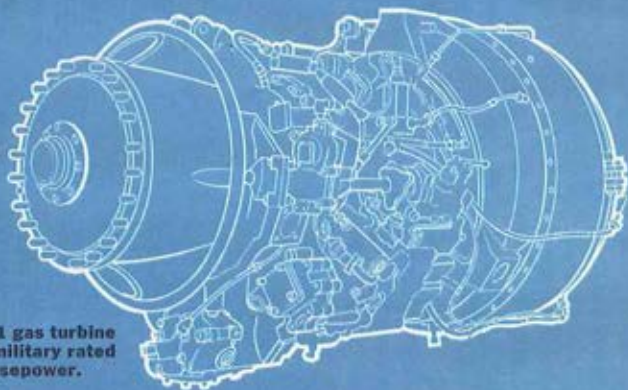


JANUARY/1962

# ARMY AVIATION



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## LYCOMING POWERS BELL HU-1A "IROQUOIS"



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# ARMY AVIATION

NUMBER 1  
JANUARY, 1962  
VOLUME 11

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## OPERATION

# STOL



The Caribou unloading at Resolution Island airstrip, which lies contained throughout its entire length within the circle (upper photo). Wheeler Airlines' Otter (background) uses the strip regularly.

## A SUPREME TEST OF CARIBOU TAKE-OFF AND LANDING PERFORMANCE ...

**Time:** Midwinter 1961. **Place:** Resolution Island, above Lat. 60°N. **Operation:** 25,000 lbs. of U.S.A.F. high priority freight to airlift from Frobisher. Round trip distance, 390 miles. **Carrier:** Nordair Limited.

**Landing Strip:** Length, 1300 feet. Width, not over 100 feet for half its length — walled in by banks of snow-covered rock 10 feet high. **Runway Extensions:** None. Sheer drop 800 feet, east end. Fall-off 300 feet west end.

**Facilities:** Strictly VFR.

**Cross Wind:** 25 kts., gusting to 30 kts., 60 to 90 degrees to the strip 70% of the time. **Turbulence:** Severe. **Average Temperature:** 24° below zero.

**Operation Summary:** MISSION ACCOMPLISHED.

DE HAVILLAND AIRCRAFT OF CANADA  
DOWNSVIEW ONTARIO

## THE RATING OF AA's

ONE of the most important tasks that faces any officer in the Army is the preparation of efficiency reports. Since we have just initiated a revised system of efficiency reports in the Army, I would like to spend a few moments emphasizing the particular responsibility of the Army aviator in this regard.

AS YOU well know, Army aviators are not considered separately on promotion lists or staff and command school lists, nor is there any provision for rating a man as an aviator and an officer separately. This is as it should be, but it means special responsibility is placed on the rater. His rating of an officer in a technical specialty serves as a measure of the officer's overall value to the Service.

DA PAMPHLET 355-25 describes the revised officer efficiency reporting system in detail, and I strongly urge every officer to read this booklet carefully. This new report is much more specific in the kind of data it covers, and I believe it offers better opportunity to state the particular qualifications of an officer aviator than our previous form allowed.

THIS is very important, for many of our "strictly flying" jobs do not offer the rater an opportunity to judge the broad abilities of an officer in the same manner an infantry company commander can observe his platoon leaders. This is no fault of the aviator, for 90 percent of his activities may be



involved with the very technical problems associated with our program, and his most important decisions may be made alone at 10,000 feet altitude. In some instances, such as our aviation companies, we have a seemingly disproportionate number of officers assigned compared to a ground tactical unit, and these officers may not have marked opportunities to demonstrate qualities of leadership, initiative and ingenuity that might be available in another assignment.

TO REMEDY this imbalance, the commander should take every opportunity to utilize his aviators in other assignments when such utilization would not detract from the basic mission of the aviation unit. There are some times when the training program would allow a certain percentage of the assigned aviators to be made available on a TDY basis to higher headquarters for the many additional officer requirements. Such temporary exchange would no doubt find favor with the other units and would allow the aviator an opportunity to display his ability in other areas. Certain units have demonstrated how effective such a program can be, both for the individual and for the organization as a whole. (I appreciate the fact that many aviation organizations face severe personnel shortages

and could not possibly afford such TDY loss.)

ALSO, I would suggest, as one means of forming your appraisal, that specific additional duties within the organization be assigned wherever possible and that these additional tasks be evaluated as part of the over-all performance. We must give our young officers opportunity to demonstrate their capabilities. In an aviation company, as well as other organizations, it may take a determined effort to make sure these opportunities exist. We can do this by periodic change of assignments, delegation of responsibility, and duty assignment that requires an officer to express himself in writing. The rater's judgment is enhanced if he makes every effort to place himself in a position where personal knowledge and judgment of a particular officer can be exercised.

THE DA PAMPHLET I cited makes one very important point: "Obvious padding with unsupported general impressions and opinions should be avoided; but too brief a description is also undesirable." In this regard, I think we tend to underplay some of the strenuous requirements of organic aviation. There is no reason to lean over backwards and, in a sense, be "ashamed" of being an aviator. The Army expects and demands a highly professional capability from its pilots. If a man spends a majority of his time in this technical field, he deserves credit for the knowledge, ability and judgment that go with this specialty. At best it is difficult for a man to be proficient in his branch and assume the additional responsibility of maintaining a high degree of competence in aeronautics. So far I have been very proud of our aviators for their ability to assume this dual capability.

NOW I do not intend to imply that an aviator demands any different consideration than any other officer. What I am trying to state is that he cannot be rated in isolation of his aviation duties. The revised efficiency reporting system puts greater emphasis upon performance of current duties. This emphasis is exactly in line with the above

## COMMENDATION

General Curtis E. LeMay, Chief of Staff, U.S. Air Force, had recent occasion to compliment Army aviation for a job "Well Done." His message of November 21 to General George H. Decker, Chief of Staff, U.S. Army, was dispatched as follows:

"Subject: 1961 Fighter Interceptor Weapons Meet. The recently concluded Fighter Interceptor Weapons Meet was an outstanding success. The timely completion of the Meet and the professional manner in which it was conducted are a credit to all concerned. Special recognition is due the U.S. Army helicopter units whose Q-2C drone recovery operations so effectively supported the Meet. Participating were the 90th Transportation Company (Medium Helicopter), Ft. Knox, Kentucky; the 54th Transportation Company, Ft. Sill, Oklahoma; and the 19th Transportation Company, Ft. Benning, Georgia. Please convey my congratulations to the units concerned and to each individual who contributed to the success of the competition."

comments. While the individual's over-all potential value to the Army is unquestionably important, it is difficult to measure. The specific instances and the specific opportunities of the individual's current assignment provide a sound basis for the rater to make an objective appraisal. Like I have said before, we in Army aviation do not want to be considered either prima donnas or step-children. In our efficiency reports an Army aviator should not receive special consideration because of his aeronautical rating or be penalized because of it.

I SUPPOSE every aviator at one time or another has kicked himself for rushing into the air and discovering once airborne that he has forgotten to check a few minor details - such as gas, oil, radios, NOTAMS, and whether he has a letdown chart for his destination. Now there may be an occasional emergency in combat conditions that might possibly excuse such behavior, but

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Turbine-powered Sioux, 1954



T-53 turbine-powered XH-40, 1956



T-63 turbine-powered HUL-1M, January, 1961

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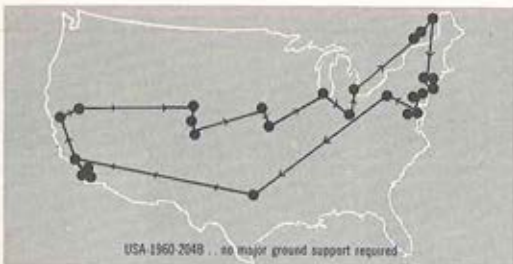
Turbine-powered UH-1H (LOH) 1961

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in peacetime few flying evaluation boards would be overly sympathetic to such pilot error.

AS WE MOVE into the winter season, our flight preparations assume even greater importance, for weather at this time is particularly unforgiving. Therefore, take all the time you need in planning your flight, preflighting the aircraft, and receiving a detailed briefing from the meteorologist (sometimes defined as a man who can look into a girl's eyes and tell whether).

IT IS a well proven fact that most accidents have their genesis in some action or omission BEFORE the flight. Few non-aviators have a real conception of the work required before takeoff. Naturally, an experienced aviator allows himself a certain leeway for this work before his ETD. But if you suddenly find yourself with an impatient VIP waiting and much more preflight work required, do not hesitate to tactfully explain

the problem and take the time required. Remember, no passenger wants to become airborne with a semi-prepared pilot or airplane.

IN THIS and succeeding letters, I hope you will forgive me if occasionally I re-emphasize the obvious - sort of like telling someone that dawn is a good time to observe the sunrise. Well, in this case, may I make the obvious point that winter is a good time to write Christmas cards (in the Northern Hemisphere) and an excellent time to review your preflight procedures. The latter effort may have a real bearing on your availability to write Easter cards next spring.

Sincerely,

DELK M. ODEN  
Brigadier General, GS  
Director of Army Aviation,  
ODCSOPS

## BELL, LYCOMING RECEIVE MAJOR CONTRACTS

■ Army contracts comprise the major portion of the \$70,000,000 volume of orders received recently by the Bell Helicopter Company, according to E.J. Ducayet, president of the Fort Worth concern.

The combined new business is the largest volume announced by Bell Helicopter at one time since high military production days during the Korean War.

New Army Iroquois contracts that will extend production of this series through November of 1963, totaled \$54,000,000 with additional orders calling for the production and delivery of Iroquois spare parts and support

An order for the production of an undisclosed number of helicopters for the Australian government and a \$5,782,000 U.S. Army order for five test versions of a new lightweight observation helicopter (LOH) are included in the overall announcement. No dollar figures on the Australian order or the spare parts portion of the U.S. Army contracts were revealed by the helicopter firm.

Contracts for gas turbine engines totaling almost \$25,000,000 have been received by Avco Corporation's Lycoming Division, Stratford, Conn., according to an early December announcement by James R. Kerr, president of Avco.

The awards call for the production of an undisclosed number of T53-L-9 helicopter engines for use in the advanced HU-1D helicopter and cover component improvement for the '61 calendar year for both the T53 series of engines and the more powerful T55 family. The order, which will extend production of Lycoming T53 engines through October, 1963, is the largest gas turbine production order the company has ever received. ■■





## FT. RUCKER REPORT

By MAJOR GENERAL  
ERNEST F. EASTERBROOK

**A**PPROXIMATELY 600 Army aviation enthusiasts assembled at Fort Rucker in mid-November to hear the former U.S. Army Chief of Staff, General J. Lawton Collins, explain the Army's role in the current world situation. He delivered his address at the annual meeting of the Bogardus S. Cairns Chapter of the Association of the U.S. Army. Gen. Collins, who led troops at Guadalcanal and Normandy, said the presence of U.S. Army forces has been the major deterrent against Communist aggression in Western Europe.

MAYOR Maxwell N. Brown of Enterprise, Alabama, was elected president of the Cairns AUSA Chapter, Mayor Earle C. Moody of Dothan was named first vice-president, Mayor Wilmer Parker of Ozark was chosen as second vice-president, and Councilman Comer Corbitt of Geneva was selected as third vice-president. Col. Raymond Coward, Fort Rucker Staff Judge Advocate, is our Secretary-Treasurer.

NATIONAL GUARD and U.S. Army Reserve units from Pennsylvania to Oklahoma have arrived at the Aviation Center during recent weeks. The Reservists and Guardsmen are making the transition to active duty rapidly and efficiently. The first unit to reach Fort Rucker was the 146th Engineer Company, whose personnel resided in and around Geneva and Enterprise, Alabama.

THEY were followed by the 844th Engineer Battalion from the Memphis, Tenn., area; the 356th Transportation Company from Norman, Okla.; Headquarters and Headquarters Company, 801st Signal Base Depot, Charlotte, N.C.; Headquarters and Headquarters Company, 333rd Engineer Group, Ann Arbor, Mich.; 803rd Signal Company, Pittsburgh, Penna.; 148th Engineer Company, Pascagoula, Miss.; and the 806th Engineer Company, Conway, Ark.

MANY prominent U.S., British, Italian and Indonesian officers visited Fort Rucker during October and November. Lt. General Thomas J.H. Trapnell, the Commanding General, Third U.S. Army, presented safety awards to 328 Center Engineer personnel and flight instructors during his first official visit to the Aviation Center.

MAJ. GEN.  
ERNEST F.  
EASTERBROOK  
COMMANDING  
GENERAL  
U.S. ARMY  
AVIATION  
CENTER



MAJ. GENERAL George T. Duncan, Commanding General of the Fourth U.S. Army Corps, came to discuss the mobilization of Reserve units. Brig. General John E. Kelly, Deputy Commanding General of Fort Benning, Ga., spoke to the graduates of Class 61-6, Officer Fixed Wing Aviator Course, on the fundamental qualities of an officer. He urged the graduates to "Study for the ultimate test, which is combat."

SEVEN British officers received an orientation and briefing within a ten-day period in late October. They were: Maj. General Kenneth T. Darling, Director of Infantry; Col. George R. Flood and Lt. Colonel R.K.S. Harker, British Army, Group Capt. D.F. Rixson, Wing Commander J.I. Parker, and Squadron Leaders J.E. Burton and F. Barnes, Royal Air Force. General Darling and Col. Flood saw helicopter firepower demonstrations at Matteson Range and the RAF officers toured the Department of Rotary Wing Training.

A GROUP of Italian Army officers, headed by Lt. General Guide Boschetti, Inspector of Infantry and Cavalry, observed rotary and fixed-wing training, and witnessed a firepower demonstration in mid-October. Gen. Boschetti was accompanied by Maj. General Umberto Borla and Brig. General Oreste Viligiardi. Fort Rucker was the fourth of six key installations to be visited by the group.

THE INDONESIAN Army's Chief of Aviation and Chief of Ordnance, Lt. Colonel S. Pirangadie and Lt. Colonel Ordojo, visited

Fort Rucker for two weeks to familiarize themselves with the instructional program of the Department of Rotary Wing Training and the Army's inventory of rotary wing aircraft.

OUR third AC-1 Caribou class recently finished its thirty-four hour flight training phase and wound up their course with a five-day tactics phase at the Infantry Center, Fort Benning, Ga. Eleven soldiers were graduated from the first "Flight Operations Specialist Course" recently. His work on the development of this course won Sergeant Young of Cairns Airfield Command the title of "Aviation Soldier of the Year," an award presented by the Hiller Aircraft Corp. through the Army Aviation Association of America. This is a 5-1/2 weeks course designed to provide selected enlisted men with the necessary knowledge to schedule and coordinate aircraft flights and to perform other administrative duties pertaining to airfield operations. It contains subjects on tactical air traffic control, aircraft characteristics, weather, regulations pertinent to Army aviation, navigation, radio procedures and VFR and IFR flight planning.

MAJOR Carlos E. Urrutia of Puerto Rico was named executive officer of Airfield Command early in October. Maj. Urrutia, who earned his commission in 1948, has been at Fort Rucker since January 5, 1960. He holds a number of decorations, has been through several Army schools and has more than 3,300 flying hours to his credit.



## ARMY ORDERS NEW RYAN VTOL

Capable of conventional flight at speeds of more than 500 miles an hour, a new Ryan jet VTOL research vehicle will be produced under a 24-month program funded by the Army. Utilizing the lift-fan propulsion system, the research aircraft has the dual capability of "straight-up" takeoffs and high forward speed. Two General Electric J85 jet engines will power the "fan-in-wing" aircraft. Some \$10.5 million has been allocated to the program, of which the Ryan airframe portion will total approximately one-half. ■■

From  
V.I.P.  
transport

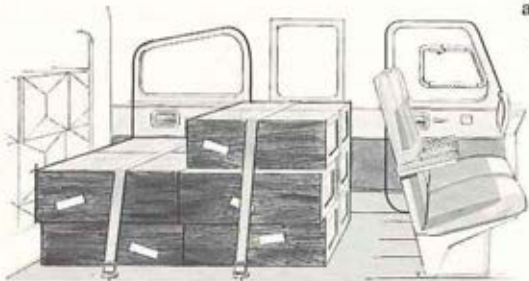


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Military Relations Department

**AERO** **COMMANDER**

**T**HE United States Army Primary Helicopter School, Camp Wolters, Texas, will initiate an eight-week Observation Helicopter Tactics Course starting next fall. (Reference the article, "Nap-of-the-Earth Tactical Training," ♦AA, Sep '61). The Rogers Committee Report recommended that such a course be established, and USCONARC has selected ORWAC 62-10 (1-B-1981B) as the initial class for this program of instruction.

## TWO-POST TRAINING

**AFTER** the successful completion of the Officer Rotary Wing Aviator - Phase 1 - Primary, 12-week course, approximately half of the class will be sent to Fort Rucker, Alabama, for training in the cargo helicopter. The remaining half of the class will receive tactical training at Camp Wolters and Fort Sill, Oklahoma.

**THE PURPOSE** of the course is to qualify selected students in the tactical employment of Army aviation, to include helicopter aerial machine gun fire and adjustment of artillery fire from the observation helicopter.

## PHASE 1 OUTLINED

**UNDER CURRENT** plans, Phase I of the course will consist of 80 hours of flying in the H-23D. At the completion of this phase, those students remaining with the USAPHS will receive 25 hours of training in the H-13 during the four weeks Primary Tactics Phase. Fifteen of these hours will be devoted to transitioning into the H-13. During these fifteen hours and during the remaining ten hours of tactical flying, the student will continue to practice and have demonstrated to him the several various types of low-level emergency procedures. The ten hours of tactical flying includes route and bridge reconnaissance, the employment of tactical radios for low-level navigation, and an introduction to aerial machine gun firing

# 'COPTER TACTICS COURSE

**BY COL. JACK K. NORRIS**  
**COMMANDANT, USAPHS**

using blank ammunition. However, there will be "midnight oil-burning" on such subjects as maintenance, map reading, medical, radio/communications, tactics, etc. Following this, the neophyte H-13 aviators take a low-level cross-country to Fort Sill, Okla.

**UPON ARRIVAL** at the Artillery Center, they will receive one week of instruction in artillery gunnery, including the adjustment of artillery fire from the H-13.

**DURING** the remaining three weeks they will continue to receive instruction and practice in the techniques and related subjects of nap-of-the-earth flying, formation flying, tactical night flying, live aerial machine gun firing, and a night cross country. The four-week training period at Fort Sill will include 25 hours of flying instruction.

**TWO AERIAL** machine gun ranges are being constructed at Fort Sill. One is located at the extreme southwest corner of the reservation and will be utilized when the winds are northerly in direction. This range has considerable cover afforded by the heavy oak and mesquite. However, the terrain is relatively flat. The other firing range is located approximately 6,000 meters



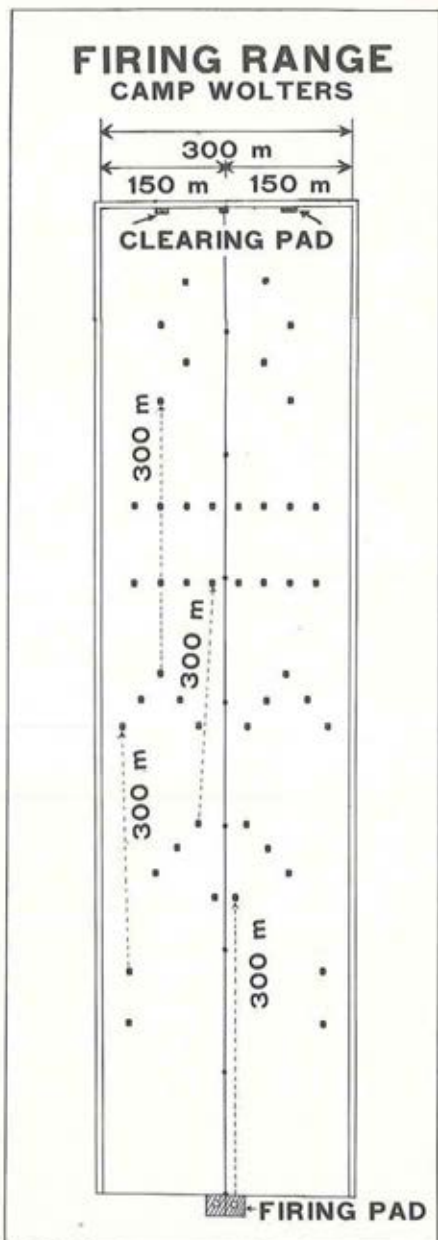
away at the northwest corner of the reservation. The terrain there is relatively bare of oak and mesquite, but there is a rise near the middle of the range and a downhill run towards the far end. When the winds are from a southerly direction, this range will be utilized.

THE RANGES are 300 by 1,200 meters in dimension. Each range has short posts located down the center, thus dividing each range into two identical lanes. Each lane will have 23 main targets (painted car bodies) and several silhouette targets placed in strategic locations. Both ranges will have a large firing pad where the H-13E's machine guns can be zeroed in and will also have clearing pads at the terminal end of the range where the weapons may be cleared.

THE FIRING techniques and fire distribution, as presently envisioned, will involve the firing at point and area targets by single helicopters and in teams of two helicopters. The targets will be taken under fire at speeds ranging from 0 to 60 knots, and will be engaged while at a hover, flying straight ahead, flying diagonally to the left or the right front, and maneuvering the aircraft in such a manner as to bring on targets arranged in a broad "V" or "U."

TARGETS will be taken under fire while flying or hovering sideways followed by advancing and shifting to a deeper target, and finally, the targets may be taken under fire by flying in a zig-zag course or a long series of S's. These procedures will, of course, be subject to change and refinement as more experience is gained in the application of fire from helicopters.

THE TRAINING at Fort Sill will terminate with a field exercise covering and utilizing the material presented during the entire eight weeks of tactical instruction. Upon completion of the FEX, the students will, by means of another night cross country flight, return to Camp Wolters where they will graduate and receive their Army Aviator wings.



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Model 217-5A has 6000-rpm output shaft, Model 217-6A has 2100-rpm flanged propeller shaft drive. Both versions combine high performance and operating economy with long life, low weight, **LOW INSTALLED COST.**



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## CONARC



**A**N Army Aviation Conference was held at USCONARC Headquarters, Fort Monroe, Va., on 16-17 November 1961. A series of briefings and orientations were conducted pertaining to aviation problems in operation, training, personnel, logistics and maintenance. The conference was attended by the Army Aviation Officers from the six Continental Armies, the Military District of Washington, XVIII Airborne Corps, representatives from DA, DCSOPS, DCSPER, COFT, the USAAVNS, and USA-PHS.

THE CONFERENCE was climaxed on the evening of 16 November by a cocktail party and dinner at the Fort Monroe Officers' Beach Club. Guests of honor at the party included Maj. Gen. and Mrs. Richard D. Meyer, Deputy Chief of Staff for Logistics, Headquarters, USCONARC.

Major Mertel



IT MAY BE of interest to list the Continental Army Aviation officers. First Army Aviation Officer is Lt. Col. John L. Briggs; Second Army, Lt. Col. Jim Lee, recently returned from USAREUR; Third Army, Col. Delbert L. Bristol; Fourth Army, Col. Lester F. Schockner; Fifth Army, Lt. Col. R.L. Cody; Sixth Army, Col. William R. Tuck; and MDW, Maj. Bernard M. Zeppenfield.

DETAILS of the CONARC Training Literature Program are contained in USCONARC Pamphlet 310-3, dated 18 October 61. Several ROAD (Reorganization of Army Division) training publications will be published by the end of this month. These include FM 1-15, "Aviation Battalion, Infantry, Airborne, Mechanized and Armored Divisions;" FM 17-36, "Armored Cavalry Platoon and Troop, Air Cavalry Troop and Divisional Armored Cavalry Squadron;" and FM 9-30, "Maintenance Battalion - Infantry, Airborne, Mechanized and Armored Divisions."

## REPORT

FM 1-15 INCLUDES full treatment of all three companies in the Aviation Battalion - the Hq & Hq Company; the Aviation Company, General Support; and the Air Mobile Company. FM 17-36 is of particular interest due to the excellent material on the Air

Cavalry Troop, including armed helicopter tactics and techniques and low level or nap-of-the-earth navigation.

ARMY TRAINING TESTS and Army Training Programs for the Aviation Battalion have been processed by USCONARC and forwarded to DA for printing. A DA training circular entitled "Employment of Aircraft Flares from Army Aircraft" has also been forwarded to DA for printing.

A REVISED DA TC 1-10, "Transition Training in the HU-1 Helicopter" will be published in the near future. Change 1 to TC 1-4 (U-1A Aircraft), TC 1-13 (H-19 Helicopter), TC 1-12 (H-34 Helicopter), TC 1-11 (H-21 Helicopter), and TC 1-14 (H-37 Helicopter) will also be published and distributed by the first of the year.

## WO COURSE RE-OPENED

THE WARRANT Officer Helicopter Training Program is again open. AR 611-85, "Selection of Volunteers for Training as Army Helicopter Pilots (W/O)" outlines the details. The first class opened at the U.S. Army Primary Helicopter School on 19 November 1961. There is also a continued demand for Lieutenants in the fixed and rotary wing aviation program. Sincere and earnest recruiting is required to fill the vacancies for both the W/O Helicopter Program and the Officers F/W and R/W Program in order to obtain the best qualified personnel.

AS ONE AVIATOR ASSOCIATE put it, every aviator must do his part to recruit necessary personnel. Seek out the qualified officers and EM and orient them on the Aviation Program. Assist them in the preparation of applications and obtaining their physicals. This action by the individual aviator along with necessary command interest and action will provide the required number of well motivated and qualified applicants.

RECENT CONARC aviation training policy emphasizes the ability of Army aviation to operate in the field under tactical con-

ditions and periods of low visibility. We sometimes forget the short field and confined area techniques with the basic observation and reconnaissance fixed and rotary wing aircraft. Training must include low level visual navigation and operations during periods of poor visibility for all tactical aircraft, particularly the utility and transport helicopters for use in conduct of airmobile operations. This doctrine is being reiterated in all future training literature and will be detailed in the next revision of Annex F, "Army Aviation" to the USCONARC Training Directive.

## RESERVES DOING JOB

A RECENT VISIT to the 149th Aviation Company, 49th Armored Division at Fort Polk, Louisiana, vividly portrayed the ability of our Reserve Component units to carry out their active duty mission. The 149th Aviation Company - recently called to active duty as part of the President's preparedness program - is busily engaged in its training program. The Aviation Officer is Lt. Col. Willis F. Horton with Maj. Jack M. Plemons as Company Commander.

SUPPORTING the 149th Aviation Company is the 249th Transportation Aircraft Maintenance Detachment commanded by Capt. Raymon C. Balwierczak. Intense interest, enthusiasm, high spirit, morale, and a tremendous amount of hard work were amply demonstrated by all officers and men of both units.

THIS SAME ATTITUDE was also well demonstrated by the 32nd Combat Aviation Company, 32nd Infantry Division, Fort Lewis, Wash., on a similar visit. The Aviation Officer of the 32nd is Lt. Col. John S. Sarko with Maj. A.R. Hackbarth as Company Commander. Congratulations to both the 149th and the 32nd Aviation Companies and supporting aircraft maintenance detachments for a job well done. Welcome aboard!

Major Kenneth D. Mertel  
Headquarters, USCONARC  
Fort Monroe, Virginia



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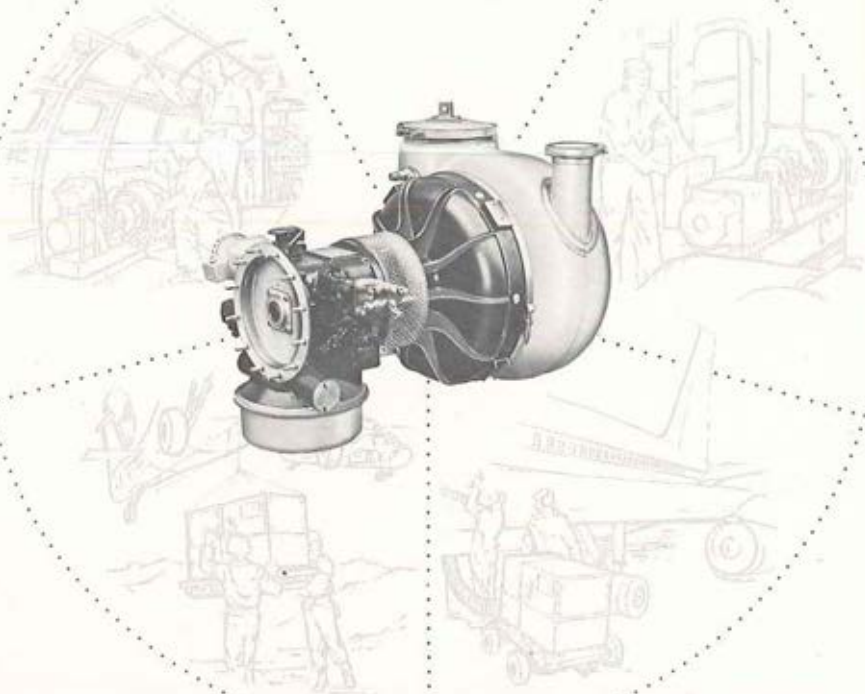
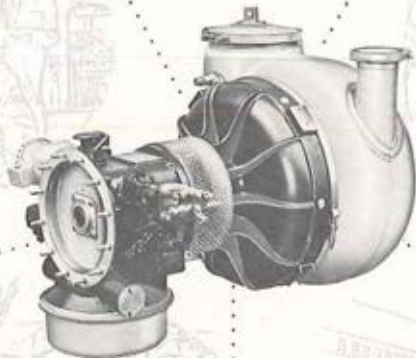
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# USAREUR REPORT

By  
**LT. COLONEL  
J. ELMORE SWENSON  
OPERATIONS DIVISION  
HQ, USAREUR**

**A**LTHOUGH visitors to Headquarters, USAREUR have different motivations, they serve a far greater purpose than drinking good German wine. Some get out with the troops, and some get in a trip before the calendar year ends. However, recent events in Europe have drawn several hurried visitors to Heidelberg.

THE FOLLOWING have dropped by USAREUR as a prelude to their important problings for knowledge and facts: Capt. James L. Hastings from Berlin; Capt. Donald J. Haid from the Aviation School; Mr. Robert F. Harris from Boeing Aircraft; and Mr. Ralph Greenway from DA.

BERLIN, of course, remains the focal point of world interest. Therefore, it is interest-

ing to give a few views from Capt. Hastings who was here recently to get in his fixed-wing time and to take his annual instrument check. Needless to say, Capt. Hastings found it a relief to fly a fixed-wing aircraft, there being none in Berlin.

HASTINGS also enjoyed being able to continue a flight in one direction for more than 30 minutes. Distance and air space limitations in Berlin on cross-country and instrument training are, of course, matters which really limit the aviation crowd there and promulgated Capt. Hastings' visit.

AT THE MOMENT, the possible relief of the restriction on the Berlin crews from flying over certain areas is being considered. Lifting the restriction would provide

some additional 45 miles around the perimeter. This seems to be small peanuts on this side of the border; but if flights are conducted at low altitudes, some realistic cross-country training could be obtained by the Berlin aviators.

ALSO posing limitations, except for close in GCA, are certain approaches and navigational facilities. Plans are in the mill to alleviate this aspect of the training problem, including the shipment to Berlin of one ICA-1 instrument simulator. This equipment would not only allow practice in simulated cross-country flying, but in instrument approved procedures as well.

AS A MATTER of departure, the Berlin operation still remains unique in the normal day-to-day performances of Army aviation activities. From a flight performance viewpoint, the flight detachment is trained primarily for riot control using tear gas dispensers, and for training in street fighting techniques and house-to-house operations.

UNDER the watchful eye of the operation officer, Lt. Dale R. Clerc, tactics call for the helicopters to land on rooftops and dispose of their troops. Four fully-equipped combat troops are carried (or five VIPs during their tours). Loads entail 1,000 pounds plus 800 pounds of fuel and a crew of two. This gives a maximum allowable gross of 7,900 lbs for the H-19.

## WAIVERS CONSIDERED

AS A RESULT of pleas from Berlin and Seventh Army, and especially from the CO, 8th TC Bn, Lt. Col. McKee, USAREUR is considering waiving certain portions of the USAREUR annual instrument check. None, or only a portion, of these requirements can be met readily at present.

HOWEVER, thought must be given as to the impact this waiver could have on the long range personnel implications, i.e., in future DA screening of aviator records to determine who should remain on flying status. Selection Boards at times can be quite unpredictable. If two aviators are

## HUBBA-HUBBA!

A U.S. Army HU-1B Iroquois helicopter was flown recently non-stop from Hurst, Tex., to Mobile, Ala., in four hours and 28 minutes, completing the 587-mile flight at an average speed of 130.7 miles per hour. Normally, the flight takes from six to seven hours and requires a fuel stop at Alexandria, La.

Ferrying the ship from Bell Helicopter Company's Hurst Plant on Dec. 7 was Capt. J.N. Nichols accompanied by PFC Lyle E. Stone, crew chief. Both are assigned to the Army Medical Aviation Detachment at Fort Sam Houston, Tex.

being considered for retention of flying status and all other things are equal as to job performance, experience and the like, the board is more apt to retain in the aviation program the aviator who has demonstrated progress and participation in his flying duties as indicated by his individual flight record.

## LOGISTICAL ANALYSIS

A RAPID but analytical trip, and one of speculative interest to all, was made by Mr. Harris of Boeing Aircraft. His surprise appearance informed us of the entrance of a multi-million dollar aircraft company into Army aviation. Boeing is spending its own money on a research program centered around Army aviation logistical activities. Mr. Harris's primary interest was logistical support of Army aviation and, perhaps, of tactical aircraft. Although his visit to certain USAREUR aviation installations was a brief one, Mr. Harris came up with some rather pertinent and fine conclusions.

FOR ONE, there appears to be a need for some determined balance between operational desires and maintenance capabilities. Some adjustments must therefore be made on operational concepts. Forward maintenance elements, for instance, must

become more centralized to take care of the sophisticated equipment, such as the Mohawk-type aircraft, since maintenance requires special skilled personnel and complex equipment. On the other hand, heavy maintenance support must move forward to provide more readily available back-up.

IF sophisticated aircraft may be employed at the division level, priority in the logistical system must be given for their back-up. Of course, as long as Army aviation remains a support function, it will never attain top priority. If it were a weapons system, per se, higher priority would prevail. This, however, is another matter and perhaps a controversial one at that.

## LACK OF ENTHUSIASM

ALSO BRUSHING through USAREUR on an extensive tour was Capt. Donald J. Haid. His visit entailed future development-armament of helicopters. His findings throughout his travels in Europe are of interest not only for aviators in USAREUR, but also for others throughout the world.

HE INTIMATED that there is some lack of enthusiasm and knowledge in Europe for the helicopter armament program. Understandably, of main concern to the aviators is the risk to be taken in low contour flying and gunnery training involved in the use of an armed helicopter. Why take chances when you will be hanged if you have an accident? Increased exposure to accidents must be recognized and accepted when flying six feet above the ground heavily loaded with armament and ammunition.

## OFFICIAL GUIDANCE NEEDED

IN THE HELICOPTER armament activity one must look at the USAREUR viewpoint, however. For one thing, there has been little information disseminated from DA about recent decisions concerning the arming of aircraft. Moreover, to get command interest, some type of more complete and official guidance doctrine will have to follow. The apparent weakness

in USAREUR is the lack of clear cut guidance or the standardization of equipment. Otherwise, helicopter armament will continue to be run on a "Back Alley Garage" fashion.

IT IS INTERESTING to note the observations made by Capt. Haid on French and British helicopter armaments. Perhaps the French are by far the most advanced and employ two systems - rockets on their Alouettes and automatic weapons on their H-34s. The British are planning armament of helicopters primarily for anti-tank fire, defense against small arms fire, and hostile helicopter fire. This latter is a consideration requiring deep thought as to tactics and technique. A detailed report by Capt. Haid on the achievements of these two countries would be of interest to all.

WITHIN THE CONFINES of Army aviation concepts of the future, some people believe that armed helicopter squadrons are the only means by which an aggressor with formidable modern armor can be stopped. The potential fire power possibly makes it superior to anything else, including fighter squadrons. Perhaps the key factor is the fact that the helicopter can provide a fixed platform for firing a vital weapon. This concept can certainly equate kill probability. This is most significant in terms of our present rockets and late model helicopters - tank killers in the making.

AS TO VULNERABILITY, one must remember that the top risk is the rotor head, followed by the fuel tanks and the pilot. These are accepted vulnerabilities. Naturally, there are solutions. The rotor head could be protected by a spinner made of hard plastic; fuel tanks should be self-sealing and burst-proof; and the pilot can be provided armament, including protective clothing. Last but not least, despite tests and other trials, the tail rotor presents no critical area of vulnerability consideration.

A FINAL CONSIDERATION on the helicopter armament weapons system is the current argument about the fixed and flex-

ible weapons systems. The big debate is to determine which system is better for helicopters.

## BEAVER DEBUT RECALLED

BEFORE ENDING, one must look back over Army aviation during the past year in USAREUR. Reflecting, one sees progress. Important are the changes in operations brought about by international events and the ever-present developments that promise even more significant happenings for 1962. At the lead has been the introduction of new aircraft into the theater. Sometimes the sailing has been smooth, sometimes rough.

THINKING of new aircraft introduction brings forth from the old musty footlocker thoughts of an old dilemma of ten years ago when the Beaver was introduced into Korea. On Christmas morning 1951, the sole Beaver aircraft in Korea, flown there

by Capt. (now Major) Guy C. Meiss, was made ready for its initial debut by carrying Gen. Van Fleet, the 8th Army Commander, to a rendezvous with Cardinal Spellman who was visiting the troops. Everything was in readiness except the weather.

ONE of the most unusual weather phenomena occurred - severe icing down to the deck. The Beaver lumbered off the field all right, but had to return immediately when it became heavily coated with clear ice. Capt. Bruce O. Ihlenfeldt then took off with Gen. Van Fleet in this typical "Van Fleet" weather and skimmed up the Han River to the General's destination. It was the only successful flight that day. Despite subsequent schemes and attempts to interest Gen. Van Fleet, he never took to the L-20. Yes, introduction of new aircraft into a theater can be a ticklish problem, particularly with commanders.

BEST WISHES to all for the New Year.

## SALVAGE MISSION "CRATES" HILLER 12E RECOVERY PILOT

■ In evacuating the wreckage of a fixed-wing light aircraft he found in the desolate, mountain area at Trout Creek Basin, Wyoming, pilot Joe Green appears to have duplicated "the wreck" in these fly-away photos of the recovery operation.

Green and his mechanic first dismantled "the wreck," removing it from between the trees where it was jammed. They then lashed the wings to the sides of their Hiller 12E, carrying the wrecked engine by sling in their first load. The fuselage and tail assembly were carried on a second flight to complete the high elevation salvage operation.

How did Green get in and out of the 12E once the wings were lashed on the sides? The lower photo shows the Avery Aviation pilot wiggling out feet first from under the bubble on landing. Ingenuity, Inc. ■■



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# Chinook

# PROGRESS



## FLIGHT TESTING CONTINUES

The No. 2 YHC-1B Chinook has been in flight test status since early September. Following airborne mechanical stability tests, 10 hours of hover testing was completed. By 28 October, 10 hours of flight testing had established the following flight envelope:

Level flight to 130 knots  
Slow sideward & rearward flight  
Gross weights exceeding design gross  
Banked turns, climbs, descents  
Autorotations  
Flares followed by vertical touchdowns  
Preliminary single-SAS investigation

Data on hover power required,  
stability & control, rotor strain,  
vibration, noise level, taxiing, &  
ground handling

Single flight controls hydraulic system  
operation during hover & slow flight  
Airflow studies

In early December, after completion of disassembly inspection, the No. 2 Chinook resumed Category I flight testing to expand the flight envelope.



## GROUND TESTING MILESTONES PASSED

On 21 December 61, just 14 days after starting the program, the 50-hour endurance tie-down run was completed on the No. 1 YHC-1B Chinook. Following completion of inspection, the 150-hour tie-down endurance test will be run.

150-hour bench endurance load run for each of the transmissions has been completed on the test stands.



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## OBITUARIES

### CLARENCE M. BRATT

Captain Clarence M. Bratt, assigned to SAAT, MAAG KAO HSIUNG, sustained fatal injuries when the HU-1A aircraft of which he was pilot crashed 15 nautical miles southeast of Tainan, Taiwan, on December 21, 1961. He is survived by his wife, Mrs. Sally Jane Bratt, of 437 East Howard Avenue, Milwaukee, Wisconsin.

### HUBERT H. HOMOLKA

First Lieutenant Hubert H. Homolka, assigned to the 69th Signal Battalion, APO 287, New York, N.Y., was killed in the crash of an L-20 aircraft at Doremberg, Germany, on December 4, 1961. Lieutenant Homolka was engaged as pilot of an official ferry flight at the time of the crash. He is survived by his wife, Mrs. Vee Ann Homolka, of 9405 Bellevue Boulevard, Omaha, Nebraska.

### CHARLES R. METCALF

Sergeant First Class (E-6) Charles R. Metcalf, assigned to SAAT, MAAG, KAO HSIUNG, sustained fatal injuries on December 21, 1961, when the HU-1A aircraft of which he was crew-chief crashed near Tainan, Taiwan. He is survived by his wife, Mrs. Shirley Jo Metcalf, of 2722 West 37th Place, Tulsa, Oklahoma.

### GILBERT F. STAUBS

Specialist Fifth Grade Gilbert F. Staubs, assigned to the 69th Signal Battalion, APO 287, New York, N.Y., was killed on December 4, 1961, when the L-20 aircraft of which he was crew-chief crashed at Doremberg, Germany. He is survived by his wife, Mrs. Hannelore Staubs, P.O. Box 381, Purcellville, Virginia.



## TURNOVER

LT. COLONEL WAYNE N. PHILLIPS (LEFT), DIRECTOR OF THE DEPARTMENT OF ROTARY WING TRAINING, USAAVNS, IS SHOWN ACCEPTING THE KEY TO THE NEW \$200,000.00 SYNTHETIC TRAINER BUILDING AT HANCHEY AAF, FORT RUCKER, ALA., FROM LT. COLONEL C.M. TURNER (RIGHT), POST ENGINEER, AS COL. WARREN R. WILLIAMS, ASSISTANT COMMANDANT, USAAVNS, LOOKS ON. THE NEW BUILDING WILL HOUSE SIXTEEN 2B3 HELICOPTER SYNTHETIC LINK TRAINERS AND TEN PROCEDURAL TRAINERS, FIVE FOR THE H-34 AND FIVE FOR THE H-21. (ALL PHOTOS, U.S. ARMY)

## DISTINCTIVE

NINE MEMBERS OF THE SWEDISH FORCE ARE CURRENTLY UNDERGOING HELICOPTER QUALIFICATION TRAINING AT THE U.S. ARMY PRIMARY HELICOPTER SCHOOL, CAMP WOLTERS, TEXAS. SHOWN, LEFT TO RIGHT, ARE: CHIEF WARRANT OFFICERS INGVAR D.B. SODERBERG, KJELL A.M. HOLMQVIST, INGMAR J.O. ERIKSSON, LENNART DAHLGREN, RAGNAR R. LIND, RUNE R.A. FRANSSON, LENNART B. BLOMQVIST, HANS O. ERIKSSON, AND LARS E. OLSSON, ONE OF MANY GROUPS OF FOREIGN NATIONALS TRAINING AT USAPHS. THE SWEDISH OFFICERS ADD A DISTINCTIVE LOOK TO LOCAL ACTIVITIES IN THEIR BLUE UNIFORMS.



## INSTALLATION

MAYOR MAXWELL B. BROWN (CENTER) OF ENTERPRISE, ALA., NEWLY-ELECTED PRESIDENT OF THE BOGARDUS S. CAIRNS CHAPTER OF AUSA, PAUSES TO CHAT WITH GEN. J. LAWTON COLLINS, USA, RET. (LEFT), AND MAJ. GEN. ERNEST F. EASTERBROOK, COMMANDING GENERAL, US ARMY AVIATION CENTER, FOLLOWING THE ELECTION OF NEW OFFICERS AT THE ANNUAL DINNER MEETING OF THE CHAPTER. GENERAL COLLINS, FORMER CHIEF OF STAFF, U.S. ARMY, WAS THE PRINCIPAL SPEAKER AT THE CHAPTER MEETING AT FT. RUCKER. (U.S. ARMY PHOTO)

## PRESENTATION

LT. COLONEL S. PIRNGADIE (RIGHT), CHIEF OF ARMY AVIATION FOR THE INDONESIAN NATIONAL ARMY, IS SHOWN PRESENTING A PLAQUE TO COL. JACK K. NORRIS, COMMANDANT, USAPHS, CAMP WOLTERS, TEXAS, IN APPRECIATION OF THE ASSISTANCE GIVEN TO HIM DURING HIS TEN-DAY ORIENTATION VISIT AT THE ARMY PRIMARY HELICOPTER SCHOOL. THE PLAQUE BEARS THE INDONESIAN NATIONAL AND ARMY FLAGS AND THE SYMBOL OF ITS AIR ARM. COLONEL PIRNGADIE'S GROUP ALSO TOURED THE FACILITIES AT FORT RUCKER, ALA., DURING THEIR VISIT TO THE U.S.



# ARMY - INDUSTRY

## LOGISTIC SYMPOSIUM



BY ROBERT M. LaRUE, USATMC, ST. LOUIS, MISSOURI

**D**URING THE WEEK of 27 November - 1 December 1961, an Army-Industry Aviation Logistic Symposium was sponsored by the Chief of Transportation and hosted by the Transportation Materiel Command at the Congress Hotel in St. Louis. The theme of the symposium centered around an exploration of ways and means of achieving more responsive and economical support early in the life cycle of aviation equipment.

**THE STAGE** for discussion was established through the use of two large charts described as the theoretical versus the actual.

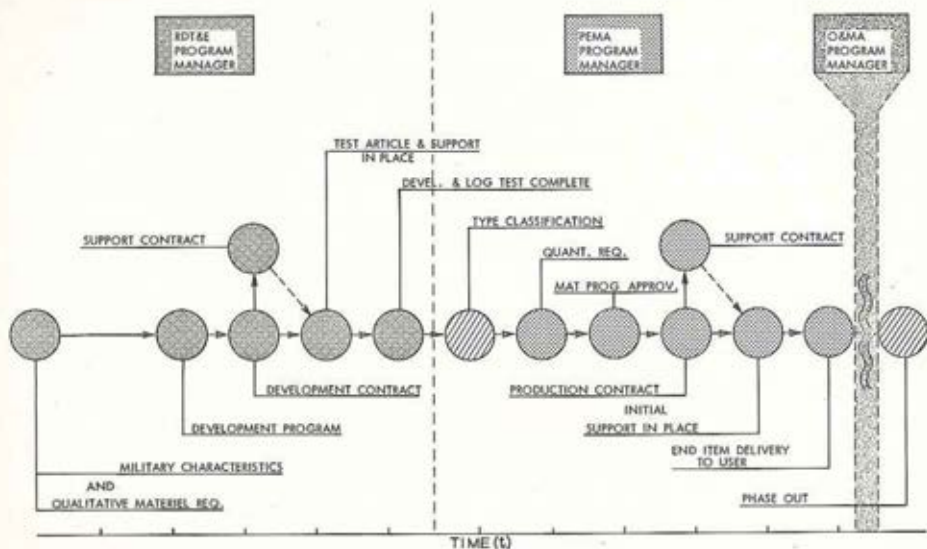
**THE FIRST CHART** (top, next page) portrays the manner in which individuals tend to visualize and, indeed, the manner in which Army regulations usually describe the sequence of events leading up to the

introduction of a new aircraft into the Army inventory.

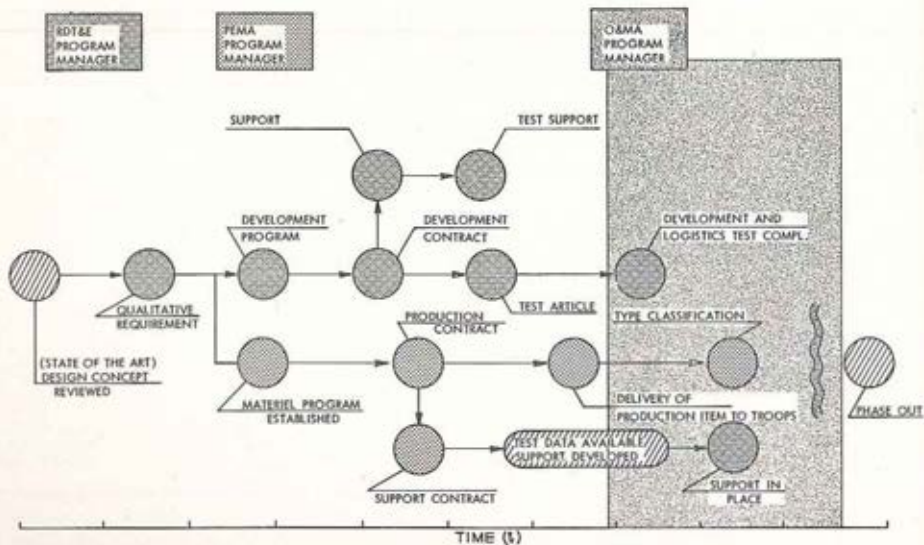
**THE SECOND CHART** (bottom, next page) portrays the manner and time-phase relationship of events as they actually occur under a compressed or accelerated development cycle.

**THE SEQUENCES** portrayed were then described as a framework model. They were represented as an idealized version of the functional anatomy of the Army as distinguished from that which more formal organizational charts tend to convey. As such, the charts are neither true nor false - merely a convenient way to think about missions, functions, and organizational interaction. RDT & E, PEMA and O & MA managers, though not distinguishable as separate single entities, were portrayed as an abstraction for purpose of convenience and clarity.

## PRESENT DEVELOPMENT CYCLE



## ACCELERATED DEVELOPMENT CYCLE





THE TOPICAL presentations that followed were designed to identify the variables of funding, support, manufacturing and communication techniques as a part of the over-all equipment life cycle. The interdependence of all these variables, the quantitatively expressed implications, and the impact of various techniques, acts or omissions were thoroughly explored and discussed in detail.

EACH TOPICAL presentation area was introduced by a speaker from TMC, who was followed by a presentation from a representative from industry, further followed by a panel discussion prior to the introduction of the next topic.

THE ENTIRE symposium was characterized by, one, a very frank and open discussion of problem areas which permitted all participants to get to the heart of the problem; and secondly, an acceptance by all that the challenge is, "how to survive in the world in which we live," rather than to "change the world to conform to the theoretical." All participants appeared to leave the conference with a feeling of purpose, and most certainly, with a greater appreciation for the problems confronting his opposite number on the military industrial team.

## PRESENTATIONS

AFTER an introductory address by Maj. General William B. Bunker, the Commanding General of the Transportation Materiel Command, topical presentations and panel discussions proceeded in the following sequence:

■ Mr. R.M. LaRue, Chief, Materiel Management Studies Division of the Management Group, USATMC, assisted General Bunker by introducing the two charts portrayed above in conjunction with an assessment of the impact of significant variables and their time-phase relationship.

■ "The Federal Cataloging Program and Related Publications." Mr. W.R. Smith,

Deputy Director of Technical Data Cataloging and Standardization, USATMC.

■ "Item Identification. Incorporation of FSN's in Contract Catalogs and Problems Encountered in Dealing with the Army." Mr. F.J. Miller, Manager, Spare Parts Department, Bell Helicopter Division of Bell Aerospace Corporation.

■ "Army Aircraft Maintenance Publications." "The Five-Part Manuals and their Development, Procurement, Printing and Distribution." Mr. E.B. Murphy, Chief, Technical Publications Branch, USATMC, Directorate of Technical Data, Cataloging and Standardization.

■ "Vendor GFAE Engine and Bulk Items Data, the Multi-Part Manual Format, Delivery Schedule and Problems in Dealing with the Army." Mr. A.L. Kettle, Supervisor, Technical Publications, Sikorsky Aircraft Division, United Aircraft Corporation.

■ "Initial Support for Newly Assigned Aircraft. Procedures and Policy Relating to Provisioning." Mr. J.A. Moro, Chief, Aircraft Commodity Division, Directorate of Materiel Requirements, USATMC.

■ "Procedure and Policy, Delivery Schedules, Documentation Processing and Problems Encountered in Dealing with the Army." Mr. F.J. Miller, Manager, Spare Parts Department, Bell Helicopter Company, Division of Bell Aerospace Corporation.

■ "Management Implications of Providing and Maintaining Effective Repair Parts Support." Mr. J.C. Swann, Chief, L-23 Project Office, USATMC.

■ "Production of End Items versus Production of Spare Parts." "Problems with Army in this Area." Mr. C.E. Kelcy, Manager, Spares Administration, Vertol Division, The Boeing Company.

■ "Maintenance Techniques in Support of CONUS Armies." Mr. C.R. Myers, Special

Assistant to Commander, Transportation Aircraft Maintenance Shops, New Cumberland General Depot.

■ "Maintenance Procedure for Providing Direct Support of CONUS Armies and Problem Areas with the Army." Mr. H.W. Holloway, Director of Engineering, Fort Rucker Division, The Hayes Corporation.

■ IROAN Concept, 4th and 5th Echelon Maintenance of Army Aircraft, Shop Operation Method, Procedures and Facilities Requirements." Major J.W. Hely, Chief, Air Depot Maintenance Division, Directorate of Maintenance Operations, USATMC.

## TWA OPERATIONS

■ "Overhaul Policy, Procedures, Methods, Programs (End Item and Component Overhaul and Rebuild)." Mr. V.L. Walstrom, Director of Maintenance and Overhaul Planning, TransWorld Airlines.

■ UR's, Engineering Change Proposals, Procedures and Implementation of Retrofit Programs." Mr. J.K. Gerdel, Chief, Management Group, USATMC.

■ "Development of ECP's in Relation to DA Product Improvement Program (UR's, Technical Reports)." Mr. C.J. Lagerquist, Project Engineer, Model 65 Airplanes, Beech Aircraft Corporation.

■ "Concurrent Development of Tools and Ground Handling Equipment with Initial Design Development of End Items." Mr. B. Stein, Project Engineer, Chinook (HC-1) Directorate of Engineering, USATMC.

■ "Participation in Development and Design of Ground Handling Equipment." Mr. G.R. Jackson, Project Engineer, Caribou (AC-1) DeHaviland Aircraft of Canada, Limited.

■ "Organization and Problems of Management Background of the AO-1 Mohawk Aircraft Project from the Establishment of the Requirement to its Use in the Field with the Army." Mr. J.W. Coursen, Project Engi-

neer, Mohawk (AO-1), Grumman Aircraft Engineering Corporation.

■ "The Army's Management Problems with the AO-1." Colonel J.W. Koletty, Project Manager, AO-1, USATMC Navy Coordinating Office.

■ "Army Aviation Logistics." "Predictions of Future Trends." - "TC Maintenance Support of Army Aircraft." Brig. General D.M. Oden, Office of the Deputy Chief of Staff for Military Operations.

■ Closing Remarks. Major General W.B. Bunker, Commander, USATMC.

## SOLUTIONS POSSIBLE

PROBABLY the most significant aspect of the entire symposium lay in the reconfirmation of a very old, long recognized truism: "There is no problem so difficult or complex, that when attacked in harmony by experienced men, cannot be alleviated in one way or another." Oftentimes, problems do not have a ready, tailor-made solution, but in these instances we can by means of good communication and good will, learn how to live with them and accomplish our joint objectives.

THE FUTURE PROOF of the value of this symposium will lie in how well we pursue and apply what was learned. It would serve no purpose to recognize a problem and then fail to act. Accordingly, within the Transportation Materiel Command, the Military Directors of the organizational elements represented by the individual speakers from TMC, have been designated as Project Officers for the further study and corrective action on problem areas discussed during the presentation and panel discussions.

ANY QUESTIONS pertaining to the status of these studies and corrective action should be addressed to the U.S. Transportation Materiel Command, 12th and Spruce Sts., St. Louis 2, Missouri, Attention: Director of . . . . (The office represented by the TMC speaker.)

# A NAVIGATION SYSTEM FOR ARMY AIRCRAFT



BY  
LT. COLONEL  
EDWARD L. NIELSEN,  
ODCSOPS

**M**OST aviators have some definite ideas regarding what they would like to have as a navigation system. Rarely will you find the greater preponderance of ideas coinciding; instead, there are as many ideas as there are aviators polled. I would like to add my personal ideas to the pot for discussion, and in the words of some of our more scientific friends postulate characteristics of a system.

THE ARMY Aviation Program today has changed considerably from the program that was known ten years ago. However, the means of getting the airplane from Point 'A' to Point 'B', that is, the navigation, has changed little. Ten years ago we had VOR systems, LF ranges, and ADF's as we have them today. True the equipment available to the pilot has been modernized, miniaturized, and made more reliable, but basically the equipment works just about the same.

ADF's, while substantially smaller and lighter, still are hard to work on an out-bound track with any degree of accuracy and VOR's with indent type tuning, while far superior to the coffee grinders, have not changed their method of operation.

ALTHOUGH the equipment of ten years ago remains similar, the Army aviation mission has changed considerably. If we sit down and add up the numbers of aircraft assigned to a typical field Army, we find that instead of being numbered in the hundreds it is now well up into a four figure count.

THERE is a good reason for this change. Conceptual documents conceived by our planners state that in a modern war operations in a combat zone will be characterized by great fluidity and dispersion. Mobility is to be a decisive factor, hence the added emphasis on the air as a means of achieving this mobility.

IF WE attempt to visualize the substantial numbers of aircraft operating in the air space over the area of influence and interest of the field Army commander, the prob-

lem of trying to sort out the traffic can be staggering. Add into this air space the activity of other forces and other things besides aircraft, such as missiles and the problem defies description.

## AIRSPACE CONTROL

SINCE I am trying to confine my comments to a navigation system, we can make an assumption that any attempt to navigate in the field Army air space must, of necessity, be closely allied with the problem of CONTROL of that air space. These two functions then are tied together as man and wife.

THE TECHNIQUES of employment of sky cavalry units, armed helicopters, and the considerations of survivability make it mandatory that a substantial portion of the Army aviation aircraft operate close to the ground.

WITH THIS in mind we can make a second assumption that any navigation system used as a standard for the Army must have the capability of operating WITHOUT the limitations imposed by line of sight equipment. This then rules out as a tactical navigation aid any device operating in the very or ultra high frequency spectrum, and conversely rules out any device capable of operating at only low altitude as there will be times when the aircraft will desire to operate at airway altitudes.

IT IS MORE than possible that the Army commander would like to have his aircraft operate at any time of the day or night and under any and all weather conditions. However, practicality dictates that there are going to be times when the weather is going to be so bad that only an idiot would venture to fly.

THEREFORE, I would like to make another assumption that any navigation system developed does NOT have to be capable of being completely all-weather. It should be something short of this with a practical aspect of perhaps plus or minus 100 yards accuracy which will make it usable over the

greater majority of time with ground controlled approach radar supplementing under the worst conditions.

IN AN ATTEMPT to outline a series of requirements for a navigation system using some of the reasoning previously expressed, coupled with economic and weight realities, I believe some general characteristics are as follows:

- ◆ Light in weight - less than 50 pounds installed including cables, shock mounts, etc.

- ◆ Inexpensive, compared to systems costing \$100,000, less that \$5,000 installed.

- ◆ Visual (Map) display - in order that allied activities may be included, such as danger areas, corridors, firings, etc.

- ◆ Accuracy plus or minus 100 yards - capability of placing the aircraft consistently within 100 yards of a given location.

- ◆ High degree of reliability.

- ◆ Ease of maintenance.

- ◆ Simple method of figuring ground speed.

- ◆ Not to be affected by line-of-sight limitations.

- ◆ Not to be effected by or susceptible to jamming.

- ◆ Operate with complete coverage in the field Army area of interest and influence - 300 nautical miles from any ground complex, if a ground complex is needed. Further, any ground complex should be easily transportable, quickly installed, and there should not be more than one for coverage of an army area.

- ◆ The system should be capable of integration with an air traffic control system.

IN AN ATTEMPT to carry out the reasoning processes a little further - navigation aids are required by the Army commander for activities other than his Army aircraft. I believe it goes without saying that he would like to have his armor units capable of reaching a given location under cover of weather or darkness when map reading leaves much to be desired. You can also postulate that it would be highly desirable

(CONTINUED on Page 40)

**F**orecasting the future, like scratching an itch, is a personal thing. This is a personal effort, lacking in official acceptance or even knowledge. It contains no information not found in open sources. If there are jealously guarded secrets which will change the apparent course of Army aviation, they are of doubtful value.

You can't fly a classified study!

One must make certain assumptions before planning tomorrow's trip to the office. Two assumptions, and only two, have been

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# ARMY AVIATION

permitted to influence this projection into the 1970 time frame:

◆ There will have been no general war involving the United States from the present through the forecast period.

◆ There will have been no relaxing of those tensions which cause the United States to maintain a large military force in being.

## THE TWO ASSUMPTIONS

It will soon become obvious that failure of either of these assumptions to materialize would nullify the entire forecast. The gigantic strides which aviation took during World War II would not have been duplicated in 25 years of tension-free living, and few will dispute the fact that if there is no Army, there will be no Army aviation.

Accepting these assumptions as valid, we need only prescribe a method of getting from here to there, and begin our work. The simplest method appears to entail three steps:

- ◆ Describe the present
- ◆ Add the anticipated changes
- ◆ Describe the future

Since the whole of Army aviation is contained within the framework of an organization which has equipment and personnel gathered together to do a job, let us describe those four facets as they are, as they may be expected to change, and as they will then be during 1970.

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BY  
LT. COLONEL  
MORRIS G. RAWLINGS  
CHIEF,  
COMBAT DEVELOPMENTS  
OFFICE,  
USAAVNS

## ORGANIZATION, PRESENT

Most Army aviation of the present is contained within organizations designed to accept aircraft as their basic machine. The Aviation Company which contains all the aircraft of a division is the prime example of this concept, but others, such as the company of the Armored Cavalry Regiment, and those transport companies normally assigned to Army, are representative. The exceptions, those aircraft given as augmentation to the various arms and services, represent individual command decisions and not policy.

## ANTICIPATED CHANGES

Paradoxical and occasionally violent viewpoints are powerful motivating forces toward change. The Artillery, demanding centralized control of all tubes, is equally vehement in requiring decentralized control of the scarce aircraft. The Infantry, though but occasionally victorious in advancing its cause of organic ownership (Tank Destroyer, Cannon Company, etc.), is consistent in its demands. Armor has effected a compromise which gives them both centralized control and decentralized operation. Transportation considers the aerial highway but another road network and the carriers nothing but elevated trucks.

Army aviation, neither branch, service, nor arm of decision, has but two main interests:

- ◆ Afford responsive support to ground units.
- ◆ Avoid the "truck" classification.

When interests conflict, the change is nearly always in the direction opposite to the present. Therefore, the Army aviation of the 1970 era will find all aircraft organic to the user except for three type units:

- ◆ Aircraft Surveillance Units
- ◆ Aircraft Mobility Units
- ◆ Aircraft Fire Support Units

## ORGANIZATION, 1970

There will be no aviation units (units equipped primarily with aircraft) at any headquarters below that now known as

Corps. At this level, there will be a battalion containing the surveillance, mobility, and fire support capability. At field army level, there will be a group, containing the same capabilities in larger quantities. Behind field army in the logistical commands, there will be such mobility units as may be required for air delivery of priority supplies. Field army will further attach such Fire Support Units as the tactical (not logistical) situation may demand.

## PERSONNEL, PRESENT

There are, today, some 6500 Army aviators, of whom the majority are semi-professionals. The term is not used to downgrade, but to express their dual function as officer/aviator. A lesser group; warrant officers, are professionals and have none of the dual officer responsibilities. The vocal and influential minority are those Regular Army officers who defied their contemporaries and entered a program described by many as a dead-end street. Officer/aviators are performing many and varied assignments throughout the world. They are, as individuals, eagerly sought by commanders for ground-duty jobs, and in most instances, have proven themselves to be exceptional officers.

## ANTICIPATED CHANGES

Changes occur only as the result of need, but whether that need is assumed or real is actually unimportant. For example, if one has 6500 aviators and 6000 aircraft, is there a real need for more aviators? No. However, if it is assumed that there will be more aircraft, then there is an assumed need for more aviators. Again, if there is to be no equipment increase, but there is dissatisfaction with the present personnel picture, then there is an assumed need for change. Let us explore only the latter facet now.

Six things militate against a continuation of the present personnel policies:

- ◆ A requirement for professional aviators due to the complexities of aircraft.
- ◆ A requirement for professional of-

officers due to the complexities of new military equipment.

◆ Proof through warrant officers, that officers are not required to pilot aircraft.

◆ A definite assurance, by warrant officer candidates, that enlisted men can pilot an aircraft.

◆ An unwillingness on the part of officers to devote themselves to a program which lessens their professional status.

◆ The emotions engendered by the acquisition of "flight pay," "pay for not flying," etc., in that great majority of officers who do not collect.

These reasons, in my opinion, are sufficient to cause a change. That change will be in the initiation of an enlisted aviator program; in the establishing of a warrant officer branch so as to permit their assignment as professional pilots to any branch or service; and in the removal of officers from flight status except when serving in a command or staff assignment which requires flying in the performance of duty.

## **PERSONNEL, 1970**

Officers will be utilized as staff officers at Corps and higher, and will also be commanders of aviation units. Warrant officers will serve as aviators in the Surveillance, Fire Support, and Mobility Units. Enlisted men will serve as pilots for all aerial vehicles organically assigned to units.

## **EQUIPMENT, PRESENT**

Without exception, today's Army aircraft could have been built twenty-five years ago. They were built only when it became economically feasible to do so. Aircraft of radically new design exist in studies and in the minds of men, but their transformation into hardware awaits customer acceptance. We, today, have almost enough machines to afford a seat for each aviator and more are being manufactured daily. Many of these will be with us for a long while.

## **ANTICIPATED CHANGES**

The Army aircraft of 1970 will present no radical change in appearance from those of today. They will be somewhat larger;

somewhat faster, and more complex. The emphasis on VTOL aircraft will level off as the convenience of their use is outweighed by the expense of their upkeep, and STOL machines will be used to replace many of the more expensive. Product improvement will add fins for appearance, but no anti-gravity power unit will be available from Gimbel's Department Store.

## **EQUIPMENT, 1970**

VTOL equipment will be found organic to units. As these become uneconomical to maintain, they will be replaced by STOL aircraft, or pooled at the next higher echelon.

Cargo-carrying V/STOL craft will be assigned by unit to Tactical Army for air mobility and to TALOG for logistical purposes. As these become uneconomical to maintain, they will be replaced by STOL aircraft and towed gliders.

Utility type VTOL craft will primarily be used as weapons carriers (Air Fire Support) but will be required to perform certain tactical air mobility missions and will be used in lieu of LOH.

Fixed-wing aircraft of the type discarded by the Air Force many years ago, with improved performance (V/STOL) obtained by product improvement, will be the equipment used to outfit the Air Surveillance Units. Sensory gear will be packaged, allowing the installation of weapons as desired.

## **OPERATION, PRESENT**

Even though aircraft are today centralized, their operation is not. Mission assignments given individual aviators are either the strictly administrative, "Take aircraft number 1234 and fly to Hagenbeck. Pick up Colonel Blatz at 1500 and come home," or the tactical, "Report to Colonel Blatz and stay with him for three days. Let us know if you need anything."

It is exceedingly difficult for the Operations Officer of an aviation unit to prepare a detailed mission order since the person requesting the aircraft has but a hazy idea of what he expects from his aerial support. It is his contention, and properly so, that if he must prepare detailed plans in order to

utilize Army aircraft, then they cannot be considered immediately responsive.

Operations today are characterized by an almost total dependence upon the pilot, who must exercise that degree of judgment required to adapt himself to changing situations and unforeseen events.

## ANTICIPATED CHANGES

With the advent of enlisted aviators, nuclear weapons, and a crowded sky, regulation, identification, and control of the airspace will be promulgated as a requirement. With the emphasis upon organic aircraft and their issue to front-line troops, freedom of use will be promulgated as a requirement. Since the two are incompatible, a compromise will be sought. No compromise will be acceptable, therefore air traffic regulation and identification will be enforced as a joint project. Airspace control will be a hypothetical term used to describe a condition during which non-regulated, non-identified flying objects may be fired upon.

## OPERATION, 1970

Pilot responsibilities will be more restricted to the cockpit. Flight planning will require approval before implementation.

Army aircraft will perform all present functions and will accept three additional:

- ◆ Close combat support by fire.
- ◆ Delivery of CW/BW agents.
- ◆ Conduct cover and deception.

With the exception of the aerial jeeps, all Army aircraft will be provided such range

# NAVIGATION

## CONTINUED FROM P. 36

to have all units in the Army employ a common navigation device. Therefore, a navigation system should be capable of not only aerial navigation, but it should also be capable of utilization by armor units and general purpose ground vehicles.

OF COURSE, trying to develop something that is all things to all men is much easier to say than to do. However, with our technology that is capable of sending personnel to outer space and bringing them back again, we can certainly develop a navigation system which will permit our Army aviation, armor, and foot troops to all get to the same place.

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extension as is required to enable them to arrive at the operational area.

The Air Force will no longer have an interest in the atmosphere except for takeoff and return.

Forecasting the future, like scratching an itch, is a personal thing . . .

## ABOUT THE AUTHOR

Lt. Colonel Morris G. Rawlings serves as Chief of the Combat Developments Office, U.S. Army Aviation School, Fort Rucker, Ala. A frequent contributor to "ARMY AVIATION," his most recent article, "Semantics in Our Business," (♦AA, Dec. '61) analyzed the multiple definitions of many of the AA terms in use today.

## ARMY ORDERS 24 CHINOOK HELICOPTERS

■ A \$25,645,000 contract for 24 HC-1B Chinook Army transport helicopters has been awarded to the Vertol Division, Boeing Airplane Company, Morton, Penna. The contract was awarded by the Air Force for the Army Transportation Command in St. Louis, Mo.

The HC-1B has a lifting capability of three tons and will transport a crew of three plus 33 fully equipped troops or 24 litters. With a weight of 26,600 pounds the Chinook is equipped with two T-55-L-5 gas turbine engines rated at 2,200 shaft horse power each. The Army transport has a cruising speed of 130 knots and a range of 100 nautical miles. ■■





# AAAA ORGANIZATIONAL NEWS

## REPORT OF NATIONAL BOARD MEETING

IN CONDUCTING its winter quarterly meeting at the Marriott Motor Hotel in Arlington, Va., on Dec. 1-2, 1961, the National Executive Board of AAAA set a new high in attendance, seventeen of its twenty-members being present or present by proxy for the two-day meeting.

National Executive Board members attending the first meeting of the '61-'62 Board included J.E. McDonald, Jr., Pres.; Col. A.J. Rankin, Exec VP; J.N. Davis, Sec.; Col. L.W. Leeney, Treas.; A.H. Kesten, Exec Sec.; Lt. Col. R.K. Moore, VP, Army Aff.; Lt. Col. K.A. French, VP, ARNG Aff.; Lt. Col. S. Freeman, VP, Res Aff.; J.E. Leonard, VP, Indus Aff.; Col. I.B. Washburn, Ret., VP, Public Aff.; and W.T. Rockwell, VP, Natl Functions.

Also present were NEB Members-at-Large Col R.R. Williams, Col. O.G. Goodhand, and Lt. Col. D.P. Gerard, Ret.; and Regional Presidents Col. W.R. Williams (Alabama Region), Maj. Gen. W.B. Bunker (Midwestern Region), as represented by Maj. D.F. Luce, proxy; and Lt. Col. J.Y. Hammack (Oklahoma Region) as represented by Capt. J.H. Merryman, proxy.

## SUMMARY OF ACTIONS TAKEN

A REPORT of the actions taken by the National Executive Board follows:

1) APPROVED the financial statement of the 1961 AAAA Annual Meeting as submitted by Col. A.J. Rankin, Committee Treasurer, to reflect a credit of \$400.00

after all Annual Meeting expenses were met.

2) APPROVED of the custody of all 1961 AAAA Annual Meeting records and after-action reports by the National Office until such time as these records are requested for use as reference data by the 1962 Annual Meeting Committee.

3) ESTABLISHED the dates for the 1962 AAAA Annual Meeting as Oct. 11-12, 1962; established Washington, D.C., as the site of the 1962 AAAA Annual Meeting; and appointed Brig. Gen. Delk M. Oden as the Chairman of the 1962 AAAA Annual Meeting Committee.

4) APPROVED of the proposal by Col. O.G. Goodhand that the 1962 AAAA Annual Meeting Committee be directed to conduct the 1962 meeting on a self-supporting financial basis, with the general scope of the meeting to parallel that of the 1961 meeting.

5) APPROVED of the presidential appointment of Col. R.R. Williams, Col. W.R. Williams, Col. R.M. Leich, and Lt. Col. J.Y. Hammack as an NEB Committee to determine the feasibility of a fly-in gathering at Fort Rucker, Ala., or Fort Sill, Okla., on or about June 6, 1962.

6) APPROVED of the presidential appointment of Col. R.R. Williams, Col. O.G. Goodhand, and Col. A.J. Rankin as an NEB Committee to prepare and submit "ground rules" for the Dr. Augustus Rasket Award to Col. R.M. Leich, Chairman, National Awards Committee, for his submission to the Lear Foundation.

## MINUTES/CONTINUED

7) DISAPPROVED of a proposal to alter the constituency of the National Awards Committee.

8) APPROVED of the presidential appointment of Col. O.G. Goodhand, Col. R.R. Williams, Lt. Col. S. Freeman, and Lt. Col. R.K. Moore as an NEB Committee to draft and forward pertinent resolutions to the National Aeronautic Ass'n following that organization's request for assistance in this area.

9) DISAPPROVED of the Association's sponsorship of a contest for an Army Aviation Song on the basis that such a contest would force-feed a song of limited general acceptance; and DIRECTED that the Ass'n encourage Chapters and individuals to submit such songs that receive "field" acceptance to the Commanding General, U.S. Army Aviation Center, for official consideration, the Ass'n to consider the endorsement of an official song upon its later submission to the NEB.

10) APPROVED of the Presidential appointment of Col. O.G. Goodhand, Col. A.J. Rankin, Col. W.R. Williams, and A.H. Kesten as an NEB Committee to review those Sections of the Ass'n By-Laws pertaining to Regional activities; and DIRECTED this Committee to submit its findings to the full NEB for consideration by a mail ballot.

11) DISAPPROVED of the proposal that the Association establish and underwrite

National President Joseph E. McDonald, Jr., will visit the USAREUR Region in late February and is expected to present a brief address to the members attending the USAREUR Region Annual Meeting at Garmisch, February 23-25. His informal visit will be the first made by an AAAA President to the organization's largest membership activity. ■■

a means, or an office, for the stimulation and encouragement of general publicity on Army aviation through all types of media.

12) APPROVED of the presidential appointment of Col. I.B. Washburn, Ret., Col. O.G. Goodhand, and Lt. Col. R.K. Moore as an NEB Committee to draft and submit a letter to the Secretary of the Army urging that greater emphasis be placed upon disseminating news of Army aviation accomplishments to all media by the Office, Chief of Information, to the benefit of the Army.

13) APPROVED of the present system employed by the staff of "ARMY AVIATION MAGAZINE" to secure general AA articles of interest from all sources, the solicitation, acceptance, and publication of all articles received by the publisher to be contingent upon the space and funding limitations of the magazine.

14) DISAPPROVED of the proposal set forth by an Annual Meeting Sub-Committee calling for the Ass'n to investigate the possibility of the AAAA becoming an affiliate of the AUSA.

15) APPROVED of the establishment by the National Office of improved communications between the National Office and the Chapter sub-organizations by means of weekly reports, and between the National Office and National Executive Board members by means of ten day reports.

16) APPROVED of the establishment of a permanent film library at the National Office for the purposes of soliciting, storing, and distributing military and industry films and slides for membership orientation and for use in the orientation of civic, fraternal, and educational organizations by members of AAAA; and DIRECTED the National Office to implement this Program by immediate coordination with the Industry Member firms of AAAA.

17) APPROVED of the presidential appointment of Col. A.J. Rankin, Lt. Col. R.K. Moore, and J.E. Leonard as an NEB Committee to investigate the possibility

of creating a two-hour film for showing at the 1962 AAAA Annual Meeting, the film to be a compilation of unclassified film clips of Army aviation activities as provided by military and industry sources.

18) **DISAPPROVED** of the proposal set forth by an Annual Meeting Sub-Committee wherein the AAAA would encourage the establishment of a D/A team to demonstrate "late model" aircraft at outlying posts and camps, citing the difficulty in accomplishing this officially in the light of present personnel and equipment shortages.

19) **APPROVED** of the National Office policy of exchanging Chapter activity information through the National forwarding of "Chapter Meeting" details to the presidents of all Chapter organizations.

20) **APPROVED** of the proposal wherein the National Executive Board will approve the publication of Ass'n "Certificates of Merit" by a mail ballot, such action to be taken upon the receipt of the draft Certificate from the National Awards Committee; and **APPROVED** the purchase of these Certificates for Chapter use by the Ass'n.

21) **APPROVED** of the issuance of bronze medal awards to the winners in the USAREUR Aviation Competition; and **DIRECTED** the National Office to procure, engrave, and distribute such medal awards at the earliest possible date.

22) **APPROVED** of the proposal wherein the Ass'n will present gold medal awards to the Honorable Najeeb E. Halaby, Secretary of the Army Elvis J. Stahr, and Army Chief of Staff General George H. Decker as outstanding participants in the 1961 AAAA Annual Meeting; and **APPROVED** of the presidential appointment of Col. R.M. Leich, Col. O.G. Goodhand, and A.H. Kesten as an NEB Committee to implement the purchase and production of these awards.

23) **TABLED** the Association endorsement of an Accidental Death Insurance

Plan pending a further study of the Plan by an NEB Committee consisting of Col. O.G. Goodhand, Col. A.J. Rankin, Col. L.W. Leeney, Lt. Col. R.K. Moore, and W.T. Rockwell, authorizing this Committee to grant or withhold Association endorsement of the Plan based upon the findings of its study.

## **SATURDAY , DECEMBER 2 SESSION**

24) **APPROVED** of the proposal that the Minutes of the previous NEB meeting be accepted formally at the beginning of each meeting of the National Board.

25) **ACKNOWLEDGED** the interest in National affairs expressed by the membership of the Alabama, Midwestern, and Oklahoma Regions as represented by the attendance of Col. W.R. Williams, Maj. D.F. Luce, and Capt. J.H. Merryman; and **WELCOMED** their participation in future meetings of the NEB.

26) **APPROVED** of the implementation of a membership incentive plan for 100 per cent membership initial entry flight training classes at Fort Rucker and Camp Wolters wherein such 100 per cent AAAA classes would receive a \$4.00 refund per new member for use by the graduation class as they see fit; and **APPROVED** of a time limit of one month for such classes to conduct the membership drives.

27) **APPROVED** of the report of J.E. Leonard, VP, Industrial Affairs, to the effect that his office had received no "critiques" from Industry Member firms relative to the 1961 AAAA Annual Meeting or any other AAAA programs pertinent to industry.

28) **DIRECTED** the National Office to secure new proxy designations from each National Executive Board member by mail.

29) **APPROVED** the report of J.E. Leonard, VP, Industrial Affairs, pertinent to the effects of the Appropriations Act upon defense advertising in technical journals.

## MINUTES/CONTINUED

30) APPROVED of the forwarding of "Get well, Bob" messages to Col. Robert M. Leich, convalescing Past President.

31) APPROVED the Corporate Banking Resolutions of the Manufacturers Hanover Trust Company, New York, N.Y., upon the change of signatories created by the change in National Treasurers.



## "TACTICS"

LT. GEN. HAMILTON H. HOWZE, COMMANDING GENERAL, XVIII ABN CORPS AND FORT BRAGG, IS SHOWN ADDRESSING THE MEMBERS OF THE 82D ABN DIVISION CHAPTER DURING A RECENT DINNER MEETING HELD AT FORT BRAGG. GEN. HOWZE DISCUSSED THE NEW ASPECTS OF ARMY AVIATION, EMPHASIZING THE NEED TO ENLARGE AVIATION'S BATTLEFIELD CAPABILITY THROUGH TRAINING AND NEW TACTICS. PRIOR TO THE MID-DECEMBER GET-TOGETHER GEN. HOWZE WAS UNANIMOUSLY ELECTED AS HONORARY PRESIDENT OF THE CHAPTER. (U.S. ARMY PHOTO)

## "STOL's"

SERGE SIKORSKY (LEFT), GUEST SPEAKER AT THE ACTIVATION MEETING OF THE FULDA, GERMANY CHAPTER, CHATS WITH COL. RUSSELL E. WHETSTONE, USAREUR REGION PRESIDENT, AND COL. ALBIN F. IRZYK (RIGHT), REGIMENTAL COMMANDER OF THE 14TH ACR. MR. SIKORSKY'S ADDRESS ON RECENT DEVELOPMENTS IN THE STOL FIELD WAS PRECEDED BY A PRESENTATION OF THE SIKORSKY "WINGED S" TO CAPT. ALBERT J. WISE OF THE AVIATION COMPANY, 14TH ACR AND THE INSTALLATION OF CHAPTER OFFICERS. (THIS IS A DELAYED SUBMISSION PHOTO, DATED 23 SEP.)



## "INDIA"

JOSEPH MASHMAN, THE DIRECTOR OF MARKET DEVELOPMENT OF THE BELL HELICOPTER CO., DISCUSSES HELICOPTER OPERATIONS IN INDIA AT THE EARLY DECEMBER STAG MEETING OF THE ARMY AVIATION CENTER CHAPTER. SHOWN L-R ARE GEN. EASTERBROOK, MAYOR PARKER OF OZARK, ALA., MR. MASHMAN, COL. W.R. WILLIAMS (CHAPTER PRES.), HANS WEICHSEL, JR. (BELL VICE PRES., BEHIND COL. WILLIAMS), AND COL. MELVIN McDUFF, DEPUTY CENTER COMMANDER, FT. RUCKER. (U.S. ARMY PHOTO)

# CHAPTER ACTIVITIES

■ Despite the Holiday Season, AAAA Chapter organizations scheduled "membership activity meetings" on a broad scale. Here's a brief summary of the December meetings as reported by the Chapter Secretaries and an indication of the Chapter activities scheduled for January, '62.

■ The HANAU CHAPTER membership heard R.L. Peterson, Sikorsky Field Representative, discuss new Sikorsky developments and viewed the films "Detect and Destroy" and "The Sky Crane" (Dec. 8).

■ Some 350 AA CENTER CHAPTER members were briefed on helicopter operations in India by Bell executive Joseph Mashman hitting a new high in "stag night" attendance. (Dec. 7).

■ The RHINE VALLEY CHAPTER (Dec. 1) and the MAIN RIVER VALLEY CHAPTER (Dec. 8) held pre-Holiday meetings, the latter group having a Guest Speaker "professional meeting" for a wrap-up gathering for 1961.

■ Also in Germany, the BAD KREUZNACH CHAPTER talked shop at its Dec. 16 general business meeting, the same night the 91ST TRANS CO CHAPTER held a nearby "Dining In" Social at the Franklin House in Mainz.

■ The report from the FORT HOOD CHAPTER Secretary described the Chapter's Dec. 14 meeting in two words, "A social," and with AA's under one roof this can cover a multitude of activities. The 82ND ABN DIV CHAPTER's Dec. 14 Dinner Meeting heard Gen. Hamilton H. Howze lay it on the line (see photo) and we suspect from his 1961 Annual Meeting address that his Chapter talk did not paint too glowing a picture of AA's present capabilities.

■ Germany's NURNBERG CHAPTER may not have met en masse, but December 6 was the date its Executive Board met to "Hancock" the official papers and pave the way for later membership gatherings. Maj. John E. Cleveland honcho's the new Chapter as President.

■ The first to schedule a '62 activity, the PIKES PEAK CHAPTER under Lt. Col. Gordon Kinley will take in a Vertol presentation and film on the new Chinook at its January 9 Stag Dinner. The Association's most active Chapter, the Fort Carson organization pursues a monthly meeting schedule.....and catches it!

■ Meeting at the Rod & Gun Club at Ft. Belvoir, the DAVISON ARMY AIRFIELD CHAPTER membership will "get down to business" at its January 19 Beer Bust. Lt. Col. Nelson L. Lindstrand, Chapter President, expects the suds to speed along a "brainstorming session" on Chapter goals for '62.

■ Gerry Gerard's D.C. members will gather at Fort Myer, Va., on December 17 at a WASHINGTON, D.C. CHAPTER Luncheon Meeting. Clarke W. Thornton of the USA is the Chapter's Guest Speaker for the Luncheon.

■ Fort Sam's ALAMO CHAPTER, finding its monthly meeting schedule well-supported by its growing Chapter membership, plans a professional meeting on January 30. A top industry guest speaker is expected to address the Chapter, according to Maj. William D.C. Jones, President.

■ Although the Guest Speaker has not been announced as yet, members of the LAWTON-FORT SILL and JIMMIE L. HILTON CHAPTERS will join forces at a January 26 Oklahoma Region "social." Rex Madeira, Regional Secretary, has posted the "Ladies Night" signs and looks for widespread attendance.

■ The newly-elected officer slate of the 82ND ABN DIV CHAPTER is shown below in an informal photo. Left to right are Lt. Bruce A. Thomas (Sec); Capt. John B. Fust (VP, Pub Aff); Capt. Walter E. Parker (VP, Res Aff); Capt. Charles D. Fountain (Trea); Lt Col Warren G. Cosby (Pres); Maj. Harold G. Keebaugh (Ex VP) Capt. George B. Calhoun (VP, Indus Aff); and Capt. Loren W. Webb (Member-at-Large).





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**IN THIS ISSUE,** Lt. Colonel J. Elmore Swenson discusses the peculiar problems facing Berlin Army Aviators in the "USAREUR Report" on page 19; Lt. Colonel Morris G. Rawlings presents an interesting forecast of the future in "Army Aviation, 1970" (page 37); and Lt. Colonel Edward L. Nielsen, writing under the title, "A Navigation System for Army Aircraft," on page 35, adds further fuel to the avionics pot. Raymond (Bud) Chaney, well known throughout Army aviation circles, has been appointed Manager of Military Requirements, Hiller Aircraft Corporation.

New Chinook Order, p. 40



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