

The Sikorsky UH-60A is now the U.S. Army's Black Hawk

SIKORSKY Division of AIRCRAFT TECHNOLOGIES

Arm

Operations

The helicopter: It may well be one of our most survivable weapons systems

THE helicopter may well be one of the most survivable vehicles in modern warefare - if properly employed as pointed out by General Howze in his recent article in Army Aviation Magazine.

Development of its full capabilities will be highly dependent upon realistic evaluation of its survivability and countering the persistent myth of its fragile nature.

To understand helicopter survivability and the reasons therefor, we can look back to a period prior to the Army having helicopters - World War II. During World War II small, unarmed aircraft (L-4's and L-5's) were used for conduct of artillery fire and many other combat missions in all theaters of operation with very high survivability.

Their survivability was produced by protection from ground fire and enemy antiaircraft weapons by our own artillery and by protection from enemy aircraft by our own antiaircraft batteries. The enemy on the ground hid from the light aircraft rather than attack them as soon as they learned that firing exposed

ARMY AVIATION is published by Army Aviation Publications, Inc., 1 Crestwood Road, Westport, CT 06880. Second Class Postage paid at Westport, Conn.

their positions to the aircraft and resulted in immediate counter fire.

Enemy pilots quickly learned that attacking the light aircraft led them right into our waiting antiaircraft guns. The lesson learned was that the most fragile of aircraft can live very well even when highly exposed if its mission is closely integrated with the Army's protective firepower.

Chance dictated use in Korean War

When combat started in Korea the Army had a few small helicopters. They were shipped to Korea, not so much due to a well thought out program, but more by chance. Their intended purpose was ill defined and most military personnel believed they were too frail to last very long in combat. Their greatest utility turned out to be in medical evacuation from the front lines.

If there had been more helicopters and larger ones, they undoubtedly would have seen service in most of the many roles the helicopter now plays. Air evacuation had priority; over 12,000 casualties were evacuated from the front lines. The helicopter proved its survivability in modern combat in the same way as the light observation airplane did during World War II.

The history of helicopter survivability in Vietnam and the conclusions that can be drawn from the experience have been

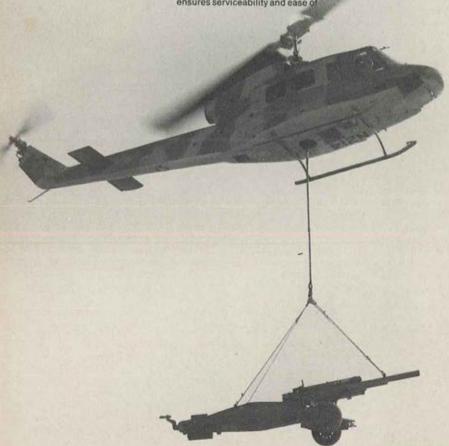
Bell's 214: the affordable solution to demanding mission requirements.

Move a fully armed squad or deliver three tons of supplies and ordnance...and do it dependably, day in and day out, with ease. That's the versatile 214, a reliable prime mover, even when it's hot and where it's high. Because the 214 utilizes a unique vibration isolation system, it does its job smoothly, with the lowest vibration level of any helicopter in its class. That means less crew fatigue, longer component life.

Another point: Its Huey heritage ensures serviceability and ease of

maintenance. That means less downtime, greater availability.

Bell's 214. Powerful, Dependable, Affordable, With over 100,000 flight hours to prove its readiness, its reliability.



peacekeepers the world over depend on

HELICOPTER

clouded by emotion and preconceived conclusions that are mostly involved in

roles and missions disputes.

Vietnam saw the introduction of the helicopter gunship. Before and during the early part of the Vietnam conflict, the Air Force strongly opposed (and the Marines would not endorse) the use of the helicopter as a weapons platform. The opposition was based primarily on its lack of survivability, and secondarily on its effectiveness in delivering fire.

Actually, the helicopter survived very well in Vietnam, and the gunship proved to be an extremely effective weapons system in that environment. These are recognized and accepted facts and need not be debated further. The challenge now remains to analyze how well the helicopter will survive in higher, more sophisticated levels of warfare.

"Vietnam environment was benign."

The basic contention of the helicopter adversaries has been that the combat environment for aircraft in Vietnam was benign. Therefore, Vietnam experience did not indicate the helicopter would survive in higher intensities of combat.

Let's examine the "benign environment" contention as it applies to combat experience in South Vietnam. Until the later stages of combat when SA-7's and other sophisticated antiaircraft weapons were introduced by the enemy, the airspace above 5,000 feet was definitely benign; most pilots felt quite comfort-

NAME CHANGES

USA Research & Technology Laboratories [AVRADCOM], Moffett Field, CA. Was USAMRDL.

Aeromechanics Laboratory, Moffett Field, CA. Was Ames Directorate.

Propulsion Laboratory, Cleveland, OH. Was Lewis Directorate.

Applied Technology Laboratory, Ft. Eustis, VA. Was Eustis Directorate.

Structures Laboratory, Hampton, VA. Was Langley Directorate. able above 1,500 feet. Below 1,500 feet was quite another story - it was downright hostile much of the time.

Without debating how hostile the airspace was in any or all of the airspace in **South** Vietnam - or in Cambodia during Lamson 719 - some conclusions on aircraft survivability can be drawn by comparing the helicopter with the jet fighter.

Jet fighter loss rate was higher

The jet fighter was designed specifically for high intensity warfare. It has been touted as being highly survivable, while theoretically the helicopters would "die like flies" in mid- or high-intensity warfare. However, the combat loss rate of jet fighters per hours flown in South Vietnam was higher than the combat loss rate of helicopters.

This fact becomes even more significant when you consider that much of the jet fighter's flight time is logged at altitudes everyone agrees is benign; the jet fighter spends very little time in that truly hostile area below 1,500 feet where the helicopter spends a major portion of

its time.

Transposing the South Vietnam experience to mid- or high-intensity combat means the airspace below 1,500 feet should become a little more hostile and the higher airspace in which the jets operate should change from benign to downright dangerous. Comparatively, therefore, the helicopter should become even more survivable than the jet fighter.

'Copter survivability explained

The explanation of the helicopter's survivability lies within its design, its mission, and its manner of employment. The scout and attack team is very much akin to the relationship of the L-4 of World War II and the artillery fire power which the fixed wing Cub could bring to bear. The design of today's scout and attack helicopter does not incorporate many of the crashworthiness and survivability features of our future

[OPERATIONS/Cont. on Page 58]



Now another go-anywhere transport from de Havilland joins the U.S. Army...

the UV-18A Twin Otter.

The U.S. forces had already chosen the Beaver, the Otter and the Caribou—more than 1,300 go-anywhere planes from de Havilland. They knew our performance first hand. And they had a very demanding order to fill, selecting transports for "command administrative, logistical and personnel flights from battalion headquarters to remote village sites throughout western and northern Alaska on a year-round basis,"

It's no wonder they chose the Twin Otter. With their de Havilland experience. Plus these Twin Otter features:

It converts readily from wheels to wheel-skis, floats or high-flotation tires. (The U.S. is equipping each Twin Otter with all of these.)

It carries 19 troops in and out of rough, makeshift 300 m (1,000 ft) strips with room to spare.

In 15 minutes, two men can change

it to a cargo plane that will carry a payload of more than two tons.

On a hundred-mile-radius reconnaissance or search and rescue mission, it can stay aloft for more than 6 hours because of its exceptional fuel economy.

It cruises at 182 knots at 10,000 feet. Or handles easily at 70 knots for pin-point paradropping of men or supplies.

The de Havilland Twin Otter. The go-anywhere plane that has proved its dependability, versatility and economy with 18 other defence, police and government organizations. And with 135 civil operators.

The de Havilland Aircraft of Canada Limited, Downsview, Ontario, M3K 1Y5.

Twin Otter: the standard of dependability and versatility in more than 50 countries.

de Havilland

If you hold a military commission or warrant, you can join USAA.

If you're a military officer, no matter whether you're on active duty, in the ready or standby Reserves or National Guard, retired (whether or not you're drawing retirement pay), or even a candidate for commission or warrant, you're eligible for membership in USAA. And you're eligible for the preferential insurance protection, savings and service that go with membership in this elite group. Former USAA members may also reapply for insurance at any time.

With USAA, you'll have a world of insurance at your command. Including coverage for your car, boat, mobile home, condominium, personal belongings and personal liability. And USAA Renters Insurance will cover your household goods and personal liability.

As a member of USAA, you could save 15% to 42% on homeowners and 15% to 35% on auto insurance over rates charged by

many other insurance companies.

You'll also have the benefit of USAA's renowed claims service. With over 1,000 conscientious claims adjusters all over the world who'll jump at the chance to help you.

If you're interested in first-rate insurance protection, savings and service, you'll be interested in USAA. For more information, fill out and mail the postage-paid coupon.



Please Print or Type			7259				
Rank Fu	III Name		Branch of Service				
Mailing Address							
City, APO, FPO	State, ZIP						
Soc. Sec. No. Birt	hdate	Sex	Marital Status				
(AC)	(AC)				
Home Phone No.	Business Phone No.						
□ Sta	Member Nr. USAA Me	h or with					
☐ Automobile		sonal Art	icles Floater				
 Household Goods—Worldwig (clothing, furniture, appliance sports equipment, etc.) 	es. jew	(expensive single items— jewelry, furs. art. etc.) Pleasure Boat					
Personal Liability Insurance							
☐ Insurance for Renters		bility (Um					
(combination Household Go and Personal Liability	ods Hor	neowner	(State)				
Insurance)	□ Mo	bile Hom	eowners				
			(State)				

First Class Permit No. 707 San Antonio, Texas

BUSINESS REPLY MAIL

No postage stamp necessary if mailed in the United States, its territories or possessions, or from U.S. military installations overseas.

FOLD AND SEAL ALL SIDES

STAGE WILL BE PAID BY

SAA Building

FOLD HERE FIRST

SCIENCE/SCOPE

The United Kingdom is the second NATO nation to choose the airborne TOW anti-tank missile system. A Defense Ministry official said a key factor in the decision to equip the British Army's Lynx helicopter with TOW was the opportunity for standardizing weapon systems with other NATO nations, 11 of which have now selected infantry and airborne versions of TOW. Standardization is an announced policy objective of the western military alliance.

The British Ministry of Defence made its selection after an intensive competitive evaluation with a European-developed anti-tank missile system. The British Aircraft Corporation will build a substantial portion of equipment for the airborne TOW system in

the UK under license from Hughes.

TOW (Tube-launched, Optically-tracked, Wire-guided), developed for the U.S. Army, today is deployed in the air and ground forces of more than 20 nations worldwide. The airborne TOW can be adapted to most U.S. and NATO combat helicopters, existing and planned. One of several improvements underway at Hughes is addition of a laser range-finder to the M65 airborne system.

The U.S. Army is testing a new 14-1b. 280,000 channel high-frequency Manpack radio (AN/PRC-104) as a probable replacement for the AN/PRC-74. Among its features: upper or lower sideband operation, automatic and noiseless antenna tuning, LSI circuitry, multi-level modular construction, 16-hour battery. 5000 sets are now being built for the USMC, USN and USAF.





Airmobility

Army Aviation — Where we've been and where we are going.

AM pleased to be here and I'm anxious to find out what I'm going to say tonight, because I really felt that, given an opportunity like this, it would be wrong to have a script or even a particular theme.

So I thought I'd let it all hang out and kind of ramble about where I believe Army Aviation has been, and make some statements — some probably controversial — on where we should be going.

For a frame of reference, I'd like to hang Army Aviation on a few wars and then dwell on some characteristics of Army aircraft. This may sound like a terribly strange outline to you, and I may find out just how strange it is as we go down the line.

The Civil War balloon

Let's go back to the Civil War and contemplate the balloon. It had a single function of combat: reconnaissance. It had this important characteristic because it was quite literally tied to the ground soldier, and he dictated its use and employment in every way.

My research is completely blank with respect to the Spanish-American War. If there was a contribution by Army Aviation in this conflict, I was unable to find it.. and I even counseled with **Bob Wil**-

An address made at the Awards Dinner, Fifth Region-AAAA, April 30 liams on the subject.. and if Bob doesn't remember anything, we probably didn't participate.

In thinking a minute about World War I, "stiff-winged" aircraft began to come into their own militarily for the first time in war's history. Here again, the initial mission was reconnaissance and probably, for starters, it was pretty well integrated into ground combat. But then one day, some pilot took his .45 with him and the guy on the other side took his Luger and they took a few pot shots . . and probably there was a bit of the command and control function as some commanders flew around in these aircraft for an overview of the battlefield and that sort of thing.

Billy Mitchell, father of "airborne"

A visionary named Billy Mitchell even suggested dropping paratroopers behind enemy lines, so the mobility function was initiated. A characteristic of the aircraft — even in those days — was that it had to have a fairly extensive ground-based system, and also the "aviators" began to become fascinated with their own particular war — air combat, as such — rather than essentially with their relationship to the ground forces. Bear with me; I'm generalizing, but that's my thesis, anyway.

Going on to WW II, I'd say there was an extension of this same idea — better performance and more of the functions of



combat, and the tendency to fly farther and farther away from ground combat. Fortunately, however, there was a sort of counterpoint developing at the same time in the form of the Piper Cub. Also, and importantly, that ugly duckling, the helicopter, which today we all find so beautiful, was making its debut in Burma.

A bit later, in Korea, we find the helicopter now much improved, principally by the turbine engine, becoming more "housebroken;" it could live in the field with the soldier. Used primarily in Korea as a medical evacuation instrument, it did that job well but as always, in the hands of good soldiers, the helicopter was growing — fanning out — learning to do more things — being used for more and more roles and missions.

A truly unique quality!

The thing which I personally believe has made the helicopter so fascinating to the ground soldier, and has made it truly his kind of flying machine, is this: it's the only device that man has ever invented which can interface with the ground while itself remaining motionless over the ground. I'm not telling you something you don't know, but just asking you to reflect on that truly unique quality.

It can do work on the ground while flying above it and thus aviod the tyranny of terrain, always a key foe of

the ground fighter.

So, ipso facto, it is a creature, a flying instrument of the ground soldier, and I believe that's really why we've taken it to our bosoms and why we've created a whole concept of employment around it involving all five functions of ground combat.

Avoiding the tyranny of terrain

As an aside, it's only once in a blue moon that any invention comes along which can improve each and every one of the five so-called functions of land warfare.

Going on to the period between Korea and Vietnam, we had what I think was a period of really vital development, I felt most fortunate to have had a part in it. A distinguished group under that distinguished soldier, Ham Howze, took a real overview of how we could better perform all the functions of ground combat by the use of organic aircraft. That really was the charter of the Howze Board—and also it was the charter of the 11th Air Assault Division and the 10th Air Transport Brigade under Colonel Del Bristol—to develop that same idea.

The charter that I got personally from General Wheeler, then Chief of Staff, was to determine how far and how fast the Army could go, and should go, with respect to airmobility. And airmobility, certainly by my own definition, and I think the generally accepted one, was the use of Army aircraft in every possible way in which they could enhance the ground fight. It was just that broad and I think that's what we did, and I believe that's why there was a period of revolutionary development between Korea and the Vietnam War.

Now a lot of things can be said about the Vietnam War - most of them unpleasant one way or another. One of the sad aspects of that sad war to me was the

†The five functions are mounty, reconnaissance/surveillance, firepower, command/control/communications, and logistics.

fact that the sterling performance of Army Aviation - and of the helicopter was virtually lost when we began to argue within our country about the morality of the war itself. The military lessons became unimportant and generally

lost from sight.

But here is my own brief appraisal: In guerrilla wars of the past, it traditionally took about 15 regular soldiers to dominate one guerrilla. Now reflect on the fact that the ratio of our forces to the enemy was between four and five to one — the Free World forces against the Communists. What made the difference between the 15 and the four or five was just one thing: Army Aviation.

Turning the tables!

The reason for that is quite well understood by the people who were there. Look at the French who fought the same enemy over the same terrain in the same weather, and typically after an attack the French found their Beau Geste fort in ruins with the bodies of their defenders strewn about, and quite typically, too, their relief column got ambushed on the way up to the fort.

But with the helicopter, even though the enemy still was able to make excellent reconnaissance, and even though he was able to mass forces which initially were larger than the defenders, the fact is that with the speed and the flexibility of the helicopter we could turn the tables and catch him in the act and quickly achieve superiority of forces and firepower. And that to me is the essence of

fighting the guerrilla.

I have to believe that the principle of being able to mass in space and time, regardless of terrain and obstacles, is the primary reason the helicopter will continue to play a key role in any combat we get into of whatever intensity.

That brings me to the Yom Kippur War. I believe there are some lessons that could be learned from this war and should have been learned that didn't emerge, particularly with respect to aviation and helicopters.

To put it in context, you must remem-

ber that the helicopters in the Israeli Armed Forces were and are all within their Air Force. They are all really controlled at the Joint Chiefs of Staff level, not even by the Air Force commander per se. Helicopters have never been integrated within the Israeli Army. More importantly, they have had no gunships of any kind.

In spite of that, let's look at some of the uses of helicopters. When the choppers were employed improperly as by the Egyptians, they were shot down in formation, and that's the way they crashed on the desert when they came in flying "fat, dumb, and happy" at 3,500 feet and making every mistake in the

book.

On the other hand, let's look at the proper employment of helicopters: the single defensive strong point in the Golan Heights that fell to the Syrians was taken by them in a helicopter assault on Mr. Hermon; and when the Israelis took it back, they did it with helicopters.

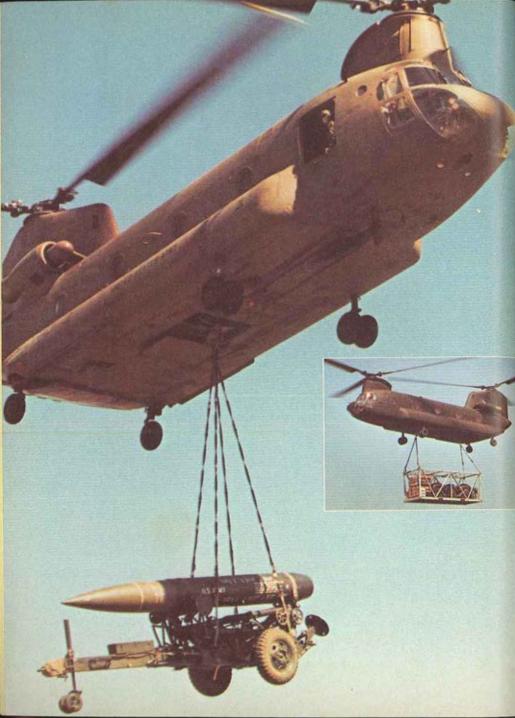
The Israelis made helicopter raids deep into enemy country. Today, people wring themr hands about crossing the forward edge of the battle area. The FEBA can be crossed, popular opinion

notwithstanding.

The key point, in my opinion, is that if the Israeli Army had had organic gunships armed with something equivalent to the TOW, the lessons that emerged from the Yom Kippur War would have been vastly different from those that did in fact emerge.

Bringing us up to date!

Next, I want to touch on the kind of thing that we heard in the AAAA briefings today. I can't tell you how pleased I was to hear Bo Maddox and his people. The 6th "Black Horse, Sir" Brigade is carrying on exactly what I believe to be the next fundamental step. It is bringing Army Aviation up to date — though certainly they aren't doing it by themselves for the whole Army is behind them. I liked the presentation [COL] Ed Browne made about the AAH being a "total"



Chinooksupport for the ground commander.



As an assault-support, medium-lift helicopter, the Boeing Chinook has displayed legendary airlift capabilities, whether taking in firepower, troops and field supplies or taking out recoverable equipment and the wounded.

Currently in production, the Chinook is serving the U.S. Army and military forces in seven other nations. At the same time, ongoing fleet modernization programs are utilizing advanced technologies to standardize the Army's fleet to the CH47D configuration... to reduce life cycle costs... and to assure continuous ground force support into the 21st century.

battle system" for I like to think that Army Aviation itself is a "total battle

system."

Army Aviation of the future is epitomized by the 6th Cavalry Brigade and their attention to the fundamentals of fighting on a high lethality, high intensity battlefield, or whatever you like to call it.

My personal analysis of the high intensity battlefield leaves me with no doubt that helicopters, and units like the Cav, can survive. But they will do far more than just survive — they'll not only be key members of the combined arms Army team, they're going to be a criti-

cally important member.

Now I realize this is debatable, but the fact is that I don't believe the U.S. Army has another good alternative to fighting the Russian land force than the helicopters we're developing right now. I beliece it's our only real chance within the U.S. Army of stopping the Russians without recourse to nuclear weapons, and I think Army Aviation offers that crucial alternative to the U.S. Army and to the country.

That's a pretty important statement and I'm willing to debate it with anyone



ALL SMILES... at Bertea Corp., Irvine, CA, during the Army's presentation of the first "Supplier of the Year Award" ever to be won by a subcontractor. Shown, l-r, are Wm. Wilkerson, ExVP; LTG George Sammet, Jr., DARCOM; Ray York, Dir of Engrg; Richard Bertea, CEO; and Bruce D. Simpson, Marketing V.P.

who wants to talk about it. I've often reflected that if someday our intelligence indicated that suddenly the Russians had armed every Red soldier with a ball bat, our reflex action would be to arm our guys with catchers' mitts, or maybe aluminum ball bats.

Address the fundamentals!

I believe there is a better approach. The answer is not in trying to whip them tank for tank. Yes, we need the tanks. Yes, I'm glad we're getting better tanks — but the organization that's really going to turn the tide — that's really going to be the ball carrier — is Army Aviation, and it's the only Army force that can do it!

There's nothing mysterious about it. It's a matter of addressing the fundamentals of how you degrade, destroy, or otherwise defeat the enemy's air defense. Once that's done — by a whole series of techniques — hardware, tactics, and so forth — the rest of it is a demonstrated capability to slaughter tanks.

Some food for thought

I'd now like to offer some food for thought. First, I believe that more attention should be paid by people like TRADOC to urban warfare with helicopters. I'm not going to talk a lot about it but I can tell you that in the days when we thought we were going into Havana I was to have commanded a task force. That's the way we were going to do it and I was, and am sure, helicopters can make it a whole new ball game.

Also, I would like to see some detailed work done on the problem of how to cross the FEBA. Personally, I'm a bit tired of hearing people say there is no way choppers are ever going to go across the FEBA. I think the faulty assumption made by these folks is that you've got to go across the FEBA without getting hurt. Nobody goes across the FEBA without getting hurt! People get hurt! That's the sad fact of war.

But if somebody says that you've got to go back behind the FEBA and chew up the enemy artillery, the enemy air Combat, It taught the U.S. Army. It taught us. We both put the lesson to work to produce an advanced tank-killing helicopter that survives.

We did it with the YAH-64. A new concept—a team approach - that uses field-proven ideas to deliver airborne point target and area-suppressive fire, day or night, in any kind of weather. It does a lot of other things, too.

It's the most survivable helicopter ever developed.

It's small and highly agile. It can take hits from 23mm highexplosive incendiaries and 12.7mm armor-piercing incendiaries, and continue to fight. It has redundant flight-control systems. Fireproof, crashworthy, self-sealing fuel cells. Armor protection for crew and critical components. It's at

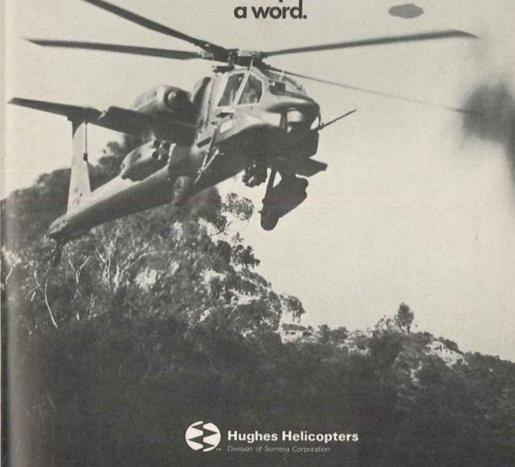
When they're shooting at you, survivability becomes more than just

home in nap-of-the-earth flight.

That's not all. Survivability also means minimum detection. The YAH-64's low rotor flicker. low-glint canopy, low noise, Black Hole engine-exhaust IR suppressor and compact size - add up to minimum detectability across the board. And maximum crashworthiness. For example, the crow will survive vertical impact rates of more than 2,500 feet per minute.

All in all, it's one tough ship, built for the men who have

to live with it.





FOUR TO TANGO—Not one, but TWO married couples are now undergoing USAAVNC primary flight training. Shown, 1-r, are WOCs Linda S. and John L. Sullivan, and 2LTs James P. and Brenda I. Monagle. The couples are expected to get their wings at December and November graduations, respectively.

defense structure, and so forth - and if they give you a choice of how you're going to do it - I for one and going to do it with helicopters and I'm certain I'm going to take losses and be more effective than doing it any other possible way.

So I think that's the way — the only way — in which to look at crossing the FEBA. As far as I'm concerned, we can fight them at the edge of the battle area and, with the right tactics, get back in there behind the FEBA.

Going back to the Yom Kippur War for just a minute, I think it's important to remember that the people who finally chewed the hole in the Egyptian Air Defense structure were not high performance aircraft and not Israeli armor; it was lightly-equipped Israeli infantry in rubber boats who crossed the Suez and got behind the Egyptian air defenses and chewed them up.

The only way they could have done it a lot better would have been with helicopters. The fact is that they did cross the FEBA and they did knock out the enemy force that was holding up the play. That's enough food for thought.

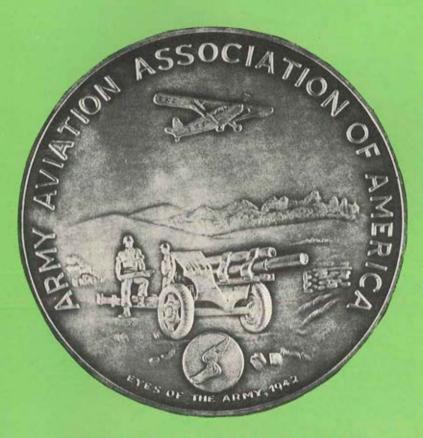
It's been a real pleasure to stand before you as your speaker, and giving me the opportunity to share my views with you. Keep up the good work!



KIDS—The big "kids" (l. to r.) SSG David Gray, PFC James Telgarsky, and CW2 Jeff Bell, all of the 159th Avn Bn of the 101st, take on Jarrett Osborn and Tom Roth at right in a mis-match at the Air Assault Chapter AAAA annual picnic at Ft. Campbell. The youngsters won when the big guys tripped all over themselves and fell. SP4 Stephen H. Shaw, 2d Sqdn, 17th Cav, won "Avn Soldier of Year" honors.

FLYING FUEL—Rubberized-fabric fuel tanks form a make-believe airplane for Sue Hulsey of Goodyear's Rockmart, Ga. plant. Fuel tanks in 130 shapes and sizes for 65 light planes made by 19 different manufacturers are produced at the plant. The tanks range in capacity from two gallons to 400 gallons and hold fuel in otherwise inaccessible areas of the wings and fuselages of light airplanes.





PROGRAM FOR THE 1977 AAAA NATIONAL CONVENTION



AAAA National Executive Board Officers for the 1976-1977 Term

President — LIEUTENANT GENERAL ROBERT R. WILLIAMS, RET.
Executive Vice President — ARTHUR H. KESTEN
Senior Vice President — MAJOR GENERAL WILLIAM J. MADDOX, JR., RET.
Secretary-Treasurer — COLONEL JOHN W. MARR, RET.

Vice Presidents

MAJ. GEN. JOHN N. BRANDENBURG COLONEL GEORGE W. ADAMSON, RET. COLONEL WILLIAM E. CROUCH. JR. COLONEL TED A. CROZIER, RET. COLONEL RUDOLPH D. DESCOTEAU

CW4 E.M. "MEL" COOK

PAUL L. HENDRICKSON

National Past Presidents

GENERAL HAMILTON H. HOWZE, RET. LIEUT. GEN. HARRY W.O. KINNARD, RET. LIEUT. GEN. JOHN M. WRIGHT, JR., RET. MAJOR GENERAL DELK M. ODEN, RET. BRIG. GEN. GLENN GOODHAND, RET. BRIG. GEN. ROBERT M. LEICH, IGR COLONEL RICHARD L. LONG, RET. COLONEL EDWARD L. NIELSEN, RET. JAMES N. DAVIS DARWIN P. GERARD JOSEPH E. McDONALD, JR.* BRYCE WILSON

Regional Presidents

MAJ. GEN. EDWARD A. PARTAIN MAJ. GEN. ALTON G. POST BRIG. GEN. JOSEPH N. JAGGERS

National Members-at-Large

MAJ. GEN. JAMES C. SMITH BRIG. GEN. CHARLES W. BAGNAL BRIG. GEN. CHARLES E. CANEDY COLONEL JOHN J. STANKO LT. COLÔNEL WILLIAM W. PRIEST CW4 LLOYD N. WASHER CSM WALTER W. KRUEGER MRS. THYRA V. BONDS

EUGENE J. TALLIA

Chapter Presidents

BRIG. GEN. JOSEPH H. KASTNER COLONEL EMORY W. BUSH COLONEL CHARLES F. DRENZ COLONEL BOBBY J. MADDOX COLONEL DARWIN A. PETERSEN COLONEL JOSEPH F. RUTKOWSKI COLONEL JERRY A. SIMMONS COLONEL RICHARD L. STOESSNER MARTIN J. LEFF DONALD F. LUCE

CARL D. PERRY

The Officers and Vice Presidents of AAAA are elected for three-year terms at the National Convention. The Executive Vice President serves as a five-year National Board appointee. National Members-at-Large are appointed by the President for one-year terms. The Regional Presidents are elected within the Region for two-year terms. Chapter Presidents are those representing CONUS Chapters with 150 or more members.

*Deceased



ARMY AVIATION ASSOCIATION WESTPORT, CONNECTICUT 06880

It is traditional for the president of the Association to welcome the attendees at the National Convention at the opening General Membership Business session, and to extend his personal greetings and best wishes to those who could not be present by means of this brief message in this special issue.

I am a traditionalist.. and welcome the opportunity in both instances.

On 14 October, I'll meet with the Delegates and members at the convention's kickoff meeting, an open discussion period devoted solely to Chapter affairs.

Here in this issue – which highlights the 1977 Convention's many activities – I feel that our far-flung members have a distillation of everything that is important within AAAA – the Association's programs, purposes, leadership, and so forth.

I can think of no better "Why Join?" document than this appropriately titled "Convention Issue and Program." Within its pages it tells the story of what AAAA is all about ... professionalism coupled with good fellowship ... at the local and regional levels ... and here at the national level during our once-a-year convention.

I echo my predecessor in saying that "we're sorry that all of you could not get to the National this year." It was, is, and will remain a most worthwhile gathering for those having a sustaining interest in U.S. Army Aviation.

ROBERT R. WILLIAMS

Expert & William

Lieutenant General, USA (Ret.)

President, AAAA



AAAA's Objectives, Purposes, and Specific Programs

The Army Aviation Association of America [AAAA] was formed in early 1957 by a small group of senior aviation officers in the active Army, the Reserve Forces of the U.S. Army, and industry. Following the incorporation of the AAAA as a membership corporation without capital stock under the laws of the State of Connecticut, this group took over control of the affairs of the AAAA from the incorporators on April 18, 1957.

Modeled after several of the professionaltechnical societies in existence, the AAAA grew rapidly, receiving the membership support of a majority of those military and civilian persons having an interest in this segment of the armed

forces.

GENERAL PURPOSES

To advance the status, overall esprit, and the general knowledge and efficiency of those persons who are engaged professionally in the field of U.S. Army Aviation, including the Active Army, the Reserve Components, the aerospace industry, the various activities in the Department of the Army which support Army Aviation, such as the Army development, supply, and maintenance agencies, and all other activities, military and civilian, that contribute to the furtherance of Army Aviation.

To preserve and foster a spirit of good fellowship among military and civilian persons whose past or current duties affiliate them with the field

of U.S. Army Aviation.

SPECIFIC OBJECTIVES

Fostering a public understanding of Army Aviation and arousing a public interest in this segment of the military forces.

Exchanging ideas and disseminating information pertinent to Army Aviation through the media endorsed by the Association.

Stimulating good fellowship nationally, regionally, and locally.

Inspiring Army-wide and nationwide interest in

Army Aviation careers.

Cementing relationships between those interested in Army Aviation in the active U.S. Army forces and the Reserve Forces of the U.S. Army.

Motivating Army Aviation personnel to increase their knowledge, techniques, and skills.

Maintaining historical records.

Conducting meetings, seminars, briefings, symposiums, exhibitions, air meets, etc.

Recognizing outstanding contributions within

Army Aviation.

Providing special types of group programs of benefit to the individual membership.

SPECIFIC PROGRAMS

An AWARDS PROGRAM in which outstanding individual and unit achievements receive National, Regional, and/or Chapter recognition.

A CHAPTER ACTIVITIES PROGRAM in which outstanding military and civilian leaders address the widespread Chapter organizations on specific areas of Army Aviation interest.

A LOCATOR SERVICE PROGRAM in which the member is assisted in his efforts to keep abreast

of the location of his contemporaries.

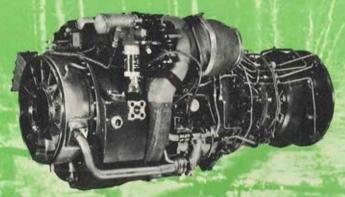
A SCHOLARSHIP AWARDS PROGRAM in which the sons and daughters of members and deceased members receive scholarship aid is pursued annually through the AAAA Scholarship Foundation, Inc., a separate, non-profit foundation that works closely with the AAAA.

A HALL OF FAME PROGRAM that recognizes broad. long term contributions to Army Aviation

and to those who serve within it.

The Army Aviation Association membership totaled 8,019 as at 5 September. Some 5,915 of these members are serving in the active U.S. Army; 382 in the Army National Guard; 116 in the USAR; and an additional 788 on the "Retired" rolls. Total military membership stands at 7,201. In addition, there are 217 individual Industry Members in AAAA, and 374 with Industry [Corporate] Membership affiliations. The total Non-Military membership is 818.

You know the features you'd like to have in an Army helicopter engine.



You'll like the T700.

The Army combat environment is rough . . . particularly rough on helicopter engines. Vietnam showed that. Foreign object damage that caused more than half of all unscheduled engine removals. Heat that made it a struggle for helicopters just to carry their own crews. Lack of sophisticated maintenance equipment in remote areas. Vulnerability to ground fire.

But now there is the T700. With an integral particle separator to provide protection from FOD. Performance that lets

the Army's UH-60A carry its crew and eleven combat-equipped soldiers on a 95 degree day at 4000 feet. Fuel consumption that is 25 to 30% lower than other engines in the same horsepower class. Ease of maintenance in the field that requires only ten simple tools. Design-features to enhance survivability, like top-mounted controls and accessories.

For the Sikorsky UH-60A UTTAS and the Hughes AH-64 AAH, we're building the T700 tough.

205-198

The T700

Approved for production to meet the needs of the modern Army

GENERAL 8 ELECTRIC



Nominees for National Board Elective Office for the 1977-1980 Term



LTG Williams

Eleven CONUS AAAA Chapters having 150 or more members are represented on AAAA'a National Board. Under the AAAA's staggered election system, three or four of the 10 AAAA elective three-year offices of the National Executive Board are vacated each year, the six to seven incumbents providing year-to-year continuity to AAAA national affairs. The three candidates who'll be nominated by the AAAA National Nominating Committee at the Oct. 14 General Membership Meeting at the 1977 National Convention are pictured here. LTG Robert R. Williams, Ret., and COL John W. Marr, Ret., are being nominated for office for additional three-years; MG William A. Becker, Ret., will serve with the foregoing during the 1977-1980 term of office. The seven incumbent elective members are listed on page 18 of this issue.

A Past President of the 1st Cavalry Division Ass'n, MG "Bill" Becker served with that unit in Vietnam and held later assignments as DCG, Combat Developments Command, and Chief of Legislative Liaison. A 15-year member of AAAA and a rated aviator, he resides in Kaufman, TX, and is an industry consultant with E-Systems of Dallas. TX.



COL Marr

Only ten of the 47 members of AAAA's National Board are appointees. The remaining 37 are member-elected.

FLIGHT INSTRUCTORS WANTED

HELICOPTER INSTRUMENT INSTRUCTORS:

Require Commercial with instruments in rotorcraft, 1,000 hours TT, 500 PIC helicopter and 100 hours Hood/Actual Instrument.

EXPERIENCED OV-1 [Mohawk] INSTRUCTORS:

Require Commercial multi-engine, instrument airplane ratings, 1,000 hours TT airplane, 500 hours flight experience airplane.

FAA Medicals apply. CFI's desirable.

Send resume to:

DOSS Aviation, Inc. P.O. Box 725, Ft. Rucker, AL 36362 ATTN: Mr. Harry Jennings

An Equal Opportunity/Affirmative Action Employer

Nominations Sought for 1978 Hall of Fame Candidates

Nominations are now being sought for candidates for June, 1978 induction into the Army Aviation Hall of Fame at Ft. Rucker. Any person, AAAA member or not, may submit one or more nominations, to include the nominee's name, address, present occupation (if known), and the reason(s) for nomination.

The data may be brief, but it must be specific. If dates and military organizations are applicable, they should be included

Persons serving on active duty shall be ineligible for consideration until separated or discharged. No nominating letters will be returned to their originators; however, the AAAA National Office will acknowledge the receipt of each.

The Army Aviation Hall of Fame Board of Trustees will meet in January to select the 1978 Inductees based on the nominations received.

All nominations should be postmarked on or before 31 December 1977 and sent to:

AAAA, Attn: Hall of Fame Program, 1 Crestwood Road, Westport, CT 06880.



The Presidents and the Secretaries of AAAA's 52 Chapter Activities

AIR ASSAULT CHAPTER [Ft. Campbell]
President: Brigadier General Joseph H. Kastner
Secretary: Major Arthur M. Mountcastle
671 Members — Last Meeting: 1 June 1977

AIR CAVALRY CHAPTER [Ft. Knox]
Acting President: Lieut. Colonel Rex M. Turner
Secretary: To be elected.

71 Members - Last Roster: 1 September 1977

ALAMO CHAPTER [Ft. Sam Houston]
President: Lieutenant Colonel Regginial R. Barden
Secretary: Captain Bruce O. Furbish
106 Members — Last Meeting: 30 March 1977

ALOHA OF HAWAII CHAPTER
President: Lieutenant Colonel Jerry W. Childers
Secretary: CW3 Carrol A. Smith
115 Members — Last Meeting: 23 September 1977

ARMY AVIATION CENTER CHAPTER [Ft. Rucker]
President: Colonel Joseph F. Rutkowski
Secretary: Thomas J. Sabiston
363 Members — Last Meeting: 5 October 1977

BENELUX CHAPTER [Brussels]
President: Major Frederick F. Mentzer
Secretary: SP5 Charles Mills
14 Members — Last Roster: 1 October 1976

BIRMINGHAM AREA CHAPTER
President: Captain Daniel O. Windham
Secretary: Major Billie Carter
64 Members — Last Meeting: 5 June 1977

BONN AREA CHAPTER [Bad Godesberg]
President: Lieut. Colonel George L. O'Grady, Jr.
Secretary: Colonel Robert Sherman, Ret.
41 Members — Last Meeting: 2 September 1977

CAJUN CHAPTER [Ft. Polk]
President: Captain Dorsey N. Horne
Secretary: Captain Ronnie Griggs
83 Members — Last Meeting: 30 June 1977

CHECKPOINT CHARLIE CHAPTER [Berlin]
President: Captain Frank C. Kurinec
Secretary: Frank J. Ungricht, Jr.
28 Members — Last Meeting: 2 April 1977

CHESAPEAKE BAY CHAPTER [Maryland]

President: Major Walter R. Mueller Secretary: Major Howard D. Hill, III 92 Members — Last Meeting: 19 February 1977

CHICAGO AREA CHAPTER

President: 1LT Ray R. Norris Secretary: Captain James A. Hitch 76 Members — Last Meeting: 24 September 1977

COASTAL EMPIRE CHAPTER [Hunter-Stewart]
President: CW4 Leland C. Komich

Secretary: Captain Scott R. Wilcox 109 Members — Last Meeting: 20 August 1977

CONNECTICUT CHAPTER [Stratford]
President: Martin J. Leff

Secretary: Leland F. Wilhelm 178 Members — Last Meeting: 4 September 1977

> CORPUS CHRISTI TEXAS CHAPTER President: Colonel Charles F. Drenz

Secretary: Ms. Olene V. Mimms

178 Members — Last Meeting: 25 August 1977

President: Colonel Richard L. Stoessner
Secretary: Major Emitt Wallace
195 Members — Last Meeting: 24 July 1977

DELAWARE VALLEY CHAPTER [Philadelphia] President: CW3 Ralph E. Domenic, Ret.

Secretary: To be elected. 133 Members — Last Roster: 18 May 1977

EMBRY-RIDDLE CHAPTER [Daytona Beach]
President: Captain Terry A. Smith
Secretary: Wilbur A. Middleton
110 Members — Last Meeting: 6 March 1977

ESFAHAN CHÁPTER [Iran]
President: Colonel Nicholas G. Psaki, Ret.
Secretary: CW2 Robert A. Albino, Ret.
106 Members — Last Meeting: 29 September 1977

FORT BENNING CHAPTER
President: CW4 George B. Horan
Secretary: CW2 Richard M. Mazur
110 Members — Last Meeting: 11 August 1977

23



The Presidents and the Secretaries of AAAA's 52 Chapter Activities

FORT BRAGG CHAPTER

President: Colonel Emory W. Bush Secretary: Captain Joseph J. Pavero, Jr. 186 Members — Last Meeting: 13 October 1977

FORT HOOD CHAPTER

President: Colonel Bobby J. Maddox Secretary: Captain Richard L. Macey 271 Members - Last Roster: 11 August 1977

FORT MONROE CHAPTER

President: Lieutenant Colonel Paul Bankit Secretary: Lieut. Colonel Raymond F. Holleran 56 Members Last Meeting: 20 April 1977

FORT RILEY CHAPTER

President: Lieutenant Colonel Edward M. Hogan Secretary: Captain David R. Ewing 50 Members Last Meeting: 29 June 1977

FORT SILL CHAPTER

President: Lieutenant Colonel Daniel T. Madish Secretary: CW2 Lawrence A. Morgan 124 Members - Last Meeting: 23 September 1977

FRANCONIA-MARNE CHAPTER [Germany]

President: Lieut. Colonel Gerald E. Lethcoe, Jr. Secretary: CW3 David C. Thill 89 Members Last Meeting: 27 May 1977

GOLDEN GATE CHAPTER | San Francsico |

President: Lieut. Colonel Donald R. Bausler Secretary: Captain Ronald R. Tamaccio 56 Members Last Meeting: 16 April 1977

GRAND CANYON CHAPTER [Ft. Huachuca]

President: CW4 Edmundo M. Doblado Acting Sec'y: Lt. Col. Frederick R. Upton, USAR 87 Members Last Roster: 8 August 1977

HANAU CHAPTER [Germany]

The Chapter is in the process of undergoing a reorganization/reactivation. 74 Members — Last Roster: 7 September 1976

INDY CHAPTER [Indianapolis] President: Captain Wayne E. Overturf Secretary: Lieutenant Colonel John E. Freeman 62 Members Last Meeting: 8 May 1977

LEAVENWORTH AREA CHAPTER

President: Lieut, Colonel Charles E. Robinson, Jr. Secretary: Captain Theodore J. Anderson 97 Members Last Meeting: 15 April 1977

LINDBERGH CHAPTER [St. Louis]

President: Donald F. Luce Secretary: Ms. Matilda C. Rowlan 275 Members Last Meeting: 24 June 1977

LONE STAR CHAPTER [Austin, Tex.]

CW4 Kenneth R. Pruitt Secretary: Major Robert R. Hinton 57 Members Last Meeting: 26 April 1977

MAINZ CHAPTER

President: CW2 Lester R. Witmer Secretary: Mrs. S.J. Lewandowski 100 Members Last Meeting: 13 June 1977

MISSISSIPPI VALLEY CHAPTER [Davenport IA]

President: CW4 Henry S. Luchner Secretary: Lieutenant Roy H. Ballinger 61 Members - Last Meeting: 12 March 1977

MONMOUTH CHAPTER

President: Colonel Darwin A. Petersen Secretary: Vincent C. O'Donnell 191 Members - Last Meeting: 11 August 1977

MONTEREY BAY CHAPTER [Ft. Ord]

President: Major John R. Quesenberry Secretary: CPT Russell J. Sanderson 88 Members - Last Meeting: 21 August 1977

MORNING CALM CHAPTER [Seoul]

President: Lieutenant Colonel Gerald Lord Secretary: Captain Daniel J. Petrosky 100 Members Last Meeting: 28 July 1977

MT. RAINIER CHAPTER [Ft. Lewis]

President: Lieutenant Colonel James T. Stewart Secretary: To be elected. 145 Members - Last Roster: 19 October 1976

NURNBERG CHAPTER [Germany]

President: Captain Robert B. Eldridge Secretary: Captain Charles D. Richmond In process of activating a Chapter activity.



The Presidents and the Secretaries of AAAA's 52 Chapter Secretaries

PERSIA CHAPTER [Teheran]

President: Colonel Richard E. Stephenson Secretary: Lieut. Colonel Herman M. Orrell, III 66 Members Last Meeting: 9 June 1977

PIKES PEAK CHAPTER [Ft. Carson] President: Lieutenant Colonel John J. Spisak

Secretary: Captain Steven E. Craver 80 Members Last Meeting: 29 June 1977

RHINE VALLEY CHAPTER

President: Colonel Crawford Buchanan Secretary: Lieutenant Colonel John C. Stillman 122 Members — Last Meeting: 21 September 1977

ROCKY MOUNTAIN CHAPTER [Denver]

President: Lieut. Colonel Robert T. Young, Ret. Secretary: Captain Jerry W. Marshall 44 Members Last Meeting: 23 July 1977

SCHWAEBISCH HALL CHAPTER [Germany] President: Captain Kenneth E. Allen

Secretary: SP5 Mary McKenna ers – Last Roster: 29 April 1977 64 Members

SHARPE ARMY DEPOT CHAPTER [Lathrop CA]

President: Colonel Roy L. Lockwood Secretary: To be elected.

92 Members Last Roster: 18 October 1976 SOUTHERN CALIFORNIA CHAPTER [Los Angeles]

President: Carl D. Perry Secretary: Peter Schulz

197 Members Last Meeting: 29 August 1977

STUTTGART CHAPTER [Germany]

President: CW4 Walter C. Handberry Secretary: CW2 James M. Davis

133 Members Last Meeting: 23 June 1977

SUN BOWL CHAPTER [Fort Bliss]

President: Major Thomas J. Konitzer Secretary: Major John P. Kennedy 92 Members Last Meeting: 29 August 1977

TAUNUS CHAPTER [Frankfurt]

President: Captain Roy E. Mann Secretary: Captain Lorane Green

91 Members — Last Meeting: 29 September 1977

TENNESSEE VALLEY CHAPTER [Huntsville AL] President: Colonel James L. Tow

Secretary: R.O. Wyne 64 Members — Last Meeting: 22 September 1977

WASHINGTON, D.C. CHAPTER

President; Colonel Jerry A. Simmons Secretary: Leonard D. Kulik 525 Members — Last Meeting: 24 September 1977

Army Aviation Hall of Fame 1974-1977 Inductees

Major Delbert L. Bristol, 1942-1949 Brigadier General William B. Bunker, 1950-1959 Colonel William W. Ford, Prior to 1942 Major O. Glenn Goodhand, 1942-1949 General Hamilton H. Howze, 1960-1969 Major Charles L. Kelly, 1960-1969 Sergeant First Class Lawrence E. Kennedy Arthur and Dorothy Kesten [Paired], 1950-1959 Lt. General Harry W.O. Kinnard, 1960-1969 Brigadier General Robert M. Leich, IGR Colonel William J. Maddox, Jr., 1960-1969 Colonel Jack L. Marinelli, 1950-1959 Lieutenant Colonel Spurgeon Neel, 1950-1959 Colonel Robert H. Nevins, Jr.

Lieutenant General John Norton Chief Warrant Officer Michael J. Novosel, 1960-69 Major John W. Oswalt, 1942-1949 Frank N. Piasecki, 1942-1949 William T. Piper, Sr., Prior to 1942 Chief Warrant Officer Johnnie R. Sandidge Colonel G.P. Seneff, Jr., 1950-1959 Colonel Claude L. Shepard, Jr.

Igor I. Sikorsky, Prior to 1942 Brigadier General James C. Smith, 1960-1969 Major J. Elmore Swenson, 1942-1949

Colonel John J. Tolson, III, 1950-1959 Colonel Jay T. Vanderpool Lt. Colonel Robert R. Williams, 1942-1949

With Rockwell-Collins Adaptive Communication, NOE problems are no problem.

Nap-of-the-earth missions no longer have to present communication problems for the pilot, commander, or ground element. Not with the Rockwell-Collins Adaptive Communication System. This system exploits the ability of HF-SSB to talk non-line-of-sight. At the same time, pilot workload and fatigue are drastically reduced.

Here's how:

Selective Calling — Airborne and ground elements can address specific parties for two-way communications, with confirmed link indication.

Muted Receiver — Radio is squelched off until a discretely addressed message opens up the audio section. The pilot doesn't have to listen to a lot of

background noise and unrelated conversations just to make sure he doesn't miss a call.

Frequency Scanning — The receiver scans a group of preselected mission frequencies looking for incoming messages with its address. When the proper address is received, the scanning stops, the transmitter is tuned to the proper reply frequency and a confirming answer is transmitted.

Heart of the Rockwell-Collins Adaptive Commo is the 100-watt AN/ARC-174 HF-SSB Transceiver. When the Rockwell-Collins 628B-1 Combo VHF-UHF Radio is also aboard, the system can scan five bands (2-400 MHz) in a simplex or split frequency (or band) operation — a definite plus in an EW environment.

For more information, contact: Telecommunications Products Marketing, Collins

Government Telecommunications Group, Rockwell International, Cedar Rapids, Iowa 52406. Phone: 319/395-2200.





See Rockwell-Collins
Adaptive Commo demonstrated
at the AUSA Show, Booth 172.





1977 AAAA Industry Member Firms and Designated Representatives

Avco Lycoming Division Richard B. LeMar, Stratford CT; L.H. Sample, Washington, D.C.

Beech Aircraft Corporation Roy H. McGregor, Wichita KS; William G. Rutherford, Washington, D.C.

Bell Helicopter Textron
Phil C. Norwine, Hurst TX; Warren T.
Rockwell, Washington, D.C.

The Boeing Company
Dr. R.L. Brock, Seattle, WA; Richard
W. Taylor, Washington, D.C.

Boeing Vertol Company
W. Thomas H. MacNew, Philadelphia,
PA; Brig. Gen. O. Glenn Goodhand,
Ret., Washington, D.C.

Canadian Marconi Company
L. Leveille and E. Spinner, Montreal.

Cessna Aircraft Company K.W. Whisler, Wichita, KS; J.J. Pohlen, Washington, D.C.

Chandler Evans, Inc. Leo J. Shannon & A.M. Mazur, West Hartford, CT.

Collins Avionics Division
W.C. Strathern, Cedar Rapids, Iowa;
Robert L. Severns, Arlington, VA

Consolidated Controls Corporation
Joseph A. Fontana, El Segundo, CA

de Havilland Aircraft of Canada, Ltd. Russ Bannock, Downsview, Ontario; Joseph L. Gude, Washington, D.C.

Detroit Diesel Allison Division R.A. Pejeau, Washington, D.C.

Doss Aviation, Inc. Robert M. Snowberger, Ft. Rucker AL

Dynalectron Corporation
Dan R. Bannister, Washington, D.C.;
Jack Vestal, Ft. Worth, TX

Emerson Electric Company Merle Engle, St. Louis, MO; Jerry Reider, Washington, D.C.

E-Systems, Inc.
John W. Dixon, Dallas, TX; Robert C.
Smith, Arlington, VA

Ford Aerospace & Commun. Corp. Ronald K. Ressler and E.S. Iverson, Newport Beach, CA

General Dynamics Corporation
John P. Maguire, St. Louis, MO; J.A.
Robertson, Washington, D.C.

General Electric Company
William J. Crawford, III, West Lynn,
MA; Robert H. Harris, Wash., D.C.

Global Chemical Systems Inc. E. Brad Atwood, Gardena, CA

Grumman Aerospace Corporation John A. Kendrick and Joel Dimaggio, Bethpage, L.I., NY

> Howell Instruments, Inc. E.H. Arbuckle, Ft. Worth, TX

Hughes Aircraft Company Charles Z. Becker, Culver City, CA; Nicholas Rayne, Washington, D.C.

Hughes Helicopters Division
Carl D. Perry, Culver City, CA; George
D. Iverson, Washington, D.C.

Hydraulic Research Textron L.A. Drazin, Valencia, CA

Kaman Aerospace Group John D. Mimnaugh, Bloomfield, CT

Litton Systems, Inc. C.A. Christofferson, Woodland Hills, CA; Henry A. Paladino, Wash., D.C.

Martin Marietta Aerospace John S. Bright, Orlando, FL; Harold G. Swallow, Bethesda, MD Northrop Corporation

W.H. Habblett, Los Angeles, CA; Victor Bray, Arlington, VA

Northrop Worldwide Acrit Service John D. Foy, Lawton, OK; John Tranter, Ft. Rucker, AL

Rockwell Missile Systems Division Dr. J.F. Reagan, Anaheim, CA; Paraskos, Columbus, OH

J. Gilbert Nettleton and J.W. Barr Washington, D.C.

Solar Division
Frank lannolo, San Diego, CA; I
ald L. Kearns, Washington, D.(

Teledyne McCormick Selph Frank B. Pollard and George D. K Hollister, CA

United Technologies Corporati Robert J. Torok, Stratford, CT; gene J. Tallia, Washington, D.

SUSTAINING MEMBERS

Air Assault Chapter, Ft. Campbell BRICK'S MEN'S STORES First Trust & Savings Bank, Clarks FT. CAMPBELL FLYING CLUB GATE 3 PRINTERS HOGUE REAL ESTATE & CONSTR

Jackson's Big Star McDonald's of Clarksville PLANTER'S BANK & TRUST C Taylor Motor Sales

Connecticut Chapter
DON SAPPERN & COMPANY
Equity Paper Company
HEMINWAY CORPORATION

Mercury Press
Monterey Bay Chapter, Ft. Ord,
SILVER STAR MOTORS, INC.

Washington, D.C. Chapter G.W. "Wally" Adamson, Realt



Who helps pilots talk to ground forces?

Over 4,000 Memcor AN/ARC-114A airborne transceivers provide the reliable, clear communications essential to coordinating air support with ground troop activity. The unit operates over a 30.00 to 75.95 Mhz frequency range. For higher frequency ranges, you will want to look at Memcor's AN/ARC-115A transceiver which operates at 116.00 to 149.97 Mhz.

Both units are extremely compact and lightweight, making them ideal for use in all light observation aircraft. They are scheduled for installation in the newly developed Advanced Attack Helicopter, the Utility Tactical Transport Aircraft

System, and the F-16 fighter.

Memcor, a division of E-Systems, Inc., is the world's largest producer of high quality tactical radios and interface accessories. Because Memcor holds current U.S. Army contracts, it can offer all customers the most current design

configuration. For more information on how Memcor can meet your tactical radio needs, contact E-Systems, Inc., Memcor Division, P.O. Box 549, Huntington, Indiana 46750. (219) 356-4300.





E-Systems is the answer.





E-SYSTEMS

Memcor Division



Leadership, Government, and Standing Committee Structure of AAAA

GOVERNMENT

The leadership and control of the Army Aviation Association rests with the officers of its 52 Chapter, three Regional, and single National Executive Boards.

Establishing broad AAAA policy and implementing Association-wide programs, the 47-member National Executive Board [For make-up, see page 18 meets three to four times a year with several of the meetings being held at the Regional Convention sites. Its constituency includes military, DAC, Reserve Component, industry, and civilian representation, and covers all categories and ranks and grades of membership.

Chaired by National Executive Board members. the fifteen major AAAA standing committees bring additional members and expertise into the gov-

erning process.

Composed of four to nine members each, the National Board subcommittees cover Awards,

By-Laws, Convention, DAC, Enlisted, Fiscal, Hall of Fame, Industry, Membership Enrollment, Policy, Regional Activities, Reserve Components. Scholarship Award, and Warrant Officer Affairs. An Executive Committee of 17-20 members meets on call on specific program areas.

More than 200 local area Chapter meetings are held annually under a By-Law quarterly meeting requirement. AAAA's USAREUR Region has held 17 Regional Conventions since 1961; a Fifth [Area Area) Regional Convention was held in 1974 and 1976 with the 1977 Convention being held this past April in St. Louis.

The First Region has held successive conventions at Atlanta, Williamsburg, and Nashville, the latter gathering being held on 25-27 August 1977.

A Sixth Region covering the Sixth Army Area may be activated during the October-December, 1977 period, and hold its first Regional Convention in 1978.

[] 1 Yr, \$8 - [] 2 Yr, \$15 - [] 3 Yr, \$22

This is the only application form accepted



Army Retired*

Other Services

ARMY AVIATION ASSOCIATION

I Crestwood Road, Westport, Conn. 06880



I wish to join the Army Aviation Ass'n of America [AAAA]. My past or current duties affiliate

zine, ARN	MY AVIATION,	I membership in and that my men s suggested, if o	mbership st	tarts on the	e subsequ	uent 1st o	f the mo			
RANK	IK FIRST NAME			LAST NAME						
STREET	ADDRESS									
CITY				STATE	E	ZIP				
Go []USA []DA C	our AAAA Profesovernment A Active Duty Civilian* uy Nat'l Guard*	Non-Governme [] Manufacturin [] Small Busine [] Retailing*	ent* ng* Ner ess* [AA/ w & Renew] 1 Yr, \$12- w & Renew low: and W	val Dues f -{]2 Yr, val Dues f	\$23-[] 3 for Enliste	Yr, \$33. ed; GS-6			

Nat'l Office will request add'l Information. by the AAAA. It may be reproduced locally.

Professional*

1 Other*

Sikorsky chooses experience:









When you're aboard every production military helicopter that uses an APU, you must be doing things right.

And Sikorsky Aircraft Division of United Technology Corporation has chosen the Solar® Titan® turbine auxiliary power unit for its winning UH-60A entry in the recent UTTAS competition, which kept our batting average at 1,000.

Altogether we've designed and built more than 8,500 turbine APU's that have totaled up 15 million operating hours. That's experience.

And when you've got that kind of experience, you've learned how to build in reliability and that's the one quality an APU can't do without.

The Titan APU has an extra margin of performance for every pound of weight and low life-cycle costs.

But when you depend on your APU for starting and auxiliary electric and hydraulic power, the main thing is it has to work. And Solar's APU works reliably.

Selection for every production military helicopter that has an APU, the new F-16 jet fighter and many commercial aircraft and business jets says a lot. But there's more to say.

So write Solar, an International Harvester Group, Dept. Z-280, San Diego, CA 92138. We'll send you the facts and then let our *Titan* turbine APU speak for itself.

With the voice of experience.

SOLAR TURBINES INTERNATIONAL



1977 AAAA National Convention Professional-Social Program



LTG Williams



BG Canedy



R.P. Alex



MG Khosrowdad



P.C. Norwine

FRIDAY, 14 OCTOBER 1977 Stouffer's National Center Hotell

0900-1830 Registration & Ticket Sales. Sign in at the Convention hotel Charleston Room

0900-1200 AAAA Nat'l Executive Board Business Meet-

ing. First Session Decatur Room 1200-1330

Nat'l Executive Board Luncheon, NEB Wives are welcome to attend...... Dewey I Room

1430-1600 Chapter Affairs Workshop, MG Alton G. Post, Pres., First Region, Chairman. For Chapter Delegates and Members Decatur Room

1600-1630 General Membership Business Meeting. Nat'l elections, proposals Decatur Room

1700-1800 '77 Cub Club Reunion AAAA Conf. Room

1800-2100 Early Birds' Reception Farragut Room ************************** NOTE: Membership Luncheon and Honors Dinner head count guarantees must be made by 1830 hours, Friday, 14 October. Other than possible last-minute 'turn-ins,' tickets for either function will not be available on Saturday, 15 October .. Plan ahead! ______

SATURDAY, 15 OCTOBER 1977 [All functions at the Stouffer facility]

0800-1200



J. Diamond



N.B. Hirsch

'Note" this page) Charleston Room

0805-1150

Professional Program Morning Session Chesapeake Hall (Lobby Level) 000000000000

"THE CHALLENGES AHEAD"

BG Charles E. Canedy, Deputy Director of Requirements and Army Aviation Officer, ODCSOPS, Department of the Army, and Chairman, Presentations Subcommittee, 1977 AAAA National Convention

000000000000

0800-0805

Welcome & Introduction by LTG Robert R. Williams, Ret., National President, AAAA

0805-0840 "The DA Army Aviation Officer's Report" by BG Charles E. Canedy

................................. 0840-0900 Program BreakRefreshments ************************* 0900-1000

"Sovetskive Vertolyety i Prinadleshaschive Sistemy Vooruzheniya." Speaker: Ralph P. Alex, President, Commission Internationale Giraviacion, Federation Internationale Aeronautique

0930-1100

AAAA Ladies' Coffee, Mrs. Robert R. Williams and Mrs. O. Glenn Goodhand will serve as co-hosts Fantail Lounge ****************************

1000-1050

"The Importance of Iranian Military in Pro-Registration. Ticket sale, if available (See I tecting the Persian Gulf." Speaker: Maj.



J. Faulk



LTG Shoemaker



1977 AAAA National Convention Speakers, Subjects, Functions

Gen. Manoochehr Khosrowdad, Director of Imperial Iranian Army Aviation

1050-1150 PANEL PRESENTATION
"Increased Survivability & Decreased Detectability for Future Helicopters." Panel Moderator: Brig. Gen. Charles E. Canedy Panel Members:

Philip C. Norwine, V.P., Government Marketing, Bell Helicopter Textron Jack Diamond, Director of Product Develop-

ment, Boeing Vertol Company Norman B. Hirsh, Deputy Program Director, AAH, Hughes Helicopters Division

James Faulk, Manager, Systems Engineering Blackhawk Program, Sikorsky Aircraft Div.

1200-1230 REFRESHMENTS

Served in Promenade ... Admiralty Ballroom 1230-1420

AAAA General Membership Luncheon. National and Chapter Awards; Presentation to "Army Controller of Year" and "Outstanding ATC Unit of Year" ... Admiralty Ballroom

1430-1630 PANEL PRESENTATION (Chesapeake Room — Lobby Level)

"How Can the U.S. Army Respond to the Challenge?" Panel Moderator: Lt. General Robert M. Shoemaker, Deputy Commander.

U.S. Army Forces Command
Panel Members:
Maj. Gen. Manoochehr Khosrowdad, Direct-

or of Imperial Iranian Army Aviation
Maj. Gen. James C. Smith, Commander, U.S.

Army Aviation Center & Ft. Rucker

Maj. Gen. Story C. Stevens, Commander,
U.S. Army Aviation R&D Command

Brig. Gen. Charles E. Canedy, Deputy Director of Requirements, ODCSOPS, and Army Aviation Officer, Department of the Army Brig. Gen. Benjamin E. Doty, Director, Officer Personnel Directorate. MILPERCEN

Brig. Gen. John W. Woodmansee, Assistant Deputy Chief of Staff for Combat Development, USA Training & Doctrine Command

1630-1635

Closing Remarks by Lt. Gen. Shoemaker, Panel Moderator, and Brig. Gen. Canedy, Presentations Subcommittee Chairman

1900-2000

1977 AAAA HONORS DINNER RECEPTION Formal Dress Chesapeake Hall (Lobby Level)

2000-0100 Admirally Ballroom
1977 AAAA HONORS DINNER AND DANCE

The Presentation of AAAA's Five 1977 National Awards by General Frederick J. Kroesen Commander, U.S. Army Forces Command

General Donn A. Starry

Commander, U.S. Army Training and Doctrine Command The Honorable Howard E. Haugerud President, McClellan Memorial Foundation

General John R. Guthrie
Commander, U.S. Army Development, Acquision and Readiness
Command

The Honorable Walter B. LaBerge
Under Secretary of the Army

SUNDAY, 16 OCTOBER 1977

(All functions will be held at the Stouffer facility)

1030-1100

Nat'l Executive Board Business Meeting. Review of 1977-1978 Planning Calendar/NEB Meetings AAAA Conference Room 1100-1300

The Diehards' Brunch. A "Bunch Munch" and run. Bloody Marys, music, and much more Fantail Lounge



MG Smith



MG Stevens



BG Doty



BG Woodmansee



LTC Rosser

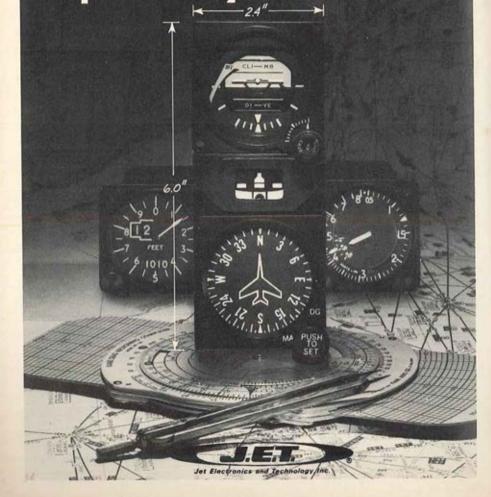
33

Needle, ball and airspeed is obsolete! Our Partial Panel System provides complete attitude, heading, turn rate and yaw data in a 2 by 6-inch panel space, while the Emergency Power Supply delivers extra power for instrument lighting, com-nav, transponder, landing gear and flaps.

Write or call: Jet Electronics & Technology, Inc., 5353 - 52nd Street, S.E., Grand Rapids, Mich. 49508. Phone: (616) 949-6600.

Today's partial panel.

A premium you can afford.





The Individual and Unit Winners of 1977 AAAA National Awards



LTC Dolin

1SG Wozniak

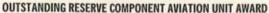
MAJ Stokely

OUTSTANDING AVIATION UNIT OF THE YEAR AWARD

Established by the Army Aviation Association of America and sponsored by the Hughes Helicopters Division and presented in 1977 to Fort Hood's

7th Squadron [Attack Helicopter], 17th Cavalry, 6th Cavalry Brigade [Air Combat] and accepted for the unit by

Lt. Col. Garry F. Dolin and First Sergeant Leon S. Wozniak



Sponsored by the Army Aviation Association of America and presented in 1977 to Grand Prairie, Texas's 300th Aviation Company [Assault Helicopter][USAR] and accepted for the unit by Major Jerry Stokely and First Sergeant Jack Powell



Established to honor the memory of James H. McClellan, an Army Aviator who was killed in a civil aviation accident on July 22, 1958. sponsored by the McClellan Memorial Foundation, and presented to Major Arthur M. Mountcastle

HHC, 101st Aviation Group, 101st Airborne Division (Air Assault) Fort Campbell, Kentucky

ARMY AVIATOR OF THE YEAR AWARD

Sponsored by the Army Aviation Association of America and presented in 1977 to Chief Warrant Officer [W2] Randy F. Dyer 155th Aviation Company (Attack Helicopter), Fort Ord, Calif.

AVIATION SOLDIER OF THE YEAR AWARD

Sponsored by the Army Aviation Association of America and presented in 1977 to

Specialist Five Charles W. Ball 146th Medical Detachment (Hel Amb), West Virginia-ARNG



MAJ Mountcastle



CW2 Dver



SP5 Ball



MG Mohr



101st Abn Div



Distinguished Head Table Guests at the 1977 AAAA Awards Dinner

Sergeant Major William G. Bainbridge. Sergeant Major of the Army Specialist Five Charles W. Ball, "Aviation Soldier of the Year" Lieutenant General Allen M. Burdett, Jr., Commander, Fifth U.S. Army Brigadier General Charles E. Canedy, Deputy Director of Requirements and Army Aviation Officer, ODCSOPS, Department of the Army Joseph P. Cribbins, Special Assistant for Aviation Logistics, ODCSLOG Lieutenant General Eugene J. D'Ambrosio, Deputy Commander for Materiel Readiness, DARCOM Lieutenant Colonel Garry F. Dolin, 7th Squadron (Attack Helicopter), 17th Cavalry Chief Warrant Officer [W2] Randy F. Dyer, "Army Aviator of the Year" General John R. Guthrie, Commander, Development, Acquisition and Readiness Command Honorable Howard E. Haugerud, President, McClellan Memorial Foundation Chaplain [Major General] Orris E. Kelly, Chief of Chaplains, United States Army Arthur H. Kesten, Executive Vice President, Army Aviation Association General Frederick J. Kroesen, Commander, United States Army Forces Command Honorable Walter B. LaBerge, Under Secretary of the Army Brigadier General Robert M. Leich, IGR, Chairman, AAAA National Awards Committee Honorable John L. McClellan, United States Senate Major General Henry Mohr, Chief of Army Reserve Major Arthur M. Mountcastle, "James H. McClellan Award" Winner Honorable Percy Pierre, Assistant Secretary of the Army (R&D) Major General Alton G. Post, Commander, USA Transportation Center & Fort Eustis First Sergeant Jack Powell, 300th Aviation Company (Assault Helicopter) Lieutenant General Robert M. Shoemaker, Deputy Commander, U.S. Army Forces Command Major General James C. Smith, Commander, USA Aviation Center & Fort Rucker General Donn A. Starry, Commander, U.S. Army Training & Doctrine Command Major General Story C. Stevens, Commander, USA Aviation Research & Development Command Major Jerry Stokely, 300th Aviation Company (Assault Helicopter) Major General Richard H. Thompson, Commander, USA Troop Support and Aviation Materiel Readiness Command Lieutenant General Robert R. Williams, USA [Ret.], President, Army Aviation Association



First Sergeant Leon S. Wozniak, Senior NCO, 7th Squadron (Atk Hel), 17th Cavalry



The 1977 AAAA Awards Dinner Program and Presenters

Welcome and Introduction of Head Table Guests Lieutenant General Robert R. Williams, USA [Ret.]

Invocation
Chaplain [Major General] Orris E. Kelly
Chief of Chaplains, United States Army

Presentations
"Outstanding Aviation Unit Award"
presented by
General Frederick J. Kroesen
Commander, United States Army Forces Command

"Outstanding Reserve Component Aviation Unit Award"
presented by
General Donn A. Starry
Commander, United States Army Training and Doctrine Command,
as assisted by
Major General Henry Mohr
Chief of Army Reserve, Department of the Army

"Army Aviator of the Year Award"
presented by
General John R. Guthrie
Commander, Development, Acquisition and Readiness Command

"James H. McClellan Aviation Safety Award" presented by Honorable Howard E. Haugerud President, McClellan Memorial Foundation

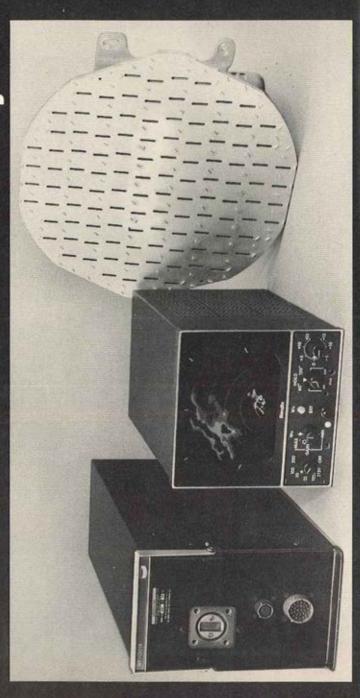
"Aviation Soldier of the Year Award" presented by the Honorable Walter B. LaBerge Under Secretary of the Army

* * *

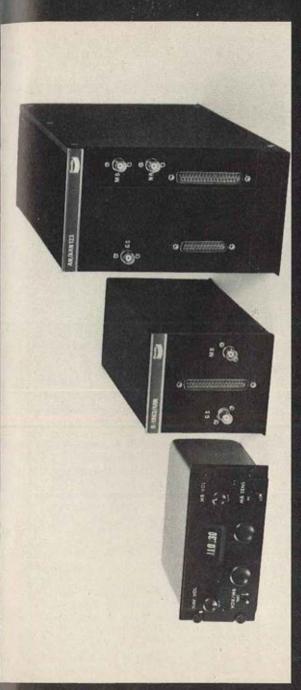
Benediction

Chaplain [Major General] Orris E. Kelly

Off-the-shelf for the U.S. Army. Bendix Avionics Systems.



RDR-1200 Weathervision . . . a proven, digital-memory-display weather avoidance radar system is already



CONUS NAV... provides VOR and full ILS capability for the U-21, UTTAS, ASH, AAH, CH-47, UH-1 and OH-58.

U.S. Army pilots, flying missions that must comply with civil regulations, can get their VHF VOR/ILS navigational data from the Bendix supplied CONUS NAV, a commercial avionics system. Available off-the-shelf!

Also, C-12 pilots will be flying with the Bendix RDR-1200 Weathervision system that features full-time, nonfading thunderstorm targets. Again, off-the-shelf! Both systems have traditional Bendix reliability and time-tested performance in civil aviation service, as a

result of commercial and FAA requirements.

For further information, contact: Mr. H. H. Nessell, The Bendix Corporation, Avionics Division, P.O. Box 9414, Fort Lauderdale, Florida 33310.





The 1959-1977 "Aviator" and "Aviation Soldier of the Year" Awardees

ARMY AVIATOR OF THE YEAR AWARD

- 1959 Captain James T. Kerr, USA Transportation Test & Support Activity, Ft. Rucker, AL
- 1960 Chief Warrant Officer Clifford V. Turvey.
 U.S. Army Aviation Test Board, Ft. Rucker, AL
- 1961 Chief Warrant Officer Michael J. Madden.
 U.S. Army Transportation Board, Ft. Eustis, VA
- 1962 Captain Leyburn W. Brockwell, Jr., Head quarters, XVIII Airborne Corps, Ft. Bragg, NC
- 1963 Captain Emmett F. Knight, 57th Aviation Company, USARV
- 1964 Major Marquis D. Hilbert, John F. Kennedy Center for Special Warfare, Ft. Bragg, NC
- 1965 Major Paul A. Bloomquist, 57th Medical Detachment (Helicopter Ambulance), USARV
- 1966 Captain James A. Scott, III. 219th Aviation Company, USARV
- 1967 Chief Warrant Officer Jerome R. Daly, 121st Aviation Company, USARV
- 1968 Captain Robin K. Miller, 114th Assault Helicopter Company, USARV
- 1969 Major Patrick H. Brady, 54th Medical Detachment (Helicopter Ambulance), USARV
- 1970 Chief Warrant Officer John I. O'Sullivan, 174th Aviation Company, USARV
- 1971 Lieutenant Colonel Robert B. Molinelli, 2d Sadn. 17th Cav. 101st Abn Div (Airmobile)
- 1972 Captain Ronald A. Radcliffe, F Troop.
 4th Cavalry, 1st Aviation Brigade, USARV
- 1973 Major Theodore J. Dolloff, Co D. 227th Aviation Battalion, 1st Cav Div. Ft. Hood. TX
- 1974 Chief Warrant Officer Norman E. York, 71st Aviation Co (Assault Helicopter), APO NY
- 1975 Major Eugene L. Richardson, HHD, Military Bureau, Maine Army National Guard
- 1976 Chief Warrant Officer Robert R. Hawkins, 7th Sqdn (Atk Hel), 17th Cav, Ft. Hood, TX
- 1977 Chief Warrant Officer Randy F. Dyer.
 155th Aviation Company (Atk Hel), Ft. Ord, CA

BACKGROUND

Sponsored by the AAAA, this Award is made annually to the Army Aviator who has made an outstanding individual contribution to Army Aviation during the previous calendar year.

AVIATION SOLDIER OF THE YEAR AWARD

- 1961 Master Sergeant Robert R. Young, Airfield Operations Command, Ft. Rucker AL
- 1962—Specialist First Class James C. Dykes, 225th Signal Detachment, USARV
- •1963—Sergeant First Class James K. Brock, First Aviation Company (Caribou), USARV
- 1964 Sergeant First Class Robert M. George, Utility Tactical Transport Company, USARV
- 1965 Master Sergeant Cyril G. Manning, 13th Aviation Battalion, USARV
- 1966 Sergeant First Class Donald A. MacNevin, 114th Aviation Company, USARV
- 1967 Specialist Fifth Class Dennis L. Falo, 1st Cavalry Division Airmobile, USARV
- 1968 Sergeant First Class Jesse J. Dodson, Jr. 405th Transportation Maintenance Det. USARV
- 1969—Sergeant First Class William R. Baum, 122nd Maint Battalion, 3d Armored Div. USAREUR
- 1970 Specialist Fifth Grade Dennis L. Jantz, 240th Aviation Company (Aslt Hel), USARV
- 1971 Specialist Fifth Class Dennis M. Fujii,
 237th Medical Det (Air Ambulance). USARV
- 1972 Specialist Fifth Class Richard G. Hatch, 3rd Brigade, 1st Cavalry Division (Airmobile)
- 1973 Sergeant First Class Robert H. Vaughan, 4th Bn (AFA), 77th FA, 101st Abn Div (Ambl)
- 1974 Sergeant First Class Robert J. Coleman,
 C Co., 159th Avn Co (ASH), 101st Abn Div (Ambl)
- 1975-Specialist Fifth Class Gregory J. Maurakis, B Co. 101st Avn Bn. 101st Abn Div (Ambl)
- 1976 Master Sergeant John R. Montgomery, USA Aviation Precision Demonstration Team
- 1977 Specialist Fifth Class Charles W. Ball, 146th Med Det (Hel Amb), West Virginia-ARNG

BACKGROUND

Sponsored by the AAAA, the Awards is made annually to the enlisted man serving in an Army Aviation assignment who has made an outstanding individual contribution to Army Aviation during the previous calendar year. The Secretary of the Army normally presents this Award at the AAAA National Convention.

HOW MANY HOSTILE TANKS ARE IN THIS PICTURE?

The ability to answer that question could mean the difference between victory and defeat. With the Warsaw Pact's numerical superiority in tanks—more than 2-1/2 to 1 by most reliable estimates—and with its emphasis on night training, it is essential that NATO have a capability for detecting and identifying armored vehicles at stand-off ranges during daylight and at night.

For the U.S. Army Advanced Attack Helicopter (AAH), Martin Marietta is developing a completely passive day/night Target Acquisition and Designation System (TADS) that functions at zero light level even in rain, snow, or smoke where other systems fail. Working in conjunction with the Pilot Night-

Vision System (PNVS), these two systems enable AAH crews to maneuver and acquire targets. Once acquired, targets can be tracked manually or automatically for autonomous attack with AAH guns, rockets, or Hellfire missiles. The laser designator in TADS may also be used to designate targets for remote attack by other AAHs with Hellfire or by artillery units firing the laser-guided projectile, Copperhead.

How many hostile tanks are in that picture? The AAH crew will know.

MARTIN MARIETTA



The 1960-1979 AAAA "Outstanding Aviation Units of the Year"

OUTSTANDING AVIATION UNIT OF THE YEAR

• 1960 - First Reconnaissance Squadron [Sky Cavalry], 2nd U.S. Army Missile Command [Med]. LTC Robert F. Tugman, Commander

• 1961 - 937th Engineer Company [AVN] [IAGS] LTC Jack W. Ruby. Commander

• 1962-45th Transportation Bn [Helicopter] LTC Howard B. Richardson, Commander

 1963 — U.S. Army Utility Tactical Transport Company, MAJ Ivan L. Slavich, Commander

 1964—11th Air Assault Division and attached 10th Air Transport Brigade, MG Harry W.O. Kinnard and COL Delbert L. Bristol, Commanders

 1965—13th Aviation Battalion, LTC Jack V. Mackmull and LTC J.Y. Hammack, Co-Commanders • 1966-1st Cavalry Division (Airmobile), MG Harry W.O. Kinnard, Commander, and SGM Kenneth W. Cooper, Senior NCO

• 1967-1st Aviation Brigade, MG G.P. Seneff, Jr., Commander, and Brigade SGM Douglas W. Sims, Senior NCO

 1968—52nd Combat Aviation Battalion, LTCs Raymond G. Lehman, Jr., Edward P. Lukert, Jr., and Paul C. Smithey, Co-Commanders, and SGM Ernest J. Winters. Senior NCO

 1969 — 25th Aviation Battalion, 25th Infantry Division, LTC Kenneth J. Burton, Commander, and CSM William H. Bennett, Senior NCO

 1970—101st Airborne Division [Airmobile]. LTG Melvin Zais and LTG John M. Wright, Jr., Co-Commanders, and CSM Robert A. Young and William T. Mixon, Co-Senior NCOs.

• 1971-1st Squadron, 9th Cavalry, 1st Cavalry Division [Airmobile], COL Robert H. Nevins, Commander, and CSM John F. Adams, Jr., Senior NCO 1972—F Battery, 79th Field Artillery, 3rd Bri-

gade, MAJ Lawrence F. McKay, Jr., Commander, and SFC Lionel S. McDonald, Senior NCO

 1973 — 227th Aviation Battalion, 1st Cavalry Division, LTC Frank L. Henry, Commander, and CSM James W. Reed, Senior NCO

 1974—155th Aviation Company [Atk Hel], MAJ Kermit E. Larson, Jr., Commander, and SFC Ray M. Teer, Senior NCO

• 1975-210th Aviation Battalion [USARCARIB]. LTC Joseph R. Koehler, Commander, and CSM Stephen M. Cole, Senior NCO

• 1976 - 334th Aviation Co [Atk Hel], USAREUR. MAJ Gary F. Ramage. Commander. & 1SG Charles Lewis Senior NCO

• 1977 - 7th Squadron [Atk Hel], 17th Cavalry, 6th Cavalry Brigade [Air Combat], LTC Gary F. Dolin, Commander, and 1SG Leon S. Wozniak. Senior NCO

OUTSTANDING RESERVE COMPONENT AVIATION UNIT AWARD

 1970—1105th Aviation Company | Assault Helicopter), Iowa-ARNG, MAJ Robert C. Cummings, Commander: 1SG Arnold J. Newsum, Senior NCO 1971—24th Medical Company [Air Ambulance], Nebraska-ARNG, MAJ Roger W. Fosbender, Commander: 1SG Andrew M. Alexander, Senior NCO

•1972-997th Aviation Company (Assault Helicopter). Arizona-ARNG, MAJ James H. Cowan, Commander: 1SG Dale S. Swensen, Senior NCO

 1973 — 307th Aviation Company (Heavy Helicopter), Alabama-ARNG, MAJ Arthur E. Fleet, Commander: 1SG John F. Hoskins, Senior NCO

 1974—445th Aviation Company | Assault Helicopter). Oklahoma-ARNG, MAJ Karl M. Frank, Commander: 1SG Kenneth Inman, Senior NCO

 1975 536th Aviation Company (Assault Support) Helicopter), Texas-ARNG, MAJ Joe E. Harry, Commander, 1SG Joseph R. Kimball, Senior NCO

 1976—1042nd Military Intelligence Co [Aerial Surveillance]. Oregon-ARNG, MAJ Loren W. Franke, Commander, and 1SG Donald MacPherson, Senior NCO

 1977—300th Aviation Company | Assault Helicopter), Texas-USAR, MAJ Jerry Stokely, Commander, and 1SG Jack Powell, Senior NCO

BACKGROUND

Sponsored by the AAAA, this Trophy is presented annually to the Reserve Component aviation unit that has made an outstanding contribution to Army Aviation over and above the normal mission assigned to the unit during the previous calendar year.

EVALUATE YOUR CAREER IN A TOTALLY NEW PERSPECTIVE . . .

... OVERSEAS

If you've never considered an overseas assignment before, or if you have extensive overseas experience, Bell Helicopter International would like you to evaluate the advantages of living and working in Iran. We offer an excellent compensation and benefit program plus relocation and transportation expenses for you and your family.

HELICOPTER INSTRUCTOR PILOTS

Minimum 1500 total R/W hours, 250 of which must be as an Instructor Pilot. Successful applicants must possess the desire to instruct foreign students in all phases of helicopter flight operations and procedures.

ROTOR/WING MECHANICS

Should have at least two years' experience on military Rotor/Wing aircraft with specific experience on airframe, power plant, or armament systems. Prefer applicants with previous overseas experience.

TECHNICAL INSPECTORS

Must have a minimum of two years' maintenance and inspection experience on helicopter systems. Prefer applicants with military training and overseas experience. A & P license desired, but not required.

For immediate attention, please send resume in complete confidence to:



Bell Helicopter International

1901 Central Drive, Bedford, TX 76021

Bell Helicopter 1341RON

Division of Textron

An Equal Opportunity Employer M/F

Must Be U. S. Citizen



The 1959-1977 Winners of AAAA's "James H. McClellan Aviation Safety Award"

- 1959 Major Arne H. Eliasson, Aviation Safety Division, Hq, Seventh Army, APO New York
- 1960 Colonel John L. Inskeep, Co-Winner, USA Primary Helicopter School, Ft. Wolters, TX
- 1960—Raymond L. Thomas, Co-Winner, Southern Airways Co. (Contract Opns)
- 1961 The James H. McClellan Aviation Safety Award was not presented in 1961.
- 1962—Colonel Spurgeon H. Neel, Jr., U.S. Army Hospital, Ft. Rucker, AL
- 1963 Colonel James F. Wells, U.S. Army Board for Avn Accident Research, Ft. Rucker, AL
- 1964 Colonel Conrad L. Stansberry, Headquarters, U.S. Army, Europe, APO New York
- 1965—Ralph B. Greenway, Army Aviation Directorate, OACSFOR, Department of the Army
- 1966 Gerard M. Bruggink, U.S. Army Board for Aviation Accident Research, Ft. Rucker, AL
- 1967 Captain Gary R. Ramage, 228th Assault Helicopter Battalion, USARV

- 1968 Francis P. McCourt, U.S. Army Aviation Laboratories, Ft. Eustis, VA
- 1969 Colonel Russell P. Bonasso, U.S. Army Board for Avn Accident Research, Ft. Rucker, AL
- 1970 Colonel Robert W. Bailey, U.S. Army Aeromedical Research Laboratory, Ft. Rucker, AL
- 1971 Colonel Eugene B. Conrad, U.S. Army Board for Avn Accident Research, Ft. Rucker, AL
- 1972 Brigadier General William W. Spruance. Air National Guard, Wilmington, DE
- 1973 Chief Warrant Officer Ralph S. Park, 155th Aviation Company (Atk Hel), Ft. Ord, CA
- 1974 Captain Charles F. Nowlin, U.S. Army Agency for Aviation Safety, Ft. Rucker, AL
- 1975 Chief Warrant Officer George L. Allen, Simmons Army Airfield, Ft. Bragg, NC
- 1976 Chief Warrant Officer Alfred J. Cargen, Ret., Hq. Fifth U.S. Army, Ft. Sam Houston, TX
- 1977 Major Arthur M. Mountcastle, 101st Avn Group, 101st Abn Div (Air Aslt), Ft. Campbell, KY



16 MILLION AMERICANS WEARING A JOSTEN RING CAN'T BE WRONG...

or Write for Free Catalog to

JOSTEN'S MILITARY SALES DIVISION P.O. Box AC Denton, Texas 76201

* Copyright by Josten's



Why belong?

Advanced Planning Briefings for Industry.

"Army Aviator of the Year" Awards at
National and Regional Conventions.

Aviation Abroad Panels - Top Foreign AA's,
Army Aviation Hall of Fame Sponsorship.

"Aviation Soldier of the Year" Awards at
National and Regional Conventions.

"Aviation Unit of the Year" Awards for
Active Army & Reserve Component Units.
Award Certificates for "Outstanding
Service" to Army Aviation at Unit Level.

Chapter "Aviator" and "Aviation Soldier"
Award Recognition & Certificates.
Chapter Professional-Social Activities.
Charter Flights to Spain, Germany, Russia.
Congressional Appreciation Luncheon
to honor Congressional Supporters.
Collier Trophy Selection Role.
Coordinated Industry Plant Tours.
Cub Club-WWII L-Pilot Reunions and
Scholarship Award Program.

Delegate Underwriting and Participation at all National Conventions. Discounts on Military & Aerospace Books. Rapid Publication of Official Actions that pertain to the Affairs of Enlisted Specialists. Film Library with Industry Film Updates. Five-Year Membership Pins Flight Pay Insurance for Army & Reserve Components - \$1.2 Million Payout. Flight Surgeon Graduation Awards. "Free World" Army Aviation Panels.

16 Garmisch, Germany Professional-Social Membership Conventions. Group Tours of Convention Cities. Aerial Gunnery Competition Sponsorship. Honor Graduates' Wings & Certificates. Honorary Memberships for Key Military, Government, and Foreign Dignitaries at Nat'l, Regional, and Chapter Levels. Hospitalization Insurance.

Industry Briefings, Films, Presentations. Informative Industry Display Advertising in Association Journal. Informal Coordination with Dept. of the Army in Official Areas of Interest. Junior Officer-Warrant Officer Councils. Locator Service. Life Insurance with No Aviation Penalty. Magazine as "Voice" and Forum.
"McClellan Aviation Safety Award"
Magazine "Comps" for Student Dayrooms.
Membership "Sweepstakes" with Airline
Tickets to Resort Areas as First Prize.
Membership and Representation of Ass'n
in National Aeronautic Association.
Memorial Scholarships.
Municipal War Memorial Sponsorship.

Seventeen AAAA National Conventions. Sponsorship of the Official "Army Aviation Song" written by Cahn & Van Deusen. "On Guard!" ARNG Aviation Columns. Placement Service.

Presidential Awards to Secretaries of the Army & Chiefs of Staff for Army Aviation. Professional Magazine - Critical Freedom in Unofficial, Non-Taxpayer Publication.

"Ready in Reserve!" - USAR Columns.
Regional Conventions - Top Programming.
Reserve Component Awards for "Aviator &
Soldier of Year", "Outstanding Unit."
Resolutions from General Membership
presented to OSD and Dept. of the Army.
Scholarship Awards totaling \$48,000.
Science Fair Award Certificates and
Cash Awards for Outstanding AviationOriented Exhibits at State, National Fairs.

Speaker Assistance with Speakers from DA, Congress, Embassies, FAA, local gov't and the aerospace industry. Symposiums on Aviation Product Support. Support and Attendance of the Secretary of the Army & Chief of Staff at virtually all AAAA Nat'l Honors Luncheons.

OPO Panels - Career Guidance Assistance at all AAAA National Conventions. "Word to the Warrant!" - Sustaining Column in Magazine on AWO Affairs. Warrant Officer Proposal Submissions to the Secretary of the Army.

Symposium on "Avionics".

Worldwide and Chapter Golf Tourneys in support of Scholarship Foundation.

World Helicopter Championship Project and many more projects and programs since AAAA's inception in April 1957.



AAAA's Splinter Group: The "Cub Club"

Sidney W. Achee Eugene L. Adoue John R. Ahern John F. Aschoff, Jr. James R. Barkley Willie W. Barrios Charles S. Black Russell T. Blair H.B. Blanchard, Jr. Walter D. Bowden Leslie C. Boyd Garrison J. Boyle, III John L. Briggs Delbert L. Bristol Weldon C. Britton Alvin F. Burch Harry L. Bush Richard E. Bywaters Lee R. Cantlebary Robert F. Cassidy William R. Chaires Donald E. Chamberlain Colin D. Cilev. Jr. David G. Cogswell* Carl A. Colozzi

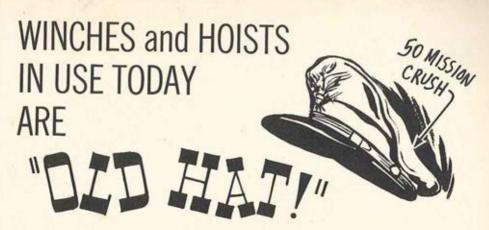
Horace G. Cooke William P. Craddock Robert G. Culbertson Michael R. Cullen A.D. Cunningham Charles P. Damon Harris O. Davis Chester A. Dillahunt Richard L. Dowden Elbert E. Drane Arne H. Eliasson Clarence H. Ellis, Jr. Austin F. Epsaro Floyd C. Erickson Robert A. Filby E.P. Fleming, Jr. Charles T. Franchina Samuel Freeman Fred F. Fulton John C. Geary Darwin P. Gerard O. Glenn Goodhand Frederick C. Goodwin Norman W. Goodwin Charles V. Graft



The "Club" has no dues, officers, business, By-Laws; no program, benefits, lapel pins, budget or charter; no awards, policies, leadership, morals... or staff. It supports a periodic AAAA Scholarship through hastily-collected "donations" collected from semi-inebriales gathered at an annual "I'm glad to be alive and I look a helluva lot better than you!" gatherings.

Frank O. Grev. Jr. Joseph L. Gude Thomas E. Hall Roy W. Haney, Jr. Curtis L. Hankins Claude E. Hargett William H. Harper William S. Hawkins Leroy V. Hester Marquis D. Hilbert Jerry E. Holstad James H. House William A. Howell Otto W. Huehner Douglas L. Hutchens Bruce O. Ihlenfeldt Raymond E. Johnson Oran B. Jolley Harold L. Jones Harry L. Jones Clifford J. Kalista Richard J. Kennedy Irwin J. Kersey Arthur H. Kesten Gordon L. Kinley Edward L. Landry James H. Lefler* Robert M. Leich Mose E. Lewis, III Richard L. Long Donald F. Luce William J. Maddox, Jr. Nelson A. Mahone, Jr. Walter S. Makuch Jack L. Marinelli John J. Martin William R. Mathews Dan A. McCartney A.J. McDermott, Jr. Henry H. McKee **Edward McMaken** William R. Miller Malcolm L. Mitchell Melvin C. Monroe H.T. Montgomery Howard M. Moore Robert K. Moore

Ross E. Noah John W. Oswalt James E. Parker Robert S. Patton Wayne N. Phillips William G. Phillips John T. Pierce, III James H. Proctor A.T. Pumphrey Alexander J. Rankin Morris G. Rawlings Jack O. Ray Paul B. Robison William A. Roehl George Rogers William E. Rogers Jack W. Ruby Thomas J. Sabiston John S. Sarko Gerald H. Shea Harry T. Shiveley James C. Smith Joseph P. Smith Thomas B. Steward William L. Stewart John F. Sullivan Selmer A. Sundby Cloyd V. Taylor George G. Tillery Harry W. Townsend Paul R. Wagner Henry S. Wann I.B. Washburn* Billy I. Wester Edwin F. Whitney Leland F. Wilhelm Robert R. Williams Warren R. Williams Bryce Wilson Deanel B. Wilson Harry E. Ziegler *Deceased **ooLAPSED** Frame J. Bowers, Jr. David M. Kyle George E. Morris Orval H. Sheppard



Does your winch/hoist system have the old-timer's "50- mission crush"? If so, it's time we designed you a new hat. Sure, the old system works. But a lot has gone into

modern hoist design. Longer cables, faster action, greater versatility, electronic control, better protection . . . all in keeping with today's fast-paced advances in technology.

Breeze has long been the country's and the world's most dependable source for airborne

winch/hoist systems. So if your systems are old —or even getting there—it's high time for a serious review of what is up-to-date at Breeze.



A COMPLETELY NEW...

Helicopter

Advanced

Technology Hoist

Consult your Breeze representative, or phone or write:

BREEZE BREEZE CORPORATIONS, INC.

700 Liberty Ave., Union, N.J. 07083 · 201-686-4000



AAA National Merit and Memorial Scholarship Winners, 1963-1972

CLASS OF 1967 \$1,500 Joel R. Graft, VA _____\$1.50 (LTC Charles V. Graft, Jr.)

***************** **CLASS OF 1968** CLASS OF 1968
Danny Barrett, APO NY ... \$500
(MAJ Ernest F. Barrett)
Robert Spears, GA ... \$500
(LTC Leroy C. Spears)
Cheryl Crefin, AL ... \$100*
(CPT Theodore D. Crefin) Roger Moseley, OK ____ \$100* (MAJ Lonnie L. Moseley)

*Honorarlum

CLASS OF 1969 Harmon B. Dow, APO (SGM Harmon Dow) Kathryn M. Eggers, VA.. \$500 (MAJ John F. Eggers) Penny L. Francis, APO ... \$500 (LTC Ernest H. Francis) Leslie T. Schockner, TX. \$500 (COL Lester F. Schockner)

AAAA Merit Award Winners Patricia L. Duncan, CA Patricia A. Kiehl, IL Gregory Litle, GA S. Karl Paul, GA Jill K. Powell, GA Katherine M. Russell, VA Frances V. Zirkle, AR

****************** **CLASS OF 1970** (LTC Harry O. Davis)

Eugene F. Geppert, VA ... \$500 (Lawrence J. Geppert) Joseph S. Lahnstein, GA. \$500 (MAJ Joseph J. Lahnstein) Roxanne Roehl, NY ____ \$ (MA) William A. Roehl)

Robert P. Thomson, HI .. \$500 (LTC Arington C. Thomson) Chauncey L. Veatch, Jr... \$500 (MAJ Chauncey L. Veatch, APO) Betty R. Williams, Al. \$500 (MAJ William H. Williams)

AAAA Merit Award Winners Elizabeth A. Beatty, GA Cheryl R. Carder, MO Kathleen M. Hunter, IL. Patricia E. Johnson, TX Susan J, Shortridge, VA John T. Stanfield, Jr., GA Linda D, Tieman, CA

CLASS OF 1971

Kathryn G. Black, VA..... \$500 (T.C William E. Black) Thomas E. Brazil, APO ... \$500 (CWO John E. Brazil) Donna M. Budjick, TX.... \$500 (Mr. William M. Budjick, Jr.) Philip K Chamberlain, AL.. \$500 (LTC Donald E. Chamberlain) (LTC Donald E. Chamberlain)
Marion L. Dellapa, MO... \$500
(Mr. George C. Dellapa)
Geri I. Paul, GA......... \$500
(CWO Delbert A. Paul) Martin S, Tyson, APO \$500 (LTC Robert M. Tyson, Jr.) Lincoln P. Webb, VA \$500 (COL Hugh W. Webb)

Florence L. Barker, IN .. \$100* (LTC William L. Barker, Ret.) Deborah H Francis, AL .. \$100* (LTC Ernest H. Francis, Ret.) Sharon J. Raulston, Al., \$100* (CWO Bobby E. Raulston)

*Honorarium AAAA Merit Award Winners Daniel E. Borasch, OK Nancy n. Burch, MO Robert H. Butchko, MO Constance S. Campbell, Al.

Sally A. Fogg, MO James T. Grant, TX Robert M. House, AL Annette E. Jaubert, LA Patricia A. Jordan, WA William T. Kirkpatrick, APO Kimberly Kline, MD Donna J. Olney, VA Linda 1. Scott, IL

Ronald S. Stepp, AL

****************** **CLASS OF 1972** Samuel C. Pierce, VA \$500 (LTC John T. Pierce, III, Ret.) Karen L. Kellar, PA \$500 (COL Robert S. Kellar) \$500 Mary L. Graft, VA \$5 (LTC Charles V. Graft, Jr.) \$500

\$500 Steven R. Otto, APO (COL Wayne R. Otto)

Philip D. Walker, MI\$150 (MA) Robt L. Walker, Deceased) Leslie Callahan, III, VA. \$100* (COL Leslie G. Callahan, Ir.)

Beverly C. Benefield, GA Larry M. Foster, NM Susan I. Hildreth, MA Patrick B Thomson, AL. \$100* (COL Arington C. Thomson)

Jettrey A. Rawlings, AR., \$100° (LTC Morris G. Rawlings, Ret.) Leone E. LongsCT\$100* (COL Richard L. Long, Ret.) William H. Welff, GA\$100*

(MAJ William H. Wolff) **AAAA Merit Award Winners** Helen M. Beatty, VA Wade H. Benton, AL Georgette Ann Bonifacio, VA Gwendolyn Bruton, TX

Sheila Coles, CA Honathan H. Futrell, VA Kathleen A. Lewis, IL Mary E. Slott, MO Peter E. Stipech, MI

CLASS OF 1973 William A. Contole, FL .. (COL Wm S Contole, deceased Samuel K. Biser, NJ (Dr. Erwin Biser)

Mark A. Cullen, MD Mark A. Cullen, MD \$50 (MAJ Michael R. Cullen, Ret.) Cynthia J. Ludwig, MO ... \$500

Charles E. Ludwig, deceased)
Claudia H. Johnson, OK., \$500
(LTC Woodbury Johnson)
Patricia A. Hyman, CO., \$500
(LTC Robert D. Hyman, Sr.)
MEMORIAL SCHOLARSHIPS Glenn D. McElroy Scholarship B.D. Thompson, III, WA..\$250 (LTC Bernard Thompson, dec.) Charles E. Harris Scholarship Greg Winesette, NC\$150 (MAJ R.C. Winesette, dec.)

Robert L. Runkle Scholarsh Tommie Jean Loftin, TX .. \$150 (Mr. Thomas W. Loftin) Frank W. Cross Scholarship

(LTC Charles P. Damon, RA., \$125 Larry C. Higginson Scholarship Mary C. Stevens, TX \$125 (MAJ Francis J. Stevens, Ret.) **Cub Club Memorial Scholarship** David E. Trudeau, TX.....\$150

(Mr. Floyd H. Trudeau) Cathy E. Dalpino, MO... \$100* (LTC Millon D. Dalpino) Wm E. Konersman, MN..\$100* (Mr. William Konersman)

Thomas J Knowles, PA. \$100* (LTC William R. Knowles) Nancy Chamberlain, TX...\$100* (LTC Denald E. Chamberlain) Gesna B. Davis, III, TX...\$100* (Mr. Gesna B. Davis, III)

Honorarium AAAA Merit Award Winners

Barbara L. Harrison, TX Susan I. Juhl, IA George E. Martin, Jr., CA Carroll M. Marquard, NE ******************

CLASS OF 1974 \$500 \$500 (LTC Robert L. Runkle, dec.)

Lyn D. Schoenfeld, MO _\$500 (COL Walter E. Schoenfeld) Christine Steffanci, PA ... \$500 (CWO Jos. Steffanci, deceased)
Robert B. Stevens, VA ... \$500
(LTC Story C. Stevens)
MEMORIAL SCHOLARSHIPS

James P. Ervin Scholarship Ann E. Dillard, MO \$25 (COL Robert A. Dillard)

Charles E. Harris Scholarship Suzanne C. Barber, PA ... \$200 (Mr. Kenneth Barber) Joel R. Graft Scholarship

Charles Johnson, MN \$1 (CWO Robert M. Johnson) Eldon B. Oakley Scholarship Deborah A Foreman, OR., \$125 (CPT Richard G. Foreman, Ret.) Robert L. Runkle Scholarship Charles D. Smith, AL \$125 (LTC John R. Smith)

Thomas O. Graft, VA ... \$100* (LTC Charles V. Graft, Jr.) Napoleon Mayorga, Jr., \$100* (Napoleon Mayorga, TX) Mona M. Nakajo, CA... \$100* (MAJ Mas M. Nakajo)

Marie O. Uberti, PA\$100* (Bruno Uberti)
Steven C. Wans, VA \$100*
(LTC Henry S. Wans, Ret.)
Robert A. Wilson, TX \$100* (LTC Eugene A. Wilson)

(LIC Eugene A. Weson)
AAAA Merit Award Winners
William S. Alton, Jr., VA
David A. Bell, Jr., GA
Dennis H. Bieber, VA
Sandra L. Crebs, APO
Kenton A. Cropp, APO
Mark A. Menson KA Mark A. Henson, KA Deborah L. Nunnelee, TX

Janice L. Rose, GA Susan L. Walsh, IL Diana L. Westrich, OK ********************

CLASS OF 1975 \$500 Patricia J. Ebel, AL (CPT William Ebel, deceased)

Denise L. Janssen, GA ... \$500 (LTC Arlo D. Janssen) \$500 Kathryn A. Klim, FL \$50 (LTC William Klim, Jr., Ret.)

Marcy E. Mencher, NJ ... \$500 (Herman Mencher) Steven A. Pate, AL (LTC Robert L. Pate) \$500

MEMORIAL SCHOLARSHIPS James P. Ervin Scholarship Miss Deidre Hunter, TX ...\$250

(LTC Robert L. Hunter) Charles R. Rawlings Award

Barry W. Godfrey Scholarship Douglas J. Campbell, VA. \$150 (LTC James E. Campbell, Jr.) Joel R. Graft Scholarship Hu B. Rhodes, Jr., TX __ \$150 (CW3 Hu B. Rhodes, deceased)

John R. Quam Scholarship Barbara J. Uberli, PA \$150

(Bruno J. Uberti) Sheven R. Conner, NY ... \$100* (MAJ Richard F. Conner, dec.) Jeannie A. Jarvis, AL ... \$100* (LTC James W. Jarvis, Jr.) (LTC Lewis N. Shaffer, TX ...\$100* (LTC Lewis N. Shaffer, dec.)

*Honorarium **AAAA Merit Award Winners** Margaret L. Barfoot, VA Vicky D. Dye, APO Richard L. Hutchens, GA Shannon L. Jones, GA Patricia A. Leary, VA Patrick J. O'Connor, W

Marilyn K. Oswalt, TX ******************* CLASS OF 1976

Wayne K. Yanamura\$500 (LTC Kenneth K. Yanamura) MEMORIAL SCHOLARSHIPS William B. Bunker Scholarship Joseph C. Offutt, MO ...\$1,000 /Joseph C. Offutt, Jr.)

Jos. E. McDonald Scholarship Martha L. Chamberlain ... \$500 (LTCD E. Chamberlain, Ret., FL)

\$250 Jeffery O. Shelton\$250

(LTC Huntly E. Shelton, Jr.)

Bonnie M. Bretz \$250

(COL Robert D. Bretz) Cynthia L. McNair 5 (COL Carl H. McNair) \$250 Tenya I. Oksa _____ \$2' (LTC Reino O. Oksa) Kathryn A. Evans ____ \$2 (LTC Wallace M. Evans) \$250 ... \$250

THE CLASS OF 1981

Barbara J. Bill ______ (LTC Gary R. Bill) .. \$150

Byars B. Clark ... \$150 (LTC Gary L. Clark) \$150

Merit Plaque Award Winners

Daryl E. Balint, CZ Michael P. Courts, WA Michael J. Crook, VA

Celinda L. Green, AZ Daniel G. Leonard, SC Dianne L. Mellish, AL Cynthia M. Pease, CT Geottrey S. Phillips, PA Patti J. Reddell, LA Diane M. Shook, NM Robert F. Sweeney, II, MD Ellen A. Trapp. CA



1972-1976 Winners of AAAA National **Merit and Memorial Scholarships**

CLASS OF 1976 [Continued] Eric H. Petersen Scholarship

Cherie A. Cropp, MO \$500 (Ralph C. Cropp) James P. Ervin Scholarship Thomas M Stedman, GA. \$250 (LTC Thomas M. Stedman) Charles E. Ludwig Scholarship Howard M Williams, APO., \$250 (LTC Howard M. Williams)

Wallace R. Martin Scholarshi Julia R. Adie, VA . \$250 (COL John R. Adie)

John J. Miller Scholarship Sarah B. Biser, NJ (Dr. Erwin Biser) Charles R. Rawlings Award Kelley J. Payne, VA \$250 (LTC James A. Payne, Jr.) Robert W. Taylor Scholarship Ann C. Contole, FL \$250 (COL Wm S Contole, deceased) **Cub Club Memorial Scholarship** James E. Rogers, APO ... \$250 (LTC James E. Rogers) Mark J. Fitzgerald Scholarship Joel W. Wilson, VA \$150 (COL Franklin L. Wilson)

Barry W. Godfrey Scholarship Clifford Altekruse, APO ... \$150 (LTC Ernest B. Altekruse) Joel R. Graft Scholarship Judith A. Davenport \$150 (COL James D Davenport, APO)

Larry R. Dewey, Jr. Award Wivian G. Delavan, VA \$150 (COE Patrick A. Delavan) George T. McKenzie Award Peter C. Withers, Jr. \$150 (LTC Peter C. Withers, VA) **AAAA Menit Award Winners**

Cynthia L. Cox, VA Kathy L. Fusner, GA Michele J. Oden, OH Leonard T. Panzitta, GA

CLASS OF 1977 Quay C. Snyder, Jr., PA ...\$500 (LTC Quay C. Snyder) \$250 Thon A. Basom, KA. (LTC Darrel W. Basom) Sonia R. Jarvis, MD

(LTC William H. Jarvis) MEMORIAL SCHOLARSHIPS William B. Bunker Scholarship James G. Humphrys __\$1,000 (COL James G. Humphrys, AL) Joseph E McDonald, Jr. Award Richard W. Doser, IL\$500 (MAJ A.J. Doser, Jr., IL-ARNG) CW3 James P Ervin Scholarship Janet C. McCullough \$250 (CW4 James L. McCullough, GA) Wallace H. Martin Scholarship

Mark C. Choat, APO \$250 (LTC Buddy J. Choat) Eric H. Petersen Scholarship Viveca D. Parker, VA \$250 (Mrs. David B. Parker)

Robert W. Taylor Scholarship Sharon L. Frizzell, VT ... \$250 (CPT Marshall R. Frizzell. dec.) Bert Kesten Scholarship

Susan M Schneider, MO. \$250 (Maurice D. Schneider) Barry M. Godrey Scholarship Richard A. Hartert, Jr.....\$125 (LTC Richard A. Hartert, VA) John J. Miller Scholarship

Mary M. Oakley, VA\$125 (LTC Howard H. Oakley) William J. Sutton Scholarship Cynthia A. Bourne, VA ... \$125 (LTC Harold O. Bourne)

Joel R. Graft Scholarship Cherrlyn J. Sherwood \$125 (CW4 Wallace L. Sherwood, VA)

CLASS OF 1978 Harry O. Davis, Jr., TX ... \$500 (LTC Harry O. Davis) Marsha L. Astrike, VA (CW4 Charles H. Astrike, Jr.) Anna N. Crothers, TX ... \$150 (CW4, Wm. E. Crothers, Ret.) Wendy S. Haynes, IL ... \$150 (MAJ Richard E Haynes, ARNG)

MEMORIAL SCHOLARSHIPS

William B. Bunker Scholarship Gary A. Yanamura, VA. \$1,000 (LTC Kenneth K. Yanamura) Joseph E. McDonald, Jr Award

David M. Snyder, PA\$500 (LTC Quay C. Snyder) Eric H. Petersen Scholarship Christopher R. Forsyth .. \$500 (LTC Robert F. Forsyth, MO) Bert Kesten Scholarship

Sharen D. Steckly, CZ ... \$250 (LTC Kenneth D. Steckly) CW4 James P, Ervin Award Christopher D. Caron \$200 (LTC John E, Caron, KA)

Cub Club Memorial Scholarship Brian W. Johnson, KA \$200 (LTC James C. Johnson) Joel R. Graft Scholarship

LuAnn Holmes, KA \$1 (MAJ Frnest L. Holmes) Randolph N. Kahl-Winter Award Colleen P. McDowell, NJ., \$150 (COL Chester W. McDowell)

Dan C. Kingman, Jr. Award Patricia D. Shields, IN ... \$150 Wallace H. Martin Scholarship Nancy J. Oden, AR \$150 (CW4 James R. Oden, Ret.) John J. Miller Scholarship

Lisa Tabak, CT (John M. Tabak) J Elmore Swenson Scholarship Judy K. Mencher, NJ \$150 (Herman Mencher)

William J. Sutton Scholarship Mark S. Blackmore, IL ... \$150 (LTC James R. Blackmore)

Robert W. Taylor Scholarship Sherie E. Dickerson, UT .. \$150 (MAJ Jon R. Dickerson) ******** **CLASS OF 1979**

Nancy F. Beauchamp \$150 (LTC Darwin Beauchamp, MO) David G. Burnison \$150 \$150 (MAJ Richard D. Duerr, ARNG)

Kenneth W. Green, Jr. \$150 ICW3 Kenneth W. Green, TX) (LW3 Kenneth W. Green, TA) Kimberly A. Lindsey, CO...\$150 (MAJ David H. Lindsey) Yvonne V. Miller, Fl.\$150 (MAJ Richard E. Miller)

Cindy L. Sanders, AL\$150 (LTC Curtis Sanders) Kathy Setzer, VA S (LTC Howard L. Setzer)

MEMORIAL SCHOLARSHIPS William B. Bunker Scholarship David H. Lukert, PA\$1,000 (COL Edward P. Lukert)

Joseph E McDonald, Jr. Award Ken Gwinner, GA \$ (LTC Maurice Gwinner)

Eric H. Petersen Scholarship (COL Charles W. Bagnal) VA ... \$500 CW3 James P. Ervin Award

Cynthia Cummins, APO .. \$200 (LTC Clark H. Cummins) Bert Kesten Scholarship Sandra L. Doucette, NJ ...\$200

(LTC Roger A. Doucette) Cub Club Memorial Scholarshi Suzie Reddell, GA \$2 (LTC Eugene B. Reddell)

CLASS OF 1980 Bruce W. Bourne, GA \$500 (CW3 Eldred G. Bourne, Ret.) John S. Pickel, VA \$20 (CW4 James P. Pickel, Ret.) \$200 Steven M. Janssen, VA ...\$200 (LTC Ario D. Janssen)

MEMORIAL SCHOLARSHIPS William B. Bunker Scholarship Henrik D. Parker, MD ..\$1,000 (Mrs. David B. Parker)

Joseph E McDonald, Jr. Award Kenneth D. Barnes, VA ... \$500 (BG Wilman D. Barnes) Eric H. Petersen Scholarship Mary A. Hayes, OK \$50 (CW4 Patrick H. Hayes, Ret.) ... \$500 **Cub Club Memorial Scholarsh**

Lysbeth K.B. Borie, CT ..\$500 (Hrny P. Borie, Jr.) Joel R. Graft Scholarship

Jee R. Graff Scholarship Gary E. Langston, Jr. ... \$200 (MA) Gary E. Langston) Randelph N Kalh-Winter Award Debra A. Britton, AZ ... \$200 (MA) James H. Britton) (MA) James H. Britton) (MA) James H. Britton) (MA) James P. Lifely) (MA) James D. Lifely) (MA) A. March W. Lifely) (MA) A. March W. Lifely) **AAAA Merit Award Winners**

Belynda Berry, HI Janet A. Bill, VA Frederick C. Bisch, HI Mary K. Hurley, MA Julia N. Jones, AR Linda S. Joyce, VA Robert J. Kelley, GA John R. Kenyon, AL Brett S. Kilpatrick, VA Michelle A. Patnode, MO Jon R. Ruiz, CA

Donna L. Scott, NC Michael T. Slye, APO ******************

The AAAA scholarships issued through the AAAA Scholar-ship Foundation are awarded annually on the basis of both merit and/or need. Some 80 persons compete annually.

The AAAA Scholarship Foundation: Background, Purposes, Governors



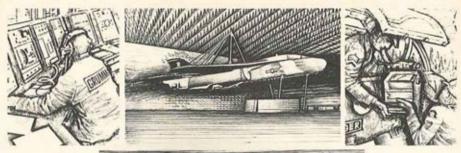
MG Beatty

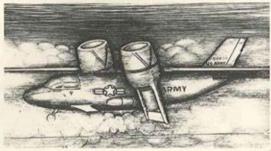
Incorporated December 5, 1963 under the laws of the State of Connecticut as a non-profit charitable activity, the AAAA Scholarship Foundation's purposes are to render financial aid for the college-level education of the children of AAAA members or deceased members, and to conduct fund-raising activities to support this purpose. Donations, bequests, legacies, devises, or gifts to the Foundation are deductible for Federal estate and gift tax purposes. Since 1963, some 181 recipients have received \$52,900 in direct aid. A 10-member Board [Bryce Wilson, President; G.P. Seneff, Jr., D.L. Bristol, A.H. Kesten, G.S. Beatty, Jr., J.L. Klingenhagen, R.M. Leich, D.F. Luce, J.W. Marr, and N.A. Mahone, Jr. administers the program, and reports to the AAAA through its President.





MG Klingenhagen





FOR THE BEST IN SYSTEMS INTEGRATION, GRUMMAN PUTS IT ALL TOGETHER.

When you come to Grumman for systems integration, you get our total systems package. Our experienced staff of professionals takes your project from inception, design, development, test and delivery, right up to operational support. And they do it while working within your cost and performance parameters.

That's Grumman professionalism. After all, we've been providing total systems integration from the very beginning. And we've produced some of the most advanced systems ever seen.

For the best in systems integration—avionics, training, airframe, support and electronic warfare—come to experience. Come to technology. Come to Grumman.



About Chairman, AWO Affairs Committee, AAAA Warrants



The Who, What, Where, When, and Why of Aviation WO Training

Py the time you read this, DA Pamphlet 600-11, "Warrant Officer Professional Development," should be off the press and available in the field. Every aviator, commissioned and warrant alike, should read and become immediately familiar with this publication for it is the foundation on which warrant officer professional development is based.

By giving the who, what, when, where and why of all training, it provides the information needed by the individual to plan an aviation career and outlines how a commander can help warrant officers fulfill their personal and professional goals. The following is extracted in large part from DA Pamphlet 600-11 in the hope that it will whet your appetite for further details and that, as a reader, you will get and read your personal copy thoroughly.

Why does the Army provide training and education for warrant officers? One purpose of the Warrant Officer Education System [WOES] is to improve the quality and competence of the Warrant Officer Corps. This is accomplished through strict insistence that any training provided has close occupational relevance. Training in fields that are unrelated to a warrant officer's skill area

Material prepared with the Warrant Officer Division of MILPERCEN is an extravagance we can't afford. We do not need an AWO who is trained as an accountant.

Consequently, any training that is funded by the Army (either by HQDA or local command) must have a clear relationship to the individual's specialty or to a WO duty position. Academic disciplines related to aviation can be found in Table 5-2 of DA Pamphlet 600-11. AWO's interested in attending college at government expense should take a look at these prior to applying for civil schooling under provisions of AR 621-1.

Military schools available are also listed in the new pamphlet. The contents of Table 5-2 and paragraph 6-16 answer in large part the what and where of available training. The why and what are really inseparable because all warrant officer training must be MOS-related.

Who will be given DA funded training? This question is best answered in terms of DA policy and some reasons which support that policy. One important factor is: return on training investment. Generally, it is best for the Army to obtain the greatest possible return on each training dollar.

Therefore, two considerations are of paramount importance to the selection process if a high degree of cost effectiveness is to be achieved. First, as many people as possible must be trained with the money available. Second, the

personnel selected must have the great-

est possible retainability.

The Army trains people to meet its requirements. The training mission is to erase as quickly as possible any deficit between warrant officer skills and skills required by duty positions. This is more effectively done if three people, for instance, are sent to civil school for six months rather than one person for eighteen months. The policy, then, is to select those warrant officers who can complete training in the least amount of time.

Retention on active duty must also be a factor. The value of the training investment must be compared to time remaining in the service. Therefore, only warrant officers who have the greatest potential for continued service are selected. This is measured in terms of potential for promotion, retention, and possible integration into Regular Army.

A key point here is that the Army does not train individuals to enhance their chances of promotion. It trains those who have already demonstrated that they can and will continue to excel. Thus, an officer's potential is assessed using past performance as an indication

of future performance.

To be considered for any training, individuals must also meet the administrative prerequisites in governing regulations, to include any service obligation that may be incurred as a result of training. Depending on the type of training, the selection process varies from in-

NEW ARMY MANAGER

LTC James H. Brown has been appointed Manager, Tilt Rotor Research Aircraft Project Office, succeeding David D. Few. The XV-15 TRRA is a joint Army-NASA project being built by Bell Helicopter Textron. The Army contract calls for the manufacture and testing of two aircraft. No. 1 aircraft made its first hover flight May 3.

dividual application to HQDA, to board action, to involuntary selection by WOD.

When will the various types of training take place? Table 5-1, DA Pamphlet 600-11 is the basic guidance. It is shown opposite in modified form as applied to Aviation Warrant Officers.

The preceding discussion has been general in nature. Now let's get down to

some specifics.

Advanced Aircraft Training. Warrant officer aviators are eligible for advanced aircraft training upon completion of three years rated service. This provides the new aviator with an opportunity to hone basic aircraft skills before upgrading to a more sophisticated piece of equipment, such as the AH-1, CH-47, CH-54,

U-8, or U-21.

Warrant officer aviators are trained and accounted for according to a hierarchy of qualification based on criticality of skills required by the Army. In descending order this precedence is 100E, 100D, 100C, and 100Q plus 100B (UH-1/ OH-58) which is considered a basic qualification common to all aviators. Therefore, if you are qualified or programmed for training in the AH-1G, UH-1, U-21, and CH-47, your primary MOS will be the 100E MOS, and 100C/100Q/100B will be additional MOS's. However, in order to guarantee an optimum return for each training dollar expended and to insure efficient personal utilization, aviators are considered for only one advanced aircraft transition.

Career Field Entry Training [CFET] is unique to the rated aviation warrant officer. In addition to being an aviator, it is possible for an individual to acquire additional skills in Safety, Operations and Training, and Maintenance. Following completion of their advanced aircraft training, aviation warrant officers will be considered for CFET. This normally occurs following an advanced aircraft utilization tour or around the sixth year of rated service.

However, entry can be as early as four

Consideration for Student Selection

occoccoccoMILITARY SCHOOLING [Para 6-16, DA Pamphlet 600-11]

	TYPE OF TRAINING	ELIGIBILITY CRITERIA	SELECTION CRITERIA
Entry Level	Warrant Officer Candidate Courses	Prior to appointment as a Warrant Officer	As needed
Entry Level	MOS-producing, equipment, and job qualification courses	Minimum of four years of Warrant Office service. All Grades, W2-W4	er As needed
Advanced Level	Warrant Officer Advanced Course [WOAC]	Four to nine years of Warrant Officer service to 17 years total AFS [if OTRA] or 24 years total AFS [if RA/MTP/ LRADP]. Grade W2	Best , qualified
Senior Level	Warrant Officer Senior Course [WOSC]	Nine years of Warrant Officer service to 17 years total AFS [if OTRA], or 24 year total AFS [if RA/MTP/LRADP]. Grades W2[P] and W3	Best s qualified
0000000000	•••••••	CIVIL SCHOOLING	
Fully Funded	WO Associate Degree Program [WOADP]	On completion of three years of Warran Officer service through 14 years AFS	t Best qualified
Partially Funded	Degree Comple- tion Program [DCP]	On completion of three years of Warrant Officer service through 23 years AFS	t Best qualified
Partially Funded	Cooperative Degree Program [CDP]	On completion of three years of Warrant Officer service through 23 tears AFS	Best qualified
Partially Funded	Tuition Assistance Program [TAP]	Throughout career	As needed

years for those selected to attend WOAC in their fourth year. Your choice should be reported to HQDA via a preference statement or other means so that we can

consider your desires. From those who are eligible the best qualified officers are then selected for career field entry training based upon the needs of the

service, the individual's record of past performance, and the numerical con-

straints of the career field.

CFET also has a skill hierarchy, which is Safety, Operations/Training, and Maintenance. This is a function of numbers based on the criticality of skills required Army-wide and is not intended to establish a relative order of importance for one career track as compared to another. Like advanced aircraft qualification opportunity, only one career field is permitted to each aviator.

Flight Safety. Career field entry training for those within the safety track is accomplished through attendance at the Aviation Safety Course and is normally followed by a utilization tour as an aviation safety officer. This training will normally be administered in conjunction with the Aviation Warrant Officer Advanced Course. Thereafter, these officers will normally receive repetitive assignment to flight safety duties.

Operations and Training [O&T]. For personnel entering the O&T track,



TOP AA-CW2 Don A. Neuman, cen., holds the USAREUR Region—AAAA's 1977 "Aviator of the Year Award" which he received with a Meritorious Service Award for his tour in Germany. Both were presented by MG Willard W. Scott, left, Cdr, 25th Inf Div, on Neuman's arrival at Schofield Barracks for assignment. LTC Jerry W. Childers, right, AAAA's Aloha Chapter President, looks on.

CFET will be as an instructor pilot in his basic or advanced aircraft. This training may precede attendance at the Aviation Warrant Officer Advanced Course. These officers will normally serve the remainder of their career in either aircraft system, advancing in both skill level and responsibility. Individuals in the O&T field who remain in utility helicopters, and are selected for further training, receive subsequent training and utilization tours such as instructor pilot and instrument flight examiner.

Those who have received advanced aircraft system transition training may progress through the basic pilot and instructor pilot skills in their respective systems. Although O&T includes both IFE and IP, an aspirant for the examiner's course must have completed

IP training successfully first.

Maintenance and Resource Management [M&RM]. Personnel who are accepted for entry into this field of career specialization will attend the Aircraft Maintenance Officer Course [AMOC] as their career field entry training which may precede attendance at the Aviation Warrant Officer Advanced Course.

These officers will normally serve the remainder of their career in the aircraft systems in which they are qualified, advancing in both skill and responsibility.

In pursuing M&RM specialty qualification, individuals will be selected for advanced career field training that normally begins with that track of the AMOC which is oriented toward their specific aircraft system. Test pilot is considered a subfield within this career track.

A full utilization tour will normally follow all career field entry training. Those personnel not immediately accepted for CFET will remain in the sustaining base and will be reevaluated and reconsidered as vacancies occur.

Currently, the Army has enough trained people to meet today's requirements but because not all are available to meet specific needs and because losses must be replaced, limited training continues. Since Warrant Officer Division generally uses its training quotas to meet requirements generated by personnel requisitions and for professional development purposes in conjunction with Advanced and Senior Course attendance, schooling opportunity normally will be available in conjunction with a PCS.

For FY-78 the following quotas were made available for Warrant Officer Divi-

sion use:

Safety, 64 FWQC, 32 CH-47 IP, 15 AH-1 Qual, 171 TOW, 131 UH-1 IP, 80 AMOC, 78 RWIFEC, 36 CH-54 IP, 4 AMEDS, 40 OV-1 IP, 4 AH-1 IP, 20 Acc Prev, 3 OH-58 IP, 35 U-21 IP, 15

As you can see, quotas are limited in number and the competition for these is keen. The days of obtaining a school in conjunction with every move are gone. Do not become alarmed, however. As pointed out earlier, aviation schools meet Army requirements and have no direct effect on the promotion, retention, managed tenure or RA picture.

Many aviators have told us, "If I don't get a school, I'll never get promoted or make RA." That is not true. If you perform poorly as a Chinook IP/Examiner, you will not be as competitive as a Huey-only officer who does well. As a matter of fact, there are a surprising number of plain vanilla 100B CW4's out there right now. DA boards for promotion and retention consider your past performance and potential.

In summary, you should acquaint yourself with the career options available to you, but concentrate on doing your current job to the best of your ability.



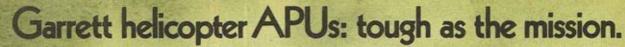
☐ In almost every instance, a brief captioned [100-125 word] photo tells the story better than a 500-word+ story w/o photos.

A FIRST!—COL Robert P. St. Louis, 2d from left, Cobra PM, presents the keys to the first new production AH-1S Cobra to BG Richard Doyle, ADC(S), 82d Abn Div, at Ft. Bragg. LTC Hilbert H. Chole, l., Cdr. 1/17 Cav, and LTC William A Howard, right, Cdr, 82d Avn Bn, look on.

LOW & SLOW-COL C.L. Montgomery, left, USAF Academy C/S, and COL A.H. Uhalt, Cdr, 46th Aerospace Defense Wing, accept delivery of two UV-18B Twin Otters from de Havailland President Russ Bannock, center. The planes will be used at the Air Force Academy for parachute jump training.

☐ Exclusive articles, so marked, are certain to be published, particularly if they are accompanied by tie-in photographs or charts.





In war, helicopters must be tough and reliable. There's flack in the air when they blunt armored thrusts, fly close air support and deliver troops in combat assault. Modern military helicopters have to be fast and rough. Every component aboard must be able to do its job under the toughest conditions.

So it's no surprise that Garrett was selected to provide auxiliary power units for the U.S. Army YAH64. Garrett APUs also have been proposed for other military helicopter applications.

Garrett's gas turbine APUs for helicopters, like the ones certified on the A-10, are built to run long and

strong. To survive the environment. And to deliver an extra measure of cost-effectiveness.

We can supply the APU, ready for interface with other systems. Or—as in the case of our GTCP 36-55 for helicopters—we can deliver a total performance package with lightweight advanced technology turbine, integrated single-plate dry disc clutch, and lightweight starter, all in one.

Garrett's been giving aircraft users what they want in APUs for 30 years. More than 30,000 Garrett APUs have logged some 105 million hours running time.

Whether the program is a combat or utility helicopter, military or transport aircraft, consider Garrett's APU experience. Nobody can match it or beat it. For details, contact: Sales Manager, Power Systems, AiResearch Manufacturing Company of Arizona, 402 S. 36th Street, Phoenix, Arizona 85034.

The Garrett Corporation
One of The Signal Companies 6



Tough to beat

Operations

systems; however, the mere fact that they are relatively small and agile, and can hug the ground, makes them considerably more survivable than any F/W.

Just as the L-4 did not habitually work by itself, neither will the attack helicopter team. Integration of the attack helicopter team with the armor, infantry, artillery, and Air Force close support aircraft are keys to its survivability and devastating firepower.

The enemy air defense has problems

The enemy's problem with the attacking helicopter is one of finding, fixing, and killing it. Finding is difficult because of the flight profile. Moving into a firing position at an altitude of three feet, places the air crew no higher than that of a tank commander. All manner of enemy devices are available to assist in locating our attack helicopters, ranging from eyeballs to optics to moving target indicating radars.

However, until the enemy invents something to see through foliage or look over hills, the attack team will go undetected. Having been given the target information from the scout, be he on the ground or in the air, the attack helicopter is now prepared to challenge the

enemy by rising from mask.

This is a key event for many reasons. We must appreciate that as soon as mask is broken, some piece of the air defense network is going to see the attack helicopter. Tests to date have suggested that if the total unmask time does not exceed 40 seconds, the attack helicopter will probably not be engaged.

With today's weaponry perhaps two TOW launches could be made, but at least one is certain. Once the attack helicopter has remasked, he is again invisible to the threat weapons (except artillery) and free to move to another scout-

selected firing position.

The artillery consideration is extremely important. We know that Soviet doctrine calls for lots of artillery and people have questioned the helicopter's survivability under their barrage fires. If one examines the caliber of the Soviet artillery and compares lethality with protection afforded all of our combat vehicles, it suggests that there are lots of front line vehicles that won't survive an artillery direct hit or even near miss.

Learning the hard way

When the artillery starts falling people and vehicles will have to move and the only vehicle that can move quickly is the helicopter. Many of us learned the hard way in Vietnam that we could survive 105 and 155 artillery falling around us by merely pulling up and moving out. For sure, the enemy can't sustain barrage-type fires indefinitely, nor can he cover the entire battle area so our attack helicopter teams will constantly search for safe firing positions to repeat the attack sequence.

Since Vietnam, many highly sophisticated tests have been conducted on helicopter effectiveness and survivability. Perhaps the most impressive was the tactics demonstration and evaluation conducted at Nellis AFB by the 7th Squadron, 17th Cavalry, 6th Cavalry Brigade. This was the most sophisticated real life portrayal of the threat that the U.S. Army or any other free world

country has faced.

The results amazed even the proponents of attack helicopters. Extremely favorable exchange ratios were demonstrated, like on the order of 32 to 1, but most important was the number of attacks by helicopters which were never detected. Out of 256 engagements against the threat array 155, or 60%, were never acquired by the air defense.

The reason is simple—stay in the trees and maximize stand off. The age old adage "Adjust or Die" is certainly germane. As the Nellis trails demonstrated, attack helicopters, properly employed, not only can survive, but can yield a significant return on investment.

If the Army is to realize the full potential of the helicopter in future combat it must assess its capabilities realistically and objectively based on experience and tests. The conception that it is a frail machine must go. Congress and other levels of government must be educated and convinced. The false information and data that have become "buzz words" concerning helicopters must be counteracted.

Ed. Note: As we recall, MG Van Natta and COL Williams were able to use their Korean findings to get limited use of 'copters in enemy areas in SAGEBRUSH ['54]. For "How not to do it" read the last few pages of "The Bridge at Toko Ri."

Footnote to Helicopter Survivability

N the Korean War, helicopters were used mostly for medical evacuation and rescue, considerably less for liaison, and not at all for fighting.

None were armed. However, they were exposed to enemy fire when rescuing airmen downed in enemy territory.

Even with this small exposure, there was a great difference in casualty rates between organizations that studied the problem of helicopter survivability and developed practical techniques to enhance it, and those organizations that "just rushed in."

The most successful users employed survivability techniques that included

the following:

 A large scale map on the wall in Operations was marked green ("Safe to fly over"), red ("Probably get shot at"), and uncolored ("Unknown").

e When an airman had to bail out, sev-

eral things were done:

.. One or more aircraft moved to spot him and, if armed, gave him what protection they could from capture by the enemy,

. All who flew over enemy territory were told again and again, "If you have to bail out, stay visible. Climb a hill if you

can ."

.. "Rescue" was called; the crewchief started and ran up the helicopter; the pilot and the co-pilot ran to the map, noted the reported **down point**, and plotted their entry and exit routes, using as

By MG THOMAS F. VAN NATTA U.S. Army, Retired much green and as little red as possible, and different routes coming and going. In those instances where the mission distance approached the helicopter's maximum range limit, there wasn't much choice, and different entry and exit routing was used whenever possible.

.. Flight was at treetop.

..The search helicopter(s) and the guarding aircraft were on the same frequency, and the latter helped to guide the "rescue" chopper(s). Pickup was fast and accurate.

Good Technique = Good Results

Those organizations that used the above technique never, to my knowledge, lost a helicopter in rescue operations. No helicopters were even hit, except in those instances wherein distance forced the rescue 'copter to fly in and out over the same red area, and hits were only taken on the way out.

No crewmen were killed; only a few were wounded; and none were wounded

seriously.

In the "just rushed in" instances, the downed airmen hid themselves; aircraft aloft didn't organize a 'watch and protect' action. Helicopters had to hunt; time was lost; enemy ground troops closed in.

Moreover, the "just rushed in" operation results in helicopters being frequently hit with some being shot down.

Survivability of helicopters is obvious. Once those in action take the time to recognize and study the risks, devise the techniques to reduce them, and make certain everyone knows and uses the techniques, survivability is not a problem.

Takeoffs



GENERALS

PATTERSON, James H., BG 43 Red Cloud Road Fort Rucker, AL 36362

COLONELS

BEITZ, Charles A., Jr. 2929 Summerall Circle Fort Eustis, Va 23604 BRIER, James R. 10231 Richview Drive Sunset Hills, MO 63127 CARSON, Ray M. 219 Jupiter White Sands MR, NM 88002 EDWARDS, Charles A. 307 Yoakum Pkwy Apt #911 Alexandria, VA 22304 FILBY, Robert A. 9612 Jacobe Dr., Apt #2 St. Louis, MO 63136 HALL, David R. 201F Oceanview, Ft Hamilton Brooklyn, NY 11209 HUTCHENS, Douglas L. 1050 Bramwell Lane Stone Mountain, GA 30083 KOEHLER, William F. 52 Red Cloud Road Fort Rucker, AL 36362 MCGURL, Peter W. 207 Fairfield Drive Yorktown, VA 23692 MOONEY, Charles W. P.O. Box 4391 Canyon Lake, CA 92380 SHALLCROSS, George W. 13 Gregg Way Fort Rucker, AL 36362 TOEPEL, Adalbert E. 646 Batson Avenue Fort Sill, OK 73503 VINES, Ronald C. 38 Polk Court Newport, RI 02840 WRIGHT, Billy R. P.O. Box 1270 San Angelo, TX 76902

LT. COLONELS

AUTH, Richard W. 1867 B. Bullene, Ft. Detrick Frederick, MD 21701

LT COLONELS

AUTHIER, Edward E., Jr. 8100 N.W. Twin Oaks Drive Kansis City, MO 64151 BARKSDALE, Lewis B. 2771 Fergusson Fort Eustis, VA 23604 BEDSOLE, William D. 305 Oakwood Drive Enterprise, Al. 36330 BRODEUR, Alfred F. G-4 Trans, Hg VII Corps APO New York 09154 8ROWN, Glenn A. Quarters 103 Aberdeen Pg. MD 21005 BUFORD, William C. 600 South 19th Street Leavenworth, KS 66048 CALLENDER, William E. 9 McPhillips Avenue Mobile, AL 36604 CAPPS, Eugene S. 2303 Stovepoint Court Alexandria, VA 22306 CHANCELLOR, Robert L. Hg, 19th Avn Bn (Combat) APO San Francisco 96271 CRAWFORD, Clydie J. HHC, 11th Ave Bri APO New York 09039 CUMMINS, Clark H. 317-1 Pope Avenue Fort Leavenworth, KS 66027 DARRAH, James T. USAAAVS Fort Rucker, AL 36362 DAVIS, Wayne B. 1540 Princeton West Trail Marietta, GA 30062 EARLEY, Neal E. 1852 Bogese Drive Petersburg, VA 23803 FEASTER, Lewis L. 1878 Schoettler Valley Drive Chesterfield, MO 63017 HAMILTON, Thomas R. 10212 Hunt Country Lane Vienna, VA 22180 HASWELL, Edward A. HSLO-SS Health Serv Cmd Fort Sam Houston, TX 78234 HEFFORD, Robert A. 539 Wheaton Road Fort Sam Houston, TX 78234

LT COLONELS

INNES, Douglas D. P.O. Box 662 Albrook Canal Zone 99965 JONES, Robert S., Jr. 408 Doug Brown Circle Enterprise, AL 36330 JUDY, Jerry E. 2127 Francis Court Leavenworth, KS 66048 KAHALEKULU, Benjamin L. 5709-A Plum Street Shaw AFB, SC 29152 KAMBROD, Matthew R. 7th Avn Bn. 7th Inf Div Fort Ord, CA 93941 KENDALL, Mark C. 1184 Cimarron Court Clarkstone, GA 30021 KING, George G. 303 S. Scott Street New Carlisle, OH 45344 KLOSE, John A.G. 11 Worchester Ave., Ft. Kam Hickham AFB, HI 96818 KNIPPA, Leroy E. Corpus Christi Army Depot Corpus Christi, TX 78419 LEE, Gordon K., Jr. 730 W. Vance Circle, S.E. Palm Bay, FL 32905 LLOYD, James W. 2d Avn Bn, 2d Inf Div APO San Francisco 96224 LOGERQUIST, Benjamin A. Qtrs #1. Jefferson Pvg Gnd Madison, IN 47250 MARSHALL, Walter D. 4205 Argonne Drive Fairfax, VA 22030 MARTIN, Donald R. Dir of Trg Dev. USAARMC Fort Knox, KY 40121 MAUK, Roby M. 5419 Golfcrest Circle Stone Mountain, GA 30088 MCKAY, Lawrence E., Jr. 1194 Drennan Park Fort Campbell, KY 42223 MICHAEL, John D. 5614 Southampton Drive Springfield, VA 22151 MOELLER, Lawrence B. 12 Diamond Circle Fort Rucker, AL 36362

LT COLONELS

MOORE, Robert D. 7127 Wintery Loop Colorado Sptings, CO 80919 MYERS, James R. USAREUR-MMC APO New York 09052 NOACK, Richard R. HHC, VII Corps (FSE) APO New York 09107 O'DONOHUE, Paul J. 294-R Lee Road West Point, NY 10996 PAQUETTE, Roger K. 6 Dunwoody Circle Hampton, VA 23666 PAWLIK, Eugene A., Sr. 401 Maple Street Enterprise, AL 36330 ROE, Robert D. 109 Anchor St, Grand View PI Junction City, KS 66441 SANDERS, Burnett T., II 3112 Budd Way Alexandria, VA 22310 SCHNELL, Hudson A. USC, Opt of Mil Sci-Bx 11507 Pueblo, CO 81001 SHRADER, Cecil L. 24 Jackson Court, Ft. Adams Newport, RI 02840 SOKOWOSKI, Louis E. AFSEC Armish MAAG, 8x 500 APO New York 09205 STUBBS. Frederic H. USAWC, Class of '78 Carlisle Barracks, PA 17013 SULLENBERGER, Louis E. 136 Aleta Drive Belleair Beach, FL 33535 SUTHERLAND, John H. HHC, 2d SUPCOM, Attn: DCC APO New York 09160 THACKER, James H. 23 Diamond Circle Fort Rucker, AL 36362 TOOMEPUU, Juri Hq. JUSMAG-K APO San Francisco 96302 WEBSTER, Grady F. Hq. KMCA APO New York 09164 WEEKS, Jimmy D. Highway 134 West

Daleville, AL 36322

LT COLONELS

WHITE, William G.
RD-1 Wynkoops Mobel
Shippenburg, PA 17252
WISSBY, James M.
Rt. 4, Box 155A
Hopkinsville. KY 42240
WRAY, Donald P.
2233 Semmes Drive
Montgemery, AL 36106
YARAMURA, Kenneth K.
TRADOC Ln. c/o Pacific S&S
APO San Francisco 96503

MAJORS

ADAMS, Bertram E., Jr. 36 Forth Artillery Road Fort Leavenworth, KS 66027 ALVERSON, Frank L., Jr. Hg. 4th ATAF, Box 6174 APO New York 09012 BALLARD, Stephen D. 7141 Game Lord Drive Springfield, VA 22153 BARNHILL, William E., Jr. 4175 Fawn Lane Smyrna, GA 30080 BAUGH, Robert M. 700 Woodland West Waco, TX 76710 BECK, Silas E. 212 Nottingham Drive Colonial Heights, VA 23834 BLAKE, Peter J., III 5225 C Sydnie Kay Street Anchorage, AX 99504 BRADLEY, John Hg USAREUR & 7A ODCSOPS APO New York 09403 BURDETTE, Robert J. 6943 Antler Drive Columbus, GA 31904 BUTLER, James M. 75 Fourth Artillery Road Fort Leavenworth, KS 66027 BYRNE, William G., Jr. 18-B Detrobriand Street Fort Douglas, UT 84113 CARROLL, William P. 3106 South Union Roswell, NM 88201 CRISSMAN, Robert S. P.O. Box 1098 (CGSC) Platte City, MO 64079

DIAMOND, Dalton 2017 O'Brig Avenue Guntersville, AL 35976 DOTEN, Frederick S. 44928 Denmore Street Lancaster, CA 93534 **ERKINS**, Moses 2012 Deerhorst Ct. Ottawa Ontario K138H1 FERRING, Theodore J.J., Jr. 912-12 Acosta Plaza Salinas, CA 93905 FIELDS, Joyce F. 10 Kirby Street Fort Rucker, Al. 36362 FIORE, Leonard A. P.O. Box 315 Gretna, FL 32332 FITZGERALD, Henry E. 26 Dragoon Drive Fort Leavenworth, KS 66027 **GNIAZDOWSKI**, Francis Hg Div Cmd, 101st Abn Div Fort Campbell, KY 42223 HODES, Robert W. 65 Bullard Loop Fort Leavenworth, KS 66027 HOPKINS, James R. 3d AD, Avn Co. Box 715 APO New York 09039 HORVATH, Leroy L. 295th Aviation Co (ASH) APO New York 09028 HOSKINSON, Charles E. 4805 Mermaid Boulevard Wilmington, DE 19808 KATZ, Darrell W. Route 6, Box 244 Boone, NC 28607 KEITHLY, Douglas L. 602 B. Miller Drive Fort McPherson, GA 30330 KIMES, Kenneth E. 1408 East Vardeman Avenue Killeen, TX 76541 LADD, Richard B. 3216 Walton Drive Montgomery, AL 36111 LALICKER, Laurence 2d Bn, 3d FA APO New York 09077 LANDERS, Curtis H. 261 Hancock Road Fort Leavenworth, KS 66027 MACLEOD, James F., Jr. 35 Ludwig-Feuerbach Str. 8500 Nurnberg, Germany MARTIN, James D. 205th Trans Bn (AVIM) APO New York 09165 MARTIN, William O. 230 Hancock Fort Leavenworth, KS 66027 MATSON, Donald F., Jr. 7 Applewood Drive Shelton, CT 05484 MCCURDY, John D. 1042 Drennan Fort Campbell, KY 42223

MCCURRY, William K. 394th Trans Be (AVIM) APO New York 09061 MCGEE, Albert P. Hg. USAREUR MMC APO New York 09052 MCLENDON, Walter H. 440-Z Keacny Fort Leavenworth, KS 66027 MEBANE, Eddie B. HHC 503-D Cht Ave Re-APO New York 09165 MILLER, Billy J. 23 Dragoon Drive Fort Leavenworth, KS 66027 MILLS, Jon R. 4389 Spillway Lane Dumfries, VA 22026 MITCHELL, Richard R. 57 Dragoon Fort Leavenworth, KS 66027 MOONEY, Lowell T., Jr. 1148 Shine Lane Harker Heights, TX 76541 MORRIS, Dennis L. 411 Woodland Drive Hinesville, GA 31313 NEUWIEN, Reginald A., Jr. 203 Holly Hill Road Enterprise, AL 36330 NICHOLS, Alfred G. 3031 Westcliff Drive, West Colorado Springs, CO 80906 OLSEN, Wesley R 84-4th Arty Road Fort Leavenworth, KS 66027 SCHLATER, John O., Jr. 737 Chatsworth Drive Newport News, VA 23601 SWIFT, William D. Bldg 100, Soldiers Circ Fort Douglas, UT 84113 SYVERUD, Roger L. Ha. USEUCOM. Box 1297 APO New York 09128 TAYLOR, John W. D Treop 4/7 Cav. 2d Inf Div APO San Francisco 96251 THOMAS, Steven A. 1953 Windsor Drive Sierra Vista, AZ 85635 TRICKLER, Roger D. 20 Ferguson Lane Fort Rocker, Al. 36362 TRUJILLO, Arthur H. 30 Dragoon Drive Fort Leavenworth, KS 66027 **VEHLOW**, Charles A. 164 Jones Street Middletown, RI 02840 WAGNER, Jerry T. 158th Avn Bn. 101st Abn Div Fort Campbell, KY 42223 WEAVER, John C., Jr. 19 Hunt Road Fort Leavenworth, KS 66027 WEBER, Glenn 6989 Sibyl Drive, S.W. Austell, GA 30001

WHITWORTH, William E. 2998 Elm Hill Road Nashville, TN 37214 WILLIAMS, Robert B. HHC, 11th Avn Ba (Prov) APO New York 09039 WILLMAN, Landon P. HHB. 72nd FA Group APO New York 09047 WOODWARD, Ronald L. 12303 Old Spanish Trail San Antonio, TX 78233 YENSAN, David A. 3947 W. Chapel Road Aberdeen, MD 21001

CAPTAINS

ACKERLY, William G., Jr. 3424-A McCornack Road Wahiawa, HI 96786 ALEXANDER, Gary J. 112 Country Club Lane Hopkinsville, KY 42240 BARTON, Jav W. 1037 Mitscher Drive Key West, FL 33040 BEADLE, Everett T. Rt #1. Box #208 Denver, NC 28037 BOWEN, Joseph S. 17301 S.W. 296th Street Homestead, FL 33030 CALVARESI, Salvatore P. USA ATC Bn Kro, EA (Prov) APO San Francisco 96301 CLEVELAND, Horst H. Avn Co. 1st AD APO New York 09326 COX, Danny C. 5305 Franklin Road Nashville, TN 39220 CUMBIE, Donovan R. 2040 13th Street N. St. Cloud, MN 56301 DANIEL, Michael W. 14th Avn Unit (ATC) APO New York 09114 DEAL, Clifford L., Jr. 1956 Ponce de Leon Ave NE Atlanta, GA 30307 DONAHUE, John C. 4911 Melrose Chicago, IL 60641 ELLIOTT, Howard R., III 498th Medical Co (AA) Fort Benning, GA 31905 FORESTER, Ronald R. 2564-8 Bullard Street Fort Eustis, VA 23604 FOWLER, Rulond W. 610 Gibson Drive Fort Benning, GA 31905 GEORGE, Joe D. HHT, 6th Cav Bde (AC) Fort Hood, TX 76544 GIBBONS, Thomas U. Hq & Hq Bbry, 56th FA 8de APO New York 09281

GLASS, Len E. 629 York Road Favetteville, NC 28303 GOODIN, Albert C., Jr. 3rd Ba, 84th Arty APO New York 09176 GRAY, James S. 1091-5 Apple Street Fort Waiswright, AX 99703 GRIZZELL, James V. HHC. 503d CAB APO New York 09165 HALL, David 1019 West Lane Killeen, TX 76571 HARMES, Michael H. 1028-4 Chestnut Street Fort Wainwright, AK 99703 HAUSMAN, James H., Jr. 14th Company, USAAC Fort Rucker, AL 36362 HIX, Alan D. Air Troop, 11th ACR APO New York 09146 HOOPER, Roger W. P.O. Bax 152 Amherst, NH 03031 HOPPES, Robert J. P.O. Box 672 Edgemont, SD 57735 HOUSE, Randolph W. 16 Dickman Fort Leavenworth, KS 66027 IGLEHEART, James L. P.O. Box 363 Ayer, MA 01432 ISLE, Stephen 5243 El Cemonte Davis, CA 95616 KNOWLTON, David L. 7 Walker Avenue Fort Leavenworth, KS 66027

KRAUS, Ronald J. 17517-15th Avenue E. Spanaway, WA 98387 LAKE, Douglas A., II 400 Branch Road, S.E. Vienna, VA 22180 LAMBERT, Robert V. 5833-A Brett Drive Fort Knox, KY 40121 LEGROW, Ralph W. 295th Avn Co APO New York 09028 LICHTIG, Jan A. 28 Kirby Street Fort Rucker, AL 36362 LILLEMON, George D. P.O. Box 44 Fort Monmouth, NJ 07703

LINSTER, Frank J. 5917 64th Street Sacramento, CA 95824 MARSHALL, John L., Jr. Rt #2. Foxtail Drive Hartwell, GA 30643 MARTIN, Robert F. 26 Dickman Fort Leavenworth, KS 66027

MAYFIELD, Richard A. 353 N. 950 East Kaysville, UT 84037 MCMANUS, William W. HHC. 21st SUPCOM (PMO) APO New York 09325 MEHRINGER, Kenneth E. Stu Det, USATSCH TOAC Fort Eustis, VA 23604 MELLEN, Paul C. 302 Choctaw Enterprise, AL 36360 METCALF, Marvin G. P.O. Box 9444 Daytona Beach, FL 32020 MOONEY, Philip A. 14 Dickman Fort Leavenworth, KS 66027 MORRIS, Patrick M. #2 Cleatowne Manor Ozark, AL 36360 MURRAY, William H. #808 7600 Blanco Road San Antonio, TX 78216 NASH, William L. 38 Harbord Fort Leavenworth, KS 60027 NORRIS Roper H. Jr. HHC, 4th Trans Bde APO New York 09451 OATES, Robert L. 28 Gainsborough Place

100-B Butts Street Fort Benning, GA 31905 PELLERIN, William A. 1384-B Myers Place Fort Sill, OK 73503 PETERSEN, Robert P. 295th Aviation Co (ASH) APO New York 09028 PIGOTT, Joel E. 3d Avn Det APO San Francisco 96271 PILLOWS, Elbert L. 5614-B Gilkey Lane Fort Knox, KY 40121 PRUETT, Hobert L., Jr. 198 Kings Deer Drive Clarksville, TN 37040 QUALLS, Michael 3125 Alice Drive Batesville, AR 72501 RANUM, Curtis A.

Newport News, VA 23602

West Lafayette, IN 47907

O'BRIEN, Michael

PASIERB, E. Gary

206 Dehart Street

20610 40th Ave. Ct. E. Spanaway, WA 98387 ROBERTS, Douglas **USAJCS Cons Mail Facil** Fort Heachuca, AZ 85613

Finthen Det, 14th Avn Unit

Presisio of Sfran, CA 94129

APO New York 09185

RASMUSSEN, Lynn W.

1238-B Ramsel Court

RICHTER, Henry J., Jr.

BURKHARDT, Joseph Jr.

APO New York 09025

180th Avn Co

ROLAND, Kenneth P., II 5238 MacArthur Blvd New Orleans, LA 70114 SCHEUER, Henry H. 15 Galt Lane Fort Rucker, AL 35362 SCHRIMSHER, Geoffrey J. 40 Kirby Street Fort Rucker, AL 36362 SCHUSTER, Michael W. 1019-3 Apple Street Fort Wainwright, AK 99703 SHUMAN, Kenneth E. RD #8 Bloomsburg, PA 17815 SIMMONS, Lester G. Route 6, Bax 310 Sanford, NC 27330 SLONIKER, Michael E. HHC, 501st Avn Bn (Cbt) APO New York 09326 SMITH, Lee T. D Co., 2nd MED Bn APO San Frnacisco 96251 SODERLUND, Paul R. 2810 Heshbon Road Williamsport, PA 17701 SPROUSE, Timothy D. 5828-A Brett Drive Fort Knox, KY 40121 STEIN, Kenneth R. 1151-A Drennan Park Fort Campbell, KY 42223 STERN, Clifford H. 208 Janice Street Enterprise, AL 36330 STEVENS, Shelby 464 N. Oakley Dr. Apt E-203 Columbus, GA 31906 STOCKL, Ludwig 126 Nedrub Drive San Antonio, TX 78223 STONE, David M. USACC Box 3. Taiwan APO San Francisco 96263 STRAW, Marvin L. HHC. 3ID Box 166 APO New York 09036 STRICKLAND, Robert M. 4184 Genyth Memphis, TN 38128 SWINDELL, Thomas A. 835-A Tidball Wahiawa, HI 96786 TACKETT, John A. P.O. Box 5692 APO New York 09012 TEKELL, Robert Tekell Furn, 309 N. Beaton Corsicana, TX 75110 THOMAS, Charles C. 10 Floyd Road Verona, NJ 07044 THOMAS, David L. Rt 2, Box 80 Wharton, TX 77488 TOBIN, William F. P.O. Box 7705 Fort Gordon, GA 30905

TUTTLE, Thomas L. HHC, 3rd Bn, 36th Inf APO New York 09045 VAUGHT, Larry G. 67 Beckwith Niagara Falls, NY 14304 WATERBURY, James A. 33 Nippins Avenue Mt. Holley, NJ 08060 WEBB, Phillip H., Jr. P.O. Box 5465 Fort Richardson, AK 99505 WILKINS, Albert G. 26 Galt Lane Fort Rucker, AL 36362 WILLIAMSON, Robert L. 809 West Claude Street Lake Charles, LA 70605 WILLIAMS, Thomas E. P.O.Box 44/1363 Tebran, Iran WYLAND, Stewart W. C Company 503rd Avn Bn APO New York 09165 WYNN, Dennis M. 10 Surfside Ormond Beach, FL 32074

LIEUTENANTS

LOSIER, Paul W. 5079-D Val Verde Houston, TX 77056 LOVEJOY, Edward 5552-C Folger Street Fort Knox, KY 40121 PETRYK, Gene R. B Co 205th Trans Bn APO New York 09165 WICK, Joseph C. 375 Bayport Avenue Bayport, NY 11705

CW4'S

ANDERSON, James R. USA Parachute Team Bx 126 Fort Bragg, NC 28307 ANDERSEN, Lee E. Bax 813 Fort Clayton, CZ 99965 BARNETT, Don E. HHT, 4/7 Cav. 20 Inf Div APO San Francisco 96251 BATTLE, Ralph G. 1300 Oak Forest Drive Ormond Beach, FL 32074 BELL, James A. FAA/DA Reg Rep Bx 20636 Atlanta, GA 30320 BENEFIELD, Bennie 157 James Drive Sierra Vista, AZ 85635 DAVIDSON, Jon R. 6612 Sabrosa Ct, W Fort Worth, TX 76133 GILMORE, Edward A., Jr. 109 Auburn Street Enterprise, AL 36330

HAWKINS, Robert R. 713 Ridge Copperas Cove, TX 76522 HERRING, Harold D. 2222 West Main, Apt #5 Dothan, AL 36301 JACOBSON, Duane M. Bell Plant Activ, Box 31100 Amarillo, TX 79120 JOHNSTON, Jimmy B. PO Box 18327 Corpus Christi, TX 78418 NETTLES, William R. 1014-8 Dogwood Street Fort Wainwright, AK 99703 NOVOSEL Michael J. HHC, 2nd Avn Bn APO San Francisco 96224 OHLSEN, David L. 10615 Aero Vista El Paso, TX 79908 OLSEN, John S. 435 Thunderbird, Court, SE Olympia, WA 98503 PARNELL, James I. Co B, 8th Avn Bn, 8th Inf Div APO New York 09185 PATTON, Donald F. Box 409, 242nd Avn Co. Fort Wainwright, AK 99703 SCHWEIKERT, Ronald W. 4455 Pine Grove Las Vegas, NV 89117 WATLACK, Richard G. 1527 Palmer Drive Fayetteville, NC 28303

CW3'S

CANNON, Frank R., Jr.

Route 1, Box 1044 Nicholasville, KY 40356 CORMACK, Bobby G. C Troop, 2/10th Air Cav Fort Ord, CA 93941 EYANSON, Charles D. 111 South 13th Street Decatur, IN 46733 GIFFIN, Robert P. 1039-2 Dogwood Street Fort Wainwright, AK 97703 GOODWIN, Curtis L., Jr. 1937 Septiembre El Paso, TX 79935 HENSELEN, Richard T. 15306 11th Ave, Ct Ea Tacoma, WA 98445 HODDER, Allen J. 363d Sixth Street Fort Richardson, AK 99505 HORVATH, John C. 173rd Avn Co APO New York 09165 HOSMUN, David R. Rt #2, P.O. Box 428 Ozark, AL 36360 HUNEYCUTT, James H. 205th Avn Co. P.O. Box 11 APO New York 09185

JAMES, Robert E. HHC. 194th Armor Bde Fort Knox, KY 40121 JOHNSON, Monte D. 5874 McCully Street Fort Hood, TX 76544 JONES, Larry K. 180th Avn Co (ASH) APO New York 09025 MELVIN, William A. CMR #2, P.O. Box 5003 Fort Rucker, AL 36362 MESSICK, Lawrence C. EUDMA, P.O. Box 748 APO New York 09019 NICKLE, Robert H., Jr. 1039-6 Dogwood Street Fort Wainwright, AK 99703 PRICE, Terry T. 11th Avn Troop Bde Fort Rucker, AL 36362 RICHMOND, Raymond E. 5142 Nance Street Fayetteville, NC 28304 RILEY, Albert F., III CMR #2, P.O. Box 5123 Fort Rucker, AL 36362 SEHL, James H., Jr. 3621-C Porter Loop Wahiawa, HI 96786 SIBERT, Daniel S. 242nd Avn Co. P.O. Bax 372 Fort Wainright, AX 99703 STANTON, John H. Readi Gp (MAIT) Box 34 Fort Sheridan, IL 60037 SWEEN, Robert G. 56th Aviation Company APO New York 09028 THOMPSON, Perry A. Spt Trp (Air), 2d ACR APO New York 09093 TURMAN, Frank E. D Trp. 3rd Sqdn 8th Cav APO New York 09185 WEST, Charles E. P.O. Box 15 Daleville, AL 09025 WHITTINGTON, Robert L. 394th Tc Bn APO New York 09061 WILSON, Paul R. 478th Avn Co (HH) Fort Benning, GA 31905

CW2'S

BARRON, John E. CMR #2, P.O. Box 5069 Fort Rucker, AL 36362 BELL, Lawrence J. 7333-B Gardner Hills Fort Campbell, KY 42223 BERTOLASIO, William 2289 Shadow Drive Sharpsville, PA 16150 BROWN, Daniel S. 239 W. Harris Drive Ft. Rucker, AL 36362

DENISON, Alan J. 63rd Company, USAAVS Fort Rucker, AL 36360 DUPLESSIS, Troy L., Jr. 1188-A Drennan Park Fort Campbell, KY 42223 ELLIS, James B. 155th Avn Co (Atk Hel) Fort Ovd. CA 93941 ENKO, Rodney E. 94-1041 Anania Circ-49 Oahu, HI 96789 GILES, Fred R. 1906 Catawba Drive Fayetteville, NC 28303 HOLBROOK, Eugene E. 147th Avn Co APO San Francisco 96611 JACKSON, Isom K. 780 Chapman Drive #2 Colorado Springs, CO 80916 KAUFMAN, Stuart M. 8 Trp. 4/7 Cav APO San Francisco 96358 KNUPP, Gary L. RD #5, Box 203 Johnstown, PA 15905 KRABY, David A. 1051-1 Gattney Road Fort Wainwright, AK 99703 MCWATERS, John D. 1100 S. Harley, Apt #1 Harker Heights, TX 76541 MELANCON, Thomas P. A Co. 24th Avn Bn. Hunter Savannah, GA 31409 MELLA, Sherwin J. 516 Heather Drive Sierra Vista, AZ 85635 MILLER, Eric L. 237th Med Det (AA) Fort Ord, CA 93941 PETERSEN, Douglas N. P.O. Box 521 Fort Rucker, AL 36362 PROCTOR, Steven V. Otrs #2547-F Fort Lewis, WA 98433 ROSSOMME, Gary E. 521-A Beluga Fort Richardson, AX 99505 RYAN, Dennis A. 190 N. Harris Drive Fort Rucker, AL 36362 TEDFORD, Jon C. 10101 Zenith Court St. Louis, MO 63123

WO'S

DOOSE, Chris A. P.O. Box 793 Killeen, TX 76541

WENDT, Peter C.

6633 Sherrod Drive

Fayetteville, NC 28304

Vew Viembers Joining AAAA



ZERO BASE - No new July-August

members enrolled from the Air

Cay, Birmingham, Chesapeake

Bay, Esfahan, Ft. Monroe, Hanau.

AIR ASSAULT CHAPTER Tennessee LTC Hayes W. Cathey SP4 Charles Gardenhies SGT Ricky L. Johnson

E4 John E. Stroud MAJ Robert D. Whitworth Clarksville, TN MAJ George L. Anderson CW3 Dennis L. Balbac Mr. John W. Binkley Ms. Jewel Birdsong Mr. Carlton W Bousman, Sr SSG Doisy Bruner MAJ Lauren D. Buford CPT Gerald L. Bulisco CSM Henry M. Cadena* CPT John Carden WO1 Joseph E. Craddock Mr. J.A. Danko CPT Vincent M.S. English CW3 Sam P. Fant SGT lumes Foster

LTC Merle Freitag SCT David Furst Tom W. Gentry CPT Louis J. Gloston, Jr. **WO1 George Haas** Mr. Ronnie Harrison Ms. Wanda L. Hogue CPT Charles T. Holt CW3 Cecil Howard Mr. Howard E. Larson SP4 Keith E. Lehman Ms. Elizabeth Q. Leible CW3 George J. Machain CW3 Mack Maclaren SP4 Wayne Mashburn

SP4 David Mast

E6 Samuel Mitchell

SFC Charles Mullins

21.T Clinton E. Palmer

CPT George W. Parsons CPT Johnny R. Pelton SP4 Aian Price

MAJ Richard F. Rockwell

CPT Johnny J. Shelton SP4 Terry Shulenberger

CPT William M. Smith

CW2 Jerry Stephens SGT Bobby Stewart CPT Paul J. Strebel Mr. Wayne Teeple WO1 Kenneth Van Allen Ms. Jo W. Wallace SGT William Water

CWZ Mark W. Wonderly Ft. Campbell SSG Jonas B. Alley SP4 Damon L. Andrews

AIR ASSAULT (Cont'd) WO1 Lester J. Austin SGT Walter Butisti SGT Chad Beckham CW2 Lawrence J. Bell SP4 Linda S. Bridges SP4 Herman D. Brown SP4 Scott Campbell PV2 Paul Catino SP4 Wilbur Chamberlin **CPT Norman Curtiss** PV2 Ferrando Davis MAJ Phillip S. Elmeer SFC Cesar A. Estrada PFC Lisa Goodwin MAI Harold F. Grace PV2 Richard Haury E4 Richard L. Jackson SGT Larry Jeffcoat SGT Richard E. Jones SP4 Daniel Knake SP4 Kim Kreinbrink CW2 Dennis L. Krewson SFC George Lake SGM Robert Lane CW2 Felipe L. Lariosa, Jr. Mr. Walter H. Maki LTC Victor E. Micol, Jr CW2 James E. Minninger 1LT David E. Mintz SGT Larry Murphree PV2 Robert L. Neubauer SP4 James Peed SP4 Vincent Pennatto SP4 Richard Penrod SGT John Perry Ms. Nancy B. Rhodes SFC Dallas O. Runner Ms. Melo Dize Schaefer CW2 Charles R. Sheldon CW2 Robert Sinniger CW2 Kobert Sinninger SP4 Edward Steigerwald CW3 Francis D. Theenburg 15G Marshall C. Tillis CW2 Bernard E. Vincent, Jr WO1 Richard Z. Voigt

SGT Clark Wolring Hookinsville PFC James Cloud 1LT Thomas C. Rankin CPT Edward E. Wyks

E4 William Webb

Oak Grove SP5 Terry Bigham CPT Edwin L. Clapp CPT George P. Eckles PFC Richard S. Furtyo SP4 Myron Hennen Mr. Eugene Jackson CPT Teddy Morse

ALAMO CHAPTER COL Michael M. Davis'
CPT Bruce G. Furbish SFC Richard Mullen MAJ Charles A. Cavis

ALONA CHAPTER CPT Steven L. Hardin CPT John A. Kimmell Mr. John J. Gorman

ARMY AVIATION CENTER CHAPTER

Mr. Marvin Baza MAJ John Benson CPT Charles J. Campbell LTC Emmett F. Johnson Mr. Robert L. Miller LTC Joe U. Molfett SFC Richard T. Myers 2LT Duphne Pratt SFC Glenn Suttles SGM Wesley E. Toon CPT Paul N. Young, Jr.

RENELLIX CHAPTER MAJ Eugene H. Kobes BONN AREA CHAPTER Dr. Albert F. Puhlmann

CAJUN CHAPTER CPT Darryl J. Fontenot CPT Gerald A. Louviere CW2 Ray Stanton **1LT Gary Bryant**

CHECKPOINT CHARLIE CHAPTER

CPT Jack L. Brayton CPT William E. Conant CHICAGO AREA CHAPTER Mr. Steve Janci Mr. Ronald Anderson Mr. Peter Mihalkanin

COASTAL EMPIRE CHAPTER CPT Robert L. Steele CW2 Richard I. Brooks, III CPT Alfred L. Johnson WO1 James E. Stone MAJ John C. Parrish MAJ Robert Vlasics CPT William L. Zanow

CW4 Thomas A. Messeder

CPT Scott R. Wilcox CONNECTICUT CHAPTER Mr. Alfred Downu Mr. Edward Driscoll Dr. Fritz Haber Sleve Waltace Mr. Donald E. Sprei

CORPUS CHRISTI CHAPTER Mr. Jose Rivera GS3 Gloria Atchisson

Ms. Debra S. Howerton CHAPTER

CW2 David L. Stine PEC Filis Lemere EMBRY-RIDDLE CHAPTER Mr. Mark Z. Connell

MAJ Glenn L. Farnsworth CW2 Thomas H. Gerblick CPT John L. Schaffer LTC John E. Davis MAJ Bobby G. O'Neal LTC Mervin R. Sullivan CW2 Gregory A. Wood Mr. Jack Ohlhaber

ESFAHAN CHAPTER Ben Dobson CPT Bruce Pinner

FT. BENNING CHAPTER SFC Harry Jaynes

FT. BRAGG CHAPTER CW3 Andrew G. Siegner LTC Bruce C. Guard **ILT James M. Sikes** MAJ William Berg CPT Richard Desigration **CPT Terrance Hummel** WO1 Howard E. Thompson CW2 Albert J. Willett **1SG Charles Barnes** LTC William A. Howard **MAJ James Lester** Mr. William A. Maloney, Sr.

FT. HOOD CHAPTER CPT William R. Smith CW2 Michael E. Perry CPT Richard L. Broyles SP4 David Nettles

FT. RILEY CHAPTER CW3 James L. Broderick CPT James Armstrong CPT Robert F. Mecredy CPT John C. Myers

FT. SILL CHAPTER SFC John G. Vanhoutean CPT Robert R. Gamber FRANCONIA-MARNE

CHAPTER CPT James J. Graham 1LT Robert A. Hammerle CPT Robert J. Hanson CSM Harry B. Scribner Indy, Lone Star, Monterey Bay, Mt. Rainier, Rocky Mountain, or Sun Bowl Chapters.

FRANCONIA [Cont'd] CPT Bruce E. Simpson 2LT James C. West **GOLDEN GATE CHAPTER** LTJR Michael Menkin

LEAVENWORTH MAJ Terrell D. Bridges MAJ Kenneth A. Harris MAJ Gerald P. Kokenes CPT John W.I. Ball

LINDBERGH CHAPTER Mr. Edward Gale Ms. Sharon J. Hagen Mr. Robert Heller

Mr. Robert L. Jackson Mr. Samuel F. Merriffeld Mr. Joseph E. Redford LTC William Hinds ITC Joe T. Pope Mr. Laurence Epstein Mr. C.C. Faerber Mr. Rickey J. Brown Ms. Patricia Niehaus Mr. Raigh Parr Ms. Charleen Rozycki

Mr. Darrel Caldwell MAIN? CHAPTER CPT Marvin H. Baker CW2 William J. Swartz

MISSISSIPPI VALLEY CHAPTER SGT Allan E. Pillard

MONMOUTH CHAPTER CPT Thomas A. Kahlert

MORNING CALM CHAPTER MAJ Barclay Boyd MAJ Bobby L. Bates CPT Phillip L. Curlis CPT David A. Jobe

NURNBERG CHAPTER CPT Byron W. Smith PERSIA CHAPTER

CDR Albert L. Rasmussen PIKES PEAK CHAPTER **BG Stephen E. Nichols**

RHINE VALLEY CHAPTER 1SG Cecil W. Vernon SP4 Mark A. Dillon

SCHWAEBISCH HALL CHAPTER

MAJ Clifford George CW2 Eddie Hill CPT Donald McCullough SSG Jimmy L. Smith SOUTHERN CALIFORNIA CHAPTER

Mr. Fred J. Anderson Mr. Vincent Cremonese Mr. Charles H. Miller, Jr. Mr. Dominic Ruggieri Mr. David Jukoff Mr. J.F. Brennan

STUTTGART CHAPTER SGT Aaron Miller MAJ Anthony C. Manilla

TAUNUS CHAPTER MAJ Jack E. Easton

TENNESSEE VALLEY CHAPTER

Mr. Marshall Acney Mr. Einar R Christopherson WASHINGTON D.C.

CHAPTER John W. Stahl MAJ Thomas Guivarra Mr. Karl Reeves MAJ John W. Lyons Mr. G.W. Adamson LTC Robert Letchworth

COL Ivar W. Rundgren UNAFFILIATED

MAJ Leo Gumienny CPT Brian E. Dunloy SGT Ronald B. Mann Mr. L.J. Rosell SSG Wayne Keisheimer PFC Wesley Klatt LTC Dan C. Clark Mr. Ralph Quosig

*Retired

ENLISTED

SUTPHIN, Arnold B., Jr., CSM 5006 A Hammond Heights Ft. Campbell, KY 42223 BAETHGE, Luther, MSG 47 "Y" Street, Stewart Gdns Newburgh, NY 12550 FARLEY, Terry G., SFC 314-C Gulkana Ave Fort Richardson, AK 99505 FARRELL, Joseph F., SFC 808-8 Adams Street Fort Devens, MA 01433

ENLISTED

NEELEY, Edward, SFC 3625 Winchester Drive Owensboro, KY 42301 GILLEM, Terry, SSG 4750-B Lee Village Fort Campbell, KY 42223 GRAHAM, Delano, SGT F Co. 123 Maint Ba APO New York 09326 KIMEL, Gerald D., SGT 1 Day Circle Daleville, AL 36322

ENLISTED

MILLARD, Aaron L., SGT 352 Avn Co Bx H Albrook CZ APO New York 09825 O'BRIEN, Terrance, SP5 4520 9th Street #18 Rock Island, IL 61201 QUILES, Antonio, SGT 4723-E Lee Village Fort Campbell, KY 42223 HALL, Dexter, SP4 A Co. 159th Avn Bn Fort Campbell, KY 42223

THE MONTHS AHEAD

Five "Special Issues" are planned for ARMY AVIATION in the months ahead. The December, 1977 "Convention Report" issue will cover the '77 AAAA Na-tional Convention activities. The Jan-Feb, 1978 issue will be dedicated to the UTTAS Program. In March we plan a "Second Career" insert covering the location & activities of our 700-plus retired readers. The April, 1978 issue will be devoted to the CH-47 Mod Program, while the July issue will update our 1969 "Equipment & Material Issue."



1977 AAAA NATIONAL AWARD WINNERS



CW2 Randy Dyer "Aviator of Year"



SP5 Charles W. Ball "Soldier of Year"



LTC Garry F. Dolin, Cdr, Outstanding Unit



1SG Leon S. Wozniak, NCO, Outstanding Unit



MAJ Jerry Stokely, Cdr, Reserve Comp Unit



1SG Jack Powell, NCO, Reserve Comp Unit



MAJ Arthur M. Mountcastle McClellan Award



Joseph P. Cribbins "Outstanding DAC of the Year"

Special National Executive Board Award to the 101st Airborne Division (Air Assault) for setting standards of aviation excellence during 1976 in Operation REFORGER