

UNITED STATES OF AMERICA

VPU ORIONS

- JAAP DUBBELDAM

Special Projects Patrol Squadrons

“By far being the most secretive aircraft in Navy inventory”. That is how someone on the internet named the Orions operated by the two VPU squadrons. And he may just as well be right. Most aircraft enthusiast will have heard of their existence, but the true nature of these special P-3 Orions remains a secret. It is even possible you may have seen one of these aircraft without realizing it. This article is an attempt to shed some light on the subject. It is, however, not complete, as it is confined to the aircraft and the squadrons that operate them and not about the mission.

It is worth noting that the VPU story shows a great resemblance with the USAF covert program that was developed under the name “**Big Safari**” in the early 1950’s. During some forty years USAF and allied aircraft flew secret reconnaissance missions around the Eastern Bloc. The final C-130 data-collecting mission from Frankfurt to Berlin was flown in September 1990. One of the rules of **Big Safari** was to keep the aircraft designators as ‘innocent’ as possible. Like their USAF colleagues an official designation of the heavily modified P-3 Orions, has never been revealed, and, like the well-known USAF C-97’s and C-130’s operating out of Wiesbaden and Rhein-Main, the deliberate lack of radar bulges or antennae conceals the actual purpose of the VPU Orions, which are said to be packed with electronics.

The Facts

Since July 1982 the US Navy has had two squadrons which form a league of their own. At the time of their establishment the two squadrons were known as Patrol Squadron Special Unit, but this designation was changed to Patrol Squadron Special Projects Unit in 1996. During 1998 both squadrons were renamed Special Projects Patrol Squadron.

These two squadrons are:

VPU-1 at NAS Jacksonville FL named The Old Buzzards
VPU-2 at MCAB Kaneohe Bay, HI named Wizards.

VPU-1 was established at NAS Brunswick, ME on 1 July 1982 and on 1 March 1996 it became a full command with tail code “OB” assigned, which has been seen on a few occasions.

VPU-2 was established on 16 July 1982 at NAS Barbers Point, HI and on 27 March 1996 it became a full squadron with tail code “SP” assigned. No reports of Orions with this code are known.

However the history of the VPU squadrons started sometime before 1982.

VPU-1 started in 1969 as a Special Projects Detachment known as **Project Saffire**, assigned to CPW-5 at NAS Brunswick, ME. and using flight crew members of VP-8. This detachment was transferred to VP-26 in October 1975, becoming a permanent detachment in 1979.

Because of numerous WestPac commitments a similar Special Projects detachment was created, which was assigned to VP-4 at Barbers Point, HI, somewhere in 1969 or 1970, which became a permanent detachment on 15 November 1979 and was renamed VPU-2 in 1982. On 1 July 2009 VPU-1 relocated from NAS Brunswick to NAS Jacksonville and switched from CPRW-5 to CPRW-11. Early in 1999 VPU-2 completed a homeport change from NAS Barbers Point to MCB Hawaii, Kaneohe Bay.

During the years several project names have been associated with the squadrons. Names such as: Saffire (1969), Church Plate, Church Plate East (1975), Reef Point (to mid 1997), Storm Jib (mid 1997- 1999) and Iron Clad (2000).



This Orion in full VP-47 marks was photographed landing in Japan on 5th September 1971. The full serial on the tail, 158495, is a non-existing P-3 Bureau Number and combined with the black camera bulge under the nose radome identifies the aircraft as a special projects Orion probably from the special project detachment of VP-4 (Takafumi Hiroe)

Don't be fooled

Thanks to the internet a lot of information and photographs have become public since 1991. However, after 40 years both squadrons are still able to fool nearly everyone who is not directly involved. During recent visits of Orions to Europe it was discovered that they not only falsify the code on the nose of the aircraft, but they also fill in the wrong Bureau Numbers on the flight plan.

This also became apparent after the crash of a VPU Orion at Bagram AB in 2008. Already the day after the accident occurred, an official accident report gave the Bureau Number as 158573. But after a year it was discovered that the Orion involved was Specially Equipped P-3 161585 of VPU-1. Most likely the crew had filled in a wrong number on the flight plan!

The following accounts of former crewmembers were found on the internet, to illustrate the way the VPU squadrons work:

1. "It was interesting that they would re-paint the planes to match who ever was overseas at the time. One morning I came to work and there were two planes painted the same, it was PC-06 of VP-6. It looked funny, not being too secret."

2. "I got to VP-4 in 1975 and, if I remember right (and it is hard to do these days), there was a change of planes that year. The YD-11 I remember is Buno 154584 and YD-12 was 154585. I didn't do any of the missions, so I could not relay any of what they did. But they were always changing the paint schemes to match the deployed squadrons. I toured the bone yard at Davis Monthan last summer and I took a picture of 154584, it still had the fake sono shutes on the bottom of the plane. They were there to make it look like a Charlie plane, since this was a Bravo."

3. "You are correct about the repainting of the aircraft too. What a pain it was to have to do that. If we landed in Diego Garcia, for example, and the deployed patrol squadron had the bird there that we were imitating, we'd have to repaint the BUNO, etc. In my opinion, the deception had more to do with fooling the mission target and not anyone on the airfields we were flying out of."

4. "In 1972 during a deployment with VP-40 I was standing a duty driver stint one night when we got a call from the tower telling us that we had two visiting aircraft on the deck en route to our line. The two P-3's were unmarked white over grey with no searchlights. They parked and posted guards and NOBODY got near those birds. The crews were in Navy flight gear with no unit insignias showing. One had BUNO 155236 and the other was 1513xx (tail obscured in the pics I have). Overnight our maintenance crews painted them up as QE-8 and QE-9 complete with the dark blue rudder top but no VP-40 marlin. The planes looked pretty ratty and retouched with several paint overs visible including the BUNO. Both had the square window in the hatch behind the port side cockpit window indicative of VPU aircraft. They left the next morning without so much as a thanks!"



This P-3 Orion visited Lajes AB on 18 December 2009 using call sign LT89. The nosecode 011 would indicate that the full Bureau Number is 161011. However the real 161011 has been modified to AIP configuration and therefore does not have the old AN/ALQ-78 ESM pod which is clearly visible under the wing. This combined with the three (batwing) SATCOM antennae, the INMARSAT bulb antennae and the horizontal HF antenna, lead to the conclusion this is a special projects Orion on its way from Sigonella to Jacksonville. (P-3 Orion Research Group)

The VPU Orions were also mentioned in an article published in the US Navy publication 'Proceedings' of March 1999:

"Discussions of a Multimission Aircraft to replace the P-3 and EP-3 have not included VPU-1 and VPU-2's Special Projects P-3. Saying that these are standard P-3s with some EP-3 equipment and some optics capability added is a gross oversimplification of the aircraft's capabilities, but the aircraft does represent consolidation of VP and VQ mission capabilities. The consensus is that the VPU P-3 cannot perform the VP mission as well as a P-3 or the VQ mission as well as the EP-3. Recent advances in technology, not to mention change in the number of targets in the threat environment, make the VPU P-3 configuration a smart solution to challenging mission profiles and shrinking fiscal resources.

An article in 'WorldNetdaily' of April 9, 2000 included with some interesting details about the VPU squadrons:

"The NSA airborne interception platforms consist of various Army, Air Force and Navy aircraft modified for NSA use. The Navy operates an entire squadron of fake P-3 Orion anti-submarine aircraft that function as highly modified radio interception platforms. The P-3 specials are equipped with giant onboard computers to sort and retransmit the data directly via secure link to the NSA and high-powered infrared video cameras used to photograph various targets. The Navy aircraft are frequently repainted with a real squadron insignia, including tail numbers and cartoon-like characters, at a secret NSA contract facility outside Dallas-Ft. Worth."



The code 227 would indicate that the full BuNo would be 158227, which of course was a bright red/white RP-3D of VXN-8. The small code 2 identifies this Orion as VPU-1 Orion BuNo 153450 originally a P-3B modified to look like a P-3C. Pictured at RAF Mildenhall on 16 May 2000 by Dougie Couch.

Characteristics

It was because of several noticeable features that during 1978, aircraft spotters first became aware of the existence of the special mission Orions operated by two VPU units. Mostly it was, and still is today, a combination of a number of specific deviations from a normal P-3 Orion, which make it possible to identify an Orion that belongs to a VPU squadron. Throughout the years the following deviations have been noticed:

- non existing Orion serials such as 158495, 153468 and 159519
- serials from Orion aircraft which had already crashed before: 152724, 153440 and 153445
- false sonobuoy tubes painted below the fuselage to make a P-3B look like a P-3C
- false windows painted on the rear fuselage to make a P-3B look like a P-3C



At first sight one would expect this to be P-3C 158565 at RAF Mildenhall on its way from Sigonella to the USA with call sign LC565 on 3 March 1999. However, the SRS antennae on the front fuselage made it suspicious and research in the field led to the conclusion this was really P-3B 154577 modified to look like a P-3C model. Hardly visible on the nosewheel door is the code 1 which was used by VPU-1 from 1996 to 2002.
(Dougie Couch)

- an unusual camera under the nose radome of a P-3B
- a square optical window behind the cockpit, instead of the usual round one; (1972 – 1992)
- an ALQ-78 ESM pod which is typical for a P-3C model in combination with a P-3B HF antenna; (1987-2003)
- an ALQ-78 ESM pod combined with an AIP radome (since 2005)
- nose codes indicating serials of non-existing Orion serials: 099, 157, 159, 231, 278, 289 & 880
- no HF antennae attached to the fin tip, but instead to the stabilizers (since 2003)



This P-3 picture was taken at MVK Valkenburg, the Netherlands on 17 July 1987, just after the arrival, using call sign VV.YM32. Below the fin is the small BuNo 161014 and on the nosewheel door is a small code 2, the same as would be present on the P-3C model which was assigned to VP-MAU at Brunswick at the time. However closer examination the next day revealed a square camerawindow on the lefthand side, while the two long HF antennae running from the fintip identify this Orion as a Bravo model. The two small windows at the rear of the fuselage are fake. A check inside the wheelbay revealed this Orion to be 154577 of VPU-1. (Willem Sander Termorshuizen)

But these do not rule out other possible changes like, for instance, a great number of unusual extra antennae. One of the recent features that can be seen on several modern P-3 Orions, are the HF antennas, which run from the horizontal stabilizers instead of the top of the fin. This configuration can be seen on US Navy EP-3E Aries II, Australian AP-3C, Korean and Norwegian P-3C Update III, Spanish P-3M and of course the Special Project P-3's.

The HF antenna has always been an important feature to recognize a certain Orion model. The P-3B had two of these of the same length while those on the original P-3C were different in length. Numerous VPU Orions with P-3C serials could be recognized as such because of the HF antenna. For instance on P-3 154577 when it visited Valkenburg, The Netherlands on 17 July 1987 was disguised as P-3C 161014. The VPU people also realised this and around 1988 the HF antennae on the original Bravo models were changed to the P-3C configuration, together with other modifications.

When these Bravo models were replaced by Charlie models the antenna layout was changed again. At the moment VPU Orions are the only US Navy P-3C models having these HF antennae, making them easier to recognise! When some pictures of the crash at Bagram appeared, another extra addition was first noted on VPU Orions. It was an extra bulge just behind the cockpit which is said to house the AMT-50 Inmarsat antenna. So far this bulge has only been seen on some EP-3E Aries II Orions and some VPU Orions.

Positive sightings of VPU Orions throughout the past 40 years have not been abundant. In the years 1977 to 1985 quite a few of the special project Orions were seen at NAS Keflavik, Iceland. Those were the days that the P-3B's were painted in the full colour schemes to resemble Orions of other squadrons. In vane, however, because the square optical window and the HF antennae gave them away. NAF Atsugi in Japan is another airbase which was frequently visited by VPU Orions throughout the years, although this stopped around

2007.

After the US Navy Orions had turned grey during the years 1997 up until 2003, a rather large number were reported at RAF Mildenhall. Special mission Orions have also been seen at Kai Tak in Hong Kong, Aviano AB in Italy, Bahrain, Hato, NAS Valkenburg and of course NAS Brunswick, the former home base of VPU-1. After the closure of NAS Brunswick in 2009 it seems that VPU Orions prefer Lajes AB, Azores instead of RAF Mildenhall, on their way to and from their area of operations in the Gulf.

Since the Gulf War in 1991 this has become one of the main area of operations. It was widely published that during Operation Desert Storm three VPU Orions were present in the area, operating from Misarah in Oman. Nowadays Afghanistan is a prime area of operations. The presence of VPU-1 was confirmed in 2008 when one of their aircraft crash landed at Bagram AB. It is obvious that sightings in this region are rare. However some recent fuel stops at Lajes AB during 2010 confirm that special mission Orions are still present.

Throughout the years of their existence the area of operations and the tasks of the two units have changed. Basically one could say that whenever there is some kind of trouble, the VPU Orions are around. The big problem with these Orions is that when they are assigned to a VPU unit they are seldom seen with their real Bureau Number. One of the ways to find out the real identity of such an Orion, once you have discovered that it is VPU Orion, is to check the msn plate inside the wheel bay. And normally people don't get the chance to get that close to it.



A fully unmarked P-3 Orion photographed at NAS Brunswick on 5 November 2002 in the old Tactical Paint Scheme. This is probably one of the first modified P-3C for VPU-1 whose squadron badge can be seen on the wall of the hangar. It was the first Orion which was seen with the modified HF antenna. (archive Jaap Dubbeldam)

Special mission P-3 Orions

Early in 1970, when both detachments were formed, both VP-4 and VP-8 were still flying P-3A Orions. VP-4 transitioned from the P-3A to the P-3B LW in mid 1970. VP-8 did not re-equip with the P-3B until mid-1976. VP-4 transitioned from the P-3B LW to the P-3B HW Orions during 1979. According to one source in the early days specific aircraft were assigned to the detachments, but no Bu No's are confirmed. The Martin Aircraft Company is known to have modified P-3A's 150520 and 150528 for a US Navy special project in 1971. P-3A 150528 was noted with Martin Aircraft, Baltimore in October 1971.

The maximum number of Orions assigned to each unit at anyone time is five, eventually two Orions were modified as special project aircraft, but this number has increased to three in recent years. According to the book 'The Age of Orion' a program was initiated in early 1992 to develop a replacement platform for the two Special Projects squadrons. Four Navy P-3C Update I/II airframes (Bu No's. 159504, 160285, 160288 and 160292) were selected as baseline aircraft for the Special Projects replacement program designated P-317. The modification was performed by the Jacksonville NADEP and standardized the VPU mission configurations among the four different Bravos onto one Charlie airframe. The interior layout of the P-317 Orions is very similar to EP-3E aircraft with sensor operator workstations positioned along both the port and starboard side of the aircraft. Bu.No. 160288 ended up with Chrysler at Waco, TX as a static R&D mock up and was most likely replaced by Bu.No. 158928. In August 2000 it was confirmed that P-3C's 161122 and 161585 were also selected to be converted to special mission aircraft. Since Bu.No. 161585 was written off in 2008, it is most likely that a replacement aircraft has been or is in the progress of being modified.

As mentioned earlier, apart from the serials, the official designation of the Orions is a problem as well. Actually it has never been revealed which designation is used after the Orions are modified as a special mission aircraft, if any. Often the aircraft are mentioned as (E)P-3B, P-3C(RP) or (E)P-3C.

In October 2010 the P-3C program office, announced at Lockheed's annual P-3 international operators support conference in Marietta, GA, that the Navy intends to fly special mission P-3Cs beyond 2019 because there is no replacement for them since the EPX program was cancelled earlier in 2010, "The Navy cannot replace special mission airplanes unless they've demonstrated a fully operational platform." "They anticipate flying a handful of airplanes, about 40 planes, specifically special mission airplanes". Amongst these 40 Orions will be 16 EP-3E Aries II, 16 P-3C BMUP equipped to carry the Boeing APS-149 LSRS pod and some 8 Orions belonging to the VPU units.

According to a source in the USA there are several levels of the P-3 story. The first is what has already been released by the Navy - the public story of the P-3. Then there are the other uses, the variants and test bed aircraft that the Navy operates. And then there are the classified Orions, of which the VPU Orions are part. These P-3's the Navy operates (for others) are highly classified. The bad news is that according to the VPU requirements officer in the Special Ops program office the VPU story will never be published.

This article started with a quote and it also ends with a quote about the VPU people:
 "When they want it known, they themselves will provide it."



LEFT A fully unmarked P-3 Orion photographed by a crewmember of VPU-2 while on a detachment at a site in the North Pacific, some time in 1990. Again the AN/ALQ-78 ESM-pod in combination with the P-3B HF antennae identify this Orion as a special projects Orion. At the time of the picture VPU-2 was using both 154584 and 154585. (archive Jaap Dubbeldam) RIGHT Photographed landing at NAF Atsugi, Japan in December 2005 is P-3C Orion 160766, which is used by VPU-2 as a logistics aircraft. It is a rare example of a VPU-2 Orion showing both the actual last three of the BuNo as well as the badge of the squadron. (via Takafumi Hiroe)

The following Orions have been known to be operated by the two squadrons;
 The Bureau Numbers in bold are current with the units. At least that is what we think!

VPU-1

151353 P-3A	assigned on 21 April 1986 as a logistics aircraft. In 1986 it was seen wearing full squadron marks, coded OB-3. On 29 April 1991 it arrived at AMARC.
152728 P-3B LW	assigned as a logistics aircraft (OB-3) in March 1991. On 23 June 1998 it is flown to AMARC.
152736 P-3B LW	assigned to VPU-1 on 13 December 1982 as a logistics aircraft, until 7 November 1985 when it was transferred to VP-94.
153450 P-3B HW	assigned to VP-8 on 4 February 1975. In October 1975 the Special Projects Detachment at NAS Brunswick was transferred from VP-8 to VP-26. Officially assigned to VPU-1 on 14 February 1983. Modified around 1987 to make it look like a P-3C. Coded (OB)2 during 1998-2003. In April 2003 reported as being stricken off charge.
154575 P-3B HW	assigned to VP-26 on 30 September 1975. Officially assigned to VPU-1 on 13 December 1982 until April 1984 when it was transferred to NADC.
154577 P-3B HW	flown to LAS Ontario, CA on 14 August 1985 for conversion to special project aircraft. It was delivered by April 1987. Modified around 1987 to make it look like a P-3C. Coded (OB)1 during 1998 - 2002. Stricken off charge on 17 September 2002.
158206 P-3C	assigned during April 2002, after rework and repainting in the new glossy paint scheme at Greenville SC on 10 January 2001. Since transferred to VP-26 (f/n June 2005).
159506 P-3C-I	assigned during 1997 (f/n September 1997) as a logistics aircraft. Reported with VP-26 on 26 September 2004 but back with VPU-1 in October 2005. There is a possibility that it has been modified as a special projects aircraft as a replacement for 160288. It arrived at AMARG on 19th May 2010.
159884 P-3C-IIIR	first reported in November 2000, as a logistics aircraft. Seen with code OB-884 during 2010. Arrived at AMARG on 27.9.10.
160285 P-3C-I	first reported during 2004, but it was probably assigned during 2002/2003, specially equipped as a replacement of a P-3B.

- 160770 P-3C-II assigned during 1995 (f/n December 1995) as a logistics aircraft. In September 1996, it was transferred to VP-16.
- 161006** P-3C-CDU reported in December 2010 as a logistics aircraft coded OB-006.
- 161122** P-3C-II.3 assigned during 1997 as a logistics aircraft, taking over the code (OB)3 during 1998-2003. Around 2002 it was converted to a special projects aircraft.
- 161415 P-3C-BMUP temporary assigned during the summer of 2005. It was seen at NAS Brunswick with a SLRS pod under the fuselage during June 2005, operating out of the VPU-1 hangar. In October 2005 it was reassigned to VP-8.
- 161585 P-3C-II.5 first reported in September 1999 to be used as a mission aircraft after modification. Reported at Waco, TX in September 2000, being modified as a specially equipped aircraft. Probably assigned during 2002/2003 as a replacement for a P-3B model. Crashed during landing at Bagram Air Base in Afghanistan, on 20 October 2008. The Orion was described as a specialized \$93 million plane !
- 161593 P-3C-BMUP temporary assigned during 2005. In September 2005 it was transferred to VP-8.



LEFT The square camerawindow just behind the cockpit was the most significant feature during the 1980's to identify a special projects Orions. Also visible are the black bulge below the nose and the extra antennae below the rear fuselage. The serial 153420 and the VP-10 squadron markings are fake and are meant to hide the real identity and mission of this Orion. Photographed at NAS Keflavik on 21 April 1980 by Baldur Sveinsson

RIGHT This Orion is identified as a Bravo model because of the two HF antennae running from the fin tip. It shows a typical paint job by the VPU-1 people, applying the serial 157311 and squadron markings on the fin to make it look like a P-3C of VP-24. Also visible are the two fake small windows on the at rear fuselage. Not visible is the square camerawindow on the left hand side. Pictured at NAS Keflavik, Iceland in September 1984 by Baldur Sveinsson.

VPU-2

- 152169 P-3A assigned to VPU-2 on 30 April 1984. During 1985 it was redesignated UP-3A as a logistics aircraft. On 2 April 1999 it leaves the unit, being destined for display at the Hawaii Museum of Flying at Barbers Point, Hi.
- 153421 P-3B-LW temporary assigned to VPU-2 from 28 November 1983 until June 1984 when it was transferred to VP-31. Earlier in 1983 it had been on loan to VX-1 for testing the Searchwater radar.
- 153433 P-3B LW assigned to VP-4 since November 1970. Reported with VPU-2 in April 1984 just before the transfer to VP-92.
- 154584 P-3B-HW assigned on 23 November 1971 until September 1973. On 19 March 1975, after service with VP-31, again assigned to the VP-4 Detachment. Officially assigned to VPU-2 on 1 July 1982 as a specially equipped aircraft. It left for AMARC on 27 July 1993.
- 154585 P-3B-HW assigned on 2 December 1971 until September 1973. On 2 March 1976, after service with VP-31 it was again assigned to VP-4 Detachment. Officially assigned to VPU-2 on 1 July 1982 as a specially equipped aircraft. Flown to NADEP Jacksonville during 1993, where it was dismantled during 1994, with the tail empennage being donated to P-3C 161009.
- 156517 P-3C temporary assigned on 20 March 1987 as a logistics aircraft, leaving the unit in 1988 for conversion to EP-3E Aries II.
- 158928** P-3C-IIIR flown from AMARC to Waco, TX on 31 August 2000 and first reported assigned in March 2004, most likely as a specially equipped aircraft.
- 159504** P-3C-I assigned early 1992 (f/n July 1992); early 1994 specially equipped, probably as a replacement for P-3B 154584.
- 159893 P-3C-I assigned as a logistics aircraft during 1992 (f/n July 1992), leaving the unit in 1995 for VP-30 and later selected for conversion to EP-3E Aries II.
- 160285 P-3C-I assigned as a logistics aircraft during 1995 until December 1997, when it was flown to AMARC.
- 160288 P-3C-I selected as a baseline aircraft for the Special Projects replacement program in 1992. Assigned during 1995 (f/n December 1995) until 1999. However in September 1999 it was first noted with Chrysler Technologies, at Waco, TX, being used as an R&D mock up. This company was renamed L-3 Communications in 2002.

- 160292** P-3C-II reported at NADEP Jacksonville being modified as a specially equipped aircraft during October 1993. First reported during April 1994, specially equipped, probably as a replacement for P-3B 154585.
- 160293 P-3C-IIIIR assigned during 1997 (f/n September 1997) as a logistics aircraft. In March 2000 it was first reported with VP-4.
- 160762** P-3C-II first reported in September 2000 as a logistics a/c.
- 160766 P-3C-II first reported in September 1999 as a logistics a/c, until 4 March 2009, when it arrived at AMARG.

The nosecode 323 would suggest this P-3C Orion is either 157323 or 159323. However both Orions would have another antennae configuration. The three Batwing Satcom antennae, the AN/ALQ-78 ESM pod and the horizontal HF antenna running from the elevator identify this Orion as a special projects aircraft. Photographed at RAF Mildenhall on 16 Augustus 2008 by Charles Cunliffe

