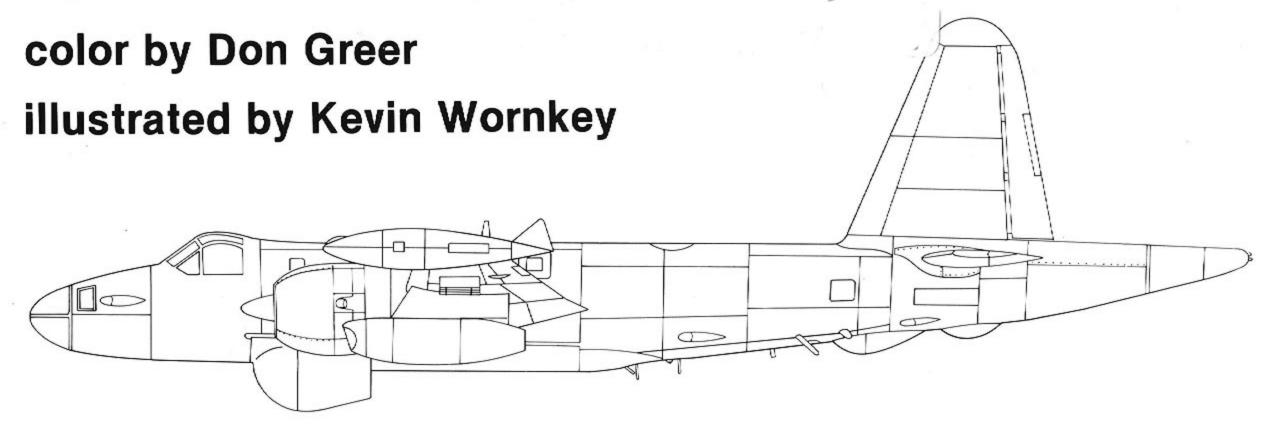


P2WNEPTUNE in action

by Jim Sullivan







P2V-7 (SP-2H) (140159) of VP-24 on a routine patrol off the Atlantic coast. The P2V Neptune, teamed with fast destroyers, provided a formidable anti-submarine force with a powerful search and destroy capability. 1960.



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Dedication

This book is dedicated to the pilots, aircrew and all the members of the Patrol Bomber community in grateful appreciation for their loyalty and dedication to keep our country secure. As a vital part of America's defense umbrella, their never ending efforts have helped to assure that we will indeed be able to exist as the land of the free and the home of the brave.

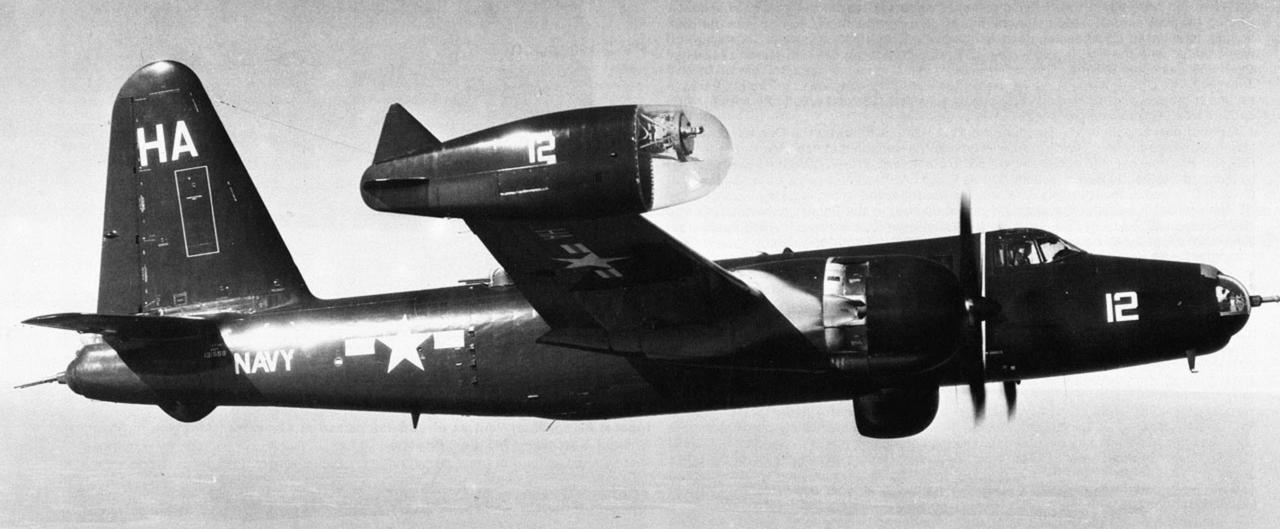
Photo Credits

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P2V-6 (131559) Neptune of VP-24 shortly after take off from its home base NAS Patuxent River. It is painted overall Glossy Dark Sea Blue with White letters and numbers. 18 April 1954 (USN via Hal Andrews)



INTRODUCTION

During the early months of WWII, enemy U-boats exacted a heavy toll of Allied shipping. Defense against these deadly submarines was provided by armed escort ships and the handful of available Naval patrol aircraft. However, by April of 1944, nearly 200 specialized US Naval and Army aircraft were flying anti-submarine warfare patrols from coastal bases. Among the first aircraft used as patrol aircraft in the anti-submarine role was the twinengine, land-based Lockheed Hudson. While flying with VP-82, a Hudson patrol aircraft was credited with the first U-boat kill by US Forces. This occurred on 1 March 1942 when the U-656 was sunk. Another Hudson flying with the Army Air Corps sank the U-701 on 7 July 1942. The British had been using the Hudson with the addition of a Boulton Paul turret under the designation Hudson I for sea patrol since 1939 and credited it with the first capture of a submarine from the air.

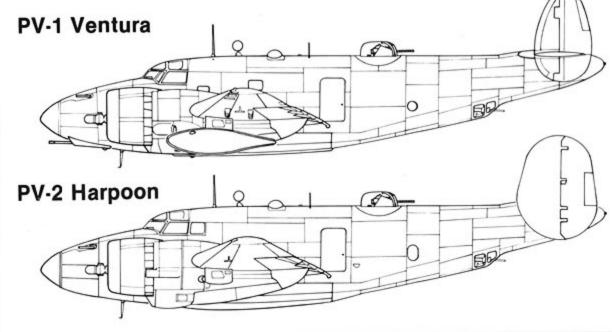
A direct descendent of the Hudson, the PV-1 Ventura followed the Hudson down the Lockheed assembly line. The Ventura was basically a Hudson that had been stretched five feet and was now capable of carrying a 2,500lb bomb load. The PV-1 Ventura was powered by a pair of Pratt and Whitney R-2800 double Wasp engines and was operated by the RAF Coastal Command, the US Army Air Force (as the B-34) and in the largest number by the US Navy where it became the standard patrol bomber in the Pacific between 1943 and 1945. Over 1,600 PV-1 Ventura aircraft were put into military service. In 1943 it was considered as a fast patrol bomber with a top speed of 300mph and carried early search radar equipment. The bomb bay was capable of carrying a combination of bombs, torpedoes and depth charges. By the end of the war the Ventura had become a very sophisticated anti-submarine patrol bomber.

Late in the war, Lockheed improved the PV-1 Ventura by adding 135 sq ft of wing area, a redesigned tail that increased the stabilizer and rudder area, and again increased the bomb bay size. Otherwise essentially similar to the Ventura the new ship was delivered under the designation PV-2 Harpoon. These Harpoon modifications increased the aircraft's payload capacity to 4,000lb with a decrease in speed of only six mph using the same engines. Seeing service as a land based patrol bomber, the Harpoon was equipped with search radar mounted in the nose.

Anticipating the Navy's need for a bigger and more powerful patrol bomber in the Pacific and drawing upon the experience they had with land based patrol bombers Lockheed began preliminary engineering drawings of a completely new land based patrol bomber design in September of 1941 under the designation Model 26. However the press of war production prevented the design team from further work on the new design until April of 1944 when the Navy awarded a contract for two prototypes and fifteen service test Model 26s under the designation P2V.

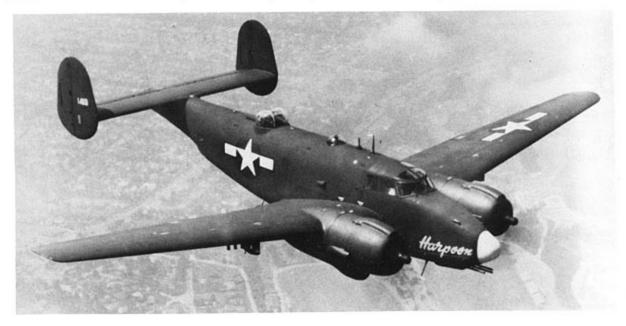
A mid-wing monoplane with a single large fin and a tricycle landing gear, the XP2V-1 Neptune was powered by two Wright Cyclone R-3350-8 engines providing 2,300hp at take off. It carried an aircrew of seven which consisted of a pilot, co-pilot, radio operator, bombardier/nose turret gunner, radio counter measure/radar operator, dorsal turret gunner and tail turret gunner. The Neptune could carry combinations of up to 8,000lbs of bombs, mines, and depth charges, or a pair of 2,165lb torpedoes. The search radar and antenna were mounted in a bay located on the underside of the fuselage between the nosewheel well and the bomb bay. A small bulge just below that installation marked the location of the dish-type antenna. Weight was 32,651lb empty and 54,526lb loaded. Maximum speed for the Neptune prototype was 289mph with a service ceiling of 4,210 miles. The XP2V-1 was heavily armed defensively with twin .50 caliber machine guns mounted in the nose, dorsal and tail turrets.

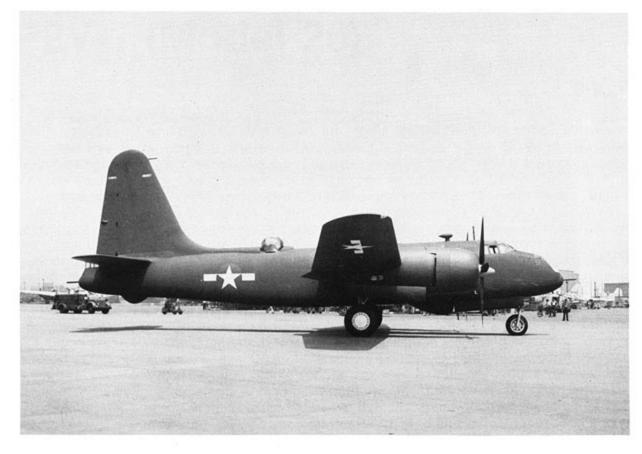
(Right) PV-2 Harpoon with nose armament of five .50 caliber machine guns. 1944 (via Pete Bowers)





(Above) PV-1 (49539) Ventura of VPB-152 parked at Kiang Wan Airdrome in Shanghai, China. 7 November 1945 (Pete Bowers)





XP2V-1 (48237) was the first of the two Neptune prototypes. First flown on 17 May 1945, it is seen on roll out at Lockheed Aircraft, Burbank, CA. (Lockheed)

One of the most unusual features found on the Neptune was the varicam tail. This feature, found on all Neptunes, was located on the horizontal stabilizer just forward of the elevator hinge-line. A mechanical device varied the camber (curved shape) of the horizontal stabilizer and gave supplementary assistance to the control function of the elevators.

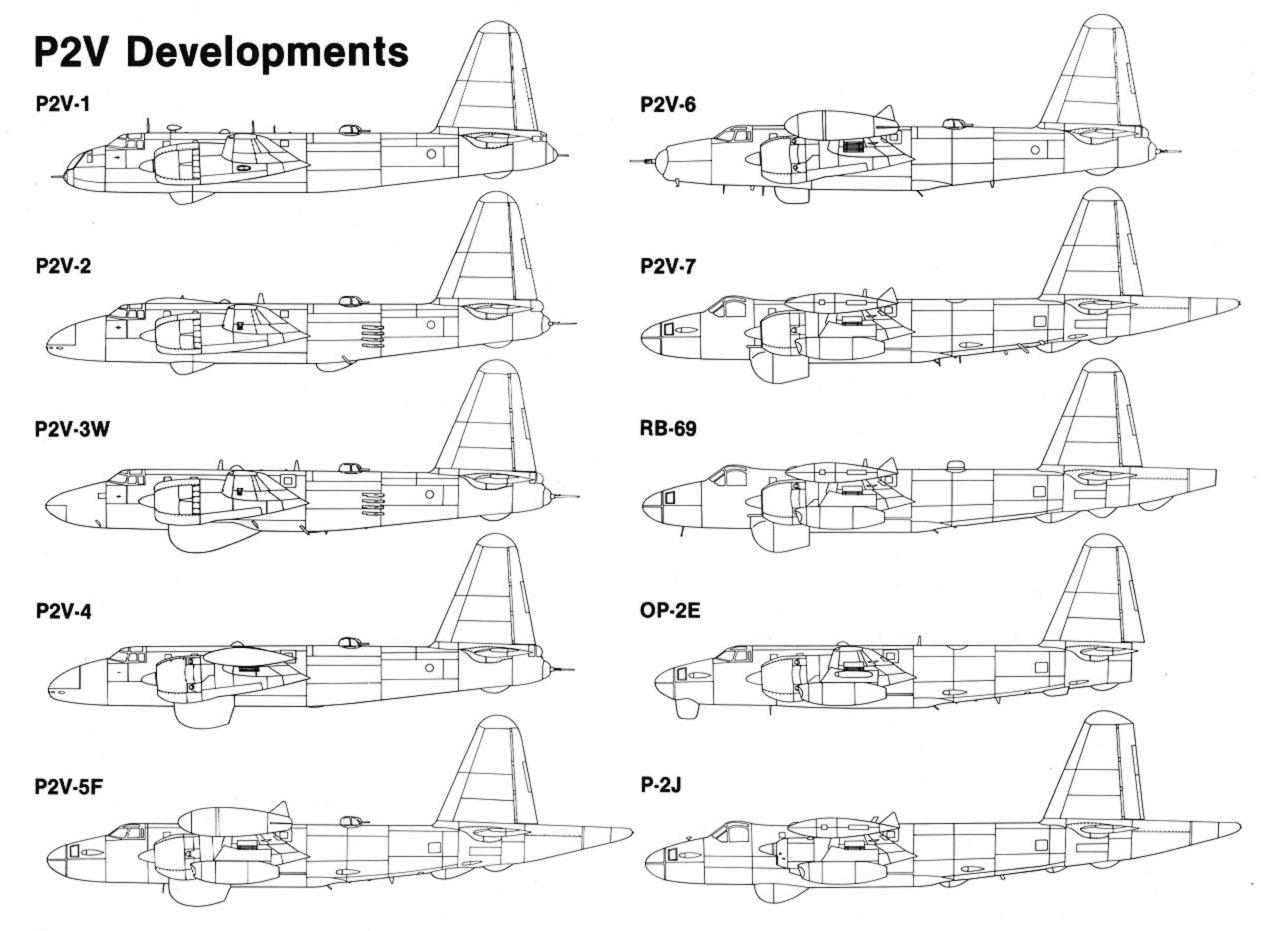
The XP2V-1 (48237) was first flown on 17 May 1945 at Burbank, CA, just three months before the end of WWII. After extensive testing of both prototypes during the summer and fall of 1945 the XP2V-1 was delivered to the Navy in July of 1946.

Robert Gross, Lockheed's president, said that the Neptune was an airplane with "some stretch to it"; and how right he was. For a seventeen year period beginning in 1945, seven major variants totaling 1,051 Neptunes were built by Lockheed with the final production P2V-7 Neptune coming off the assembly line in April of 1962. At the height of its US Navy career Neptunes equipped no less than twenty-three first line patrol squadrons. In addition, Kawasaki Industries of Japan, under license, produced another 48 P2V-7s and 82 turbo-prop P-2Js. At the time of this writing a small number of Neptunes still serve with the military of foreign nations. In the USA, the Neptunes no longer fly for the military, but a number of the later versions (the P2V-5 and the P2V-7) have been modified to fly as firebomber aircraft providing protection from the ravages of forest fires throughout the country.



(Above and Below) XP2V-1 (48237) had twin .50 caliber machine guns in the nose, tail and dorsal turret. Capable of hauling 8,000lbs of ordnance, the Neptune would become the US Navy's prime Anti-Submarine Warfare (ASW) aircraft. The Lockheed company insignia is painted on the nose of 48237 and later the name "Neptune" was added under the company insignia. 1945 (Lockheed photos)





P2V-1 (Model 26)

The initial production variant, the Model 26 P2V-1 Neptune, differed little from the prototype. Its mission was that of a land-based, anti-submarine/anti-surface vessel patrol aircraft. The P2V-1, the same as the prototype, was powered by a pair of Wright Cyclone R-3350-8 engines turning four bladed props and producing 2,300hp each at take off. Empty weight was 33,720lbs with a gross weight of 61,153lbs which included a crew of eight. The P2V-1 had the capability of carrying an 8,000lb combination of bombs, mines, depth charges, or two 2,165lb torpedoes in the huge bomb bay. Armament and search radar equipment were identical to the XP2V-1 with a slightly larger under-fuselage radome. The dorsal fairing running from the tail to the turret and the small fairing in front of the turret were removed, and the turret was lowered slightly into the fuselage reducing its profile and drag. Delivery of the first production aircraft for flight testing and evaluation took place early in 1946.

Fifteen P2V-1 Neptunes were built for the US Navy, the first of which reached Fleet service with VPML-2 at NAS Miramar on 13 March 1947. With a speed of 302mph and a range of 4,130 miles, pilots checking out in the P2V-1 found it to be a smooth performer during take off and landing, and possessed an unusually high rate of climb for a patrol bomber (1,050 feet-per-minute). The huge single rudder provided excellent responsiveness, and the aircraft had very good single engine performance. The interior was designed with efficiency and rew comfort in mind while they were flying long patrols over the expanses of the oceans. De-icing equipment was used on the P2V-1 wing and tail surfaces. The wings were designed to provide temporary floatation action should a Neptune need to ditch at sea. All fifteen P2V-1s had been delivered to the US Navy by the end of May 1947.

Looking to set a new world record, the third production P2V-1 (89082), dubbed the "Truculent Turtle", was modified to carry an enormous amount of fuel. By removing all armament and combat equipment the "Turtle's" empty weight was reduced to 29,240lbs. With additional fuel tanks including wing tip tanks, and fuel, the "Turtle" grossed out at 85,240lbs. Piloted by Commander Thomas D Davies with a full air crew aboard, "The Turtle" flew a record setting unrefueled non-stop flight from Perth, Australia to Columbus, Ohio; 11,235.6 miles in 55 hours and 17 minutes. Set on 29 September 1946, this unrefueled non-stop distance record set by the Neptune stood for years, and was only broken by a Strategic Air Command B-52H Stratofortress on 10/11 January 1962, flying from Okinawa to Madrid Spain, a distance of 12,532.3 miles.

(Top right) P2V-1 (1005/89084) during construction at Lockheed Aircraft as the subassemblies come together on the assembly line. The circular hole on the top of the fuselage is for installation of the astrodome. 1945 (Lockheed)

(Right) P2V-1 (1010/89089) during final assembly. Entry to the Neptune cockpit area was through the nosewheel well via a ladder. The starboard propeller has been fitted with a spinner over the hub. A number of P2V-1s were either delivered without the spinner or the spinners were removed in the field. 1945 (Lockheed)







(Above) P2V-1 (89084) in factory finish devoid of unit markings. The belly mounted radome is located between the nose wheel well and the bomb bay. The area surrounding the engine exhaust opening has been left natural aluminum. The glazed nose area has been faired over with metal. 1946 (via Bob Esposito)

(Below) P2V-1 (89090) of VPML-2 based at NAS Alameda, CA. VPML-2 was the first operational unit to receive the Neptune. The faded National insignia on the fuselage has recently had Red bars added. Both nose and tail .50 caliber machine guns have been removed from this Neptune. The tail section of the Neptune was protected from rough landing damage by a tail skid bulge. 23 October 1948 (L S Smalley)



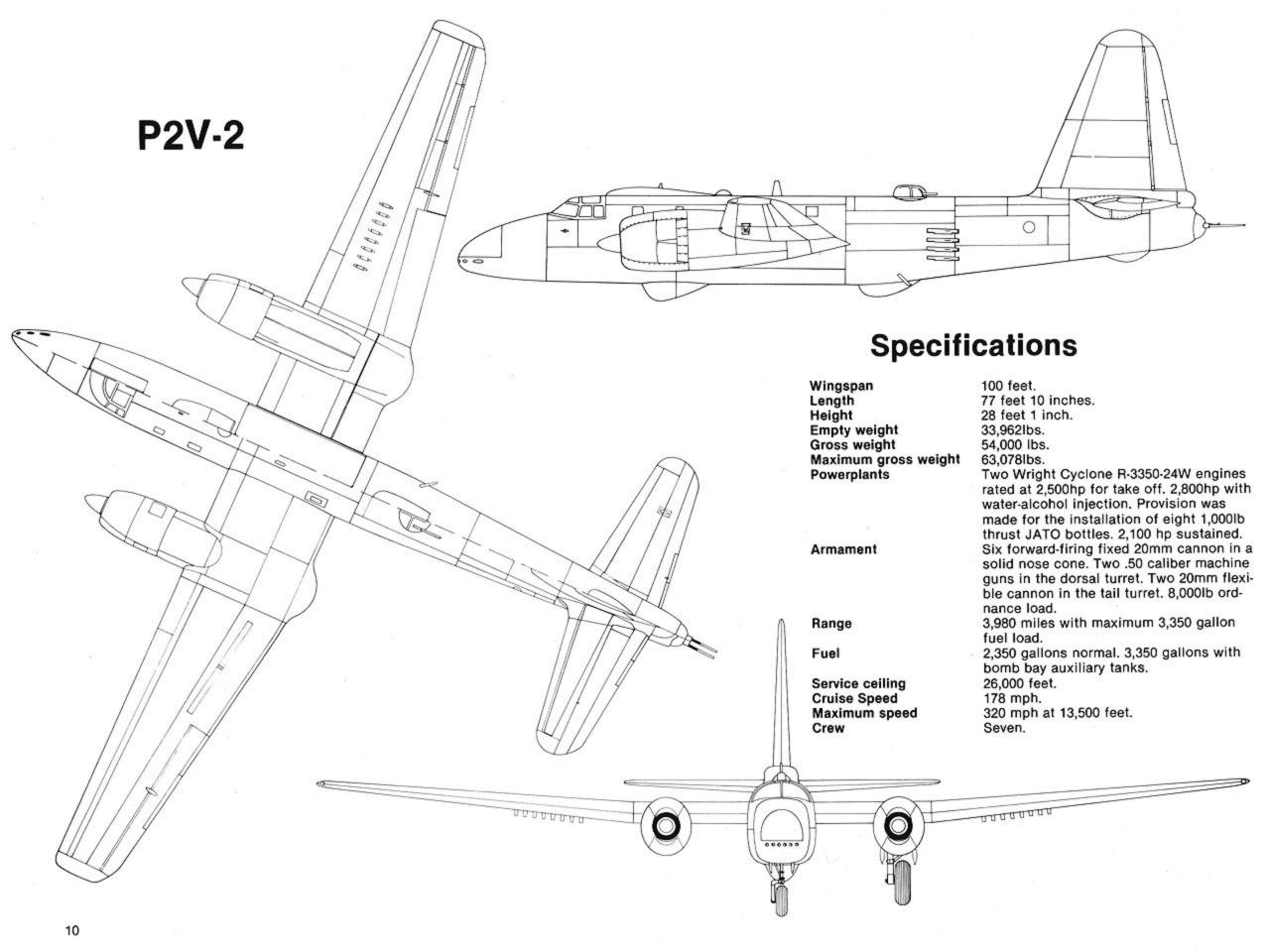
(Below) P2V-1 (89088) of VPMS-2, part of Fleet Air Wing 14, carries the modex 'SA'. The large observer/gunner nose provided excellent visibility. 1947 (via Hal Andrews)





P2V-1 (89082) "THE TURTLE" was modified for long distance flight. A nose section similar to that which would be found on the later P2V-2 was installed as well as additional fuel tanks. Known as "The Truculent Turtle" it set a world record for non-stop, non-refueled flight on 29 September 1946. After service use, the aircraft was stored and displayed at

NAS Norfolk, VA. In the late 1970s "THE TURTLE" was moved to the Naval Air Museum at Pensacola, FL where it can be seen today. Photo was taken at Floyd Bennett Field, NY on 8 May 1949 (via Bob Esposito)



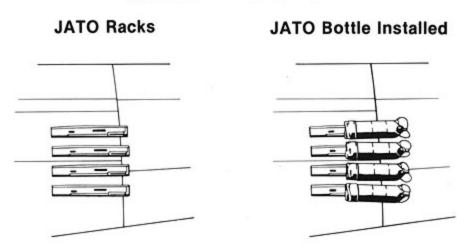
P2V-2 (Model 126)

The fifth production P2V-1 (89086) was modified to serve as the prototype of the Model 126 P2V-2 which refined the Neptune to increase efficiency and decrease the crew size to seven. The glazed nose and turret containing twin .50 caliber machine guns was replaced by a solid nose cone containing the massive firepower of six fixed position 20mm cannon, which added 2.5 feet to the overall length of the Neptune. The dorsal turret was streamlined by reducing its height while still retaining the twin .50 caliber machine guns, Initial production machines retained the twin fifties in the tail position, but after the ninth production model the rear fifties were replaced with a pair of 20mm flexible cannon. Provisions were made for sixteen underwing rocket launch stubs (eight under each wing). The powerplants were upgraded with the installation of 2,500hp (2,800hp with water injection) Wright Cyclone R-3350-24W engines, and the four bladed props were replaced by Hamilton Standard three bladed props. These upgraded powerplants and three bladed props gave the P2V-2 a top speed of 320mph and a range of 3,980 miles. Maximum gross weight was upped to 63,078lbs. Search radar essentially similar to the P2V-1 was carried, however, some airframes were retrofitted with an additional radome installed just aft of the bomb bay. Provisions were made for the addition of four Jet Assisted Take Off (JATO) bottles on each side of the fuselage just aft of the wing trailing edge. JATO provided increased take off capability for heavily loaded Neptunes. The eight 1,000lb thrust JATO bottles provided 8,000lbs of thrust for a ten second duration (an additional 1,600hp was added). Electrical de-icers replaced the older less efficient alcohol type. The prototype of the P2V-2 first flew on 7 January 1947 with the first production aircraft taking to the air for the first time on 20 May. A total of 81 Lockheed Model 126 P2V-2 Neptunes were built, with the final P2V-2 being delivered to the Navy in July of 1948.

P2V-2N "Polar Bear"

One sub-type was built in the -2 series, this being the P2V-2N ski-equipped version, of which two (122465 and 122466) were constructed for Arctic operations. Without removing the wheels aluminum skis were added to the landing gear, all of which was retractable in flight. This ski installation made necessary the addition of farings to mate the retracted skis to the engine nacelles and the underside of the nose. All armament including the dorsal turret were removed and an early Magnetic Anomaly Detection (MAD) probe was installed in the tail. The protective tail skid was also removed.

JATO Installation





P2V-2 (39318) was the first production P2V-2 and still carries the .50 caliber twin machine gun installation in the tail turret, the twin 20mm cannons were not fitted in the tail of the P2V-2 until the ninth production machine. This machine also is still equipped with four bladed propellers. 1946 (Lockheed via Hal Andrews)

This early P2V-2 (39329) has the last two digits of the factory number (1029) painted on the nose. Taxiing out of the Burbank facility of Lockheed Aircraft, this Neptune is being prepared for its flight test. The eight underwing rocket launch stubs can be seen beneath the starboard wing. The hanger in the background still carries its WW II camouflage. (Lockheed)

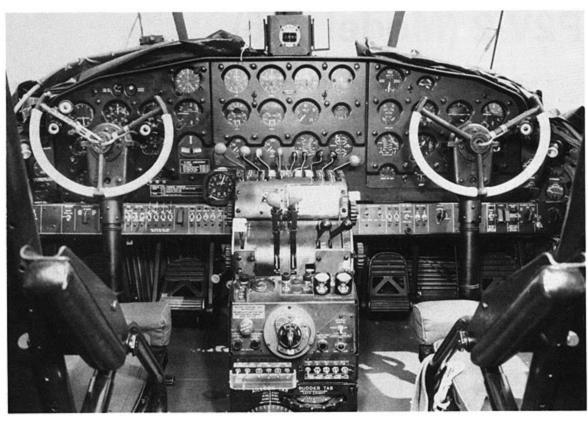




P2V-2 (39358) on the taxiway at Floyd Bennett Field (NAS New York). The JATO racks installed on the rear of the fuselage were standard on the -2, as were the twin 20mm cannon in the tail turret. This particular machine, however, was fitted with six .50 caliber machine guns in the solid nose cone instead of the standard six 20mm cannon. The dorsal turret was streamlined by lowering it slightly into the fuselage. 15 May 1948 (Bill Larkins)

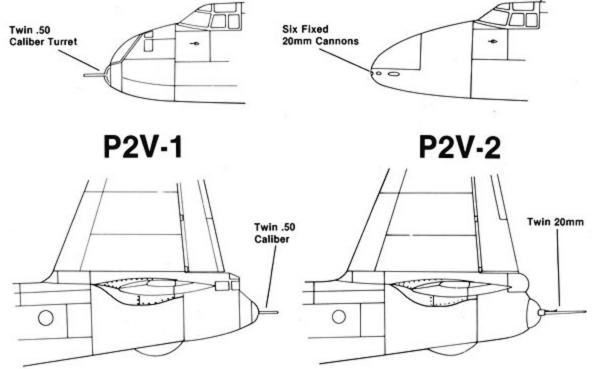
P2V-2 (39351) of VP-4 on display during an open house at NAS Sand Point, Washington. The center line hinged doors over the cockpit have been left open for ventilation in the hot sun. This PV2-2 has 20mm cannon installed in the tail turret and nose, but the JATO equipment and propeller spinners have been deleted. 1949 (Pete Bowers)



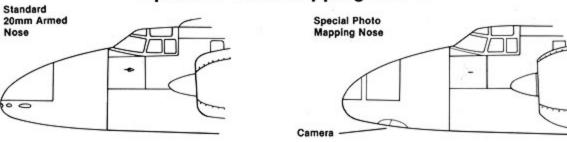


The instrument panel of the 68th production P2V-2 (122454) built by Lockheed Aircraft. 1947 (Lockheed)

Nose and Tail Development

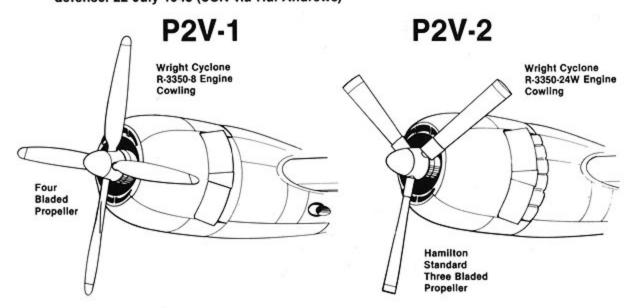


Special Photo Mapping P2V-2





A formation of three specially modified photo mapping P2V-2s of VP-4 fly over the south end of the Mount Fair-Weather range near the Brady Ice Field in Alaska. These aircraft participated in the photo mapping of Alaska. The 20mm guns and solid nose cone were replaced by a glass observation nose and a camera installation was mounted underneath the nose. Armament was also removed from the tail turret leaving only the dorsal turret for defense. 22 July 1948 (USN via Hal Andrews)





P2V-2 (39360) in the markings of Advanced Training Unit (ATU) 601, all armament has been removed from the aircraft. Instead of the Hamilton Standard three bladed propellers this -2 Neptune is equipped with a pair of four bladed propellers. 1949 (Clay Jansson)

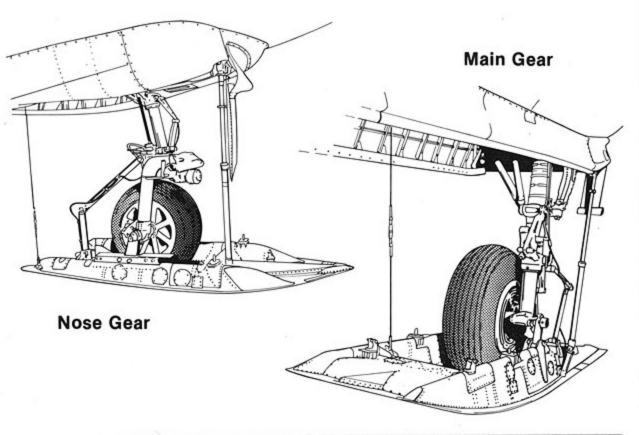


This Marine P2V-2 (39343) is attached to AES-12 at MCAS Quantico, VA. The USMC operated two Neptunes for a brief period. A second radome has been added just aft of the bomb bay and the dorsal turret has been removed. The propeller spinners and tip of the nose are painted white C.1950 (via L S Smalley)



P2V-2 (128443) of VP-8 is preparing to take off from an airfield near Chicago. JATO bottles to fill the fuselage racks are standing near the port main landing gear. Each bottle added 1,000lbs of thrust for ten seconds, providing an additional 1,600hp during take off. 1956 (Kriger via Brain Baker)

P2V-2N Ski Installation





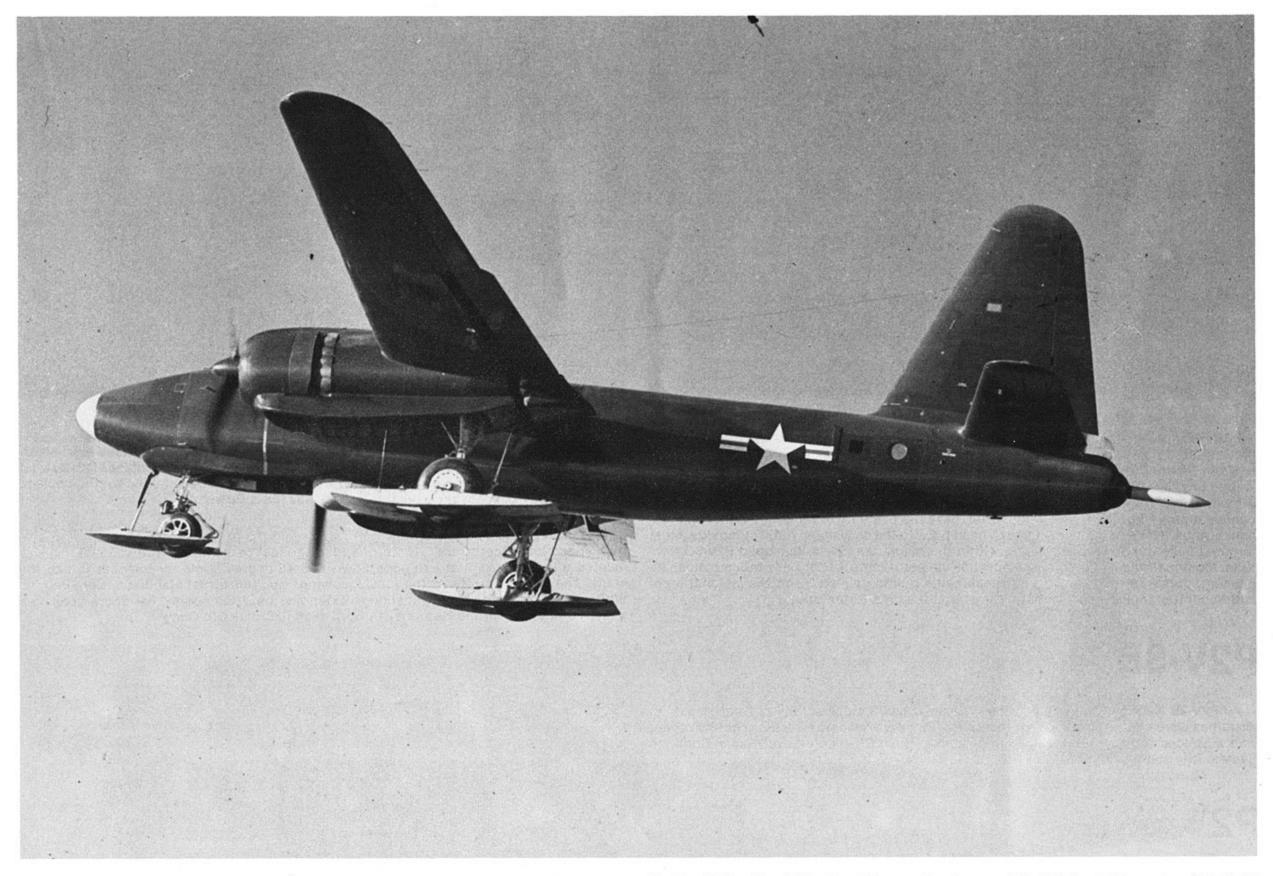
P2V-2N (122466), with JATO bottles in place, is running up her engines preparing to get underway at NRAB Minneapolis. The tail, rear fuselage and nose tip have been painted Orange/Red. 1948 (Bob Stuckey)



Blasting off the runway with JATO at Patuxent River, a P2V-2N prepares for OPERATION DEEP FREEZE, the exploration of the Arctic. Only two of these ski equipped Neptunes were built. A SA-16 Albatross "chase plane" is circling overhead in case of trouble during the tests. 24 August 1955 (USN via Hal Andrews)



P2V-2N being refueled during OPERATION DEEP FREEZE. Only partially visible is the Penguin emblem on the nose. 1949 (Lockheed)



The P2V-2N was capable of operating from snow, ice or standard runways, and was fully equipped for long range search and rescue operations in the Arctic. The P2V-2N (122465) was equipped with early Magnetic Anomaly Detection (MAD) probes in the tail replacing

the turret. The tip of this aircraft's nose has been painted White. 22 November 1949 (USN via Hal Andrews)

P2V-3 (Model 326)

Produced under the designation Lockheed Model 326, the P2V-3 was upgraded with the installation of a pair of 2,300hp (3,200hp with water injection) Wright Cyclone R-3350-26W engines turning the Hamilton Standard three bladed props, increasing top speed to 338mph. The -3 series was the first Neptune to incorporate the use of jet augmenter engine exhaust stacks. The ASW radar and heavy firepower of the P2V-2 model was retained. The first of the P2V-3 series took to the air for the first time on 6 August 1948. A total of 83 P2V-3 Neptunes were built consisting of forty P2V-3s; eleven P2V-3Cs; thirty P2V-3Ws and two P2V-3Zs. The final P2V-3 Neptune was delivered to the Navy in January of 1950.

The P2V-3 saw action in the skies over Korea where in addition to its normal patrol duties, the Neptune was pressed into service as a ground attack aircraft for a short period of time early in the hostilities. In the ground attack role the Neptune presented a devastating head on attack with its six 20mm nose mounted cannon and sixteen wing mounted 5-inch HVA rockets. Later, in addition to ASW and patrol duties, the Neptune was called upon to carry out secondary missions of rocket and night bombing attacks, mine laying, daylight bombing and photographic reconnaissance.

P2V-3C

With the growing strength and menace of the Soviet Union the, P2V-3C was produced to provide the US aircraft carrier fleet with a long range patrol bomber that could be launched from a carrier deck. The concept was proven valid on 3 March 1949 when a P2V-3C, loaded to a 74,000lb gross weight (including a simulated 10,000lb nuclear bomb load), took off with JATO from the deck of the USS Coral Sea. The battle strategy was to launch a nuclear armed Neptune from a fast carrier, have the plane fly to its target, deliver its ordnance, and then fly to a friendly base or head back to the carrier and ditch alongside. Most targets inside the Soviet Union were within the range of a carrier launched P2V-3C Neptune. Modifications included the removal of the astrodome, under belly radome, nose armament, dorsal turret, wing rocket attachments points, tail skid, and the installation of additional fuel tanks. The 20mm tail turret was retained for defense.

P2V-3B

All P2V-3B Neptunes were modifications from other -3 models. In all, a total of sixteen airframes were converted; ten P2V-3Cs and six P2V-3Ws became P2V-3Bs. The -3B variant was a special armament aircraft equipped with the ASB-1 Low Level Radar Bombing System (the same system as used in the A-3 Skywarrior).

P2V-3W

An early warning aircraft, the P2V-3W was essentially identical to the standard -3 with the addition of APS-20 search radar and a much larger belly mounted radome to accommodate the larger dish antenna of the APS-20. The first P2V-3W (124268) was flown on 12 August 1949. Thirty examples of the P2V-3W were produced.

P2V-3Z

The final sub-type of the -3 was the P2V-3Z of which two were produced (122986 and 122987). These were combat transport aircraft equipped with a special interior and heavy armor plating. The nose armament and dorsal turret were removed, and four bladed props replaced the normal three bladed props. The -3Z Neptune was used to fly VIP personnel into combat areas in relative comfort and safety. Both aircraft saw action during the Korean war.

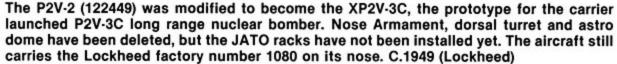


This P2V-3 of VP-741 made an unscheduled landing with port engine trouble. After repairs, the aircrew checks out the engine. An additional radome has been added to the fuselage bottom directly beneath the dorsal turret. C.1948 (Pete Bowers)

P2V-3 (122950), the 21st -3 Neptune built, was assigned to the Naval Parachute Unit as a high speed jump test aircraft. Under the fuselage just beneath the National insignia was located a jump chute that extended down at a 45 degree angle for jumpers to exit the plane. The rear underside of the fuselage, wings and horizontal stabilizers were painted White. The Red prop warning markings extending onto the nosewheel doors became a standard practice on the Neptune. 14 April 1958 (USN via Bill Curry)

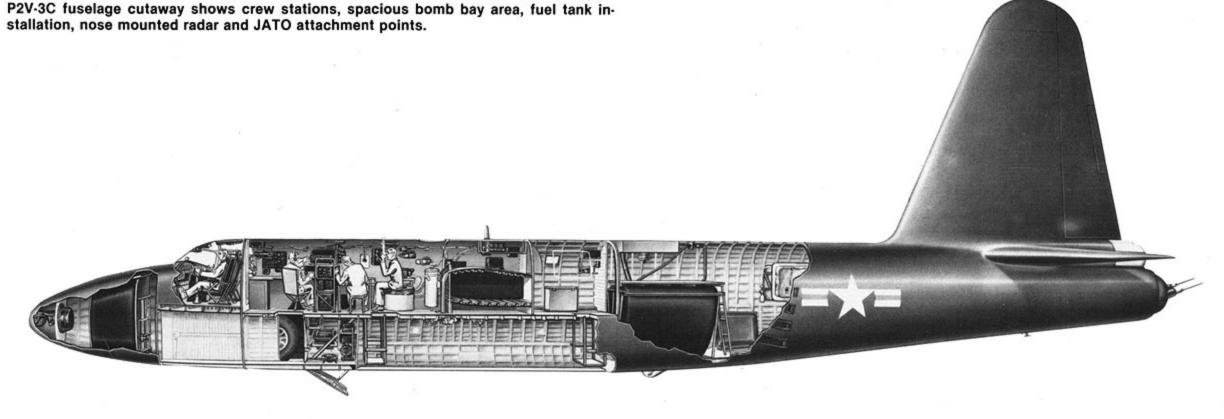








P2V-3C (122968) thunders down the deck of the USS Coral Sea with the roar of eight 1,000lb thrust JATO bottles hurtling it into the air. This Neptune, launched off the Virginia Cape, carried a 10,000lb dummy payload across the country dropped its load on the West Coast and then returned non-stop to the east coast, landing at NAS Patuxent River. 7 March 1949 (USN via Hal Andrews)



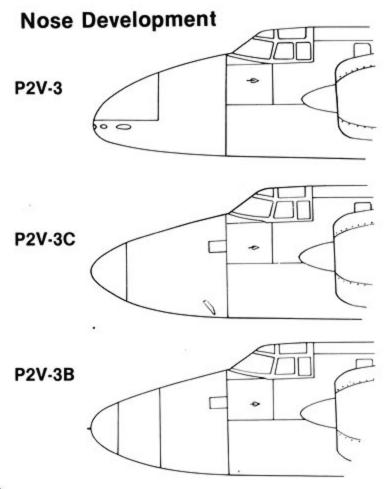




(Above) P2V-3C (122971) of VC-8 is parked on the ramp at Romulus, Michigan. JATO racks are mounted just aft of the fuselage insignia which has been moved forward. The only defensive armament retained on the -3C was the pair of 20mm cannon in the tail turret. September 1952 (Brian Baker)

(Left) P2V-3C (122969) of FASRON 104, with its Fowler type flaps fully extended for maximum lift, makes a JATO take off from NAS Glenview, IL. A tremendous cloud of smoke was generated by the ten second blast from the eight JATO bottles. 1952 (Clay Jansson)

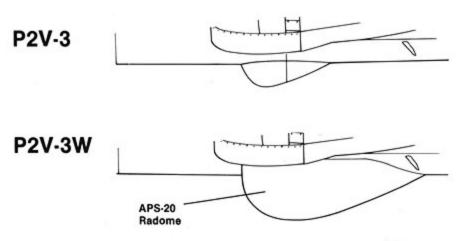
(Below) P2V-3B (122936) of VC-6 was one of ten P2V-3Cs further modified to flight test advanced electronics for possible installation in later Neptune variants. It has a slightly different nose shape, the tail guns removed, the tail skid added back, and a long test probe fitted to the starboard wing. The tail modex is "NF". NRAB Minneapolis, MN. 1950 (Bob Stuckey)







This P2V-3W (124268) was the first of thirty -3 Neptunes modified to carry APS-20 search radar with its much larger dish and radome. Undergoing flight tests at NATC Patuxent River it was found that, even with the increased drag of the enlarged radome, the -3W was capable of reaching 330mph. 20 June 1950 (U S Navy)



This P2V-3W (124289) of VAH-3 has had the radar and radome deleted and the nose section of an A-3 Skywarrior installed. It was used by Heavy Attack Training Wing 1 (HATWING-ONE) for bombadier/navigator training before the advent of the TA-3B Skywarrior trainer. NAS Sanford Field, FL. C.1958 (USN via Bill Curry)





(Above) P2V-3Z (122986), is parked on the ramp at K-16, Seoul, Korea, carrying two stars and the insignia of VR-23 beneath the cockpit. One of two VIP combat transports built for operations in and out of combat areas, it was stripped of most of its ASW electronics. Armor plate was added and the interior was modified to carry VIPs safely and comfortably into combat areas. (Charles N Trask)

(Below) P2V-3Z (122987), the other Neptune combat transport, after seeing action in Korea, was assigned to NAS Pensacola. The top of the fuselage and part of the fin were painted White. Three White stars on a Blue field is painted just beneath the cockpit. Romulus, Michigan. September 1952 (Brian Baker)



P2V-4 (Model 426)

Under the designation Model 426, Lockheed produced 52 P2V-4 Neptunes, the first of which flew on 14 November 1949. Powered by a pair of Wright R-3350-30W Turbo-Compound engines developing 3,750hp and again turning four bladed propellers, top speed was increased to 352mph, and while maximum gross weight for the P2V-4 was increased to 74,129lbs, the take off run was reduced and the rate of climb was increased. The addition of under wing tip fuel tanks boosted fuel by an additional 850 gallons extending the P2V-4's range to 4,200 miles. A powerful searchlight was installed in the forward portion of the starboard wing tip tank. Because the new R-3350-30W engine was not ready when the first P2V-4s came off the assembly line, initial production machines were powered by the earlier R-3350-26W engines. These aircraft, however, were retrofitted with the more powerful R-3350-30W Turbo-Compound engine as soon as supplies of the new powerplant became available. The belly mounted APS-20 radar with its larger radome, first installed on the P2V-3W early warning variant of the -3, was made standard on the P2V-4. Armament was unchanged from the -3, six 20mm cannons mounted in the nose and tail, twin .50s in the dorsal turret, and sixteen rocket launching stubs on the wings.

An aircrew of eight was assigned, the extra crewman being a radio sonobouy operator. Radio sonobouys were dropped into the sea in an area of suspected enemy submarine operations. A microphone in the sonobouy picked up sound from a submarine's propeller and relayed it to the Neptune where the submarine's location was plotted. Once an enemy submarine was tracked, the hunter Neptune became a killer Neptune, dispensing destruction with bombs, rockets, cannon and depth charges.

Many lessons learned from the record-setting P2V-1 "Turtle" modifications were used on the P2V-4 to extend the fuel capacity by means of expanding the size of the wing and fuselage tanks in addition to the wing tip tanks. A number of P2V-4 Neptunes saw action during the Korean war, with most of them being used for patrol missions. In 1962 P2V-4s were still serving in the Naval Reserves, at which time they were redesignated P-2D.

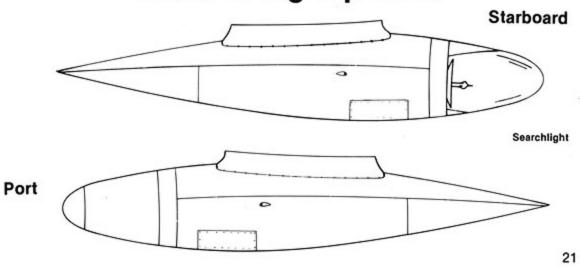
P2V-4 (124215) belonging to VX-1 during developmental testing is flying over the Key West area. This early -4 is powered by the Wright R-3350-26W engine. The APS-20 radar with its larger dish antenna and radome were standard on the P2V-4. 3 May 1950 (USN)





Long and sleek, the fifth production P2V-4 (124215) is seen during a factory flight low over the Pacific along the California coast. The addition of under wing tip fuel tanks increased the range of the -4 to 4200 miles. 1950 (Lockheed)

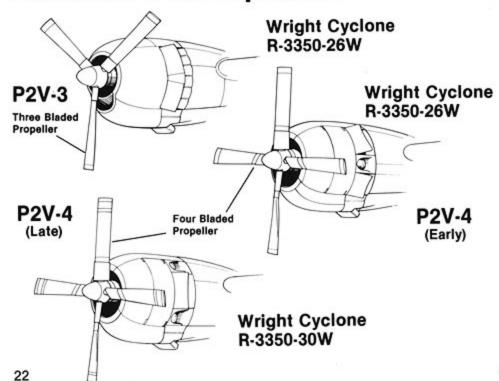
Under Wing Tip Tank





(Above) P2V-4 (124261) of VP-741 based at NAS Jacksonville, FL. The new 3,750hp Wright Cyclone R-3350-30W engines were installed on production P2V-4s and retrofitted to existing -4s as quickly as supplies of the new engine became available. A unique addition to the standard markings is the list of thirteen locations this Neptune has visited from Lisbon to Argentina. C.1955 (Clay Jansson)

Exhaust Development



(Below) P2V-4 (124252) from the Naval Air Reserve Training Unit at Memphis, flying over the Tennessee countryside. The nose gun ports have been fared over. The "6M" tail modex was assigned to NAS Memphis. 26 September 1959 (USN via Bill Curry)



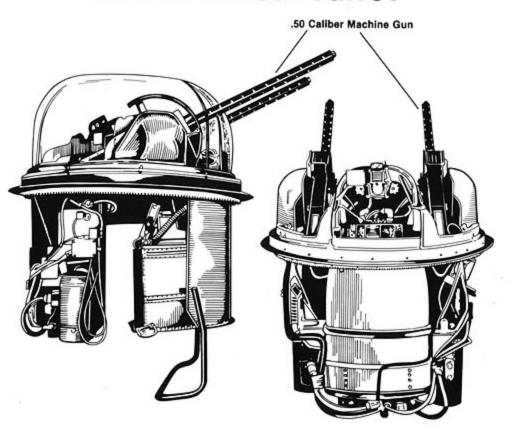


(Above) This P2V-4 (124220) is assigned to the Naval Reserve Unit based in Lincoln, Nebraska. Somewhat out of place is the "B" modex tail marking from NAS Atlanta, its previous station assignment. 1951 (Krieger via Clay Jansson)

P2V-4 (124258) of VP-33 taxies off the ramp at the National Air Races in Cleveland, Ohio. It was considered quite an honor for a squadron to be chosen to represent the Navy at such events. This late P2V-4 has the R-3350-30W engine installation. September 1951 (via L S Smalley)



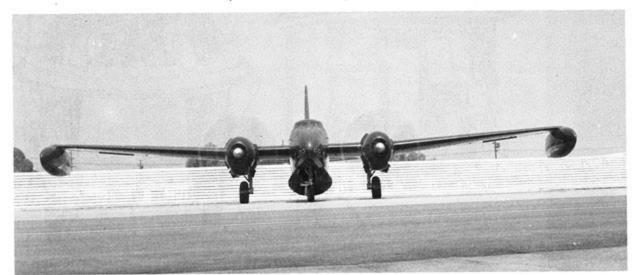
Martin Dorsal Turret





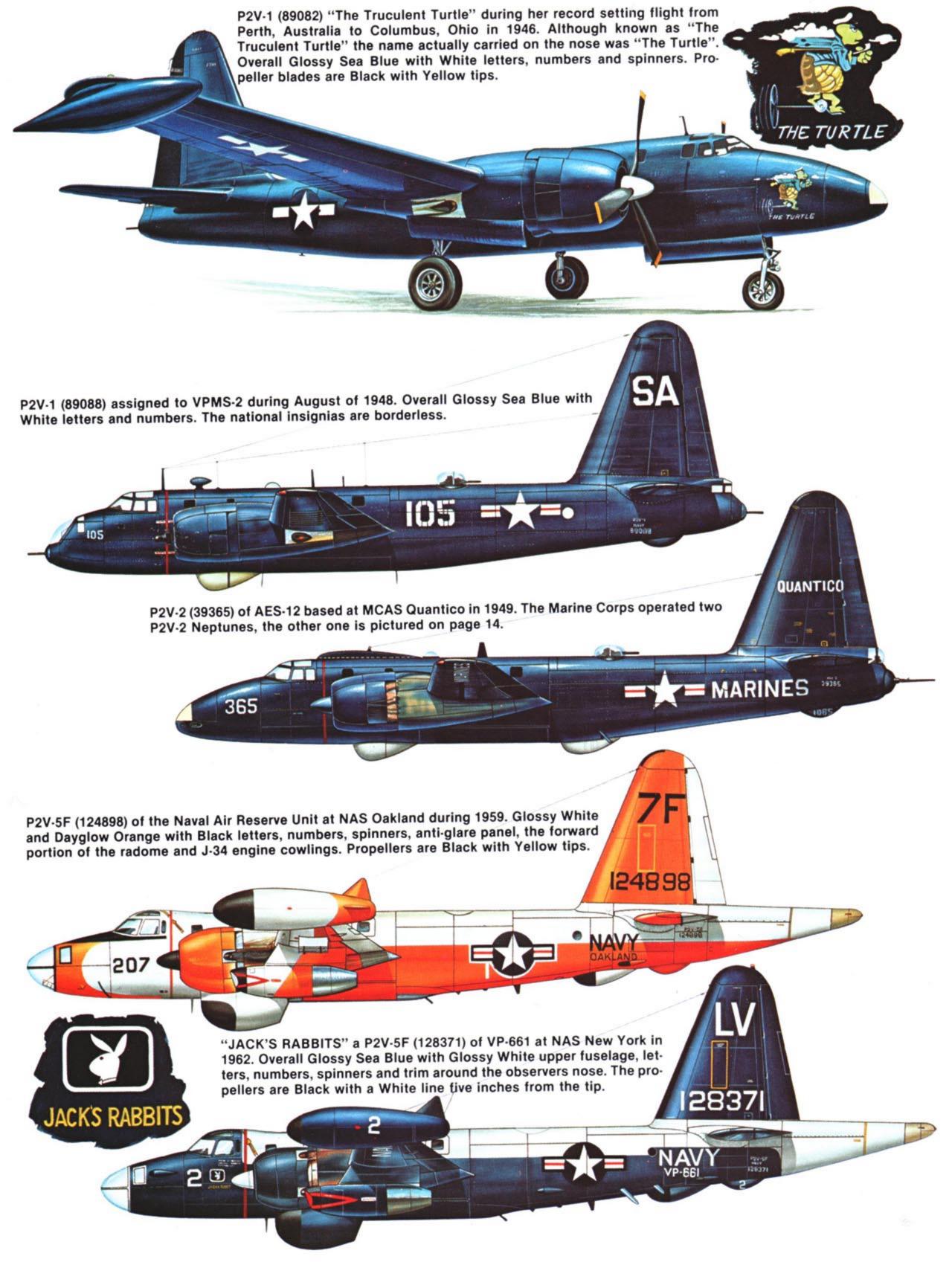
(Above) This P2V-4 (124241) of VP-8 parked on the ramp at NAS Glenview, has the late engine exhaust configuration. The heavy exhaust-streaking was often seen. The sealed-over nose gun ports have been taped to reduce drag and to keep out grim. The "E" beneath the cockpit was a Fleet award for squadron excellence. March 1951 (Clay Jansson)

(Below) This P2V-4 (124212) was fitted with wing tip rocket nacelles to test an alternate means to JATO. Summer 1950 (via Hal Andrews)



(Below) A very colorful example of markings of the early 1960s was this P2V-4 (124262) assigned to the Naval Parachute Facility at NAS El Centro, CA. 19 March 1960 (Bill Swisher via Clay Jansson)







P2V-5 (Model 526) P-2E

Under the designation Model 526 P2V-5 Neptune Lockheed produced a total of 424 aircraft. It was to become the definitive version of the Neptune by virtue of having both the largest number of airframes produced and by serving as the basis for the largest number of sub-type modifications developed of any of the Neptune series.

The P2V-5 Neptune replaced the six cannon solid nose cone with an Emerson ball turret armed with a pair of 20mm cannon. The 20mm tail turret as well as the .50 caliber machine gun armed dorsal turret remained unchanged. Similar to earlier models the P2V-5 was capable of carrying an 8,000lb load of mines, torpedoes, bombs or depth charges and sixteen rockets on underwing launch stubs. APS-20 radar with its large radome was mounted in the underbelly position just behind the nose wheel doors. The wing tip fuel tanks were enlarged, had fins added, and were moved from an under wing tip position to the outside center of the wing tips. The new tanks were droppable and could carry an additional 350 gallons of fuel in each tank. In addition, the forward portion of the starboard wingtip tank housed a powerful searchlight with a moveable reflector and arc element that was linked by servo motors to the nose turret guns. The port wingtip tank had APS-8 search radar mounted in its forward portion. The increase in ASW/ECM equipment increased the aircrew to nine men. The P2V-5 was powered by a pair of Wright Cyclone R-3350-30W engines, the same as the -4, and the weight of the additional equipment without an increase in power caused top speed to drop to 341mph. However, the added fuel capacity increased the P2V-5's range to 4,750 miles.

To assist in producing the number of aircraft ordered, Lockheed "farmed-out" construction of sub-assemblies to aircraft companies such as Chance Vought, Temco, Kaiser-Fraser and Solar Aircraft. First flown on 29 December 1950, when the P2V-5 became available in sufficient quantities, it was solely responsible for retiring virtually all of the remaining P2V-3s and -4s still in service. The P2V-5 in its early configuration served on patrol missions late in the Korean war and later would serve the military needs of six nations in addition to the US Navy.

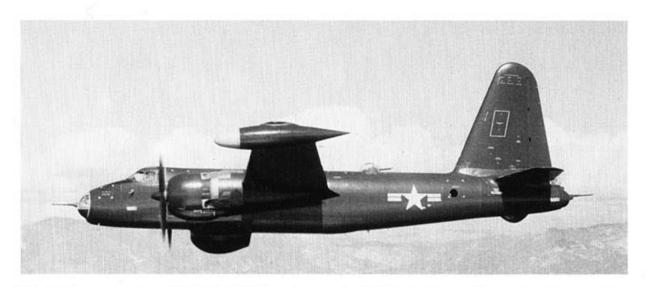
During the production run, a clear glass "observation" nose was installed replacing the twin 20mm armed Emerson turret. Replacing the tail turret a long "stinger like" housing was added to the tail section to protect the ASQ-8 MAD system which became known as the Magnetometer tail. A number of nose and tail configurations were possible on the P2V-5. AN/LR-3 antennas in teardrop farings were added to both sides of the nose. Later production aircraft were the first to use the Julie/Jezebel ASW equipment.

PV2-5F

Under the designation PV2-5F a large number of late production P2V-5s were modified with the installation of a pair of Westinghouse J34-WE-34 turbo jet engines rated at 3,250lbs of thrust each. These jets were carried beneath the wings on pylons mounted just outboard of the engine nacelles. The installation of the turbo jet pylons meant the deletion of four rocket launch stubs from each wing. The ordnance load was increased to 10,000lbs.

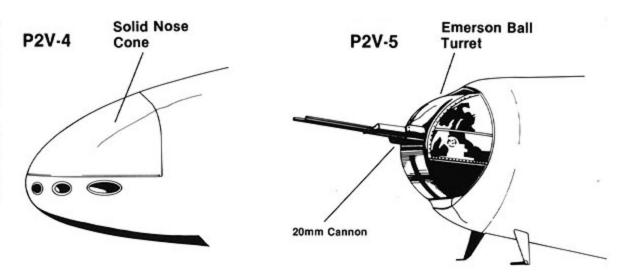
PV2-5FD

The P2V-5 was modified with the addition of electronic equipment to handle target drones which were carried on pylons mounted on the bottom of the wings outside of the J-34 jet engines. All armament including the dorsal turret, the remaining rocket launch stubs, much of the avionics and the astrodome as well as the wing tip tanks were deleted from this sub-variant. P2V-5FDs were also equipped for and used in target towing.



The first production P2V-5 (124865) during early flight testing still carries the smaller P2V-4 style under wing tip tanks. The factory production number (5001) is carried on the nose and tail. Early 1951 (Lockheed via Hal Andrews)

Nose Development



P2V-5FE

The addition of J-34 jet engines and additional electronic equipment.

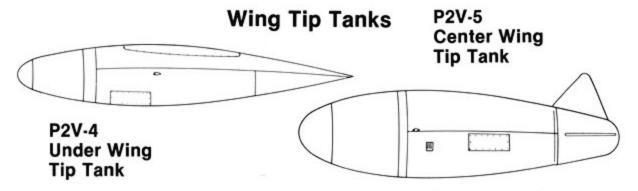
PV2-5FS

The addition of J-34 jet engines and expanded ASW capability with the addition of the Julie/Jezebel submarine detection system.

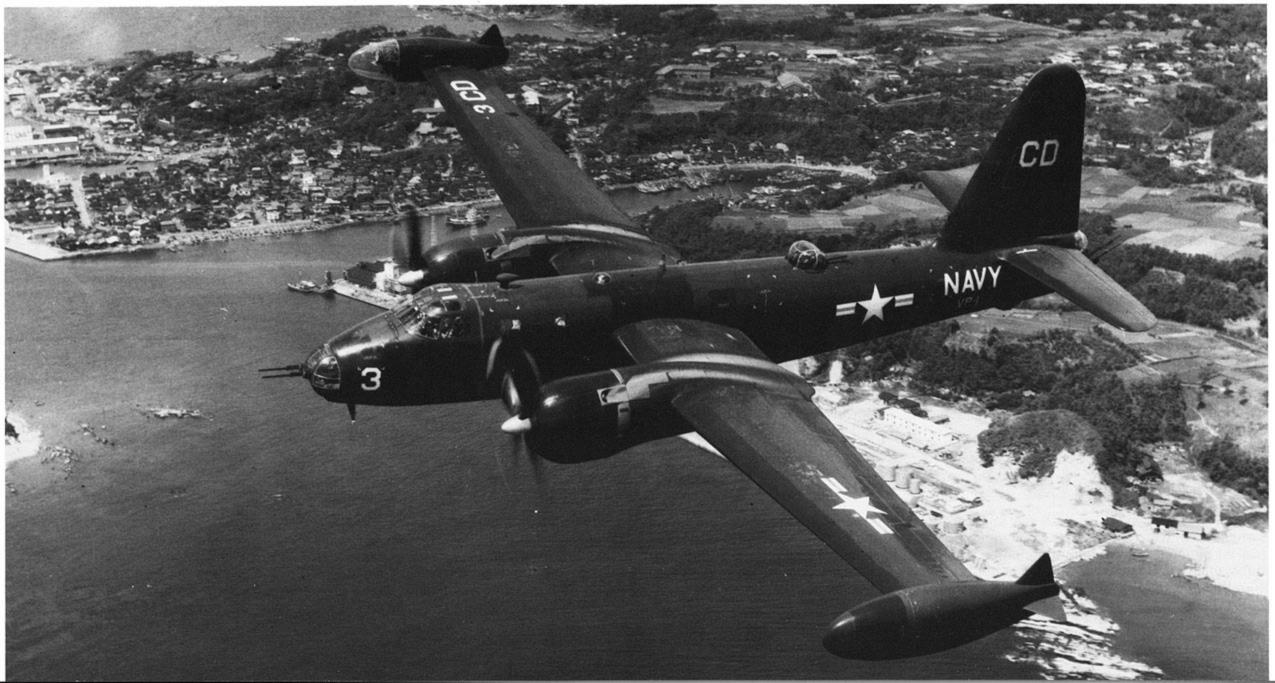
In 1962, the Department of Defense issued directives to change the aircraft designater system. The following changes took place: the P2V-5 became the P-2E, P2V-5FD became the DP-2E, the P2V-5FE became the EP-2E, and the P2V-5FS became the SP-2E.

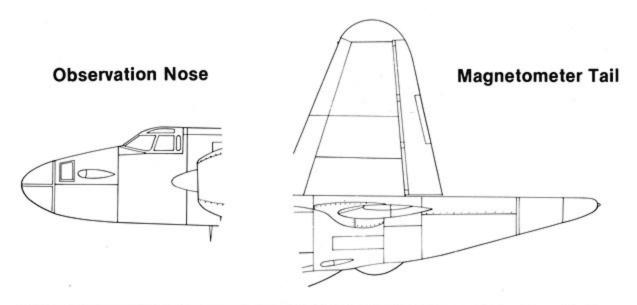


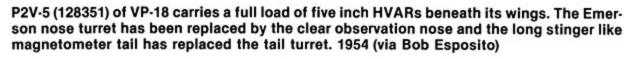
P2V-5 (124865) during testing of the new droppable center wing tip tanks. The new finned tanks were found to improve lateral stability and easily dropped clear when released. A test probe has been mounted on the Emerson turret in place of the twin 20mm cannon. 1951 (Lockheed via Hal Andrews)



(Below) Banking over the coast of Japan after lifting off from NAS Atsugi, a P2V-5 of VP-1 heads out on patrol over the Sea of Japan. With the new center wing tip tanks the P2V-5's range was increased to 4,750 miles. 9 December 1952 (US Navy)









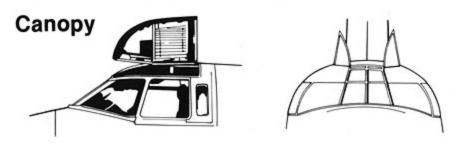
(Above) P2V-5 (51-15956, Lockheed production 5161) was one of a batch of fifty-two Neptunes supplied to Great Britain. Ferry markings can barely be seen on the nose and tail. These markings were applied while in the temporary custody of the US Air Force prior to delivery. C.1951 (E M Sommerich via Pete Bowers)





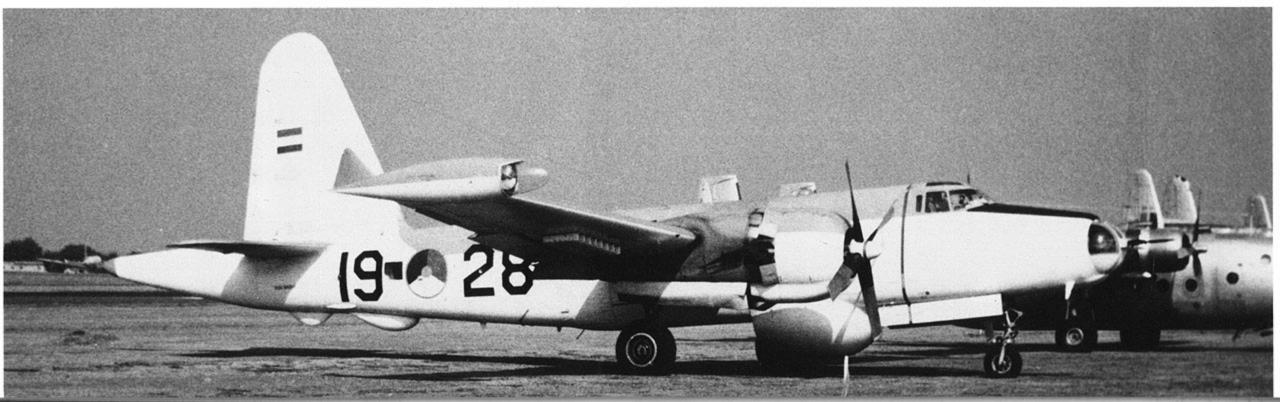


(Above) P2V-5 (4705) of the Portuguese Air Force at Montijo Air Base, Portugal. March 1967 (via Duane Kasulka)



(Left) P2V-5 (7012) of the Brazilian Navy on the ramp at Santa Cruz AFB. 22 April 1969 (via Duane Kasulka)

(Below) P2V-5 (134719/19-28) belonging to Squadron 320 of the Netherlands Air Force. C.1969 (via Duane Kasulka)



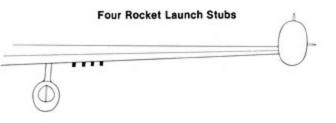


P2V-5F

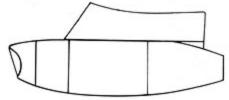
P2V-5

Eight Rocket Launch Stubs

P2V-5F



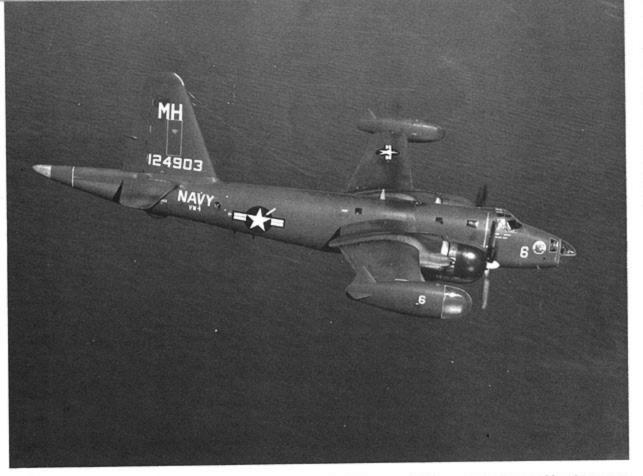
Westinghouse J34-WE-34 Turbo Jet



P2V-5F (131499) of VAH-4 is parked on the crowded ramp at NAS Alameda, CA. An early P2V-5F it has the smaller type wing tip tanks, the Emerson ball turret in the nose and 20mm tail position. 16 June 1957 (L S Smalley)

Another early P2V-5F (128374) it also has the early gun installation mounting twin 20mm cannon in both nose and tail positions. This machine carries the large center wing tip mounted 350 gallon tank. The port side of the center line hinged canopy hatch is in the open position. NAS Denver, 1955 (via Pete Bowers)

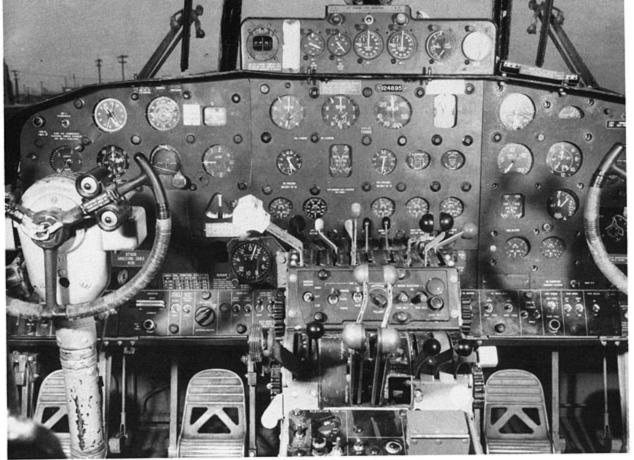




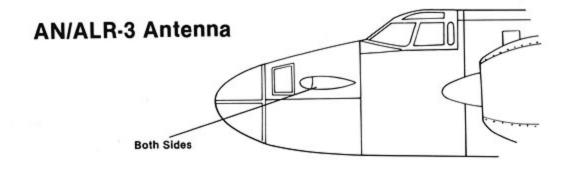
A P2V-5F (124903) of VW-4 on patrol off the Florida coast. These Hurricane Hunters carried a crew of eleven and could stay airborne for up to 14 hours. On low level penetration into a storm, an altitude of 500 feet was maintained. 15 November 1957 (US Navy)

This P2V-5F (124892) belongs to VW-3 and is an "ace" having bagged five Hurricanes which are stenciled just beneath the cockpit. This Neptune was totally unarmed, not only have the guns and dorsal turret been removed, but even the rocket launch stubs have been deleted. C.1956 (USN via Hal Andrews)



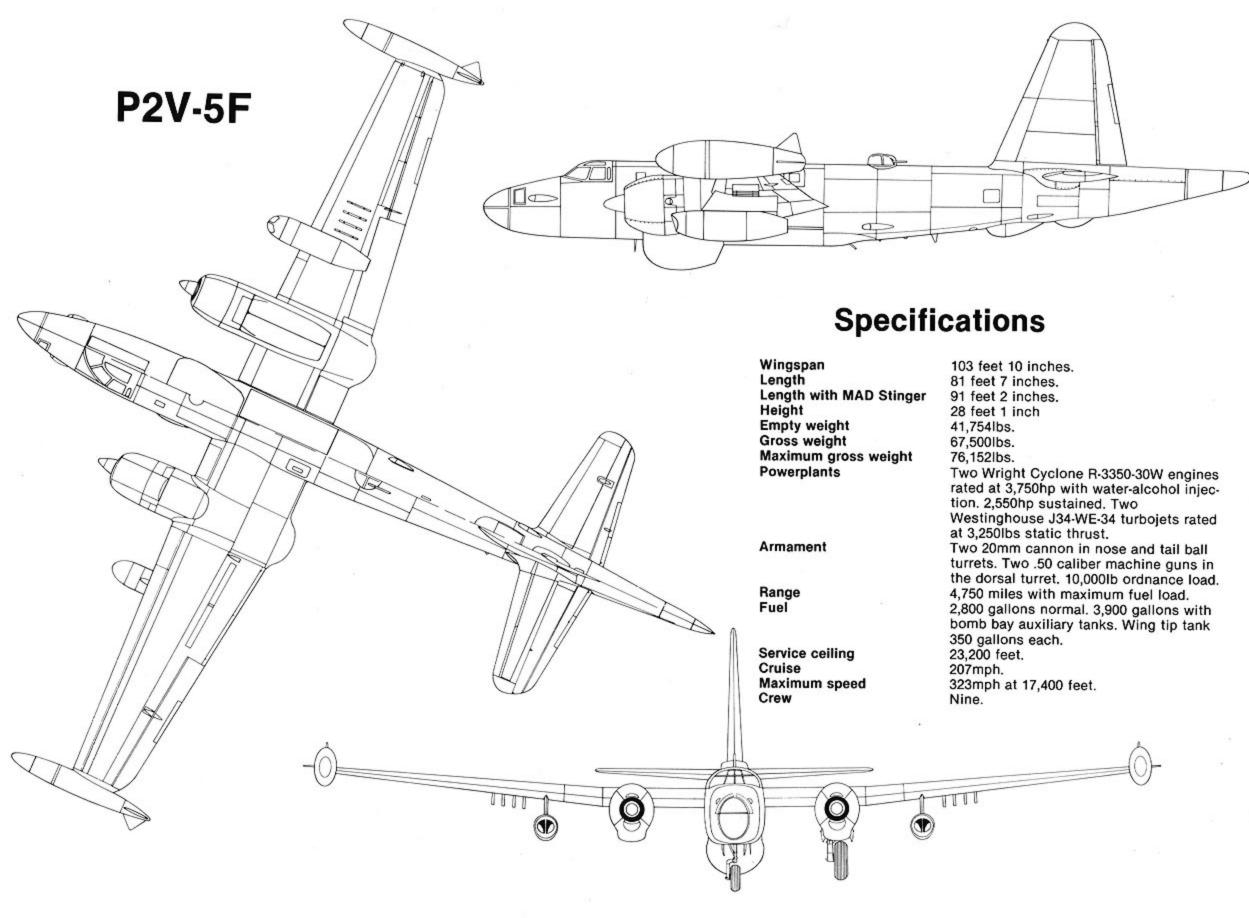


The main instrument panel of the P2V-5F (124895). The two buttons on the port wheel control firing of the rockets and release of the sonobouys. Instrumentation on the top of the main console is for the jet engines. 1952 (Lockheed)



Little of value is left in this foam soaked wreckage of a P2V-5F of VP-28 that burned after crashing at NAS Barbers Point, Hawaii. This scene was seldom repeated, the Lockheed Neptune had a safety record that was the envy of most military aircraft manufacturers. C.1958 (Bob Lawson)







"Pelican" four, a P2V-5F (131518) of VP-44 patrols the coastal areas off Sigonella, Sicily. An aircrewman's head can be seen in the astrodome. 13 November 1961 (Tom McManus)

P2V-5F (131532) provides a view of the very busy underside of the Neptune, with its radomes and numerous antenna installations on the fuselage. The port AN/ALR-3 antenna installation was a mirror image of the starboard installation. 10 November 1960 (Lockheed)





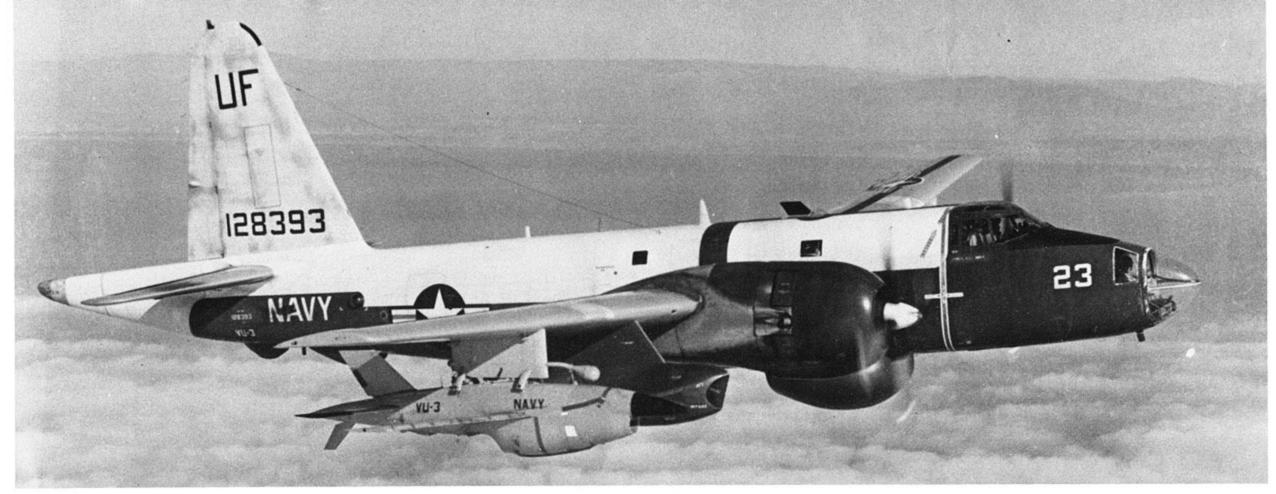
Lt John Cutita of VP-44 is seen standing in the port cockpit hatch of a P2V-5F. It is not difficult to understand why he was known as a big man in his squadron. AN/ALR-3 antennas were in teardrop farings mounted just behind the nose window on both sides of the fuselage. NAS Norfolk, VA. 26 June 1961 (Tom McManus)

Ordnance men prepare to load a Mk-36 mine into the cavernous bomb bay of a P2V-5F of VP-44 at NAS Norfolk, VA. 26 June 1961 (Tom McManus)

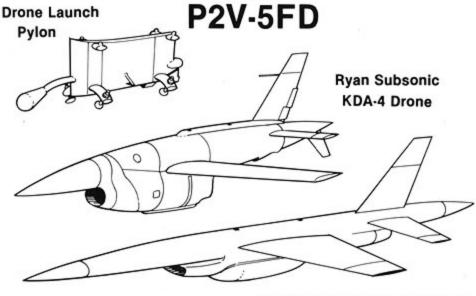




P2V-5F (128356) of VP-6 landing. Sharkmouths have been painted on both J-34 engine nacelles, which have the air intake doors open. Regardless of how much equipment was added to the Neptune it always seemed to be able to retain its innate gracefulness. C.1960 (via Duane Kasulka)



P2V-5FD (128393) of VU-3, carrying a pair of Ryan KDA-4 Firebee drones, climbs to altitude for target launch. The deletion of wing tip tanks, all armament and the astrodome was standard for the P2V-5FD. This Neptune was home based at NAS Alameda, CA. April 1960 (US Navy)



Ryan Supersonic Target Drone

(Right) Loaded with Ryan BQX-34A jet target drones, this DP-2E (P2V-5FD) (128347) has been prepared for flight and is waiting for its crew. After serving with VC-3, this Neptune was retired in May of 1973. NAS North Island, CA. 14 February 1970 (Clay Jansson)



(Above) DP-2E (P2V-5FD) (128342) of VC-5 wears a Yellow and Red checkerboard tail. This colorful Neptune served as a target tow and launch aircraft during its career. However, the drone pylons have been removed at this time. NAF Atsugi, Japan. C.1970 (US Navy)





(Above) 2-P-10, a SP-2E (P2V-5FS) (131532) of Armada 104 of the Argentine Air Force is probably not equipped with Julie/Jezebel. ARMADA 104 is repeated in Black below the nose mounted AN/ALR-3 antenna faring. NAS Norfolk, VA. 26 August 1972 (Duane Kasulka)

(Below) A civilian P2V-5F (128346) after it was modified to the tanker configuration as a fire retardant bomber. Other than the enlarged bomb bay and the MAD boom deletion, the basic airframe was unaltered. Kirtland AFB, NM. 11 June 1981 (Doug Slowiak)



AP-2E (P2V-5F)

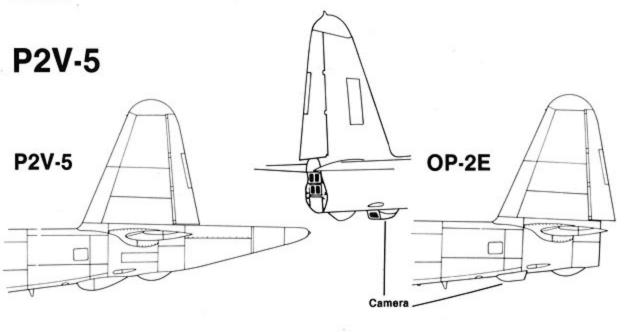
Under the designation AP-2E the P2V-5F Neptune was used by the US Army in Vietnam. The AP-2E Neptune had added ECM electronics and sensing equipment, the smaller more streamlined wingtip tanks, and additional radio equipment. The glass observer's nose was replaced by a solid nose cone filled with electronics. These Army Neptunes were assigned to the 1st Radio Research Company and were operated out of Cam Rahn Bay from July 1967 to April 1972.

This AP-2E (131492), formerly of the Seattle Reserves, now carries the markings of its new owners, the US Army. However, as yet it does not have the solid nose installed. In Vietnam Army Neptunes saw duty with the 1st Radio Research Company based at Cam Rahn Bay. 14 October 1969 (Duane Kasulka via Pete Bowers)



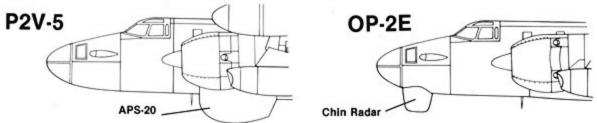
OP-2E

The OP-2E had the large belly mounted APS-20 radar removed and a smaller radar unit installed on the chin just behind the observers glazed nose. The tail mounted MAD housing was deleted and the opening covered with a bulkhead giving the OP-2E tail a very distinctive bluntness. Much of the ASW equipment was removed and provisions were made for window mounted machine gun stations. A camera installation was provided in a bulge located beneath the fuselage under the tail. Armament was increased with the addition of gun pods positioned beneath the wings on the inboard rocket launch stubs. Assigned to VO-67, OP-2Es arrived at Nakhon Phanon, Thailand on 15 November 1967, where they participated in IGLOO WHITE missions (dropping sensors along the Ho Chi Minh Trail). VO-67 was disbanded on 1 July 1968 and rotated back to the US. During its combat use in Vietnam, the OP-2E was painted in a Jungle Green over Dark Gray paint scheme.





This OP-2E (131423) of VO-67 is flying over the countryside near Nakhon Phanom, Thailand. The OP-2E Neptune saw combat in Vietnam painted Jungle Green over Light Gray. December 1967. (US Navy)



OP-2E (131528) served with VO-67 from 29 April 1967 to 9 July 1968, at which time VO-67 was disbanded and rotated back to the United States. When the MAD gear and its stinger tail housing was deleted the opening was sealed up with a bulkhead leaving a distinctive bluntness to the OP-2E tail. Prior to its Vietnam tour this Neptune served with VP-8, 10, 16 and 26. NAS Alameda, CA. 30 September 1967 (L S Smalley)



P2V-6 (P-2F) (Model 626)

The Model 626 P2V-6 Neptune's prime mission was to deliver aerial mines while retaining the ability to function in the torpedo attack, high and low level bombing, and photo reconnaissance roles.

The nose section was slightly longer, again mounted the Emerson twin 20mm cannon armed ball turret and had the AN/ALR-3 antennas deleted. The P2V-6 was the first Neptune to utilize stainless steel engine nacelles, into which were installed a pair of Wright Cyclone R-3350-36W engines which delivered a top speed of 328mph. The belly mounted radar was an APS-70 unit that required a smaller radome. For additional protection during low level attacks several hundred pounds of armor plate was installed. The P2V-6 was first flown on 16 October 1952 with production beginning the same month. Production records show that of the total of 83 Model 626 Neptunes produced 67 were P2V-6s and the remaining 16 were produced as P2V-6Ms.

Under the Department of Defense's new designation directive the P2V-6 became the P-2F.

P2V-6B

Initially designated P2V-6B this Neptune was modified to carry equipment which was capable of launching Fairchild Petrel AUM-N-2 air-to-under water missiles. It was redesignated P2V-6M.

P2V-6M (MP-2F)

Originally designated P2V-6B this Neptune was capable of carrying and launching Fairchild Petrel AUM-N-2 air-to-under water missiles.

P2V-6F (P-2G)

Retro-fitted with J-34-WE jet engines mounted under the wings.

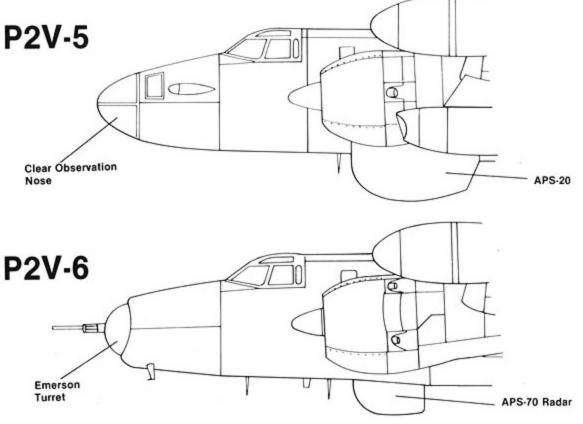
P2V-6T (TP-2F)

P2V-6 Neptunes converted to the trainer role with all armament, including the dorsal turret, being removed; the wing tip tanks were also usually deleted.

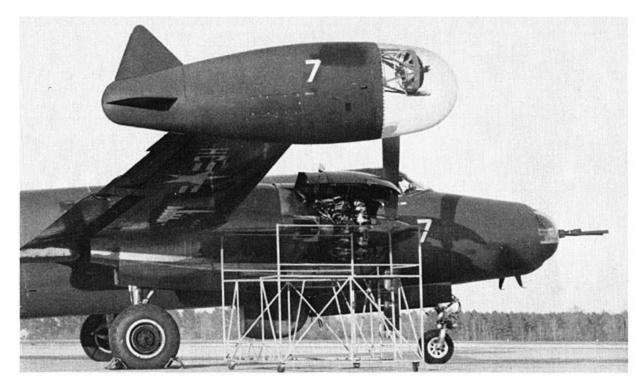




P2V-6 (126523) of VP-21 starts its engines preparing to depart after a refueling stopover in Wilmington, NC. The -6 again carried the Emerson 20mm ball turret in its longer nose. 1954 (Paul McDaniel)



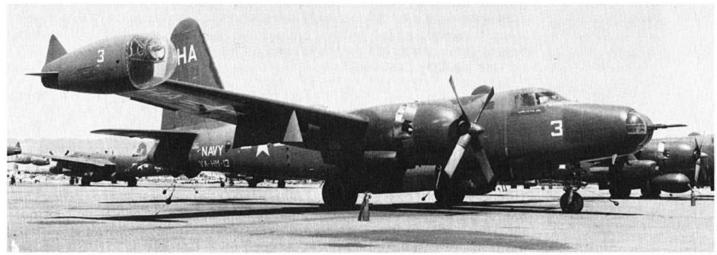
P2V-6 (126546) of VP-17 is sitting on the ramp between missions. The -6 was equipped with the APS-70 with a smaller radar dish and smaller under belly radome. The P2V-6 Neptune possessed special mine laying capabilities. 30 July 1955 (Walsh via Pete Bowers)



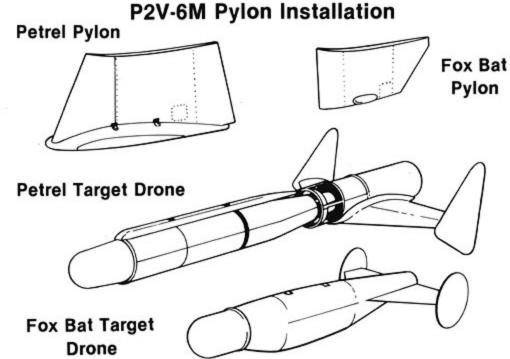


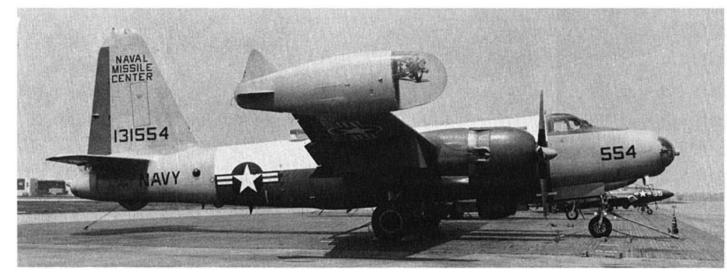
(Above) P2V-6 (126533) is parked among a ramp full of Neptunes at NAS Alameda, CA. The Orange/Red trim on the lower nose and tail section brightens the Glossy Sea Blue and White paint scheme. The sixteen rocket launch stubs remain, but the guns have been removed. November 1962 (Harry Gann via Clay Jansson)

(Left) This P2V-6 (126526) of VP-21 is undergoing maintenance after it made an unscheduled stop due to starboard engine trouble. The P2V-6 was the first Neptune to replace the aluminum engine cowlings with stainless steel cowlings that not only proved to be stronger but also lighter. Wilmington, NC 1954 (Paul McDaniel)



(Left) This P2V-6M (131556) of VA-HM-13, one of only two Heavy Mining squadrons, carries drone launch pylons beneath the wings. Unlike most Neptunes fitted with drone launching equipment this aircraft is fully armed. NAS Alameda, CA. June 1957 (Bill Larkins via Clay Jansson)





P2V-6M (131554) attached to the Naval Missile Center at Point Mugu, has Petrel missile launch pylons mounted under its wings. All guns have been removed and JATO rack attachment points have been installed on the fuselage just forward of the National insignia. 8 October 1962 (Howard Levy via Pete Bowers)





(Above) A P2V-6T (126519) trainer assigned to ATU-501 is having baggage stowed aboard prior to departure from NAS Moffett Field, CA. The forward lower fuselage and tail section are painted Red/Orange, and the lower portion of the national insignia has been outlined in White. 21 May 1960 (Bill Larkins via Clay Jansson)

(Left) Flying from NAS Corpus Christi, TX, this P2V-6T (126534) is carrying out a training flight over the Gulf of Mexico. All armament including the dorsal turret, astrodome, and wing tanks have been removed. 30 July 1962 (USN via Hal Andrews)

This P2V-6T (126523) of ATU-501 is in a most unusual all White finish. The rear of the engine nacelles, anti-glare panel, front of the radome, and part of the wing leading edges have been painted Matte Black. The Advanced Training Units turned out Fleet qualified personnel. October 1960 (USN via Hal Andrews)



P2V-7 (P-2H) (Model 726)

The Lockheed Model 726, the P2V-7 was the last Neptune variant to roll off the Lockheed production line. It was powered by a pair of 3,700hp (with water injection) Wright R-3350-32W Turbo Compound engines and for the first time the Westinghouse J-34-WE-36 turbo jet engines factory installed under the wings. (However, under the designation Model 826 by Lockheed, the twenty-five P2V-7s ordered by Canada were built without the J-34 jet engine, although they were later retrofitted with the jet engines.) The P2V-7 had a top dash speed of 364mph making it the fastest of the Lockheed produced Neptunes. Empty weight was 43,011lbs and a maximum gross weight of 79,895. The P2V-7 could carry an ordnance load of 10,000lbs. A completely redesigned bulged canopy provided better all around vision, the two piece top of which was now hinged along the front. The large belly mounted APS-20 search radar with its larger radome, which was standard on the earlier P2V-5, was made standard on the P2V-7. The APS-20 radome on the P2V-7 was mounted further forward than on the earlier -5. Smaller more streamlined center wing tip tanks were fitted, and an aircrew of nine was carried.

Early production P2V-7s were equipped with the twin 20mm nose and tail ball turrets, but very early in the production run they were modified to take the observer nose and MAD stinger tail. The dorsal turret was also replaced early in the production run with the installation of a skylight observation window, and AN/ALR-3 antennas were added to the sides of the nose. First flown on 26 April 1954, production ended after Lockheed had built 311 P2V-7s. However, Kawasaki in Japan produced under license another 48, bringing the total number of P2V-7s built to 359.

In addition to service in the US Navy, US Air Force and US Army, P2V-7 Neptunes served with the military forces of Canada, Australia, France, Japan and The Netherlands. Present day finds a number of privately owned P2V-7 (P-2H) Neptunes fighting a war against forest fires as fire retardant bombers in the US.

P2V-7S (SP-2H)

The addition of improved ASW/ECM equipment including Julie/Jezebel ASW gear.

P2V-7LP (LP-2J)

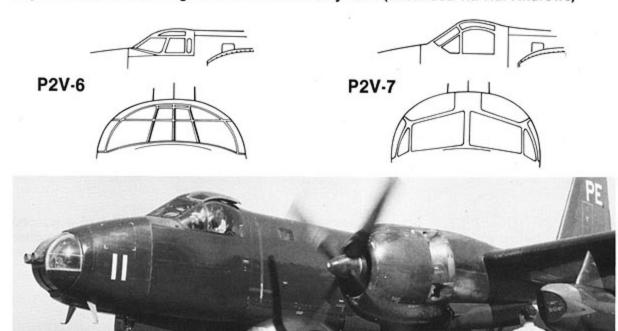
P2V-7s with the addition of retracting Aluminum skis (much like the earlier P2V-2N installation) and other equipment for research and exploration in the Antarctic. To provide additional power for take offs in the snow the -2N was equipped with provisions for mounting sixteen JATO bottles. The larger P2V-5 type wing tip tanks were used. Four P2V-7LP (LP-2J) aircraft were produced by Lockheed (140434, 140436, 140437 and 140439).

AP-2H

Of the modifications made to the basic P2V-7 airframe the AP-2H was perhaps the most radical. Originally designed for ECM work in Vietnam, the four AP-2Hs built were used by the Navy for night and all-weather interdiction work from November of 1967 to June of 1969. Assigned to VAH-21, these Neptunes were used to drop electronic sensors which monitored portions of the Ho Chi Minh Trail. The AP-2H had the MAD boom deleted and replaced by an Aero 11/A twin 20mm tail turret, MK-8 rocket/gunsight and infrared the Starlight Scope installation which proved to be so deadly in combat. The APS-20 and large radome were replaced with the smaller APQ-92 unit. In addition, chin mounted infrared sensors and Low Light Level TV (LLLTV) installations were made. The dorsal turret was deleted and fared over, the skylight was not installed. The AP-2H often carried bombs and



The first production P2V-7 (135544) during factory flight testing. Test probes are mounted on the observers nose and port wing tank. The early P2V-7s mounted the twin .50 caliber dorsal turret. For the first time Westinghouse Turbo Jet engines were standard, being factory installed on the wings of the P2V-7. 30 July 1954 (Lockheed via Hal Andrews)



A P2V-7 (135584) of VP-19 runs up number one engine at NAS Moffett Field, CA. Early -7s carried both the nose and tail 20mm ball turrets but very early in the production run were modified to take the observers nose and MAD tail. Both this machine and the one above have the earlier P2V-6 type of exhaust. 17 May 1958 (Bill Larkins)

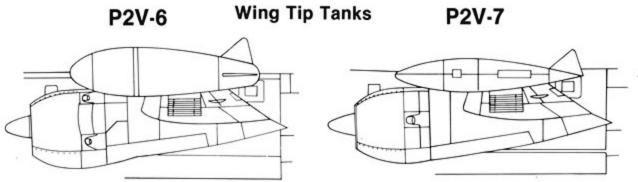
napalm on underwing stations and were equipped with fuselage mounted 40mm grenade launchers. Other armament consisted of a 7.62mm Minigun pod installation which was mounted at a 30 degree downward angle. The final modification was the installation of exhaust suppression equipment for the jets and reciprocating engines.





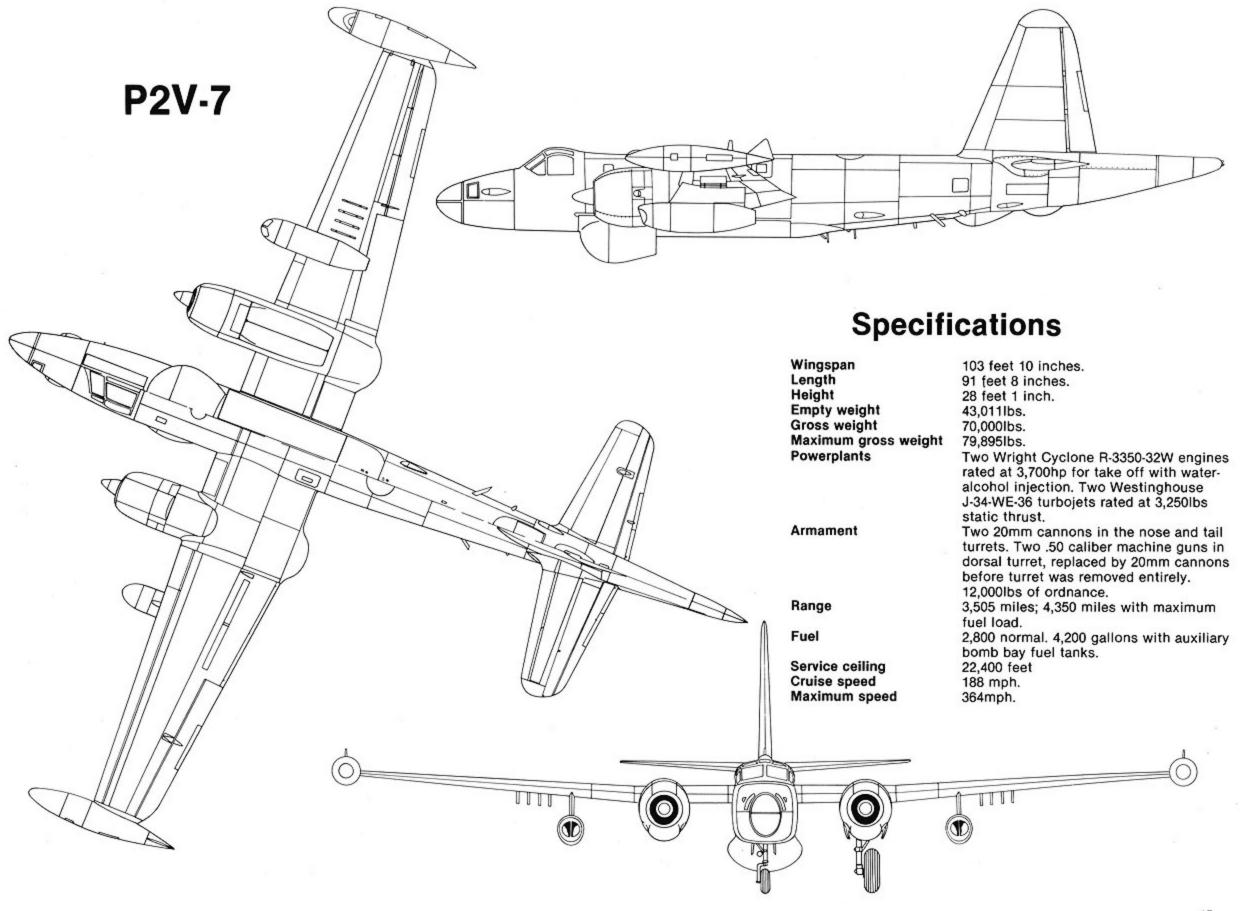
(Above) P2V-7 (135570) just off the Lockheed assembly line. The P2V-7 had a bulged canopy for better visibility and additional cockpit room, and was equipped with smaller wing tip tanks than the P2V-6. The -7's first Fleet assignment was with VX-1. NAS Key West, FL. 25 April 1955 (USN via Bill Curry)

(Above) A P2V-7 of VP-2 is just moments away from touch down at NAS Whidbey Island, Washington. Heavy exhaust staining was a standard feature on the Neptune C.1955 (USN via Hal Andrews)

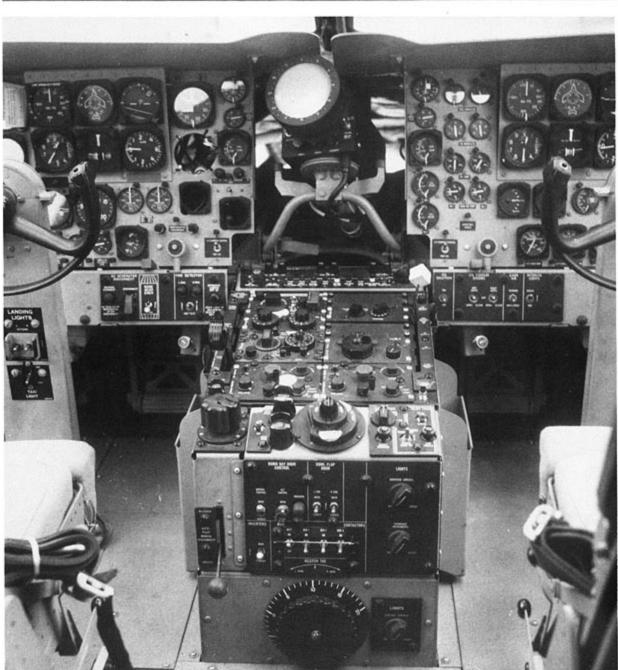


(Below) P2V-7S (141241) of VP-62 on the taxiway at Jacksonville, FL. The -7S was modified with additional ASW equipment including Julie/Jezebel. The Navy's Gray over White paint scheme was introduced in 1957. (USN via Bill Curry)









(Above) The ski equipped P2V-7LP (LP-2J) (140436) of VX-6 takes off with the help of eight JATO bottles. This was a part of the test program prior to the Neptune's participation in the Antarctic OPERATION DEEP FREEZE. International Orange paint is carried on the top and bottom of the outer wing panels, rear fuselage and complete tail section. 14 October 1957 (USN via Hal Andrews)

(Left) P2V-7 cockpit showing much of the main instrument panel and center console. The circular screen in the middle of the panel is the plotting board. C.1960 (Lockheed)



(Above) LP-2J (P2V-7LP) (140434) of VX-6 experienced an inflight emergency when the starboard ski installation broke free. With no other option, the pilot retracted the gear and made a safe wheels up landing. 17 October 1965 (USN via Hal Andrews)

(Below) SP-2H (P2V-7S) (150281), one of the last few Lockheed built Neptunes is assigned to VP-2 at Cam Ranh Bay, Vietnam. March 1968 (N Malayney via Doug Slowiak)

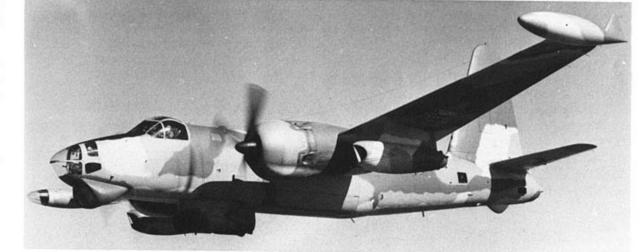


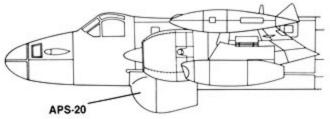


(Above) SP-2H (P2V-7S) (150282) of VP-1, was next to the last Lockheed built Neptune and is parked on the flightline of the Naval Air Facility at Cam Ranh Bay, Vietnam. These aircraft served into the early 1970s. 9 September 1968 (US Navy)

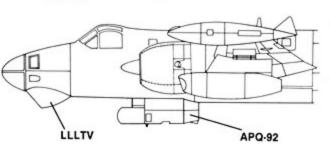
(Middle) AP-2H (135620) in the multi-shade Gray paint scheme with the new smaller national insignias. Not yet Fleet assigned, this Neptune is on a factory test flight. It carries the chin mounted forward looking Low Light Television installation, extra windows in the nose area and the smaller radar pod just forward of the bomb bay. C.1966 (Lockheed)

(Right) AP-2H (148337) "Napalm Nellie", still carrying her mission markers and awards below the cockpit, in storage at Davis-Monthan AFB, AZ. APQ-92 radar was carried in the underslung pod just aft of the nosewheel well. The Chin mounted LLLTV installation has been removed. 16 March 1970 (Clay Jansson)









AP-2H





RB-69A (P2V-7U)

Built for the Air Force under the Navy designation P2V-7U, the RB-69A, of which seven were built, was an aircraft shrouded in mystery. Used in the late 1950s and 60s to obtain electronic intelligence world wide, they were often found in some very troubled locations. These aircraft were often equipped with Side Looking Airborne Radar (SLAR) in a long horizontal pod mounted on the starboard fuselage side running from just behind the wing trailing edge to the front of the horizontal stabilizer. These reconnaissance Neptunes specially rebuilt for the Air Force were often used to gather intelligence on Soviet and Chinese radio and radar emissions, and it has been suggested that they regularly penetrated Soviet air space prior to the Soviet deployment of SAM missiles. The RB-69A was delivered in the standard Navy finish of overall Glossy Sea Blue with White markings, but for operational use the Air Force painted them Black. The seven RB-69A Neptunes carried the serial numbers 54-4037 thru 54-4043.

This P-2H (135564) is externally identical to the Air Force RB-69A and is one of three Navy modifications to that configuration. Operating out of Japan, some of these highly modified Neptunes were used to probe the northern Russian coastline. NAS Alameda, CA. 17 February 1967 (LS Smalley)



(Above) This RB-69A (P2V-7U) (54-4037) was the first of seven Neptunes manufactured for US Air Force use. Delivered in standard Navy Glossy Sea Blue with White markings, this RB-69A carries extra radomes on the rear fuselage, a modified MAD boom and no wing tanks. C.1958 (USAF Photo via Dave Menard)



P2V-kai (P-2J)

Following a 1961 requirement of the Japanese Maritime Self Defense's Force Kawasaki Industries built a Turbo-prop version of the Neptune based on the P2V-7. During the summer of 1965, a P2V-7 was converted to the P2V-kai configuration*. The Wright R-3350-32W powerplants were replaced by a pair of license built General Electric 2.850hp T-64-IHI-10 turboprop engines turning Hamilton Standard three bladed propellers. Completely redesigned engine nacelles and cowlings were fitted around the T-64 engines. The underwing Westinghouse 3,400lb J-34 jet engines were replaced by Japanese license built 3.085lb IHI-J3 turbojets. Top speed was a phenomenal 403mph. Updated ASW/ECM electronics and the smaller APS-80 search radar and smaller belly mounted radome were installed. The space saved by these changes was used to increase fuel capacity allowing the P2V-Kai to remain "on station" longer. Because of the shallowness of the new turbo prop engine nacelles the single wheeled main landing gear was replaced by a much smaller diameter dual wheeled main landing gear. The fin and rudder were slightly enlarged and changed in shape. The dorsal antennas were installed on the nose. Aircrew was increased to ten and gross weight was reduced to 75,500lb. First flown on 21 January 1966. 82 P-2Js were built with the final machine being delivered in March of 1979 - thirty-four years after the XP2V-1 Neptune first flew.

Kai is an abbreviation of Kaizo, meaning modified.

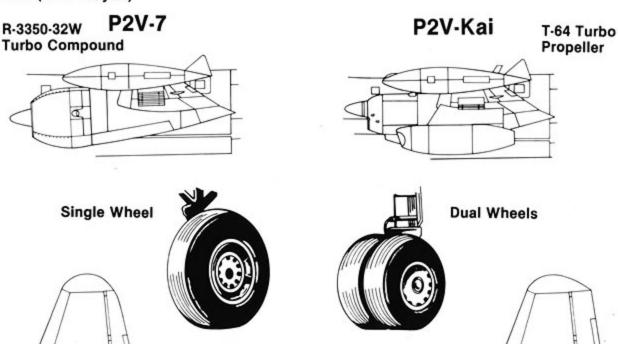






The Kawasaki Industries-built P2V-Kai (P2-J) (4742) had turboprop engines, dual wheel main landing gear, Japanese manufactured radar and a revised fin and rudder shape. Belonging to VP-1, it is landing at NAS Atsugi, Japan in May of 1975. (Hideki Nagakubo)

(Left) Parked on the ramp at Hachinohe Naval Base, Japan, this P2V-Kai (P-2J) (4715) of VP-2 carries the standard JMSDF Blue and White finish. The last two digits of the serial number are repeated in White on the nose under the AN/ALR-3 antenna faring. 18 May 1974 (Norm Taylor)



A UP-2J (9162) of the JMSDF's 81st Squadron has a solid radar nose, additional avionics and extra radomes beneath the rear fuselage. Iwakuni Air Base, Japan. 7 August 1983 (A Watanabe via Doug Slowiak)



