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# *Airborne* LOG

THE MAGAZINE OF NAVAL SEA CONTROL AND MARITIME PATROL





Canadian Forces

A CP-140 Aurora from Canadian Forces 407 Squadron located in Comox, B.C. flies over Snowy Valley.

## CANADA'S MARITIME PATROL FORCE

*by David Reade*

**W**ith the Pacific Ocean on her west, the Atlantic to the east and the Arctic to the north, Canada possesses one of the world's longest and most unusual coastlines. The coastal zones of the west and east are unique geographically and industrially, considering the east's St. Lawrence River, massive Gulf, Labrador Sea and the huge Hudson Bay. The Queen Elizabeth Islands of the Northwest Territories compete only with the tip of Greenland on their reach to the Northpole. The Yukon shares with her bordermate, Alaska's concerns of population, petroleum production and pollution control.

To maintain a constant vigil over this vast and rather inaccessible land requires patrol by aircraft. It is interesting to note that Canada is the second largest country in land size and that her

seacoast includes 36,356 miles of mainland and 115,133 miles of islands.

Eighteen years ago, Canada selected an aircraft to fulfill her operational requirements and to replace their old, beloved, glass-nosed Argus. Their choice would be a customized P-3 Orion redesignated the CP-140 and renamed the Aurora.

To some, Aurora conjures up thoughts of Greeks mythology. Aurora was the goddess of the dawn, who was in love with ORION the Hunter, a nice, coincidental match of names. Others envision Canada's Aurora Borealis or northern lights display, which became their logo.

Built for Canada by Lockheed in the late 1970's, the CP-140 is a long range maritime surveillance aircraft based on the P-3C Orion. The aircraft shares the same basic airframe and

engines as the P3C, but contains advanced avionics of Lockheed's S-3A VIKING modified for the Aurora. One of the major differences of the Aurora is its unique interior crew arrangement. By careful Canadian design, all the sensor operators are clustered in the center of the aircraft to foster improved crew coordination and mission efficiency.

Like the P-3 Orion at that time, the Aurora was primarily used as a submarine hunter and was a vital link in NATO's Arctic defense of the North Atlantic during the Cold War. The Auroras also performed multiple sovereignty roles, search and rescue and national interest missions.

Today, the aircraft are concentrating their support to the national interest roles. Besides performing traditional maritime patrol missions, the burly Auroras conduct civilian government



tasks that include environmental monitoring, fisheries protection, law enforcement support, northern sovereignty patrols and iceberg reconnaissance.

Many of the civilian tasks resulted from the Department of National Defense (DND) signing Memorandums of Understanding with various Canadian government agencies to provide them with aerial support. Now the Aurora's multi-mission capabilities are being fully utilized.

### **PROTECTING THEIR ENVIRONMENT**

Environmental Canada utilizes the Auroras for monitoring of pollution and control of natural resources to include animal population census and aerial mapping. Some of these missions are accomplished through design provisions in the aircraft, with specialized packages mounted in the weapons bay to house sensors and photographic equipment. There is even a provision for a Side-Looking Airborne Radar (SLAR) in the aft section of the aircraft.

### **DEFENDING FISHING ZONES**

In support of the Department of Fisheries and Oceans (DFO) enforcement program, Canadian Auroras monitor shipping traffic in maritime regions to locate and identify violators of Canada's 200 mile EEZ or Exclusive Economic Zone. Auroras investigate suspect vessels, querying them as to their point of origin, cargo on board and amounts and types of fish collected. Violators are identified and photographic evidence is generated to aid in prosecution.

Canada is also a member of NAFO, the North Atlantic Fisheries Organization and is responsible for policing fishing zones outside of its 200 mile limit.

### **COUNTERING NARCOTICS INFILTRATION**

Through a Memorandum of Understanding between the DND and the Royal Canadian Mounted Police (in association with Canadian Customs) military Auroras provide aerial surveillance to monitor and track surface vessels suspected of smuggling drugs into the maritime provinces. These missions usually include drug liaison officers from the RCMP aboard the aircraft to coordinate operations. The Auroras locate, identify and track these ships

until seagoing law enforcement or Coast Guard assets can intercept and board the craft. If contraband is found and arrests are made, photographs and data collected by the Aurora are used as evidence in court. Canadian Auroras have been directly involved in such operations over the years, with several recent captures netting very large quantities of drugs bound for Canadian cities.

### **PATROLLING THE GREAT NORTHWEST AND ARCTIC**

Another important national interest tasking, vital to Canada's sovereignty is Northern Patrols of its Arctic region. This mission stems from a 1985 government mandate for the military to demonstrate a presence in isolated Arctic and coastal territories, to assert Canada's sovereignty and protect its natural resources from those who would exploit them. This mandate contributed greatly



The Canadian Forces have 18 CP-140 Aurora and three CP-140A Arcturus aircraft. Fourteen of the Auroras and the three Arcturuses are located at 14 Wing, CFB Greenwood in Nova Scotia while the remaining four Auroras are stationed at 19 Wing, CFB Comox in British Columbia.

The 14 Wing operates the 415, 405 and 404 Squadrons, and the MP & EU (Maritime Proving and Evaluation Unit). Their centralized maintenance group, the 14 AMS, is a substantial part of the Wing as well. The 19 Wing on Vancouver Island, supports the 407 Squadron.

to the acquisition of the three CP-140A Arcturus variants now in service for Canada.

A Northern Patrol is usually synonymous with the Arctic surveillance mission, but can also include other taskings such as pollution monitoring, animal population census, emergency medical evacuation and Arctic search and rescue.

One important sub-mission of Northern Patrols is Ice Reconnaissance. Icebergs located during "NORPATS" are reported to the Iceberg Central Division of the Canadian Department of Transportation. "Ice Central" uses iceberg location data in its maritime radio reports to mariners, for safer navigation of northern waters.

Most of these missions are now flown by their three new Arcturus aircraft. These were the last three P-3C airframes off of Lockheed's closing Palmdale production line. Originally, the three planes ordered were intended to be fully equipped Auroras, but when the Cold War defused, their mission was redesigned. Delivered "Green" without any avionics or sensors, the Arcturus' were equipped with minimal equipment necessary for Arctic surveillance by Industrial Marine Products (IMP) of Halifax, Nova Scotia. Lacking the Auroras ASW and associated gear, the Arcturus is lighter and profits with greater range.

The CP-140As use the APS-507 (APS-134) Radar and enhanced long range navigational and communications systems. They regularly carry Survival Kit Air Droppable (SKADS) multi-purpose life rafts designed for deployment from the weapons bay. The SKADS provide a significant measure of emergency/survival equipment for any situation.

The Arcturus augments the fleet in other ways, especially in pilot training, but they also work as a logistical transport, ferrying spare parts and replacement crews to deployment sites.

### **SUPPORTING OPERATION SHARP GUARD**

Although expanding national interest roles of the Auroras are important in this Post Cold War era, traditional military roles of the Aurora are still in demand as demonstrated during the recent support of NATO operations in the Adriatic.

The Canadian Auroras have been participating in operations to support United Nation's Resolution 820, enact-

ing an economic embargo against the former republics of Yugoslavia, as part of Canada's NATO commitment.

Since early September (1993), the Auroras have been flying armed missions over the Adriatic from Naval Air Station Sigonella, Sicily. Sharp Guard support missions include surface surveillance operations to detect, identify and query any merchant ships in the region. Those suspected of carrying prohibited cargos to the former Yugoslavian republics are reported to the fleet aircraft command and control ships. Suspect vessels are then targeted for intercept and boarding for inspection by other NATO surface units. If found to be violating the imposed embargo, the ships are escorted to port for discipline.

Sharp Guard has been one of the first major international deployments for Canadian Aurora squadrons. Crews from 405, 415 and 407 squadrons regularly rotate through Sigonella every 30

days in overlapping schedules. Prior to deploying, each designated crew is assigned to special orientation training consisting of rules of engagement, defensive air combat maneuvering, potential threat identification, local surveillance techniques and regional geopolitical background. Cockpit crews engage in additional flight simulator training emphasizing aircraft handling characteristics with higher gross weights (due to weapons loads).

## LOOKING AHEAD

Canada has not been immune from budget cuts and defense downsizing. Yet, as in the United States, her missions and obligations to NATO continue. So to keep their planes updated and in condition for their future requirements and interoperability with other platforms and P-3s around the world, the Aurora Life Extension Project has been initiated. The Project is a series of "supportable" avionics enhancement

initiatives for prototype systems. Design studies are currently underway, as required by Project Management-Aurora Office.

Their goals are set on the integration of GPS (Global Positioning System), SATCOM and a new ESM with a stand-alone, self-protection suite, as well as a color weather radar and communications management package.

Eventually, a new acoustic processor, 99 channel sonobuoy receiver set and an imaging "Spotlight SAR" Mod to the radar may see their way into the suite.

Another initiative in progress is the installation of Structural Data Recording Systems (SDRS) on several aircraft to generate information for a structural life extension study. Their objective is to determine the cost and effort to prolong the structural life of the aircraft to the year 2025. ★



Tactical Navigator, CAPT Alistair Mackay of the 415 Squadron.



Dept. of Fisheries & Oceans Officer and pilot, CAPT Gregoire, confirm fishing vessel sighting off Newfoundland coast.



Investigation of the vessel is made from the CP-140.

Photos: Capt. John Blakeley

## Pirates in Their Fishing Ground *by Capt. Tony Keene*

The flag on the fishing trawler says it comes from Belize. Or Panama. Or Sierra Leone. But the nationality of its crew says it really hails from more Mediterranean climes. It sits just on the line that limits Canada's 200-nautical-mile economic zone, on the edge of one of the greatest fishing areas in the world, The Grand Banks off Newfoundland. The captain is preparing to place his trawls in the water. It is a rough day, with two-metre waves, and a low overcast that threatens snow. The foreign skipper is quite confident he can haul in his catch and make his way clear without getting caught.

Suddenly, out of the sky, comes a grey shape, its four engines roaring, and as it passes low overhead a camera in its belly begins snapping pictures. This is a CP-140 Aurora aircraft of 415 Squadron, 12 Wing, from Greenwood, Nova Scotia. It and its crew are engaged in what has become known in flying jargon as a "FISHPAT" or fisheries patrol.

Reluctantly, the trawler captain sends his crew below, and puts the helm over. But he'll probably be back another day, trying his luck with international law.

Most of the violators are what are called "flag-of-convenience" vessels. Sometimes what they're doing

is legal, but only just.

Canada has all but closed its Atlantic fishery in an attempt to allow disastrously-low, stocks of cod, halibut and groundfish to recover. But although other members of the North Atlantic Fisheries Organization, NAFO, have agreed to observe quotas on many species, this only applies to vessels registered in those countries. It is an easy matter to register a ship in Panama and Liberia, with much-lower standards, as operators of cargo ships found out long ago.

Only onboard inspection can tell what they're catching. They mainly haul in various species of groundfish, but they keep everything they catch.

The Canadian cuts in fishing quotas began with northern cod, but then were extended to almost all groundfish. These include such types as red and silver hake, flounder and pollock. This latter has become popular recently under the commercial name Boston Bluefish, and is also dyed red, flavored, and sold as mock crab.

According to fisheries officer Trent Barrett, there are less illegals now due to the constant patrol of the waters and to very high fines. ★





David Reade

VP-16 P-3 checks out their team player, an Aegis cruiser.

## Operation Support Democracy

*By David Reade*

**O**n September 30, 1991, the duly elected president of the Island nation of Haiti was deposed in a coup by a military Junta. This action initiated a period of unrest in Haiti that continues today. Negotiations to return the ousted president, Jean-Bertrand Aristide and bring stability to Haiti were futile, so in June 1993, the United Nations passed Resolution No. 841 to enact an economic embargo against Haiti. This prompted the ruling military council to let Aristides return in August. The council later reneged and the sanctions were reimposed on October 18, 1993.

The UN embargo, Operation Support Democracy, involves a blockade of Haiti by naval combatants from Britain, France, Canada and the United States including elements of the US Coast Guard. The NATO flotilla is tasked to enforce the sanctions and has the authority to stop and search vessels suspected of violations. Embargoed goods include gasoline, oil, oil by products, arms and ammunition, police or military equipment, vehicles and spare parts.

It was on October 16, 1993, immediately preceding the reinstatement of the U.N. resolution, that Patrol Squadron Sixteen conducted the first intelligence and surveillance missions of the embargo.

The War Eagle's P-3 Orions were part of the multinational force under the command of Joint Task Force 120. They provided surveillance support to the Task Force and became the aviation backbone of the embargo. "No other U.S. or Allied Aviation Squadron has contributed more to ensure the embargo's success," reported Lt. Dave McKneely, VP-16's Public Affairs Officer.

The OSD mission encompasses employing the P-3 Orions on 10 hour surface surveillance flights against merchant traffic in and around Haiti. The multi-mission Orions detect; identify and query suspect ships. Information on suspicious vessels is passed to ACU (Aircraft Control Unit) ships; suspects may be targeted for subsequent boarding. The P-3s then track the suspect vessels, and provide intercept vectors to the Navy or Coast Guard units.

Within days of the embargo's initiation, VP-16 Orions located several ships. One was found to contain over 6,000 barrels of motor oil. Another ship tried to run the blockade. Refusing to change course, warning shots were fired across the ship's bow. This caused the vessel to turn back and leave the area.

A secondary mission tasking of OSD is the location and





interception of Haitian refugees fleeing from that island nation. Labelled Able Manor, these flights are flown to the north of Haiti in the straits between Cuba and Haiti. Often found adrift in over loaded rickety fishing boats or afloat on makeshift rafts, these refugees are subject to repatriation to Haiti if found. The task of trying to find these refugees, who are illicitly entering the United States is difficult. Despite the efforts of the US Military personnel to help them, the refugees resist, due to current policies that must return them to Haiti.

The OSD embargo mission tasking of VP-16 was just one part of their normal deployment period to Puerto Rico, Key West (FL), Panama and Honduras, in support of counter narcotic operations. Counter narcotics is an ongoing Navy P-3 mission conducted throughout the Caribbean, eastern Pacific and Atlantic coastal regions. P-3 crews detect, locate and track suspected ships and smaller surface craft that fit a particular drug trafficking profile. The Orions capability for day and night surveillance is well suited for this type of mission.

The P-3 CDU is a specially configured fleet Orion with an air to air intercept capability to detect and monitor suspected drug smuggling aircraft. CDU system components include the APG-66 (F-16) fire control radar, Cluster Ranger standoff, a stabilized high resolution electro-optical device and a dual enhanced communications suite. The communications suite also has an interface to the Cluster Ranger for the timely transmission of airborne intelligence imagery. Several fleet P-3s are currently equipped with proof-of-concept systems that are designed for quick or roll-on/roll-off installation. Provisions for 18 additional CDU Mod Kits are underway and expected to be available starting mid 1995.

By mid-February (1994) Patrol Squadron Sixteen's six month deployment came to an end. Returning to Naval Air Station Jacksonville, VP-16 turned over the continuing Operation Support Democracy mission to VP-8. To date, no resolution to the unrest in Haiti and easing of the embargo is in sight. The multi-mission capable P-3 Orion continues to be the eyes and ears of the fleet in support of democracy. ★



# CANADA HOSTS FINCASTLE



11th win for RAAF in 33 years

## Australian RAAF Crew Wins 1993 Fincastle Competition

by David Reade

**A**fter a 14 year drought, Australia won the 1993 Fincastle Competition, held at CFB Greenwood in Nova Scotia, Canada. Top honors went to the Royal Australian Air Force's 11 Squadron, Crew 5.

Held annually since 1961, the Fincastle Antisubmarine Warfare Competition pits the best ASW crews from the commonwealth countries of New Zealand, Australia, United Kingdom and Canada against each other in friendly competition for the coveted Fincastle Trophy.

The original competition began as an annual bombing accuracy contest. New Zealand, Australian, United Kingdom and Canadian crews first flew the bombing sorties locally over home waters, with the results sent to an adjudicating committee in the United Kingdom. This framework continued until 1970 when fundamental ASW skills were incorporated into the competition that included the detection and attack of a submerged submarine.

The most significant change took place in 1971 when all four participating nations agreed to convene at a central venue hosted by one of the member countries on a rotating basis. A new format was also initiated with a day sortie to detect, classify, localize and attack a

diesel exercise submarine and a night sortie, involving radar-homing and photography of a submarine target.

The competition changed again in 1981, adding a 30 minute CASEX (Combined Antisubmarine Exercise) as a tie breaking flight. The CASEX consists of locating a snorkeling submarine. Once located, the aircraft flies over the sub, heads outbound for eight miles and turns back for the attack while the submarine submerges. Points, or figures of merit are scored by two criteria: (1) the time it takes for re-acquisition of the sub, and (2) the accuracy of the attack.

In 1984 the day sortie submarine was changed to a nuclear boat and the night mission revised to locating and tracking a diesel. The most recent change came in 1989, with the day and night sorties increased from 4.5 to 5 hours.

Fincastle has attained the honor of being the oldest international military competition based on ASW skills. It has established a long tradition of 'esprit de corps' and camaraderie among those participating, leading to its longevity. There's even an award, the Chris Patrick Fellowship Trophy, sponsored by VP International (VPI), that is presented to the crew that best promotes goodwill during the competition. It was named for CAPT Chris Patrick, who, as International President of VPI, initiated

FINCASTLE 1961-1993			
YEAR	COUNTRY	AIRCRAFT TYPE	LOCATION
1961	Australia	P-2 Neptune	No Central Location
1962	Canada	Argus	(Home Waters)
1963	Australia	P-2 Neptune	" "
1964	New Zealand	Sunderland	" "
1965	Canada	Argus	" "
1966	U.K.	Shackleton	" "
1967	Australia	P-2 Neptune	" "
1968	Australia	P-2 Neptune	" "
1969	Australia	P-3B	" "
1970	U.K.	Nimrod	" "
1971	Aust./Canada	P-3B/Argus	Comox, BC Canada
1972	Australia	P-3B	Tengah, Singapore
1973	U.K.	Nimrod	Edinburgh, S.Australia
1974	U.K.	Nimrod	Whenuapai, Auckland NZ
1975	U.K./Aust.	Nimrod/P-3B	Greenwood, NS Canada
1976	U.K.	Nimrod	Kinloss, Scotland UK
1977	U.K.	Nimrod	Edinburgh, S.Australia
1978	Australia	P-3B	Whenuapai, Auckland NZ
1979	Australia	P-3B	Greenwood, NS Canada
1980	New Zealand	P-3B	ST.Mawgan, Cornwall UK
1981	Canada	CP-140	Edinburgh, S.Australia
1982	New Zealand	P-3B	Whenuapai, Auckland NZ
1983	New Zealand	P-3B	Greenwood, NS Canada
1984	U.K.	Nimrod	Edinburgh, S.Australia
1985	Canada	CP-140	Kinloss, Scotland UK
1986	U.K.	Nimrod	Edinburgh, S.Australia
1987	U.K.	Nimrod	Greenwood, NS Canada
1988	New Zealand	P-3K	Edinburgh, S.Australia
1989	Canada	CP-140	ST.Mawgan, Cornwall UK
1990	U.K.	Nimrod	Greenwood, NS Canada
1991	New Zealand	P-3K	Edinburgh, S.Australia
1992	U.K.	Nimrod	Kinloss, Scotland UK
1993	Australia	P-3C	Greenwood, NS Canada

the fellowship award prior to his untimely death in 1979. Australia's Crew 5 was doubly proud to be this years recipient.

Competition aircraft have varied over the span of 33 years and have included such planes as Shackletons, Sunderland flying boats, P-2 Neptunes and Canadair Arguses. Today, three out of the four participants fly variants of



Lockheed's P-3 Orion. The Orion was first introduced into the competition in 1966, by New Zealand who was the first foreign operator. Australia soon followed with her P-3Bs in 1968 and then their version of the P-3C in 1978. Canada first flew their P-3 variant, the CP-140 Aurora, in competition in 1980. The United Kingdom has flown the only true jet in the competition, the Nimrod, since the early 1970s.

Although all the competition aircraft are similar in capabilities, it is the skill of the aircrews that most affects the outcome, often with the victor winning on the basis of just a few yards or a few seconds.

Many of the crews have worked together for a long time, which increases their skills, but some of the crew composition that occurs at Fincastle can be an interesting factor as well. Due to NATO-exchange practices, finding a multi-national crew is not unusual. This year was no exception. The Canadian team, 405 Squadron's Crew 5 had a US Navy exchange pilot, LT Tom Reck, serving as their competition Crew Captain. The team, also included an Australian exchange TACCO, Flight Lieutenant Paul Wade.

The British team included an exchange Sensor Operator from New Zealand, SGT Spider Newth, and Australia had an RAF Nimrod pilot, Flt/LT Malcom Ridley. This years New Zealand crew had an ex-Canadian Aurora pilot, Flt/Lt Steve Castle, flying for them.

It's not uncommon for a crewman to participate numerous times wearing uniforms of different nations. "Transplant" crewmen may have retired from service with one nation's air force, move to another member nation and participated in Fincastle with that country's air force.

The Fincastle competition is the only contest of its kind stressing traditional ASW tactics. Although the world MPA community has many joint exercises, nothing quite compares to the uniqueness of Fincastle.

What is not readily perceived is that Fincastle serves as a forum for ASW tactics, where shared knowledge reaps dividends in both revising old ASW tactics and developing new ones. The ASW symposium segment of the competition provides an opportunity for member nations to benefit from each others experiences and knowledge of ASW matters. ★



Francois Charest

Competition winners of the Silver Tray for Fincastle 1993, the Royal Australian Air Force 11 Squadron, Crew 5 and support team are happy campers and doubly so. They also hold the Chris Patrick Fellowship Trophy in recognition of their camaraderie. The Fincastle Trophy is an original donation from Mr. and Mrs. Aird Whyte in 1960, honoring their son, Sergeant Narin Fincastle Aird Whyte who was killed in action in WWII while serving with the RAF Coastal Command. The Fellowship Trophy is sponsored by VP International.

## VP International



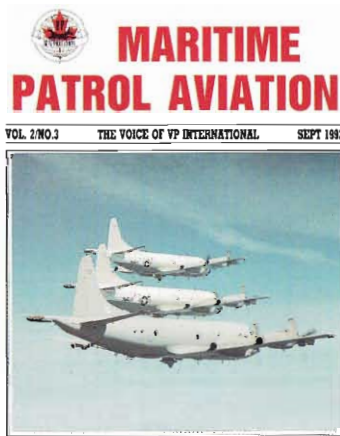
The magazine pictured here, Maritime Patrol Aviation, is published by VP International, a Canadian "worldwide association of VP fellowship". Even though qualification for membership is limited to individuals who have logged 2000 flight hours in patrol aircraft, there are over 3800 members in 27 "Wings" spread through 14 countries. Members receive the magazine free, however, it is available to non-members by subscription, as well.

VPI's main charter is "to maintain an organization of airmen to foster goodwill and fellowship among long-range, sub-seeking patrol and reconnaissance flyers through the promotion of understanding and recognition of VP operations and the impact on military aviation". The organization was the brainstorm of

Col. (Ret) Herb Smale, still on staff with VPI and the magazine. VPI's roots developed in the '60s when the "Royal Canadian Air Force" was flying the P-2V7 Neptune prior to the arrival of the ARGUS, and when Herb was a Wing Commander. The original charter was drawn for the "P-2000 Club" which later developed into VP International.

VPI continues to play a major supporting role in the Fincastle completion by setting-up house in the competition country, socially bonding the group, and by coordinating many of their functions.

For information contact President, VP International, CFB Greenwood, Nova Scotia, Canada, BOP 1NO. Their phone number is (902) 765-5447.



FEATURING: SUBMARINES OF THE TWENTY-FIRST CENTURY



EP-3E Aries II  
on a test flight at NAS  
Patuxent River, MD,  
before delivery to VQ-1.



## Updated P-3 Orion Bureau Number List Shows Many Changes

*by David Reade*

**W**ith many changes taking place, it's been an interesting year since the last P-3 Bureau Number List was printed. Most noteworthy is the retiring of P-3B Orions from reserve service. With a number of active squadrons disestablished, the P-3C is transferring into reserve use and the P-3Bs are being retired to desert storage.

Delivery of ex-Navy P-3 Orions to new foreign operators has now commenced with Chile and Thailand receiving aircraft as well as Australia acquiring

three as potential training and logistics aircraft. The past year has also seen several Orions designated for display at Naval Air Stations and others donated to museums. Some have been purchased by aircraft parts dealers or by aeronautical systems companies as integration laboratories or prototype mock-up simulators.

Besides the many changes, it is worth mentioning that the response to our first publication of the list was over-whelming. We believe this list is the most comprehensive and accurate in

existence. We heard from aircraft enthusiasts and former aircrew personnel and from people who actually work with the numbers in their jobs.

Besides status and title changes, these aircraft are in a constant state of evolution. The EP-3E ARIES II pictured here, for instance, is shown over NAS Patuxent River, MD on a flight test before delivery to VQ-1. It is sporting new grey canoe pods and radomes. They are manufactured of a composite material and replace very old components.



# P-3 BUREAU LIST

BUNO	LASC #	TYPE	LOCATION	COMMENTS
None	9998	P3V-1	Burbank	Fatigue Test Article

First P-3 airframe off production line used only for structural test prior to continued P-3 production. Now located in a scrap area on Lockheed's Burbank property.

## P-3A ORIONS

148276	1003	NP-3A	Pensacola	Nat'l Museum of Naval Aviation
Originally, an L-188 Electra re-engineered to the YP-3V-1 prototype for the flight test program. Used by NASA as an NP-3A until 1993.				
148883	5001	UP-3A	NAWC-AD Willow Grove	Versatile Testbed A/C
First production P-3V-1 delivered to the USN.				
148884	5002	P-3A	STRIKE (wing damage, NADEP JAX, 8/77)	
148885	5003	UP-3A	DMRO JAX	for disposal
Empennage used on NCAR Electra.				
148886	5004	P-3A	Tucson, AZ	K-TECH Aviation
148887	5005	EP-3E	VQ-1	(ARIES-DEEPWELL)
148888	5006	EP-3E	NADEP Alameda VQ-2	CILOPS donor from VQ-2
148889	5007	UP-3A	NAWC-AD Willow Grove	Versatile Testbed A/C
Used for the S-3 Electronics Flight Test with full mission suite and flight deck installed inside the fuselage.				
149667	5008	RP-3A	STRIKE	(Donated for fire training at NAS JAX)
149668	5009	EP-3E	VQ-2	(ARIES)
149669	5010	EP-3B	LASO AEROMOD	was Black P-3
Modified for special missions by the CIA in the mid-1960s, later modified to EP-3B "Bat Rack" prototype for VQ-1. It was brought up to the Aries configuration and flown until its systems were donated to the CILOP/ARIES II program.				
149670	5011	RP-3A	NRL	to AMARC - FMS (pre-strike)
149671	5012	EP-3A	CHINA LAKE	Static Ground Airflow Generator
149672	5013	P-3A	STRIKE	(water collision, Pax River, VP-8, 1/63)
149673	5014	EP-3A	AMARC - FMS	was Black P-3 (Miss Piggy)
Known as "Miss Piggy," her colorful history includes VP-8, CIA in SE Asia, first EP-3A, PMTC, NWL, VX-1, VP-MAU as a UP-3A, VP-30 and finally retirement to AMARC.				
149674	5015	EP-3A	NRL	Project testbed aircraft
A P-3A Orion, modified by Lockheed into a WP-3A prototype for Weather Reconnaissance Squadron 4, the "Hurricane Hunters." VW-4 was disestablished in 1975 and the mission was transferred to the Air Force.				
149675	5016	VP-3A	NAS Barbers Pt.	ETD (VIP Transport)
A WP-3A that was later modified to a VP-3A.				
149676	5017	VP-3A	VP-30	ASA (VIP Transport)
A WP-3A that was later modified to a VP-3A.				
149677	5018	P-3A	AMARC - FMS	CHILE #403
149678	5019	EP-3B	LASO AEROMOD	was Black P-3
Nearly identical history as 149669 except the wings were used in a USN/JMSDF structural analysis study.				
150494	5020	EP-3E	LASO AEROMOD	CILOP Donor
150495	5021	UP-3A	NAS KEFLAVIK ICELAND	base transport
150496	5022	VP-3A	VP-30	ASA (VIP Transport)
A WP-3A with VW-4 that was later modified to a VP-3A - the Orion flew to Moscow for an official visit on 3/14/93.				
150497	5023	EP-3E	NADEP ALAMEDA-bone yard	CILOPS Donor
An EP-3E ARIES-DEEPWELL Orion that was later stripped by NADEP ALAMEDA as component Donor to ARIES II/CILOP program.				
150498	5024	EP-3E	DMRO Alameda	for disposal
An EP-3E ARIES-DEEPWELL Orion that was later stripped by NADEP ALAMEDA as a component Donor to CILOP/ARIES II program.				
150499	5025	RP-3A	NAWC-WD	1st Billboard Orion
First EP-3 Orion to be modified with a unique Billboard extension of the vertical stabilizer for Pacific Missile Test Center - recently re-designated RP-3A "EATS" Orion.				
150500	5026	RP-3A	NADEP JAX-bone yard	SARDIP
Was an "Arctic Fox" RP-3A with VXN-8.				
150501	5027	EP-3A	NADEP ALAMEDA-bone yard	CILOP Donor
150502	5028	EP-3E	LASO AEROMOD	CILOP Donor
150503	5029	EP-3E	CHINA LAKE	Test Range
After a long life with VQ-2, components were used in the ARIES II/CILOP program. The airframe was split, cockpit used as P-7 mock-up, fuselage sent to China Lake.				
150504	5030	UP-3A	VQ-1	Partial VIP configured
150505	5031	EP-3E	VQ-2	(ARIES-DEEPWELL)
150506	5032	P-3A	Tucson, AZ	K-TECH Aviation
150507	5033	P-3A	CHILE	#402
Was leased to Spanish Air Force by USN, returned 9/91 to AMARC.				
150508	5034	P-3A	STRIKE	(fire, Cubi Pt. VP-9, 12/64)
150509	5035	P-3A	NAS Moffett Field	on display
VP-31 "Framp" Maintenance Training Aircraft, recently mounted for display.				
150510	5036	P-3A	Graybull, WY	Hawkins & Powers Aviation
Leased to Spanish Air Force by USN - now with H&P, a fire fighting company, via US Forest Service.				
150511	5037	VP-3A	VP-30	ASA (VIP Transport at Sigonella)
150512	5038	RP-3A	ALCO	will be used for parts
Was a RP-3A "EATS/SMILS" Orion for the PMTC - was recently SARDIP at NADEP-Alameda, now purchased by Aircraft Logistical Support Company of Reno, NV currently located at American Valley Aviation, Quincy, CA.				



148883 as SAR Testbed



148884 P-3A



148889 as Droop Snoop Testbed



149674 EP-3A with NRL



149676 as WP-3A for VW-4

BUNO	LASC #	TYPE	LOCATION	COMMENTS
150513	5039	P-3A	Alamogordo, NM	Neptune, Inc.
Formerly leased to Spanish Air Force by USN, now pending modification into fire fighter.				
150514	5040	P-3A	US Customs Service	"SLICK" N18314
150515	5041	P-3A	Sigonella	VR-DET (VIP Transport)
150516	5042	P-3A	Spain	assigned to Sp AF Museum
150517	5043	P-3A	VP-30	FRAMP Aircraft
150518	5044	UP-3A	AMARC - FMS	CHILE #401
150519	5045	UP-3A	AMARC - FMS	ex. General Offshore Orion
150520	5046	RP-3A	Oakland, CA	Western Aerospace Museum
150521	5047	RP-3A	NAWC-WD	2nd Billboard (EATS) Orion
150522	5048	RP-3A	NAWC-WD	3rd Billboard (EATS) Orion
150523	5049	P-3A	Waco, TX	Chrysler Technology Inc.
150524	5050	RP-3A	NAWC-WD	2nd EATS/SMILS Orion
Now being utilized by DOE/INFOTEC Development for "AMPS" Airborne Multisensor Pod System program.				
150525	5051	RP-3A	NAWC-WD	Harpoon Test Orion
150526	5052	UP-3A	VRC-30	Partial VIP configuration
150527	5053	UP-3A	AMARC - FMS	was VXN-8 "Tasmanian Devil"
150528	5054	UP-3A	AMARC - FMS	was VXN-8 "Loon"
150529	5055	EP-3A	Graybull, WY	Hawkins & Powers
Was VAQ-33 EW training Orion.				
150604	5056	P-3A	AMARC - REC	
150605	5057	UP-3A	NAS Barbers Pt.	ETD
150606	5058	P-3A	Tucson, AZ	K-TECH Aviation
150607	5059	UP-3A	AMARC - FMS	CHILE #406
Was once operated by both VXN-8 and NRL.				
150608	5060	P-3A	AMARC - REC	
150609	5061	P-3A	Tucson, AZ	K-TECH Aviation
151349	5062	P-3A	Tucson, AZ	K-TECH Aviation
151350	5063	P-3A	STRIKE	(water collision, So. China Sea, VP-6, 4/68)
151351	5064	P-3A	Tucson, AZ	K-TECH Aviation
151352	5065	TP-3A	VP-24	Pilot Trainer
151353	5066	UP-3A	AMARC - FMS	
151354	5067	UP-3A	CHILE	#405, first aircraft del'd 3/93
151355	5068	P-3A	Aero Union	Parts Bird
151356	5069	P-3A	AMARC - FMS	
151357	5070	TP-3A	VP-30	Pilot Trainer
151358	5071	UP-3A	AMARC - REC	
151359	5072	P-3A	Aero Union	AEROSTAR #24 (N924AU)
Tanker #24 via USFS, crashed in Montana 10/6/91.				
151360	5073	P-3A	AMARC - FMS	
151361	5074	P-3A	Aero Union	AEROSTAR #25 (N925AU)
Tanker #25 was the first P-3 to be modified as an air tanker.				
151362	5075	P-3A	STRIKE	(water collision Argentina, Newfoundland, VP-45, 11/64)
151363	5076	P-3A	STRIKE	(ran off runway, Adak, AK, VP-45, 6/69)
151364	5077	TP-3A	VP-30	Pilot Trainer
151365	5078	P-3A	STRIKE	(water collision, Japan, VP-4 4/67)
151366	5079	P-3A	AMARC - FMS	
151367	5080	UP-3A	NAS Bermuda	Base Transport aircraft
151368	5081	P-3A	AMARC - FMS	
151369	5082	P-3A	Aero Union	AEROSTAR #27 (N927AU)
151370	5083	TP-3A	VP-30	Pilot Trainer
151371	5084	TP-3A	VP-30	Pilot Trainer
151372	5085	P-3A	Aero Union	AEROSTAR #23 (N923AU)
151373	5086	P-3A	NADEP ALAMEDA-bone yard	
151374	5087	P-3A	NAS JAX	Gate Guard Display Orion
151375	5088	P-3A	VP-30	Pilot Trainer
151376	5089	TP-3A	NAS Barbers Pt.	ETD
151377	5090	P-3A	Aero Union	Parts Bird
151378	5091	P-3A	AMARC - FMS	
151379	5092	TP-3A	VP-30	Pilot Trainer
151380	5093	P-3A	STRIKE	(grd collision, Bermuda, VP-16, 7/65)
151381	5094	P-3A	STRIKE	(wheels-up landing, NAS JAX, VP-62, 2/78)
151382	5095	TP-3A	VP-30	Pilot Trainer
151383	5096	P-3A	AMARC - FMS	
151384	5097	UP-3A	AMARC - FMS	CHILE #407
151385	5098	P-3A	Aero Union	AEROSTAR #21 (grounded, N921AU)
151386	5099	P-3A	AMARC - REC	
151387	5100	P-3A	Aero Union	AEROSTAR #22 (N922AU)
151388	5101	P-3A	AMARC - REC	
151389	5102	P-3A	AMARC - FMS	
151390	5103	P-3A	US Customs Service	"SLICK" N15390
151391	5104	P-3A	Aero Union	AEROSTAR #00 (N900AU)
GMA-Allison tested the GMA 2100 engine on this USFS/Aero Union aircraft.				



BUNO	LASC #	TYPE	LOCATION	COMMENTS
151392	5105	TP-3A	VP-30	Prototype Pilot Trainer
151393	5106	P-3A	AMARC - REC	
151394	5107	TP-3A	VP-16	Pilot Trainer
151395	5108	P-3A	US Customs Service	"SLICK" #N16295
151396	5109	P-3A	AMARC - REC	
152140	5110	P-3A	AMARC - FMS	TACNAVMOD
152141	5111	UP-3A	AMARC - FMS	CHILE #408
152142	5112	P-3A	NADEP JAX	THAILAND (P-3T)
152143	5113	P-3A	AMARC - FMS	THAILAND (P-3T)
Scheduled for induction into NADEP JAX for modification by 10/93.				
152144	5114	P-3A	STRIKE	(grd collision, Japan, VP-48, 1/68)
152145	5115	P-3A	Spanish Air Force	#22-22/P-3-3
152146	5116	P-3A	AMARC - FMS	TACNAVMOD
152147	5117	P-3A	AMARC - FMS	ex - General Offshore
Once used for sonobuoy Quality Assurance Testing with General Offshore Corporation.				
152148	5118	P-3A	AMARC - FMS	TACNAVMOD
152149	5119	P-3A	STRIKE	(Spanish Air Force, Spain 7/77)
152150	5120	UP-3A	NAWC-AD Willow Grove	Versatile Testbed
Nicknamed the "Glass Bottomed Orion" for one of many research projects, the Laser Testbed.				
152151	5121	P-3A	STRIKE	(engine fail, Cubi Pt., VP-6, 12/71)
152152	5122	P-3A	Pensacola	Nat'l Museum of Naval Aviation
152153	5123	P-3A	Spanish Air Force	#22-21/P-3-1
152154	5124	P-3A	AMARC - FMS	TACNAVMOD
152155	5125	P-3A	STRIKE	(missing off CA coast, VP-31, 5/72)
152156	5126	P-3A	NAS Brunswick	mounted for display
152157	5127	P-3A	AMARC - FMS	TACNAVMOD
152158	5128	P-3A	NAWC-23	(non-flying status)
152159	5129	P-3A	STRIKE	(explosion-lighting, NV, VP-17, 8/70)
152160	5130	P-3A	NAS Bermuda	mounted for display
152161	5131	P-3A	STRIKE	(hard ldg, Whidbey Is., VP-69, 1/81)
152162	5132	P-3A	AMARC - FMS	TACNAVMOD
152163	5133	P-3A	THAILAND	(for parts)
152164	5134	P-3A	Tucson, AZ	K-TECH Aviation
Recently acquired by K-TECH from DMRO - parted out and cut up for scrap on site at NADEP Alameda.				
Provided tail Empennage to USCS SLICK 152170				
152165	5135	P-3A	CHILE	#404
152166	5136	P-3A	STRIKE	(hard ldg, Whidbey, VP-69, 1/89)
152167	5137	P-3A	AMARC - FMS	TACNAVMOD
152168	5138	P-3A	AMARC - FMS	TACNAVMOD
152169	5139	UP-3A	VPU-2	(specially equipped)
152170	5140	P-3A	US Customs Service	"SLICK" #N16370
152171	5141	P-3A	STRIKE	(water collision, VP-19, 4/66)
152172	5142	P-3A	STRIKE	(grd collision, MI, VP-19, 7/66)
152173	5143	P-3A	AMARC - FMS	TACNAVMOD
152174	5144	P-3A	AMARC - FMS	TACNAVMOD
152175	5145	P-3A	AMARC - FMS	TACNAVMOD
152176	5146	P-3A	AMARC - FMS	TACNAVMOD
152177	5147	P-3A	THAILAND	(for parts)
152178	5148	P-3A	Tucson, AZ	K-TECH Aviation
152179	5149	UP-3A	AMARC - FMS	
152180	5150	P-3A	AMARC - FMS	TACNAVMOD
152181	5151	P-3A	AMARC - FMS	TACNAVMOD
152182	5152	P-3A	STRIKE	(grd collision, Morocco, VP-44, 6/72)
152183	5153	P-3A	AMARC - FMS	TACNAVMOD
152184	5154	P-3A	AMARC - FMS	THAILAND (UP-3T)
152185	5155	P-3A	AMARC - FMS	TACNAVMOD
152186	5156	P-3A	AMARC - FMS	TACNAVMOD
152187	5157	P-3A	AMARC - FMS	TACNAVMOD

#### P-3B "LIGHT WEIGHT" TACNAVMOD

152718	5158	P-3B	AMARC - FLA	
152719	5159	EP-3J	VP-66	fleet EW training aircraft
152720	5160	P-3B	STRIKE	(grd collision, Hawaii, VP-6 6/83)
152721	5161	P-3B	AMARC - HOLD	
152722	5162	P-3	AEW&C	US Customs Service 3rd Dome #N147CS
152723	5163	P-3B	AMARC - HOLD	
152724	5164	P-3B	STRIKE	(water collision, Azores, VP-23 4/78)
152725	5165	P-3B	AMARC - FLA	
152726	5166	P-3B	AMARC - FLA	
152727	5167	UP-3B	VQ-1	
152728	5168	P-3B	VPU-1	specially equipped



150494 EP-3E Aries Orion



150495 MAS Keflavik UP-3A



150499 RP-3A "Billboard"



150500 RP-3A "Arctic Fox"



150510 Ex-Spanish P-3A  
Now with Hawkins & Powers

BUNO	LASC #	TYPE	LOCATION	COMMENTS
152729	5169	P-3B	AMARC - FLA	
152730	5170	P-3B	AMARC - HOLD	
152731	5171	P-3B	NOAA	training/logistics aircraft
152732	5172	P-3B	AMARC - FLA	
152733	5173	P-3B	STRIKE	(wheels-up ldg, Hawaii, VP-1 5/83)
152734	5174	P-3B	AMARC - HOLD	
152735	5175	P-3B	NASA	"EFIS BRAVO"
152736	5176	P-3B	AMARC - HOLD	
152737	5177	P-3B	AMARC - HOLD	
152738	5178	RP-3D	AMARC - FLA	Minimod RP-3D
Modified P-3B equipped with "minimod" systems that provide project Birdseye and Seascan mission capabilities.				
152739	5179	NP-3B	NAWC-23	special purpose
152740	5180	UP-3B	AMARC - FMS	from VQ-2
152741	5181	P-3B	AMARC - FLA	
152742	5182	P-3B	AMARC - FLA	
152743	5183	P-3B	AMARC - HOLD	
152744	5184	P-3B	AMARC - FLA	
152745	5185	EP-3J	VP-66	fleet EW trainer
152746	5186	P-3B	AMARC - FLA	
152747	5187	P-3B	AMARC - HOLD	
152748	5188	P-3B	VP-93	
152749	5189	P-3B	STRIKE	Selfridge ANGB display (water collision, VP-10 3/73)
152750	5191	P-3B	AMARC - HOLD	
152751	5193	P-3B	AMARC - FLA	
152752	5194	P-3B	AMARC - FLA	
152753	5195	P-3B	AMARC - HOLD	
152754	5196	P-3B	AMARC - FLA	
152755	5197	UP-3B	AMARC - FLA	
152756	5198	P-3B	AMARC - HOLD	
152757	5199	P-3B	STRIKE	(wing separation, ME, VP-8 10/78)
152758	5201	P-3B	AMARC - FLA	chosen by RAAF for TAP-3 project
A testbed aircraft with NATC - FWATD, once tested the feasibility of a P-3 Orion in-flight refueling system.				
152759	5203	P-3B	VP-64	
152760	5204	P-3B	AMARC - HOLD	to AMARC - hold
152761	5205	P-3B	AMARC - FLA	Pants Bird - Australia
152762	5206	P-3B	AMARC - HOLD	
152763	5207	P-3B	AMARC - FLA	
152764	5209	P-3B	VP-94	
152765	5210	P-3B	STRIKE	(hard ldg/fire, Lemoore, VP-31 3/69)
152886	5190	P-3K	Royal New Zealand Air Force	#NZ4201
152887	5192	P-3K	Royal New Zealand Air Force	#NZ4202
152888	5200	P-3K	Royal New Zealand Air Force	#NZ4203
152889	5202	P-3K	Royal New Zealand Air Force	#NZ4204
152890	5208	P-3K	Royal New Zealand Air Force	#NZ4205
153414	5211	P-3B	AMARC - MUSEUM	
153415	5212	P-3B	AMARC - HOLD	IPADS prototype
153416	5213	P-3B	AMARC - HOLD	
153417	5214	P-3B	AMARC - HOLD	
153418	5215	P-3B	AMARC - HOLD	
153419	5216	P-3B	AMARC - HOLD	
153420	5217	P-3B	AMARC - FLA	
153421	5218	P-3B	AMARC - FLA	
Used by VX-1 to test British SEARCHWATER Radar, '82-'83.				
153422	5219	P-3B	AMARC - FLA	
153423	5220	P-3B	AMARC - HOLD	
153424	5221	P-3B	AMARC - FLA	
153425	5222	UP-3B	Alverca, Portugal	OGMA SARDIP
153426	5223	P-3B	AMARC - HOLD	
Once had a mid-air collision with a USCG C-130 over Midway Island with eight feet of wing torn off - 12/12/71.				
153427	5224	P-3B	VP-66	
153428	5225	P-3B	STRIKE	(grd collision, Canary Is., VP-11, 12/77)
153429	5226	P-3B	AMARC - FLA	
153430	5227	P-3B	AMARC - HOLD	
153431	5228	P-3B	AMARC - FLA	
153432	5229	P-3B	AMARC - HOLD	
153433	5230	UP-3B	VQ-1	
153434	5231	P-3B	AMARC - HOLD	chosen by RAAF for TAP-3 project
153435	5232	P-3B	AMARC - FLA	
153436	5233	P-3B	AMARC - HOLD	
153437	5234	P-3B	AMARC - FLA	
153438	5235	P-3B	AMARC - FLA	
153439	5236	P-3B	AMARC - FLA	chosen by RAAF for TAP-3
153440	5237	P-3B	STRIKE	(water collision, So. China Sea, VP-26 2/68)
153441	5238	P-3B	AMARC - FLA	



# P-3 BUREAU LIST

BUNO	LASC #	TYPE	LOCATION	COMMENTS
<b>P-3B "HEAVY WEIGHT" TACNAVMOD</b>				
153442	5239	EP-3B	NRL	EW Simulator/Evaluator
First production Heavy Weight P-3 Bravo.				
153443	5500	RP-3D	NAWC-AD Pax River	Seascan - "EL COYOTE" (FWATD)
Modified as the YP-3C Prototype Orion - later re-designed as a Dual Mission RP-3D research aircraft that can conduct both Project Seascan and Birdseye Missions.				
153444	5240	P-3B	VP-60	
Once involved in the Myaguzh incident, with the Orion in direct communication with the White Horse while taking hits from enemy fire.				
153445	5241	P-3B	STRIKE	(water collision, So. China Sea, VP-26, resulted from direct enemy action, 4/1/68)
153446	5242	P-3B	AMARC - HOLD	
153447	5243	P-3B	AMARC - HOLD	
153448	5244	P-3B	AMARC - HOLD	
153449	5245	P-3B	AMARC - HOLD	
153450	5246	P-3B	VP-1	"DIFAR" Bravo, specially equipped
153451	5247	P-3B	AMARC - FLA	
153452	5248	P-3B	AMARC - HOLD	
153453	5249	P-3B	AMARC - HOLD	
153454	5250	P-3B	Tucson, AZ	K-TECH Aviation
Recently acquired by K-TECH from DMRO - parted out and cut up for scrap on site at NADEP Alameda - once provided wing to P-3B 154599.				
153455	5251	P-3B	AMARC - HOLD	
153456	5252	P-3B	VP-94	
153457	5253	P-3B	AMARC - HOLD	
153458	5254	P-3B	VP-94	
154574	5255	P-3B	SARDIP	Willow Grove Display
154575	5256	P-3	AEW&C	US Customs Service 4th Dome #N148CS
154576	5257	P-3N	Royal Norwegian Air Force	#1576
154577	5258	P-3B	VP-1	"DIFAR," specially equipped
154578	5259	P-3B	AMARC - HOLD	
154579	5260	P-3B	VP-94	
154580	5261	P-3B	AMARC - HOLD	
154581	5262	P-3B	VP-94	
154582	5263	P-3B	AMARC - FLA	
154583	5264	P-3B	Spanish Air Force	#22-31/P-3-8
USN Bravo sold to Norway and later sold by Norway to Spain; modified as a "Super Bravo."				
154584	5265	P-3B	AMARC FLA	"DIFAR," specially equipped
154585	5266	P-3B	VP-1	"DIFAR," specially equipped
154586	5267	P-3B	AMARC - FLA	
154587	5268	RP-3D	NRL	Project Birdseye "ARCTIC FOX"
A Dual-Mission RP-3D research aircraft that can conduct both Projects Birdseye and Seascan Mission.				
154588	5269	P-3B	VP-66	
154589	5270	RP-3D	NRL	Dual mission research Orion
A multi-purpose RP-3D Orion for airborne research with a back-up capability for the "EW" mission of 153442 (orange & white).				
154590	5271	P-3B	AMARC - HOLD	
154591	5272	P-3B	STRIKE	(wheels-up ldg, Hawaii, VP-6 9/80)
154592	5273	P-3B	Waco, TX	Chrysler Technologies
154593	5274	P-3B	VP-64	To AMARC-HOLD 5/94
154594	5275	P-3B	VP-66	To AMARC-HOLD 5/94
154595	5276	P-3B	VP-64	To AMARC-HOLD 8/94
154596	5277	P-3B	STRIKE	(engine fail/fire, Cubi Pt., VP-22 6/79)
154597	5278	P-3B	VP-66	
154598	5279	P-3B	VP-64	
154599	5280	P-3B	VP-66	
Had wing replaced 6/91 from #153454.				
154600	5281	RP-3D	AMARC - FLA	Minimod RP-3D
Modified P-3B equipped with "minimod" systems that provide Project Birdseye and Seascan mission capabilities.				
154601	5282	P-3B	AMARC - HOLD	
154602	5283	P-3B	AMARC - HOLD	
154603	5284	P-3B	AMARC - FLA	
154604	5285	P-3B	AMARC - HOLD	
154605	5286	P-3	AEW&C	US Customs Service 2nd Dome #N146CS
Originally a USN P-3 Bravo, sold to the RAAF as a replacement for 155296, that was destroyed before delivery to Australia. It was traded back to Lockheed towards the purchase of new P-3Cs, then modified as the second P-3 AEW&C for US Customs.				
155291	5401	P-3K	Royal New Zealand Air Force	#NZ4206
The first of 10 "DELTA" Bravos sold to Australia - later re-sold by the RAAF to the RNZAF in 1985 and subsequently modified as a P-3K Orion.				
155292	5402	P-3P	Portuguese Air Force	#4801
P-3P prototype Orion engineered by Lockheed.				



150517 FRAMP Orion



150519 Ex-General Offshore Corp. UP-3A



150526 VIP Configured UP-3A



151367 Bermuda Base Transport Orion



151387 Aerostar #22 with Aero Union

BUNO	LASC #	TYPE	LOCATION	COMMENTS
155293	5403	P-3P	Portuguese Air Force	#4802
155294	5404	P-3P	Portuguese Air Force	#4803
155295	5405	P-3P	Portuguese Air Force	#4804
155296	5406	P-3B	STRIKE	(hard ldg/fire Moffett Field RAAF 4/68)
155297	5407	P-3P	Portuguese Air Force	#4805
155298	5408	P-3P	Portuguese Air Force	#4805
155299	5409	P-3	AEW&C	US Customs Service 1st Dome #N145CS
Was Lockheed's P-3 AEW&C prototype Orion, and platform for the Navy's Cooperative Engagement Capability (CEC) test program.				
155300	5410	ORACL RAAF - DSTO		R & D Mock-up/simulator
RAAF P-3B damaged in fuselage fire, the wings supplied to a USN P-3C, 157330. Fuselage was re-furnished as an R&D mock-up. ORACL is an acronym for Orion Avionic Concept Laboratory.				
<b>P-3C ORIONS</b>				
156507	5501	EP-3E	VQ-1	ARIES II Prototype Orion
156508	5502	P-3C	VP-65	NUD
156509	5503	P-3C	VP-65	NUD
156510	5504	P-3C	VP-30	U III MOD
156511	5505	EP-3E	VQ-1	ARIES II
156512	5506	P-3C	VP-65	NUD
Once set turboprop time/altitude record from Atsugi, Japan to Pax River, MD of 6.857 statute miles, 15 hours 21 minutes.				
156513	5507	P-3C	VP-65	NUD
156514	5508	EP-3E	NADEP Alameda	CILOP/ARIES II
156515	5509	P-3C	VP-62	U III MOD
156516	5510	P-3C	VP-17	U III MOD
156517	5511	EP-3E	VQ-1	ARIES II
156518	5512	P-3C	VP-30	U III MOD
156519	5513	EP-3E	NADEP Alameda	CILOP/ARIES II
156520	5514	P-3C	VP-65	NUD
156521	5515	P-3C	VP-91	U III MOD
156522	5516	P-3C	VP-30	U III MOD
156523	5517	P-3C	VP-1	U III MOD
156524	5518	P-3C	VP-65	NUD
156525	5519	P-3C	VP-65	NUD
156526	5520	P-3C	VP-65	NUD
156527	5521	P-3C	VP-62	U III MOD
156528	5522	EP-3E	NADEP Alameda	CILOP/ARIES II
156529	5523	EP-3E	NADEP Alameda	CILOP/ARIES II
156530	5524	P-3C	VP-30	U III MOD
<b>SPANISH AIR FORCE "HEAVY WEIGHT" TACNAVMOD</b>				
<b>P-3B SUPER BRAVOS</b>				
156599	5301	P-3B	Spain	#22-32/P-3-9
156600	5302	P-3B	Spain	#22-33/P-3-10
156601	5303	P-3B	Spain	#22-34/P-3-11
156602	5304	P-3B	Spain	#22-35/P-3-12
As a Norwegian Bravo, this aircraft had a mid-air collision with a Soviet interceptor/fighter on 10/13/87.				
156603	5305	P-3N	Royal Norwegian Air Force	#6603
157310	5525	P-3C	VP-5	U III MOD
157311	5526	P-3C	VP-24	U III MOD
157312	5527	P-3C	VP-8	U III MOD
157313	5528	P-3C	VP-5	U III MOD
157314	5529	P-3C	VP-16	U III MOD
157315	5530	P-3C	VP-24	U III MOD
157316	5531	EP-3E	NADEP Alameda	CILOP/ARIES II
157317	5532	P-3C	VP-40	U III MOD
157318	5533	EP-3E	NADEP Alameda	CILOP/ARIES II
157319	5534	P-3C	VP-45	U III MOD
157320	5535	EP-3E	VQ-2	ARIES II
157321	5536	P-3C	VP-16	U III MOD
157322	5537	P-3C	VP-46	U III MOD
157323	5538	P-3C	VP-91	U III MOD
157324	5539	P-3C	VP-4	U III MOD
157325	5540	EP-3E	VQ-2	ARIES II
157326	5541	EP-3E	NADEP Alameda	CILOP/ARIES II
157327	5542	P-3C	VP-40	U III MOD
157328	5543	P-3C	VP-30	U III MOD
157329	5544	P-3C	VP-1	U III MOD/OASIS I
157330	5545	P-3C	VP-46	U III MOD
Damaged in accident 2/6/88. Re-built by NADEP JAXX with surplus wings from RAAF P-3B A9-300. Completed in Nov. '90.				
157331	5546	P-3C	VP-30	U III MOD
157332	5547	P-3C	STRIKE	(mid-air, Moffett Field, VP-47, 4/73)
158204	5548	P-3C	NAWC-AD Willow Grove	Versatile Testbed
158205	5549	P-3C	VP-46	U III MOD
158206	5550	P-3C	VX-1	(NON-ASW) "SMILS"
158207	5552	P-3C	VP-17	U III MOD

BUNO	LASC #	TYPE	LOCATION	COMMENTS
158208	5553	P-3C	VP-9	U III MOD
158209	5554	P-3C	VP-1	U III MOD
158210	5555	P-3C	VP-30	U III MOD
158211	5556	P-3C	VP-46	U III MOD
158212	5557	P-3C	VP-4	U III MOD
158213	5558	P-3C	STRIKE	(hit train-wires, Pago Pago, VP-50, 4/8/0)
158214	5559	P-3C	VP-30	U III MOD
158215	5560	P-3C	VP-46	U III MOD
158216	5561	P-3C	VP-1	U III MOD
158217	5562	P-3C	VP-4	U III MOD
158218	5563	P-3C	VP-4	U III MOD
158219	5564	P-3C	VP-45	U III MOD
158220	5565	P-3C	VP-9	U III MOD
158221	5566	P-3C	VP-46	U III MOD
158222	5567	P-3C	VP-17	U III MOD
158223	5568	P-3C	VP-1	U III MOD
158224	5569	P-3C	VP-5	U III MOD
158225	5570	P-3C	VP-9	U III MOD
158226	5571	P-3C	VP-1	U III MOD
158227	5551	RP-3D	NRL	Project MAGNET "Roadrunner"

Only production RP-3D built by Lockheed (PISANO TRES).

158563	5572	P-3C	VP-1	U III MOD
158564	5573	P-3C	VP-24	U III MOD
158565	5574	P-3C	VP-45	U III MOD
158566	5575	P-3C	VP-5	U III MOD
158567	5576	P-3C	VP-45	U III MOD
158568	5577	P-3C	VP-5	U III MOD
158569	5578	P-3C	VP-45	U III MOD
158570	5579	P-3C	VP-45	U III MOD
158571	5580	P-3C	VP-5	U III MOD
158572	5581	P-3C	VP-45	U III MOD
158573	5582	P-3C	VP-24	U III MOD
158574	5583	P-3C	VP-30	U III MOD
158912	5584	P-3C	NAWC-AD Pax River	FWATD Test A/C
158913	5585	P-3C	VP-46	U III MOD
158914	5586	P-3C	VP-1	U III MOD
158915	5587	P-3C	VP-1	U III MOD
158916	5588	P-3C	VP-30	U III MOD
158917	5589	P-3C	VP-4	U III MOD
158918	5590	P-3C	VP-4	U III MOD
158919	5591	P-3C	VP-45	U III MOD
158920	5592	P-3C	VP-16	U III MOD
158921	5593	P-3C	VP-47	U III MOD
158922	5594	P-3C	VP-5	U III MOD
158923	5595	P-3C	VP-45	U III MOD
158924	5596	P-3C	VP-45	U III MOD
158925	5597	P-3C	VP-46	U III MOD
158926	5598	P-3C	VP-45	U III MOD
158927	5599	P-3C	VP-16	U III MOD
158928	5600	P-3C	VP-68	U I

Update I prototype - development Orion with OMEGA software.

158929	5601	P-3C	NAWC-AD Pax River	FWATD Test A/C
158930	5602	P-3C	STRIKE	(mid-air, off San Diego, VP-50, 3/91)
158931	5603	P-3C	VP-8	U III MOD
158932	5604	P-3C	VP-16	U III MOD
158933	5605	P-3C	VP-45	U III MOD
158934	5606	P-3C	VP-24	U III MOD
158935	5607	P-3C	VP-24	U III MOD
159318	5608	P-3C	VP-16	U III MOD
159319	5609	P-3C	VP-5	U III MOD
159320	5610	P-3C	VP-24	U III MOD
159321	5611	P-3C	VP-17	U III MOD
159322	5612	P-3C	VP-16	U III MOD
159323	5613	P-3C	VP-9	U III MOD
159324	5614	P-3C	VP-9	U III MOD
159325	5615	P-3C	STRIKE	(mid-air, off San Diego, VP-50, 3/91)

159326	5616	P-3C	VP-17	U III MOD
159327	5617	P-3C	VP-9	U III MOD
159328	5618	P-3C	VP-1	U III MOD
159329	5619	P-3C	VP-9	U III MOD
159342	6001	P-3F	IRAN	#5-8701

Iranian P-3F, ordered by Iran before the Islamic Revolution, has equipment of both P-3B and P-3C. Several have reportedly been crashed, while others are presumed grounded due to lack of spare parts; one seen flying during the recent Gulf War.

159343	6002	P-3F	STRIKE (Presumed)	#5-8702 (Harpoon)
159344	6003	P-3F	IRAN	#5-8703
159345	6004	P-3F	IRAN	#5-8704
159346	6005	P-3F	IRAN	#5-8705



**151391 as Allison GMA 2100 Engine Testbed Orion**



**151354 1st UP-3A Delivered to Chile**



**152719 EP-3J with UP-66**



**152735 Nasa's "EFIS" Bravo**



**152739 Special Purpose NP-3B**

BUNO	LASC #	TYPE	LOCATION	COMMENTS
159347	6006	P-3F	IRAN	#5-8706
159503	5620	P-3C	VP-17	U III MOD
159504	5621	P-3C	VP-2	U I/specially equipped
159505	5623	P-3C	VP-69	U I
159506	5624	P-3C	VP-68	U I
159507	5625	P-3C	VP-1	U III MOD/OUTLAW HUNTER

Designated "OUTLAW HUNTER" OTH-T prototype aircraft - scheduled to be new "AIP" testbed Orion.

159508	5626	P-3C	VP-65	U I
159509	5627	P-3C	VP-69	U I
159510	5628	P-3C	VP-69	U I
159511	5629	P-3C	VP-68	U I
159512	5630	P-3C	VP-68	U I
159513	5631	P-3C	VP-68	U I
159514	5632	P-3C	VP-68	U I
159773	5622	WP-3D	NOAA	Weather Recon.
159875	5633	WP-3D	NOAA	Weather Recon.
159883	5634	P-3C	VP-69	U I
159884	5635	P-3C	VP-68	U I
159885	5636	P-3C	VP-17	U III MOD
159886	5637	P-3C	VP-68	U I
159887	5638	P-3C	VX-1	U III MOD
159888	5639	P-3C	VP-91	U I
159889	5640	P-3C	VP-30	U III MOD

Was Update II and Update III prototype.

159890	5641	P-3C	VP-69	U I
159891	5642	P-3C	VP-4	U III MOD
159892	5643	P-3C	STRIKE	(ditched/eng. fire, Adak, AK, VP-9, 10/78)

159893	5644	P-3C	VP-2	U I
159894	5645	P-3C	VP-4	U III MOD
160283	5646	P-3C	VP-47	U III MOD
160284	5647	P-3C	VP-68	U I
160285	5648	P-3C	VP-46	U I
160286	5649	P-3C	VP-46	U III MOD
160287	5650	P-3C	VP-24	U III MOD
160288	5651	P-3C	VP-1	U I
160289	5652	P-3C	VP-17	U I
160290	5653	P-3C	NAWC-AD Pax River	FWATD Test A/C

First production Update II Orion, now Update III MOD.

160291	5654	P-3C	NAWC-AD Willow Grove	Versatile Testbed
160292	5655	P-3C	NADEP JAX	U IV prototype

Currently undergoing modification for special operations units.

160293	5656	P-3C	VX-1	U II
160294	---	---	Re-numbered 160751 as first P-3C delivered to the RAAF.	
160610	5659	P-3C	VP-11	U II
160611	5661	P-3C	VP-92	U II
160612	5663	P-3C	VP-92	U II
160751	5657	P-3C	Royal Australian Air Force #A9-751	

Scheduled for Navy #160294, this P-3C II was modified & re-numbered on the Lockheed production line for the RAAF and was the first of 10 for Australia.

160752	5658	P-3C	Royal Australian Air Force #A9-752	
160753	5660	P-3C	Royal Australian Air Force #A9-753	
160754	5662	P-3C	STRIKE	(ditched, Cocos Is., RAAF, 4/91)

160755	5664	P-3C	Royal Australian Air Force #A9-755	
160756	5666	P-3C	Royal Australian Air Force #A9-756	
160757	5668	P-3C	Royal Australian Air Force #A9-757	
160758	5672	P-3C	Royal Australian Air Force #A9-758	
160759	5674	P-3C	Royal Australian Air Force #A9-759	
160760	5676	P-3C	Royal Australian Air Force #A9-760	
160761	5665	P-3C	VP-30	U II
160762	5667	P-3C	VP-92	U II
160763	5669	P-3C	VP-23	U II
160764	5671	P-3C	VP-23	U II
160765	5673	P-3C	VP-23	U II
160766	5675	P-3C	VP-92	U II
160767	5670	P-3C	VP-92	U II
160768	5677	P-3C	VP-30	U II
160769	5678	P-3C	VP-92	U II
160770	5679	P-3C	VQ-2	U II
160999	5680	P-3C	VP-92	U II
161000	5681	P-3C	VP-30	U II
161001	5683	P-3C	VP-92	U II
161002	5684	P-3C	VP-30	U I/IDPM prototype
161003	5685	P-3C	VP-23	U II
161004	5686	P-3C	VP-23	U II
161005	5687	P-3C	VP-64	U II
161006	5688	P-3C	VP-30	U II
161007	5690	P-3C	VP-26	U II
161008	5691	P-3C	VP-26	U II
161009	5692	P-3C	VP-30	U II



# P-3 BUREAU LIST

BUNO	LASC #	TYPE	LOCATION	COMMENTS
161010	5694	P-3C	VP-10	U II
161011	5695	P-3C	VP-10	U I/OASIS II
161012	5696	P-3C	VP-23	U II
161013	5698	P-3C	VP-69	U II
161014	5699	P-3C	VX-1	U II
161121	5700	P-3C	VP-30	U II
161122	5701	P-3C	VP-69	U II
161123	5702	P-3C	VP-30	U II
161124	5703	P-3C	VP-11	U II
161125	5705	P-3C	VQ-2	U II
161126	5707	P-3C	VP-10	U II
161127	5710	P-3C	VP-10	U II
161128	5713	P-3C	VP-66	U II
161129	5716	P-3C	VP-26	U II
161130	5718	P-3C	VP-64	U II
161131	5721	P-3C	VP-11	U II
161132	5724	P-3C	VP-11	U II.5 MOD
161267	7001	P-3C	Japan	U II.5 #5001
161268	7002	P-3C	Japan	U II.5 #5002
161269	7003	P-3C	Japan	U II.5 #5003
161329	5726	P-3C	VP-10	U II.5
161330	5727	P-3C	VP-26	U II.5
161331	5728	P-3C	VP-11	U II.5
161332	5729	P-3C	VP-26	U II.5
161333	5730	P-3C	VP-11	U II.5
161334	5731	P-3C	VP-10	U II.5
161335	5732	P-3C	VP-11	U II.5
161336	5734	P-3C	VP-23	U II.5
161337	5735	P-3C	VP-10	U II.5
161338	5736	P-3C	VP-8	U II.5
161339	5738	P-3C	VP-8	U II.5
161340	5739	P-3C	VP-8	U II.5
161368	5733	P-3C	Netherlands	U II.5 #300
161369	5737	P-3C	Netherlands	U II.5 #301
161370	5741	P-3C	Netherlands	U II.5 #302
161371	5745	P-3C	Netherlands	U II.5 #303
161372	5750	P-3C	Netherlands	U II.5 #304
161373	5754	P-3C	Netherlands	U II.5 #305
161374	5758	P-3C	Netherlands	U II.5 #306
161375	5762	P-3C	Netherlands	U II.5 #307
161376	5765	P-3C	Netherlands	U II.5 #308
161377	5769	P-3C	Netherlands	U II.5 #309
161378	5773	P-3C	Netherlands	U II.5 #310
161379	5774	P-3C	Netherlands	U II.5 #311
161380	5776	P-3C	Netherlands	U II.5 #312
161404	5740	P-3C	VP-8	U II.5
161405	5742	P-3C	VP-11	U II.5
161406	5743	P-3C	VP-26	U II.5
161407	5744	P-3C	VP-8	U II.5
161408	5746	P-3C	VP-10	U II.5
161409	5747	P-3C	VP-26	U II.5
161410	5748	P-3C	NAWC-23	U III MOD
Special project aircraft modified with unique elongated ventral cance pod; second Update III prototype.				
161411	5749	P-3C	VP-10	U II.5
161412	5751	P-3C	VP-65	U II.5
161413	5752	P-3C	VP-11	U II.5
161414	5753	P-3C	VP-26	U II.5
161415	5755	P-3C	VP-10	U II.5
161585	5756	P-3C	VP-26	U II.5
161586	5757	P-3C	VP-10	U II.5
161587	5759	P-3C	VP-23	U II.5
161588	5760	P-3C	VP-23	U II.5
161589	5761	P-3C	VP-23	U II.5
161590	5763	P-3C	VP-26	U II.5
161591	5764	P-3C	VP-11	U II.5
161592	5766	P-3C	VP-26	U II.5
161593	5767	P-3C	VP-10	U II.5
161594	5768	P-3C	VP-8	U II.5
161595	5770	P-3C	VP-8	U II.5
161596	5771	P-3C	VP-8	U II.5
161762	5772	P-3C	STRIKE	(hard ldg. Crows Landing, VP31, 9/90)
Was the first Update III production Orion.				
161763	5775	P-3C	VP-47	U III
161764	5777	P-3C	VP-40	U III
161765	5779	P-3C	VP-9	U III
161766	5781	P-3C	VP-91	U III
161767	5783	P-3C	VP-40	U III
162314	5786	P-3C	VP-40	U III
162315	5788	P-3C	VP-40	U III
162316	5790	P-3C	VP-40	U III



Spanish P-3B



P-3F with Iran



153443 as YP-3C Prototype



154576 P-3N with RNoAF



154587 The Newest Project Birdseye RP-3D Orion

BUNO	LASC #	TYPE	LOCATION	COMMENTS
162317	5792	P-3C	VP-40	U III
162318	5794	P-3C	VP-91	U III
162656	7778	P-3C	Royal Australian Air Force	#A9-656
162657	5780	P-3C	Royal Australian Air Force	#A9-657
162658	5782	P-3C	Royal Australian Air Force	#A9-658
162659	5784	P-3C	Royal Australian Air Force	#A9-659
162660	5785	P-3C	Royal Australian Air Force	#A9-660
162661	5787	P-3C	Royal Australian Air Force	#A9-661
Was T56 "Smoke Reduction" Engine Mod testbed aircraft.				
162662	5789	P-3C	Royal Australian Air Force	#A9-662
162663	5791	P-3C	Royal Australian Air Force	#A9-663
162664	5793	P-3C	Royal Australian Air Force	#A9-664
162665	5795	P-3C	Royal Australian Air Force	#A9-665
162770	5796	P-3C	NAWC-AD Pax River	FWATD Testbed A/C
162771	5797	P-3C	VP-47	U III
162772	5798	P-3C	VP-46	U III
162773	5799	P-3C	VP-40	U III
162774	5800	P-3C	VP-47	U III
162775	5801	P-3C	VP-47	U III
162776	5802	P-3C	VP-24	U III
162777	5803	P-3C	VP-47	U III
162778	5804	P-3C	VP-47	U III
162998	5805	P-3C	VP-47	U III
162999	5806	P-3C	VP-47	U III
163000	5807	P-3C	VP-17	U III
163001	5808	P-3C	VP-62	U III
163002	5809	P-3C	VP-62	U III
163003	5810	P-3C	VP-62	U III
163004	5811	P-3C	VP-62	U III
163005	5812	P-3C	VP-62	U III
163006	5813	P-3C	VX-1	U III
163289	5814	P-3C	VP-62	U III
163290	5815	P-3C	VP-91	U III
163291	5816	P-3C	VP-91	U III
163292	5821	P-3C	VP-16	U III
163293	5822	P-3C	VP-5	U III
163294	5823	P-3C	VP-91	U III
163295	5824	P-3C	VP-91	U III
Last Lockheed P-3 manufactured for the US Navy.				
163296	5817	P-3C	Norway	RNAF #3296 U III
163297	5818	P-3C	Norway	RNAF #3297 U III
163298	5819	P-3C	Norway	RNAF #3298 U III
163299	5820	P-3C	Norway	RNAF #3299 U III
164467	5825	P-3C	AMARC - FLA	Pakistan U11.75
Three aircraft for Pakistan are in storage at AMARC per resolution of the "Pressler Sanctions."				
164468	5826	P-3C	AMARC - FLA	Pakistan U11.75
164469	5827	P-3C	AMARC - FLA	Pakistan U11.75
165098	5831	P-3C	Korea - under production	U III+
165099	5832	P-3C	Korea - under production	U III+
165100	5833	P-3C	Korea - under production	U III+
165101	5834	P-3C	Korea - under production	U III+
165102	5835	P-3C	Korea - under production	U III+
165103	5836	P-3C	Korea - under production	U III+
165104	5837	P-3C	Korea - under production	U III+
165105	5838	P-3C	Korea - under production	U III+
CANADIAN CP-140 AURORAS				
140101	5682	CP-140	CFB GREENWOOD N.S.	#CP-101
140102	5689	CP-140	CFB GREENWOOD N.S.	#CP-102
140103	5693	CP-140	CFB GREENWOOD N.S.	#CP-103
140104	5697	CP-140	CFB GREENWOOD N.S.	#CP-104
140105	5704	CP-140	CFB GREENWOOD N.S.	#CP-105
140106	5706	CP-140	CFB COMOX B.C.	#CP-106
140107	5708	CP-140	CFB GREENWOOD N.S.	#CP-107
140108	5709	CP-140	CFB GREENWOOD N.S.	#CP-108
140109	5711	CP-140	CFB GREENWOOD N.S.	#CP-109
140110	5712	CP-140	CFB COMOX B.C.	#CP-110
140111	5714	CP-140	CFB GREENWOOD N.S.	#CP-111
140112	5715	CP-140	CFB COMOX B.C.	#CP-112
140113	5717	CP-140	CFB GREENWOOD N.S.	#CP-113
140114	5719	CP-140	CFB GREENWOOD N.S.	#CP-114
140115	5720	CP-140	CFB GREENWOOD N.S.	#CP-115
140116	5722	CP-140	CFB COMOX B.C.	#CP-116
140117	5723	CP-140	CFB GREENWOOD N.S.	#CP-117
140118	5725	CP-140	CFB GREENWOOD N.S.	#CP-118
CANADIAN CP-140A ARCTURUS				
140119	5828	CP-140A	CFB GREENWOOD N.S.	#CP-119
140120	5829	CP-140A	CFB GREENWOOD N.S.	#CP-120
140121	5830	CP-140A	CFB GREENWOOD N.S.	#CP-121
JAPAN'S JMSDF P-3 ORIONS				
5004 - 5008		JMSDF P-3C	Update II.5 assembled from Lockheed produced "Knockdown" components by Kawasaki Heavy Industries.	

BUNO	LASC #	TYPE	LOCATION	COMMENTS
5009		First Kawasaki produced P-3C II.5 Orion under license from Lockheed.		
5010 - 5069 (5032)		Kawasaki Update II.5 Production STRIKE (wheels-up landing, JMSDF, 3/92)		
5070 - 5088+		Kawasaki P-3C Update III Production		
9171 - 9172		Kawasaki EP-3 Orion Production		

#### BuNo LIST KEY

AMARC -	Aircraft Maintenance and Rejuvenation Center Located at Davis-Monthan Air Force Base, AZ. There are several categories of aircraft storage and disposition at
AMARC.	
STRIKE -	Aircraft stricken off Navy books due to accidents, collisions, and crashes.

#### CATEGORY 4850

##### 4850-1: FORCE LEVEL ASSURANCE (FLA)

Aircraft kept in ready condition as a reserve material supply

##### 4850-2 FMS OFFICE (FMS)

Aircraft assigned to the Foreign Military Sale Dept., for potential sales to foreign military operators

##### 4850-3 MUSEUM

Assigned to the National Museum of Aviation at Pensacola, FL. These aircraft are managed by the museum and are put on display there or provided to other bases for static display (in some cases, this category is used to trade aircraft to and from civilian surplus collectors).

##### 4850-4 RECLAMATION (REC)

Aircraft scrapped, equipment removed for spare parts and the remaining airframe disposed of (SARDIP)

##### CNO INVIOLEATE HOLD (HOLD)

A new AMARC designation that provides for "administratively stricken" aircraft to be held in a war reserve-like disposition. Aircraft are held intact, inviolate, with no systems or parts removed.

##### RIT (RECLAMATION INSURANCE TYPE)

Aircraft kept as "parts birds" to insure a ready supply of needed spares

AIMD -	Aircraft Intermediate Maintenance Dept.
AIP -	ASUW Improvement Program
ARIES -	Airborne Reconnaissance Integrated Electronic System for EP-3E Orions (modified on a P-3A airframe)
ARIES II -	A standardized EP-3E configuration with upgraded Aries systems (now based on the P-3C airframe)
ASA -	Administration Support Aircraft (VR detachment with VP-30 at NAS JAX)
BAMEO -	Base Aircraft Engineering Maintenance Organization Located at CFB Greenwood Maintains all Greenwood based CP-140 Auroras now 14th AMS (Aero Maintenance Squadron)
BER -	Beyond Economical Repair Associated with SRP, aircraft that are shown not to fit the SRP criteria during pre-inspection
CILOP -	Conversion In-Lieu Of Procurement The upgrade modification program of P-3C airframes into "EP-3E ARIES II" Orions AEROMOD, Lockheed's aircraft modification facility in Greenville, SC where the first EP-3E conversions were made before remaining aircraft were transferred to NADEP Alameda June 1992 Alameda, the Naval aircraft repair depot that is finishing conversion of EP-3E ARIES II Orions (will be transferred to NADEP JAX with the closure of Alameda) At NATC, flight testing all EP-3E Orions before introduction into the VQ squadrons
CONUS -	Aircraft Flown Only in the Continental United States
DIFAR -	Directional Frequency Analysis & Recording
DMRO -	Defense Material Re-utilization Office
EATS -	Extended Area Test System
EFIS -	Electronic Flight Instrumentation System
ESM -	Electronic Support Measures
ETD -	Executive Transport Department (at Barbers Pt., HI)
FRAMP -	Fleet Readiness Aviation Maintenance Personnel Aircraft used for ground maintenance training instruction
FWATD -	Force Warfare Air Test Directorate, Part of NATC



**154589 New Dual Mission Research RP-3D with NRL**



**155295 P-3P with Portugal**



**164469 Pakistan P-3C**



**165098 First Production P-3C For Korea**

BUNO	LASC #	TYPE	LOCATION	COMMENTS
GPS -		Global Positioning System		
IPADS -		Improved Processor and Display System		
				A P-3C type acoustic display system for TACNAVMOD P-3Bs
ISAR -		Inverse Synthetic Aperture Radar		
KNOCK-				
DOWNS -		Aircraft Re-Assembled From Large Component Pieces		
MAD -		Magnetic Anomaly Detector		
NADC -		Naval Air Development Center		
				Located at Warminster, PA, now NAWC-AD Willow Grove
NADEP -		Naval Aircraft Depot (for rework, mods, paint, etc.)		
				Depots located at Jacksonville & Alameda
NASC -		Naval Air Systems Command (known as NAVAIR)		
NATC -		Naval Air Test Center		
				Located at Pax River, MD, now NAWC-AD Pax River
NAWC-AD				
-		Naval Air Warfare Center, Aircraft Division		
		Location (see above)		
NOAA -		National Oceanic and Atmospheric Administration		
NRL -		Naval Research Laboratory		
OASIS -		Over-the-horizon Airborne Sensor Information System		
OTH-T -		Over-The-Horizon-Targeting System		
OUTLAW HUNTER				
-		OTH-T Prototype Orion Testbed		
PMTC -		Pacific Missile Test Center, now NAWC-WD Point Mugu		
SARDIP -		Stricken Aircraft Reclamation and Disposal Program		
				Stripped aircraft (stripped of needed parts) sold as scrap metal
SATCOM		Satellite Communication		
SDLM				
-		Standard Depot Level Maintenance		
SMILS -		Sonobuoy Missile Impact Location System		
SRP -		Sustained Readiness Program		
TACNAVMOD				
-		A systems upgrade modification to P-3As and Bs that brought them up to P-3C processing standards		
		• Super Bs - TACNAVMOD Bravos		
		• Killer Bs - Enhanced TACNAVMOD Bravos		

PHOTO CREDIT: Terry Taylor, Marty Isham (the Isham Collection), Bob Shane, Bruce Stewart, Scott Van Aken, Randy Hepp, George Van Belleghem, Milo Peltzer, Marco Borst, and David Reade via P-3 Publications.





VP-93 aircraft awaits her crew on a Key West sunrise.

## RESERVE PATROL FORCE: Vital to the Fleet *by David Reade*

**A**s a brilliant sunset fades on the western Caribbean, the calm of the coming twilight is broken by the drone of turboprop engines. The dark outline of a P-3 Orion darts across the fading light.

On board the aircraft, a lawyer, a real estate agent and a high school principal, man the controls while an airline pilot and a NASA technician handle the NAVCOM and TACCO station. The rest of the crew members aboard the Orion include a Coca Cola executive, sales representative, teacher, landscaper, stock broker, banker and policeman.

As you have guessed, this is no ordinary P-3 crew. This is a Reserve VP crew made up of Selected Reservists, men and women from all parts of the country and all walks of life. Reservists serve one weekend a month and two weeks per year, with requirements to complete upwards of seventy-two additional drill periods. These drill periods consist of training in NATOPS safety coordination, weapons, ethics, and sexual harassment. Flight crews are also required to spend additional time in crew trainers and flight simulators.

Reserve VP crews are highly proficient at their military occupation, often having three times more experience than their active forces counterpart. Crew coordination and motivation is highly developed due in part to a reserve crews longevity which can run five years or more before a crew member change.

Initiated early in the 1970s, Reserve patrol squadrons were established as part of a new Reserve Force Squadron concept. This concept implemented a structure for the naval air reserve forces to provide fully manned and equipped squadrons to the fleet in the event of war or national emergency. For many years, reserve squadrons conducted mobilization and proficiency training, by deploying to distant

bases to practice their trade alongside active squadrons and attain higher states of combat readiness. During times of national crisis or if tensions increased, Reserve squadrons could be called up to augment the active forces.

Today, reserve patrol squadrons are more proactive and responsive to the needs of the fleet. They are flexible, supporting ongoing fleet operations worldwide and possessing the capability to respond quickly in a crisis. At least two reserve patrol squadron crews are deployed somewhere in the world each week, fifty-two weeks a year. Reserve VP units provide contributory support to many fleet operations.

### Operation Support Democracy

OSD is the Navy's mission in support of the United Nations economic embargo of Haiti. Reserve VP squadrons, flying out of NAS Roosevelt Roads, Puerto Rico, have been conducting surface surveillance flights of merchant traffic in the maritime environment around Haiti. Ships are detected and questioned as to name, nationality, point of origin, destination and contents of cargo. Any vessel deemed suspicious is reported via Datalink to a NATO surface combatant acting as the Aircraft Control Unit. The ACU then directs an available Naval or Coast Guard surface ship to intercept and board the suspect vessel for inspection.

### Able Manor

A secondary mission tasking during Operation Support Democracy is Able Manor. With OSD flights conducted towards the south of the Haitian capital of Port-au-Prince, Able Manor missions are flown to the north, in the straits between Haiti and Cuba. The mission's purpose is to detect Haitian refugees adrift, fleeing from their homeland. Once



sighted, their location is transmitted back to the ACU and a Coast Guard vessel is dispatched to pick them up. Under a presidential directive and current US immigration laws, all Haitian refugees are to be repatriated to Haiti.

### Counter Narcotics

One standing task for reserve VP units in all U.S. waters is counter narcotics operations. In the Caribbean, Reserve P-3s are based at Naval Air Station, Key West, Florida supporting Commander Joint Task Force Four. Counter narcotics missions incorporate standard MPA surveillance procedures to identify suspect vessels sailing in known transit zones. Photographs are routinely taken to confirm ship identification and configuration.

Although the primary sensors are radar during the day and IRDS at night, reserve Orions are sometimes equipped with a portable electro-optical sensor known as SID-RIT short for Secondary Imaging Dissemination System - Remote Imaging Transceiver. This system includes a digital camera and laptop transmitter to send stabilized visual data back to a command center or ACU asset.

### Sharp Guard

The Reserve squadrons were among the first MPA units to participate in operation SHARP GUARD, the NATO enforced embargo against the former Yugoslavian Republics in support of U.N. sanctions aimed to restore peace. Again, they demonstrated the value of maritime surveillance capabilities for blockade support, this time to stem the flow of illegal contraband from entering the warring Adriatic Republics of Bosnia and Herzegovina.

Most of these missions include weapons loads usually in the form of torpedoes and rockeye bombs. As in the OSD missions, suspected vessels are reported to Allied surface ships and targeted for interception and inspection. Other mission requirements include stand-off monitoring of Adriatic seaports along the coastline.

### The Future

The reserve force is changing right along with the active patrol forces. By the end of FY 1994, both the Atlantic and Pacific fleets will be forced to retire several patrol squadrons, reducing the total number from thirteen to nine. VP-60, VP-67, VP-90 in the Pacific and VP-93 in the Atlantic will disestablish, dispersing some personnel to remaining squadrons and some to non-aviation reserve units. Some will opt for early retirement or drop out rather than transit greater distances required to report for duty.

In the mean time, transition training from the P-3 to the P-3C continues. When completed, reserve VP will be an all P-3C fleet with two squadrons utilizing P-3C Update IIIs and the remaining units operating P-3C NUD, Update II and II.5 Orions. The ultimate plan for reserve VP is to upgrade all its aircraft to the P-3C Update III configuration. Conversion of the existing P-3C variants could begin as early as 1996, culminating in a completely integrated P-3C force.

With the continued disestablishment of active patrol forces, reserve VP will play an ever increasing role providing a ready and effective force to augment active elements in equal support to the fleet. This concept has already been tested during a trial nine month program enacted to augment active patrol squadrons with reserve VP elements. Crews from VP-62 co-located with VP-49 on deployment and oper-

ated jointly sharing crewmembers as well as maintenance requirements. Since then, reserve VP units have continued the side-by-side concept throughout operations Sharp Guard and Support Democracy.

In months to come reserve squadrons will strive to maintain the fifty-two week coverage it has established, while going above and beyond providing crews for counter narcotics, UNITAS and crisis response missions. Reserve VP will continue to be an effective force multiplier for fleet operations now and in the future.

### RESERVE PATROL SQUADRONS

VP-60*	COBRAS	RESPATWINGSPAC	NAS Chicago Ill.
VP-62	BROADARROWS	RESPATWINGSLANT	NAS JAX Florida
VP-64	CONDORS	RESPATWINGSLANT	NAS Willow Grove Pa.
VP-65	TRIDENTS	RESPATWINGSPAC	NAS Point Mugu Ca.
VP-66	LIBERTY BELLS	RESPATWINGSLANT	NAS Willow Grove Pa.
VP-67*	GOLDEN HAWKS	RESPATWINGSPAC	NAS Memphis Tn.
VP-68	BLACK HAWKS	RESPATWINGSLANT	NAF Washington D.C.
VP-69	TOTEMS	RESPATWINGSPAC	NAS Whidbey Island Wa.
VP-90*	LIONS	RESPATWINGSPAC	NAS Chicago Ill.
VP-91	STINGERS	RESPATWINGSPAC	NAS Moffett Field Ca.
VP-92	MINUTEMEN	RESPATWINGSLANT	NAS South Weymouth Ma.
VP-93*	EXECUTIONERS	RESPATWINGSLANT	NAS Detroit Mi.
VP-94	CRAWFISHERS	RESPATWINGSPAC	NAS New Orleans La.

\*Pending disestablishment 1994



East coast squadrons line up: from front to back VP-62, 64, 66, 68, 92, 93 and 94. VP-93 has disestablished, VP-94 is now a west coast squadron.









## AIRBORNE MULTI-SENSOR POD SYSTEM

DAVID READE

The Department of Energy is sponsoring Research, Development, Test and Evaluation of several new technology sensor systems that can monitor areas of interest vital to our national security and our environmental concerns. The program involves the use of a Lockheed RP-3A Orion as a testbed research aircraft for proof-of-concept sensor development. Named the "Airborne Multi-Sensor Pod System" (AMPS) program, the project is under DOE sponsorship with the National Laboratories. Their purpose is to develop a series of pods with state-of-the-art electronics to support data collection which could be used ultimately in treaty verification and in environmental monitoring applications.

Under the program, the DOE National Labs are tasked to design and develop sensor pods in order to test multisensor data research concepts. There are currently three different pods being designed for AMPS that are based on US-3A Viking Carrier Onboard Delivery cargo pods modified as electronic sensor instrument bays. Each pod, 200 inches long and 42 inches in diameter, has a 90-inch wide door well suited for access to installed avionics.

Pod 1, developed by the Sandia National Laboratory, contains a digital imaging Synthetic Aperture Radar (SAR), positioned in a side-looking configuration for all weather, day and night radar imagery. Pod 1 information processed through Data Fusion compliments and enhances the optical sensor data from Pod 2.

Pod 2, designed by EG&G-Remote Sensing Laboratory, is a multi-sensor pod, housing six different off-the-shelf optical and thermal imaging sensors. These range from high-resolution mapping cameras and video units, to three multispectral infrared sensors. The units are placed in a downward looking vertical position within the pod.

On their own, each sensor cannot generate the degree of information that can be derived from the combination of all sensor data. It's this synergistic concept of combining sensor data, that is at the heart of AMPS research.

Pod 3, still under development, is a proposed Effluent Species Identification pod, to be equipped with several air particle scanners. These systems will be capable of detecting

airborne radioactive particles escaping from nuclear facilities, which could be associated with nuclear weapons production. Environmentally, chemical pollutants and chemical warfare agents leaking from manufacturing plants or storage facilities can be detected. Lawrence Livermore National Laboratory in collaboration with Savannah River Technology Center and Pacific Northwest Laboratory have been selected for development of this portion of the program.

DOE has selected Infotec Development Inc. (INFOTEC) of Camarillo, California as the program coordinator. INFOTEC provides project development support to the National Labs and is the liaison with the US Navy. The company directs all flight operations for the program and had coordinated the arrangement with the Naval Air Warfare Center-Weapons Division, Point Mugu, California to utilize a range control RP-3A Orion as the AMPS testbed aircraft. (DOE had investigated purchasing a used Navy Orion to conduct RDT&E projects several years ago, but settled on the less costly agreement to utilize one of the NAWC-WD Point Mugu Orions on an "as need" basis.)

The NAWC-WD Orion was modified by the Naval Aviation Depot, Alameda to provide power, control and data-signal support for the AMPS pods. The Mod includes a twin sensor operator workstation in the back of the aircraft to operate the SAR pod and controls. Sensor data is collected and stored by digital tape and film/video units installed on the aircraft for later analysis.

Although the Orion is only the testbed aircraft for the AMPS program and is not scheduled to be an operational platform for the pods, which were originally conceived for use with various aircraft, it is possible that P-3 Orion operators could utilize the AMPS sensor pods, custom-tailored for their own operational needs.

The AMPS concept lends itself to future applications, exploiting advance technologies to develop low cost derivative sensor pods with capabilities for law enforcement, search and rescue, border and counter-drug surveillance, environmental and fisheries patrols. Military applications may include electronic warfare, non-acoustic ASW and weapons test monitoring. ★





Diagram illustrating the internal layout of the E-10B aircraft fuselage, showing the location of various sensors and equipment:

- BARO & STRUDD CAMERA
- METRIC CAMERA
- ADAPTER PANEL
- ECS PANEL
- HSS INSTRUMENT CONTROL UNIT
- HSS POWER SUPPLY UNIT
- TIME CODE GENERATOR
- COLOR VIDEO CAMERA CONVERTER
- BARO & STRUDD RECORDER
- LOW LIGHT LEVEL RECORDER
- COLOR VIDEO CAMERA CONTROL UNIT
- MULTISPECTRAL SCANNER UNIT
- LOWER LIGHT LEVEL CONTROL UNIT
- MULTISPECTRAL SCANNING OPTICIZER
- CONVERTER
- MULTISPECTRAL SCANNER (FOR POSITION ONLY)
- HYDROSCOPE
- ACTUATOR ASSEMBLY
- SLOD WITH TRAP DOOR
- BLOWER & HEATER
- LOW LIGHT LEVEL
- WINDOW
- HYDROSCOPE STAT. BRK.
- HYPERSPPECTRAL SCANNER (FOR POSITION ONLY)
- TANK FOR BARO & STRUDD
- METRIC CAMERA CIRCULARITY UNIT
- ACTUAL SHOTS

### MULTISENSOR POD

### Effluent Species Identification Pod

A close-up photograph of the underside of a B-57 Canberra bomber. The image shows the fuel tank and the 'DANGER' warning text. The aircraft is white with red markings. The word 'DANGER' is written in red on the side of the fuel tank. There is also a red band with the word 'DANGER' written on it. The aircraft is parked on a tarmac, and a person is visible in the background.

A front-facing view of a C-17 Globemaster III military transport aircraft. The aircraft is white with dark grey accents on the nose and engine nacelles. It features four large propellers with red and white striped tips. The aircraft is positioned on a light-colored tarmac, and its landing gear is visible. The background is a clear, bright sky.

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Radome experimentation by the RNZAF is an attempt to reduce moisture ingress.

## “PROJECT KESTREL” New Wings For New Zealand’s P-3s

**T**he Royal New Zealand Air force is currently finalizing a contract with Lockheed for the purchase of five to six pairs of P-3 wings as part of a New Zealand re-winging program, called Project Kestrel. The RNZAF has been investigating the option of re-winging their P-3K Orions for several years now and only recently requested Lockheed to look into all aspects of such a project that would also include replacement of the horizontal stabilizers and refurbishment of engine nacelles.

After 27 years of continuous service, the New Zealand aircraft are showing their age. The Kiwis were the first foreign operator of the P-3, receiving five light-weight P-3s in 1966. Since then, corrosion and stress corrosion cracks in the wing spar web, upper caps, horizontal stabilizers and engine nacelle areas have begun to appear. Replacing critical fatigue items on the existing aircraft became the best alternative to solve the problem.

Several Service life Assessment Program-like studies were initiated to identify and determine the remaining fatigue life of the aircraft, which included the installation of stress and strain load recorders and flight parameter instruments aboard the Orions to generate fatigue data during normal operations.

The SLAP data indicated that the P-3Ks had less than ten years of service left and identified which areas needed replacement.

Lockheed was then asked to conduct a feasibility study to determine if new production heavy weight P-3C wings, currently in production for the Korean P-3 Orion program, could be installed on the older New Zealand P-3K Orions. Lockheed's response was a proposed installation plan that consisted of modifying the lower section of the center wing box to that of a P-3C, to facilitate the attachment of the Charlie wings. The upper section of the center box would remain virtually the same. The horizontal stabilizer would encompass a straight forward replacement with the engine nacelles needing only refurbishing. The project does include a non-fatigue related modification to the #5 fuel tank, accommodating a fuel dumping capability.

The RNZAF is considering where the re-winging installations will take place. Proposals include Lockheed's Marietta plant and/or its Aeromod facility located in South Carolina. There is also a possibility that the wings could be shipped directly from their assembly point in Korea to New Zealand for installation. The project is expected to start in early 1995 and take approximately four years to be completed.

In this era of austerity, Project Kestrel is perceived to be the most cost effective means for the RNZAF to keep its Orions flying. Project Kestrel will add another 20 years to the P-3Ks service life. ★—by David Reade

## S-3, P-3 to Star on WINGS Program

In recent months, a camera crew from the Discovery Channel's aviation series “WINGS” visited Naval Air Stations Jacksonville and Cecil Field, to conduct live interviews for upcoming episodes on the P-3 Orion and S-3 Viking.

Network Projects, the production company that produces WINGS for the Discovery Channel, is developing the P-3 and S-3 segments for a 13 part series on Naval Aviation. Entitled “Sea Wings”, the series documents different Naval aircraft including the Orion and Viking. The episodes will be telecast sometime this Fall. ★



## Moffett Memento

Naval Air Station Moffett Field commuters were surprised to see a new addition to their base last summer. Adjacent to base operations building a freshly painted P-3 had been mounted permanently for display. On the other side of the building a P-2 Neptune had been previously placed and together they aptly framed Moffett's tower.

The Orion, bureau number 150509, was originally delivered to VX-1 Air Test Development Squadron in 1964. It was transferred to the Naval Air Development Center, Warminster, PA in 1971. In 1973, it began Naval Reserve duty, serving with VP-68, VP-65, VP-69, VP-94 and VP-67 until it was retired from flying in 1981. The aircraft continued to serve as a ground maintenance trainer, assigned to VP-31's Fleet Readiness Aviation Maintenance Personnel division. When the Navy base was scheduled to close, the “FRAMP” Orion became the logical choice for the previously planned display. ★