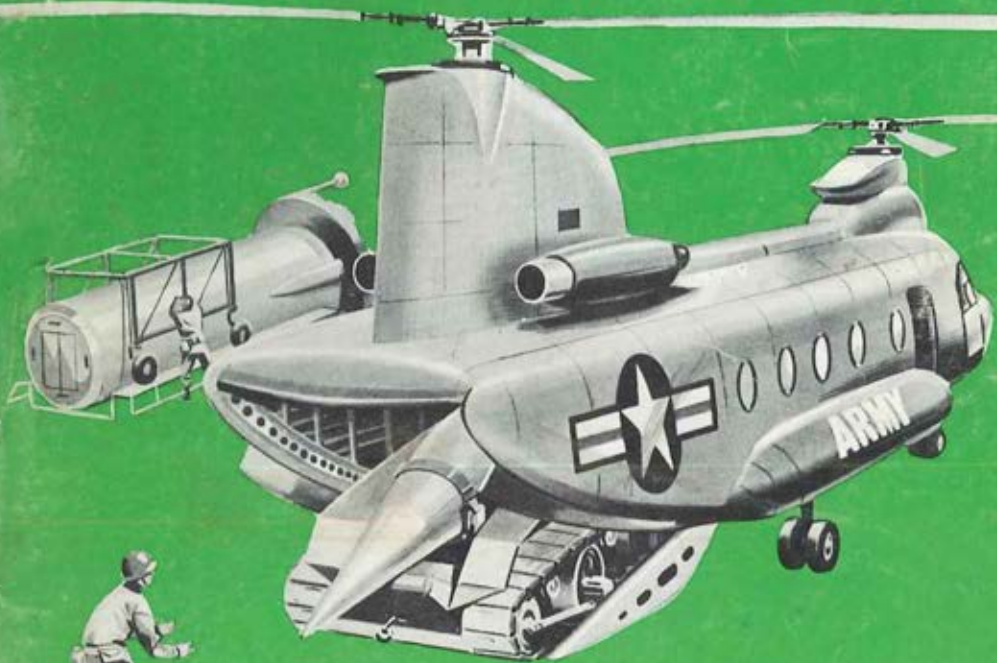


ARMY AVIATION

JUNE ★ 1959



Lycoming...

chosen to power
ARMY'S YHC-1B VERTOL "CHINOOK"



LYCOMING T55-L-3
GAS TURBINE, 1940 HP

Lycoming

A Division of **AVCO** Corporation
Stratford, Conn. • Williamsport, Pa.

Vertol 107 Engages in Dunk Tests

Vertol 107 twin-turbine powered helicopter, prototype of the U.S. Army YHC-1, is shown in the photo at the right demonstrating its amphibious capability during a recent "dunking test."



The Vertol-built craft obtains this capability by the process of having its fuselage sealed during assembly operations. Lateral water stability is provided by sealed tip fairings on the landing gear structures.

High placement of the twin rotors on the 107 makes possible a steep flare for zero speed autorotational landing on water.

An advanced transport helicopter, the 107 offers amphibious capability without a specially-shaped hull and with a minimum weight penalty, according to Vertol officials.

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In the new concept of lightning war, the Caribou's ability to move big loads in and out of small improvised landing strips quickly means greater concentration of our land forces through the use of RAPID MOBILITY.



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DOWNSVIEW ONTARIO

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WHICH WAY DID HE GO? UP!



Thirty-five years ago Dr. Bothezaat broke the world's helicopter record at McCook Field, Dayton, Ohio, by remaining in the air two minutes and forty-five seconds at a height of fifteen feet. It seems strange that a vehicle developed at such an early date would not come into prominent usage until some twenty-seven years later in the Korean War. Why?

It is an irrefutable law that demand will pace progress. In 1923 the helicopter was ahead of its time. There was still room for improvement in surface mobility and in fixed wing aviation. Improved power plants, fuels, suspension systems, hydraulics, terrestrial and aquatic flotation and advances in metallurgy provided man with the means to move faster and with greater freedom using the simple vehicles he then possessed.

Factors Affecting Development

The helicopter has come into its own since World War II. What, then, has occurred to

create the demand required to convert an inventor's dream into a practical aerial vehicle? Two factors influenced this development more than all others: *the limitations of the fixed wing aircraft and the atomic weapon.*

The first of these is most influential as it pertains to both civilian and military applications of the helicopter. During the period starting in the late thirties and continuing today, America has taken to the air like toads to hopping. The mass acceptance of air travel paved the way for its integration into all enterprises.

Militarily, the air machine proved an able troop and supply vehicle as well as an effective weapon of destruction.

Yet, both militarily and commercially, there was need for a maneuverable aerial vehicle which was not tied to highly developed landing facilities. Oil and ore exploration, feeder and connecting air lines in congested areas, reconnaissance of vast timber, cattle or agricultural acreages are but a few of the many com-

(Continued on Page 250)

BY
LT. COLONEL JACK. W. HEMINGWAY
Army War College
Carlisle Barracks, Pennsylvania

HERE'S HOW BELL

is helping make the American public aware of the objectives of today's NEW U. S. Army in its continuing program of modernization... a program vital to our national defense and security in an age of new weapons and new concepts of warfare.

*One of a series of ads currently appearing in such opinion-making publications as *Fortune*, *Business Week* and *U. S. News & World Report*.



AERIAL COMMAND POST for the **NEW U.S. ARMY**



and there's a BELL in the Picture

In warfare of the future, the concentration of forces in small areas would invite annihilation by "area weapons." Thus, the wide dispersal of combat forces is the task of precise direction and coordination never urgent than now. In fact, it would be hard to overstate the field commander's necessity for having rapid transportation to cover wide areas of the battlefield. Such transportation must be by air. Army Aviation gives today's new Pentomic Army this battlefield mobility — in command, liaison and communications. Bell helicopters, with their unequalled ability to land or take off from small unimproved areas — their ease of maintenance, requiring only simple ground facilities — play a vital part in the Army's "intimate coordination of effort." They help the new Army achieve the mobility that can spell the difference between victory or defeat.

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More facts about the **New** **L-23F**



The L-23F's pilot compartment, separated from the cabin by sliding doors, has room to spare for instruments and radio. Notice the wide aisle and adjustable crew seats. Its conveniently-located controls, excellent flight characteristics and super-charged fuel injection engines make the L-23F a favorite of every pilot who has flown it.

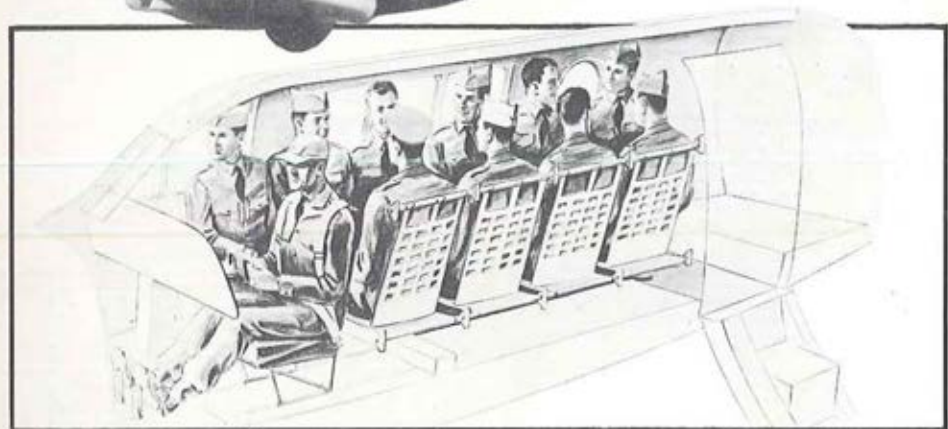


Wherever it has appeared, this spectacular new version of the L-23 has been enthusiastically received.

Bigger, roomier, quieter — with a completely new fuselage design — the new U. S. Army L-23F lends itself to a wider variety of uses than any other plane anywhere near its size. As a flying command post, an aerial "bus", or a cargo-hauling workhorse, the L-23F is winning new admirers every day.

Other Beechcraft projects today include research and development work on launching and recovery systems for missiles, drones, and manned aircraft; ground support equipment; and classified projects in the advanced fields of aerodynamics, cryogenics, thermodynamics, and aircraft range extension.

U. S. Army Transport



The L-23F lends itself to a wide choice of quickly-convertible interior arrangements, including this one which seats 11 people.



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

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Dear Army Aviator:

It was our distinct pleasure to attend and to address the first Annual Meeting of the *Army Aviation Association of America (AAAA)*, held in Washington on 5, 6, and 7 June to commemorate the 17th anniversary of the establishment of Army aviation.

To refresh your memory, the anniversary of Army aviation dates from the 6 June 1942

the area of the Washington high-density area as marked on the Jeppesen chart, but my original statement is true in that all aircraft coming into or departing Davison Army Airfield under instrument flight rules should have a co-pilot aboard because they come under the control of the Washington Air Traffic Control Center.

I would like to use the newly authorized GCA for Davison Army Airfield as an example of

• TRENDS •

memorandum from the Secretary of War to the Commanding Generals of the Army Ground Forces, Army Air Forces, and Army Service Forces, authorizing the organic assignment of light observation airplanes to field artillery units. Since that time Army aviation has increased in scope from its original mission of artillery air observation to four major functions prescribed by the Secretary of Defense in his memorandum of 26 November 1956; i.e., observation, to include surveillance, airlift of small units and supplies, aeromedical evacuation, and command, liaison, and communications.

Check Your Cruising Altitude!

Since establishing the system for collecting data on near collision incidents in CONUS one interesting aspect of what's going on in the air has shown itself. A number of reports indicate VFR traffic above 3000 feet at other than the thousand plus 500 foot levels. Of course, AR 95-8 is quite clear on VFR cruising altitudes and since more traffic induces more proximity in the air, be sure your separation level is correct. You are the flight safety officer when you are in the cockpit.

why Davison traffic must be conducted within a high-density area. Based on the direction of flight, Washington Center will normally direct Army aircraft destined for Davison to one of four fixes: *Springfield Homer, Doncaster Intersection, Andrews Low Frequency Range, or Riverdale Homer.*

From one of these fixes the Washington Center will bring you down to a selected altitude and then turn you over to the Washington Approach Control who will radar vector you to a position where the Davison GCA will take you under surveillance and control for the final approach to Davison Army Airfield. As you can see, it is quite probable that an instrument let-down to Davison may well be directed through the main part of the Washington high-density area.

Flight Information Digest

The first item concerning the *Army Aviation Flight Information Digest* was published in the *Newsletter* two years ago. Since that time the distribution of this document has more than doubled. Distribution is now made to Army, NG, USAR, and AAF Operation offices in

By
COLONEL HALLETT D. EDSON
Acting Director of Army Aviation, ODCSOPS

More on Davison

My comment in the *April 1959 Newsletter* pertaining to Davison Army Airfield and the Washington high-density area may not have been sufficiently clear to those aviators not familiar with Washington ATC procedures. Davison Army Airfield is physically outside of

CONUS, all government aeronautical and charting agencies including FAA, C&GS, ACIC, & USN Hydrographic Office, DA staff activities and technical services. This digest, published by Army Aviation Flight Information Division (SCIA), OCSigO, supplements other available material by providing a compilation of operational flight information data based upon

TRENDS/Continued

daily NOTAM's, advisory data of short duration, routine information, and warnings of hazardous conditions.

The *Flight Information Digest* represents a complete weekly review and recapitulation of all pertinent data which is superseded by each successive issue. This "throw-away" system prevents possible misuse of obsolete data by the Army aviators. Where certain data such as graphic portrayal of special flight procedures (maneuvers, etc.) are published, an appropriate "retention for future use" notice will be included.

Assists Operations Officers

The *Flight Information Digest* is designed to assist the operations officer of each Army unit and Army airfield in providing the Army aviator with compact flight data and every effort is being made to make it a publication that will be useful to all Army aviators. This objective requires the cooperation of each aviator, and particularly those serving as airfield operations officers, to contribute informational items by the most expeditious means in accordance with the procedure contained in paragraph 3 of the *Digest* Foreword page.

As indicated in the Foreword of the *Digest*, the *Digest* does not eliminate the necessity of reviewing the latest NOTAM's or other hourly message data available in the operations office.

Demonstration Team



Shown with the Bell HU-1 Iroquois they will demonstrate at major American and allied military headquarters in Europe are, l-r, CWO Frank Pauli, Capt Anthony Carroll, Sgt Peter Dusick and Sp/5 Ernest Wells. The US Army Aviation Board personnel will climax their tour by participating in the International Air Show in Paris, June 12-20.

Heavy Lift



An H-21 Shawnee of the 80th Transportation Company (Lt Hel) is shown above lifting a 2,000 pound trailer during the testing of a new hoist on helicopters. The action took place at Bryant Airfield, Alaska, in preparation for Operation "Caribou Creek" participated in by men of the 503rd Airborne Infantry Regiment. (US Army photo/Jones).

Don't Overlook the Sectionals!

A suggestion or reminder has been submitted to this office that is worth repeating to all of you. *WAC* and *Sectional Charts* are available in your operations office and should not be neglected because we have the Jeppesen aviation charts. Examples can be cited when air maps have proved to be life savers to aviators experiencing communications failures during instrument flights. Even though you may be on an IFR clearance, the visibility conditions may permit the use of one of these charts in checking your position, especially when nearing your destination. In other words, we recommend that you take air maps as well as Jeppesen charts on all flights.

Consolidation at Fort Rucker

On 20 April 1959 the Department of the Army announced that *Camp Gary* would be inactivated and that fixed wing flight training would be consolidated at Fort Rucker. The decision to take this action was reached after a thorough study of our present and future training requirements. This study indicated that substantial savings would accrue to the Government by the elimination of primary fixed wing



OP IN THE SKY

OP IN THE SKY



Able to cover miles of terrain in minutes...to stop and hover for a closer look...the Hughes YHO-2HV 2-place helicopter gives the Company Commander a quick, accurate picture of the tactical problem. The YHO-2HV is the first helicopter designed specifically to perform this organic job. Rugged in con-

struction, easily concealed due to its small size, it is available for duty any time...any place. This unique helicopter is economical in every sense. Its low maintenance and operating costs simplify the logistics problem: no special tools are required for field maintenance...wearing com-

ponents are designed for at least 1000 hours life...major components can be quickly removed as independent assemblies. Its low purchase price puts a greater number of helicopters in the field. For a full color brochure describing this FAA Certified helicopter please write to:

DIRECTOR OF CUSTOMER RELATIONS
HUGHES TOOL COMPANY—AIRCRAFT DIVISION
CULVER CITY, CALIFORNIA





The four-ton H-16, first in Vertol's series of turbine-powered helicopters, flown in 1955.



The H-21D research aircraft equipped with two GE T-58 turbo-shaft engines, flown in 1957.



The Vertol 105 with two Lycoming T-53 engines used in the test program, flown in 1957.



Why Vertol leads in turbine helicopter design and development

Steady progress in helicopter technology has advanced this versatile air vehicle to the threshold of a new era of usefulness. It is the era of the turbine-powered transport helicopter designed for improved battlefield mobility and logistical support of combat elements and missile systems, and for all-weather, day-night operations.

Vertol has been and is today at the forefront in progress toward this new achievement. Among the first to recognize that turbine power would vastly improve performance, capacity and versatility, Vertol also is a leader in research and development on new designs incorporating these powerplants.

The result of many years of work in this field is the Vertol 107, first member of an entirely new generation of multi-turbine helicopters destined to play vital roles in short-range transportation throughout the world. It is now being produced for the U.S. Army as the YHC-1. The 107 can be adapted to an almost limitless variety of functions without altering basic design. Its growth potentialities are built in, assuring a steady progression of helicopters with even greater performance, load-carrying ability and versatility. Detailed engineering on growth versions of the 107, which will incorporate more advanced engines now in development, is under way.



In 1958 the Vertol 76, powered by the Lycoming T-53 was the world's first successful tilt-wing VTOC.

VERTOL

Aircraft Corporation

MORTON, PENNSYLVANIA

SUBSIDIARY ALLIED RESEARCH ASSOCIATES, INC., BOSTON, MASS.

CESSNA U-3A



**USAF's new
transport
with high-power
twin-engine
safety**

The Cessna U-3A is now on operational duty with the U. S. Air Force. Its speed—the highest speed of any U. S. A. F. light twin transport—and its range and versatility are proving highly valuable in raising administrative mobility.

Cessna designed and built the U-3A for hard work. Power loading, acceleration, and climb characteristics are excellent. Single engine performance is particularly outstanding—for this modern Cessna twin packs more power per pound than any other light twin transport. Operating and maintenance costs are low. Result: the Cessna U-3A makes substantial savings for the U. S. A. F. Cessna Aircraft Co., Wichita, Kansas.

Cessna

TRENDS/Continued

flight training at Gary. This consolidation offers for the first time the opportunity for our initial fixed wing qualification course to be conducted under one curriculum at one installation with one commandant. It will mean a PCS for student officers who will then be permitted to move their families and household goods and remain at one station for approximately nine months.

The primary phase at Fort Rucker will be conducted by civilian contract with the advanced, tactical, and instrument phases to be conducted by military instruction as at present.

Other advantages in making this move include reducing the air space and air density problem in the Gary area, abandoning a sub-standard temporary type installation which would have proved expensive to either rehabilitate or replace in the long run, and placing our student officers under the environment of a combat arms school for the duration of their course of instruction. Present plans call for the first class to commence training at Fort Rucker early in September 1959.

Information Needed

Periodically, the Aviation Section of the Officers Assignment Division, Office of the Adjutant General, Department of the Army, publishes a "Telephone Directory of Army Aviators on the Department of the Army Staff and Principal

Staff and Command Aviation Officers by Major Command." While assignments are usually known, changes in telephone numbers and office locations can be reflected only if reported to the Aviation Section of OAD, TAGO. Please send your name, office, and complete telephone number directly to the Chief, Army Aviation Section, TAGO, Washington 25, D.C., so that he can complete an accurate directory this summer.

Troop Duty an Essential

The Aviation Section, OAD, TAGO, informs me that early troop duty and branch experience for aviators who entered flight training direct from the branch basic course is considered to be essential for career development. Such experience provides a solid foundation for later command and staff assignments in the Army aviation program. *Change 1, AR 600-105*, is the governing regulation.

Also, I suggest that you advise your officers to take the opportunity to review their official 201 file in the office of The Adjutant General or their branch records the next time they are in Washington so that they will know where they stand career wise.

Sincerely,

HALLETT D. EDSON
Colonel, GS
Acting Director of Army Aviation,
ODCSOPS

Canadian Army Aviation Terminates Contract Elementary Training

July of this year will see the end of an era for Canadian Army aviation. For with the graduation of *Light Aircraft Pilot's Course 27* from their ag initio training phase at the *Brandon Flying Club*, located at Brandon, Manitoba, the twelve-year-old scheme of elementary training at civilian flying clubs will come to an end.

In the future, commencing with *Course 28*, all elementary flying training for Canadian Army pilots will be carried out under the auspices of the Royal Canadian Air Force at RCAF Flying Training Schools.

Light Aircraft Pilot's Course 26, which commenced training on February 23rd, is now at the Civilian Contract School—*The Brandon Flying Club* at Brandon, Manitoba—undergoing

their primary fixed-wing training on Cessna 140 aircraft. Members of this course are drawn from four different Corps of the Canadian Army and, upon graduation, will fulfill such diversified roles as air transportation, artillery air observation, aircraft repair and maintenance, and aerial reconnaissance and communication.

This course will report to the Light Aircraft School, Canadian Joint Air Training Centre, Rivers, Manitoba, about the middle of May to commence their conversion to the Cessna L-19 aircraft, and the advanced tactical flying phase of their training will be carried out here. Final graduation, including the awarding of the Army Flying Badge to the successful members, will take place early in August.

■ In my last article I explained to you my viewpoints on *Air Mobility* for the Army. I also discussed our concept of air vehicles now in the research and development stage which I hope will give the Army mobility desired.

In this article I shall give you a resume of our Transportation Corps plan for direct engineering and procurement of Army aircraft and related end items such as engines, propellers, and rotors.

Misunderstanding on Procurement

The procurement of Army aircraft is, perhaps, one of the most misunderstood functions in the field of logistics except to the people who are directly engaged in the day-to-day activities. This misunderstanding is just as prevalent within the Army as without. A short resume of the growth of the existing procurement system will explain why we consider improvement is essential if we are to insure the future success of Army aviation.

For a number of years, the Army procured all of its aircraft through the Air Force. We told them what we wanted, how many, and when. We also furnished the money.

The Air Force wrote the contracts and served as the official voice between us and the manufacturers. Even when we wanted to procure aircraft normally being purchased by the Navy, we still processed our requests through the Air Force. They, in turn, duplicated our work and processed a similar request to the Navy.

While this procedure sounds relatively simple, although time consuming, it becomes quite complicated when integrated in the pattern of procurement used between the Air Force and Navy.

The Meaning of Plant Cognizance

The procurement responsibility for aircraft is theoretically assigned on a *plant basis* to either the Air Force or Navy. Airframe, engine, and propeller manufacturers are assigned to either the Air Force or Navy under what is commonly called *plant cognizance*.

Both the Air Force and Navy, however, place greater importance on engineering responsibility for an aircraft, rather than "who" has the assigned plant for procurement purposes. For this reason, they enter into agreements which permit them to deal directly with each other's cognizant facilities for items in which they have primary interest. This means that the Air Force

Transportation Corps REPORT

contracts *directly* with Navy plants, and the Navy contracts *directly* with Air Force plants. Since we use a variety of aircraft manufactured from plants under both the Air Force and Navy and a mixture of engines in a variety of airframe combinations, our theoretically simple system assumes a very complex atmosphere of criss-crossing administration.

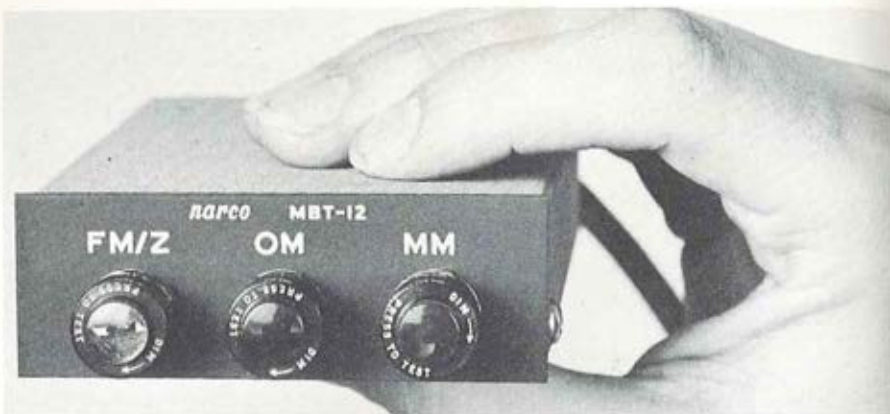
1956 Authorization

In 1956, the Office of the Assistant Secretary of Defense authorized the Army to deal directly with the Navy, as well as the Air Force, for procurement of Army air items. It was an attempt to relieve the time consuming administrative channels.

There was, however, no change to the plant cognizance system, nor to the agreement procedures used by the Air Force and Navy. Complexity has doubled. Our access to manufac-

By Brig. Gen. Richard D. Meyer
Deputy Chief of Transportation
for Aviation, OCOFT





18-OUNCE • COMPLETELY SELF-CONTAINED • 3-LIGHT
MARKER BEACON RECEIVER
narco **MBT**

Here's another remarkable electronic triumph from Narco — an airline-type three-light marker beacon receiver that weighs only 18 ounces — just a fraction of the weight, size and complexity of other available beacon receivers and with superior performance!

The Narco MBT gives you positive identification of airways and LF range Z markers (white light); ILS outer markers (blue light) and middle markers (amber light). Provides aural identification as well.

And it's all completely self-contained! No separate power supply; no complicated wiring; no shock mount needed. Case measures less than 3½" by 1⅞" by 6", can be quickly and easily panel-mounted. Models available for 12 or 24 volt operation.



MOUNT EITHER WAY
 Unique face panel is etched on one side for horizontal mounting, on the other side for vertical mounting.

RUGGEDIZED, SIMPLIFIED, SUPER-RELIABLE

Simplified superheterodyne design with ruggedized construction throughout, plus hermetically-sealed units, heavy-duty transistors and printed circuitry, combine to give the *narco* MBT exceptional reliability. Can be expected to give long, trouble-free service. Fantastically low power drain of only 0.005 amperes. Has "Press to Test" lights, variable dimming.



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 for technical literature

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NATIONAL AERONAUTICAL CORP., FORT WASHINGTON, PA.

TC REPORT/*Continued*

turers now is controlled through two official channels. We also find two different systems of purchasing and administration superimposed on our own peculiar requirements. With Air Force and Navy diminishing interest in aircraft types predominantly used by the Army, there is a correlated decline in appreciation of the problems associated with such aircraft.

This is the system we have today and this is the system we hope to improve in the future.

We believe we can develop a pattern of procurement that will be *responsive* to the expanding needs of Army aviation. We also believe we can develop this pattern through a system of agreements with both the Air Force and Navy. Gradually, and within our capability to do so, we hope to assume greater responsibility in both the engineering and *direct* procurement of Army air items.

Many Areas of Activity

Although we speak in general terms of engineering and procurement, there are actually fifteen major areas of activity which can be further sub-divided into detail functions. There are varying degrees of responsibility and an associated element of risk.

We have already assumed responsibility for procurement of practically all secondary items directly from the manufacturers. We have assumed responsibility for engineering evaluation of certain engineering change proposals and unsatisfactory equipment reports. We now have Transportation Corps representatives located at various manufacturing facilities.

We still have many agreements to negotiate. Some are underway; others have not started. Our plans to accept responsibility include the development of an inherent capability to per-

form effectively. This build-up of capability, in part, also dictates the time frame in which we gear our negotiations.

Some of the areas which are still to be negotiated are:

*Engineering flight testing and evaluation,
Standards and specifications,
End item procurement, and
Contract administration.*

Army aviation is big business and our investment dictates a need for *effective* management. As we continue towards our objective, we are carefully superimposing procedures that will provide us a timely and economical system both for engineering and for procurement functions.

High Demand For Specialists

Simultaneously, we will be creating a demand for talents of which we have limited numbers currently available. The Transportation Corps has a need for greater numbers of aeronautical and mechanical engineers, test pilots and technicians, cost analysts, industrial engineers, and procurement specialists to fulfill our engineering and procurement plan. I foresee greater career opportunities for officers, rated and unrated, for warrant officers, and for enlisted personnel.

I foresee the Air Force and Navy's moving further into the supersonic aircraft and the missile field, thus getting further away from our type of "low and slow" Army aircraft. I believe that both services are hard pressed for money and spaces. We may find it necessary to place qualified aviators in their laboratories, procurement offices, and test sites in the very near future.

This, of course, requires advanced schooling for some of our best talent, in the areas of



An unofficial world record for single engine flight was made in April when a twin-engine C-47 (above) took off on one engine at Belize, British Honduras, and flew single engine non-stop to Brownsville, Tex., a distance of 1,248 miles. Through a mixup brought about by the 16 hour cable delivery time to British Honduras, pilot Vic Stadter returned to Brownsville, Tex., prior to the receipt of the cable from his employer informing him that arrangements had been made with customs to ship the replacement engine to him. Stadter's time 7:15.

TC REPORT/Continued

contracting and procurement, engineering flight testing, etc. One such school is now being finalized. Present plans call for the training of 8-10 selected TC aviators by the Air Force Flight Test Center at Edwards Air Force Base, California. If necessary arrangements can be completed in time, the first course will start about 1 September 1959. Length of the course is approximately eight months, and consists of flight and classroom instruction.

Prerequisites for Edwards Course

Applicants selected for the course must have a minimum of two years of college training with a background in mathematics, up to and including calculus.

Additional desired requirements are as follows:

- a. *Diversified flying experience (fixed & rotary wing)*
- b. *Seven or more years as a rated pilot with approximately 2000 hours flying time.*
- c. *Not in a grade higher than Major.*

Department of the Army can determine those officers who majored in engineering; however, it is not always possible to determine the level of mathematics the individual has completed. Some officers have majored in other than

engineering, have had calculus; but this information is not reflected in the personnel records.

Submission Of Applications

In order to consider all TC aviators who may be qualified, it is desired that those officers who meet the above prerequisites, and who are desirous of attending this training, forward a statement of interest to: *Chief, Military Personnel Division, OCOFT*. Each statement should be accompanied by a copy of the officer's college transcript and a copy of his up-to-date DA Form 759.

At such time as other specialized training courses are established, I shall so advise you in an appropriate article.

The engineering and procurement of Army air items are the last remaining functions needed to give the Army complete control over its aircraft from concept to obsolescence. When we accomplish this objective, we will be in a position to face the future problems of Army aviation with the knowledge that we will have complete responsibility within the Army.

RICHARD D. MEYER

Brig. Gen., USA

Deputy Chief of Transportation
for Army Aviation, OCT

ITEMS OF INTEREST

TC Aviators' Conference, 4 June 1959

■ We held our first *TC Aviators' Conference* in Washington, D.C. on 4 June and it was most gratifying to see so many of our TC Aviators from posts, camps, and stations throughout CONUS.

As information to those who did not attend, and particularly to those TC Aviators overseas, we discussed the *TC R&D program*; the *TC procurement program*; the *aircraft maintenance structure and support*; and the *current Department of Army and OCOFT personnel plans, policies, and procedures affecting TC Aviators*.

Those aviators attending the conference were able to review their personnel records and to have individual interviews with our career management personnel.

I feel the conference was worthwhile, and it might be wise to make the *TC Aviators' Conference* a bi-annual affair in order to inform

you of the progress to date, and the future aviation plans within the Transportation Corps. I therefore solicit your comments on this subject.

Advanced Schooling

■ Congratulations to the following Transportation Corps aviators recently selected for attendance at the Command and General Staff College, Fort Leavenworth, Kansas.

Aviators attending the 1959-1960 regular course: Major J. Y. Hammack, Major W. R. Dodd, Major C. S. Black; Captain John E. Cobb, Captain Edgar R. Fitzgerald, Captain H. W. Huntzinger, Captain W. G. Phillips, Captain A. B. Suttle, and Captain Sam G. Cockerham.

Aviators attending the 1959 Associate C&GSC: Lt. Col. Thomas E. Haynes and Lt. Col. William B. Dyer, and Captain William E. Black.

Attendance at the Armed Forces Staff College, Norfolk, Virginia: Major Orval H. Sheppard.

Accomplishment Through Understanding

"In some respects, being in the aviation business without being an aviator might appear to be an insurmountable handicap. But one must remember that it is unnecessary to lay an egg in order to judge an omelet. As a matter of fact, in today's Army, there is really no such thing as a non-flyer. We all fly, although it is true most of us do not pilot.

"One of the deficits in coming green into the aircraft business is lack of vocabulary. When someone says of a chopper: 'The G.D. C.G. is N.G.,' it takes a while before one is able to translate the sentence as meaning that there is something gravely askew with the center of gravity.

Two Way Street

"But this vocabulary poverty on the part of a non-aviator or non-aviation trained maintenance person works both ways. If the average supply and maintenance personnel have to learn to use the language of the wing wearers, the latter, in turn, should learn the peculiar patois of the wrench-winders and the electronic processing clockwork. For the supplying machine has just as peculiar a language to suit its needs as the flying machine.

"Supplies in the Army, like personnel in the Army, not only have a name, but they have a number. When somebody calls or writes or complains about the fact that they never got and want action on an item of supply, say a computer, he might as well complain about the lack of a whatchamacallit, for the stock number and organization identification number, as well as the adjectival designation, are what the supplier needs so that he can ferret out and patch up the



By
**Lt. Colonel
John Murray**

flaws in the supply line. A supply line which, incidentally, is usually and unfortunately visualized as a single huge and sluggish sewer pipe system, when in fact it's a tangle of ganglia more like a monstrous plate of spaghetti—always steaming with the heat of activity.

On Availability and Angels

"A word about maintenance and availability. The only things with wings that fly with unerring perfection are angels, not aircraft. As far as is known, angels have a VTOL capacity, no fueling problems, no SCAMP problems and no AOC (or TDP—if you prefer) problems.

The strange part of it all are the commanders' expectations that mere mortals can meet the perfection of Divine Providence. Is it too much to expect of human nature with all its shortcomings to only meet the flying ability of the deity's flawless creations by 85%? At least, give the supplier and maintainer a 15% credit of downtime for lack of supernatural powers.

And remember the wisdom of the old Greek playwright, Plautius, who observed over 20 centuries ago, that "flying without feathers isn't easy."

Early Birdmen

If you think you're "old" in the business, note the 13 Early Birdmen (left) who pose in front of a 1910 Bleriot Monoplane at the Las Vegas World Congress of Flight. To join this select organization of 300 pilots who flew prior to 1916 is a unique honor. Mr. Roy Knabensrue, 82, fourth from left, back row, is America's oldest airman having made a balloon flight in 1900. What were YOU doing in 1915?



THE ARMY AVIATION ASSOCIATION OF AMERICA, INC.

Headquarters and Corresponding Address: A.A.A.A., Westport, Conn., Telephone: Clearwater 9-4752



Annual Meeting Details Next Month

Unfortunately, we cannot cover the events of the *AAAA Annual Meeting* in Washington, D.C., on June 5-6-7 in this particular insert. The magazine closing date of June 2nd precludes any Annual Meeting coverage. The next issue will report on this Meeting in detail.

Through June 1st, it was evident that the Annual Meeting would be a most successful professional meeting, delegates and members from many Z.I. Chapters indicating in advance that they would attend the 2½-day technical meeting. In fact, advance registrations, together with written confirmations received by both the National office and the Annual Meeting Committee, pointed to a possible sellout in advance of 5 June.

By the time you read this—late June/early July—you should have received first-hand reports on the Meeting as provided to you by attendees. We hope you made it to Washington;

if not, we'll have a complete rundown for you in the July, '59 issue.

S. California Chapter Organized

Chapter activity continues at an accelerated pace. Though lacking a large Army installation in the general Southern California area, California Reserve, Army National Guard, and active Army members joined forces and activated the California Region's third Chapter, the *SOUTHERN CALIFORNIA CHAPTER*. They were assisted in their activation by Capt. Donald Hendershot, Regional VPP. The '59-60 Chapter slate includes:

President: Capt. David Pierson (ARNG)
Executive Vice President: Capt. Leroy Rios (ARNG)
VP, Army Affairs: Capt. John Gilroy (Army)
VP, NG Affairs: Lt. Rulon Andrus (ARNG)
VP, Reserve Affairs: Capt. Robert Durych (USAR)
VP, Industrial Affairs: Lt. Bennett James (ARNG)
VP, Public Affairs: Lt. Sanford Ross (ARNG)
Treasurer: Lt. Beverly Bedley (ARNG)
Secretary: Lt. Richard Demmer (ARNG)

Activate Fort Riley Chapter

Meeting in late April, some 44 members within the general Fort Riley-Manhattan-Junction City, Kansas area activated the Midwestern Region's first Chapter, the *FORT RILEY CHAPTER*. Predominantly supported by members of the 81st Trans Co (LH), the Chapter embraces membership from the 1st Infantry Division, the 71st Trans Bn (Hel), and the Airfield Operating Detachment, Marshall U.S. Army Airfield. Elected to office as the 1959-1960 Executive Board slate were:

President: Lt. Col. Kenneth F. Langland (71st Trans)
Exec Vice President: Capt. Loren D. Eaton (AOD)
VP, Army Affairs: Capt. Richard H. Scott (AOD)
VP, Industrial Affairs: Capt. James R. Kitts (71st Trans)
VP, Public Affairs: Maj. Robert D. McClanahan (81st TC)
Treasurer: Capt. Ralph W. Merritt (81st TC)
Secretary: Capt. Gerald E. Royals (71st Trans)

New Chapter activities are being pursued at Fort Campbell, Fort Carson, and Fort Devens. Two additional Massachusetts Chapters—USAR and ARNG—and a Metropolitan Chapter (NY) are also in the process of activation.

Lawton-Ft. Sill Chapter Board



Lawton-Fort Sill Chapter Officers for '59-'60: Front, l-r, Maj Howard Moore (XVP), Maj Norman W. Goodwin (Pres), and Lt Paul Bass (VPP). Rear: CWO Alva Anderson (VPI) and Lt Ralph H. Matthews (Treas). Missing were CWO Jacob Packer (VPA) and Lt Joseph Fox (Sec). Extensive membership support has made the Oklahoma Chapter the Association's third largest Chapter, exceeded only by the Chapters at Fort Rucker and Fort Benning.

Regional and Chapter Elections

During the month of May, many Regional and Chapter activities participated in organizational balloting designed to return their Executive Board slates for the 1959-1960 membership year. We will report on these slates in the AAAA insert prior to the publication of a general Association-wide "Activity Structure Leaflet." Taking office on 7 June 1959 were:

COMBINED TEST ACTIVITIES CHAPTER

Fort Rucker, Alabama

President: Col. Jack L. Marinelli (Avn Bd)

Exec VP: Lt. Col. Charles H. Neufeld (Avn Bd)

VP, Army Affairs: Maj. William F. Francavage (TATSA)

VP, Industrial Affairs: Capt. George E. Lawrence (TATSA)

VP, Public Affairs: Lt. Col. Wm F. Byrd, Jr. (Avn Bd)

Treasurer: Capt. James L. Teese (TATSA)

Secretary: Capt. Garrison J. Boyle (Avn Bd)

WASHINGTON, D.C. CHAPTER

President: Col. Wayne E. Downing (ODCSLOG)

Exec Vice President: Col. John R. Dole (FAA)

VP, Army Affairs: Lt. Col. David G. Cogswell (ODCSPER)

VP, NG Affairs: Maj. Harrison A. Worley (NGB)

VP, Reserve Affairs: Maj. Robert M. Barendse (CARROTC)

VP, Industrial Affairs: Mr. George W. Fay (Sikorsky Acft)

VP, Public Affairs: Lt. Col. Paul R. Wagner (OCINFO)

Treasurer: Maj. Richard W. Bywaters (OCT)

Secretary: Maj. Paul E. Killpack (OCD)

Presidents of newly-elected Boards are urged to forward the new slates (and, if possible, a group photo of the Board) ASAP so that we may prepare the '59-'60 Association-wide "Activity Structure."

Shutdown

Please note that the National office has been closed during the period 11-25 June. This will temporarily delay correspondence, including new and renewal membership credentials.

Our four-handed, five-footed staff asks your

INDUSTRY MEMBERS, AAAA

Aero Design & Engineering Company

Aircraft Radio Corporation

AVCO Lycoming Division

Beech Aircraft Corporation

Bell Helicopter Corporation

Cessna Aircraft Company

Chance Vought Aircraft, Inc.

Continental Motors Corporation

De Havilland Aircraft of Canada, Ltd.

Fairchild Engine & Airplane Corporation

General Dynamics Corporation

William J. Graham & Son

Grumman Aircraft Engineering Corporation

Hayes Aircraft Corporation

Hiller Aircraft Corporation

Hughes Tool Company-Aircraft Division

Kaman Aircraft Corporation

Leor, Inc.

Lockheed Aircraft Corporation

McDonnell Aircraft Corporation

Petroleum Helicopters, Inc.

Republic Aviation Corporation

Ryan Aeronautical Corporation

Sikorsky Aircraft Division

Southern Airways Company

Vertol Aircraft Corporation

indulgence during the late June-early July period as we fight the *Battle of the In Box*. The normal period for processing membership and renewal applications—submission to receipt of credentials—is 14-18 days.

Arthur H. Kesten

Executive Secretary, AAAA

Industry Members - May, 1959

PETROLEUM HELICOPTERS, INC.

Robert L. Supps, President

Marion H. Boyan, Executive Vice President

Frank W. Lee, Vice President & General Manager

Leonard L. McComb, Vice President—Operations

Creston L. Tydal, Vice President—Maintenance

Stanley R. Clay, Chief Pilot

Louis W. Bynn, Assistant Chief of Maintenance

Samuel S. Hill, Personnel Director

Richard F. Bicknell, Assistant Chief of Operations

Philip H. Fillingham, Administrative Assistant

CHANCE VUGHT AIRCRAFT, INC.

W. F. Thayer, Vice President

J. R. Clark, Director of Engineering

Forbes Mann, Director of Sales & Service

J. B. Allyn, Manager, Military Requirements

R. V. Lynch, Manager, Sales Engineering

A. L. Jarrett, Manager, Advanced Weapons

F. W. Bates, Jr., Washington Representative

F. A. Nickols, Washington Representative for Army

F. S. Hardy, Jr., Chief of Army Requirements

L. D. Richardson, Chief of Advanced Aircraft

GENERAL DYNAMICS CORPORATION

T. G. Lanphier, Jr., Vice President

Kenneth Stiles, Vice President, Plans & Programs

W. C. Keller, Military Relations Administrator*

H. T. Dillon, Manager, Convair-Huntsville

R. B. Swanson, Convair Division, Washington, D.C.

David Rowland, Convair Division, Washington, D.C.

W. H. Mollering, Convair-San Diego

K. S. Coward, Convair-San Diego

*Convair Division

GRUMMAN AIRCRAFT ENGINEERING CORPORATION

J. B. Bellalatta

Paul Butler

A. Peleback

R. Kras

D. Terrana

E. Oight

F. Rowley

R. Donnell

Norman G. MacKinnon

J. F. Bolger

CESSNA AIRCRAFT COMPANY

(Names of individual members to be submitted)

NEW MEMBERS JOINING AAAA IN MAY, 1959

NORTHEAST AREA

[Mass-Conn-NH-RI-Me-Vt]
 Capt Philip J. Neary
 Capt Thomas J. Willson
 Lt John Falls
 Lt Clementine Williams
 Lt Eugene F. Britton
 Lt E. D. Lautzenheiser
 Lt Daniel J. Looney
 Lt Robert L. Inne
 Lt Donald L. Dodge
 Lt Philip G. Drew
 Lt Clarence J. LaSande
 Lt Pierre A. Favre

EASTERN AREA

[NY-NJ-Pennsylvania]
 Capt Marvin E. Gordon
 Capt Theodore M. Devine
 Lt Clayton L. Davis, Jr.
 Lt Kenneth D. Tobin
 Lt John E. Marcus

WASHINGTON REGION

[W.D.-D.C.-Va. within 60 miles of D.C.]
 Brig Gen Carl I. Hutton
 Lt Col George W. Patnam
 Maj Dale W. Taylor
 Capt Jack H. Thompson
 CWO Richard E. Myers
 Mr Irving S. Noland
 Mr Peter MacDonalld

MID-EASTERN AREA

[W.Va.-Del.-Va. outside 60 miles of D.C.]
 Lt Col Grady F. Lilly
 Capt Clarence A. Davis, Jr.
 Lt Charles L. McGuire
 Lt Charles D. Grim
 Lt Thomas H. Scott
 Lt Donald S. Webster
 Lt John B. Phillips
 CWO William H. Goldman
 CWO Robert A. Veal
 CWO Henry L. Lues
 CWO Carl E. Lawrence
 WO Victor H. Martin
 WO Carl E. Carrier
 WO Patrick J. Burns

GEORGIA REGION

Capt John L. Yunker
 Capt Thomas M. Stedman
 Capt I. J. Leach
 Capt Kenneth L. Wynn
 Lt Walter E. Jones
 Lt Jack F. Bishop
 Lt Joel J. Mikuta
 Lt Benny L. Booth
 CWO Carl Bernhansen
 CWO Charles N. Allred
 CWO Albert P. Norris
 Sp/6 George R. Thraill
 Sp/6 Gordon W. Colvin
 Sp/5 Rex L. Paul

SOUTHEASTERN AREA

[N.C.-S.C.-Florida]
 Capt William C. Lull
 Capt Harry E. Podley

Capt Kenneth C. Kirby
 Lt Paul W. Bailey
 Lt Carl E. Wolford
 Lt Joe D. Jobe
 Lt Henry A. Douglas
 Lt John A. Power
 Lt Jack L. Mullen
 CWO William K. Cormick
 WO Max H. Wilson
 WO Lawrence J. Taylor
 SFC Ralph M. Hardin
 Sp/5 Clifford Winkelman

SOUTHERN AREA

[Okla-Tenn-Ky-La-Miss]
 Lt Col Bruce Meeker
 Lt Harold W. McGregor
 Lt Carmen R. Martell
 Lt Jerry M. Bunyard
 Lt Osborn E. Smith
 CWO Jimmie E. Johnson
 CWO Eugene Stone
 CWO John A. Banks
 WO Ray H. Leggett
 WO Harry P. Parr
 WO Allen L. Holt
 WO George R. Barner
 WO Frank T. Nysewander
 WO William H. Ruffin
 WO Odgar J. Wagner
 M/Sgt Walter S. Cagle
 SFC Harold L. Baroff
 SFC Fred R. Campbell
 Sp/6 Jack R. Adell
 Sp/5 Edward D. Bradley
 Sp/5 John P. McGill
 E/5 Victor E. Rodriguez

CENTRAL AREA

[Ohio-Ind-Ky-Wich-Miss]
 Capt William L. Buck
 Capt Richard W. Nuttall
 Lt George E. McCusker
 Lt Robert Porades
 CWO Henry E. Holmes
 CWO Carl J. Riley

ALABAMA REGION

Maj Marvin H. Sneed
 Capt Robert G. Shanabarger
 Capt George E. Thayer
 Capt Eucia D. Spencer
 Capt Dwight R. French, Jr.
 Capt Joseph E. Henderson
 Capt Nick J. Basic
 Capt Edwin T. Brinkley
 Capt Nease Y. Davis
 Capt Richard E. Keltz, Sr.
 Capt Elliott T. Morris
 Capt James M. Peterson
 Lt Kenneth S. Womack
 Lt Donald M. Knapp
 Lt Robert F. O'Kane
 Lt Daniel J. Delany
 Lt Theodore W. Johnson
 Lt Frank S. Stewart, Jr.
 Lt James R. Hill
 Lt Alan R. Todd
 Lt Emory W. Bush
 Lt Charles C. Jones
 Lt Ivan D. Bugeleit
 Lt Deway C. Yapp
 Lt Robert L. Webster, Jr.

Lt Kenny W. Vansandt
 Lt LaVene W. Bindrup
 Lt Nicholas A. Gentile
 Lt Clifford A. Crosmun
 Lt Layell A. Fry
 Lt L. J. J. Pawlen
 Lt Wesley F. Osborn
 Lt Roydeau H. Patterson
 Lt Robert J. Jones
 Lt Philip D. Matheson
 Lt Alfred L. Martin, Jr.
 Lt James H. Jenkins, Jr.
 Lt R. F. L'Hammiedue
 Lt Glenwood N. Parrish
 Lt Robert D. Henderson
 Lt Christopher Fuller
 Lt Ray A. Wulff
 Lt George B. Callhaus
 Lt John B. Hart
 Lt Charles T. Holt
 Lt Joe E. Newman
 Lt Wayne C. Hogan
 Lt John H. Wilmore
 Lt William E. Harris
 Lt John L. Jones
 Lt Ronald L. Hewland
 Lt Marvin E. Nelson
 Lt Walter T. Colley
 Lt John J. Whalen, Jr.
 Lt John P. Stewart
 Lt Arlin Deal
 Lt Duane V. Schull
 Lt Arthur J. Crosmun
 Lt William A. McCollough
 Lt Walter F. Wall
 Lt Jerry W. Kalb
 Lt James D. Reeder
 Lt Clarence H. Keville, Jr.
 Lt Clarence O. Bakken
 Lt Philo W. Ackerman
 Lt Cecil L. Shrader
 Lt Jerome C. Meader
 Lt Engel Reimetz
 CWO W. B. Tomlinson
 CWO Delbert E. Poorman
 CWO Vining E. Cooby
 CWO James W. Marsh
 WO Paul J. Chavlin
 PFC Curtis F. Lawrence

TEXAS REGION

Col John L. Indigep
 Lt Col Bill G. Smith
 Maj Ralph H. Vels
 Capt Thomas W. Stephens
 Capt Arlen R. Suddaby
 Capt Donald L. Miller
 Capt Harold L. Wheeler
 Capt John F. Brown
 Capt Douglas E. Wheeler
 Capt Roland H. Shamburek
 Capt William F. Lang, Jr.
 Capt Jack J. Nelson
 Capt Myles H. Wierswa
 Capt Pitt D. Wright
 Lt Donald L. Wylie
 Lt Herbert C. Dameron
 Lt Ralph W. Clement
 Lt Philip J. Dvorak
 Lt Marion F. White
 Lt John E. Canon
 Lt Carl J. Fritzl
 Lt Frederic W. Watke
 Lt Theodore E. Mathison

Lt Jerry D. Hahn
 Lt William B. Long
 Lt Norman E. Healtzel
 Lt Donald R. Martin
 Lt Johnny A. Phillips, Jr.
 Lt Orin D. Floodner
 Lt David L. Florence
 Lt Bobby G. Franklin
 Lt Robert W. Copeland
 Lt Robert L. Stinnett
 Lt James T. Radford
 Lt Albert J. Berlin
 Lt Russell A. Branson
 Lt Charles C. Prentice
 Lt David W. Moore
 Lt Kendall G. Howler
 Lt Ramon D. Leyva
 Lt Richard D. Emerson
 Lt William G. London
 Lt Frank A. Stone
 Lt Robert W. Willingham
 Lt Daniel A. Addiss
 Lt Raymond J. Trouve
 Lt Gary F. Root
 Lt Ralph J. Bernsen
 Lt Robert H. Delaney
 Lt Leo Kravchick
 Lt Charles D. Magoon
 CWO Alvin D. Ezell
 Mr C. E. Davis
 Mr Mark Littleton
 Greer C. Dilling

MIDWESTERN AREA

[Minn-Neb-Kan-Mo-Iowa-NDak-S Dak]
 Lt David E. Boeb
 Lt Dale J. LeBlanc
 Lt Theodore K. Sharkey
 CWO Robert L. Williams
 WO Ernest W. Saunders
 Mr Bryce O. Todd

NORTHWEST AREA

[Wash-Idaho-Ore-Mont-Wyo]
 Capt George E. Knowles, Jr.
 Capt Howard L. Preme
 Lt Charles E. Beckel
 Lt Dan S. Leonard

USAFFE REGION

Capt James E. Kennedy
 Lt Lawrence H. A. Johnson
 Lt Clarence D. Wilks
 Lt Ira U. McIntosh
 Lt James R. Tamlin
 Lt Gerald D. Lippert
 Lt Castile H. Farish
 Lt Norman J. Hughes
 Lt Thomas A. Rice
 Lt Marion H. Dor
 CWO David A. Doble
 Mr Richard W. Sullivan

USARACRIB AREA

Capt Charles T. Cook
 Capt Daniel R. Stefanovich
 Capt Hugh L. Broyles
 Capt James M. Allen
 Capt James C. Crawford
 Lt Gene T. Bragg
 Lt Delano E. De Genette
 Lt Joseph P. Morris

FPPP: Semi-Annual Review

File 1 (Major). Meniere's syndrome. Claimant now retired. Has received 21st indemnity check. Indemnity total: \$4,515.00.

File 2 (Captain). Cardiac condition. HCs received 17th indemnity check. Indemnity total: \$3,485.00.

File 3 (Captain). Episodes of loss of consciousness. Claimant now retired. Has received 16th indemnity check. Indemnity total: \$3,280.00.

File 4 (CWO). Muscular atrophy of left shoulder. Has received 14th indemnity check. Claim total: \$1,890.00.

File 5 (Lieutenant). Respiratory condition. Received six indemnity checks prior to return to flight status. Indemnity total: \$960.00.

File 6 (Lieutenant). Nerve ailment in shoulder and back. Has received 11th indemnity check. Indemnity total: \$1,660.00.

File 7 (CWO). Hells. Received nine indemnity checks prior to return to flight status. Indemnity total: \$1,125.00.

File 8 (Captain). Transient numbness of right arm and face. Claimant returned to flight status prior to the loss of flight pay.

File 9 (Lieutenant). Recurring disability due to injuries received in an automobile accident. Received three indemnity checks prior to return to flight status. Indemnity total: \$480.00.

File 10 (Captain). Diabetes/cardiac. Has received 9th indemnity check. Indemnity total: \$1,845.00.

File 11 (Captain). Hernia. Returned to flight status prior to the loss of flight pay.

File 12 (Captain). Cardiac condition. Has received 9th indemnity check. Indemnity total: \$1,800.00.

File 13 (Lieutenant). Meningitis. Has received 7th indemnity check. Indemnity total: \$1,190.00.

File 14 (Major). Has received 6th indemnity check. Indemnity total: \$1,320.00.

File 15 (Lieutenant). Sacroiliac. Returned to flight status prior to the loss of flight pay.

File 16 (Captain). Demyelinating disease. Has re-

Double Play

Capt. Weldon C. Britton, VPA of the MONTEREY CHAPTER, and Aviation Officer at CDEC, penned this interesting note: "Just a word to let you know that the Britton family is 100% AAAA. I don't know how many brother acts the AAAA has (Ed. One, to our knowledge) but you now have another.

My brother, Gene, resigned from the AFR last year and joined the RI-ARNG as an Army Aviator, and has been at Mineral Wells, Tex., going through Helicopter School.

A little background info: We both graduated from the AF in '44 as fighter pilots, Gene flying 51's in Europe and myself flying 51's in the Pacific, both getting out in '46 with civilian flying taking up the best part of our time until I became an AA in '50. Now, Gene has finally seen the light and is also an AA."

ceived 6th indemnity check. Indemnity total: \$1,230.00.

File 17 (Captain). Eye infection. Has received 6th indemnity check. Indemnity total: \$1,140.00.

File 18 (Captain). Pericarditis. Has received 6th indemnity check. Indemnity total: \$1,230.00.

File 19 (Lieutenant). Deviated septum. Has received 5th indemnity check. Indemnity total: \$750.00.

File 20 (Captain). Major eye surgery. Has received 4th indemnity check. Indemnity total: \$760.00.

File 21 (Captain). Possible cardiac condition. Alert claim form received.

File 22 (Lieutenant). Severe injuries and burns following aircraft accident. Alert claim form received.

File 23 (CWO). Visual deficiency. Alert claim form received.

File 24 (Major). Broken leg following skiing accident. Alert claim forwarded to claimant.

File 25 (Captain). Ulcer. Alert claim form forwarded to claimant.

MILITARY AVIATION PLACEMENT SERVICE

Members may apply for a specific position by requesting a Qualification Resume from the AAAA. Resumes, as received, will be forwarded to the specific Box holder.

SOUTHEASTERN firm has a current need for personnel with helicopter, supply and engineering backgrounds. Write AAAA, Box 5, Westport, Conn.

SOUTHEASTERN STATE will have openings for several aviation mechanics in the near future. Applicant must be either service school trained or appropriate CAA license in both fixed wing and rotary wing aircraft. Must be willing and able to be a member of the National Guard. Write AAAA, Box 1, Westport, Conn.

MIDWESTERN AIRCRAFT firm requires technical representatives to service target missiles. Immediate positions call for extensive training, practical experience on electronic equipment such as radar, fire control systems, autopilot, radio, telemetry. Must be capable of assisting military

personnel on recommended service techniques, by means of class room lectures, training schools, service demonstrations. Write Box K, AAAA, Westport, Conn.

MAJOR WEST COAST Aircraft Manufacturer Desires East Coast Military Sales Representative. Prefer extensive Army aviation background with helicopter flight experience. Write AAAA, Box J, Westport, Connecticut.

CANADIAN helicopter operators have openings for licensed mechanics. Must have held their "M" license for a minimum of two years. Write AAAA, Box 7, Westport, Conn.

"A Well Done"

■ For about one year, Army aviation activities in Transportation Division of USAREUR have come under the direct supervision of Lt. Colonel John Murray. Col. Murray, by hard work, soon mastered aviation terminology and has done an outstanding job.

Although he had all Transportation material, he devoted the major portion of his time to aviation. It has been a pleasure to work with him and his transfer to a new position leaves a big space for an incoming pilot to fill. Murray



By
**Col. Warren R.
Williams**
Hqs, USAREUR

USAREUR REPORT

is a member of the Army Aviation Association of America and has volunteered to write some comments for the USAREUR REPORT upon his departure. They appear in a sub-column on page 244.

Do's and Don't's

■ The investigation into our fatal L-23 crash has been completed. Although the report is a model of thoroughness, we still cannot say why the aircraft crashed. For some reason, the aircraft went into a steep spin and the pilots were unable to regain control. All controls were intact after the crash.

One strange aspect is that neither prop was turning when it struck the ground. Since the flight was an instrument check ride, the possibility is strong that control was lost as the result of single engine operation at below single engine speed. The instructor was sitting in the right seat and, since the spin was to the left, may not have been able to get the controls because of

centrifugal force. So far, all we can pass on to help others is:

a. Instructors should occupy the center seat during check rides involving any unusual maneuvers.

b. Don't cut an engine for practice where you don't have enough room to regain control if the student errs. You may be quick enough and experienced enough to handle a dead engine in any position; but, with another at the controls, you must plan for the unexpected on his part.

It's Your Magazine!

■ Recent changes in organization within the USAREUR Staff may make it a bit harder for me to keep up with USAREUR aviation activities. However, we'll try to keep the column going. Notes and contributions from other USAREUR aviators are needed more than ever. Let's send them in, you USAREUR Army Aviation personnel!

New Item

Stepping onto terra firma after a flight from the continental U.S. via Spain in a brand new Army L-23F are Maj. Henry N. Weggeland, USAREUR Aviation Detachment commander, far left, pilot of the aircraft, and Capt. Billy R. Wright, co-pilot and the unit's Operations Officer. Greeting the pair on arrival at Heidelberg is Col. Warren R. Williams, Chief of the USAREUR G-3 Organization and Training Branch. The "F" Model incorporates numerous refinements, including a fuel-injection engine. (U.S. Army photo.)



WHICH WAY?/Continued

(Continued from Page 4)

mercial applications of the helicopter for which the fixed wing aircraft was not well suited. In this same vein the first military applications of the helicopter were in the command and evacuation fields.

Dispersion and Speed All-Important

The second, and militarily the most significant, factor influencing the development of the helicopter has been the introduction of the atomic weapon into the arsenal of war. The atomic weapon has placed a *premium* on dispersion and speed. The best insurance against atomic destruction is to keep concentrations of any of the tools of war below the levels which are militarily and economically lucrative for the employment of atomic weapons.

Yet, to be effective it is necessary at the proper moment to mass men and material quickly and then with equal rapidity to disperse below the level of danger. Ground contact vehicles were reaching their practical limits in speed and flexibility. It was necessary to look elsewhere. The answer was in the air. The fixed wing aircraft did not offer the freedom of action and versatility necessary for tactical mobility. The rotary wing aircraft was a vehicle in being which offered great potential. Its vertical take-off and landing characteristics freed it from the restraints of prepared landing strips or roadways; its freedom from support by the earth permitted it to leap over terrestrial obstacles; and its speed and maneuverability equipped it to achieve surprise.

■ "ARMY AVIATION" reimburses its voluntary subscriber-correspondents for exclusive professional articles. Rates vary from 7c.-12c. per printed line for the first 1,000 words, the rate depending upon the illustrative art or photos accompanying the article. For consideration, submissions should contain "an exclusive" verification.

Applications to Atomic Battlefield

What are some of the applications of the helicopter to the atomic battlefield? General Willard G. Wyman in an address to the Air War College stated that the Army "... must have tactical aerial vehicles that will permit us to:

One: Move patrols and assault forces up to battle group size to seize critical terrain and exploit tactical atomic blows.

Two: Move reinforcing elements in depth or laterally to meet or counter an enemy threat or create one of our own.

Three: Effect rapid shifting of weapons with crews and other combat equipment within the battle area—particularly across natural or man-made obstacles."

General Wyman's classification of the needs of the Army for tactical aerial vehicles recognizes the already accepted use of these craft in logistical, medical evacuation, reconnaissance, fire direction, command and communication roles. He has only listed requirements beyond these.

In the first category established by General Wyman are those missions primarily offensive in nature. The atomic weapon is not a cure-all to the problems of attack. To realize the most

Master Army Aviator

Lt. Col. E. Johnson, head of the Department of Rotary Wing Training, at USAAYNS, Fort Rucker, is shown as he received Master Army Aviator wings from Brig. Gen. Ernest F. Easterbrook, Commanding General, USAAC. In keeping with tradition, several other Master Army Aviators were on hand to witness the award ceremony. Shown, left to right, are: Col. Jack L. Marinelli, President, US Army Aviation Board; Capt. Leonard F. Seitz, USAAB; Gen. Easterbrook; Col. Johnson; Capt. Merrill E. Jameson, USAAB; and Lt. Col. John W. Oswalt, Combat Developments.





Power Pack

Brigadier General Ernest F. Easterbrook, left center, Secretary of the Army Wilber M. Brucker, and Lieutenant General Clarke L. Ruffner, Commanding General of the Third U.S. Army, discuss an SS-10 air-to-ground guided missile mounted on an H-13 Sioux helicopter during a recent visit by the dignitaries to Fort Rucker. Briefed on the Center's mission, Secretary Brucker was flown to the Matteson Range where he witnessed a small firepower demonstration.

from firepower it is imperative that it be exploited by ground oriented action. In order not to telegraph an offensive blow, to provide protection to friendly forces from atomic weapons effects or to capitalize on an unforeseen tactical development, atomic or other fires may be massed in an area distant from forces planned for their exploitation. Troop-cargo vehicles with vertical take-off and landing (VTOL) characteristics must be used to realize the most from these situations.

The medium and heavy helicopters are vehicles in being which are well suited for the delivery of troops, weapons, supplies and minimum transportation in a quick offensive thrust, irrespective of terrain barriers, to prevent an atomic shattered enemy force from reorganizing or to seize a critical locality to prevent withdrawal of enemy units. The tremendous powers of the atomic weapon offer great bonuses in surprise, destruction and disorganization of the enemy to a commander who is prepared to move rapidly into the atomic created vacuum. The VTOL air vehicle gives the unfettered mobility to offensive forces so necessary for success on the atomic battlefield.

Defensive Tactics Enhanced

The second category delineated by General Wyman relates primarily to defensive actions. This field suggests that the commander can increase the potential of his reserve by mounting it in VTOL aircraft. Such mobility will permit greater dispersion of reserves as passive protection from atomic weapons.

Yet this dispersion does not invite defeat in detail because of the speed of the carriers in massing the elements of the reserve. Where

the size of an area may be such as to require a surface mobile force of a given size to ensure that time and space factors would permit accomplishment of its mission, it is possible that a VTOL vehicle transported force of half this size could handle the entire area. Of course, this force is smaller in size and could not meet on even terms a force of, say, twice its size. However, through its great mobility it may be able to defeat a force of a much larger size by achieving surprise or by catching the enemy near prostrate and in the throes of reorganization after an attack or being struck by friendly fires. A slower moving force would find a recovered enemy, possibly one too strong for it to defeat.

The VTOL carrier is also suited for the movement of forces disposed along or near the forward edge of the battle area. These forces can be moved by air in limited and controlled withdrawals in setting the trap for penetrating enemy forces. These aircraft similarly may be used to shift forces from one forward position to another in order to assist in canalizing an enemy, to reinforce another unit or as part of a master scheme of deception to deny the enemy current information of the location of friendly forces.

In delaying actions the VTOL carrier will be of inestimable value. It will permit forces to execute maximum delay before being whisked away as the enemy closes on the delaying position. Psychologically, the will of delaying forces to fight will be greatly enhanced by the knowledge that their withdrawal can be effected even if surrounded.

These carriers, coupled with firepower, will give the delaying commander a potent counter punch allowing him to conduct an aggressive

WHICH WAY?/Continued

delaying action. Enemy atomic delivery systems, supply installations or other critical points can be destroyed or neutralized by VTOL carrier delivered forces or by stay-behind units which are recovered by VTOL carriers. Again, the present helicopters offer as vehicles in being the means for achieving to a degree the mobility needed in defensive and retrograde operations on the atomic battlefield.

Finally, in the third category established by General Wyman we find the VTOL aircraft employed as a weapons carrier. The General's statement of requirement emphasizes the concept of VTOL transport aircraft moving weapons and crews about the battlefield with the implication that they will be used in a ground role. This does *not* restrict the eventual use of the VTOL aerial vehicle as a mobile gun platform. The initial plans for employment of VTOL aircraft as purely transport vehicles to lift a combat ready force from one location to another to allow it to fight in a conventional manner are only the initial step in this field. As aircraft improve in their technical characteristics, become more available and eventually reach a numerical frequency rivaling that of the jeep, the low, slow flying gun platform must become part of the air mobile ground force. The ever present requirement for fire support with the same characteristics of mobility as the supported forces will demand their development.

Zero Ground Pressure Vehicle

It is obvious that the helicopter is not the ultimate vehicle. What is needed is a device best described as a "zero ground pressure" vehicle, one which can fly or hover a foot or two above the earth or soar to a few hundred feet. This vehicle must be easily operable. It is required in several sizes: small ones for light weapons platforms, command and reconnaissance, and messengers; larger one for small unit transports (squad or platoon), cargo vehicles,

Pillow Tank



A giant 50,000-gallon fabric pillow tank—the largest ever made—has been manufactured by the Goodyear Tire and Rubber Company in Rockmart, Ga., for the Army Corps of Engineers. Sixty-four feet long and twenty-four feet wide, the tank can be used for storage of fuel or other liquids, either offshore or on shore. The mammoth sack is made of rubber-coated nylon, and weighs about one ton when collapsed.

command posts and mobile medical installations. These vehicles must have great reliability and durability, be resistant to the effects of firepower, be simple to maintain and be economical in the consumption of fuel.

Such vehicles are somewhat removed from the realities of today. We are, however, standing at the threshold of transition of battlefield mobility from the earth supported vehicle to that of the zero ground pressure vehicle. We will see comparatively small improvement in surface mobility while mobility in the air will make great strides. When the zero ground pressure vehicle becomes available, then the surface vehicle as we know it today will disappear. In the meantime we must be ever alert to utilize the means we have for improving our air mobility, the Army aircraft. Development is paced by ideas. Don't be bound by convention. Keep the inventor's horizon pushed ever farther away by progressive thought. Make the most of what is at hand and be mentally prepared to accept the developments of the future.



Lt. COL. JACK W. HEMINGWAY received his commission in 1942 through the Citizens Military Training Program. Following his assignment to the 35th Infantry Division, he joined the 78th and fought with that Division in ETO. A unit commander at Camp McCoy, Wisc., in the post-war period, he later went to Japan being assigned to GHQ, SCAP. Returning to the U. S., he served as company commander and later as battalion S3 with the 14th RCT at Camp Carson prior to a Fifth Army Headquarters assignment. In Korea, he was assistant G-3 of the 40th Infantry Division, and battalion commander and executive officer of the 223rd Infantry Regiment. His return to the United States brought HQ, Third Army duty and later an assignment with the Command and Staff Department of the Infantry School. Currently attending the Army War College, Col. Hemingway looks forward to his challenging assignment in Army aviation.



Environmental Testing By . . .

FLYING LABORATORIES

■ In the past several years, great strides have been made in the state of the art of airborne surveillance, sensory, electronic warfare, communications identification, and navigational equipments, both ground based and airborne. These equipments in the main are devices which will be carried aboard or used in support of manned as well as drone aircraft.

These complex electronic systems require a great deal of development and engineering to insure a suitable capability and configuration for use aboard Army aircraft and drones prior to standardization and insertion in the Army inventory. While much of the development can be done in laboratories, a great deal of *environmental engineering testing* must be accomplished to insure system as well as environmental compatibility.

Environmental Testing Requirements

In the early stages of engineering development, as well as in the latter stages of packaging development, it is imperative that a great deal of test equipment and engineering talent accompany the equipment during its environmental testing phases.

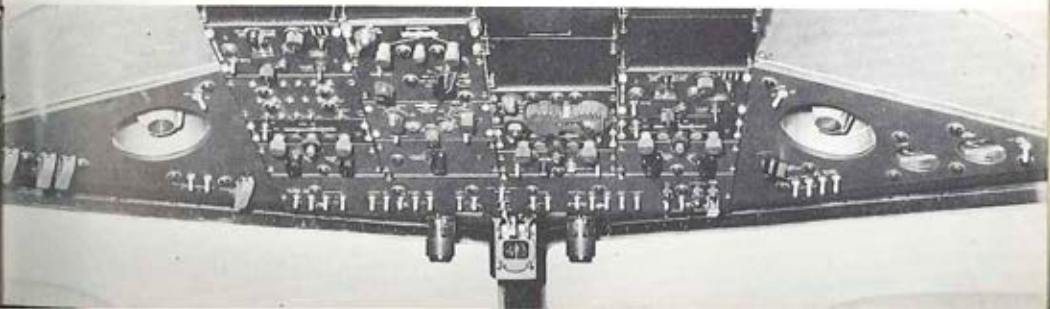
In the past the Signal Corps has had to rely upon large aircraft furnished by sister services—

BY
COLONEL JOHN L. LEIDENHEIMER
OCSIGO

the Air Force and Navy—which has proven both costly and time-consuming in that each project was considered and *installed separately* aboard aircraft on loan from the sister services, and after completion of the test, *original configuration of the aircraft had to be restored prior to return*. The increasing number of equipments under development and proposed for development has led the Chief Signal Officer to the requirement for several specially configured aircraft with the versatility of accommodating a wide variety of equipments to be tested.

Six Surplus R4D's Secured

Early in 1958 the Navy was approached for the indefinite loan of six of its surplus R4D aircraft for the above purpose. These were delivered to the Army in the fall of 1958. It was decided that these aircraft would be completely modified to the latest standards to include the latest navigation and communication system with complete instrumentation to make these vehicles the best flying laboratories available today.



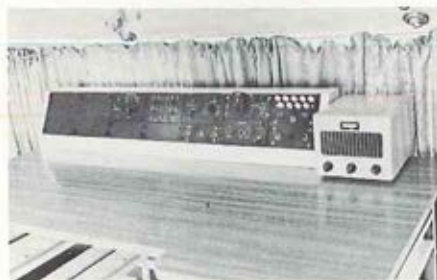
FLYING LABS/Continued

In May 1958 a requirement was placed on the U.S. Army Signal Research and Development Laboratories, Fort Monmouth, New Jersey, to prepare a program for development of a flying laboratory utilizing the Navy R4D aircraft as the carrying vehicle. At a preliminary meeting in Washington the desired electronic configuration was discussed and at subsequent meetings held in Dallas and Fort Monmouth, the basic mission and desired capabilities of the flying laboratories were established.

Stress Safety and Mission Flexibility

Two main objectives were stressed throughout the programming conferences and design stages. These were **SAFETY** and **MISSION FLEXIBILITY**. To accomplish these goals, three main segments of programming were established:

1. Electronic Configuration including the following:
 - a. Radio
 - b. Navigation
 - c. Flight Control
 - d. Electrical Systems
2. Cockpit and Cabin Configuration
3. Performance Requirements



A team was formed consisting of the Signal Corps agencies planning to use the flying laboratories, Collins Radio Company as prime contractor, and Executive Aircraft Service, Inc., as sub-contractor for certain aircraft work. What had been a long-needed requirement now started to become a reality.

Analysis of Installed Equipment

Let us first analyze the equipment installed in these aircraft as a part of Item 1. above:

1. Dual VHF Navigation Systems (OMNI)
2. Glide Slope Receiver
3. Marker Beacon Receiver
4. Radio Compass AN/APN-59
5. TCN-101 TACAN
6. DF-301A Direction Finder Group (UHF-ADF)
7. Airborne Weather Radar
8. LORAN, Radio Receiver AN/APN-70
9. Radar Beacon Transponder
10. Airborne HF Single Sideband Communication System
11. VHF-COMM-1, VHF Receiver, VHF Transmitter
12. VHF-COMM-2, VHF Receiver, VHF Transmitter
13. UHF-COMM, Radio Set AN/ARC-27
14. FM COMM, Radio Set AN/ARC-44
15. AUX H.F. SSB KWM-1 Transceiver
16. Interphone, Special Design Intercommunication System, including five (5) Operating Positions, Cockpit and Cabin Loudspeakers and Patch Panel
17. IFF, Radar Set AN/APX-68
18. AP-101E Automatic Flight Control System
19. FD-104D Integrated Flight System
20. Dual C-10 Gyroscopic Compass Systems
21. A.C. Power System

With the above equipment as installed in the aircraft, there are *five Navigation Systems* independently operated including *VOR, ADF, UHF, TACAN*, and *LORAN* which provide positive positioning of the aircraft at all times in any area regardless of the type of navigation aids available.

We have also provided for Communication flexibility with UHF, VHF, HF, LF, and FM Radio in order that positive communications can be maintained in any area regardless of the type of ground station available.

Stability and positive tracking of the vehicle has been accomplished through the use of the electronic Auto Pilot and Flight Director System which can be fed radio intelligence from several of the navigation systems for coupled operation.

AC Power System

The *A.C. Power System* designed for the *Flying Laboratories* includes:

- 1) 1 each - Main Inverter
115 volts, 400 cps, Single Phase, 2500 VA
- 2) 1 each - Auxiliary Inverter
115 volts, 400 cps, Single Phase, 2500 VA
- 3) 1 each - Emergency Inverter
115 volts, 400 cps, Single Phase, 2500 VA
- 4) 1 each - SSB Inverter
115 volts, 400 cps, 3 Phase, Wye Connected, 2500 VA

- 5) 1 each - Test Power Inverter
115 volts, 400 cps, Single Phase, 2500 VA
- 6) 1 each - Test Power Inverter
115 volts, 60 cps, Single Phase, 1000 VA
- 7) 1 each - Test Power Inverter
115 volts, 400 cps, 3 Phase, Wye Connected

In reviewing the above *A.C. Power*, you will note that there are three Test Power Inverters which were installed and wired for the exclusive use of the Cabin Section where the test equipment and systems will be operated. By a switching system the Test Power Inverter, 115 volts, 400 cps, 3 Phase, Wye Connected, can also be used as a 3 Phase Delta Connected power source supplying all the variations of the *A.C. Power* required.

Further, the inverter classified as "Emergency Inverter" is so installed as to be automatically energized upon failure of the Main or Auxiliary Inverters requiring only battery power to supply heading and attitude information to the Pilot in addition to one Compass System, the second VHF Communication System, and one ADF System. This design satisfies the latest criteria of emergency flight power requirements.

DC Power System

The *D.C. Power* requirements of the aircraft are amply met by a 28.5 V System capable of generating 900 amperes. The 900 amperes are supplied by two 300 ampere engine-driven Generators and a third 300 ampere Generator driven by an auxiliary power unit mounted in the aft Cabin section capable of continuous ground or in-flight operation.

Forward Cabin Configuration

With the basic electronic configuration established to provide Communication, Navigation, and Flight Direction, and with a power scheme for the variety of testing which is to be accomplished with the *Flying Laboratories*, we next approach the problem of a Cabin Configuration which would provide the maximum flexibility for the variety of programs planned and anticipated by the Using Agencies in the Signal Corps.

In the *forward compartment* we installed an Observer's position between the Pilot's and Co-Pilot's seats to be used for observance and evaluation of the cockpit flight panel. In the radio racks on the right side of the forward section we installed all *Communications Systems*. The forward left hand section contains the *Navigation Systems*, and the aft left hand section contains the *Flight Systems*. Each of the electronic



racks are equipped with a separate junction box containing all terminals, relays, circuit protection and miscellaneous components required for the system installed in that particular rack. The top of the left radio racks provides a large work table area for in-flight program planning and administration.

Aft Cabin Configuration

The *aft Cabin* was configured and structurally designed for the mounting of eight General Logistics type mounting tracks. Four of these are located on the floor and four are located across the ceiling. All installations made in the cabin such as the test racks, work tables, Test Operator's Console, storage racks, and miscellaneous seats are designed to mount in these tracks and can be adjusted to any location in the cabin—left or right, forward and aft.

As a general plan, the Console is mounted at the left forward corner of the cabin adjacent to the photo-panel and includes controls for sampling any radio signals desired. The radios

FLYING LABS/Continued

can also be monitored through the overhead speaker system consisting of four speakers located through the cabin area.

The photo-panel mentioned above, used to record flight test information, contains the following instruments: Air-speed, Turn and Bank, Vertical speed; Engine RPM; Manifold Pressure; Outside Air Temperature; D.C. Voltmeter for Test Buss; Ammeter for Test Power Feed; Voltmeter for the various A.C. currents; a Course Indicator; Approach Horizon RMI; and Distance RMI. There is also included in the photo-panel a special Annunciator Panel with a ten digit system to identify the various configurations and test photographs taken in conjunction with equipment evaluation.

Additional Features

Test equipment racks with adjustable shelves for mounting any variety of test equipment are provided in the Cabin section with power outlets at six separate locations for D.C. and three types of A.C. currents.

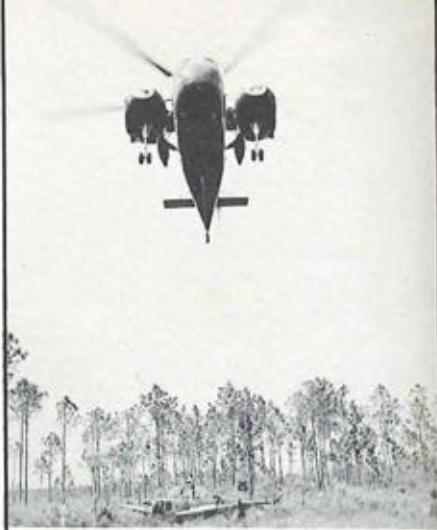
In the aft portion of the cabin there are two floor cut-outs—each measuring 24" x 55"—for use in aerial photography or equipment testing such as infrared or other systems which require external viewing.

The *Auxiliary D.C. Power Unit*, mentioned previously, is in the aft left hand corner of the Cabin and is easily removable in the event test equipment or cargo is to be loaded requiring use of the double door opening. The Cabin also has provisions for mounting a motion picture screen for projecting film in conjunction with testing, training, and demonstrating equipment.

R4D Performance Upped

With the desired 1) Electronic and 2) Cabin Configurations established, we researched the required flight performance and weight carrying capability of the R4D Aircraft to determine its ability to perform the required task with maximum safety. It was decided that certain modifications should be performed to increase the R4D's basic performance and include proven safety features developed since the aircraft's original design.

As a starting point, an 8,000 Hour Overhaul was performed on each aircraft to ensure the basic airframe was structurally sound and airworthy. The engines were changed from the



Responding to an emergency call, a Fort Rucker H-37 flown by CWOs Ralph Fitch and J. R. Oden participated in the retrieval of a downed Navy T-34 trainer from inaccessible swamplands near Pensacola, Florida. The 1-hour plus flight, and subsequent air-evac, resulted in savings well over \$9,000 in dismantling and reassembly costs to the government.

standard R1830-92, rated at 1,200 H.P. to the R1830-94, which is a standard configured engine used in the Military Services and capable of developing 1,350 H.P. It also incorporates a two-speed blower system increasing the maximum ceiling of the aircraft. The Air Research Maximizer Kit was installed to improve the aircraft's performance and provides an ultimate cruise speed of between 200 to 210 miles per hour, a reduced take off distance, and a considerably improved rate of climb, and single engine capability.

Safety Features Installed

All mandatory and most recommended FAA and Military Safety features were applied such as Rotating Beacons; a paint scheme designed with luminous paint for easy identification in flight; new hydraulic panel and high pressure system to improve landing gear retraction; one-piece birdproof windshield; increased side window visibility; safe feather indication; etc.

Another item to be considered as a part of performance was *maximum flight endurance*. To accommodate the increased range desired for certain missions planned for these aircraft, shackles were installed under the out-board panels of both wings capable of carrying 250-gallon Drop Tanks which increased the total

capacity from 800 to 1,300 gallons. The drop-able feature of these tanks provides for quick discharge of 3,000 pounds should an emergency exist such as engine failure at critical weights.

We also installed shackles under the center fuselage for mounting test equipment and other items to be carried, and these shackles also are wired to provide for electric disconnect and dropping of the load in the event of emergencies. We now felt that maximum performance for this type aircraft had been achieved and the end mission was feasible.

SAFETY and MISSION FLEXIBILITY—these were the objectives. We feel the R4D flying laboratories provide each of these to the maximum, consistent with the capability of the airframe chosen and the electronic state of the art. We further believe that the ability of the Signal Corps laboratories to test and develop their equipment is now unimpaired by restrictions previously experienced in utilizing smaller aircraft of insufficient speed, weight-lifting capability, and electrical power sources.

Aircraft Assigned by Panel

Simultaneously with the work being accomplished at Collins Radio, The Chief Signal Officer appointed a panel of officers and civilian agencies to recommend the assignment of these six flying laboratories to the Signal Corps agencies.

Also, a standard operating procedure was

Destination: North Africa



Leonard Mercer, assistant factory superintendent at Cessna Aircraft Company's commercial aircraft division, and Chris W. Heese, works manager, inspect the first of 36 Cessna L-19's being readied for shipment to the French Forces in North Africa. The airplanes will be used for observation and reconnaissance duties.

About The Author

Col. John L. Leidenheimer, currently the Deputy Chief, CD & O Division, Office, Chief Signal Officer, is a graduate of the University of Illinois (BS in EE) and has achieved his Masters Degree at Harvard.



Rated as an Army Aviator, the Colonel served in combat in N. Africa, Sicily, Italy, and Southern France during WW II. Considered as an outstanding officer of many talents, the Illinois career officer graduated from the Army War College in 1953.

drafted, based on Navy criteria, to cover the operation and training of personnel to man these aircraft. This panel recommended that two laboratories be assigned to Fort Monmouth, two to the Army Electronic Proving Ground, Fort Huachuca, one to Project Michigan, Ann Arbor, Michigan, and one to be utilized for the purpose of transition training crews into the aircraft and as a spare to back up the other five.

July, 1959 User Deliveries

These aircraft are expected to be completed and delivered to the users by July 1959. As of this writing, approximately 4,400 hours of flight test utilization have been scheduled against 140 projects under development.

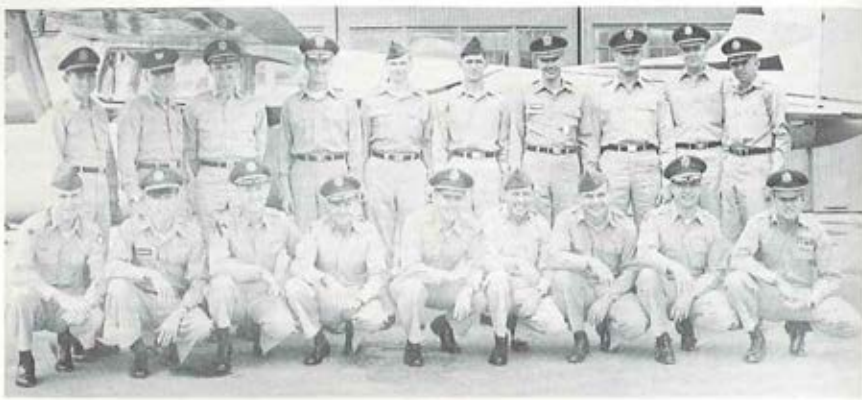
It is estimated that this new facility available to the Signal Corps will expedite development of new equipments for the Army by cutting down the lead time required for development and engineering evaluation and that these aircraft will pay for themselves in dollar savings in the first year of their operation.

Unique

■ Class 59-C4 of the U.S. Army Primary Helicopter School's Officer Rotary Wing Aviator Course graduated in May, marking the first time that commissioned officers, with no prior aviation qualifications, have received initial training in rotary wing aircraft. Previously, the only similar type training was given to selected enlisted personnel who in addition to the initial flight training, underwent an officer preparatory course for eventual warrant officer selection.

SCRAPBOOK SNAPSHOT

Fourth U.S. Army Instrument School Fort Sill, Oklahoma



FRONT ROW (l-r): Capt Marion R. Bradley; Maj Wallace C. Bolen; Lts Raymond J. Trouve & Phillip J. Dvorak; L/Col Neal C. Baldwin, Jr.; Capts Malcolm Bamford & Robert H. McCandlish; Lt Bruce J. Hoppe; CWO Robert J. Drda; Lt John M. Weaver. BACK ROW: Lt Don A. Butler; Capt Charles E. Hoyer; Lts Jack A. King, Raymond E. Murphrey; Ralph M. Bourne, Robert E. Lee, Jr., Theodore E. Mathison, & Emmet P. Hollowell; CWO Wilford W. Welch, Jr.; Lts Thomas E. Connell & Robert L. Guilloitte; Maj Lloyd B. Slimp.

CHECKITUS

Surely every individual has, at one time or another, experienced that old bug-a-boo of aviators, "check-itus." Actors and public speakers know the phenomenon as a sudden paralysis of memory usually encountered in the middle of a passage which is best known to them. They refer to it as "stage fright."

Soldiers, too, as every military man knows, have been known to "freeze up" in the thick of battle. Such mental seizures, unless overcome immediately, result in the unfortunate victims' becoming statistics, either as battle casualties or as sufferers of so-called "battle fatigue."

Athletes are not immune to similar afflictions. Some complain of "butterflies in the stomach" for hours before an important sports event. Others concentrate so seriously upon forthcoming athletic contests that they are unable to keep food down and may refuse to speak to friends and acquaintances. These are merely other forms of "check-itus."

If the problem is closely examined, it soon becomes apparent that "stage fright" or "check-itus," or whatever one will call it, is nothing but plain, ordinary fear. Fear of what? Fear of appearing stupid, fear of not being able to con-

form with the "norm," or a hundred and one other insignificant little fears that can, if not ignored, influence one's life forever.

Fear is a normal reaction of a person's system to the unknown element of an approaching, or present, situation. It is something that is experienced only by abnormal individuals. So it appears that the mature reaction to the onset of "check-itus" is to make the wise choice of two possible alternatives. The questions: Am I going to fail because I am afraid? Or shall I just give it my level best, and if somehow thwarted, try again another day?

Which answer will you select?

—Capt T.C. Roberson

Benning Hosts JCOC

■ Serving as the front door to Fort Benning, Lawson Army Airfield welcomed visiting dignitaries of the 28th Joint Civilian Orientation Conference held in early May. Demonstrations included a heavy air drop of a re-enforced airborne rifle company of the 101st Airborne Division by C-119's and participation by 12 rocket armed helicopters of the Aerial Combat Reconnaissance Platoon from Fort Rucker, Ala.

MAINTENANCE TIPS . . .

. . . Mike Button

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

UER DIGESTS MISSING?

Have you missed the *UER Digests* lately? *TB AFN 23-5* series, that it.

Well I guess everybody has 'cause the -2 was the last one distributed to the field. The latest word is that the -3 is at the printers and should be in your hands shortly.

TB AFN 23-5-4, -5, and -6 with the answers to a bunch of your questions and the solutions of most of your problems on UERs have been solved and are on their way.

The reason?

To give you better understanding and the solutions of your everyday procurement, supply, and maintenance problems.

Here's the scoop direct from the "*Super Scooper!*"

Stock numbers of items which are in the supply system now and listed in the various SB, manuals, etc., from now on will not be included as part of the "*FIX*" when published in the *UER Digest*. However, new items for the "*FIX*" will be published in the *Digest* so that the "Supply People" can get you that part by FSN (P/N) etc.

Take a big note of some entries (Project Nrs) in the *Digest* as they'll have stock numbers only because you can't find them any place else at the moment; however, they will show up in the -20Ps and -34Ps later on. When you run into an item in the *Digest* without a stock number that'll tip you off that the stock numbers are

readily available in the appropriate supply document which you should have.

The whole purpose of the revamp is to get the complete "*FIX*" into a *Digest* entry, including any FSNs not listed, as yet, in the proper supply document.

In the event you do find some FSNs in the *UER Digest* entries which are different from the same part in the -20Ps and -34Ps, don't panic; the ones in the *UER Digest* entry are the latest numbers available and is the latest information which should be used. When this happens it will be because TSMC has discovered that the previously published FSNs were in error.

UNABRIDGED, EAGER RECOURSE

Please, when filling in your *DA 468* remember that they are only as informative as *YOU* make them. It is real important for TSMC to receive the complete history of what you're UER'ing. Tell us everything you can or know about it. Tell what has been done to the discrepant "thing" to thoroughly check it out. Phrases like: "*replaced with like item*," "*won't work*," "*unserviceable*," etc., just don't cut the mustard! We gotta know the complete history! Our supply of crystal balls is completely exhausted.

So, to the Transportation Supply Section, New Cumberland, for your Activity Report Number 59-15, we of TSMC wish that everyone in the field, responsible for UER submissions, could feast their peepers on your *Unabridged, Eager Recourse*; it was a dandy.

SUCTION GAUGES

S/L 32-59, 29 April 1959 rescinded US Army TSMC *S/L 75-78*, 10 Dec 1958 which previously gave out the current data on the Suction Gauges used on *OTTERS*, *BIRD DOGS*, *BEAVERS*, and *SEMINOLES* and their interchangeability.

FSN-6685-550-6918, formerly 2303-MS 28061-4, should be requisitioned because it is the "key" gauge which tips off our supply people that



By
William D.
Bickham

MIKE BUTTON/Continued

there are about a dozen gauges which are functionally and mechanically interchangeable on these aircraft.

Too, when you have these gauges which are repairable but unserviceable send them back to your Army Depot (SB 1-15-5) pronto.

Checking out this new S/L 32-59 will save you a lot of sweat when you got cagey gauge problems.

PUB CHECK-OUT

Old Mike has been queried as to just what gives with TSMC *Time Compliance Technical Manuals* which have "Fourth Echelon responsibility (third echelon capability)" in the first paragraph of TM 1s. It seems that the Third Echelon Shops are confused to the point where they don't understand just who is actually responsible for the maintenance or whether 3rd or 4th echelon will request kits.

Well now, let's take a look at this here problem:

First, you gotta get hold of a few references:

1. SB 1-15-9
2. TB AVN 23-24
3. AR 750-712

These are the "Bibles" from which you get all the information needed. But, just in case

they are not readily available, old Mike will try to get the thing into a nutshell.

When you receive a *Time Compliance TM 1* which states "Fourth Echelon Responsibility (3rd capability)," it means, 4th is responsible for receiving and approving requests for 3rd to do the modification, if 3rd has the actual capability to perform the modification.

3rd then is responsible to go to 4th with a request, get the kits, and install them if the kits are marked 3rd echelon capability.

4th is responsible for supervising the overall program of field modifications; whereby, 3rd is responsible for the actual performance of the modification. In a nutshell the people's names found in the parenthesis are the guys with the capability to perform the modification.

And another point to get firmly fixed in the old grey matter is that requests for modification kits submitted to General Depot (SB 1-15-9, 5 Feb 1959) should be limited to only those required or to be installed within the immediate period. This will assure you don't have surplus kits around or find yourself having to re-ship them should your aircraft be shipped out.

Informationally Yours,

Mike Button

SCRAPBOOK SNAPSHOT

Airbase Section
U.S. Army Aviation Center
Fort Rucker, Alabama



FRONT ROW (L-R): Capts. Sandel, Lofgren, and King; Maj. Hix (Commanding); Capts. Peck, Shannabarger, and Quin. BACK ROW: CWO Adrain; Lt. Nelson; Mr. Whitfield; Lts. Williams, Watson, and Benston; CWOs Tomlinson and Poorman. (Also a 100% AUSA unit) (U.S. Army photo).

Command and Staff Changes

BLACKER, Kamuel K., Col., Naval War College, Naval Warfare Course, Newport, Rhode Island.
CREEK, Roy E., Lt. Col., Officer Student Company, Box C-26, Fort Rucker, Alabama.
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EDER, Herbert R., Maj., 6063rd Army Advisory Group, McNary Field, Salem, Oregon.

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SCRAPBOOK SNAPSHOT

Army Aviation Safety Course 10 University of Southern California



FRONT ROW (l-r): Capt Richard H Scott (Riley); Maj John Oihavik (Benning); CWO Stanley L Chambers (Sill); Maj Frederic B Franklin (USAREUR); Capts Reino O Oksa (Huachuca) and Robert V Atkinson (Ord). 2ND ROW: Capt Joseph N Jagers, Jr. (Benning); Lt Col William C Edler (Bragg); Capt Marvin E Dempsey (Sill); CWO Frederick G. Lieb (Knox); Capts John J Morris (Rock Island Arsenal) & Capt James H Chappell (Walters). 3RD ROW: Lt Col Gordon L Kinley (GINY); Mr Lawrence E Fisher (Knox); Capt Loren L Glenn (Walters); Lt Wallace H Franklin (CZ); Capts Henry R Mangum, Jr. (Charleston, WVA), Joseph I Martin (Meade), and Richard A Johnson (Belvoir).

SCRAPBOOK SNAPSHOT

54th Transportation Company (Medium Helicopter) (H-37 Mojave) Fort Sill, Oklahoma



FRONT ROW (l-r): Capt Kemp; CWOs Ayers, Stewart, Shore, & Seigler; Maj Trapp; CWOs Lashomb, Sevigne, Cooley, McGlasson, & Munsell; Lt Wood; Capts Peppard & Smith. 2ND ROW: Capt Dennis Lt Wilcox; CWOs Pickel, Townsend, Black, Owens, Allen, Hurst, Romain, Moore, & Leggett; Lt Cominos. 3RD ROW: CWOs Denning, Cook, Milliron, & Spaulding; Lt Bradley; CWOs Wagner & Myers, Missing: CWO Butts (birth in the family that a.m.).

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USAREUR REPORT



Seventh U.S. Army Award Won by Signal Aviation Section

One of the best flying records in the history of Seventh Army, involving 8,259 accident-free flight hours, has won the Seventh Army Certificate of Merit for Safety for the Aviation Section of the 160th Signal Group.

Covering the period June 1, 1957, to March 31, 1959, and involving instrument flights, courier runs and routine flying assignments, the award was accepted on behalf of the signal group by Capt. Chester R. Mead, the group aviation officer.

"Ground maintenance, observance of flying safety regulations are basic," said Captain Mead, a senior pilot with over 6,000 hours in the air. "Eliminating human error to the greatest degree possible is the secret of flying safety."

The award was presented by Col. J. M. Kimbrough, Jr., (left) Seventh Army signal officer, in the presence of Capt. Mead's fellow pilots and Col. John R. White, (right) commanding officer of the 160th Group.

The Two Blew

Through an International Society of Aviation Writers' charter flight, your staff will take in the Paris Air Show during mid-June. We hope, while there, to visit several major AA installations in Germany. Nothing like seeing friendly faces when far away from home.

11th Transportation Company Logs 1,000 Flight Hours in April

For the first time in USAREUR flying history, a helicopter company—Seventh Army's 11th Transportation Company—has logged 1,000 air hours in a single month.

The 11th cracked the 1,000-hour barrier in April, piling up 1,127 hours as they handled an extraordinary load of maneuver, training test, and troop movement assignments.

The self-styled "aerial workhorses of Seventh Army," 11th Transportation pilots normally log about 750 air hours a month with their H-34's, 100 to 200 more than the command average. Their record-smashing total for April was compiled while covering approximately 75,000 miles—all accident-free.

Field Experience Affects Design

Major Harvey E. Gill company commander, believes there is another benefit derived from such a work month, other than a record. "It's field experience like this, in flying and maintenance, properly transmitted to the engineers' drawing boards, that provide tomorrow's better planes."

"And when a helicopter company can produce, without delay or undue strain, a 1,127 air-hour month, it verifies what we in Army aviation have been sure of for a long time—that the Army's air arm can be depended upon under combat conditions."

April was a month of NATO maneuvers, Army training tests and troop and equipment movements. The company took part in Exercise Top Weight, the NATO command problem held early in the month, and supplied aerial transport for a number of units undergoing their annual proficiency tests.

The 11th carried a mixed manifest during the month, howitzers and jeeps slung under the fuselages, sick and injured hurried out on emergency medical evacuations.

XV-3 to Undergo Flight Testing

■ Air Force flight testing of Bell Helicopter Corporation's XV-3 convertiplane was expected to start about May 15, according to Bell officials. The test program, called Air Force Phase II, will see formal evaluation of the VTOL aircraft's flight characteristics at the Air Force Flight Test Center at Edwards Air Force Base, Calif., and will extend through June.



Ever since the Transportation Corps was transferred responsibility for Army aviation supply and maintenance support responsibility from the Air Force, it has actively sought improved methods for carrying out this mission.

The Army, unlike the other services, has a special problem in this area. Our depots cannot remain indefinitely at an air or naval base, or some other fixed installation, but must travel along behind our highly mobile armies.

This being the case, it was readily apparent from the beginning that a realistic inventory must be established which would be adequate to the needs of maintenance personnel in the field, but yet not permit large build-ups of seldom used parts in forward areas.

In establishing a realistic minimum repair parts inventory it necessarily followed that requisitions for replacement parts must be filled far more expeditiously than in the past. The concerted attack on this aspect of the newly acquired mission began almost immediately.

First Step: Model Shop

An Aviation Field Maintenance Shop was established at the Transportation Training Center, Fort Eustis, Virginia as a "Model Shop" for the development and testing of improved supply and maintenance systems. To this operation was applied the old adage, "the shortest

L-R: Lt. Col. Charles W. Audet, Military Assistant to the Chief, Data Processing Division, Directorate of Automatic Data Processing; Brig. Gen. William B. Bunker, CG, TSMC; and Mr. Robert L. James, Deputy Director of Automatic Data Processing. (U.S. Army photo.)

distance between two points is a straight line"—in this case, the line being a direct communications line between the Fort Eustis Model Shop and the Transportation Supply and Maintenance Command at St. Louis, Mo., center of all TC supply operations.

A logical second step was the extension of the line from St. Louis to depots throughout the U.S.

Design-Tests by Technicians

Technically qualified supply and system personnel converged on the Model Shop to design and test improved methods of office management, record keeping, and supply management which might achieve the primary goal of increased supply effectively. Since good supply support depends primarily upon a rapid interchange of information and a prompt and responsive system, initial efforts were directed toward achieving (1) a shortened supply cycle, (2) Minimum documentation, (3) inventory reduction, (4) uniformity of stock numbers at

AUTOMATION/Continued

user and supplier level, (5) use of a single source document, and (6) elimination or at least the reduction of errors in document preparation.

In establishing the ultimate system, all the modern tools of communications and management were exploited. In mechanizing operations to the greatest possible extent, a *Friden System Flexowriter* with Tab Card Reader, an *IBM 026 card punch*, and an *IBM Transceiver* were installed.

Today, operations performed and records maintained are in compliance with AR 711-16. To assure control and maintain stock number compatibility between the Model Shop and the Transportation Supply and Maintenance Command, a *master deck of punch cards* is maintained which represents all TC air items normally stocked in the supply system.

Thru use of the punch cards much of the typing of repetitive data has been eliminated. Punch cards are used to prepare pre-prints of DR Forms 1546 for satellite units, practically eliminating requisition typing at these units and assuring stock numbers that will be recognized at supply level. They are also used to prepare changes to authorized stockage lists.

Again, there is a *guaranteed* stock number and elimination of errors usually encountered in typing. Requisitions transmitted via *IBM Transceivers* to TSMC are prepared in accordance with AR 725-8 and require only the dup-

lication of certain data from master cards plus non-repetitive data being keyed into paper tape and punch card. At TSMC the requisition is received in punch card form for processing to account records.

Shipping documents, also in punch card form, are transmitted via transceivers to depots. Shipments from depots to using units are accompanied by punch cards which contain shipment and transportation data. Station excesses are disposed of or reported to higher authority thru use of master cards and installed equipment.

Requisition to Shipment: 10 Days

Prior to complete system operation the average number of days from date of requisition to date of shipment was 23, as compared with an average of 10.1 days in the first 30 days of operation. And we hope to steadily reduce this figure.

The improved system has now been extended to the Fourth Echelon Maintenance Shops at the general depots and is either now installed or being installed in selected Field Maintenance Shops which have a particularly heavy volume of activity. These include major centers of aviation such as *Rucker, Benning, and Belvoir*.

Already, the system has greatly reduced the time factors of documentation and processing, mechanized the area where errors have been most prevalent in the past, and made possible a substantial reduction in the number of line items on authorized Stockage Lists.

Sill H-34's Abet Fire-Fighting

A recent range fire on the Fort Sill Military Reservation presented a unique mission for the 45th Transportation Battalion and the 91st Transportation Company (Lt Hel).

The fire got out of control when a freakish north wind exceeding 50 MPH blew in during the night and scattered burning embers over a wide area of grass land. More than 5,000 troops were called out to fight the fire which threatened the town of Cache, Oklahoma and the Wichita Wild Life Refuge.

The helicopters of the 91st Trans Co were called in to maintain an around-the-clock surveillance over the area and report on fire conditions. The fire was brought under control by evening; however, the around-the-clock surveillance was necessary to insure containment of the fire through the hours of darkness.

The complete mobility of the 91st Trans

Company's H-34 helicopters made it possible to make reconnaissance flights, to pick up fire fighting troops, and to take these troops into the areas in which they were needed most.

Water Lifts

In addition to these missions, the *Choctaws* were able to carry water into areas that were impossible to get into by foot or motor vehicle. This around-the-clock surveillance was continued until the fire was completely extinguished three days later.

The operation was directed by Lt. Col. *Bruno Meeker*, Commanding Officer, 45th Transportation Battalion, who set up ground control in Post Headquarters. Helicopters operations was established in the 91st Trans Company by Maj. *Norman W. Goodwin*, then Unit Commander. Helicopters from the 91st Trans were flown over the area day and night for sixty-eight hours. Thirty four pilots from the company participated in the mission.

12E



X-18



H-23D



XROE-1



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United States Army
The Chief of Staff

SEVENTEETH ANNIVERSARY OF ARMY AVIATION

On behalf of all the members of the Army, I extend congratulations and best wishes on the Seventeenth Anniversary of Army Aviation to the officers and men engaged in that activity.

The soldierly qualities, the technical skill, and the pioneer spirit of the members of Army Aviation have brought about a continuing expansion of the capabilities of this vital Army function. These capabilities have made an increasingly significant contribution to the Army as a whole, both in carrying out its current mission and in meeting the challenges posed by the progressively growing impact of technology upon military operations.

I speak for all your fellow soldiers in expressing appreciation for the many past achievements of Army Aviation and confidence in its continued success in the future.

Maxwell D. Taylor
General, United States Army
Chief of Staff

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