

Grumman A-6A Intruders of Attack Squadron 42, the "Green Pawns," homebased at NAS Oceana, Va. VA-42 was the first squadron to fly the A-6A commencing operations in February 1963. Chess pawn emblem on Airplane No. 502, aft of canopy. (Photo — Grumman Number 83626)

AN INTRODUCTION TO THE INTRUDER

* By KURT H. MISKA

Come up with the foulest weather imaginable and it would probably be raining, thunder and lightning, steamy and muggy, and on top of it, at night over the jungles of North Vietnam. It's the sort of environment the Navy and Marine Corps pilots flying the Grumman A-6A Intruder often cope with. Intruder is a name that can mean many things; to hundreds of our pilots it means the most complex and refined attack machine available. The enemy has dubbed it a miniature B-52.

The Intruder is an all-weather, carrier or land based, low level attack bomber designed to deliver up to 18,000 pounds of conventional or special ordnance against ALL targets. Performance is subsonic and the weather is made

relatively unimportant.

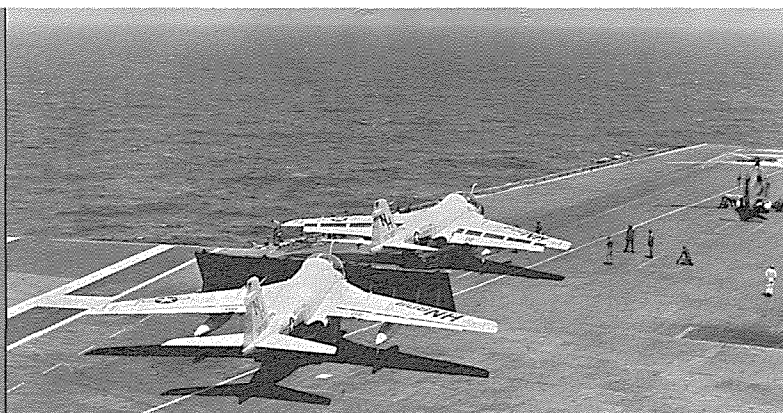
The design and performance capability of the A-6A evolved from demands placed upon our military airpower during the Korean conflict. At that time, most combat missions were attack missions.

The Navy and the Marines, at that time, flew Douglas A-1 Skyraiders and Chance Vought F4U Corsairs, piston-engined aircraft extremely vulnerable to enemy ground fire. And, the jet aircraft then available (1950-53 era) were not designed for attack missions. Their endurance at low altitude was severely limited and they could not effectively respond to the enemy's strategy of moving forces and

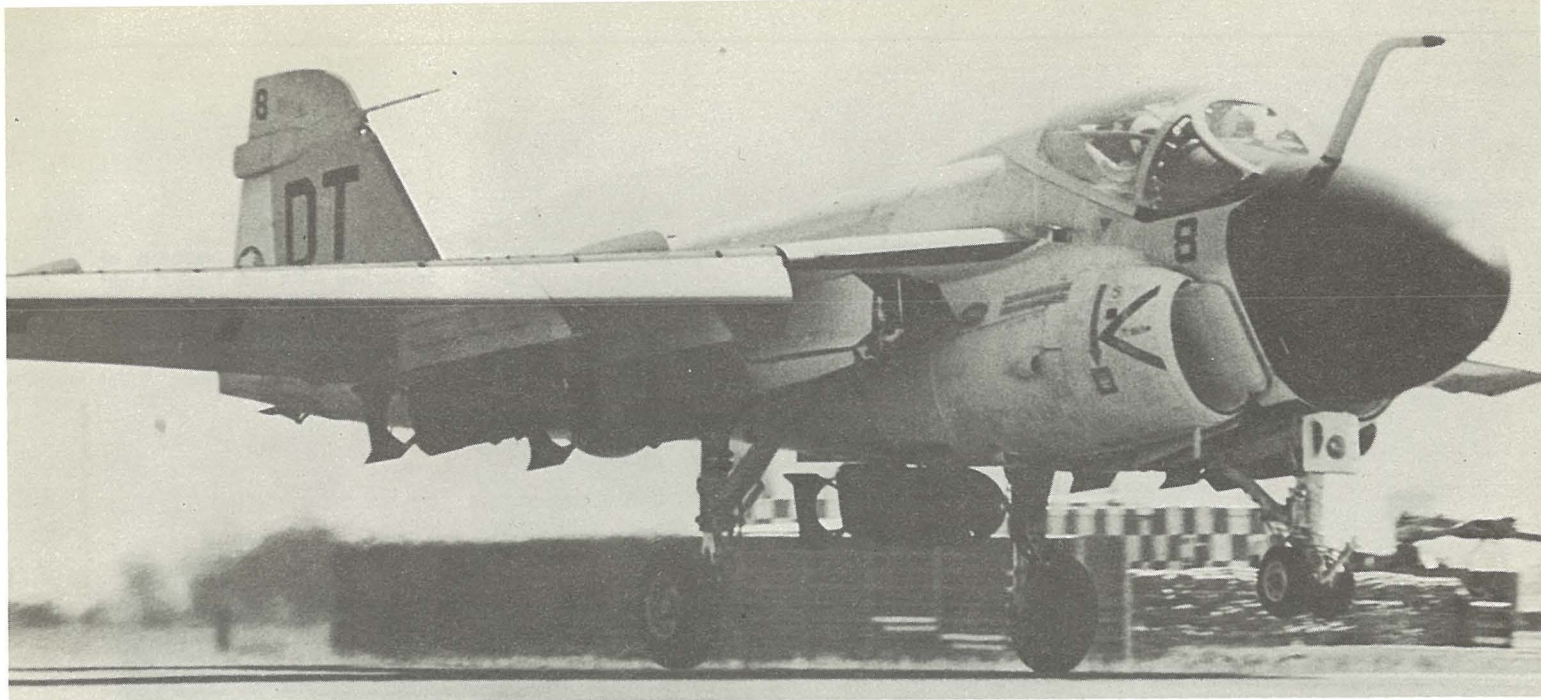
*Kurt Miska is Aircraft Specialist for A-6.



Latest Intruder development is EA-6B four-place electronic warfare aircraft, undergoing extensive flight testing. The number one airplane was built from Grumman shop No. 15, with a 40-inch section spliced into fuselage for rear seat locations. Large bump on rudder



houses electronic equipment. (Photo - Larry Van Wallendaal, Grumman 68619) At right — A-6A's of Attack Sqdn. 85, the "Black Falcons," on the USS KITTY HAWK (CVA-63). VA-85 was assigned to combat in October 1965. (Photo - Grumman 65933)



An A-6A in Vietnam, one of VMA(AW)242, at takeoff. (Photo-Gann)

supplies under cover of night or inclement weather.

What was really needed was a moderately fast jet attack airplane that could fly long-range missions, with a payload, at both low and high altitude, in all kinds of weather and in darkness. How to go about satisfying these demanding requirements was another matter; requirements and the state of the art were miles apart at that time.

However, heavy losses by United Nations forces led to a weapons breakthrough, the Navy's development of the Bullpup missile. Bullpup is aircraft launched and is guided to the target while the airplane remains beyond the range of ground fire. Both Navy and TAC (USAF) now use this weapon.

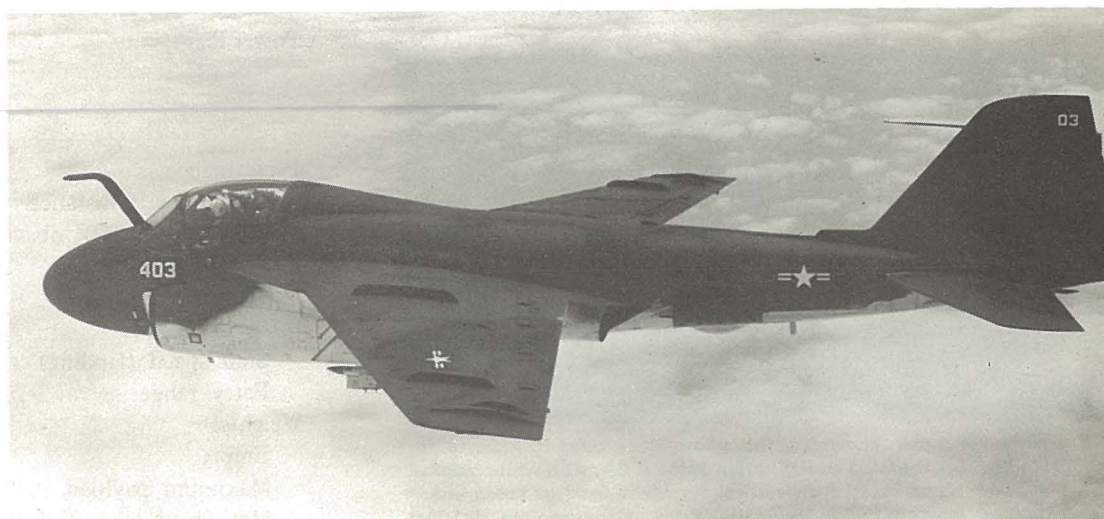
After Korea, development of airborne electronic systems advanced rapidly. New radars, coupled with advanced computers and weight-saving miniaturization of electronic equipment, resulted in integrated bombing-navigation systems that promised all-weather attack capability. At about the same time, the Office of Naval Research promoted the

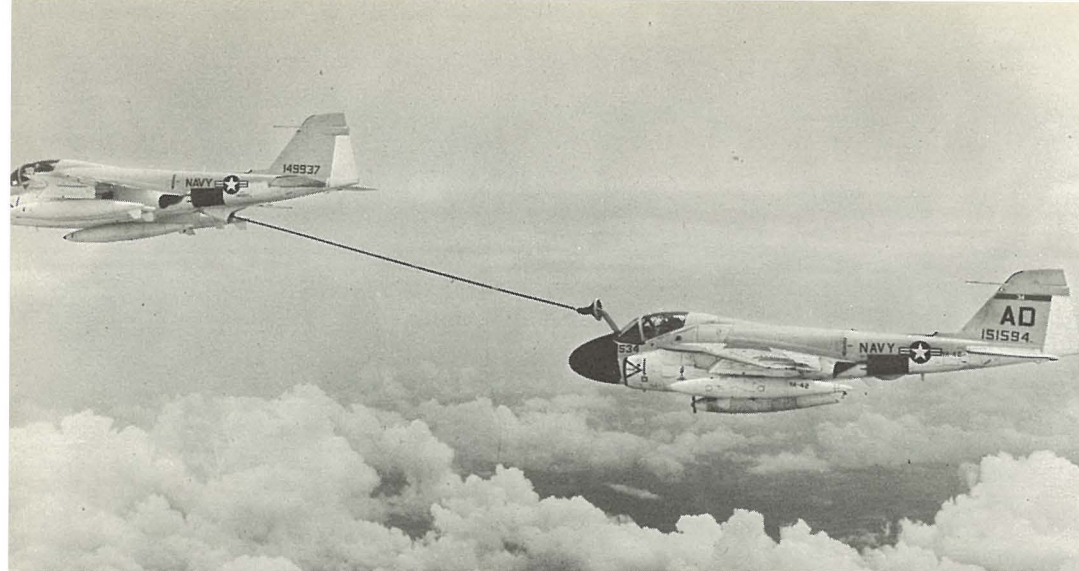
development of new cockpit display systems.

Ultimately, these advances, along with the known requirements for attack aircraft, led the (now) Naval Air Systems Command, to sponsor a new design competition. The competition was conducted from May to December 1957, among eight aircraft companies. Eleven designs were submitted and on the last day of 1957 Grumman's design 128 emerged the winner. The new airplane, eventually named the Intruder, was the first weapon system to be developed under a Navy CPIF (cost-plus-incentive-fee) contract, an award that came in March 1959. The full-scale mockup was completed by September of that year and the new aircraft was designated A2F-1. Ten days later the Navy accepted the design.

An additional contract award in March 1960 covered delivery of eight airplanes; four to be delivered in 1960 and four more in 1961. With Grumman test pilot Bob Smyth at the controls, the first A2F took off from Calverton Field, Long Island (Grumman's flight test base) on

A-6A Intruder in Vietnam-type camouflage scheme, tried by Attack Sq. VA-65 and -85 but discontinued. This is early A-6A with fuselage and wing tip speed brakes. (Photo - Grumman)





Left - Built to test feasibility of converting A-6A into tactical tanker, the one-of-a-kind KA-6D refuels VA-42's No. 534 over Oceana. (Photo-Van Wallendael, Grumman Number 66523)



The first of the USMC/Grumman EA-6A airplanes. Black radome and fuselage speed brakes retained, airspeed boom remains on port wing as in early A-6A, and no wing tip brakes. (Photo-Grumman 681104)

April 19, 1960. Shortly thereafter the Navy changed its aircraft nomenclature system and the airplane was redesignated A-6A. Following its acceptance and a period of flight testing and development work, the A-6A, in October 1962, began the 60 day airframe phase of its Board of Inspection Survey (BIS) trials started. Subsequently, an order for 67 more Intruders, and 12 EA-6As, was placed. The EA-6A is an electronic reconnaissance version of the A-6A.

A-6A CHARACTERISTICS

Span	53 ft.
Wing area	529 sq. ft.
Overall length	54 ft. 7 in.
Height	15 ft. 7 in.
Crew	Pilot and Bombardier/ Navigator
Power Plant	Two Pratt & Whitney J52-P-8A Turbojet (non-afterburning) 9,300 lbs. static thrust era.

Performance:

Min. takeoff distance	1,630 ft.
Takeoff over 50' obstacle	2,200 ft.
Service ceiling	41,660 ft.
Maximum speed	less than Mach 1
Cruise speed	417 knots
Stall speed (landing)	68 knots
Ferry range	2,800 nautical miles

Weights:

Empty	25,684 lbs.
Maximum payload	18,000 lbs.
Max. gross takeoff weight	60,626 lbs.



Although shown elsewhere, this photo is included to indicate, for comparison, the latest configuration of the A-6A, with white radome, airspeed boom located on vertical fin again, fuselage speed brakes deleted, wing-tip brakes included. (Photo - Grumman No. 681044)