



**U. S. AIR FORCE • GUNSHIPS**

**BACKGROUND  
INFORMATION**

SECRETARY OF THE AIR FORCE • OFFICE OF INFORMATION  
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## FOREWORD

United States Air Force gunships have added a new dimension to tactical warfare. This Background Information pamphlet describes the development of gunship aircraft and their accomplishments in Southeast Asia.

The primary purpose of the U.S. Air Force Background Information series is to help provide information officers with factual, cleared material on various Air Force subjects. As a source of basic reference material, the Background Information pamphlet may be used to prepare local speeches, base newspaper features and fillers, radio and television programs and spot announcements, local news releases, and Commander's Call programs.

Information contained in this pamphlet is current as of the publication date. The Consolidated Index to Air Force Information Materials can help the IO keep up with minor changes in the information presented.

In addition to their primary purpose, Background Information pamphlets may also be of value for reference in recruiting stations and in base libraries. In all cases, the use will be determined by the subject matter and the audience's needs, after evaluating information materials available.

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## INTRODUCTION

The war in Southeast Asia accelerated the development of many new concepts in aerial warfare. One of these is the side-firing U.S. Air Force gunship.

This concept was first applied to the C-47 Skytrain. Modified to a gunship configuration, the C-47 was redesignated AC-47 and nicknamed "Dragonship." The concept has since been extended to the C-130 Hercules and C-119 Packet.

## GUNSHIP EVOLUTION

The idea of making a gunship of the slow-flying C-47 was conceived by an Air Force officer who had served a tour of duty in South America. He had noted that mail and vital supplies were sometimes lowered to remote villages in a bucket tied to the end of a long rope suspended from the cargo door of a slow-flying aircraft. As the plane circled in a steep pylon turn, the bucket tended to orbit in one spot over the ground.

The officer envisioned a line of fire in place of the line of rope. Side-firing guns in the transport could be aimed by the pilot and kept bearing on a ground target as long as the plane orbited in a steep bank overhead.

In first tests of this principle, the modified C-47 used ten .30 caliber machineguns protruding from the passenger windows and cargo door on the left side of the aircraft. In later modifications, the machineguns were replaced by three 7.62mm machineguns firing up to 18,000 rounds per minute.

Air Force Maj. Ronald W. Terry, Chief of Gunship II Project Branch of Aeronautical Systems Div., Wright-Patterson AFB, Ohio, is credited with much of the groundwork and study in gunship development. His first contact with the unique problems in Southeast Asia came during a visit there in 1963 as a member of a U.S. Air Force Systems Command team studying requirements for a limited war plan.

Studies of earlier reports on lateral sighting techniques had a direct effect on development of the AC-47 into the first Air Force gunship.

Subsequent testing in a converted Convair C-131 led to shipment of three conversion kits to Bien Hoa AB, South Vietnam, where two C-47s were reconfigured and tested in a combat environment. Successful tests in Southeast Asia resulted in assignment of the first operational AC-47 unit in combat in 1965.

## AC-47



Known commonly by its unofficial nickname "Gooney Bird," the C-47 is the military version of the DC-3 commercial airliner and the oldest of all active Air Force aircraft.

It was first flown in 1935. More than 10,000 C-47s were manufactured before production was stopped in 1944. The aircraft saw extensive service in World War II.

The AC-47 was originally nicknamed "Puff the Magic Dragon" by its aircrews. The name came from Vietnamese forces being supported by Dragonships. On one of the first combat missions, the guns of an AC-47 were loaded with continuous rounds of tracers. When they spewed out into the night, the Vietnamese were quick to imagine tongues of flame from a flying dragon -- thus, the "Puff" nickname. The AC-47 is also unofficially referred to as "Spooky."

The AC-47 was originally slated for use in support of Army Special Forces camps and isolated outposts under Viet Cong attack.

Operating primarily during hours of darkness, Dragonships have broadened their operation to include close support of ground troops, and night reconnaissance missions.

AC-47s are used mostly at night because of their vulnerability to ground fire. They stay above 3,000 feet, out of the range of most small arms fire.

In addition to the miniguns, Dragonships carry flares of 2-million candlepower, with burning times of two to three minutes. Flares are used to light the target area before a strike.

The men who fly "Spooky" are called on for many different types of missions, but they receive their highest praise from the ground troops they support.

*"We witnessed about every facet of the war in two hours,"* said Capt. Robert J. Cowlshaw, an AC-47 navigator, following a mission in support of troops in contact at Dak Pek in the Vietnamese Central Highlands.

The Dragonship crew, commanded by Lt. Col. Joseph W. Lentine of Flight B, 4th Air Commando Squadron at Pleiku AB, was called to aid the ground forces during the early morning hours. When they arrived, they first fired their 7.62mm miniguns into enemy positions, from which rockets were being fired into a U.S. base camp. Then they provided illumination for a medical evacuation, for two Army helicopter gunships, and for four resupply helicopters.

Before a forward air controller got into the area, the Dragonship crew handled FAC duties. When the FAC arrived, the crew helped direct a fighter strike.

They continued firing into the enemy positions until the attack was broken and they were replaced with another Dragonship crew from Pleiku AB.

In another instance, an Army captain was reported to have said: *"To have a Dragonship arrive on target is like having a battalion move in."*

A message from General William C. Westmoreland, former commander of U.S. Forces in Vietnam and presently the U.S. Army Chief of Staff, read in part: *"AC-47 crew members and support personnel have provided sustained and outstanding support of ground operations during the past year. Their actions in defense of bases, camps and outposts have repeatedly cost the enemy heavy casualties and saved many lives on our side.... Performance of all concerned has been exceptional. My hearty congratulations."*

#### SPECIFICATIONS

Prime Contractor: Douglas Aircraft Co  
Modification Contractor (AC-47): Air International, Miami  
Power Plant/Manufacturer: Two Pratt & Whitney R-1830-90s (piston)  
Horsepower: 1,200 hp each  
Dimensions: Span 95'; length 66'11"; height 16'11"  
Speed: 230 mph  
Ceiling: Above 24,000 feet  
Range: Beyond 2,000 miles  
Load: 7,500 lbs  
Armament: Three 7.62mm miniguns  
Crew: Seven  
Maximum Gross Takeoff Weight: 33,000 lbs  
Status: Operational

**\*All AC-47 Spooky aircraft in Vietnam are assigned to the 3rd and 4th Special Operations Squadrons, which are units of the 14th Special Operations Wing, headquartered at Nha Trang AB.**

AC-130



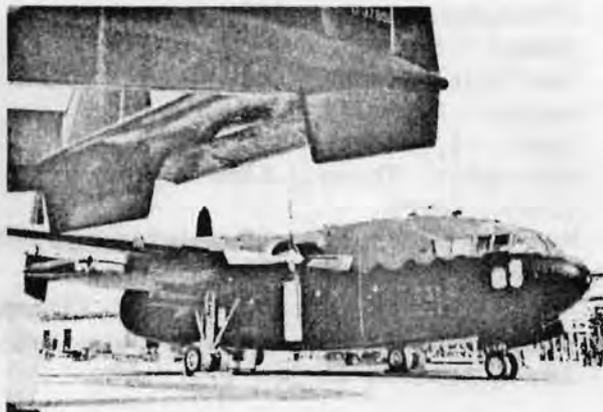
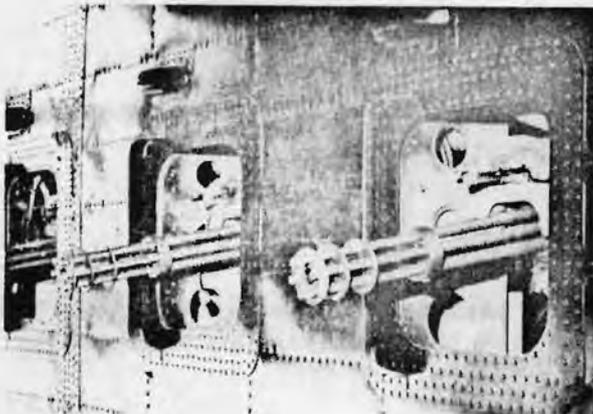
The AC-47 proved the feasibility of gunships. An AC-130 prototype was then sent to Southeast Asia. It was armed with four 7.62mm miniguns and four 20mm cannons. The success of this aircraft led to a contract to modify more C-130s to the gunship configuration.

The AC-130 will further increase the U.S. Air Force's ability to acquire targets under adverse conditions and strike with heavy firepower.

#### SPECIFICATIONS

Prime Contractor: Lockheed Aircraft Corp  
Modification Contractor (AC-130): Ling Temco Vought Electrosystems  
Power Plant/Manufacturer: Four Allison T56-A-9s  
Horsepower: 3,750 equivalent-shaft hp each  
Dimensions: Span 132'7"; length 97'9"; height 38'4"  
Speed: 330 mph  
Ceiling: Above 30,000 feet  
Range: Beyond 2,000 miles  
Load: 36,000 lbs  
Armament: Four 7.62mm miniguns and four 20mm cannons  
Crew: Ten  
Maximum Gross Takeoff Weight: 124,200 lbs  
Status: Modification under contract

AC-119



In an effort to further increase gunship capability, C-119 Packets were recalled from Air Force Reserve duty. The C-119s are being modified in two versions, one carrying two reciprocating engines, and the other carrying a pair of jet booster engines in addition to the two reciprocating engines.

Those equipped with jet engines are designated AC-119Ks while those without jets will be AC-119Gs.

The AC-119Gs will be outfitted with four miniguns, and the AC-119Ks, in addition to the four miniguns, will have two 20mm cannons.

The C-119s are of 1947 vintage, but those being converted to gunships are 1952 and 1953 models. The Packets have been in continuous use since first coming into service and were used effectively during the Korean War for airdrops and troop movements. Their important role in support operations included paradropping tractors, trucks and other equipment for construction of the DEW Line.

#### SPECIFICATIONS

Prime Contractor: Fairchild Hiller Corp  
Modification Contractor (AC-119): Fairchild Hiller Corp  
Power Plant/Manufacturer: Two Wright R-3350-89s and two General Electric J-85s (J-85s on AC-119K only)  
Horsepower: 3,500 hp (takeoff) each reciprocating  
2,850 lbs thrust each jet  
Dimensions: Span 109'4"; length 86'6"; height 27'6"  
Speed: 250 mph  
Ceiling: Above 20,000 feet  
Range: Beyond 2,000 miles  
Load: 21,000 lbs  
Armament: Four 7.62mm miniguns (Also two 20mm cannons, AC-119K)  
Crew: Seven (AC-119G)  
Ten (AC-119K)  
Maximum Gross Takeoff Weight: \* 63,000 lbs (AC-119G)  
\* 80,400 lbs (AC-119K)  
Status: Modification under contract

\*Maximum gross takeoff weight varies with changes in temperature, humidity and altitude.

