CHARLIE CHASERS

HISTORY OF USAF AC-119 "SHADOW" GUNSHIPS IN THE VIETNAM WAR

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War is an ugly thing, but not the ugliest of things;
The decayed and degraded state of moral and patriotic feeling
Which thinks that nothing is worth war is much worse.
A man who has nothing for which he is willing to fight,
Nothing that he cares about more than his personal safety is a
Miserable creature who has no choice of being free, unless made and
Kept so by better men than himself.

—John Stuart Mill

ONE

Emergence of USAF Fixed-Wing Gunships

By 1964, events strongly indicated the need for more U.S. military support if South Vietnam was to be saved from communist aggression and possible takeover. Increased airpower would be a critical part of the equation. But, what kind of airpower was most useful in guerrilla-style warfare? The French Air Force had effectively used F-8 and B-26 fighter/bombers against the Viet Minh, strafing and dropping bombs and napalm on enemy troops during VFR (visual flight rules) daylight conditions.

Nevertheless, during the hours of darkness when most Viet Minh attacks occurred, there was very little if any aerial support for French ground forces. Therefore, the question for the U.S. military remained: What kind of aircraft could really provide prolonged protection of airbases, firebases, cities, towns, hamlets, forts, outposts, and road and riverine convoys while providing direct fire support for friendly troops in combat with the enemy, particularly during the hours of darkness, and even during inclement weather conditions?

The Farm Gate detachment at Bien Hoa established in 1961, flying prop-driven FT-28, B-26, and C-47 aircraft, had already proven to be successful in counterinsurgency operations, but their capabilities were limited. Consequently, the U.S. Air Force was seeking new methods of aerial weapons systems to combat the Viet Cong guerilla-style warfare

tactics of ambushes and "attack and withdraw" to the jungle forests. The need for an aircraft with night capabilities; a night fighter with a large load capacity and long flight endurance that could loiter over targets for extended time periods with substantial firepower became clear to Air Force personnel like Captain Ronald W. Terry.

The aerial weapon system needed in Vietnam did not spring out of the Research and Development "think tanks"; it did not move from the drawing boards to the wind tunnels, or undergo exacting scientific engineering and analysis. Instead, the weapon system evolved from the minds of regular Air Force personnel improvising with aircraft and equipment already in the inventory, parts from various systems matched with new operational concepts to create a new weapons system; the fixed-wing gunship or gunplane, so as to not to be confused with a helicopter gunship. The fixed-wing gunship concept took initiative and a lot of tinkering; it was a story about good old "Yankee Ingenuity."

At Wright-Patterson AFB, Dayton, Ohio, Captain Terry rejuvenated an old theory of delivering ordinance on ground targets. While Terry was on a tour of duty in South America, he witnessed mail and supplies lowered to remote villages from the air in a unique operation. As a slow flying plane circled in a steep pylon turn, a bucket was suspended on a rope from the cargo door of the aircraft. The bucket tended to orbit in one spot over the ground and the villagers easily gathered their mail and supplies from the bucket. Terry could visualize the substitution of the suspended rope with the ballistic path of bullets from an aircraft with side-firing guns. A pilot should be able to fly an aircraft with a fixed side-firing gun in a continuous circle above a stationary ground target, aim through a fixed side-window gunsight, and fire a steady stream of bullets to hit the target. It was something to prove and Terry would prove it.

In 1963, Captain Terry was working as a member of the U.S. Air Force Systems Command team, investigating new ideas for counterinsurgency warfare. Captain Terry pushed the fixed-wing gunship theory and took his argument to anyone who would listen. After highly successfully tests of lateral-firing Gatling guns (aka miniguns mounted in

C-131 aircraft) at Eglin AFB, Florida firing ranges, requests were made to mount miniguns in the C-47 "Gooney Bird" of World War II fame. Test firings and the stability of the flying gun platform proved just as successful.

The fixed-wing gunship concept was a simple one; to fly slow and low above the target in a firing orbit of 360 degrees around the target, all the while keeping the target in sight and then saturating the target with devastating minigun and/or cannon firepower even during the hours of darkness and inclement weather conditions. It was an unlikely conversion of relatively slow propeller-driven transport aircraft with abundant cargo space large enough to house guns, ammo, and flares into heavily armed gun platforms. An aerial offensive weapon system like fixed-wing gunships was desperately needed and requested to fill a void in the USAF arsenal of preferred jet fighter/bombers.

The fixed-wing weapon system was ideal for night and counterinsurgency operations and its excellent slant range capability enabled it to strike targets on steep slopes that had long been considered inaccessible to jet fighter/bombers. Unlike the "fast-movers" of jet aircraft (in and out of target areas with very little loiter time while requiring forward air controllers), fixed-wing gunships (aka "slow-movers") could loiter for hours waiting for targets, change attack plans and firing patterns quickly, correct malfunctions inflight, provide illumination at night with flares, and then saturate targets with accurate and devastating firepower from miniguns and cannons during the hours of darkness, in difficult terrain, and under varying weather conditions. The Viet Cong and NVA had learned very quickly that daylight operations were vulnerable to air strikes. Hence, communist forces had traditionally used darkness as their ally. They moved supplies at night; they trained at night, and they attacked at night.

Captain Terry's briefings on side-firing gunplanes moved steadily up the chain of command. On 2 November 1964, Terry and Lieutenant Sasaki gave their presentation to General Curtis B. LeMay, Chief of Staff, USAF. General LeMay reacted favorably and sent a Systems Command team to Vietnam to modify and test the C-47 in combat.

Three conversion kits were shipped to Bien Hoa Air Base, South Vietnam. Two C-47s were reconfigured for Project Gunship I combat tests. Thus, the venerable U.S. Army Air Corps/U.S. Air Force C-47 (aka DC-3) became the first fixed-wing gunship employed in Vietnam.

One sortie of the combat test typified the instant popularity of the "Flying Fire Dragon." On 23 December 1964, the aircraft was on airborne alert out of Bien Hoa Air Base. The moon was high; there was a layer of light scud on the horizon. At 2237 hours, the crew was directed to Thanh Yend, west of Can Tho in the Mekong River Delta area. A little outpost was under heavy attack by the Viet Cong.

The FC-47 went in blacked-out (lights out), and turned into a firing orbit, and quickly brought fire on enemy positions. Apparently this Viet Cong unit had not seen the "fire breathing dragon-ship" before; therefore, when the gunship attacked, the VC immediately broke off the assault.

A second aircraft was diverted just after midnight on the same night to Trung Hung, an outpost twenty miles west of Thanh Yend. A South Vietnam Air Force (VNAF) C-47 was there dropping flares, but the Viet Cong continued to attack. The FC-47 arrived at 0040 hours and pumped a stream of 7.62mm rounds into the surprised Viet Cong. Trung Hung defenders were awed at the fire from the sky; the VC attack stopped their attack with the first burst of fire. At night, the Gatling guns of the flying dragon ship, with its steady stream of red tracers, was a fearsome sight for enemy troops, resulting in quite a psychological impact. Consequently, requests for the fire-spitting dragon ship were in high demand because of its accuracy and firepower. The need for fixed-wing gunships was everywhere but there were only a few of the gunships available.

The success of the gunship in night defense was easy to understand. The entire South Vietnamese hamlet pacification program was at stake. Under the cover of darkness, the Viet Cong assaulted and sometimes overran forts and strategic hamlets in government designated "safe areas." The VC showed that the South Vietnamese Army could not protect the villages and outposts, thus frustrating the South Vietnam government and ARVN attempts to reestablish control over vast rural areas of the country.

The C-47 gunship was first designated FC-47. Because of objections from jet fighter/bomber commanders and pilots to a cargo plane being designated a fighter aircraft, the "F" that designated the C-47 gunship as a "Fighter" aircraft was eventually changed to an "A", which designated "Attack" aircraft, thus the FC-47 became the AC-47. Fixed-wing gunships were thereafter designated Attack Cargo (AC) (i.e., AC-47, AC-130, and AC-119). At first, the FC-47 carried the popular names and radio call signs of "Puff the Magic Dragon" and simply "Puff" followed by a number, but ultimately became "Spooky" for the signature prefix to its radio call sign.

With all the successes of the FC-47 gunship during combat tests in Vietnam, justification was now warranted for the formation of a full squadron of C-47 gunships. Subsequently, training for the 4th Air Commando Squadron started on 29 August 1965 at Forbes AFB, Kansas. Two and one-half months later on November 14, twenty AC-47 aircraft of the new 4th ACSq arrived at Tan Son Nhut Air Base, Saigon, RVN. Four of the twenty aircraft were designated for command support and attrition. When the 4th Air Commando Squadron arrived in-country, the 1st ACS FC-47 crews were transferred from Bien Hoa to Tan Son Nhut and incorporated into the 4th ACS. FC-47 operations had been conducted as part of the 1st Air Commando Squadron which included O-1 Bird Dogs FACs, A-1s, and cargo/psyops C-47s aircraft stationed at Bien Hoa Air Base.

The squadron was assigned to the 2nd Air Division. A forward operating location (FOL) was immediately established at Da Nang and four of the gunships were sent from Tan Son Nhut to Udorn Royal Thai Air Force Base (RTAFB) to support the secret war in "neutral" Laos. Flying day armed recon missions in the "Steel Tiger" region of southern Laos proved that the gunship was extremely vulnerable to heavy anti-aircraft fire. It wasn't long before one AC-47 was lost over Laos. Another gunship was lost to enemy ground fire while flying from Tan Son Nhut to Phan Rang Air Base, RVN.

Regardless of AC-47 successful interdiction efforts on the Ho Chi Minh Trail in the Steel Tiger region and the defense of small towns,

hamlets, and outposts in southern Laos, the primary mission of the 4th ACSq was still protecting hamlets, forts, outposts, and military installations in all four corps of South Vietnam.

Seventh Air Force Operations Order 411-65, November 1965 stated the mission of the 4th Air Commando Squadron of AC-47s was to support hamlets under night attack with firepower and flares, to supplement strike aircraft in defense of friendly forces, and to provide long endurance escort for convoys.[1]

With the fixed-wing gunship concept proven to be highly successful and firmly established by the AC-47 "Spooky" in 1966, gunship operations expanded with increased fighting in South Vietnam during the new year of 1967. With the 4th SOS operating out of DaNang (A Flight), Pleiku (B Flight), Nha Trang (C Flight), Bien Hoa (D Flight), and Bien Thuy (E Flight); the basic operations plan for all flights was to have two aircraft orbit on airborne alert to cover assigned areas while one backup aircraft stood ground alert for reinforcement in needed areas. Only E Flight at Bien Thuy had two aircraft on standby ground alert. AC-47 operations continued strong aerial support for ground troops in contact with enemy forces while defending hamlets, outposts, forts, USA Special Forces camps, and air bases.[2]

Spooky's six-man combat aircrew consisted of pilot, co-pilot, navigator, flight mechanic, loadmaster, and one gunner. On target, the pilot and copilot worked together in flying the AC-47 in the firing orbit to maintain a stable firing platform. The pilot had complete control of the gunship and crew, but the copilot would nudge his control column forward or backward to keep a consistent firing altitude which was usually around 3,000 above ground level (AGL). Many AC-47 pilots flew lower, depending on targets, weather, and enemy anti-aircraft fire.

In the left-turn firing orbit, the copilot watched for signs that the pilot might experience vertigo while concentrating on the target, especially during nighttime. Target affixation was real. The copilot controlled the Master Firing switch located on the copilot's overhead control panel, but was under commands of the pilot to switch between guns hot and guns safe position. The navigator worked closely with the pilot to verify

the correct location of the aircraft in the target area and to confirm targets before firing. The flight mechanic (aka flight engineer) monitored all gauges in the cockpit for potential problems with the aircraft from engine performance to fuel consumption.

The loadmaster was responsible for the flares carried onboard (thirty-six flares as late as early 1968; then twenty-four flares later to reduce aircraft weight due to the mandated flare box). He set the flares and dropped them at the directions of the pilot. On February 1969, Spooky 71 of the 3rd SOS sustained a mortar round explosion in its right wing causing the aircraft to bounce uncontrolled into a steep right turn. Amidst the catastrophe, loadmaster Airman First Class (A1C) John L. Levitow saved a fellow-crewman from falling out of an aircraft opening and then recovered an activated flare rolling around on the floor to push-out the deadly flare before it exploded once clear of the aircraft. Levitow was awarded the Medal of Honor for his heroic actions.

The gunners (aka weapons mechanics) loaded and cleared malfunctions while keeping the three 7.62mm miniguns ready for firing. At the direction of the pilot, the gunner would select the number of guns the pilot wanted to fire at any one time and the rate of fire that the pilot wanted (i.e., low rate = 3,000 rounds-per-minute; high rate = 6,000). The gunner would select which single gun to fire as he was the only one who knew which gun was ready to fire. Once the pilot ordered the copilot to switch the Master Firing control to guns hot, the pilot could fire the guns by pressing the firing button on his control yoke.

It was normal to carry 21,000 rounds of 7.62mm ammunition on a typical Spooky mission. The three guns were initially loaded with 2,000 rounds each. Ten ammunition cans containing 1,500 rounds each were stored onboard. As each gun was fired out (i.e., emptied of ammo), the gun was reloaded by the gunner with 1,500 rounds. Occasionally, two gunners were assigned an aircraft, but because of never-ending shortages of gunners, one gunner assigned to a mission was the standard. The addition of another crewman to watch out for anti-aircraft fire was always welcomed. Throughout combat operations, all available eyes onboard Spooky scanned for enemy anti-aircraft fire.

During 1967, AC-47 operations experienced major increases with an additional squadron of AC-47s (The 14th ACS became operational in January 1968 and was redesignated the 3rd ACS on 1 May 1968) and additional aircraft for the 4th ACS authorized to expand operations and to replace lost gunships. The 4th ACS lost a total of five aircraft; three of which were confirmed losses to enemy ground fire during the year. The need for the aerial weapon system had become absolutely essential to directly support ground troops in contact with enemy forces and to defend air bases, artillery fire bases, towns, hamlets, forts, and outposts. The standard had been set high by the AC-47 Squadron during 1967; not one friendly outpost had been overrun when there was a Spooky gunship overhead.

To insure even greater success of fixed-wing gunships by adding advanced technology on the warbirds, the Air Force started investigating possible aircraft to replace the aged fleet of AC-47 gunships. The Air Force looked for bigger and better airframes to carry more and/or bigger guns into prolonged battle. Despite its combat successes and reliability, the old C-47 lacked adequate cargo space thus payload capacity, and its low wing prevented the pilot full view of the target and the placement of minigun fire. The "Gooney Bird" had proved to be extremely efficient and effective as the first USAF fixed-wing gunship, but a larger aircraft that could provide more firepower, greater loiter time on target, and accommodate advanced warfare technology equipment was essential.

The C-130 "Hercules" airframe was determined ideal for the next fixed-wing gunship; a four engine turboprop aircraft with more than sufficient engine power, payload, and fuel capacity to correct these deficiencies. In 1967, a modified C-130A prototype Gunship II arrived at Nha Trang AB on September 21 to undergo combat evaluation. The gunship carried four 20mm Vulcan cannons, four 7.62mm miniguns, and a variety of sophisticated sensors, illumination devices, and navigational aids. Seventh Air Force had recommended the C-130 aircraft to replace the highly effective but aging AC-47.[3]

A major problem surfaced with AC-130 gunships replacing the AC-47s right away. There was a shortage of C-130 airframes available for

conversion to gunships and the fact that C-130s were in critical demand worldwide as cargo and troop carriers, especially in Southeast Asia. Nonetheless, the demand in Vietnam for more fixed-wing gunships was deemed paramount for saving Vietnam. Therefore, the Air Force reconciled that the C-119G "Flying Boxcar"—with its high wing configuration affording a clear line of sight along the length of the fuselage for both firing and sensor operation, greater cockpit/cargo space for advanced equipment, flight crews operating computer firing control and sensor systems, larger payload, longer loiter time, and better survivability—was the best and most aircraft available for Project Gunship III. The aircraft was the quickest solution to filling the void of AC-47 gunships until more AC-130 gunships became obtainable. A sufficient supply of C-119Gs was readily available with U.S. Air Force Reserve units.

As follow-on to the C-82 Packet, the C-119 "Flying Boxcar" was developed shortly after World War II and was the largest U.S. cargo/troop/paratroop carrier transport aircraft at the time. The newly formed U.S. Air Force in 1947 fully utilized C-119s in support of American and allied activities worldwide, including the Korean War and first Indochina War in Vietnam and Laos.

On 8 June 1967, Secretary of the Air Force Dr. Harold Brown approved the selection of C-119G aircraft as the immediate successor to the AC-47. Modifications to transform 52 C-119G aircraft into AC-119 gunships were planned in two phases. In phase one, twenty-six C-119G aircraft were modified to carry four 7.62mm miniguns, advanced firing control system, infrared and white light detection equipment, jettisonable flare launcher equipment, and ceramic armor to protect crewmembers and essential aircraft components. These aircraft became the AC-119G "Shadow" gunships. In the second phase, twenty-six C-119G aircraft would be further modified with the addition of two J-85 engines to carry two .20mm cannons and four 7.62mm miniguns plus an advanced fire control system, even more sophisticated sensors such as infrared and Doppler radars, and an advanced illumination system. These became the AC-119K "Stinger" gunships.

TWO

Gunship III

The first phase of Project Gunship III was committed to developing improved replacement gunships for the aging fleet of AC-47 gunship missions currently employed in Vietnam. The AC-119G model was the most expedient remedy to the need for more fixed-wing gunships in the war zones. Thus, the G model of the AC-119 gunship took priority over its more sophisticated brother, the K model AC-119 gunship.

Fairchild-Hiller, manufacturer of the C-119, was the most logical aircraft company to convert the cargo plane into a gunship. Warner Robins Air Materiel Area (WRAMA) awarded the modification contract to Fairchild-Hiller on 17 February 1968. Upon activation of the USAF Reserves 930th Tactical Airlift Group, C-119G aircraft were sent to Fairchild-Hiller's Aircraft Service Division plant at St. Augustine, Florida for modification to AC-119 gunships. The Air Staff designated the AC-119G/K Gunship III project "Combat Hornet" on 21 February 1968. Problems soon arose which caused delays in converting the troop/cargo transports into gunships and the eventual deployment of the 71st SOS to Southeast Asia. The first AC-119Gs were scheduled to arrive in Vietnam by July.

Among the problems were procurement of electronic components and miniguns for the gunships not on schedule, the procurement of aircraft

Conversion of C-119G Transport/Troop Carrier "Flying Boxcars" into Attack AC-119G "Shadow" Gunships at Fairchild-Hiller Aircraft Plant in St. Augustine, Florida, 1968.

support equipment, and defining supply procedures. A smoke removal evacuation system became a must modification to clear smoke from the aircraft within ten seconds in case a magnesium flare ignited in the cargo (gun) deck. The survival of the gunship and crew was at stake because a flare fire would fill the aircraft with blinding and toxic smoke, impairing the vision and reaction capabilities of aircrew members.

A serious problem evolved with the AC-119G's gross weight. The first AC-119G was delivered to TAC (Tactical Air Command) to begin limited flight testing on 9 June 68. Test personnel immediately identified the combat configuration of the AC-119G would be over the take-off maximum gross weight limit of 62,000 pounds, thus forcing lighter fuel loads and in turn loiter time over targets. Consequently, the gunship failed to meet Air Force profile standards of sustaining a 200 feet-per-minute rate

of climb with one engine feathered during hot day conditions at a gross weight of 62,000 pounds. The final test report recommended a weight reduction in the gross weight of the aircraft in order to fulfill desired SEA combat capability.

Representatives from Headquarters USAF, PACAF (Pacific Air Forces), TAC, AFLC (Air Force Logistics Command), Seventh Air Force, and Fairchild-Hiller conferenced at WRAMA on 26-27 July 68 to determine alternatives for improving the aircraft performance to meet combat mission requirements. Conference attendees identified thirty items that could be removed to reduce aircraft weight by 3,277 pounds. The conferees had already been briefed that the AC-119G weighed 66,282 pounds when ready for take-off with a full load of fuel, ammunition, and flares. Removal of the thirty items would reduce the weight of the gunship to 63,005 pounds. The conferees believed that PACAF and Seventh Air Force needed to adopt the weight reduction plan and at the same time relax the single engine climb rate standard from 200 feet to 100 feet-per-minute.

Air Force Headquarters encouraged PACAF to accept the recommendations of weight reduction and lowering single engine rate of climb standard to 100 feet-per-minute and by doing so, the SEA mission profile for the AC-119G could be met while stressing the lower standard of performance afforded "adequate operational safety" with the pilot operated jettisonable flare launcher. Jettisoning the flare launcher in an emergency would boost the single engine rate-of-climb to around 150 feet-per-minute. On 15 August 1968, PACAF agreed to lower the rate-of-climb criterion to 100 feet-per-minute. Consequently, the aircraft were recycled through the St. Augustine plant for weight reduction modifications and on 11 October 68, the Air Force officially accepted the modified AC-119Gs.[1]

Twenty-six C-119Gs were converted to AC-119G gunships. Serial Numbers of those aircraft were: 52-5898, 52-5905, 52-5907, 52-5925, 52-5927, 52-5938, 52-5942, 53-3136, 53-3138, 53-3145, 53-3170, 53-3178, 53-3189, 53-3192, 53-3205, 53-7833, 53-7848, 53-7851, 53-7852, 53-8069, 53-8089, 53-8114, 53-8115, 53-8123, 53-8131, 53-8155.

The Fairchild AC-119G gunship was a fixed high-wing, twin boom, land monoplane of all metal construction. Modifications to the C-119G cargo/troop carrier aircraft to provide a side-firing aerial weapons system for day and night combat operations during all-weather conditions included the following:

1. Four SUU-11 Pod or four MXU-470/A Module 7.62 millimeter mini-guns (Gatling-type guns with revolving barrels). Eventually all Shadow gunships were fitted with G.E. MXU-470 mini-gun modules with flash suppressers, specifically designed for gunship use. Any number of guns could be fired at one time. At high rate of fire, each gun fired 6,000 rounds-per-minute. At low rate of fire, each gun fired 3,000 rounds-per-minute. When all four miniguns were on-line at high rate, a five second burst of fire sent 2,000 bullets at the target. The barrage of bullets was called "Rain of Death".
2. A Computerized Gunsight Fire Control System was installed for pinpoint placement of bullets. The system operated in fully automatic, semi-auto, manual, and offset firing modes with Lead Computing Optical Gun Sight and Fire Control Display.
3. A LAU-74A Flare Launcher, housing twenty-four Mark 24 flares, was installed in the starboard paratroop doorway (the door was removed) at the rear of the cargo deck. The launcher could be jettisoned in case of a “hung” flare fire or for use of the doorway for crew bailout. A small doorway was cut out just forward of starboard paratroop door for crew entrance/exit on the ground.
4. AVZ-8 Illuminator, a 20-kilowatt, 1.5 million candlelight Xenon “white spot light” with a variable beam that could light up a football stadium during the darkest of nights. It was aimed out the port paratroop doorway (the door was removed) at the rear of the cargo deck. When used, the light literally turned night into day on the ground.
5. Night Observation Scope (NOS) that magnified starlight and moonlight several thousand times to provide the NOS operator with a clean, though green, picture of the terrain below. The NOS, which

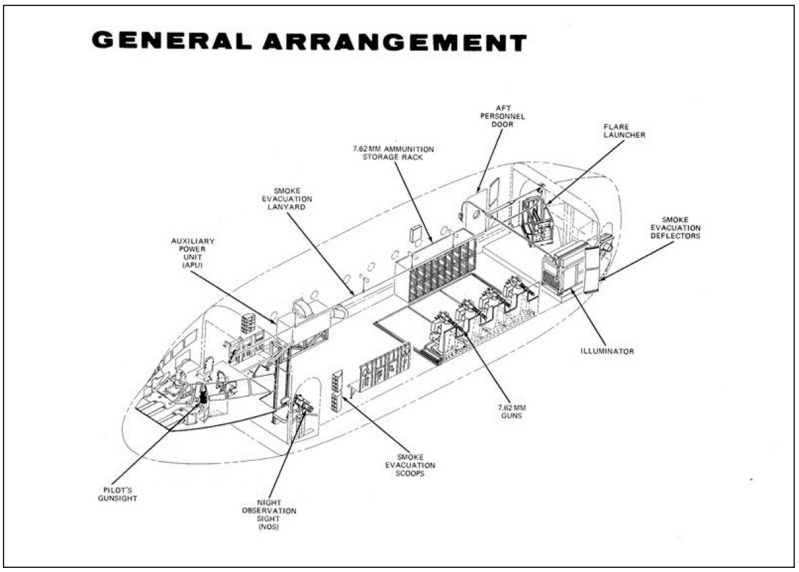
utilized moonlight, starlight, and infra-red light, enabled the gunship to see in the dark of night. The framework for the NOS was installed in the port forward doorway (the door was removed).

6. Auxiliary Power Unit (APU) 60 KVA.

7. Ceramic armor plating for cockpit crew protection against enemy ground fire.

8. Twenty-two self-sealing fuel tank bladders in the wings. Bladders were filled with reticulated polyurethane foam to suppress explosions.

9. Updated flight, navigation, and standard radio equipment for Southeast Asia Operations.



AC-119G Gunship interior arrangement. Ammunition storage racks were later removed to reduce aircraft weight. Cans of ammunition were thereafter strapped-down to the floor.

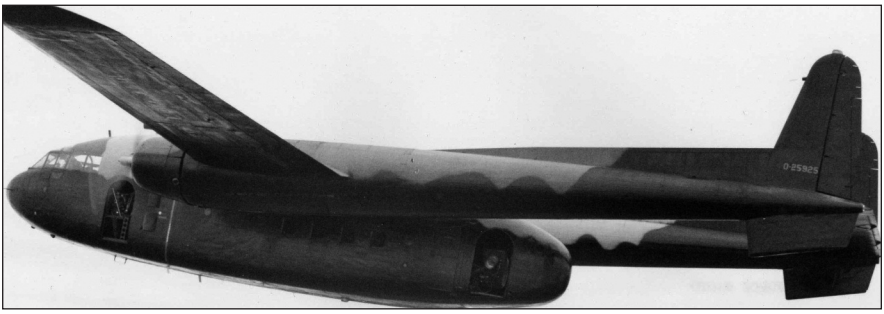
With dimensions of 109 feet, 3 ¼ inches (wing span), 86 feet, 5 ¾ inches (length), and 26 feet, 7 ¾ inches (height), the gross weight of the aircraft was 64,000 pounds while powered by two Wright R-3350 radial piston-driven engines at 3,500 horse-power per engine. The aircraft's cruising speed was 180 knots, while speed during combat was reduced to 140 knots. Attack altitudes above ground level (AGL) were: A (Alpha)—1500 feet; B (Bravo)—2500 feet; C (Charlie)—3500 feet; and D (Delta)—4500 feet. Most combat missions for the AC-119G gunship were flown at or below Charlie altitude because the 7.62mm miniguns maximum effective range of fire was 3500 feet. Existing weather conditions and enemy anti-aircraft fire also dictated the firing altitude. Maximum sortie (aka mission duration) was six hours with thirty minutes reserve fuel. Usually, combat sorties ranged from four to five hours in duration.

Mission priorities of the AC-119G squadrons were to provide: 1) Close-fire support of U.S. and friendly troops in contact with enemy forces; 2) Close-fire support of U.S. and friendly military installations including artillery fire bases, forts, outposts, strategic hamlets, villages, and district towns; 3) Pre-planned armed reconnaissance and interdiction of hostile areas and infiltration routes; 4) Search and Rescue support; 5) Night and day armed escort for road, river, and close off-shore convoys; 6) Illumination for night fighter strikes; and 7) Harassment and Interdiction of enemy.

The AC-119K Gunship

In the second phase of Gunship III development and modification at Fairchild-Hiller Aircraft Service Division plant located at St. Augustine, Florida, twenty-six more C-119Gs were converted into AC-119K gunships. The K model C-119 gunship was actually preferred by the Air Force over the G model gunship but the urgent need of gunship replacements for the AC-47 in Vietnam justifiably pushed the production of AC-119G gunships ahead of the K model.

In addition to all the modifications made to transform the C-119G into the AC-119G gunship, two J-85 jet engines were added for greater take-off performance to accommodate heavier payloads that included two 20mm Vulcan cannons and ammunition, beacon tracking radar, for-



AC-119G Gunship's "Business" port side with pilot gunsight, night observation scope, four miniguns, and white spotlight.

ward looking infrared radar (FLIR), and associated fire control system computers on K models. Polyurethane foam bladders were installed in both the G and the K models for explosion protection against hits sustained from enemy anti-aircraft weapons.

The AC-119Ks were assigned to the 18th Special Operations Squadron, activated under the 1st Special Operations Wing for training at Lockbourne AFB, Ohio on 25 January 1969. The squadron would eventually be assigned to the 14th Special Operations Wing at Phan Rang, RVN. The first AC-119K gunship arrived at Phan Rang on 3 November 1969 and flew its first combat mission ten days later. In keeping consistent with fixed-wing gunship call signs starting with the letter "S", (i.e., Spooky, Spectre, and Shadow), Seventh Air Force officially approved the radio call sign of "Stinger" for the AC-119K gunships on 1 December 69. Stinger airmen soon created their squadron patch with the motto of "Vengeance By Night." The primary mission for Stingers was interdiction of enemy supply routes on the Ho Chi Minh Trails, Steel Tiger, and Barrel Roll in Laos while also flying direct fire support missions for allied ground forces in combat with enemy forces and defending friendly air bases.