



UNITED STATES ARMY AVIATION *DIGEST*



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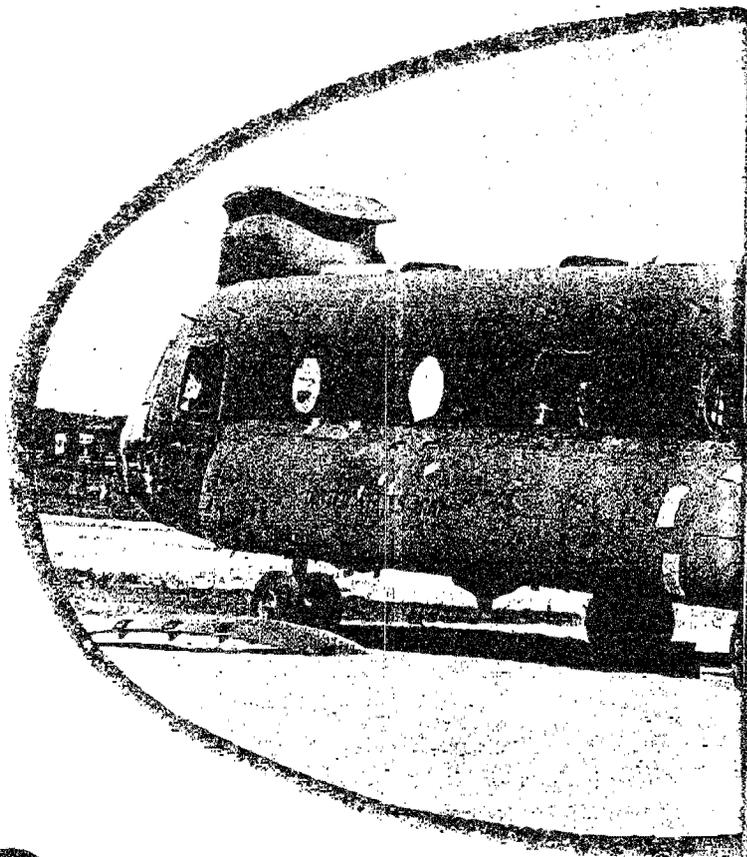
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JUNE 1976	VOLUME 22	NUMBER 6
Professionalism in Army Aviation And Budgetary Constraints, BG Charles E. Canedy 1		
The Army Aviation Story, Part X: The Early 1960s, MAJ David H. Price 4		
In Extremis, LTC Dick A. Roach 6		
Guns A Go-Go, LCDR Donald A. Mohr 8		
How's Your Learning Center, William D. Dentzler 14		
Don't Melt The Battery, Walter B. Orr 20		
Cupid The Killer, CPT John B. Huffman 21		
FLIP Realignment In The Pacific 22		
Views From Readers 23		
New Aviation Testing Concept, MAJ David M. Mabardy ... 24		
Medical Aspects of Survival—Part II, LTCD. H. Kerney, M.D. and Peley Thompson 28		
Why Pilots Make Errors, William C. McDaniel 32		
Realistic Training At Any Price?, Arnold R. Lambert 35		
Who Killed George?, David G. Holmes 37		
Briefs That Teach 38		
Bird Strike Avoidance—What's Been Done? CPT Don A. Mynard 40		
Aviation Safety Officers Course 43		
Pearl 44		
Unit-Level Life Support Section, CW2 Craig C. Leing 45		
USAASO Sez 48		
Aviation Safety, Who Is Responsible? BG Charles E. Canedy Inside Back Cover		

COVER
The cover of the June 1976 issue of the U.S. Army Aviation Digest features a photograph of a pilot in a flight suit, standing in front of a helicopter. The pilot is wearing a helmet and goggles, and the helicopter is partially visible in the background. The cover is titled 'Aviation Safety, Who Is Responsible?' and is edited by Richard K. Tierney.

The U.S. Army Aviation Digest is a quarterly publication that provides information on Army aviation operations, training, and safety. The June 1976 issue, Volume 22, Number 6, contains 48 pages of articles and features. The cover story is 'Aviation Safety, Who Is Responsible?' by BG Charles E. Canedy. Other articles include 'Professionalism in Army Aviation And Budgetary Constraints' by BG Charles E. Canedy, 'The Army Aviation Story, Part X: The Early 1960s' by MAJ David H. Price, and 'In Extremis' by LTC Dick A. Roach. The Digest is published by the U.S. Army Aviation Center, Fort Rucker, Alabama. It is available to all Army aviation personnel and is also available to the general public for a fee. The Digest is published by the U.S. Army Aviation Center, Fort Rucker, Alabama. It is available to all Army aviation personnel and is also available to the general public for a fee.



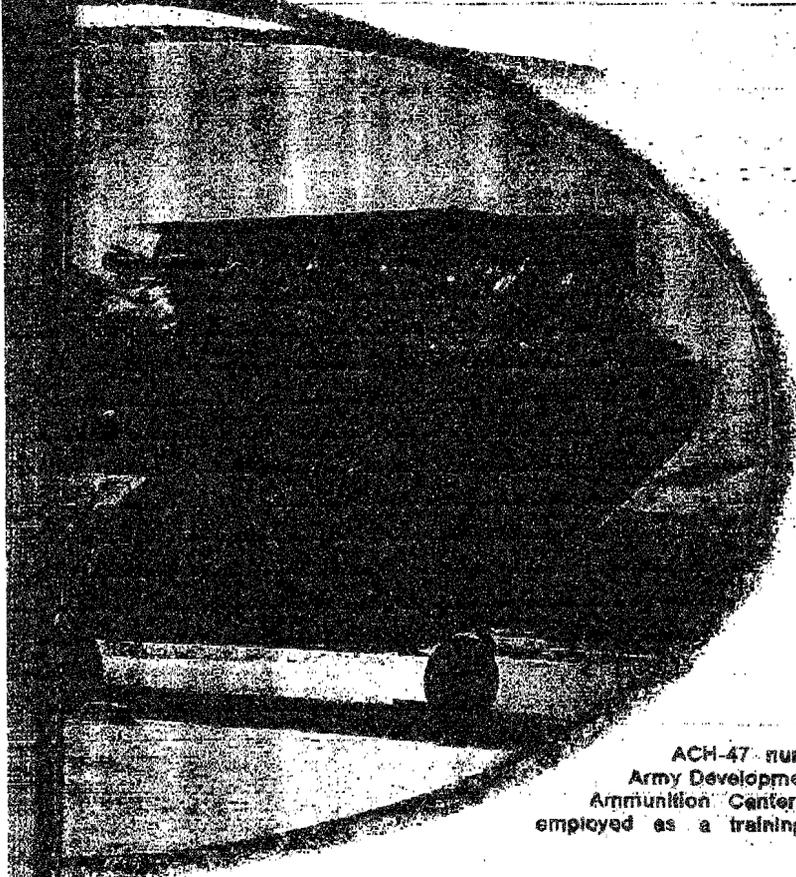
Guns A GO-GO

LCDR Donald A. Mehr

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MARGINAL WEATHER with 200-foot ceilings had persisted in the Republic of Vietnam (RVN) since the early part of February, hampering fixed wing airstrikes in support of the Battle of Hue. Only helicopters were flying and their operations were conducted in the dead-man's zone at such low altitudes they were constantly exposed to enemy small arms fire.

In an occasional break in the weather on 22 February 1968 two armed ACH-47 Chinooks from the 228th Assault Helicopter Battalion (Air Cavalry) joined numerous other helicopter gunships to provide needed gunfire support near the Citadel. Historians would later laud these efforts which significantly contributed to the victory in the bitter house-to-house fighting during the 1968 Tet Offensive.



ACH-47 number 64-13149 located at the Army Development and Readiness Command's Ammunition Center, Savannah, IL, where it is employed as a training aid for civilian careerists

During one exchange of gunfire in the firefight, heavy and sustained enemy ground fire struck one of the supporting ACH-47 gunships. In the cockpit, numerous caution panel light segments illuminated signifying systems failures as the stricken helicopter broke off the engagement, seeking a secure area for landing. The wingman, Go-Go 9, continued to rake enemy positions with suppressive fire as Go-Go 4 executed an emergency landing precariously close to the walled city.

The crippled Chinook's position was clearly visible from the city and drew intense enemy fire. Moments later Go-Go 9, piloted by Major Alan B. Matthews, touched down near the disabled craft, effecting a rescue of the seven-man crew. The men clambered aboard as Captain (then WO1) Gary Daniel and waist gunners continued firing the 40 mm grenade launcher and 50 caliber machineguns, reducing the level of incoming fire.

Go-Go 9 lifted off without incident and was in the process of initiating measures to secure the area around the downed Chinook while still enroute to Camp Evans. Troops requested to support the extraction attempt were later cancelled when word was received that Go-Go 4 had sustained a direct hit from enemy mortar fire and was completely destroyed.

Attrition of CH-47 serial number 64-13154 — better known to the aircrew as "Birth Control" —

would mean a good deal more than the loss of any other valuable Chinook. For, without an escort or wingman for mutual support, Go-Go 9's career as a gunship also had been terminated as surely as if it had been shot down by enemy fire. The loss of the third gunship would toll the death knell to the Guns A Go-Go evaluation and the 1 April 1968 demise of the 1st Aviation Detachment of the 228th Assault Helicopter Battalion. No evidence could be found to substantiate further single ACH-47 gunship operations — or others in conjunction with either UH-1B/Cs (Hueys) or AH-1Gs (HueyCobras). Such an association might well have been as effective and lethal as the later adopted Huey/Loach (light observation helicopter) "pink teams."

Ironically, the elimination of those standard Chinook systems which contributed to a more desirable gunship, and the armor added to improve survivability, precluded 149's return to the fold of the more conventional logistic Chinooks. Overweight and ill-equipped for this mission, Go-Go 9 (known as Easy Money) was subsequently transferred to the 1st Aviation Brigade and flown to the Army maintenance facilities at Vung Tau where she served out the remainder of her Vietnam tour with the 17th Aviation Group (Combat) as an AAMTAP (Army Aircraft Mobile Technical Assistance Program) aircrew trainer for prospective crewchiefs. It was while serving

in this capacity that the aircraft was reduced to a mere skeleton or hulk due to component and systems removals (cannibalism). With the graveyard looming as an imminent possibility, aid came from an unexpected quarter.

Interested individuals who recognized the historical value of this craft intervened to restore and refurbish 149 and arranged for transportation stateside. This was accomplished about the time the Refresher Training School at Phu Loi was closed in April 1972. The helicopter was never flown while it was waiting to be transported back to the U.S. The reworked aircraft was then donated to the U.S. Army Aviation Museum at Fort Rucker.

One might now expect serial number 64-13149 to finally grace a deserved place of honor at the Army Aviation Museum, resplendent in paint with stub wings bristling 20 mm cannon, rockets, and the M-5 grenade launcher under the nose. Unfortunately, not yet! No pristine paint graces 149 today along with the Easy Money name given in combat and which had adorned her side. Instead the helicopter is located at the Army Development and Readiness Command's Ammunition Center, Savannah, IL, where it is employed as a training aid for civilian careerists assigned to worldwide ammunition activities. The aircraft is used to teach typical helicopter loading/unloading and cargo tiedown procedures. The Ammunition Center also is responsible for formulation of ammunition and nuclear handling procedures.

The inception of the combat experiment and evaluation known as Guns A Go-Go had its beginnings as a February 1964 Army battlefield requirement for employment of a heavily armed helicopter. The main emphasis was expected to focus on increased speed

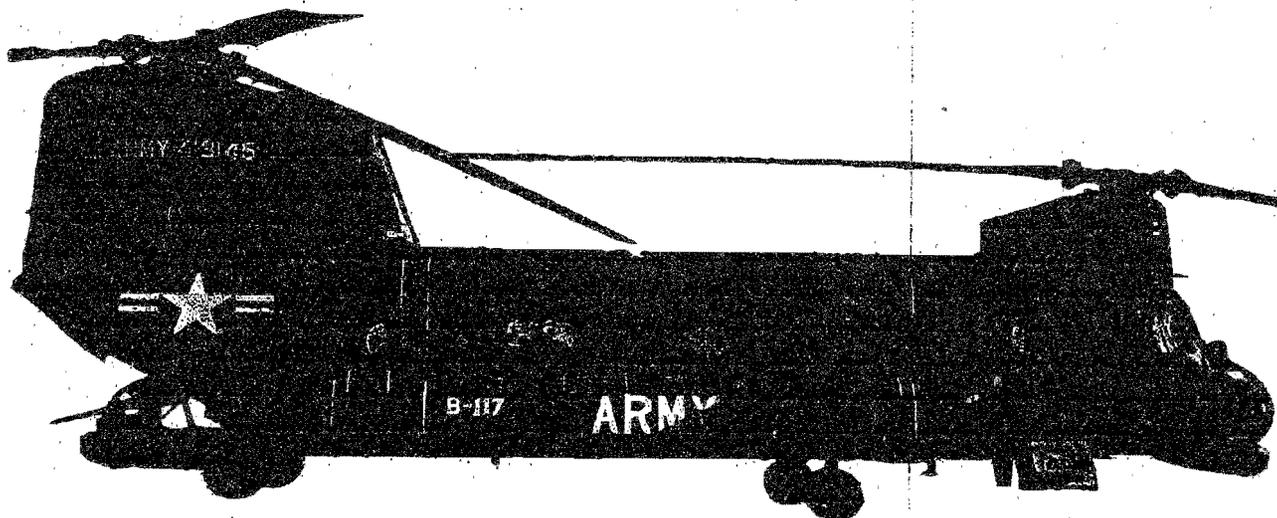
and higher weapons payload; two major limiting factors affecting employment of the current UH-1B gunships. The Huey was not designed for the armed configuration, and as armament was increased to the helicopter's maximum gross weight, airspeeds were limited to 80 knots. This speed proved unsatisfactory since the escorting gunships could not overtake an air-mobile force.

Several alternative helicopter models such as the Sikorsky S-61 Sea King and Kaman UH-2A Sea Sprite, along with existing helicopters in the Army inventory, were examined by the Bush Board* as possible candidates for this escort mission. Current production lines, existing logistic support and spare parts commonality may have been factors which tipped the scales in favor of the CH-47. By June 1965 the Army authorized production of four armed ACH-47 prototype configurations. The first of these, serial number 64-13145 (Boeing production number B-117) was accepted for the Army by the Navy Plant Representative as a standard CH-47A on 7 July 1965. After weapons systems and armor installations were completed the first flight of the ACH-47 series was accomplished on 10 November 1965.

Later in November, 64-13145 was publicly displayed at Boeing's Center Two facilities located at Philadelphia International Airport, PA. This rollout almost coincided with the secret debut of a Bell Helicopter Company funded prototype Model 209. This HueyCobra (which became the AH-1 and commonly called the Cobra) would revolutionize armed helicopter gunship tactics and configurations in the

*A Department of the Army board convened to evaluate possible replacements for the UH-1 Huey gunships.

Number 145 new from the factory





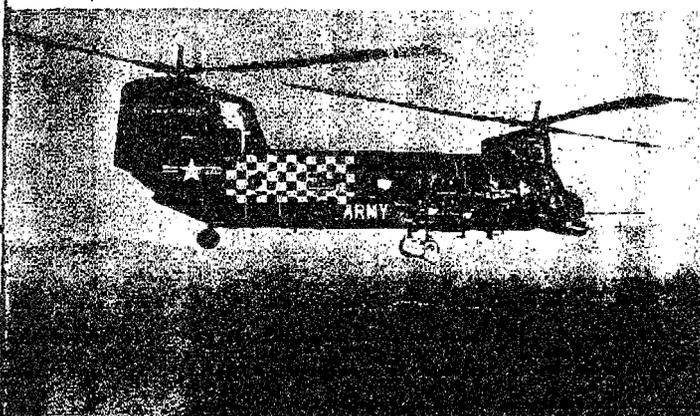
Number 145 being readied for tests

following 2 years. During the succeeding months three more armed Chinooks would be delivered; these being serial numbers 64-13149, 64-13151 and 64-13154.

The most conspicuous difference between these ACH-47 helicopters and the standard CH-47A logistics support configured version was the rotatable M-5 nose pod and two fuselage pylons. These were 2½ feet wide hardpoints located on both sides of the helicopter near station 242, just outboard of the front wheels. To provide a fire support capability provisions existed for installation of a 20 mm cannon, along with an XM-10 bomb rack for the 19 shot XM-158 2.75 inch rocket pod on each side. Five fuselage stations also were provided with flexible mounts for either 7.62 mm or 50 caliber machineguns — two along the sides and one on the rear loading ramp. This rear position provided a clear field of fire to engage targets after the helicopter had passed over them. This was a unique advantage among gunships and allowed pilots considerably more latitude in attacking fortified positions.

A cardinal rule of gunship tactics is to never overfly a target area due to the vulnerability of the helicopter after its guns no longer keep the enemy down. Dual side and rear firing weapons permitted the Chinook to write its own rules. The armed Chinook also boasted

Number 145 undergoing jettison tests



more than 1½ tons of expendable munitions aboard. The heavier 50-caliber machineguns normally used on the ACH-47 nearly doubled the engagement range of the 7.62 mm machineguns then being used by UH-1s in Vietnam.

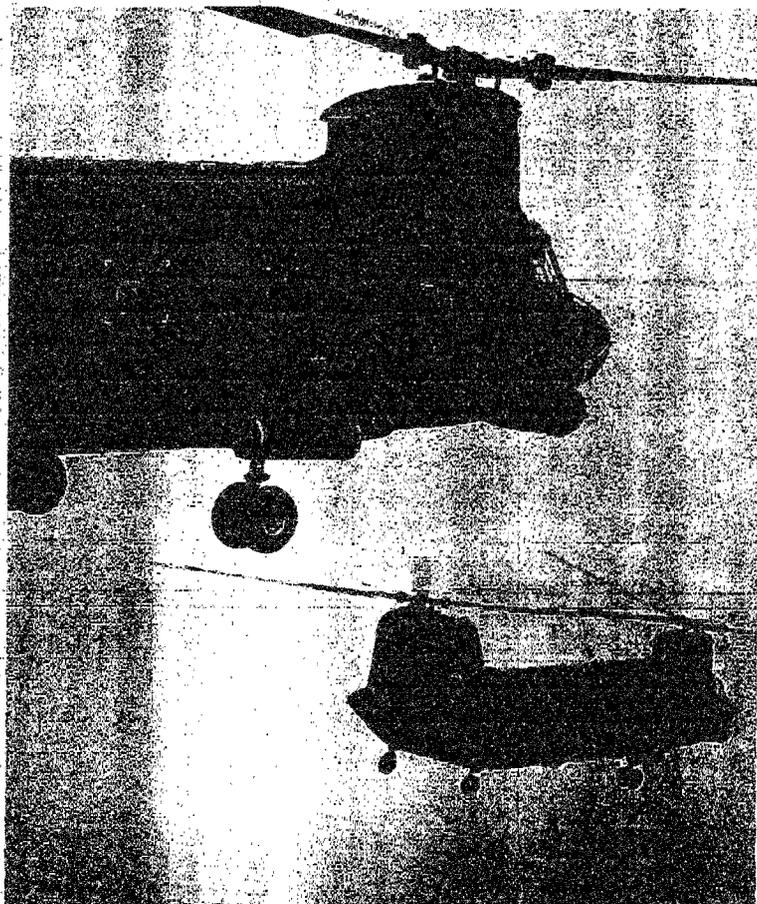
Many standard CH-47 items which were not essential for the fire support mission were not installed. These included the cargo hook, winch, heater, cargo door, auxiliary loading ramps, sound-proofing and all but five troop seats. Estimates of 2,000 pounds of steel armor plate were added to protect crewmembers and vital components. To enhance the survivability of the helicopter, a combat interphone system, fuel fire suppression, crossfeed shutoff valves and ballistic armor plate capable of withstanding the impact of 50 caliber ammunition were installed. Pilot and copilot seat and torso armor protection, known as the iron maiden (derived from an early torture device of the same



Number 145 on display

name), also were provided. The normal combat practice of locating flack jackets in the chin bubble was employed.

Army test and evaluation boards from Ft. Rucker operated the first helicopter at Aberdeen, MD, for weapons capability, testing until March 1966. Following unit training at Fort Benning, GA, three of the craft were assigned transportation to RVN for combat evaluation. These helicopters arrived and commenced combat theater operations in June 1966 under the Army Concept Team in Vietnam (ACTIV) supervision. The initial testing was performed by the 53rd Aviation Detachment Field Evaluation (Provisional) operating under the 10th Aviation Group (see "Armed Chinooks," July 1966 and "Armed CH-47A



Number 145, shown flying with a friend, was deployed to RVN as a replacement

Helicopter Employment," August 1966 *DIGEST*). These experiments earned high praises for the concept and caused officers to compare the Guns A Go-Go with the Air Force's lethal C-47, dubbed Puff the Magic Dragon.

Following completion of the ACTIV tests the ACH-47s were assigned to the 1st Cavalry Division (Airmobile) which had introduced the Chinook in its standard logistics configuration to Vietnam operations in October 1965. Normal employment of the Chinook at this time was as a prime artillery mover. With a 7,000-pound payload, the Chinook could relocate a complete 105 howitzer, crew and net full of ammunition in nearly inaccessible areas. General John J. Tolson, in his monograph "*Airmobility 1961-1971*," praised the Chinook in this way: "If the Huey helicopter became the cornerstone of airmobility, then the Chinook must be considered one of the principle building blocks."

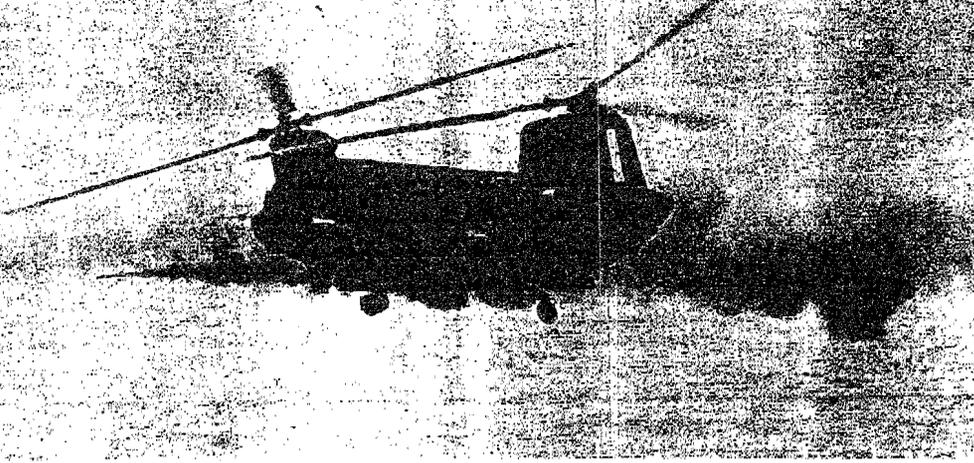
The ingenuity and courage of all CH-47 aircrewmembers are indeed worthy of note. While two aircraft of the Guns delivered over eight tons of ordnance in the Song Re Valley on 9 August 1967, other Chinooks were dropping napalm and riot agents from the rear loading ramp. This ramp, which could be lowered in flight, provided a nearly perfect delivery method. While this mode of operation normally was employed only when tactical air was unavailable, the availability of the helicopters to do this mission facilitated considerable employment. A single CH-47 could deliver 2½ tons of napalm. During Operation Pershing more than 29,000 pounds of riot agent was delivered in this manner by the 1st Cavalry.

The installed armor on the Guns effectively protected all but one of the aircraft from loss; the actual reason for the loss of 154 was never fully disclosed. A taxi accident was to claim the first of the ACH-47s in Vietnam on 5 August 1966. This occurred in the III Corps Area, prior to 1st Cavalry assignment. Subsequent to this accident the fourth ACH-47 aircraft (serial number 64-13145), located at Edwards AFB, CA, for performance and flight quality testing, was deployed to RVN as a replacement. This aircraft is unceremoniously credited with its own destruction when it was lost on 5 May 1967. Due to failure of the retention of the M-24A 20 mm cannon on a gun-run, a round was fired into the rotor system, striking a rotor blade and destroying the craft. The last two examples survived until 22 February 1968 when 154 was lost. Yet, loss is a strong word only if it is not balanced against what was gained for this price.

Guns A Go-Go, in its combat evaluation as an interim helicopter gunship, exhibited numerous

Number 145 was destroyed when one of its 20 mm guns was accidentally fired into its rotor system





Guns A Go-Go blazed a high trail of glory

strengths and a few weaknesses, some of which were subsequently solved in the AH-1G. It must be remembered the AH-1G was also only an interim gunship; the ill-fated AH-56 Cheyenne, cancelled after prototype testing, was to be the ultimate gunship.

The speed, endurance and firepower of the ACH-47 immediately solved the requirements necessary for escorts of the airmobile force. Although the ACH-47 had to reduce forward speed when operating at max gross weights, it still could escort CH-47 formations since the latter seldom transited at V_{ne} . Its endurance equalled or exceeded UH-1 fuel reserves, even when the Guns were "armed to the teeth." With nearly 1½ tons of expendable ordnance onboard, targets could be engaged on a more liberal and continuous basis than when each round had to be rationed for a specific purpose. This sustained fire support and long onstation time in the combat zone earned considerable praise. The Guns excelled in landing zone preparation, road reconnaissance, interdiction, escort and in direct support of the infantry.

The ACH-47s prototyped the forward cabin and rear ramp machinegun installations later adopted on the logistic model CH-47s as the M-24 and M-41 armament systems. With a full 360 degrees of fire capability, the aircrew could effectively engage and observe the aircraft being fired upon from all quarters. A serious shortcoming of the later AH-1G Cobra was a lack of knowing when the aircraft was under fire until actually being hit. Introduction of the SA-7 Strella missile later in 1972 forced AH-1G gunship pilots to keep their heads on a swivel.

The installed forward firing 20 mm cannon armament gave these helicopters the first opportunity to engage troop concentrations armed with 50 caliber weapons or larger, rather than being forced to withdraw and/or await tactical airstrikes. The increased target accuracy and engagement range of the 20 mm also enhanced survivability. The area fire effectiveness of the 2.75 inch rockets, identical to

those carried by the UH-1, needs no further accolades. Additional target area suppression fire existed in the M-5 grenade launcher controlled by the copilot. Basically Guns A Go-Go carried the combination of weapons systems any three single UH-1s might employ and the capability to continue the barrage twice as long. A pair of armed Chinooks were indeed a formidable adversary.

Today various positions prevail concerning the ideal size, agility and speed requirements for gunships. Certainly the effectiveness of this experiment must be assessed, recognizing the excessive size and some limitations in maneuverability. Significantly, initial requirements recognized the Chinook would have little to no agility advantage over the UH-1, but it would excel with a distinct firepower advantage. The Guns also operated with the earlier lower powered Lycoming T55-L7, 2,650 shaft horsepower (shp) engines, and not the present L-11As which power the Super C model Chinooks and are rated at 3,750 shp each.

Perhaps the ultimate tribute to The Guns can best be summed up in the words of their Vietnam commander, Major General Tolson, who said this about the Guns A Go-Go:

Though anything but graceful, it had a tremendous effect on the friendly troops which constantly asked for its support. From an infantryman's viewpoint, when the "Go-Go Bird" came the enemy disappeared.

Whenever an Army can field equipment the enemy is reluctant to engage and can do so much to improve morale and assist the fighting man on the ground, they're on the right track!

The Guns A Go-Go blazed a high trail to glory in their short combat evaluation. The fact that the Department of the Army elected to discontinue the armed Chinook concept in no way diminishes the outstanding combat record of these craft and the heroic deeds of the pilots and aircrew who flew them.