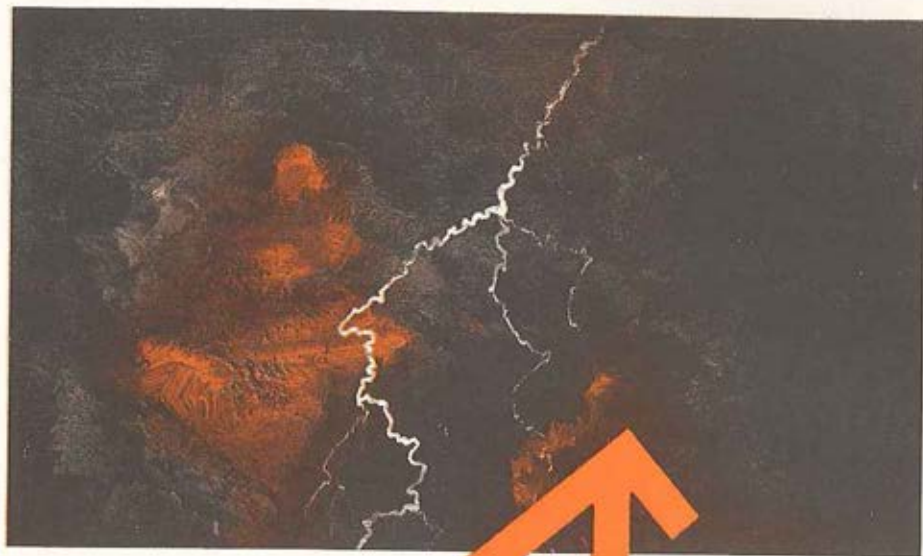
Troop duty or command duty offers many things now that were never available to commanders a few years ago, and certainly missing entirely from the experiences of those whose only troop duty was in combat.

Let's examine them carefully. Where there used to be a chain of command, there's a fan of command, made up of many chains of command, which instead of coming to a focus at the top, now starts at the top and comes to a focus at the level of the unlucky troop commander. This fan of command doesn't depend upon the brains and good judgment of the Commanding General, but includes the best thinking of ORO, WPA, George Washington University, Cornell University, General Motors, and Sears Roebuck.

Let's look at it in detail, but first, remember that each is complete within itself, and is not diluted or contaminated by contact with any of the other chains or with the overall mission of the unit itself. Therefore, it remains 99 and 44/100 per cent pure, unadulterated, and an end in itself with plenty of experts at all levels but the operating level to help make it go.

First, the personnel chain. This includes civilian personnel and military personnel. Military personnel are shipped in by one agency without regard to MOS or grade structure, while another agency makes darn sure that once you've trained them, they are declared surplus and shipped out again because they don't fit the TA or TOE. The morale division emphasizes the prestige of the non-commissioned officer while the other division, whatever it is called, directs that you reclassify them to specialists and if they don't go willingly—board 'em!

Civilian personnel is a wonder all of its own and deals with its own species in a manner that is both mysterious and time-consuming.



WHATEVER THE WEATHER

the Ryan AN/APN-97 Doppler Navigator for helicopters continuously and automatically detects and displays drift, vertical and heading speeds.

By providing sustained automatic hovering and **all-weather** capabilities, it made possible a vital breakthrough in anti-submarine warfare missions. The first, lightest, self-contained navigator of its kind, the APN-97 is in full production for the Navy, Marines and Coast Guard and is the **only** Doppler helicopter navigator in world-wide operational use. The APN-97 operates on the **approved** frequency of 13,300 megacycles and has demonstrated **very high accuracy**. Applications include: All-Weather ASW, Rescue, Navigation, Blind Landings, Automatic Hovering, Aerial Surveys, Drone Helicopter Control, Traffic Control. World leader in the field of C-W Doppler navigation, Ryan Electronics is also making significant progress in solving problems essential to the success of future missions into Space.

RYAN
ELECTRONICS

A DIVISION OF RYAN AERONAUTICAL COMPANY • SAN DIEGO • CALIFORNIA

Ryan offers challenging opportunities to engineers

Secondly, the G2 doesn't bother much. He sends you data classified "*Secret*" which must be disseminated to the troops who can only be cleared for "*Confidential*." Of course, he has compulsory courses in "*how to keep your mouth shut*," etc., which are in addition to the training schedule prescribed by G3.

Next, the G3 is a many-splendored thing that devotes only a very little time to the operational mission of your unit. It is mainly concerned with administering the alert plans and the training program. The alert plans all have many annexes, and many more inclosures, each of which have five paragraphs but are otherwise unidentifiable. They give you a combat mission, but authorize no means of carrying it out. It's "*Secret*," of course, which is a merciful thing to all those who can't be cleared higher than "*Confidential*."

Now for the training program. That's one of those things that is designed to keep a TD outfit busy during the twelve hours they're not performing their assigned mission. It includes the commander's time, the chaplain's hour, the safety lecture, the "why we fight" lectures, first aid, CBR training, code of conduct, annual rifle marksmanship, gas mask drill, and many, many more that are all a "*must*." Of course, the training of clerks to clerk, drivers to drive, traffic controllers to control traffic, dispatchers to dispatch, firefighters to fight fires, and personnel people to pay and promote is separate and unrelated to the above training.

Now the G4 is a piker. He is a stolid type who can't think of much for the outfit to do other than perform its mission. He stresses supply economy and sets up a

system designed to keep the stuff locked in the warehouse, but otherwise has little effect on your operation.

The Comptroller is a new face on the horizon. Personally, he's a nice fellow, but what a racket he has! You can't argue with him because you don't speak the language. Periodically, the door swings open and out pops a type who shows you how to draw charts and graphs so you will be able to tell what you're doing. If you have a TD outfit, he's there to change it with such suggestions as "*fire the first sergeant and let the company clerk handle the details*." It's the latest out of Harvard Business School so you must accept it and not be a reactionary. He will put fifty people in a 2x4 office building to save fuel and floor space. He tells you what kind of an organization you need to handle your job, though he hasn't the foggiest idea what you're supposed to do—but it works for General Motors, so get with it.

Then, there's the G-Whiz. He is hard to spot, but he throws in the parades, Saturday inspections, entertainment of VIPs., etc.

Now the IG is your friend. He's the only guy who knows the whole story and he adds up the score against you on all of the above counts—and boy—is it a black one!

Oh yes, the wife! She probably left several months ago.

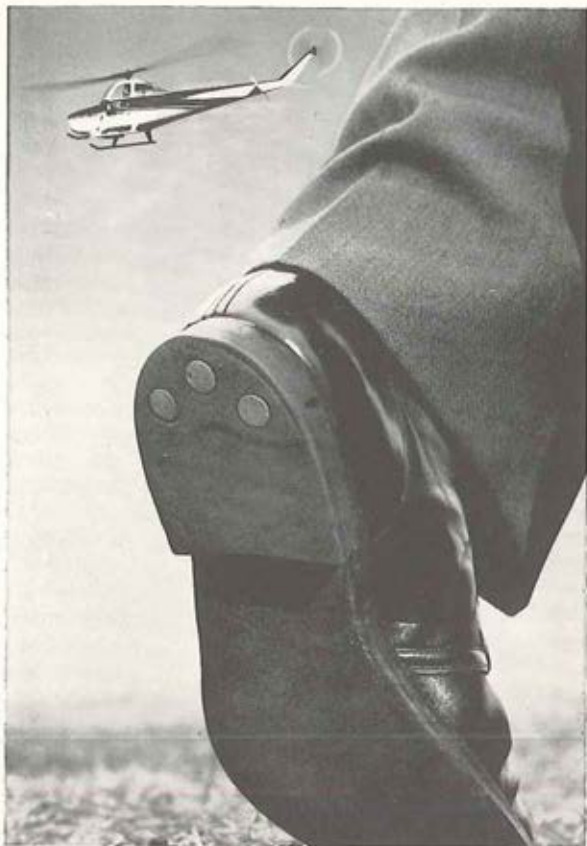
The above comments were intended to be offered in a humorous vein. However, they do point up one man's views on this business of command duty in the so-called peacetime Army. It's a job with frustrations all out of proportion to its real size or importance. I believe it could be made most satisfying and rewarding if only one thing were done. That would be for each staff section, beginning at DA level, to issue each directive only after it has been COORDINATED to determine its relationship with the programs of other staff agencies and its net effect upon the mission of the unit concerned. *Anyone for troop duty?*

MELVIN C. MONROE
Lt. Col., Arty
Fort Rucker, Ala.

ARMY AVIATION MAGAZINE

VOL. 10 — APRIL 30, 1961 — NUMBER 4

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How much should military transportation cost?

It depends. For a soldier or airman on his way to class, the cost would be that of a well-kept pair of low-cuts. For an officer on the move, perhaps a staff car. For high-priority liaison between America's multimillion-dollar weapon sites—dependable rotary-wing aircraft, such as the new, in-production Cessna CH-1C. There is no room in today's streamlined military for extravagance in transportation. Nor can there be patience with forms of transportation that are not equal to a nation's investment in men, money, and safe tomorrows.

CESSNA

Military
Division
WICHITA, KANSAS



World's most experienced makers of utility military aircraft

The NAP of the EARTH



[When you read this issue, Col. Jack Tolson will have departed the Pentagon and the post of Deputy Director of Army Aviation. If you wait too long to do your reading, he may even have vacated the rank of Colonel for what we hope will be the first of many stars. In view of his long association with air mobility in all its forms, and in recognition of the many, many occasions where he has carried the ball for Army aviation during the past two years, General von Kann has asked Colonel Tolson to write this month's letter from the Director.]

Dear Army Aviator,

In the past six years as Director of the Airborne-Army Aviation Department, The Infantry School, Assistant Commandant of the Army Aviation School, and Deputy Director of Army Aviation, ODCSOPS, I have probably read, nit picked, rewritten, and heard just about everything anyone could say or write about Army aviation and air mobility—probably some of it three or four times. In fact, I must be stale. However per General von Kann's request, on the eve of my departure from the aviation arena I consider it an honor indeed to write this month's letter.

In trying to get across to you something of value in this farewell message, the phrase (however trite it may seem) "... in the nap of the earth" seems uppermost on my mind. In point of fact, everything that we say or claim that we are capable of doing in combat is tied in with the statement that we will operate "in the nap of the earth." Our treetop tactics are applicable to all envisioned future operations whether

they be with rotary wing or fixed wing aircraft. By a little honest deduction, it soon becomes obvious that we are very likely to fail in all our ambitions, in all our boasts, unless we are *actually* capable of operating at treetop level.

WOULD YOU SURVIVE?

Let's do a little soul searching. How many aviators and how many units today are capable of operating in a tactical situation which requires operating on the deck in reasonable extremes of weather and terrain? How many would survive in the environment of the battlefield of the future? I hate to say it, but I'm not sure that we have many pilots or many units in Army aviation today who are really capable of operating "in the nap of the earth." (Now a word of caution to you "hot rods." After reading this, please don't bring on a surge of helicopter accidents involving telephone wires and power lines in an effort to prove me wrong.)



On the positive side, what can we do about the situation? There are two general areas which must be considered—training and equipment—and the former holds the immediate solution to our problem. Individual pilotage “in the nap of the earth” involves the most difficult navigation there is. It can only be accomplished after arduous training and detailed planning for each mission.

We must consider the possibility of securing three or four large training areas within the continental United States where aviation units can periodically move to and actually practice and train in the low-level environment. Pilots and units should not return to the same area each year but be rotated to one of the other areas in order to avoid developing intimate familiarization with terrain. Unless some major steps along this general line are undertaken, it is very doubtful that we will ever develop the low-level capability that will be mandatory for successful operations.

EQUIPMENT NEEDS

In the area of equipment, there is an urgent requirement for low-level navigational aids—a requirement that has existed for over twenty years. As early as 1941, our Army Air Corps troop carrier units foresaw a requirement to operate under certain situations at treetop level. After these twenty years of many stated requirements, the

equipment still does not exist which is feasible for installation in our Army aircraft to give greatly needed mechanical assistance to the navigational problem of low-level operations. Consequently, I repeat, the only solution today is repetitious practice and training in as varied types of terrain as can be made available.

REHEARSALS ARE OUT

Now I know someone is going to say that he has done this type of flying on various demonstrations, exercises or tests and “What-am-I-worrying-about?” However, I know that in all these cases the pilots were familiar with the terrain and usually had rehearsed their routes and their mission many times prior to show time. I’m afraid an enemy will not allow you to rehearse your mission, lay down panels, chop down trees, and otherwise lead an air mobile unit by the hand. This is a problem that we had best get on with at all levels, and get on with fast, or the Army will get caught with its aircraft down when the big test comes.

AIR MOBILITY, 1939

Now for a little reminiscing, if you will please forgive and bear with me. In the process of going through some old footlockers prior to the arrival of the packers, I ran across an old edition of the *INFAN-*



NOW BEING TEST-FLOWN AT THE US ARMY AVIATION BOARD, A TWO-SEAT FIAT G.91 LIGHTWEIGHT NATO JET IS SHOWN BELOW IN THE FOREGROUND; THE SINGLE-SEAT VERSION IN THE REAR. INSET: COL. MARSAN, FIAT CHIEF PILOT, CONGRATULATES MAJ. JAMES J. BROCKMYER, ODCSOPS, AS ONE OF THE FIRST TWO ARMY AVIATORS TO SOLO THE G.91. COL. JACK L. MARINELLI, PRESIDENT, USAAB, ALSO SOLOED THE G.91.



TRY JOURNAL, November-December, 1939. The article that immediately caught my attention was one written by a young second lieutenant entitled, "A Company Flies to Battle." The articles begins as follows:

"On a Wednesday afternoon in the middle of May at King Kalakaua Golf Club (Schofield Barracks, T. H.), my company commander spoke up right at the top of my backwing: 'Say, Jack, there's a chance that your company will fly to the island of Kauai in June.' He certainly picked the psychological moment. I dubbed my drive completely.

"Why should I get excited? Well, I happened to be the shavetail of the company that was to do the flying. In the second place, in spite of hardly knowing where Kauai was, I had never heard of a Doughboy unit being flown to action in the United States Army. I've checked on that point, and I can find no records to that effect. . . ."

Well, for the next twenty-one years that young shavetail was destined to be involved continuously in air mobility—one way or another. It is a little hard to believe that that was the situation—as recently as 1939—no doubt there has been real progress, but much still remains to be done. We must find a way to move faster to exploit all the possibilities of air mobility.

As I leave to concentrate on some other business for a few years, I am very optimistic now over what the many hundreds of keen and enthusiastic advocates of air mobility for our Army will produce. It has been a great challenge and experience, and I trust I shall be permitted to return to this vital program in the near future.

If any of your cross-countries take you by Africa, drop in to see me at Addis Ababa. So long.

Sincerely,
JOHN J. TOLSON
Colonel, GS
Deputy Director of Army Aviation,
ODCSOPS

TRIPHIBIOUS SUPPLY LINE—sea, air and land. For the Army Transportation Corps, Sikorsky's S-60 Skycrane recently lifted a Conex container from the hold of a ship at sea; minutes later placed it in a truck ashore. The S-60 can carry five tons. The next Skycrane, the turbine-powered S-64, will lift up to ten tons. Future designs will carry up to 40 tons. Loads can be carried by cargo hook, or in pods for transporting complete units such as field hospitals, communications centers or personnel.



UNITED AIRCRAFT CORPORATION
SIKORSKY AIRCRAFT DIVISION
STRATFORD, CONNECTICUT

BELL



ADDS 11



MORE WORLD RECORDS



Bell Helicopter team now claims 19 world records... takes lead from Russian MIL team!

THE 11 NEW RECORDS*

- 1 Speed Run, 100 kilometers (62.14 miles)**
Current record—101.14 mph—held by Russian KA-15
Bell 47J-2 record claim: 107.08 mph (Class E. 1. c)
- 2 Speed Run, 100 kilometers (62.14 miles)**
Current record—70.36 mph—held by Czechoslovakian H.C.2
Bell 47J-2 record claim: 104.61 mph (Class E.1.b.)
- 3 Distance in closed circuit**
Current record—None
Bell 47G record claim: 631.436 miles (Class E.1.b.)
- 4 Speed Run, 500 kilometers (310.70 miles)**
Current record—None
Bell 47G record claim: 73.985 mph (Class E.1.b.)
- 5 Speed Run, 1,000 kilometers (621.40 miles)**
Current record—None
Bell 47G record claim: 73.641 mph (Class E.1.b.)
- 6 Non-stop distance, straight line (Without Payload)**
Current record—None
Bell 47G record claim: 729 miles (Class E.1.b.)
- 7 Speed Run, predetermined point-to-point**
Current record—None
Bell 47G record claim: 102.392 mph (Class E.1.)
- 8 Speed Run, predetermined point-to-point**
Current record—None
Bell 47G record claim: 102.392 mph (Class E.1.b.)
- 9 Altitude without payload—Female**
Current record—14,760 feet—held by Russian Mil-1
Bell 47G-3 record claim: 19,406 feet (Class E)
- 10 Non-stop distance, straight line (Without Payload)—Female**
Current record: 214.129 miles—held by Russian Mil-1
Bell 47G-3 record claim: 404.36 miles (Class E)
- 11 Speed Run, predetermined point-to-point—Female**
Current record—None
Bell 47G-3 record claim: 91.26 mph (Class E)

Of the other eight world records held or claimed by Bell helicopters, seven were set by the HU-1 Iroquois in 1960, one by the 47D-1 in 1952.

*Pending official verification by the Federation Aeronautique Internationale.

MISSION BELL ACCOMPLISHED

Today, Bell claims 19 official world records, more than double the number held by all other U. S. makes combined, and more than any other nation. Eighteen of these marks were set during the past nine months! And, each Bell record was established, not by an experimental ship, but by a *production-line* model... HU-1 and Model 47 (H-13) series... military and commercial products of the aggressive Bell engineering-manufacturing-management team. These accomplishments are a measure of the high performance standards by which Bell is known to military and commercial users... evidence of Bell's undeniably superior capability to meet the helicopter performance demands of modern military planning.

For recognized world leadership in flight performance, look to



**BELL
HELICOPTER
COMPANY** FORT WORTH, TEXAS

A DIVISION OF BELL AEROSPACE CORPORATION • A **TEXTRON** COMPANY

FT. RUCKER REPORT

By

MAJOR GENERAL ERNEST F. EASTERBROOK

*Commanding General, U.S. Army Aviation Center
Commandant, U.S. Army Aviation School*



America's industry took a close look at one of today's fastest-growing military concepts—Army aviation—during the *U.S. Army Aviation Symposium* held here March 22-24.

Attended by more than 400 industrial and military leaders from across the nation, including *Secretary of the Army* Elvis J. Stahr, the three-day series of conferences represented a big step forward for Army aviation.

Speaking before the conferees at the *Association of the United States Army*—sponsored event, *Secretary Stahr* called upon the representatives of American industry to "focus their attention" upon the battlefield as well as the factory, and said that "Army aviation is one of the essential elements of the over-all capability which the Army must have."

He added that "If we have to fight again, we will be able to fight with far greater advantages, thanks in a large measure to the advancement of Army aviation, which is bringing about a revolution in the Army's ability to surmount the obstacles of time and terrain in the movements of troops, weapons, and supplies."

Besides *Secretary Stahr*, 36 high-ranking military leaders attended the Symposium. Among the visitors were *Gen. Clyde D. Edleman*, *Gen. Herbert B. Powell*, *Lt. Gen.*

Arthur G. Trudeau, *Lt. Gen. Paul D. Adams*, and *Lt. Gen. Gordon B. Rogers*.

The Symposium got off to a flying start at the Army Aviation Center with an informal dinner for the conferees sponsored by our local Bogardus S. Cairns AUSA Chapter the first night. *Brig. Gen. Carl I. Hutton*, the Aviation Center's first commandant, and *Col. Earl H. Blaik, USA-Ret.*, who coached many Army football teams to victory, were among the guests.

The industrial conferees—who represented the major industries of the nation, as well as some of the largest and smallest aircraft manufacturers—spent their first day registering and viewing industrial exhibits displayed by local Alabama communities.

Classified conferences on such subjects as "Soviet Capabilities in Army Aviation" took up the following morning as the Symposium rolled into high gear. An aerial demonstration attended by *Secretary Stahr* and the conferees at our Longstreet Range was the highlight of the afternoon of the Symposium's second day.

The demonstration also featured our 8305th Aerial Combat Reconnaissance Company's armed helicopters and performances by Army aviation's newest and fastest aircraft, the AO-1 Mohawk, and the AC-1 Caribou, biggest of our aircraft.

Secretary Stahr was guest speaker at a

FT. RUCKER

REPORT

dinner that night for the conferees, where he told attendees that *"The urgency of the missions with which the Army is charged in these perilous times merely emphasizes the need for industry to live up, in every respect, to the magnitude of its responsibilities as a member of the team."*

After more conferences and a panel discussion the next day, the industrial and military leaders—many of whom had visited us at the Army Aviation Center for the first time—left with a better knowledge of the past, present, and future of Army aviation.

The first production model of Army aviation's biggest aircraft—the rugged, twin-engine AC-1 *Caribou*—was delivered to the Aviation Center from its manufacturers, De Havilland Aircraft in Toronto, Canada, recently.

Pilots for the flight were Captains Thomas N. Hurst and Ephraim A. Berry, both of our Dept. of Advanced Fixed Wing Training here. The AC-1 was the first of five scheduled for delivery here by 1 July. The big airplane was immediately put to work by the Army Aviation School in training pilots who will use AC-1's in all conditions and all climates around the world.

Another aircraft in the news at Fort Rucker was the SD-1 *Range Drone*. The radio-controlled, aerial surveillance drone, whose successor may someday replace manned aircraft in inaccessible areas to save pilots and aircraft, was flown at our Longstreet Range for the Symposium by the U.S. Army Aerial Surveillance and Target Acquisition Platoon.

The demonstration flight was the 100th test flight for the drone made by USAASTAP. Stationed at the Center's Cairns Ar-

my Airfield, USAASTAP is charged with the mission of developing tactics, techniques, and procedures for the employment of the pilotless aircraft.

The AO-1 *Mohawk* served as a classroom for six of our pilots who made up the first class of AO-1 pilots to graduate from the Army Aviation School recently. They received fifty hours flying time in the aircraft and completed a two-day cross-country flight in the *Mohawk* before their graduation.

The course, first to be given in the medium observation aircraft by the School, is given only to experienced Army Aviators and is six weeks long. Graduates of the first *Mohawk* course were: Col. Warren R. Williams and Captains J. R. Knudson, H. Morris, H. A. Manieri, F. W. Short and R. F. Holleran.

Several of our helicopter pilots had a chance recently to work closely with fellow aviators of the *Alabama National Guard*, flying rescue missions in the stricken flood areas of Central Alabama.

Aviation School rotary wing pilots who participated in the operation reported that at least 500 persons, trapped by the rising flood waters of the Alabama River near Montgomery, were flown to safety in H-34 helicopters.

First Lieutenant George E. Leaf, one of the Ft. Rucker pilots, said 200 persons were evacuated in one day as the river reached its crest. Flying with Lt. Leaf on the missions were: Chief Warrant Officers James I. McGeehee, Bobby Bruce, R. F. Collins, W. M. Curls, and Instructor Joe Moore, all of the Department of Rotary Wing. Col. Oliver J. Helmuth, Rotary Wing director, and Maj. Alvin F. Burch, made a trip to the scene to evaluate the situation.

Fort Rucker and Fort Benning helicopters also played an important role in "Operation Haylift" after the people of the area were safely flown out of the disaster area.

Cut off by high water, some 6,500 head of cattle were saved from starvation when H-34s flew in tons of hay to feed the starv-

ing cattle stranded on dry ridges. Feed also was air-lifted in to about 5,000 chickens and 1,400 hogs.

Working closely with the 31st (Dixie) Infantry Division Aviation Company, our helicopters patrolled the flooded areas in an overlapping pattern and kept in touch by radio to see where they were needed.

Fort Rucker pilots involved in the operation praised the readiness and efficiency of the National Guard pilots—most are recent graduates of the Army Aviation School. The value of this emergency as a training exercise in tactical communications and practical airlift is evident.

Floyd Mann, director of the Alabama Department of Public Safety, referred to our helicopters in the emergency as "Angels With Rotary Wings."

The last of over 1,500 H-13 helicopters produced for the Army has been ferried to the Army Aviation Board here for testing. The final aircraft of the series is a modified version of the H-13 which became known as the "Korean Angel" when used extensively in the Korean Conflict for evacuation of casualties and for scouting missions.

The modified H-13, the JH-13K, utilizes a Franklin Turbo super-charged engine which enables the aircraft to maintain a constant horsepower from sea level to over 15,000 feet. In the past a helicopter's horsepower decreased as the altitude increased.

Resulting from this new capability, this helicopter incorporates additional product improvements such as: increased rotor blade length, a considerable increase in gross weight, an increase in pay load and an increase in maximum speed.

The "last H-13" is undergoing a 150-hour evaluation test with emphasis being placed on performance at high density altitude.

Page Aircraft Maintenance Inc., a Fort Sill, Oklahoma firm has been awarded a contract for aircraft maintenance and test engineering that has been held since 1957 by Test and Development Co., a Southern Airways branch.



SYMPOSIUM PHOTOS

SHOWN DURING THE RECENT AUSA ARMY AVIATION SYMPOSIUM AT FT. RUCKER, ALA., ARE, LEFT TO RIGHT, TOP PHOTO, SECRETARY OF THE ARMY ELVIS J. STAHR, MAJ. GEN. ERNEST F. EASTERBROOK, AND GEN. HERBERT B. POWELL, COMMANDING GENERAL, CONARC. CENTER PHOTO: SECRETARY STAHR EXCHANGING GREETINGS WITH BRIG. GEN. CLIFTON F. VON KANN DURING THE SYMPOSIUM DINNER. BOTTOM PHOTO, MAJ. GEN. D. W. MCGOWAN, CHIEF OF THE NATIONAL GUARD BUREAU; LT. GEN. ARTHUR TRUDEAU, CHIEF OF RESEARCH AND DEVELOPMENT; AND BRIG. GEN. HARRISON SHALER (USA, RET.) OF AERO-JET-GENERAL CORP. (U.S. ARMY PHOTOS).

The contract is to support the *U.S. Army Transportation Aircraft Test and Support Activity* located at *Cairns Army Airfield*. Page started operations March 1.

A birthday was celebrated at the Aviation Center recently when the *Second Battle Group, 31st Infantry* held its third Organization Day ceremonies here March 27. First organized at Fort Rucker, the Battlegroup has played a key role in supporting our Army aviation program since 1958. Besides their 8305th ACR Company with its armed helicopter testing operations, they actively support the School's training activities.

The unit celebrated its birthday with a parade and ceremonies honoring a member of the 31st Infantry who was posthumously awarded the Medal of Honor for heroism during the Korean conflict. He was *PFC Ralph E. Pomeroy*, for whom one of our new brick billets was named Pomeroy Hall. The dedication was attended by several members of PFC Pomeroy's family.

Another occasion was celebrated when the *Hayes Corporation*, which maintains hundreds of Army aircraft for the Army Aviation School, reached a million man-hours worked without one loss-of-time accident.

Congratulating Hayes employees for their efforts, *Hayes Resident General Manager W. T. Neal* pointed out that it would take one man working 40 hours a week, 50 weeks per year, 500 years to reach the million hours mark. The Hayes Corporation employs about 1,000 South Alabama, North-west Florida, and Southwest Georgia residents at Fort Rucker.

FOR THE RECORD

It's hard to believe that just seven short years ago *Cairns Army Airfield* here was just a "ghost airport" with two weather-beaten buildings and an old hangar with both ends missing.

If an aviator had to land there at night, he had to wait for a ground crew to light sand-filled gasoline cans to be able to see his way.

Today, *Cairns Army Airfield* ranks "unofficially" as between the tenth and eleventh busiest airports in the United States. The Field doesn't consume much space, just 212 acres, but it handles more air traffic daily than many of the larger airports in the South.

Last year 252,000 aircraft landed or took off at *Cairns* under visual flying rules and 24,000 under instrument flying conditions. This averages about 500 aircraft operations each day. The present facilities at *Cairns* are excellent and we are real proud of the Airfield Command people who handle this tremendous load of air traffic in such a safe manner as they do.

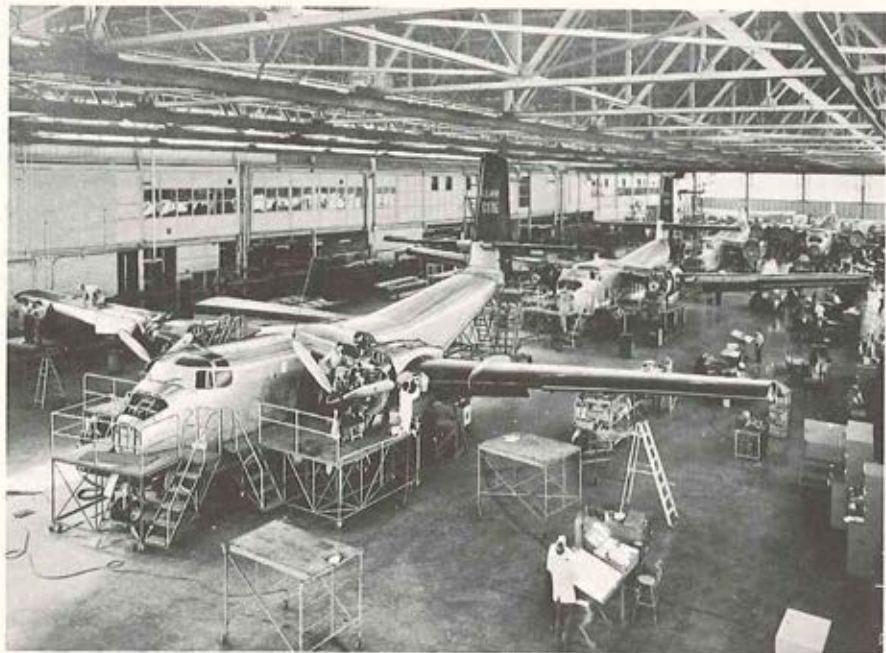
For instance, the field has not shut down for other than emergencies—and then for only 20 minutes at a time—since 1954. Less than 50 men are required to keep the 24-hour operation at *Cairns* running smoothly.

Its three fully-lighted, hard-surface runways; six hangars in constant use and modern operations building help make *Cairns* one of the most modern airports the Army has.

General Easterbrook

FORT ORD OPENS NEW AIR FACILITY

Formal dedication ceremonies of Fritzsche Army Airfield, named in honor of the late Major General Carl F. Fritzsche, were held in mid-March at Fort Ord, California. The post's new air facility, an all-weather, 24-hour-a-day operation having the most advanced instrument approach and departure systems, will ultimately be valued at \$7 million. It will be operated by the 52nd Transportation Battalion, commanded by Lt. Col. G. A. Lutz.



Caribou for the Army

ARE ROLLING OFF THE LINE AT DHC

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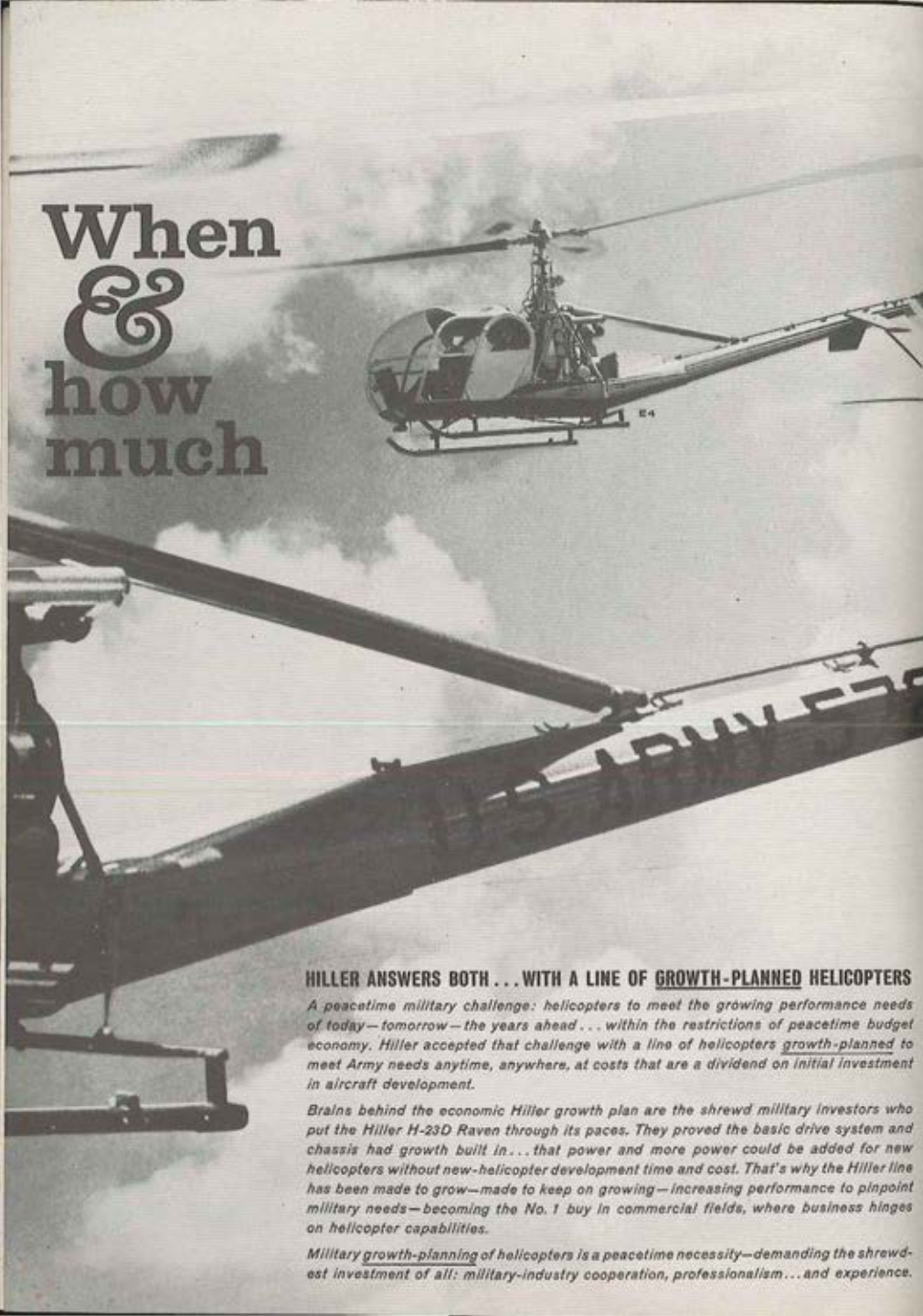
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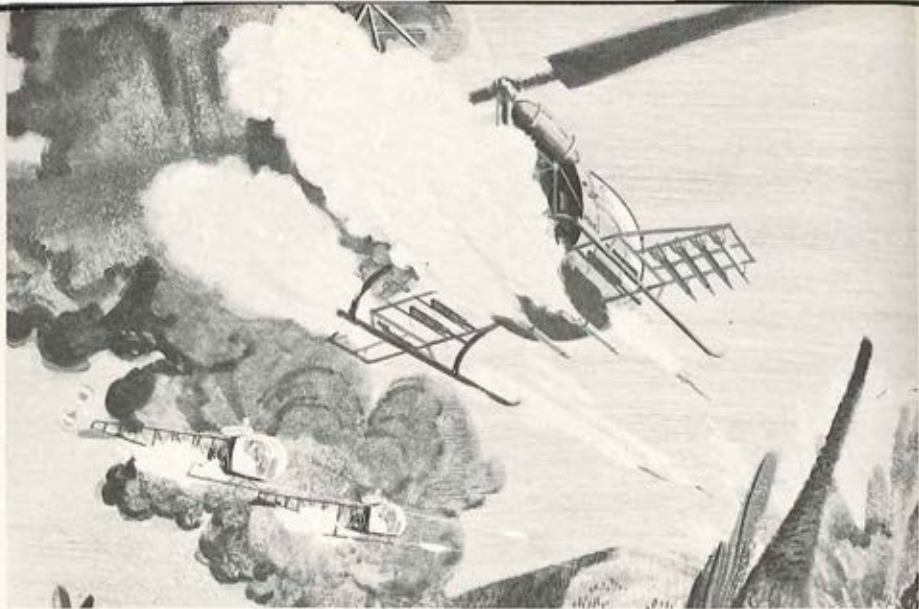
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LOW-DOWN TACTICS

By

CAPTAIN DARWIN D. BEAUCHAMP

**Logistics Operations Plans Div., Plans and Programs Office
U.S. Army Transportation Material Command**

The main battle may never move more rapidly than the speed of the slowest ground vehicle, or that finest of all weapons—the infantryman, but high speed cavalry-like maneuvers of some decisive forces will be more vital in the winning of tomorrow's battles than ever before.

Peripheral mobility is more certainly the essence of maneuver now than it was for Caesar's legions or Patton's armored columns. Where once the main body of troops was the focus of the battlefield, the stable mass of heavy forces has been traded for massive destruction elbow room.

But, with dispersion has come the realization that most ground vehicles are too limited to assure rapid transit of the distances and terrain visualized in tomorrow's

battlefield. The search for a new medium of peripheral mobility has settled on Army aviation, and in particular, upon that unique air-ground vehicle, the ubiquitous helicopter.

Our plans to exploit the advantages of ground-air maneuverability have resulted in the integration of the helicopter throughout our combat organizations. Subsequent experimentation aimed at enhancing the combat roles of the helicopter has succeeded in producing some effort to mount weapons for use against ground targets. Assuredly, the helicopter is on its way toward becoming a highly flexible and effective weapon system capable of far more than its past "taxi" service.

Much thought has been given to aircraft

vulnerability and in retrospect, to the aviator's chances of survival. But our thoughts have largely been directed toward passive defense. We have been preoccupied with the main battlefield hazard to Army aircraft—ground-aimed missile and gun fire. "Gotta stay down low", we say, "that line of sight angle is the trick. Avoid detection first, and scoot for cover second."

Surely our "nap-of-the earth" tactics are reflections of both prudence and the singular flight technique which sets apart and marks Army aviation as different from our sister air services. But somewhere in the course of development, we seem to have overlooked the problem of protecting our transport helicopters. Certainly the lumbering transport must also fly close to cover, but is ground cover protection against attack by other aircraft?

Have we forgotten the havoc created by fighter attack on unprotected transports? Let's not forget that fighters accounted for more aircraft kills in yesterday's war than ever did any "ack-ack."

SITTING DUCKS

You and I both foresee many helicopter missions in tomorrow's war. I see formations of transport "choppers" carrying critical loads of shock-troops, beans, blood, and bullets. I also see enemy killer helicopters streaking in to down the sitting ducks.

We may rationalize that we have armed helicopters, and that escort missions are logical duty. But this is not enough. Our helicopters aren't particularly fast. Our aircraft armament is designed mainly for use against ground targets. We do not have an Army organization designed to provide constant and highly skilled low-down air combat support.

Do we think that a potential enemy will not use exactly the same advantage of freedom in the air, even within the "nap-of-the-earth"? Do we think him too unimaginative to bring his firing position to us, be

his weapon goose gun or target-seeking rocket?

There is good reason to believe that he will be there to reap the harvest, backed-up with long experience in the business of operating fighting aircraft close to the ground. Remember that the conventional mentality of the enemy usually concentrates on active defense. He can be counted on to develop high-speed helicopters fitted with weapons designed for air-to-air combat close to the ground. The mobility advantage of the transport helicopter may be as effectively nullified by the airborne killer as the cavalry was made useless by the machine gun.

What is the counter-measure? *Why not escort destroyer helicopters?* The analogy which the word "Destroyer" connotes is good enough. Flanking, circling, dodging convoy escorts are easily imagined. Perhaps we see pairs of wing mates; some ranging out aside and ahead, some hugging the transport formation, ready to give instant protective and supporting fire. Or maybe we think of swift maneuvers of screening sky cavalry moving to intercept the intruding killers; closing to destroy with multiple machine gun fire, or, launching an explosive war head at longer range.

Any situation we visualize is comparable to the problems of marine convoys. It is likely that the general tactics would also be similar; the difference being only in the three dimensional movement capability of both attacker and defender.

GENERAL RULES

Some general rules may be envisaged even now. It seems probable that the basic defense will be violent counter-attack in coordinated units. The prime rule of defense will be to intercept the attack as far out as possible; to destroy the attacker before he fires; or to engage and draw off his fire, and expose him to other escort fires.

The basis for all maneuver will be initial

speed and flank position. Maneuver may take the form of lateral sweeps from one side of the convoy to the other, in scissor-like evolutions. It is conceivable that escort helicopters would be employed in an inner and outer screen similarly to naval escort vessels. It will be necessary to maintain, or successively come into flank positions from which an escort fire team may maneuver freely; to instantly intercept and bring the attacker under fire, in order to interrupt the attack as rapidly as possible.

THE 'WOLF-PACK'

Some fixed wing fighter tactics could be adapted. However, the destroyer escorts would probably seldom face single opponents of their own kind. Enemy attack will most likely be of the "wolf-pack variety, an obvious conclusion when we consider that the destroyer-escorts would seldom be equal to the number of transport helicopters to be protected. It is probable that attacking killers would "jump" an inferior number of escorts, to overwhelm or draw off the defenders, so to expose the transports to destruction. It follows that escort maneuvers would be designed to bring defending weapons into position to concentrate their fires from the flanks, and yet remain dispersed themselves.

The usable plane of operation will be flat and shallow. "Top-cover" tactics will be ruled out, or at least severely limited, just as "nap-of-the-earth" operation is adapted to the rule of avoiding line-of-sight detection by ground weapons. However, attack from superior altitude may occur when the enemy is not vulnerable to friendly supporting fires. Enemy attack from below is not very probable, excepting ambush, since the convoy would most likely fly at contour altitude.

Tactics themselves suggest the military requirements for a destroyer-escort helicopter. The escort will probably be smaller than most transports but will be more ruggedly constructed. It must be powered by

Do you have any thoughts on combat helicopter tactics? Others can benefit from your thinking. Put them in writing—and send them in.

an engine which can boost it up in a quick, sustained vertical climb. It must be able to accelerate rapidly to interception speeds. It must be able to lift, and maneuver with a weapons load which will give it the necessary killing power. In essence, it must be faster than its convoyed transports, yet still be highly specialized for air-to-air combat.

In this respect, the elemental design of the helicopter must be considered. The helicopter is blind from the top and rear, because of its main rotor or rotors, and/or its tail rotor configuration. This blindness may be compensated for by observation maneuvers, but the same configuration limits the positioning and aiming of weapons. Flexible and even remotely controlled turret mounts may easily cover zones below and around the helicopter, but may not be elevated safely beyond the rotor blade flexation limits. Flexible weapons are therefore perhaps better relegated to the transports.

The escort must provide its own flexibility. The helicopter is inherently the most agile of aircraft, and is admirably suited to rapid turning maneuvers. However, the destroyer escort must possess a higher order of attitude-change maneuverability, in order to tip up or down, and to bring its weapons to bear instantly on targets at different altitudes.

UNPLEASANT PICTURE

Conjecture may be carried to great length, entertaining thoughts such as a proper mix of weapons, detection devices, "leap-frog" escort interception timing on long convoy hauls, and many more. Professional contemplation of better things to do is pleasant, but the powerful picture of mangled transports and troops, evoked by thoughts of enemy killer helicopter attack, is reason enough for us to pause in sober reflection.

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The Nuclear Battlefield

by CAPT. WILLIAM G. HOOKS
Fort Benning, Georgia



UPI

With the introduction of the possible use of nuclear weapons in future wars, many changes have been made in the current concept of fighting on a nuclear battlefield. One of the most significant changes is the reliance on mobility to meet the changing situation expected on the nuclear battlefield. The necessity for increased mobility not only will affect the ability to move nuclear weapons from one area to another, but will have a definite relationship on the ability to move other supplies and equipment. To meet this requirement of added mobility, a well organized and flexible Army transport aviation unit is of paramount importance. To date, a unit capable of performing this mission is not found in support of the field army.

I would like to discuss the requirement for using Army aviation to move nuclear weapons within the field army. However, the great potential of moving other equipment and supplies by Army aviation should not be overlooked.

The present doctrine on use of Army aviation is to augment the capability of the Army to conduct effective combat operations. In performing this mission, one important facet is the mission of logistical support of the ground combat forces.

In the present type field army, the number of aircraft are as follows:

	<i>Air- plane</i>	<i>Heli- copter</i>	<i>To- tal</i>
Division Aircraft:	264	327	591
Corps Aircraft:	286	598	884
Field Army Aircraft:	113	535	648
	—	—	—
Total in a type field army:	663	1,460	2,123

In the total of 2,123 Army aircraft in a type field army, a large percentage of these aircraft are of the liaison, reconnaissance, command, utility, and light transport type and provide little or no heavy transport capability. The H-37 *Mojave* is the only helicopter now available that approaches the lift capability desired. The H-37 is capable of a payload of 8,645 pounds, including fuel. This, in itself, points out the great need for an aircraft or helicopter with a greater payload.

In addition to the relative small lift capability, other deficiencies now exist in our present aircraft as follows:

NUCLEAR/*Continued*

a. None of our aircraft have an all-weather capability, thereby restricting use during periods of reduced ceilings and visibility.

b. Improved navigational equipment is needed, both on the ground and in the aircraft.

c. Maintenance requirements must be reduced in order to increase availability of aircraft for day to day operations.

d. The noise level must be reduced to allow for more freedom of movement about the battlefield without detection.

e. Increased speed is essential in order to more rapidly meet the need for mobility and respond to the requirements of using units.

The importance placed on the use of Army aviation in the field army must not be taken for granted. In examining the Russian capability on use of helicopters, it is found that some of their best qualified aeronautical engineers have been put to work in producing a helicopter that will provide the degree of lift capability and suitability desired.

This fact, in itself, points out the great importance that the Russians have placed on achieving mobility in the air. Emphasis must continue with the development of technology on air mobility until a suitable air machine capable of performing the required mission is in the inventory of Army aviation units within the field army.

One of the most powerful weapons known to man today is the destructive power of a nuclear weapon. This weapon is now available to the field army commander for

use on suitable targets. Major General Hamilton H. Howze, former Director of Army Aviation, had this to say about the importance of nuclear weapons: *"The missile in the correct place at the correct time, equipped with the correct warhead and provided with a proper target, can be very effective. The problem is to make all these conditions come about. It would appear that light aviation is the best possible answer."*² There can be little question as to the feasibility of light aviation providing the desired mobility for movement of nuclear weapons within the field army.

In a quick comparison of the two primary means of mobility for nuclear weapons available in the field army, i.e., Army aviation and ground vehicles, the mobility of ground vehicles remains virtually unchanged from that found in World War II, whereas Army aviation is just now breaking through the technological barrier to more modern advances.

General Maxwell D. Taylor placed this in proper perspective when he made this remark: *"We must increase our ability to deliver atomic fires."*³

The emphasis here is, of course, to improve our ability to move our weapons from place to place by providing suitable mobility. The helicopter, or airplane, is not a routine substitute for the ground vehicle. The cost of the helicopter and airplane will restrict their use to those missions for which they are more logically suited.

Army aviation should provide the field army commander a means of rapid movement of nuclear weapons anywhere within the battle area. Army aviation support must be able to react instantaneously to a constantly changing situation in order that maximum use can be derived from this increased mobility. The helicopter and airplane can move where the ground vehicle cannot. In a typical battle area, many obstacles are going to preclude the movement of ground vehicles; however, the helicop-



ter, or airplane, should be able to accomplish required support missions.

With the advent of nuclear weapons on the battlefield, new obstacles are going to further reduce the mobility of ground vehicles. Some of these obstacles are: large areas of induced radiation, woods ablaze, and areas contaminated by toxic gases. These obstacles will greatly reduce the movement of ground vehicles, thereby requiring the commander to fully exploit the capability of Army aviation support.

One major factor to be considered which favors the use of Army aviation over ground vehicles is *speed*. Speed on the nuclear battlefield is essential to success. Speed to react to an enemy with the delivery of nuclear weapons will greatly enhance the probability of success.

Another factor is the preclusion of large stockpiles of nuclear weapons at delivery sites due to the enemy capability of destroying the delivery site. This will require more frequent use of Army aviation to distribute or redistribute nuclear weapons according to their planned use. In this connection, Major Patrick Powers had this to say relative to missile mobility: *"To achieve the full force of their deterrent and offensive power, bases for our nuclear weapons should be easily and quickly movable from place to place to avoid enemy neutralization."*⁴

To further elaborate on this problem of mobility for nuclear weapons, Army aviation appears to be the only unit capable of supporting a constantly shifting weapons delivery site in remote mountain, jungle, or forest areas such as might be encountered in certain areas of the world. The enemy will be constantly seeking the location of nuclear delivery sites, thereby requiring that these locations be highly mobile. Army aviation can provide this mobility. It will not be uncommon for a forward nuclear delivery unit to travel from sixty (60) to one hundred (100) miles to



Benning's 1st Avn Co receives Caribou

the rear to replenish their prescribed nuclear loads from the Army special ammunition supply point (SASP).

This problem of distance is greatly magnified when consideration is given to the probability of obstacles being in the way, thereby causing much delay. This delay could, in some cases, cause delivery units to be unable to fire a mission because of the lack of a nuclear weapon. Army aviation would not have to contend with the same obstacles as ground vehicles thereby expediting the delivery of a much needed nuclear weapon to the delivery site.

Consideration must be given to the limited capability of Army aviation to fly under adverse weather conditions; however, this limitation will exist only a small percent of the time when a requirement exists. Army aviation will be able to perform supply missions even during times when

NUCLEAR/*Continued*

the enemy has air superiority, whereas, ground vehicles would be highly vulnerable to enemy air attack as they moved along the main supply route (MSR).

Another important factor to be considered is that nuclear weapons will not generally be plentiful in all yields at the lower unit level, i.e., division. Units at division level will be restricted to a certain degree as to weapons available to engage a nuclear target. There can conceivably be many situations where the only means of solving this problem will be by the use of Army aviation to rapidly shift a weapon or a complete delivery unit from one position to another. The fact that most profitable enemy nuclear targets aren't going to present themselves for long periods of time, dictates that the field army be able to rapidly shift nuclear weapons or delivery units with much speed. Army aviation should be able to provide this means.

If Army aviation is to really perform the mission of providing mobility, one inherent characteristic it must possess is flexibility. It must be able to perform a variety of missions from different locations and above all must be responsive to the requirements of units in the field army. What is needed is a unit with a capability that will respond to a "You call, We haul" situation. Centralized control will generally allow for more flexibility; however, elements of this unit must be able to operate independently for short periods of time if maximum oper-

ational use is to be obtained. The aviation unit that can perform a mission of movement of nuclear weapons within the field army must provide the lift capability, speed, and equipment to fulfill the constant requirements of the field army in a nuclear environment.

If the field army is to react to the constant changing situations on the nuclear battlefield, it must be provided with an Army aviation unit capable of responding to the immediate needs of fighting units. Continued emphasis must be placed on the importance of the use of Army aviation in a nuclear war, especially from the standpoint of how fast air movement of nuclear weapons will allow a commander to quickly employ nuclear firepower at the critical time and place. The speed by which Army aviation can rapidly move nuclear weapons within the battlefield should be fully capitalized upon so as to pose a constant threat to the enemy.

Technological advancement must continue if equipment supplied to this Army aviation unit is to remain abreast of the rapid advancement of the Russian helicopter advances. There is a definite requirement for use of Army aviation in the movement of nuclear weapons; however, new equipment must be introduced into the inventory if this mission is to be fully performed. Army aviation is one of the greatest potentials for mobility available to the field army and if properly equipped and used should provide a means for a great increase in air mobility.

Grumman, Kaman Join Forces On VTOL Competition

Grumman Aircraft Engineering Corp. recently announced that Kaman Aircraft will participate in a Grumman proposal to design the first VTOL aircraft for the U.S. Army, Navy, and Air Force. In its proposal in the industry-wide, "Tri-Service VTOL" design competition now being conducted by the Bureau of Naval Weapons, contracting agency, Grumman would be the prime contractor and weapons system manager. Kaman would be responsible for the design of dynamic components for the vehicle such as lifting propellers, shafts, and gear boxes. ■

By S. G. TUCKER

PORTABLE SURFACING FOR ARMY AIRFIELDS



Army field commanders are fully aware of the importance of airfields and roads in any tactical or strategic military operations. Airfields and roads for such operations must be prepared in a few hours' time and must be able to withstand the accelerated traffic of military aircraft and vehicles under adverse weather conditions.

Obviously, no type of rigid or permanent construction is suitable for expedient operations; first, because of the time element in regard to curing, and, second, because of the enormous quantities of materials which would have to be transported to distant locales. Therefore, a surfacing which requires *no* specialized equipment and which can be placed by *unskilled* personnel is needed to improve the tactical mobility and operational flexibility of field armies.

Such a surfacing is under study and development at the *U.S. Army Engineer Waterways Experiment Station*, Vicksburg, Miss. A flexible prefabricated airfield and road-surfacing membrane has been developed which serves as an expedient dustproofing and waterproofing medium for soil subgrades.

The membrane consists essentially of a woven fabric that is coated on both sides with an elastomer to provide resistance to fire, water, weather, and abrasion. It adds no appreciable strength to the subgrade but acts to maintain the condition of the in-place or as-constructed soil subgrade. The membrane is designed for military operations which range from emergency operations of one week to sustained operations of several months.



MEMBRANE
SERVICE
TESTING,
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During September 1958–February 1959, membrane materials were service-tested at Fort Rucker, Ala. Emphasis was placed on the suitability of the materials as surfacing for hastily prepared combat-type Army airfields on which engineer construction effort would *not* be available. Tests were conducted for a period of several months to determine the effects of operating Army aircraft on the membrane during different climatic and seasonal conditions.

Fixed-wing aircraft such as the L-19 *Bird Dog* and AC-1 *Caribou* (photos 1 and 2) operated satisfactorily from membrane-surfaced runways. The dustproofing ability of the membrane surfacing was readily demonstrated when helicopter operations on unsurfaced soil areas were compared with operations on membrane-surfaced areas (photos 3 and 4).

From these field tests it was determined that *no* special equipment or training was required for placement of the membranes by Army field troops and that the No. 8 cotton duck, vinyl-coated sewn membrane

panel was a durable surfacing and could be placed rapidly in the field.

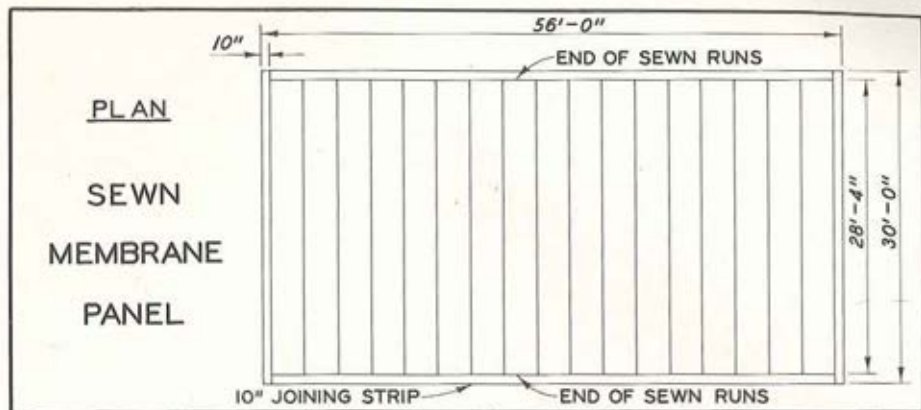
The sewn membrane panel was designed and developed at the *U.S. Army Engineer Waterways Experiment Station* so that it would be practical for use on both U.S. Army airfields and roadways. The panel consists of strips of the No. 8 cotton duck, 36 inches wide sewn together to make a waterproof surfacing medium approximately 56 ft. wide and 30 ft. long (fig. 1). Each panel weighs approximately 400 lbs. These particular panel dimensions and this weight were selected for the following reasons:

- A runway 50 ft. wide can be surfaced with the 56-ft-width panel and the excess material can be extended into ditches dug at the sides of the runway and covered with backfill so as to anchor the membrane in place.
- The 30-ft dimension fits the width of a one-way, combat-type earth roadway which consists of a 20-ft roadbed with ditches on each side.



DUST-
PROOFING
ABILITIES
MEMBRANE
(LEFT),
UNSURFACED
SOIL AREA
(RIGHT)





- The dimensions permit the panel to be folded into a neat, compact bundle that can be easily handled by field troops (fig. 4).

- The panel is light enough that it can be easily moved by four men.

A **diaper-shaped cover** is designed to contain the panel for storage purposes and to permit rapid handling (fig. 4). The ends of the sewn panels are connected with an adhesive lap joint (fig. 5) to provide a continuous surfacing.

The **sewn membrane panel** and adhesive are presently being integrated into the U.S. Army's supply system as type IV items. Procurement of these materials is estimated to begin during the 2nd Quarter of FY 62. A feed back of information from operational units on performance of this material will be utilized towards further improvement of the material and technique of application.

ABOUT THE AUTHOR

S. G. Tucker is currently serving as a project engineer with the Prefabricated Pavement Section, Flexible Pavement Branch, of the Soils Division, at the U.S. Army Engineer Waterways Experiment Station, at Vicksburg, Miss.



BEECH "IMAGINUTY" IN
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wide range of uses at a fraction of the cost of operating larger planes. Quickly and easily adaptable to the installation of ground surveillance radar, the L-23F can also be converted quickly for liaison and cargo missions. Its versatility is further demonstrated by its rapidly growing popularity as a multi-engine instrument trainer.

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USAREUR REPORT

The investigation of a recent fatal L-23 accident reveals several good lessons worthy of study by every aviator. The mission was to ferry an L-23D aircraft on an approximate 9 hour flight. The first two legs of the journey were completed without incident, with two landings for fuel.

At the second fuel stop, the ICAO weather briefing revealed *severe ice, severe turbulence, and thunderstorms* imbedded along the route of flight. The route over some

HELD IN THE ARMS OF HIS MOTHER, MRS. PATRICIA ENRIGHT, BABY MICHAEL IS UNAWARE OF HIS UNIQUE ENTRY INTO THE WORLD. THE CHILD WAS BORN DURING A 35-MINUTE H-19D FLIGHT TO THE 20TH STATION HOSPITAL AT NURNBERG, GERMANY. SURPRISINGLY ENOUGH, THE 274TH MED DET (HEL AMB) CREW, HEADED BY PILOT CAPT. DONALD C. BUSH, RECEIVED THE "RUSH CALL" AT TWO IN THE AFTERNOON.



200 miles of ocean was to be conducted during *hours of darkness* and would require approximately four hours flight time.

Despite the advice of another aviator to remain for the night in view of the weather, the pilot filed a flight plan and requested an ATC clearance. The aviator cleared his own flight (2-2 pilot) although unauthorized (happened prior to issue of change 1 to AR 95-1) and in spite of the fact that a communications drop to USAFE Flight Service was available.

At about 1800 hours, the aviator took off and climbed to 11,000 feet, reported two check points and was over the ocean. A few minutes later an increase in altitude was requested from ATC and the flight was cleared to 13,000 feet. A change in frequency was directed by ATC and from that point on there was no further radio contact. Radar contact revealed that the aircraft made several snake-like turns on the airway from one side to the other; then the aircraft dropped to about 9,000 feet and disappeared in the darkness of a thunderstorm cell. No further radio or radar contact. No trace of the aircraft has yet been found.

Other interesting points from the investigation. The pilot had over 4,000 hours flying time but had not flown an L-23 for the past 90 days. The co-pilot had never flown an L-23 and was from another branch of the service. There was no evidence of overwater emergency equipment aboard the aircraft.

The ATC tape recording of the last radio contact when frequencies were switched indicated that the frequency repeated back to ATC by one of the aviators was 10 kilocycles off the frequency directed by the controller. The controller did not catch the error in the *read back*. The reason given by the aviator to another pilot at the last

refueling point as to why the flight couldn't wait until the next day and better weather was that he wanted to get home to spend Christmas with his family. Date of the accident: 23 December.

One of the most efficient Aviation Detachments in USAREUR is that of the Berlin Command, commanded by *Capt. Billy R. Goodall*. This detachment, equipped with H-13 and H-19 helicopters, possesses the only Army aircraft in the divided city. Although the area of operations is somewhat limited, the Detachment carries on a very important mission and has one of the highest availability and flying hour rates within USAREUR.

With one crewchief per helicopter plus the NCO in charge, *SFC Charles Kimbrough*, and a clerk-supply man, this unit demonstrates a tremendous spirit of efficiency, cooperation, and professional competency on the part of every man. Navigation is by pilotage and it is doubly important that one must know where he is at all times in relation to specific land marks. A flight of more than 15 minutes in any one direction will put you out of the Allied Zone. Congratulations again to you and your men, *Captain Goodall*.

The recent change of radio frequencies for military control towers to 118.0 has caused this frequency to be quite congested. This situation could be improved with better radio-voice procedures. First, wait a moment to see if anyone else is transmitting before you break in. Administrative traffic should be passed over to the FM frequencies that are available at almost every airfield, rather than cluttering up the VHF nets. A great amount of unauthorized and unnecessary words are used that could be eliminated by proper flight planning and telephone calls made on the ground.

In addition, much information often asked for over the radio is found in the *Jeppesen Manual*. For example, I recently overheard one aviator spend five minutes on the air, trying to determine the limits of a danger area. Long messages to be relayed to your wife or buddy also do not improve the situation.

Major *Neely R. Brown*, Seventh Army Aviation Section departs this month for reassignment to the 21. Major Brown has performed an outstanding job in the air traffic control field. All of us wish you luck in your new assignment, *Neely*.

Scientific Panel Meets at Ft. Eustis

The Army Scientific Advisory Panel, composed of 60 of the nation's leading civilian scientists, engineers, industrialists and educators, will hold its annual spring meeting April 17-19 at Fort Eustis, Va., with panel members concentrating on Army transportation problems associated with modern warfare. They will review current Transportation Corps research and development programs concerned with advanced air and surface mobility concepts, and will examine items of transportation equipment now in development.

Subpanels will study specific problems in the areas of air mobility; surface mobility; chemical, biological, and radiological weapons; communications and electronics; firepower; human factors; environmental research, and research and development management. The Army Scientific Advisory Panel was established in 1951 to assist the Secretary of the Army and Chief of Staff. Dr. Clifford C. Furnas, Chancellor of the University of Buffalo, Buffalo, New York, is chairman of the panel.

Readers of some of my past columns dealing with the V/STOL test beds, aerial jeeps, the joint service V/STOL transport program, the GEM, and other exotic vehicles might have gotten the idea that the helicopter is fast becoming obsolete.

Not so! The *Rogers Board* report clearly shows that the helicopter is and *will* continue through this decade to be the Army's primary operational VTOL aircraft. It has proven worthy of the title—"*mainstay of Army air mobility.*" Rather than discuss its demise, Transportation Corps technicians are hard at work on the means for its possible improvement.

I'm sure no one has seen a helicopter that will cruise at 200 mph, carry payloads up to 7,000 pounds, and have a ferry range of as much as 2,000 miles. But, based upon the research which we have sponsored to date, this appears to be a very realistic forecast.

How do we get this increased performance? First, as you might have guessed, the studies point to the necessity for a rigorous drag clean-up program. Army requirements for fuselage utility, as exemplified by the box car shape, somewhat hamper us in this respect but we are convinced that significant improvement is possible.

For example, the landing gear which accounts for a major portion of drag could be made retractable if other penalties are not too great. The rotor head pylon fuselage interference can be lessened significantly. Drag caused by the cooling system is already being reduced somewhat through the use of turbine engines. Such miscellaneous items as landing lights, antennas, handles, etc. also contribute to drag and



must also receive attention in any drag clean-up program.

Along with reductions in drag there is a requirement for achieving greater rotor tip speeds while at the same time avoiding the accompanying problems of rotor blade stress and excessive compressibility drag.

Studies to date indicate that a 50 to 60 percent increase in range can be attained from drag reductions of the type mentioned along with accompanying increases in speed. To carry this further, improved speed-range-payload characteristics spell increased productivity, i.e., same cargo missions can be flown faster and with fewer aircraft. Reduction in number of aircraft means *less* cost, *less* maintenance, *less* training, *less* POL, *less* pilots and trained maintenance personnel.

Our new LOH competition design selection board will pay a lot of attention to these problems in making its choice. Significant improvements in current production aircraft performance will be studied and introduced into latest models.

By

MAJ. GEN. RICHARD D. MEYER
Principal Assistant for Aviation
Office, Chief of Transportation

Cargo Handler's Dream

A hovering helicopter has been known to release as much as 100,000 volts, low amperage, of static electricity as some sadder but wiser ground cargo handlers can readily attest. Besides the severe shock in

MAINSTAY OF ARMY MOBILITY

juries to the personnel whose job it is to hook up external sling loads, there is an even greater danger from the presence of this charge, when explosives or ammunition must be handled.

The *Transportation Corps* has been conducting research under a contract with *Cornell Aeronautical Laboratory* that shows considerable promise toward eliminating this hazard. The project began about two years ago and preliminary field tests of the equipment were completed recently using an Army helicopter.

Airplanes build up static electricity, too, but the charge is easily dissipated by static dischargers on the wing-tips. Upon landing, the plane is "grounded." Because the helicopter moves more slowly, static dischargers are not really effective. Also, a hovering helicopter is not grounded until the ground handler grabs the hook and completes the circuit.

Cornell engineers wrestled with the problem for more than a year to determine whether a practical elimination system could be developed. The next step was the construction and bench tests of "bread board" equipment followed by preliminary flight research at Edwards AFB, where basic data on the nature of helicopter static charges was obtained.

This phase was followed by the recent flight tests in which an H-21 from Fort

Niagara, N. Y. was utilized. The tests included flights over plants and factories to determine whether more static electricity was present in industrial smoke concentrations. Next step is two months of extensive tests at Edwards AFB where a greater variety of helicopters and better test conditions will be available. According to the engineers, higher electrical charges are created in the *drier* climates. Also, some types of helicopters are known to build up these charges more readily than others.

We will push this project as rapidly as funds allow and hope to design useful hardware within the foreseeable future.

Iroquois "B" Deliveries Begun

The first of the HU-1B *Iroquois* helicopters are expected to be introduced into the Army inventory by the time this appears in print. Three "B's" were due at the end of March or early April—two to the *Transportation Aircraft Test and Support Activity* for Phase F logistical tests and one to the *Aviation Board* for the full scale Phase E test, including desert operation. The Contractor's Technical Compliance Inspection of this aircraft was made 7 and 8 February. The same month Bell delivered the last of the 110 HU-1A' from the FY 1959 buy, and will shortly be concentrating exclusively on producing HU-1B's.



PROGRESS FLIGHT TEST

The special instrumentation installations for the Chinook flight test program have been designed and fabricated for maximum operational flexibility. Multi-channel recorders and photo panel, weighing more than a ton in all, are mounted on slide-racks to facilitate installation, removal and substitution, so that scheduled rearrangement or correction of instrumentation malfunctions will cause minimum delay to the flight test program.

Instrumentation data can be telemetered to recorders located on the ground. Flight test engineers who are monitoring these recorders can request the test pilot to repeat a particular maneuver if recorded data appears to be inconsistent, or can approve his performing maneuvers to extend the test envelope when recorded data warrants such extension.

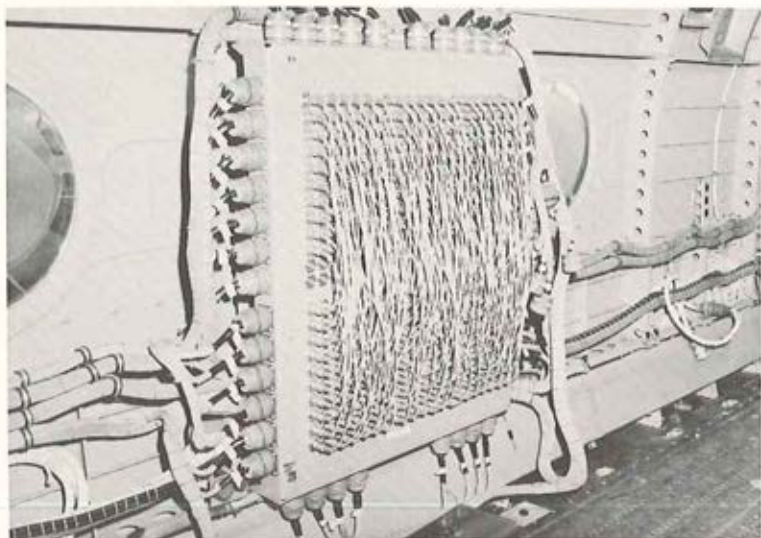


Slide-In Flight Test Instrumentation Racks

SUMMARY

STRUMENTATION

April, 1961



**Cargo Compartment, No. 1 Chinook,
Showing Instrumentation Patch Panel**

Expediting the exploration of the Chinook's flight envelope during Vertol Division tests will permit ensuing user-type evaluations to be conducted with few, if any, flight restrictions.

The first Chinook, complete with flight test instrumentation, is scheduled to be shop-completed and to be in the first phase of ground testing by the time this issue of ARMY AVIATION magazine is distributed.

VERTOL DIVISION
MORTON PENNSYLVANIA **BOEING**

Aviation Symposium

The *AUSA Army Aviation Symposium* conducted at Ft. Rucker, 22-24 March is covered elsewhere in this issue, but I want to add mine to the many other congratulations to the Aviation Center on their outstanding hospitality and on their highly professional demonstration.

From the research and logistics point of view, the opportunity to present our plans and anticipated problem areas to representatives of the aviation industry in the focus of significant policy statements by our most senior officers has been a great benefit. Thanks are also due to *AUSA* for their sponsorship.

We can be proud of the interest in and support for Aviation in the Army by important members of industry.

Bendix Develops ALARM System To Aid Maintenance Inspections

Electronic checkout techniques, similar to those used in missile launchings, are being tested on Army aircraft to determine if the airplanes are safe for flight, according to a recent Department of Defense announcement.

Army-sponsored research into the feasibility of this concept is being carried out by the *Bendix Corporation*, York, Pennsylvania, under a contract with the *U.S. Army Transportation Research Command*, Fort Eustis, Virginia. The Army may adopt this system in the future to check on the safety of its aircraft.

Known as *Project ALARM*, for Automatic Light Aircraft Readiness Monitor, the concept envisions the use of strategically placed sensors to forecast electronically the condition of various critical mechanical and structural components, thus saving valuable manhours in carrying out maintenance inspections on Army airplanes and helicopters.



INCREASING Aircraft Availability

Any Flying Hour Program which does not consider maintenance capability will fail!

Hours over-flown are not long term gains, but are borrowed from the future!

These facts are evident, yet what steps are being taken to assure that operations and maintenance are correlated? Normally, aircraft operations and supporting maintenance organizations are separate entities, each interested only in their respective missions.

A review of the *Army Aircraft Statistical Digest* reveals that in most cases, aircraft availability decreases in direct proportion to the increase of accumulated flying hours. Only one reason can exist for this condition. Maintenance capabilities are not being considered in determining a sound lo-

et's



ASE availability

BY

CAPTAIN WALTER D. YENNE

586TH TRANSPORTATION CO (AAHM&S)

USARL SUPPORT COMMAND

FORT RICHARDSON, ALASKA

lies in the means used to achieve this goal.

For example, providing aircraft availability is 50% and these 50% are flying the total program for all aircraft of that type, the balance between operations and maintenance is impaired. The accrual of flying hours must then be curtailed to the minimum essential to allow maintenance personnel to reduce the backlog and increase availability to acceptable standards.

Let's face the facts. Meeting a poorly coordinated program looks good on paper or charts, but when the Commanding General calls for all available aircraft on the morrow and only 50% show, who explains? There is only one explanation and that is "poor management."

We must remember that every entry on the "-3" is borrowed time, and that the debt can reach proportions to cause removal of a vitally important aircraft from service when critically needed. The only way to reduce these entries to the minimum is to allow maintenance sufficient time to make corrections before the roof falls in.

Logistics is a tyrant, and although all efforts are being expended to provide spare parts as required, *over-flying* of aircraft will defeat any sound program established. The end result is delay in receipt of EDP items, further reducing aircraft availability.

There seems to be only one solution to this major problem facing Army aviation today. That solution lies in the word, "*Coordination*." The increasing cost of Army aircraft, the consequent increase in repair parts value, the complexity of maintenance requirements, and the tactical missions must be considered as one basic problem. *Coordination* between operations and maintenance personnel is essential to assure a sound Army Aviation Program.

cal flying program. *Over-flying* of operational aircraft results in a backlog of deferred maintenance, excessive supply problems, unanticipated repair requirements, and undoubtedly in lowered standards of aircraft serviceability.

By computing the total number of maintenance man hours available and dividing by the number of hours of maintenance required to sustain one hour of flight, a sound and realistic flying hour program can be maintained. Maintenance man hour requirements will vary under climatic conditions and operational requirements.

All aircraft operating units try to reach the flying hour program goals established by Department of the Army. This does not create a problem. *The problem*

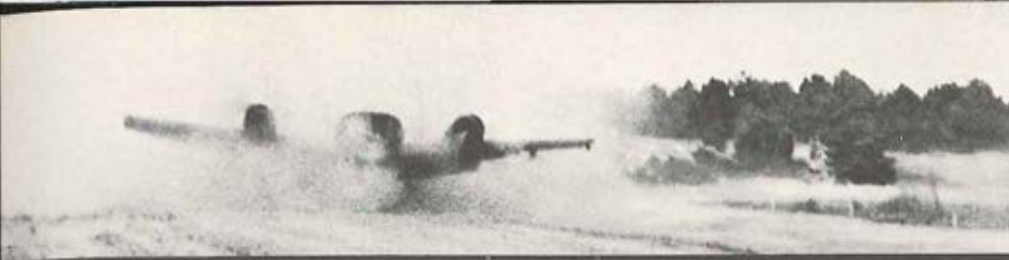
LAND...

**ON ANY
SURFACE...**

TAKEOFF...



**the ARMY MOHAWK
does it all in just 600
feet of cow pasture!**



The Grumman AO-1 Mohawk is a twin turboprop aircraft designed for electronic surveillance and observation missions. It features short-field capability for maximum operational flexibility. It's an all-weather craft—when the birds are grounded in snow, ice, or mud, the AO-1 will complete its assigned missions. The MOHAWK configuration offers:

- short-field takeoff and landing
- drop tank and supply pod capabilities
- operation from unimproved areas
- adaptability to various types of photographic and electronic equipment
- good low-speed control

Long a producer of reliable aircraft, Grumman now also develops new concepts in electronic systems integration, missiles, and space vehicles.

GRUMMAN

AIRCRAFT ENGINEERING CORPORATION

Bethpage • Long Island • New York



Maintenance Tips

NEED SUPPLY INFO?

Mike had a very informative conference with the Director of CDSA and his Deputy the other day, with reference to disseminating pertinent and timely supply information in this "Mike's Tips" column.

So, starting next month and each month thereafter, I'll be talkin' to you about this new feature TMC is offering until we run out of material.

In these issues I hope we'll be able to pass on to you pertinent information and guidance in supply matters on such subjects as:

1. Local Procurement
2. Supply Logistics Assignments
3. New Policies in Supply
4. Methods of Operations
5. Standards of Operations
6. Any other points of this big supply

operation and customer satisfaction which which we think you may need and want.

Too, if there are questionable areas puzzling you, these will be discussed, as we intend to provide at least one pertinent fact each time we go to press. We will try our level best to cover each item adequately, thereby assisting all field elements which are engaged in supply, logistics, and management.

Should there be any specific areas or questions, just write them to me and we'll get the answer off to you.

Any good or bad criticism of a constructive nature or any of your own ideas, which you know work, let us know too, 'cause we will then be in a position to be able to help you when you help us with the true picture representing facts.

"D" MARKS THE TIME

All Otter maintenance people who are concerned with R-1340-59 or R-1340-61, will, in the very near future, (if you have not already seen them) be seeing these engine cylinders marked with a "P", "D", "T", "B" in 3/16" high letters, located on the outside diameter of the cylinder hold down flange and positioned on the front of the cylinder of these engines. If you don't find it there because it may interfere with the

manufacturer's symbols or part numbers, look to the right of these symbols because they'll be as close as possible to that area.

The system has been devised to identify the total number of hours the cylinder has on it—"A" being 100:00; B=200:00; C=300:00; D=400:00; etc., etc., etc. This has been done to get rid of those cylinder assemblies with 4000:00 or better from further use on 1340-59 or 61 engines.

There is much more information, which Mike can't get into this article, contained in TM 1-2R-1340-1002, dated 27 January 61, so get a copy and familiarize yourself with these letter codings.

QUESTIONS FOR THIS COLUMN SHOULD
BE SUBMITTED TO: MIKE BUTTON, BOX
209, MAIN OFFICE, ST. LOUIS 66, MO.

QUESTIONS AND ANSWERS

Dear Mike,

While reading your article in the October 1960 issue of *ARMY AVIATION*, page 595, I saw you had a question on aviation fuel which you answered 100% in accordance with USA-REUR Manual 700-235.

For this reason, I am enclosing a copy of the manual which, if you haven't seen it already, might be of interest to you. We follow it like a —2 in our unit and so do most others over here.

Since the question was proposed it might be worth a thought to publishing the manual as a DA Manual for use by all Army aviators. Evidently its information could benefit some others like Admiral Oh, who like myself, didn't know just what this numbers racket was all about until I read 700-235. By the way, 700-235 is mandatory reading for all personnel in our unit Aviation Section.

Keep up the good work, Mike. I for one always read your column since you are in many cases away ahead of us over here in the land of Schnitzel & Suds on the latest pub's and procedures.

Capt. Jack O. Johnson
Opns Officer
Hq, 32nd Arty Brigade
APO 227, N. Y., N. Y.

Dear Capt. Johnson,

Thanks for the manual and those kind words of encouragement. I just gave aviation oil the

same treatment for dear old Admiral Oh, in copy just released for the Mike column, so be watching for that, too.

Also, I released a good (egotistical I) article to *PS MAGAZINE*, reference same subject, but including all aspects of *Aviation Fuel* handling. Stay on frequency for that, too.

Captain, your suggestion, reference a DA publication covering points contained in USA-REUR 700-235 manual, is a splendid idea; however, I have pursued this problem in Army aviation for quite a spell.

1st Step, see inclosed "Field Service Digest", which "Mike" was responsible for also. This was the step to try to offset dangerous practices by Army personnel handling JP-4 fuel.

2nd Step, (everybody involved), was TM 10-1107, February 1960, "Petroleum Handling Operations for Aviation Fuels", which is the DA TM which I'll recommend to all "pellows" as good reading in next month's column.

I guess it's the proper place now to insert the recommendation which I told Capt. Johnson I would make. So, everyone concerned with aircraft refueling operations should get this TM 10-1107, February 1960, and get a big bite of it! Mike can't make you dig into it, but for your own good I suggest you put this down as mandatory reading for yourself on your own.

Informationally yours,
MIKE BUTTON

INFORMATION, PLEASE!

For the past 3 years Mike's been giving out with his crystal ball findings and only once during that period have I asked for the "turning of the tables." So, I gotta come to you with a Mike's problem the answer to which only you in the field have. 'Tis this:

We need information on the condition in which you receive your packaged goods (no,

not your "Pinch Bottle" or "Old Granddad"), but whether the stuff you're getting through supply channels to keep the kites flying is arriving at the proper destination in good condition and is not all busted to h—l.

Are the "bits & pieces" which you order arriving in a bad condition, busted, and all that jazz? Are the containers overpacked,

MIKE BUTTON/*Continued*

either with pieces or packing materials? Are they arriving in what you'd classify as a wrong container or box for the type of contents? Any other reasons which you might think of that could possibly help us to offer better service for you?

We've got a local project afoot to save the taxpayers' moolah which we call "Treas-

ure Hunt" and each subdivision within this "House of Logistics" has their own pet they are pursuing.

This one is called "Wrap Up!"

So wrap up a small note to Mike; let me know and I'll see to it that something good for you will come from the information. Remember, we can't change or make improvements if we are left out of the picture, so, let us in on your gripes and we'll set them straight. Fine Show!

ARE YOU FIT?

Mike's just found that many of the Army's own trained maintenance personnel who are getting out of the service and even some who are already out and working in the aviation maintenance field are finding it quite difficult to hold certain maintenance jobs which they feel they are completely competent to perform, without the presently required FAA A & P Certification.

The people who pull the strings have this to say about the established requirements, which I feel is good news for all when they find themselves in the same position on some future date.

The U.S. Army has recommended to the proper people, and I quote:

"That a review of the method used to maintain academic and service records should be accomplished to determine the feasibility of furnishing the FAA (Federal Aviation Agency), formerly the CAA (Civil Aeronautics Administration), approved schools transcripts of academic and service records in order to expand and further implement those portions of Civil Aeronautics Manual 24 which cover mechanical knowledge, experience, and skill requirements.

"Also, a close relationship and co-ordination effort should be sponsored, jointly, by the FAA & the U.S. Army with a view towards monitoring course curricula of aviation maintenance programs to insure pa-

rallel training as training time limitations permit. This Army-FAA relationship should be further developed to permit experienced qualified personnel to participate in practical, oral, and written examinations at selected Army installations to add responsibility, authority, and prestige to service instructors and maintenance personnel."

As you all can see the right people are on your side and are fully aware of this common problem. Just the other day a group of experts from FAA & the Army got together to discuss the provisions of CAM 24 and they all seemed to agree that certain experience gained in the service over a specific period gives you the ticket to get into the inner sanctum to take the written examination. Last group (over 12 in number) who were qualified on the basis of past experience took and passed the written exam without being the least concerned about it.

So there you are, if you want your A & P ticket, go get it. I might add one more point: if you're working for the Army as a civilian and an ex-service maintenance man go to the CPO and have him check and coordinate with the military authority at the base.

Informationally yours,

Mike Button
William D. Bickham

RESCUE

The Kaman HUSKIE was designed to be a rugged, reliable rescue helicopter. It was bred for the boondocks. The number, nature and difficulty of the rescues it has completed since entering operational service prove it was bred right. Rescues involving Kaman helicopters which hit the headlines recently follow below, with on the spot photos to the right.

A. LARSON AFB, WASH.—

A Huskie hovering over the burning wreckage of a B-52D used its rotor downwash to keep flames away from the bomber's 128,000 pound fuel load until all 10 crewmen had been safely evacuated. (Air Force Photo)

B. CAPE HATTERAS, VA.—

When the tanker Pine Ridge broke up off shore, a Kaman HUK operating from the Valley Forge rescued 9 crew members and returned them safely to its carrier base. (U.S. Coast Guard Photo)

C. RANDOLPH AFB, TEXAS

USAF H-43 on standby alert reached the crash scene of a KC-97 tanker and worked with fire fighting crew to prevent flames from spreading to 4,000 gals. of spilled fuel, saving the aircraft. (San Antonio Field Photo)

THE KAMAN AIRCRAFT CORP., BLOOMFIELD, CONN.



*in national defense
KAMAN is a part of the rescue*

This demonstration photo became a reality at PLATTSBURG, N.Y., when one of the crewmen who bailed out of a crippled B-52 was injured when landing in an isolated area of 100 foot trees. The crew of a Huskie saved his life by hovering over the spot and lowering a medic to give first aid until rescuers on foot reached the scene.

TAKEOFFS

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LT COLONELS

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LUTZ, GA, 245 Ardennes, Ft. Ord, Cal.
STANSBERRY, CL, Stu Off Co, Camp Wolters, Texas

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BROWN, JP, 3733 Sig Ser Bn, APO 403, NY, NY
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CATE, HC, Jr., 17th Avn Co, Ft. Ord, Calif.
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COBB, BR, 561-B Farney Loop, Ft. Belvoir, Va.
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CONOVER, RL, USAEPG-6470, Ft. Huachuca, Ariz.
CROOK, GR, H-H, USAARMC Avn Comd, Ft. Knox, Ky.
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DARRAH, RF, Hq, 10 SFG Abn, APO 108, NY, NY
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FLANDERS, JP, 168 Harris Dr, Ft. Rucker, Ala.
FORD, JR, Box 256, Ft. Rucker, Ala.
FOURNIER, CA, 3752 USA Tng Cen, APO 46, NY, NY
FOUST, B, 2d Inf Bde, Ft. Devens, Mass.
FRANSDEN, DP, Avionics, Bldg 7145, Ft. Huachuca, Ariz.
GAINEY, JC, Co E, 32nd Sig Bn, APO 175, NY, NY
GARNEAU, LR, TOCC 2-61, USATSCH, Ft. Eustis, Va.
GORDON, ME, 3734 E. 27th St, Tucson, Ariz.
GRIFFIN, WR, 2 ACR Avn Co, APO 696, NY, NY
GRIMM, AH, 23 Trans Bn, 1 CD, APO 24, San Fran, Calif.
GUEST, DR, 3160 Case Rd, Columbus 21, Ohio



MASTER AA

CAPTAIN FRED W. MCGOWAN, FLIGHT DETACHMENT OPERATIONS OFFICER AT HQS, SECOND U.S. ARMY, FT. MEADE, MD., IS SHOWN BEING PRESENTED WITH MASTER ARMY AVIATOR WINGS BY LT. COL. ELMER M. FOX, SECOND U.S. ARMY AVIATION OFFICER, THE PERSONAL PILOT FOR LT. GENERAL RIDGELY GAITHER, SECOND ARMY COMMANDER, MCGOWAN IS A VETERAN OF 18 YEARS' SERVICE. (US ARMY PHOTO).

BRIEFING

DISCUSSING A DISPLAY OF ARMY AIRCRAFT ON FORT BENNING'S LAWSON FIELD ARE SENATOR PRESCOTT BUSH, LEFT, SENIOR SENATOR FROM CONNECTICUT AND A MEMBER OF THE SENATE ARMED SERVICES COMMITTEE, AND COL. LEWIS W. LEENEY, COMMANDER OF LAWSON ARMY AIRFIELD COMMAND. THE SENATOR VIEWED THE INFANTRY SCHOOL AND CENTER IN MID-MARCH. (US ARMY PHOTO).



ATT

SHOWN MARKING THEIR FLIGHT MAPS AFTER A BRIEFING ARE MEMBERS OF FORT ORD'S 17TH AVIATION COMPANY PRIOR TO FLYING A MISSION INVOLVING THE REMOVAL BY OTTER AIRCRAFT OF 50 SIMULATED CASUALTIES TO A FIELD HOSPITAL. THE ACTIVITY WAS PART OF THE UNIT'S ARMY TRAINING TEST DESIGNED TO TEST THE ABILITY OF THE UNIT TO FUNCTION UNDER DIFFICULT FIELD CONDITIONS. (US ARMY PHOTO).

CAPTAINS (Continued)

HAID, DJ, Box 453, Ft. Rucker, Ala.
 HANKINS, CA, Hq Det, Avn Comd, Ft. Knox, Ky.
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 HARRIS, TW, 6105 W. 54th St, Mission, Kan.
 HEATHCOTE, CJ, 329 Engr Det-Geod Surv, APO 231, NY, NY
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KING-SIZE

A SIKORSKY S-64 TRANSMISSION, THE LARGEST EVER BUILT FOR SIKORSKY AIRCRAFT, LITERALLY DWARFS THE TWO PROJECT ENGINEERS IN CHARGE OF THE S-64 PROGRAM. THEY ARE WALTER W. LYSAK (LEFT), SENIOR PROJECT ENGINEER, AND ROBERT J. TYNAN, PROJECT ENGINEER. THE FIRST PROTOTYPE MODELS OF THE ALL-PURPOSE TRANSPORT HELICOPTER ARE EXPECTED TO BE COMPLETED LATER THIS YEAR.

HU-1B UNDER TEST

SHOWN IN FLIGHT AT FT. WORTH, TEX., DURING BELL HELICOPTER COMPANY'S PHASE I FLIGHT TEST PROGRAM, AN ARMY HU-1B TAKES PART IN THE CONCURRENT YHU-1B TEST PROGRAM BEING CONDUCTED AT EDWARDS AFB, CALIF., FORT RUCKER, ALA., AND FORT WORTH. THE SERVICE TESTING IS DESIGNED TO ESTABLISH THE AIRCRAFT'S "ENVELOPE" OF FLIGHT PERFORMANCE, AND TO DEMONSTRATE STRUCTURAL INTEGRITY, STABILITY, AND CONTROLLABILITY.



INTERIOR

THE ENVIRONMENT OF JET AGE HELICOPTER TRAVEL CAN BE PLEASANT, AS PROVEN BY THIS INTERIOR VIEW OF A BOEING VERTOL 107 AIRLINER MOCK-UP. THE INTERIOR WAS DESIGNED BY WALTER DORWIN TEAGUE ASSOCIATES WHO CREATED THE INTERIORS FOR THE BOEING 707. THE VERTOL DIVISION BUILT THE MOCKUP AS A MEANS OF SHOWING CUSTOMERS INTERIOR POSSIBILITIES IN THE 107. "COFFEE, TEA, OR MILK?"

NOSE JOB

INSTALLED IN THE NOSE OF A MODIFIED BEECH 18 "FLYING TEST BED," CANADIAN PRATT & WHITNEY'S PT6 TURBOPROP/TURBOSHAFT ENGINE WILL SHORTLY UNDERGO FLIGHT TESTING. INSTALLATION OF THE CANADIAN-DESIGNED 500 H.P. ENGINE IN THE BEECH 18 WAS DONE BY DE HAVILLAND AIRCRAFT AT THEIR DOWNSVIEW, ONTARIO PLANT. FOLLOWING GROUND TESTS, THE PT6 FLIGHT TEST PROGRAM WILL BE AT ST. JOHNS, QUEBEC.



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LETTERS

BRIEF LETTERS FROM READERS ON ANY PERTINENT SUBJECT ARE WELCOMED BY THIS PUBLICATION. NO ANONYMOUS LETTERS WILL BE PUBLISHED.

Holding Down the Fort

Sirs:

Greetings from London! I did not know what to enter in the "Chapter" box on my AAAA dun notice since I am the only Army Aviator in Merry Olde England. This being so, I guess I would hold all the offices in any local Chapter. However, doing a bit of quick mental arithmetic I came to the startling conclusion that the one-sixth rebate (\$1.00) is good for roughly four and one-half pints of *Keg Bitter* (Bittah, that is) in the local pub, not the best reason for starting a Chapter here, but a reason.

I've been meaning to write to you and the Frau for some time—Where do you get off putting "Sirs" at the top of each letter when all of us oldtimers know that the

"skirts" half of the operation is the more pleasant member of the staff? I plan to get off a long epistle one of these days giving you an account of my stewardship here. Of course, if you can make a personal survey, we always have a spot to hang your bowler and umbrella. Yeh, I know. Your return letter will cite the airline fares.

Anyway, there are no U.S. Army aircraft here, and I fly with both the British Army and the USAF. Have been checked out in C-47s, sport a USAF white card, and take delight in watching the looks of fright come over Air Force passengers when I climb into the driver's seat. Don't print this letter, or you'll spoil my fun! (*Ed. Fat chance after calling me the unpleasant half of the staff.*)

I now have SIX little tigers . . . 3 hims and 3 hers. Even though I have a staff job during the daytime, I think DA should give me credit for command duty at night. If the Army ever settles on a six-man squad, I will have the permanent position of squad leader.

The four older ones are in British schools and are holding their own. Once in awhile I hear the word "cawn't" booming through the halls, but I do believe that more British parents are hearing their kids uttering such endearing terms as "*Cotton-picker,*" "*Squaresville,*" and the like. Guess you could say that we are an American Oasis in the British Desert.

Seriously, I shortly plan to write an article for "AA" on my activities here. Just wanted to touch base with you two fine people again and to let you know that we would be delighted to have you visit with us if you can find an excuse for the trek.

Maj. Eugene F. Lynch

NO "MODEL" SCENE, BUT AN ACTUAL CRASH ABOUT TO HAPPEN. MOVIE STUNT PILOT, CLIFF WINTERS, ZEROES HIS GERMAN ME-109 MOCKUP INTO A PROP-BUILDING DURING MOTION PICTURE FILMING. THE "HOUSE MOVING" FEAT WAS REPEATED BY WINTERS AT THE RECENT AERO-RAMA HELD AT BORREGO SPRINGS, CALIF.



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OBITUARIES

Captain Oscar R. Harper, assigned to the U.S. Army Aviation School, Fort Rucker, Ala., sustained fatal injuries in the crash of an Army AO-1AF aircraft on April 4, 1961. The Army Aviator was serving as an instructor pilot when his aircraft crashed on the Monmouth County Airport near Fort Monmouth, N.J., during a training mission. He is survived by his wife, Mrs. Carol Harper of 88 Red Cloud Road, Fort Rucker, Ala.

First Lieutenant James H. Stone, assigned to the 25th Transportation Aircraft Maintenance Company, Fort Bragg, N.C., sustained fatal injuries on March 17, 1961 when the L-20A aircraft of which he was pilot crashed during take-off from a field strip in the Fort Bragg reservation. He is survived by his wife, Mrs. Ola Elizabeth Stone, of Route 4, Box 127, Minden, La.

Captain William M. Templeton, assigned to the Army Aviation Section, Fort Monmouth, N.J., was killed in the crash of an Army AO-1AF aircraft at Monmouth County Airport near Fort Monmouth, N.J., on April 4, 1961. Flying as pilot, Captain Templeton was engaged in a training mission at the time of the accident. He is survived by his wife, Mrs. Stella M. Templeton, of 55 Midway Lane, Eatontown, N. J.



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☐ My past and current duties have not affiliated me with the field of U.S. Army aviation but I wish to further the aims and purposes of the Army Aviation Association.

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(Please print) Rank/grade First M. I. Last

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

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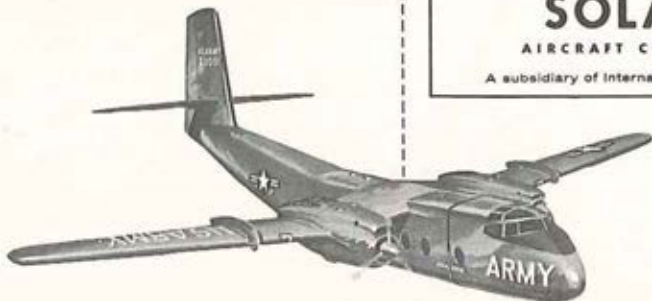
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AAAA NEWS

MINUTES OF NATIONAL BOARD MEETING, APRIL 15, WASHINGTON, D.C.

Convening on April 15, 1961 at the Sheraton-Park Hotel, Washington, D.C., the National Executive Board of AAAA completed a lengthy working agenda at its Spring quarterly meeting. A full report to the AAAA membership follows:

PRESENT

BW Wilson (Pres); *OG Goodhand* (Ex-VP); *KE French* (Sec); *AH Kesten* (Ex-Sec); *AJ Rankin* (VP, Army Aff); *HE Haugerud* (VP, ARNG Aff); *JE McDonald, Jr.* (VP, Indus Aff); *IB Washburn* (VP, Public Aff); *RK Moore* (VP, Nat'l Functions), as represented by *Maj WP Craddock*, proxy; *RM Leich* (Member-at-Large); *RR Williams* (Member-at-Large); *BGen CF von Kann*, guest observer.

ACTIONS TAKEN

MINUTES: The Minutes of the NEB Meeting of Jan. 27-28, 1961, as mailed to NEB Members, were approved by the Board.

NATIONAL AWARDS: *Col RM Leich* (Chairman, Nat'l Awards Committee), reported that many of the "Chapter nominations" had not been received through April 13th and requested Board approval to contact the Chapter presidents by telegram and cable. The Board approved the dispatch of the telegrams over the signature of the Committee Chairman.

Col AJ Rankin (Awards Committee Member) reported that the *Director of Army Aviation* planned to contact the aviation officers of all major commands by personal note in an April 18th mailing.

The National Office was directed to place

"Awards stuffers" in all subsequent first class correspondence forwarded from the AAAA Hqs.

ASSOCIATION MEDALS: The Board examined three artist's sketches of medals as created by the *Medallic Art Company, N.Y., N. Y.*, and approved a "1942 commemorative" medal design with minor modifications. The National Office was directed to have final artist's sketches presented to *BW Wilson, OG Goodhand, AH Kesten*, and *RM Leich* for final approval.

ANNUAL MEETING: *LCol AJ McDonald, Jr.* (Sub-Committee Chairman, Annual Meeting Committee) briefed the Board on programming for the two-day *AAAA Annual Meeting* to be held in Washington, D.C., on Sept 4-5, 1961. He confirmed the acceptance of *Najeeb Halaby*, Administrator of the FAA, as Main Speaker for the Awards Luncheon, Sept. 5th.

Pending later details on the Awards Luncheon head table, the Board postponed a decision on the presentation of the Awards.

The National activity was directed to initiate planning for the Sept. 4th Chapter Delegate Meeting to be chaired by the National Executive Vice President with full National Board attendance. The National Office was directed to solicit "discussion areas" from Chapter activities by contacting Chapter presidents prior to the July 14-15 NEB Meeting. The Executive Secretary was directed to consolidate the Chapter presidents' submissions and to present them to the NEB for the drafting of a Meeting Agenda during the July 14-15 meeting. The Board also approved the action whereby the selected "discussion areas"

MINUTES/Continued

would be placed for study before working groups of Chapter Delegates.

The Board directed the National Office to publicize those sections of the By-Laws that pertain to the National Elections to be held at the *AAAA Annual Meeting*.

BY-LAWS: Prior to its approval of the new By-Laws of the Association, the Board reviewed each section of the By-Laws that had been revised, amended, or deleted by the By-Laws Committee consisting of *BW Wilson*, *OG Goodhand*, and *AH Kesten*. The Board directed that Sections 2.4—*GOOD STANDING* and 2.5—*TERMINATION OF MEMBERSHIP* be returned to Committee for further revision.

NAA: The Board approved of the *AAAA* joining the *National Aeronautic Association* as an "Association Member" and authorized the expenditure of \$100.00 dues for this membership. The Board approved the action whereby the President of *AAAA* would write to the *NAA* outlining the purposes, programs, and membership of *AAAA*.

AAAA service has its advantages. Officers of the *USAREUR* Regional slate go "backstage" during the recent the Garmisch, Germany "Regional social." Checking on the entertainers are, 1-r, *LCol R.P. Alexander* (Past Pres.), *Col Russell Whetstone* (Pres), *LCol H.H. McKee* (Sec), *LCol Richard Long* (Exec VP), and *Maj. Orman Hicks* (Trea).



GRASSHOPPER CLUB: The Board approved of the organization of a "*Grasshopper Club*," an organization with no dues, no officers, no membership card, and no formal meetings. The Board established the following prerequisites for membership: 1) membership in *AAAA*, 2) provision to the *AAAA* National Office of a copy of the orders rating the applicant as an Army liaison pilot, and 3) the provision to the *AAAA* National Office of a document, photo, or account relating to the organization or employment of Army aviation during WW II. The Board directed that periodic announcements of the membership be made and stated that the organization would be as "active" as the occasion demanded.

AAAA TIES: The National Office was directed to place the minimum order for additional *AAAA Ties* with the British manufacturer, and to afford these ties to all current members by direct sale at cost plus handling charges. The Executive Secretary was directed to have the manufacturer provide the re-order in narrow, rather than broad design ties, and to have the firm increase the "tie-ability" of the product. The Executive Vice President agreed to service test the sample bow-tie design provided by the manufacturer.

NEW BUSINESS

PRESIDENTIAL LETTERS: The Board expressed its desire to congratulate members *James N. Davis* and *Howard E. Haugerud* upon their recent appointments within the Defense establishment, and delegated *President Bryce Wilson* to dispatch letters to each reflecting the best wishes of the Board and all members of the Association.

REGIONAL ASSISTANCE: The Board approved the request of the Executive Secretary to provide sufficient stationery and postage to overseas Regional activities at National expense.

AD REVENUES: The Board acknowledged the *AAAA* receipt of \$2,460.00 in advertis-

ing revenues for the April, 1960-March, 1961 period under the terms of the agreement between the Association and the publisher of *ARMY AVIATION MAGAZINE*.

FORT LEAVENWORTH CHAPTER: The Board waived the normal Chapter membership requirement for members within the general Fort Leavenworth area and authorized the activation of a *Fort Leavenworth Chapter* of AAAA upon the receipt of an initial slate of officers by the National Hqs. The Board also approved the representation of the Chapter at the Annual Meeting by one Chapter Delegate.

HISTORICAL: The Board tabled the subject of Association assistance in the purchase of the last L-15 type aircraft in existence upon the presentation of alternate means of securing the aircraft for museum purposes.

The Board endorsed the program, known as the "*AAAA Trunk in the Attic*," whereby the AAAA National Office would solicit and store Army aviation historical documents, photos, official accounts, and "semi-valid war stories" furnished by the membership for historical purposes. The Board directed that the Executive Secretary table all cataloging, cross-filing, and indexing of material received, and merely provide for the clear marking of the donor's name and subsequent safekeeping. The Board urged that this program be accorded full publicity and official acceptance so that the ultimate goal of the program—historical data on Army aviation—can become a reality in subsequent years.

CHAPTER HONORARY MEMBERS: (82d Avn Bn Chapter agenda item). The Board approved of a *Chapter Honorary Membership Program* with the following provisions:

- 1) each Chapter limit its Honorary Memberships to five per year;
- 2) the Chapter provide the Annual Dues for each of its Honorary Members from earned Chapter refunds;
- 3) the National activity provide an ap-

propriate Certificate and a distinctive Honorary Member membership card to Chapters for use in this program.

4) the Chapters postpone the implementation of this program until such time as the National Office secures the desired Honorary Membership credentials.

In a companion action, the Board approved of the National Office provision of a Certificate of Commendation for Chapter use. *Col. Robert M. Leich*, National Awards Chairman, was appointed to secure the Certificates of Honorary Membership and Commendation.

REDUCTION IN DUES FOR ENLISTED APPLICANTS: (82d Avn Bn Chapter agenda item). The Board disapproved of a reduction in the amount of Annual Dues.

TWO-YEAR TERM OF OFFICE FOR CHAPTER OFFICERS: (Ft. Eustis Chapter agenda item). The Board disapproved of the proposal to amend the By-Laws to provide for "elections by attrition," pointing out that Sections 7-31 and 7-32 of the By-Laws provide for elections in a manner to cover all contingencies.

Igor B. Benson (standing), president of the Benson Aircraft Corp., addresses a recent luncheon meeting of the 82d Avn Div Chapter, Ft. Bragg, N.C. Seated at the guest table are, l-r, Capt. R.M. Corey, Maj. C.S. Atley, LCol R.G. Jones, Mr. Benson, LCol R.R. Corey (Chapter President), and Capt. G.C. Horton.





REAR CAPTIONING OF ABOVE PHOTO READ "PRESS MEETING..." (GRAPES, PERHAPS, BUT EVEN THAT'S UNLIKELY SINCE THEY'RE ALL WEARING SHOES.) SHOWN AT THE RECENT GARMISCH, AAAA GALA ARE, REAR, L. TO R., COL RUSSELL WHETSTONE, COL ARTHUR RIES, HANS WEICHEL, JR. (BELL); STU HILL (SIKORSKY), FRED DOBLHOFF (VERTOL), COL JACK HEMINGWAY, AND MAJ W. A. BEARDEN. POOPED—PARDON, SQUATTING—ARE LCOL ROWAN ALEXANDER, REN PIERPOINT (VERTOL), LCOL HENRY McKEE, AND LCOL JEROME FELDT.

MINUTES/Continued

PLACEMENT SERVICE: (Ft. Eustis Chapter agenda item). The Board acknowledged the interest of the Chapter in this Program and pointed out that additional emphasis on this Program is forthcoming.

AVIATOR CEILING: (Monterey Chapter). The Board took note of the resolutions of the Monterey Chapter and informed the Chapter president by separate letter of the actions being taken in this matter.

LIFE INSURANCE PROGRAM: (USARCARIB Chapter agenda item). The Board noted the proposal of the USARCARIB Chapter and initiated action to provide preliminary data on this program for National Board review.

ACCRUAL PAY: (USARCARIB Chapter agenda item). The Board referred this agenda item to the VP, Army Affairs, for direct answer.

TEN-YEAR AAAA PIN: (Pikes Peak Chapter agenda item). The Board tabled this proposal.

MEMBERSHIP DRIVE: (Personal letter from USAREUR Regional President.) The President read Col. Whetstone's letter to those in attendance, the Board agreeing that all possible assistance is to be provided by the National Office to the USAREUR Regional activity.

TIME AND SITE

The Board set July 14-15, 1961 as the dates for the Summer quarterly meeting, the Board to convene on these dates at the South Gate Motel in Alexandria, Va.

AAAA BRIEFS

■ Chapter activities have completed their "activity elections" for the 1961-1962 membership year. The Chapter Officer slates appear in part in this issue with the remaining slates to appear in the next issue of the magazine.

■ Those Members who have not as yet renewed their membership in AAAA are reminded that the cut-off date for membership renewals is June 1st. A duplicate—and final—renewal notice was mailed on April 21st to those 1960 Members who had not renewed their membership through that date.

■ Question often asked: "Are Booster Lapel Pins still issued?" They most certainly are. Enroll just one new Member at full year dues, submit his application, initiation fee, and dues under your cover, and holler "Booster." You both get pinned.

■ Another perennial question: "Have new car. Old Scotchlite Trunk Decal now lighting up used car lot. How do I get another?" Although the National Board would like to issue "duplicates" gratis, the Glow-Jobs are costly. They've pegged re-issue decals at 25¢ and ask that you provide a stamped, addressed return envelope to get "seconds."

Since the decal is a 3-7/8" square—and will crack if folded, the return envelope should be of sufficient size to accommodate a 4" x 4" chipboard insert.

CHAPTER ACTIVITIES

(A LOG OF CHAPTER MEETINGS, BOTH PAST AND PLANNED)

■ **FT. McCLELLAN CHAPTER.** Business Meeting and Chapter Election of Officers Aviation Detachment, Ft. McClellan, Ala. Mar. 14.

■ **217TH TRANS BN CHAPTER.** Business Meeting. 911 S. Chance Avenue, Fresno, Calif. Mar. 26.

■ **RHINE VALLEY CHAPTER.** Business Meeting and Chapter Election of Officers. Heidelberg Officers Club, Heidelberg, Germany. Mar. 31.

■ **91ST TRANS CO CHAPTER.** Business and Social Meeting. McGraw Officers Club, Munich, Germany. Apr. 7.

■ **FORT RILEY CHAPTER.** Combined Business and Social Meeting. Ft. Riley Officers Open Mess. May 19.

■ **MUNICH CHAPTER.** Combined Business and Social Meeting. Schleissheim Army Airfield—Recreation Area. July 8.

New Members

COLONELS

William C. Wilkinson

LT COLONELS

Morgan C. Light
John W. Marr
Conrad L. Stansberry

MAJORS

Paul G. East

CAPTAINS

Charles A. Benedict
Edwin O. Carr

CAPTAINS

Donald M. Damskov
Robley W., Davis, Jr.
Willie L. Davis
Willard C. Goodwin
John S. Jacob
Robert Lowes Landry
Nesbert L. Miller
Jack R. Rollinger
Henry W. Schober
Angelo J. Siracuse
Austin K. Veatch, Jr.
Thomas J. Warr
Floyd R. Wirthlin

LIEUTENANTS

Richard G. Adamski
Damon W. Agee, Jr.
William A. Beasley
William H. Bosking
John F. Carroll
William T. Clary
John T. Colson
Robert E. Cuyle
Joseph D. Donahue
Richard E. Forbes
Carroll M. Fyffe
James H. Goodloe
Robert G. Lusignan
Donald J. Mascia
James M. Mitchell
W. H. Osborne, III

LIEUTENANTS

Carl B. Priode
Douglas A. Pritchett
George C. Stroh
James M. Taylor
Joseph C. Tirre, Jr.
Thomas H. Tyler
Jerry T. Willis

FRIENDS

Miss Margaret Beckman
Miss Elinor A. Cornelius
Miss Minne J. Schuster
Miss Loretta Slavick
Mr. D. T. Bernard
Mr. C. D. Brown
Mr. Marion F. Busiere

ACTIVITY STRUCTURE, AAAA

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 Pres., Midwestern Region Brig. Gen. Wm B. Bunker
 Pres., Oklahoma Region Maj. J. Y. Hammack
 Pres., USAREUR Region Col. Russell E. Whetstone

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(Europe, Africa, Middle East)

President Col. Russell E. Whetstone
 Exec Vice President Lt. Col. Richard D. Long
 Secretary Lt. Col. Henry H. McKee
 Treasurer Major Orman E. Hicks
 Members-at-Large To Be Elected by Chapters

Oklahoma Region

(Fort Sill, Oklahoma)

President Maj. J. Y. Hammack
 Exec Vice President Lt. Paul W. Bass
 Secretary Mr. Rex H. Madeira
 Member-at-Large Capt. Billy C. Hall
 Member-at-Large CWO Dwight O. Allen

Washington, D.C. Chapter

(Washington, D.C.)

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 Exec Vice President Lt. Col. John L. Pierce, III
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 Treasurer Maj. James O. Townsend
 VP, Army Aff. Lt. Col. Cloyd V. Taylor
 VP, ARNG Aff. Maj. G. P. Kelly
 VP, USAR Aff. Mr. Herman A. Henry
 VP, Industrial Aff. Mr. Tom Bagn
 VP, Public Aff. Miss Jean Ross Howard

Davison U.S. Army Airfield Chapter

(Fort Belvoir, Virginia)

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 Exec Vice President Maj. William H. Harper
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 Treasurer Capt. Joel R. Steine
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 VP, ARNG Aff. Maj. Paul H. Roundy
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 VP, Industrial Aff. Maj. Stanley R. Blunk
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(St. Louis, Missouri)

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 Exec Vice President Colonel Albert A. Wilson
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 Treasurer Mr. Leland Springer
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 VP, Industrial Aff. Mr. Marvin D. Marks*
 VP, Public Affairs Mr. Victor Schulte
 *Incumbents, 2d year of 2-year Chapter term.

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(Fort Rucker, Alabama and environs)

President Col. Warren R. Williams
 Exec Vice President Lt. Col. John R. Riddle*
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 VP, Industrial Aff. Mr. Neil S. Dodson*
 VP, Public Aff. Lt. Col. Jack Blohm, Ret.
 *Incumbents on 2d year of 2-year Chapter term.

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(Fort Riley, Kansas)

President Maj. Richard H. Scott
 Exec Vice President Capt. Evans J. Guidroz
 Secretary Lt. Jerry W. Kolb
 Treasurer CWO Dalton J. Romero
 VP, Army Aff. To Be Elected.
 VP, Industrial Aff. Lt. Pierre V. Brunelle
 VP, Public Aff. Capt. Edward H. Bauerband, Jr.
 VP, Reserve Aff. To Be Elected

Fort Eustis Chapter

(Fort Eustis, Virginia)

President Lt. Col. David E. Condon
 Exec Vice President Maj. James H. House
 Secretary Capt. James H. Patterson
 Treasurer Capt. Richard A. Hartert
 VP, Army Aff. CWO Melvin H. Caldwell
 VP, Reserve Aff. Capt. Gordon H. House
 VP, Industrial Aff. Capt. Leonard F. McLaughlin
 VP, Public Aff. To Be Elected

Lawton-Fort Sill Chapter

(Fort Sill, Oklahoma)

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 Exec Vice President Capt. James C. Lane
 Secretary CWO William T. Henderson
 Treasurer Lt. Joseph P. Gallagher
 VP, Army Aff. M/Sgt Ralph F. Keyport
 VP, Reserve Aff. CWO James P. Pickel
 VP, Public Aff. Capt. John J. Peppard

Rhine Valley Chapter

(USAREUR Region)

President Lt. Col. Rowan P. Alexander
 Exec Vice President Lt. Col. J. Elmore Swenson
 Secretary Capt. Jay W. Pershing
 Treasurer Capt. Ben D. Waterman
 VP, Army Aff. Lt. Col. Harold I. Lukens
 VP, Industrial Aff. To Be Elected
 VP, Public Aff. To Be Elected

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BRIEFS

■ Shortly before press time, this magazine learned that *Colonel Wayne E. Downing*, Army Aviation Advisor to the Deputy Chief of Staff for Logistics, Department of the Army, was killed while attending a tri-Service demonstration at Nellis AFB, Nevada. Awaiting helicopter airlift, *Colonel Downing* was struck by a rotor blade fragment, thrown some 50 yards after a transport helicopter had crashed to the ground and had rolled over on its side.



MAIN SPEAKER

■ Najeed Halaby, Administrator of the Federal Aviation Agency, will present the main address to Honors Luncheon attendees at the AAAA Annual Meeting, Washington, D.C., September 4-5, according to an announcement by Maj. Gen. Richard D. Meyer, Annual Meeting Chairman.



ONE MILLION

■ An enviable safety record has been established by the Aviation Branch, U.S. Army Engineer District, Gulf, when they completed one million accident-free passenger miles in support of Engineer activities in Iran and Saudi Arabia.



AHS FORUM

■ Army aviation attendance at the forthcoming *Annual Forum* of the *American Helicopter Society* is expected to be extensive. If your itinerary brings you to the Washington, D.C. area on May 3rd-5th, take in the *AHS Forum* at the Sheraton-Park Hotel. You'll find the *Forum* both interesting and informative.