



AC-119G *Shadow* 17th SOS & Shadow Chronology

Who Knows What Evil Lurks?

The Shadow Knows

A history of the AC-119G **Shadow** gunship. A full two years before the final AC-47 Spooky mission in December 1969, the Air Force had already narrowed the replacement for the old C-47s to either the 1950s-vintage, twin-engined C-119 Flying Boxcar, or the newer, four-engined C-130A Hercules. While the advantages of the latter over the former were clear to all involved, the cost of diverting scarce C-130 resources for gunship duty would severely penalize the already overtaxed airlift forces. The ready availability of C-119s in Air Force Reserve units finally decided the issue in favor of the Boxcars, at least as an interim measure until sufficient AC-130s could be brought on line. The next step proved far more controversial.

Because the G-model AC-119's twin piston-engine performance was so marginal at combat gross weight, the Air Force intended from the beginning to upgrade selected Gs to a new K-model configuration. The K bolstered the piston engines with two wing-mounted jet engines. The difference was no small thing. While the rate of climb with one engine out 500 feet per minute for the K, the G model's performance under the same conditions was listed unsatisfactory at combat gross weight. Perhaps to spare squeamish pilots, no performance measurers of any kind were included to describe just how unsatisfactory the situation was!

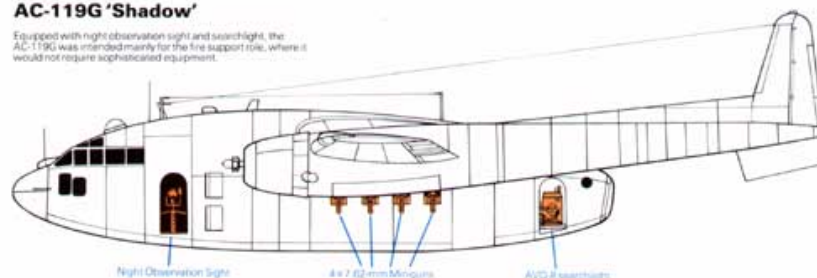
Overriding strong Air Force concerns in June 1967, Secretary of the Air Force Harold Brown citing modification costs & deployment delays chose to go with the G model as the AC-47 replacement. Later, in February 1968, he relented, what by approving a mixed C-119G/K fleet, 16 of each type in two squadrons & an additional 10 of each type to absorb attrition losses. The addition of a K squadron, however, did little to alleviate Air Force apprehension over the all-piston G model. In mid-1968, even the gunship-hungry Seventh Air force in Saigon openly questioned whether the G model should even be allowed into combat.

The AC-119G was truly the follow-on aircraft to Spooky. It was built with the TIC support mission in mind. If the G models could wrangle an invitation to the party, they'd at least come 'well dressed.' The Flying Boxcars were armed with four 7.62mm SUU-IIA/IA minigun pods, one more minigun than the three carried aboard the AC-47s, & with the increased ammo supply afforded by the larger payload capacity, the AC-119G was about 25% more effective than the AC-47. Later aircraft were fitted with the G.E. MXU-470 minigun modules designed specifically for gunship-type aircraft. The aircraft to be modified were drawn from Air Force Reserve units, many of them coming from the 434th Troop Carrier Wing in Indiana. The 434th would also supply many of the AC-119 crews. In addition to the gun package, AC-119Gs were fitted with an AVQ-8 20KW Xenon light, a Night Observation Sight which magnified starlight & moonlight several thousand times to provide a surprisingly clear, if still green, picture of the terrain below. The NOD's biggest drawback was that the tracer rounds fired by the gunship's miniguns provided so much more light that they effectively shut the NOD/NOS system down. As a result, flares became the primary means of identifying ground targets. In addition, the Shadow had an LAU-74A flare launcher, General Precision fire control computer, & a TRW fire control safety display to ensure that the aircraft did not fire on friendly troops. Internal power for all the new equipment was supplied by a Garrett Industries 60 KVA (APU) auxiliary power unit, the same one used in Boeing 727 airliners. For crew safety, ceramic armor was added & APR-25 & -26 ECM gear installed. Carrying 31,500 rounds of ammunition & 24 flares, it was more than capable of hurting anything it caught in its sights.

Fairchild AC-119

AC-119G 'Shadow'

Equipped with night observation sight and searchlight, the AC-119G was intended primarily for the fire support role, where it would not require sophisticated equipment.



While the aircraft were being modified, the crews of the 434th TCWg (Reserve) were going through training for their new role. First came gunship training with the 4434th Combat Crew Training Wing at Lockbourne AFB in Ohio. Then it was on to Eglin AFB for jungle training. Designated the 71st Special Operations Squadron, the unit continued training throughout the summer & early fall of 1968. In November 1968, the unit deployed to Nha Trang where they became part of the 14th Special Operations Wing.

In what must have seemed to some like crashing the party uninvited, the first four C-119Gs of the 71st Special Operations Squadron finally arrived in Vietnam in December 1968 to begin a three-month combat evaluation. The AC-119s needed a catchy call sign since the AC-47 crews had Spooky. An ill-considered attempt by Seventh Air Force to assign the radio call sign 'Creep' to the 71st did at least give the squadron an early opportunity to demonstrate its fighting mettle to the headquarters staff. Following a 'howl of indignation' from the squadron, Seventh Air Force agreed to change the call sign to the one that the 71st requested 'Shadow.' The name stuck & the aircraft were known as AC-119G Shadows.

The 71st displayed the same mettle in the early combat evaluations. During nightly armed reconnaissance missions, the Shadows flew down to 500 feet, using night observation systems to detect ground targets. The Flares became primary, even though their intensity effectively closed down the NOD after field experience in Vietnam revealed serious limitations in this early generation night viewing system. Once the flares acquired a target, the Shadow established an orbit overhead & pummeled the target with one or more of its four 7.62mm miniguns. As with the AC-47s, the range limitations of the 7.62mm ammunition kept the orbit altitudes as low as feasible, but usually no higher than 2,000 feet. Just two months after the arrival of its lead elements, all assigned aircraft were in country & the 71st SOS was declared combat ready.'

To provide fire support to all four military regions in South Vietnam, the 71st began operating Alpha, Bravo, & Charlie flights, each with three gunships from three widely separated airfields throughout the country. In June 1969, the 71st SOS returned its flag to the United States, leaving some of its G models & two-thirds of its personnel in Vietnam to fill out a new gunship squadron designated the 17th SOS.'

By the end of 1969, the 14th Special Operations Wing had 16 G-model & 12 K-model gunships operating from five different air base throughout Vietnam.' And by this time, the Shadow & Stinger crews were already establishing their formidable reputation throughout Southeast Asia.

From the arrival of the K models, the two squadrons began dividing into separate missions a reflection of their different sensors & armament. The crews of the G models had already learned the range limitations of their 7.62 minigun ammunition when firing against troops from an altitude that kept the AC-119s beyond the reach of the enemy small-arms fire. Shadow navigator 1st Lt. Billy B. 'Rusty' Napier recalled learning one such lesson, much to his crew's subsequent embarrassment: 'We found a solitary North Vietnamese truck one night, a rare catch for a Shadow crew. Popping up to 2,000 feet we opened up on the truck with all four miniguns. The truck disappeared in a cloud of dust as we showered it with thousands of rounds. After patting ourselves on the back & calling in our 'kill' to home base we were astonished to see the stationary truck start back down the road! To pour salt in our wound, it even turned its headlights on.'

It was experiences like this that led the G models to specialize in defense of isolated outposts in South Vietnam, while the stronger Ks with their 20mm cannon focused on the increasingly important truck-killing mission. During the course of the war, the battles of Dak Pek & Dak Seang also reminded everyone that gunships offered far more than gun support. One of the more unusual missions occurred at Dak Seang in the A Shau Valley the night of 6/7 April 1970. The base camp had been under attack for several days & ammo & supplies had to be airlifted in. The trouble was, the NVA anti-aircraft fire was pretty accurate. After three Army C-7 Caribou transports were shot down attempting to resupply the camps, the pilots of the gunships & Caribous put their heads together & agreed to try something never before attempted. Col. Bill Fairbrother, CO of the 14th SOWg, proposed that the re-supply drops be done at night, with airborne illumination of the airstrip being handled by a Shadow gunship. The Shadow would circle overhead, using his xenon light to illuminate the drop zone. If the NVA opened fire, this cargo bird could fire back.

This tactic called for the AC-119 orbiting the besieged camp to maintain suppressive fire until the Caribou reached the final approach to the parachute drop point. At precisely this time, the AC-119 lit up the drop zone like a nighttime Super Bowl game with its powerful 1.5-million-candlepower illuminator. Shadow Navigator Rusty Napier recalls the gunship crew's frightening sense of vulnerability to enemy fire once it identified its

position by turning on the illuminator: 'We left the illuminator on for a predetermined number of seconds, every one of which seemed an hour long once enemy tracer fire started coming toward the big white light in the Sky.' The C-7s, using a Shadow radio call sign, put the supplies right on the money - Immediately after dropping its cargo, the C-7 called for the AC-119 to kill the lights, while the Caribou escaped to safety in the darkness. It worked 68 times in three weeks without a single Caribou being hit. More importantly from a command viewpoint, both camps held while the enemy took a considerable beating for their efforts. This type of mission pointed up the versatility of the gunship.

Immediately following the Dak Pek/Dak Seang battles, the Shadows in particular supported the massive South Vietnamese & US attack later that same year on North Vietnamese base camps in Cambodia. But while the allied forces returned to South Vietnam, the gunships stayed deep in Cambodia in a desperate attempt to bolster government forces against the Khmer Rouge. This highly classified gunship operation required fake flight & expended-ammunition logs showing operating locations within South Vietnamese borders. Fortunately for US public policy, no gunship was shot down in Cambodia during this period.

Gunship luck wouldn't hold forever. A single engine failure on takeoff killed six men; two months later, a runaway propeller forced a crew to abandon their aircraft over the China Sea. While the crew was recovered safely the aircraft continued to fly itself.... straight to China! It eventually disappeared from radar in international waters. I've also heard stories we didn't let it get very far. Supposedly we sent aircraft after it & shot it down. This has never been validated.

By 1972, the war was clearly winding down for the Shadow/Stinger squadrons. The AC-130s were coming on line in growing numbers, & the 17th SOS in particular was converting from a combat to a training squadron as its aircraft were turned over to the Vietnamese Air Force. The indisputable combat success of the AC-119 crews in Indochina is a story of persistence & faith in themselves as much as it is one of valor. Continual program delays, modification cost overruns, & bureaucratic opposition to the AC-119 gunship program from Washington to Saigon threatened their deployment at every step.

With the advantage of hindsight, however, it can be argued that the truest testimony of the AC-119s' worth is not measured on engine performance charts, The most obvious sign of success was when a GI on the ground, about to be overrun by VC troops, told the FAC pilot 'F#@%! the F-4s - Get me a Shadow!

ADDITIONAL NOTES:

Type: AC-119G Shadow, fixed wing gunship

Number Built/Converted: 26

Remarks: Gunship version of C-119

Serial numbers: 52-5898, 52-5905, 52-5907, 52-5925, 52-5927, 52-5938, 52-5942, 53-3136, 53-3136, 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

SPECIFICATIONS

Span: 109 ft. 3 1/4 in. **Length:** 86 ft. 5 3/4 in. **Height:** 26 ft. 7 3/4 in. **Weight:** 62,000 lbs. max.

Armament: Four SUU-11A 7.62 mm 'miniguns' with 50,000 rounds of ammunition for daytime missions; 35,000 rounds & 60 MK 24 flares (max.) for night missions. Later, the SUU-11A's were replaced by **General Electric MXU-470/A gun modules**. The AC-119G was equipped with a **computerized fire control system (FCS)** with fully auto, semi-auto, manual & offset firing capabilities. The Shadow also has a 1.5 million candlepower **illuminator** with a variable beam

Engines: Two Wright R-3350s of 3,500 hp. ea.

Crew: Six (day) or eight (night) - pilot, copilot, navigator, night observation sight (NOS) operator, flight engineer, illuminator operator, two gunners

PERFORMANCE

Combat speed: 130 knots **Cruising speed:** 180 knots **Duration:** approximately 6 hours (plus 30 minutes reserve) **Attack altitude:** approximately 3,500 ft. above ground level

(Excerpts from *Apollo's Warriors* by Col. Michael E. Haas, USAF, Ret., and *Gunships: A pictorial History of Spooky* by Larry Davis)