

BRITAIN'S TOP SELLING
AVIATION MONTHLY

CDC00458

FlyPast

No.62 USA \$3.50

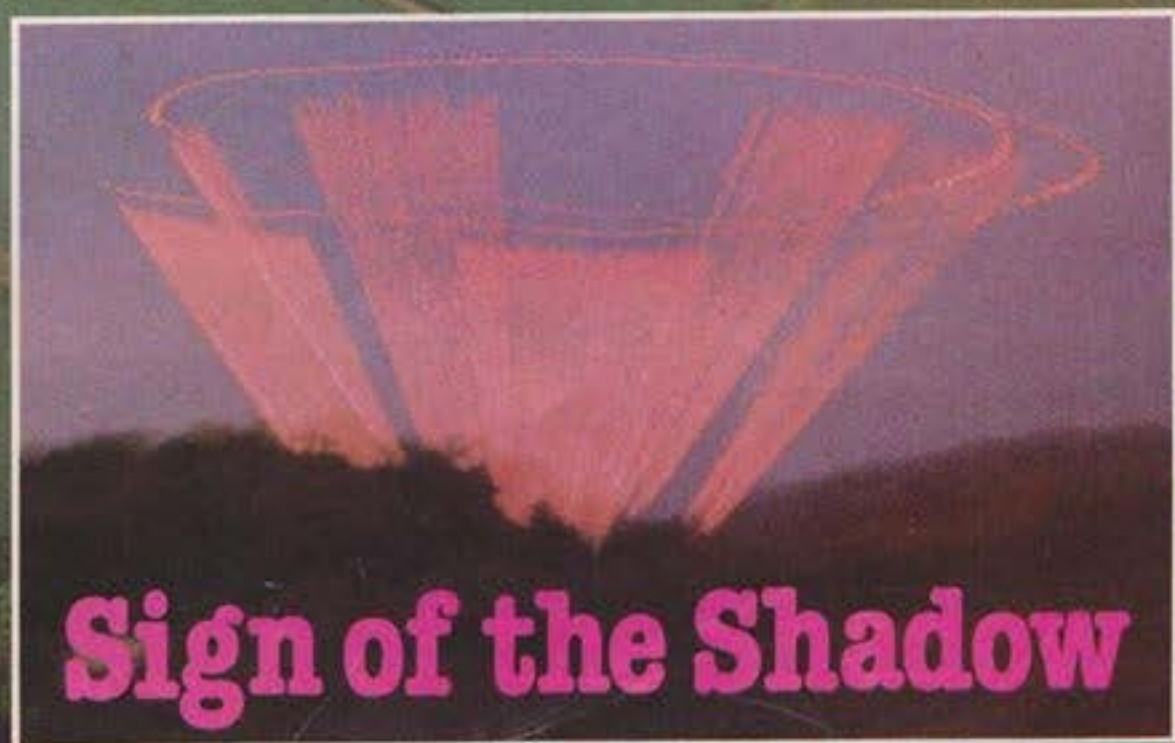
50th ANNIVERSARIES
1936~1945



**Lossiemouth
Shackletons**

**Spiteful
and
Seafang**

**Freight
Racer!**



Sign of the Shadow



BY THE END of 1963 the first United States Army Special Forces teams had arrived in South Vietnam to assist the government in its struggle against the Viet Cong. The Green Berets began to recruit native Civilian Irregular Defence Groups and established them in protected camps in remote areas of the country from which they could monitor and carry out operations against the Viet Cong.

Over the next two years more Special Forces advisers arrived and by the end of 1965 US combat troops were in action on the ground and South Vietnam's air bases had begun to receive squadrons of fighters, attack aircraft and helicopters.

It did not take long for the Americans to

realise that although they could bring their superior firepower to bear in the daytime, the night belonged to the Viet Cong.

During the hours of darkness Viet Cong sappers could try to penetrate the defences of the CIDG camps to clear paths through the barbed wire and minefields for the main force units, who would try to overwhelm the defenders before first light enabled air strikes to be delivered.

The aircraft parking ramps at Air Bases became juicy targets for the enemy guerillas who could infiltrate close to the perimeter, fire off a dozen mortar bombs and fade away into the darkness. Such an attack on Bien Hoa Air Base on November 1, 1965 destroyed five aircraft and damaged fifteen others.

Ground troops in contact with the enemy could call up airstrikes during daylight hours, but during the night air support was limited, even with C-47 'Night Angel' flare ships to provide illumination by dropping high intensity parachute-delivered flares over the scene of the fighting.

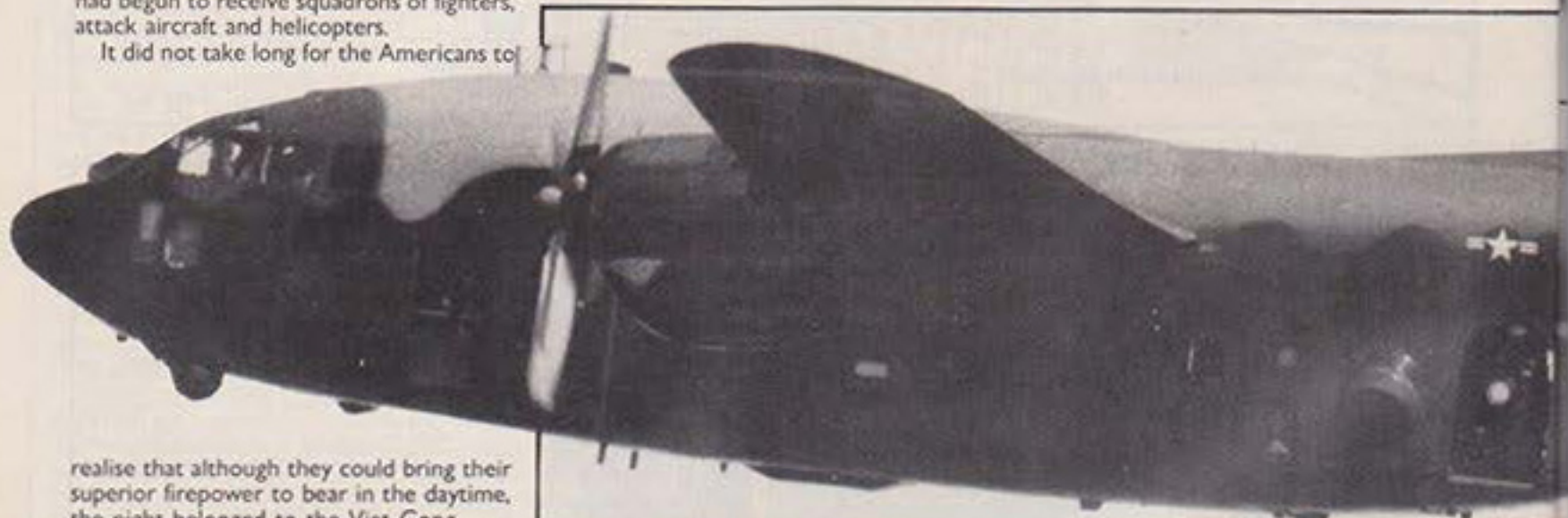
Back in the US research was beginning, following a slow start, into the idea of aircraft equipped with side-firing guns. The basic theory being that such an aircraft could orbit a target in a left-hand pylon turn and pour continuous fire into the target.

The first live-firing tests took place in the late summer of 1964 at Eglin AFB in Florida. A Convair C-131 transport aircraft was fitted with a fairly new weapon, the 7.62mm General Electric SUU-11A/A Gatling gun pod, which had a two-speed motor drive capable of delivering up to 6,000 rounds per minute. One of these guns was mounted in the starboard cargo door of the C-131 and tested over Eglin's water range at altitudes from 500 to 3,000 feet.

The C-131 scored 25 hits on a ten foot rubber raft and 75 hits on a fifty foot raft. All this with only a one second burst. On the land range, 25 mannequins were set up in various positions and scattered over three-

DISPOSAL

A SERIES ON THE FATE OF AIRCRAFT WITHDRAWN FROM SERVICE



AC-119 Gunship

Phil Chinnery and former aircrew Ken T Wilhite Jr recall operations in Vietnam with Shadow and Stinger gunships – a specialist role requiring an adaptable airframe. With the end of the conflict, the demise of the AC-119 was not far behind.

quarters of an acre. After one three second burst, nineteen mannequins were hit, with ten of them considered 'killed'.

Project Gunship I continued with further tests in an armed C-47 Skytrain and in October 1964 a test team arrived at Bien Hoa to convert one of the 1st Air Commando Squadrons C-47s into a gunship. Two GE minigun pods were mounted in the last two windows on the port side, while the third would fire out of the open cargo door.

A Mark 20 Mod 4 gunsight, borrowed from the A-1 Skyraider, was mounted in the left cockpit window. A trigger button, which could fire all three guns individually or simultaneously, was mounted on the pilot's control wheel. The forward cargo hold was modified to hold 24,000 rounds of ammunition and 45 200,000 candlepower flares, which could be thrown out of the open cargo hatch.

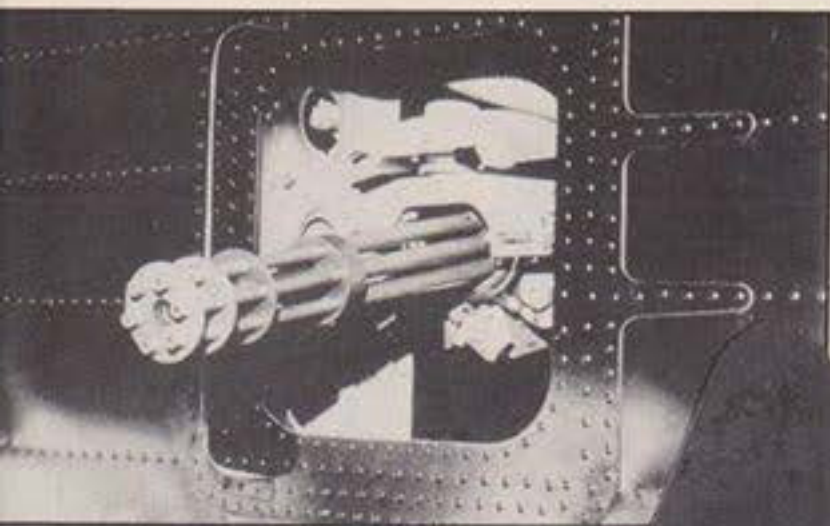
Originally the C-47 was designated FC-47, but this was then changed to AC-47. To anyone watching one of its nocturnal close-support missions, its firepower was, to say the least, impressive. One in every five rounds was a tracer and the sight of streams of tracer rounds pouring out of the darkness towards the ground, combined with the

roar of the guns, soon led to the AC-47 being nicknamed *Puff the Magic Dragon*. This was followed in 1966 by the nickname *Spooky* the call-sign of the AC-47 gunships.

Early in 1966 the AC-47 began to fly armed reconnaissance missions along the Ho Chi Minh Trail infiltration routes through Laos and into South Vietnam. This was a whole new ball game, for the Spookies were no longer faced with heavy machine-gun fire, but with 37 and 57mm anti-aircraft guns, some of which were radar-guided. In short order six AC-47s were shot down and the type was withdrawn from the trail pending the arrival of the Lockheed AC-130 Hercules.

The Air Force wanted a bigger gunship with a vast increase in payload and performance, to enable them to fit more guns and ammunition, together with new systems including night observation devices. The C-130 was chosen for the job and designated the AC-130 Spectre Gunship II.

Fitted with four 20mm GE M-61 Gatling guns and four 7.62mm GE MXU-470 miniguns, the prototype had a Night Observation Device (NOD) or Starlite Scope, a primitive infrared sensor, a 20 kilowatt searchlight and a bread-board computer to



Above: Loading Mk. 24 flares into the LAU-74/A flare launcher on a Stinger. (Mike Drzyzga via Ken Wilhite)

Above left: GAU-2/B minigun protruding from the port side of an AC-119G. (Fairchild)



AC-119K 38121 being escorted over Laos by A-1 Skyraider 'Blood Sweat and Tears' of the 1st SOS. (RS Drury)

solve the Kentucky windage problems by coordinating all the variables involved in a side-firing weapons system.

The AC-130 would eventually evolve into the most powerful sophisticated gunship ever built, but a shortage of airframes caused a slow start. The Seventh Air Force in Vietnam wanted more gunships as soon as possible, with the ability to operate over the Ho Chi Minh Trail as well. The AC-47 was out of the question, so the Air Force turned to the venerable, Fairchild C-119 Flying Boxcar.

The C-119 had the increased performance required, together with a large interior and was readily available as it equipped many squadrons of the Air Force Reserve. On February 17, 1968 a letter of contract was awarded to Fairchild-Hiller Corporation to modify 26 C-119G airframes into AC-119G gunships and 26 more into advanced AC-119K gunships for the truckhunting role. The modifications were to be carried out at the Fairchild-Hiller facility in St Augustine, Florida.

Withdrawn from Air Force Reserve units the C-119s came in particular from the 434th Troop Carrier Wing in Indiana who would also supply many of the AC-119 crews. The AC-119G was to be armed with

four 7.62mm SUU-11A/1A minigun pods and with the increased ammunition supply afforded by the larger interior, it was about 25% more effective than the AC-47.

The AC-119Gs were also fitted with an AVQ-8 20KW Xeron searchlight, a Night Observation Sight, an LAU-74A flare launcher, General Precision fire control computer and a TRW fire control safety display to ensure that the aircraft did not open fire on friendly troops.

AC-119G crews underwent gunship training with the 4434 Combat Crew Training Wing at Lockbourne AFB in Ohio and then went on to Eglin AFB for jungle training. The first AC-119G was delivered in May 1968, exactly 100 days after the contract was let. The AC-119G unit was designated the 71st Special Operations Squadron and they deployed to Nha Trang in South Vietnam in November 1968, where they became part of the 14th Special Operation Wing.

Callsign Creep was initially allocated to the AC-119Gs. After a howl of indignation from the 71st SOS this was changed to Shadow as of December 1, 1968.

Shadows began operational sorties and combat evaluation on January 5, 1969. They performed satisfactorily except in the forward air control role, as they were rather

slow, hard to manoeuvre and vulnerable to enemy fire. They were also very heavy and limited to six hours flying time. Most Shadow targets were located as a result of armed reconnaissance operations, when a AC-119 would be assigned to patrol a 'box' - an area bounded by precise co-ordinates. The Shadow would fly at around 500 feet and search for a target with the night observation device or by means of the flares/illuminator.

When a target was identified the gunship plotted the co-ordinates and called the controlling agency for clearance to fire. Upon receipt of clearance the Shadow would climb to 3,500 feet, usually select a semi-automatic firing mode, bank into a left orbit and open fire.

Many of the AC-119G boxes were located west of the cities of Kontum and Pleiku where Cambodia, Laos and South Vietnam converged. One Shadow attack on an enemy troop concentration and storage area north of Pleiku Air Base touched off eighty secondary explosions.

By March 1, 1969 all eighteen AC-119Gs of the 71st SOS were in Vietnam. In the meantime, back in the US, work on the AC-119Ks continued. 26 C-119Gs were brought up to C-119K standard, equipped as AC-

119Gs and then modified for the truck-hunting role.

Two M61A1 20mm gatling guns were added to the four GE MXU-470 minigun modules now fitted to the AC-119Gs. AN/APN-147 Doppler terrain following radar, Texas Instruments AN/AAD-4 Forward Looking Infrared, Motorola AN/APQ-133 Side Looking beacon tracking radar and Texas Instruments AN/APQ-136 search radar with moving target indicator mode were all installed.

First AC-119K was delivered to the 18th SOS at Nha Trang on November 3, 1969. The 18th SOS joined the 17th under the 14th Special Operations Wing, which was one of the most unique units in South East Asia. They had the only AC-47 units in the 3rd and 4th SOS; the only two psychological warfare units in the 5th and 9th SOS; the 20th was the only armed helicopter unit in the Air Force, plus the two AC-119 squadrons.

AC-119Ks were designated the callsign Stinger and used almost exclusively in the truck-hunting role. The twin 20mm guns could destroy most makes of Soviet truck, but were ineffective against light tanks. Later in the war some Stingers would relinquish all the 7.62 armament in favour of more 20mm ammunition.

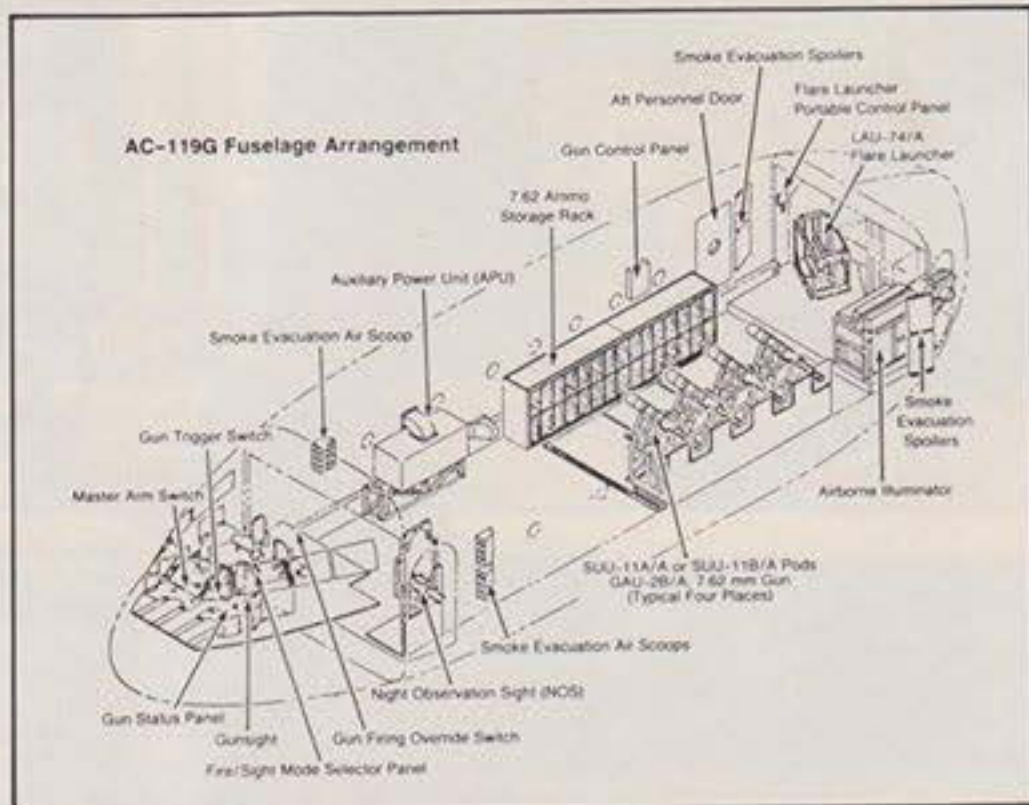
Originally the 'K' model gunships were based in flights at Da Nang, Phu Cat and Phan Rang. From these bases though, the Ho Chi Minh trail virtually unreachable and eventually two flights were moved to Udorn and Nakhon Phanom Royal Thai Air Force Bases. From there the Stingers could roam the trail at will.

71st SOS was redesignated the 17th SOS in June 1969 and one third of the squadron's personnel rotated back to the United States. Before the changeover, the squadron was involved in an unusual mission when one of its Shadows arrived over a friendly compound which had lost its electric power during a Viet Cong attack.

A doctor was performing a delicate operation on a wounded Vietnamese soldier as the power failed. Lt Col Burl C Campbell banked his Shadow into a tight orbit over the compound and switched on its one-million candlepower illuminator. The light enabled the doctor to finish the operation successfully and the Shadow headed for home.

On October 11, 1969 the 17th SOS lost its first aircraft. Shadow 76 crashed on take off from Tan Son Nhut Air Base with the loss of six crew members. A second AC-119G was severely damaged a month later when its right gear collapsed on landing at Chu Lai Air Base.

18th SOS lost its first AC-119K on February 19, 1970 whilst on short finals to Da Nang Air Base. The approach went nor-



mally until the flaps and undercarriage were lowered about two miles out and at 500 feet altitude. A sudden power loss in the port engine and jet pod prevented the pilot from maintaining directional control or altitude. The aircraft was demolished in the resulting crash but the crew escaped with only minor injuries.

1970 was a quiet year for AC-119 operations over South Vietnam. Most of the enemy main-force units had withdrawn to their sanctuaries in Laos and Cambodia. Many gunship missions were now assigned to the border areas and in defence of such outposts as the CIDG camps at Dak Seang and Kak Pek.

Shadows and Stingers flew one or two sorties a night to cover the besieged post between April 1 and May 22. Expending almost 2,400,000 rounds of 7.62mm ammunition and 22,000 rounds of 20mm.

In early April the Shadows were asked to illuminate a drop zone while DHC C-7A Caribous tried to resupply the defenders by air. Three C-7s had been lost to ground fire and a change in tactics was required.

The gunships would orbit the posts and provide fire support until the Caribou reached the initial point for the drop. At that moment the gunship would turn on the illuminator, the Caribou would drop its load and then disappear into the darkness again as the illuminator was switched off. This tactic worked 68 times without a Caribou being hit.

On April 28, 1970 the 17th SOS lost another Shadow. The aircraft lost an engine

on takeoff from Tan Son Nhut Air Base and crashed, killing six of the eight crew members. The 'G' models were so heavy that with one engine out they could only climb at 100 feet per minute, compared to the 'K' model with its two underwing J85 jet engines and 960 feet per minute climb rate, with the loss of one engine.

Following this crash the Air Force reduced the 'G' model's maximum gross take-off weight to allow a 150 foot per minute rate of climb on a single engine.

Less than a fortnight after the crash at Tan Son Nhut a Stinger operating out of Udorn in Thailand was nearly lost, but for an outstanding display of airmanship by its crew. It was one o'clock in the morning and the Stinger was orbiting a heavily defended road section near Ban Ban, Laos. They had destroyed three trucks and were receiving heavy anti-aircraft fire.

Suddenly the whole cargo compartment lit up as anti-aircraft rounds tore into the right wing and sent the aircraft into a sickening right dive. Captain Alan Milacek called "Mayday, Mayday, we're going in" and ordered the illuminator operator to jettison the 1,100 pound flare launcher. The gunship dropped 1,000 feet in a few seconds and as the crew prepared to bale out the two pilots pooled their strength to pull the aircraft out of its dive.

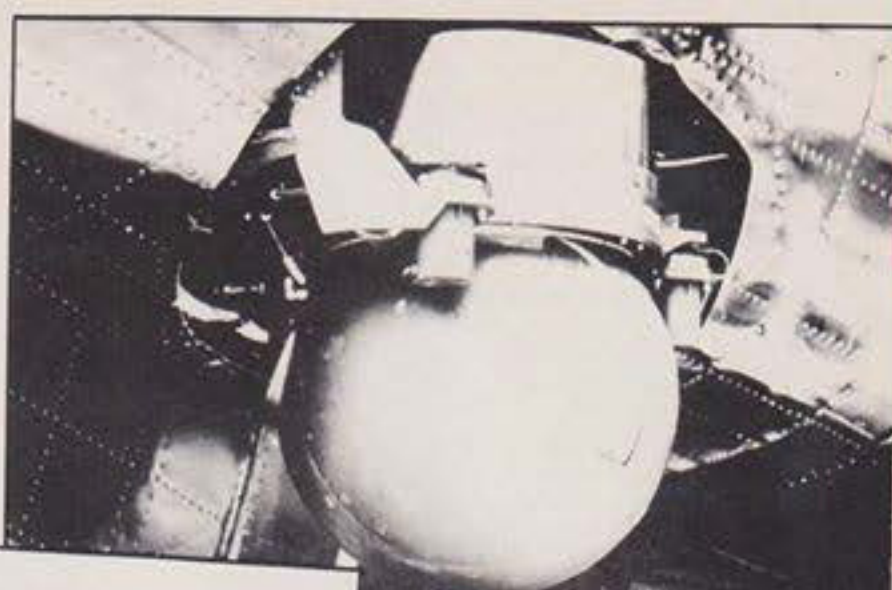
By using full-left rudder, full-left aileron and maximum power on the two right engines, they regained stabilised flight. The crew threw out every possible item to allow the crippled aircraft to clear the mountains

Below: AC-119G in South Vietnamese Air Force colours. (Mike Kasiuba)





Above: View of the Night Observation Sight installation in the port crew entrance door of the AC-119G. (Fairchild-Hiller)



Above: Prototype AN/AAD-4 forward-looking infra-red system on an AC-119K (Fairchild)



Left: Shadow 'business card' giving vividly the task that AC-119s were set. (via Ken Wilhite)

between them and safety and Milacek made a successful no-flaps landing at Udorn at 150 knots (normally 117 knots).

When the crew stepped thankfully to the ground they discovered that about one-third of the right wing; a fourteen foot section and aileron, had been torn off. Fifteen months later in a ceremony at the Pentagon, Captain Milacek and his crew were awarded the Mackay Trophy for 'the most meritorious flight of the year'.

18th SOS lost its second Stinger on the night of June 6, 1970 when its left engine propeller went out of control shortly after take-off from Da Nang. The pilot tried to return to base but the situation deteriorated and the crew bailed out over the South China Sea East of Da Nang.

The empty aircraft continued seaward, creating a certain amount of excitement as it headed towards China's Hainan Island. The independently-minded Stinger crashed at an undetermined spot, but all crew members except one were safely recovered.

With the wind-down of United States combat units in South Vietnam and the introduction of the Nixon administration's policy of Vietnamisation, the 14th SOW was deactivated in September 1971. Most of the AC-47 gunships had been given to the Vietnamese Air Force and the AC-119s were to follow.

17th SOS gave up all its AC-119Gs and support equipment to the Vietnamese 819th Combat Squadron at Tan Son Nhut on September 1, 1971. The 17th was charged with training the Vietnamese crews and planned to have two dozen operational by May 1, 1972. They were well on their way to achieving that figure when the North Vietnamese launched their invasion on March 30, 1972.

Some of the heaviest fighting during the

spring invasion took place around the city of An Loc. An AC-119K gunship being flown by Captain Terry Cortney on a daylight mission, was hit by accurate 37mm anti-aircraft fire. They lost the right engine and jet, along with some parts of the wing and began to lose altitude.

The pilot held the aircraft steady as the crew baled out and with the last crew member out, the co-pilot, looked around as he swung in his parachute, he saw the aircraft enter a right bank and impact the ground. Captain Cortney was nominated for the Medal of Honour, but it was not approved.

South Vietnamese armed forces held out against the North Vietnamese invaders for three more years. By April 29, 1975 the Saigon government, having been abandoned by its American allies, found itself surrounded

by fourteen North Vietnamese Army Divisions. As defeat loomed, dozens of Vietnamese Air Force aircraft departed for Thailand, including two AC-119s which made it to U-Tapao. At least 37 others were abandoned or destroyed as the country fell.

One AC-119 which fought to the last, spent the night of April 29 orbiting Tan Son Nhut air base expending flares and ordnance against the advancing enemy. At daylight the gunship landed to refuel and rearm and took off again.

At 0700 hours it was hit by an SA-7 surface to air missile and plummeted to the ground in flames. Three parachutes blossomed, but one caught fire and burned. The next day the Government of South Vietnam surrendered.

Right: Nose-art on AC-119K Stinger 'Super Sow'. (Major W Boyce via Jim Wood)

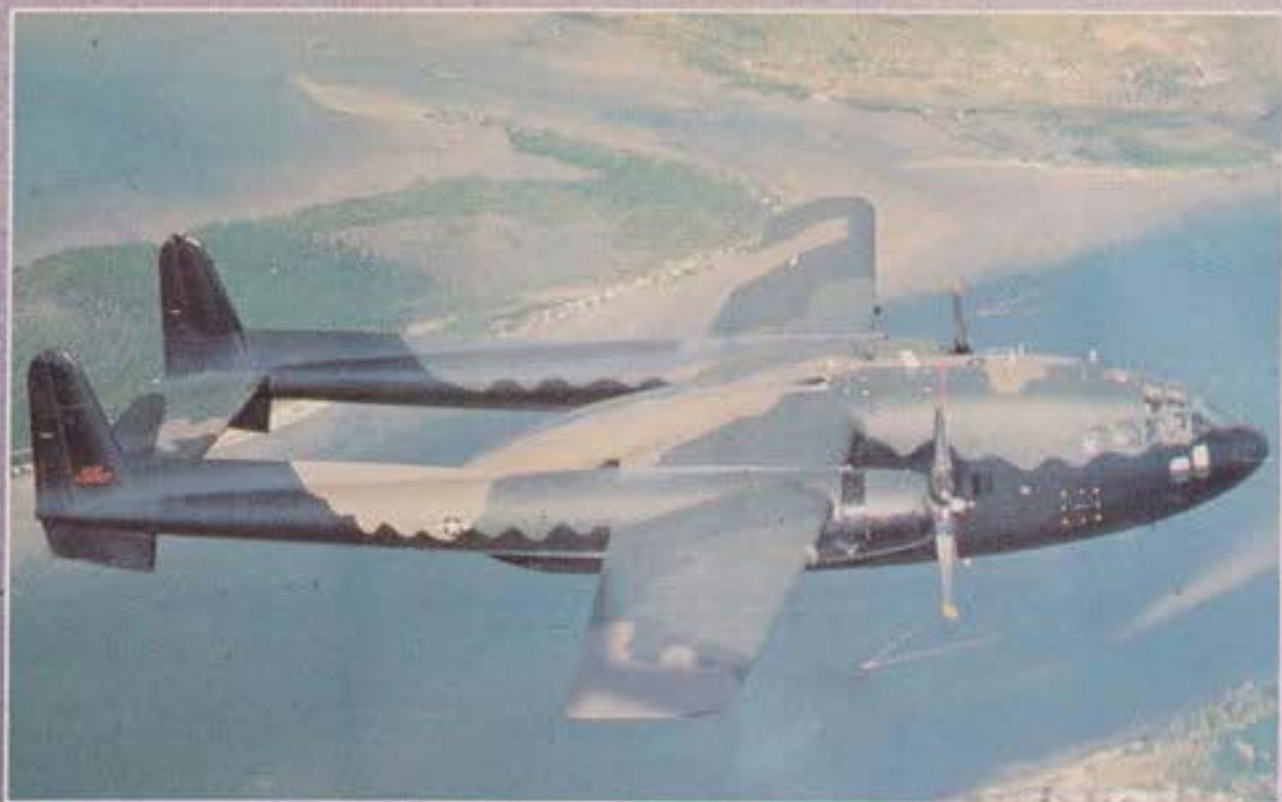


THE AIRCRAFT

71st SOS AC-119G
near Nha Trang in
December 1968.
(Mike Kasiuba, via
Phil Chinnery)

THE EFFECT

Main Picture: Time
exposure shot of a
16th SOS AC-119G
'hosing down' the
perimeter of Phan
Rang Air Base
following a North
Vietnamese sapper
attack. (Mike
Drzyzga via Ken
Wilhite Jr.)



THE CAUSE

Left: AC-119G
interior
showing the
SUU-11
minigun pods.
(Fairchild
Hiller) Right:
Two MXU-
470/A
minigun
modules in an
AC-119K.
(Mike Drzyzga
- both via Ken
Wilhite Jr.)

