

War Zone: Vietnam

Gunship Operations (Part 2)

While the mainstream gunships went from strength to strength as ever more capable equipment became available, the USAF and US Navy investigated several other variations on the gunship theme, although none were to reap the same success.

The next major stage in gunship development was not long in coming, and centred around the provision of more powerful armament and additional sensors to boost detection capability at night. Given the codename 'Surprise Package' the modification of this first aircraft was accomplished during the autumn of 1969 so that it could eventually reach Ubon in early December, undertaking its first mission on 12 December.

As far as armament was concerned, the 'Surprise Package' Hercules toted a particularly powerful array of weapons to port, two Vulcan 20-mm, cannon being located in the forward fuselage and two 40-mm Bofors guns just aft of the main landing gear unit. Not surprisingly, it quickly demonstrated superior performance as a truck-killer, accounting for no fewer than 604 destroyed and 218 damaged by the end of April 1970, when the 'Commando Hunt III' campaign closed.

This represented an average of 7.34 trucks destroyed or damaged per sortie, handsomely exceeding that achieved by its closest competitor, the standard AC-130A, which recorded an average of 4.34. Perhaps more importantly, though, the 'Surprise Package' aircraft accomplished these results with a greater measure of safety, being able to operate effectively at higher altitude as a means of placing it above the envelope of enemy AAA.

In view of these impressive results it was hardly surprising that serious consideration was given to acquiring additional aircraft to the 'Surprise Package' configuration and to bringing the five surviving AC-130A gunships (by now known as

'Plain Janes') to an equivalent standard. In due course, nine more AC-130As were 'produced', while late 1970 also witnessed the start of work on a gunship variant of the C-130E, which would employ armament consisting of two 20-mm cannon, one 40-mm Bofors gun and one 105-mm howitzer. The AC-130E was known as the 'Pave Spectre', 'Pave Aegis' being the codename specifically allocated to the 105-mm installation. The first of these aircraft entered battle in the 1971/72 'Commando Hunt VII' interdiction campaign.

The AC-130Es also played an important role in combatting North Vietnam's major offensive of spring 1972, when they frequently operated in a close air support function, on occasion laying down a barrage of fire not more than a few feet from friendly forces and in the process confirming the remarkable accuracy of the system. Further evidence is furnished by the fact that firing corrections requested by ground spotters were sometimes as small as 3ft (0.9m), and it was quite commonplace for such instructions to specify a particular house containing an enemy machine-gun nest as a target.

Similar work was also undertaken by the AC-119 at this time, albeit with slightly less spectacular results since this gunship type was rather more lightly armed. As noted elsewhere, two subtypes were produced, these being the AC-119G 'Shadow' and the AC-119K 'Stinger'. Both variants featured a quartet of 7.62-mm Miniguns, the 'Stinger' being slightly more sophisticated in that it also carried a brace of 20-mm cannon and a more

A 'Surprise Package' AC-130 demonstrates the 40-mm cannon. This weapon introduced far greater truck-killing capability over the 20-mm Vulcans, and its greater effective range enabled the Hercules to operate at safer altitudes.

An AC-130A in its revetment at Ubon shows the sights, armament and sensors of the type. The 'Black Crow' radome identifies the aircraft as a 'Pave Pronto'. The ASD-5 'Black Crow' was a major introduction, being a passive receiver tuned to the radiation emitted unintentionally by Soviet truck ignition motors. Running trucks could be located even beneath dense jungle canopy.





Like the AC-47D which it was intended to replace, the Fairchild AC-119G had little in the way of sophisticated sensors, although it did introduce a Night Observation Sight and a searchlight. Armament was restricted to four Miniguns mounted in the cabin under the wing.

comprehensive array of sensors.

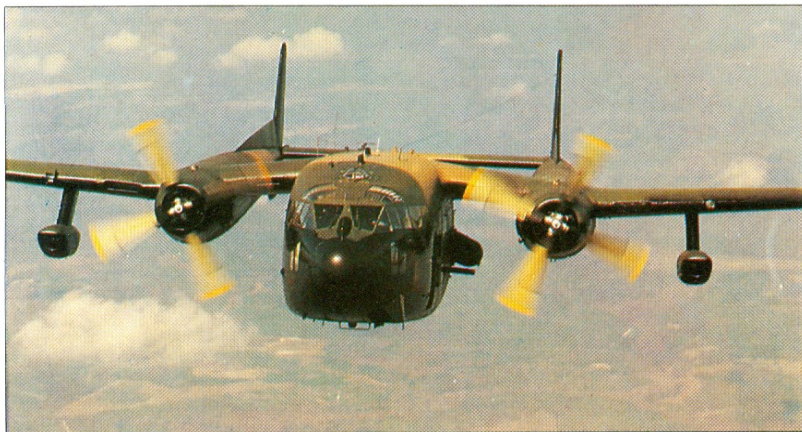
As far as operational applications were concerned, 'Shadows' generally undertook armed reconnaissance, working in the slightly more permissive 'in-country' environment while the jet-augmented 'Stingers' were equally at home in the 'out-country' war, interdicting the Ho Chi Minh Trail alongside the AC-130 and performing more than adequately in that role, although they seldom achieved quite such spectacular results.

'Gunship III'

The AC-119 was the 'Gunship III', and approval to proceed with the project was forthcoming in June 1967. But progress was slow and subject to some uncertainty with regard to force mix. Eventually, in early February 1968, the programme was firmed up, it being decided to modify sufficient C-119s to equip two 16-aircraft squadrons of the 14th Air Commando Wing and leave a reserve for training and attrition replacement purposes. Including the prototype AC-119G, some 52 aircraft were involved, these being split equally between AC-119G and AC-119K models. At this time it was also hoped to have at least six AC-119Gs in the combat zone by July and four AC-119Ks by November, but both dates were missed by a considerable margin.

Given the project name 'Combat Hornets', the conversion process was entrusted to the WRAMA, an organization which had earlier gained gunship experience in conjunction with the AC-47, as noted above. This time, however, WRAMA reached the conclusion that Fairchild-Hiller should undertake the modification work at its St Augustine, Florida, facility and the 52 aircraft involved were mostly obtained from Continental Air Command resources, this agency also being responsible for conducting initial training at Clinton County AFB, Ohio. Once the AC-119Gs began to become available, the focus of attention would

Looking like a malevolent hornet, this AC-119K roams the Vietnamese skies in daylight. Spoiling the box-like fuselage on the port side are the Beacon Tracking Radar and the barrels for the 20-mm Vulcan cannons. Note the underwing jet engines.



shift to Lockbourne AFB, Ohio under Tactical Air Command's 4413th Combat Crew Training Squadron. ConAC involvement extended to providing reservist personnel to man the 71st SOS, which would introduce this type to combat.

Modification of the 26 AC-119Gs was completed by October 1968 but the target deployment date was repeatedly delayed and it was not until 27 December that the first two aircraft reached Nha Trang, the first combat sortie being flown on 5 January 1969. Thereafter, as the number of AC-119Gs steadily rose, the contribution to the war effort of the 'Shadow' increased, and the type was soon hard at work defending friendly outposts, where its timely presence often made the difference between life or death for those under attack. A classic and highly unusual instance of the life-saving role happened early in 1969 when, following a power failure, a 'Shadow' gunship orbited above a compound and employed its one-million candlepower illuminator as a source of light whilst a doctor operated on a badly wounded Vietnamese soldier.

As with the AC-47, extensive use was made of forward operating locations (see table). By the end of 1969 many of the 71st SOS's personnel had fulfilled their active service obligations and returned to the USA. But the AC-119G remained, henceforth being assigned to the 17th SOS, a regular-force unit activated on 1 June 1969.

Non-availability of FLIR systems and 20-mm cannon had a significant impact on deployment of the more sophisticated AC-119 variant, the first examples not reaching Phan Rang until 3 November 1969, with the 18th and last aircraft arriving on 25 January 1970. In Vietnam, the AC-119K operated with the 18th SOS, this (like the AC-119G unit) having two non-operational spare aircraft. Thus the number of AC-119s assigned to the combat zone actually totalled 36.

Once in place, the AC-119K soon began to prove its worth, being employed on 'in-country' 'out-country' missions. The need for additional interdiction capability over Laos prompted the activation of D Flight at Udorn, Thailand, this using three AC-119Ks taken from B Flight at Phu Cat. By the end of the year D Flight had moved to Nakhon Phanom and had increased in strength to six aircraft for an area of activity now encompassing Cambodia.

Operational losses

Inevitably, operations were not without hazard. For instance, the 17th SOS lost its first aircraft on 11 October 1969 and another on 28 April 1970, but enemy action was not responsible, both machines crashing on take-off from Tan Son Nhut. Aircraft malfunctions also claimed a couple of AC-119Ks of the 18th SOS in 1970, and there were many instances of severe battle damage being sustained by both 'Shadow' and 'Stinger' aircraft.

By early 1971, President Nixon's desire to 'Vietnamize' the war was beginning to make its effect felt and this eventually extended to the gunship fleet, plans being drawn up to transfer the AC-119Gs to the VNAF's 819th Combat Squadron later that year. Accordingly, the 17th SOS's mission emphasis shifted to combat crew training as the year progressed, and culminated in deactivation of the squadron on 30 September 1971.

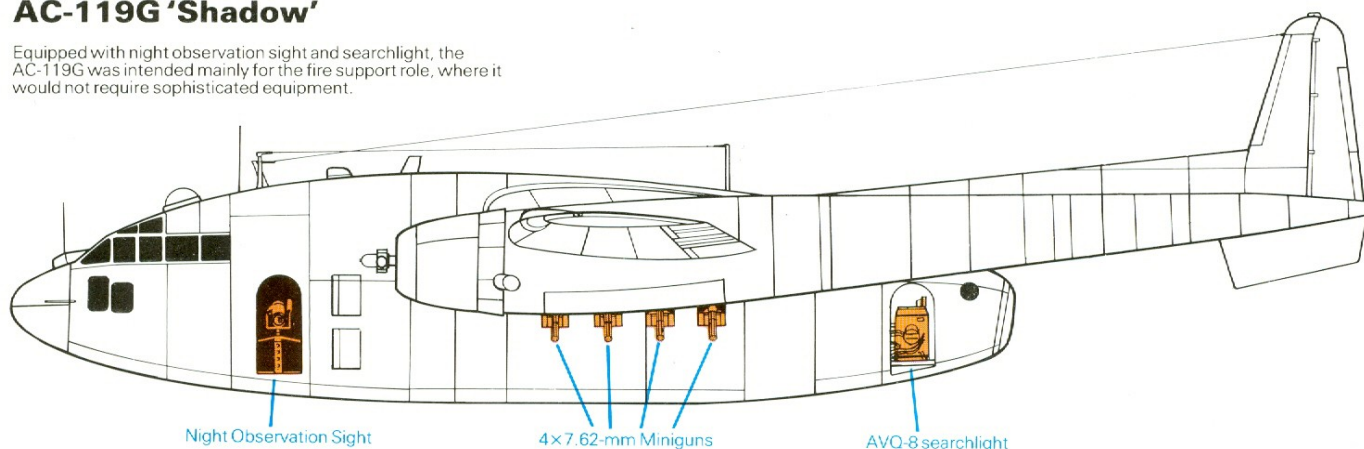
About six weeks earlier, the 14th SOW also lost responsibility for managing the AC-119K fleet when the 18th SOS was transferred to the control of the 56th SOW at Nakhon Phanom on 25 August 1971. In practice, this change had little impact on the scope of operations although these were now generally staged from either Nakhon Phanom or Da Nang. Thai-based 'Stingers' routinely operated over 'Barrel Roll' (northern Laos) whilst those from Da Nang covered the 'Steel Tiger' zone and South Vietnam.

Fairchild AC-119

Gunship Operations

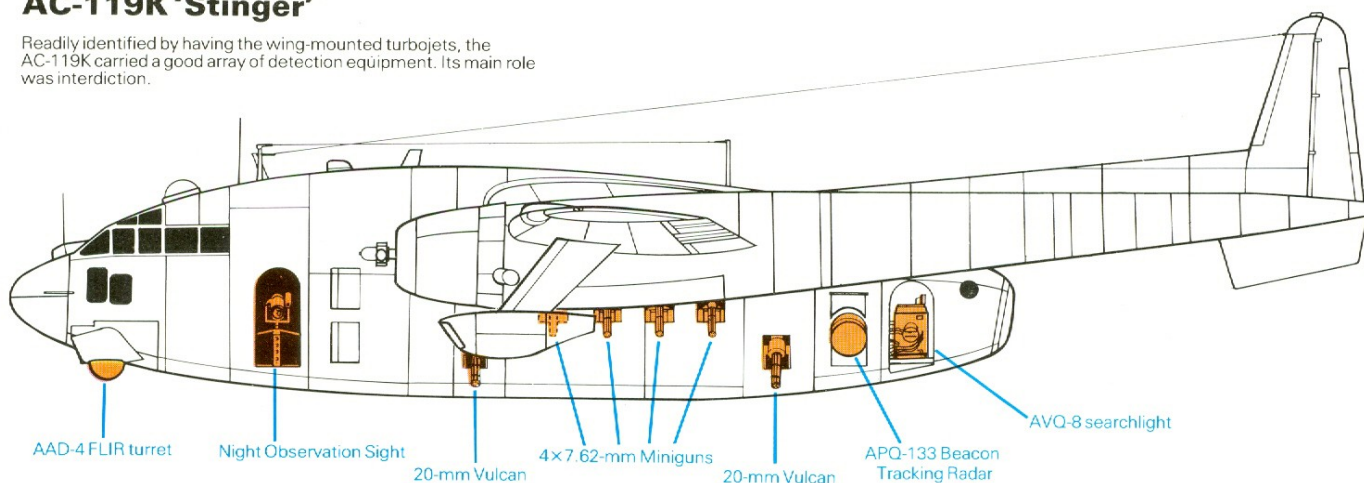
AC-119G 'Shadow'

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



AC-119K 'Stinger'

Readily identified by having the wing-mounted turbojets, the AC-119K carried a good array of detection equipment. Its main role was interdiction.



Eventually, of course, the growing numbers of 'Spectre' gunships and the increasing hazards to be faced in interdiction of the Ho Chi Minh Trail militated against continued use of the less effective and rather more vulnerable AC-119K, and the 18th SOS was deactivated on 31 December 1972. The now redundant 'Stingers' had not, however, come to the end of their useful lives: most (if not all) of the surviving examples were passed on to the VNAF, which continued to operate the type right up until the final capitulation in 1975.

Less well known by virtue of the fact that it never undertook combat duty in South East Asia, the project designated 'Credible Chase' is worth examining in some detail if only for the simple reason that it represented a serious attempt at applying the gunship concept to a much smaller aircraft. In the event, numerous shortcomings manifested themselves during the course of a detailed test and evaluation programme and the idea was allowed to lapse, partly as a result of high cost but mainly on the grounds that capability was, at best, considered to be marginal.

The 'mini-gunship' idea in fact made its first appearance as early as the mid-1960s, when the so-called 'Little Brother' proposal was examined in some detail, Air Force Systems Command and the Limited War Study Group being the prime movers at this time. Not surprisingly, in view of his earlier advocacy of the FC/AC-47 concept, Captain Terry was intimately involved, briefing members of the study group on side-firing techniques.

After examining various options and aircraft types, the group eventually proposed a 'mini-gunship' based around a light twin-engined machine possessing a high wing and a payload capability in the 907-kg (2,000-lb) region. Cessna's

AC-119G/K Deployment: December 1969

17th Special Operations Squadron

Flight	Base	Aircraft
A	Tuy Hoa	4
B	Phan Rang	7
C	Tan Son Nhut	5

18th Special Operations Squadron

Flight	Base	Aircraft
A	Da Nang	6
B	Phu Cat	3
C	Phan Rang	3

Note: 17th SOS used the AC-119G model while 18th SOS had the AC-119K. The main operating base for both units was Phan Rang, all other facilities being FOLs. Contemporary planning anticipated assignment of six AC-119Gs at each 17th SOS base and six AC-119Ks at each 18th SOS base.

distinctive Model 337 Super Skymaster seemed to fit the bill adequately. Armament for 'Little Brother' would comprise a single semi-recoilless 40 to 42-mm cannon capable of a rate of fire of the

AC-119s were noted for their nose art, much of which leaned towards the obscene. 'The Super Sow', one of the more publishable, flew with the 18th SOS, 14th SOW from Phan Rang, on both in-country support missions and interdiction flights over Laos.





Above: One gunship project which did not reach South East Asia was 'Pave Gat'. This allied the capabilities of the Martin B-57G 'Tropic Moon III' night interdiction bomber with a ventrally-mounted three-barrelled 20-mm cannon. The B-57G was used without the gun on interdiction missions, using the FLIR, LLLTV and laser in the nose fairing to locate and pinpoint targets.

Above right: One of the 'Credible Chase' contenders is seen under evaluation in Thailand. This is the Fairchild AU-23A Peacemaker, complete with cabin-mounted XM197 three-barrelled 20-mm cannon.

Seen being prepared for delivery to the Khmer air force, this is one of the Helio AU-24A Stallions used for the 'Credible Chase' evaluation. The gun armament has been removed, but four underwing hardpoints can mount light bombs or rockets. Khmer AU-24s were flown with gun armament later.

order of 500 rounds per minute, the MXU-470/A Minigun module seeming to be almost ideal on technical, cost and reliability grounds.

At this time it was anticipated that 'Little Brother' would carry a two-man crew (pilot and gunner) and be capable of operation by day or night from unimproved strips. Cruise speed would vary from 87 to 166kts (161 to 306km/h; 100 to 190mph) and patrol endurance would be a remarkable 10 hours.

It was also decided to adopt a fire-control system, whose development was entrusted to the Air Force Avionics Laboratory. Rather interestingly, the system was mainly the brainchild of a Royal Air Force officer serving an exchange tour with the laboratory. Wing Commander Thomas Pinkerton's work on this eventually led to a test specimen being put together in the laboratory workshops and this was duly tested in a Cessna 337 leased from the manufacturer and modified by the Aeronautical Systems Division at Wright-Patterson AFB.

Evaluation showed considerable promise and many aspects of the fire-control system were later embodied in the AC-130A Hercules gunship. But 'Little Brother' was allowed to lapse at about the end of 1966. The notion fell victim to funding 'starvation', being squeezed out by the demands made by larger gunships under development to supplant the original AC-47.

'Credible Chase'

Five years later 'Credible Chase' came on the scene, this also envisaged operational deployment of small but heavily armed mini-gunships as one means of 'Vietnamizing' the war effort. Two basic types were considered, these being the Fairchild AU-23A Peacemaker and the Helio AU-24A Stallion. Initial evaluation was conducted at Eglin AFB in Florida during May 1971. Both types were



similar in appearance and characteristics, being turboprop-powered high-wing STOL aircraft with side-by-side seating for two pilots.

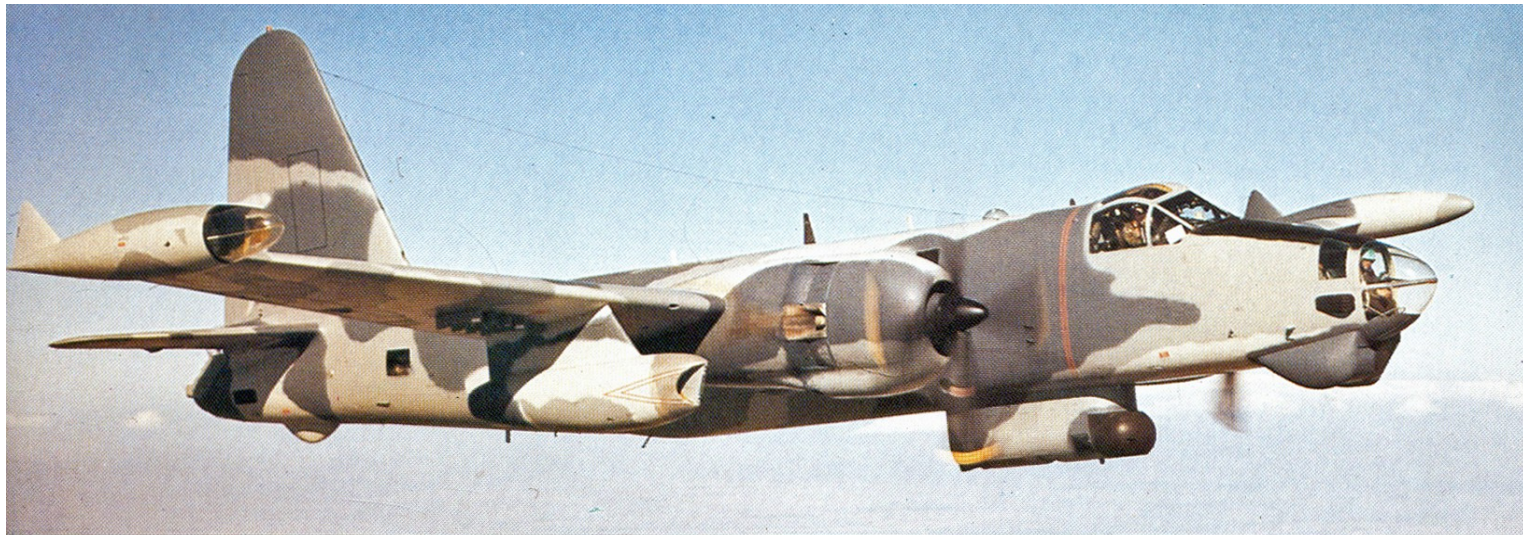
Basically intended to furnish the VNAF with improved mobility and greater firepower at relatively modest cost in a short timescale, the project soon found favour with the Secretary of Defense, Melvin Laird, even though a fairly brief combat evaluation conducted in South East Asia with single examples of each type revealed numerous failings and more than a little scepticism of the wisdom of pursuing this line of gunship development. Despite misgivings on the part of many, 'Credible Chase' did proceed, 15 machines of each type being ordered in late 1971 with FY 1972 funds.

Armament capability was similar, each having four underwing pylons capable of carrying a modest weapon load, a single XM197 side-firing three-barrel 20-mm Gatling-type cannon being fitted in the cabin. Possessing two rates of fire (350 and 700 rounds per minute), the XM197 came complete with a TVS-5 night-vision sight, this being one of a number of sensors that the AU-23A and AU-24A would employ.

Delivery of the Peacemaker started in January 1972, and little time was wasted in beginning the evaluation at Eglin. Testing soon came to an unplanned halt, however, the few aircraft in place being grounded on 4 February following the discovery of cracks in the rudder. This was only the first of many problems encountered in the first half of 1972.

The first Stallion arrived at Eglin on 4 March: testing did begin, but this too was delayed by a decision to cease accepting aircraft in April. Eventually, despite many hiccups, testing of the AU-24A was completed in mid-May 1972, the AU-23A taking a little while longer to get through its programme, the loss of one aircraft in a crash delaying





completion until the end of June.

Immediately afterwards all the surviving AU-23As and AU-24As were despatched to Davis-Monthan AFB in Arizona for storage, as the report of the evaluation firmly recommended against operational deployment, largely on the grounds of 'marginal capability'. Some concern was also expressed with regard to survivability, it being felt by many that both types were ill-equipped to deal with combat hazards. In consequence the project was allowed to lapse, most if not all of the aircraft which found their way to storage eventually being disposed of to Thailand (AU-23A) and Cambodia (AU-24A).

Sophisticated bomber

The first of them was an Air Force programme which entailed the conversion of two examples of the Fairchild Provider light tactical transport to NC-123K configuration. Each carrying a package of sensors to assist in night-time operations and known by the rather unflattering codename 'Black Spot', the two aircraft so modified featured bomblet-drop capability and were employed in interdiction of the Ho Chi Minh Trail by the 606th Air Commando Squadron at Nakhon Phanom between 1968 and 1971.

Second only to the AC-130 in terms of sophistication, the 'Black Spot' Provider sensor package included forward-looking radar, LLLTV, FLIR, a laser rangefinder and an advanced navigation system. Weapons release was managed by computer and some idea of the efficacy of the system is provided by the fact that, in the 141 sorties flown during the 'Commando Hunt III' campaign of 1969-70, the two NC-123Ks compiled a truck-kill average of 3.12 per sortie. This failed to put them in the same league as the AC-130, but it was nevertheless a creditable performance and one which surpassed the efforts of other aircraft types.

Eventually both NC-123Ks returned to the USA for storage in Arizona, languishing there for a couple of years before returning to the Far East when they were supplied to the Royal Thai Air Force as part of the US Military Assistance Program. By then, though, they had reverted to conventional transport configuration.

The other short-term member of the burgeoning gunship family was based on the Lockheed Neptune and was a Navy programme, four aircraft being modified to AP-2H standard. Little is known of the operational use of these distinctive machines, although it appears that they underwent modification in 1967, being deployed to Cam Ranh Bay in South Vietnam later during that year.

Initial responsibility for management was apparently vested in the Naval Air Test Center's 'Project TRIM' detachment, which operated the four Neptunes from Cam Ranh Bay and other locations for about a year, control then passing to

Heavy Attack Squadron Twenty-One (VAH-21), which was commissioned on 1 September 1968. In the event VAH-21 enjoyed only a brief life, despatching its aircraft to Davis-Monthan AFB, Arizona for storage and being decommissioned barely six months later, in March 1969.

The acronym TRIM signified Trails, Roads, Interdiction Multisensor, and the AP-2H was very different from its forebears, featuring an array of sensors of which little is known although they probably included FLIR, LLLTV and terrain-avoidance radar. More information has filtered out with regard to armament, the AP-2H's quite fearsome arsenal including a pair of M24 20-mm cannon in place of the tail 'stinger', four more 20-mm cannon in a special turret beneath the forward fuselage, podded SUU-11B/A Miniguns beneath the wings and up to four wing-mounted LAU-3/A or LAU-59/A 2.75-in (69.85-mm) rocket-launchers permitting carriage of a maximum of 76 weapons.

Removable windows in the aft fuselage also enabled crew members to bring pintle-mounted M60 machine-guns to bear, while other modification work involved 'hush-kitting' the auxiliary jet engines and fitting flame-suppressing exhaust equipment on the reciprocating engines. Finally, all four of the gunship Neptunes featured a most bizarre camouflage pattern employing varying shades of light and dark grey.

No details have ever emerged with regard to the degree of success achieved by these aircraft, but in view of the relatively modest investment and the fact that they served in the combat zone for little more than 16 months, it seems reasonable to assume that they were not so hot, the Navy evidently coming to the conclusion that the gunship mission was best left in the hands of the Air Force.

The strange three-tone grey colour scheme is readily apparent on this Lockheed AP-2H, seen prior to delivery to VAH-21 at Cam Ranh Bay. The aircraft worked over the Mekong Delta, helping to stem the tide of materiel reaching VC guerrillas through its myriad waterways.

Glossary

AA Anti-Aircraft
AAA Anti-Aircraft Artillery
ACS Air Commando Squadron
ACW Air Commando Wing
AFB Air Force Base
CBU Cluster Bomb Unit
ConAC Continental Air Command
FLIR Forward-Looking Infra-Red
HUD Head-Up Display
LLLTV Low-Light-Level TV
RLAF Royal Lao Air Force
SOS Special Operations Squadron
TFS Tactical Fighter Squadron
TFW Tactical Fighter Wing
TRIM Trails, Roads, Interdiction, Multisensor
VNAF South Vietnamese Air Force
WRAMA Warner-Robins Air Materiel Area

Another weird paint scheme was applied to the two Fairchild NC-123K 'Black Spot' aircraft, one of which is seen here at Ubon in 1969. The sophisticated acquisition, tracking and targetting sensors were mounted in the nose and the large turret beneath.

