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CARRIER AIRBORNE EARLY WARNING SQUADRON
ONE HUNDRED SIXTEEN
FPO SAN FRANCISCO 96601

VAW-116/20:1en
5740
Ser **C6**
APR 11 1974

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From: Commanding Officer, Carrier Airborne Early Warning Squadron
ONE HUNDRED SIXTEEN
To: Chief of Naval Operations (OP-05D2)
Subj: Command History for Calendar Year of 1973
Ref: (a) OPNAVINST 5750.12B
Encl: (1) VAW-116 Command History of 1973

1. In accordance with reference (a), enclosure (1) is submitted.


J. E. GARDELLA

Copy to:
CNO (OP-05B9)
COMFITAEWINGPAC
CINCPACFLT

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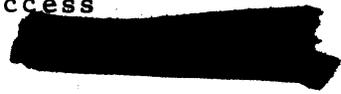
The Squadron

Carrier Airborne Early Warning Squadron ONE HUNDRED SIXTEEN (VAW-116) is a four plane, self-supporting Airborne Early Warning Squadron under the operational and administrative command of Commander, Attack Carrier Air Wing NINE, reporting also to the functional Wing, Commander Fighter Airborne Early Warning Wing Pacific (COMFITAEWWING-PAC), and within the fleet structure of Commander Naval Air Forces Pacific (COMNAVAIRPAC).

VAW-116 operates the five-place, twin-turboprop E-2B "HAWKEYE", which is capable of both shore and carrier based operations. The E-2B is 56 feet long, has an 81 foot wing span, and weighs 51,000 pounds when operationally loaded. It's most distinguishing physical characteristics are its four vertical stabilizers and its 24 foot diameter, dish-shaped rotodome mounted 6 feet above the fuselage. This rotodome contains the high powered airborne early warning radar and associated antennas. The interior of the aircraft is fully pressurized and is divided into four sections: the cockpit, the forward equipment compartment, the CIC (Combat Information Center) compartment, and the aft equipment compartment.

Occupying the majority of the electronics and accounting for most of the \$20,000,000 + cost of the E-2B is the Airborne Tactical Data System. This system includes the long range million watt radar, IFF detection system, data processing and display systems, voice and data link communications, inertial-doppler navigation system, and an inflight performance monitor test unit. This highly integrated system, when coupled with a skilled crew, becomes in effect a complete airborne CIC capable of operationally controlling an entire strike flight from a CVA under all weather conditions, day or night.

The crew of the E-2B consists of five members. Four officers and one highly trained enlisted flight technician. Two pilots are utilized to perform the demanding tasks of ensuring the safe and orderly conduct of the flight, which includes the launching and recovery of one of the Navy's largest carrier based aircraft. The three remaining crewmen occupy the CIC compartment where three separate and distinct stations are arranged fore and aft in the compartment. The senior officer is the CICO (Combat Information Center Officer) whose primary duty is to direct, control, and monitor the ATDS system and is assigned the responsibility for the success

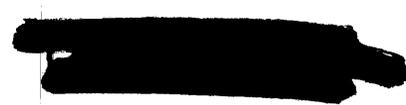


of the assigned mission. He is assisted by the ACO (Air Control Officer) whose duty is the control of tactical aircraft assigned. The final member of the crew, the flight technician, is responsible for in-flight maintenance and operation of all of the more than six tons of electronic equipment onboard the E-2B. He has a secondary task of assisting the CICO with the tactical problem since he also has a fully operational console at his position.

This highly skilled crew, when working as one, can perform a variety of missions simultaneously. The following is a list of the more prominent missions:

1. Airborne Early Warning (the detection of unknown air contacts closing the Task Force).
2. Tactical aircraft intercept control.
3. Strike flight following/control.
4. Surface/subsurface surveillance coordination.
5. Helicopter control.
6. Aerial mining control.
7. Tactical reconnaissance aircraft control.
8. Secondary approach control for carrier aircraft.
9. Communications relay (automatic and manual).
10. Airborne search and rescue coordination.

1973 marked the seventh calendar year since its commissioning on 20 April 1967, that VAW-116 has excelled in performing its assigned missions.



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1973 NARRATIVE

With a year of unmatched accomplishments behind them, the Sun Kings of VAW-116 started 1973 by saying good-byes to their loved ones and on 5 January, setting sail aboard USS CONSTELLATION (CVA-64) as a member of Attack Carrier Air Wing NINE (CVW-9).

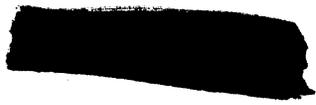
During the transit to WESTPAC the keyword was training, with formal lectures and discussions among all aircrew on RED THREE/GOT operations. Threats and tasks were defined, procedures analyzed and concepts studied so to prepare everyone for any imaginable occurrence. Also, during this time frame, three of the squadron's senior CICO's gave briefings to other Air Wing squadrons. These briefings covered the capabilities, limitations, and tasking of the E-2B, and how the E-2 could provide valuable assistance in the completion of the other squadron's mission. These presentations proved to be invaluable and aided in gaining an early rapport with each squadron.

The daily training routine was only interrupted by a one day stop-over in Pearl Harbor, Hawaii (10 January) and the call to launch the "Ready-alert" crew. On 16 January the CONSTELLATION received BEAR activity intelligence which was followed by "launch the E-2". In the ensuing sorties, the ship was overflowed by seven different BEAR aircraft within a half hour of each other--- with all bogies escorted by CVW-9 F-4's.

On 20 January, two days prior to CONSTELLATION's arrival in Subic Bay, two E-2's were flown off in order to lighten the deck load for carrier qualifications and also to allow squadron representatives to gain valuable information from VAW-113, CTF-77, and COMSEVENTHFLT, all of which were inport Subic Bay.

After a brief five day stay in Subic, CONSTELLATION departed for the Subic Operational Area for several days of carrier quals and cyclic operations. While in the operational area, three (3) concentrated AAWEX's were conducted. The "Sun Kings" were tasked as both Eagle (Raid) Control and the AEW aircraft during these exercises. On 29 January, a NOREX was executed under EMCON conditions with the E-2 running the exercises. It, however, degraded to "necessary" clear radio communications when a SAR ensued involving an A-7 exercise aircraft. The SAR continued on through the 30th, with Air Force, Marine, and Cubi aircraft assisting CONSTELLATION in the search effort. The search was to no avail and Commander Tom Wilkerson, the Commanding Officer of VA-147, was lost with no trace of debris, radio calls, or emergency squawks.

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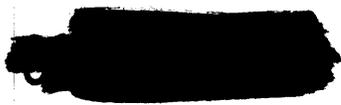
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Late on the 30th of January, CONSTELLATION departed the operational area and arrived on Yankee Station the night of 31 January, three days after the Vietnam cease-fire went into effect. Even with the "End" of the Vietnam conflict, the CONSTELLATION and CVW-9 were not greeted with an uneventful February. On 2-11 February, CVW-9 was called upon to assist in strikes in Laos, with the "Sun Kings" providing airborne early warning, flight following, and airborne command and control (ABCCC). All aircraft entering Laos did so through one of the two corridors on either side of Danang, and then came under Air Force FAC control for targeting in Laos. The "Sun Kings" assisted in the ABCCC effort by controlling aircraft through the corridor and by maintaining a constant vigil to insure that the stringent border rules in effect around North and South Vietnam were not violated by air wing aircraft.

On 12 February, CONSTELLATION turned for Subic Bay and used the transit time to good advantage. Due to the growing patrol boat threat in the Gulf of Tonkin, it was necessary to update the air wing's tactical doctrine. To do this, the first of many "KOMAREX's" was held with one of CVW-9's own "Indian Gal" helos posing as the threatening PT boat. One E-2 was tasked as Eagle Control for the PT; keeping the low flying (500-1000 ft) helo informed of closing aircraft and of the carrier's location. A second E-2 was assigned the control of aircraft processing the closing threat, with primary concern given to the most advantageous use of all assets, while maintaining a safe and controlled exercise.

After a ten day inport period in which the squadron pilots sharpened their landing skills with FCLP's, it was back to Yankee Station on 23 February. With the end of bombing in Laos announced, this second line period, which continued through March, saw the emphasis shifted to training and to the support of operation "END SWEEP", the de-mining operations in the northern Gulf. During the last week of both February and March, the CONSTELLATION was on Yankee station, and the remainder of the time was spent at a station further north in the Gulf (later known as Northern Station). To the "Sun Kings", supporting the de-mining operation, primarily meant providing covered UHF radio relay (Navy Blue Relay) between the units involved in the de-mining and the remaining units in the Gulf, and flight following CVW-9 aircraft to

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assure safety of flight and that none of the ceasefire boundaries were violated. While on Yankee Station, CVW-9 emphasis was on improving its tactical doctrine, which prompted daily training exercises (AAWEX's and KOMAREX's) stressing Air Wing co-ordination. In the majority of these exercises, the E-2 acted as both Eagle Control and as the AEW aircraft, while still providing AEW coverage for the task force and Navy Blue Relay. VAW-116 was so efficient in their Navy Blue Comm Relay that they received a "well done" from CTF-77.

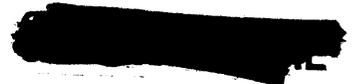
On 1 April CONSTELLATION again turned for Subic Bay, arriving on the evening of the 2nd. This inport period, as most, was spent with the pilots in FCLP's and several system check flights. One highlight to note was the CONSTELLATION's Change of Command in which Captain J. D. WARD was relieved by Captain P. H. SPEER.

With a new Commanding Officer, CONSTELLATION departed Subic Bay and arrived on Yankee Station on 13 April. Even though the WESTPAC emphasis had been shifted to training evolutions, CTF-77 maintained a constant vigilance and state of preparedness. During this short line period the Sun Kings were the sole E-2 squadron in the Gulf and continued to provide AEW and Navy Blue Relay. It was during this time frame that a new secondary mission began to grow in importance---Surface Surveillance. In this role, the E-2 detected surface contacts, and then utilizing TACAIR assets (A-5, A-6, A-7) as "scrappers", correlated the contacts with visual reports, and thus provided a "real-time" surface picture. In conjunction with this, VAW-116 attempted to assist CTF-77 in a study to determine the effectiveness of the E-2 radar in the detection of surface threats, a study which proved the E-2 most useful in this area. The highlight of the line period, however, was the "Sun Kings" receiving the word that they were the recipients of the coveted COMNAVAIRPAC Battle Efficiency "E" Pennant, for excellence in operational performance in the last competition period ending December 1972.

On the 25th, as CONSTELLATION steamed for Subic, the "Sun Kings" were called upon to flight follow and/or control in three tactical exercises; a MINEX, a mini-Alpha Strike, and a KOMAREX.

During this inport, on 28 April, VAW-116 held its Change of Command, when Commander John K. GARDELLA relieved Commander Robert L. WATKINS as Commanding Officer. At this time, Commander James A. MOORE joined the "Sun Kings" as Executive Officer.

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On 4 May, the CONSTELLATION again departed for Yankee Station, arriving on the 5th and commencing cyclic operation that day. The squadron was again tasked to provide AEW coverage, radio relay, flight following, and SSSC updating. Routine cyclic ops continued throughout the entire line period with intra and inter-Task Group AAWEX's intermixed. The Inter-Task Group AAWEX had USS CORAL SEA providing non-squawking raid aircraft against CONSTELLATION during a three hour vulnerability period, and CONSTELLATION returning the favor under like conditions two days later. The E-2's were used as Eagle and AEW/CAP Control. The theory of the E-2's having access to any CAP section, when better control was obvious, while the surface units maintained primary control, enabled the E-2 to fully participate and yet maintain Navy Blue Relay at the same time.

On 18 May, while enroute to Subic, CONSTELLATION/CVW-9 team conducted a smoothly executed NOREX with the E-2 providing flight following and followed with a MISSLEX with the E-2 providing range sanitation. The team was also "judged" ready to prosecute a multiple Komar threat, and the operating period ended with a most successful exercise using three (3) PG's and one (1) PTF. The "Sun Kings" provided detection and tactical control for the exercise and during the debrief, CTF-77 termed the exercise a huge success.

This inport period in Subic was one of the best, for after one day, the CONSTELLATION departed and on 21 May arrived in Hong Kong. While there, many of the men were joined by their wives, and everyone, whether married or single, had a marvelous six days.

The fifth line period began with CONSTELLATION departing Hong Kong on 28 May. Within four hours after getting underway, the CONSTELLATION/CVW-9 team put a "Fire Power for Peace" demonstration for several visiting British field grade officers. The "Sun Kings" provided airborne area clearance, the narrator for the air show and a slide presentation on the capabilities and use of the E-2B.

Upon completion of the demonstration, the visiting dignitaries were flown back to Hong Kong, and CONSTELLATION proceeded directly to Yankee Station to relieve USS RANGER and became the only CVA in the Gulf. The Sun Kings began what had become normal routine, radio relay, AEW, SSSC,

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flight following, and exercise control. A twelve-plane maximum launch per cycle was instituted in the Gulf and gave the "Sun Kings" more time for aircrew training and experimentation. Of primary interest were the efforts to establish the "best" altitude for covered relay for a given time period. From this study, which is discussed in the "Special Projects" section of this report, it became apparent that a priority had to be given to one type of mission, and that particular mission would be at the sacrifice of other missions. Also, due to the limited launches and to fewer carriers in the Gulf, fewer specific missions were assigned and thus afforded greater flexibility for exercises. During this line period, there was one major AAWEX with USS RANGER, which found the "Sun Kings" in their traditional roles of AEW/CAP Control and Eagle Control. Additionally, several smaller "strikes" on RED CROWN and OSWALD were conducted. The operating period ended with an "Alpha Strike" on Scarborough Shoals, with the strike group under the control of one E-2 and a second E-2 controlling "opposition" (HANCOCK F-8's). One hour later, a third "Sun King" launched to act as range clearance/flight following for a VF-92 AAMEX.

Due to the length of the inport period (14-27 June), VAW-116 conducted a rigorous training schedule to keep aircrew at optimum readiness. It was during this time that CVW-9 received its corrosion control inspection, where the "Sun King" aircraft were judged to be in excellent condition. Between 28 June and 3 July, operational training was conducted in the Subic Oparea, with VAW-116 providing surface and air range sanitation for several VA/VF missile shoots: air control, communications and flight following of BINGO aircraft; and participated in carrier quals. After a Safety Standdown on 4 July, it was back to Yankee Station. Again operations consisted of what had become routine: radio relay, AEW, SSSC, AIC, and exercise participation. There was a three day suspension of flight operations during this period due to typhoon ANITA, which forced CTF-77 out of the Gulf.

While enroute to Subic, VAW-116 was given its Command inspection by the CVW-9 staff. The results were either "outstanding" or "excellent" in every category. The great success in this inspection was brought about by many hours of thorough preparation over the past months and was a tribute to all hands.

After a short three day stay in Subic, it was on to Singapore and six days of fun and relaxation in the "Lion" city. When CONSTELLATION departed Singapore, it took a slight southern jog and crossed the equator into the Domain of Neptunus Rex. This gave a relatively few "Shell-backs" the opportunity to indoctrinate the over 4,000

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"Pollywogs" into "ancient mysteries of the deep."

On 1 August, the squadron pilots flew into Cubi to conduct night FCLP's in order to prepare the squadron's two junior pilots for night carrier quals. CONSTELLATION arrived in Subic the next day and departed the following morning for the Subic operational area for three days of CQ and training. CONSTELLATION then proceeded to Yankee Station for the seventh and last line period of the deployment. This "last" line period consisted primarily of type training and providing AEW, Navy Blue Relay, SSSC, flight following of special missions, buffer warning relay, and exercise planning, coordination, and control. Of primary interest, was an attempt to improve the Air Wing's defense against airborne attack. Instead of the normal "close control intercept" with sections of interceptors on various CAP stations, an effort was made to maximize the weapon systems of the individual aircraft. Each aircraft was assigned a given sector and was responsible for providing visual and electronic surveillance in his sector while the E-2 and the carrier provided "bogey" information via Broadcast Control and Link 4A. The debrief after the exercise indicated very positive results achieved by both the ship and Air Wing elements.

On 29 August, CONSTELLATION departed the Gulf of Tonkin for the last time of the deployment and arrived in Subic on the 30th. The next two weeks were spent inport, followed by three days of training in the Subic operational area, and then back to Subic for the last time. After a brief three day stay in Subic, it was off to Yokosuka and then home. While enroute to Yokosuka, VAW-116 demonstrated the E-2's operational capabilities to six members of the Japanese Air Defense Forces, as directed by the Chief of Naval Operations. The all-day event included an aircraft indoctrination brief, static display, and a demonstration flight for four of the Japanese officers.

CONSTELLATION arrived in Yokosuka on 25 September and enjoyed two days of liberty before departing for CONUS. The transit home was eventful, with the time being spent preparing for the upcoming arrival in San Diego and the standing of "Bear alerts" for possible overflights, of which there were none.

On 5 October, the CONSTELLATION again stopped in Pearl Harbor, Hawaii, this time to off-load weapons and to pick up sons of personnel on CONSTELLATION termed Operation TIGER. The boys were able to see what life on a modern super-carrier was like. On 10 October, the "Sun King" flight crews, flew-off and landed at NAS North

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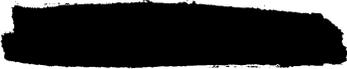
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Island to be greeted by family, friends, and well wishers. The next day CONSTELLATION arrived at North Island and the remainder of the "Sun Kings" were united with their families. The squadron stooddown until 16 October when the offload and move back to NAS North Island began. During this week, the squadron's post deployment corrosion control inspection was held, and again the aircraft were judged to be in excellent condition. After the inspection, three (3) of the four (4) aircraft were transferred to other squadrons who were in need of E-2's. The remainder of October and the first part of November encompassed a post deployment standdown.

The standdown period ended on 11 November and on 15 November, the Sun Kings were officially presented the FY-73 Chief of Naval Operations Aviation Safety Award by Captain L. S. LAMOREAUX, Commander, Fighter Airborne Early Warning Wing Pacific. This marked the first time in VAW history that a E-2 squadron had won the award twice in succession. November marked over three and one half years of accident free flying, logging in excess of 7400 hours.

The remainder of 1973 was spent preparing for the strenuous training schedule to begin in January and the Christmas/New Year standdown, thus closing another highly successful year for the "Sun Kings" of VAW-116.

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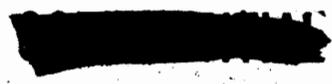


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1973 Flight Time Statistics - Part I

	Total Flight Hours	Day Flight Hours	Night Flight Hours	Non-Combat Sorties	Combat Sorties	Combat Support Hours	Combat Hours Flown
JAN	83.7	71.0	12.7	35	0	0	0
FEB	220.9	187.4	33.5	36	36	131.7	131.7
MAR	337.8	263.9	73.9	105	0	0	0
APR	154.7	123.3	31.4	58	0	0	0
MAY	218.3	177.5	40.8	73	0	0	0
JUN	241.8	178.3	63.5	86	0	0	0
JUL	136.8	96.1	40.7	52	0	0	0
AUG	300.6	220.0	80.6	112	0	0	0
SEP	42.9	29.5	13.4	21	0	0	0
OCT	16.2	16.2	0	5	0	0	0
NOV	22.5	17.0	5.5	11	0	0	0
DEC	16.6	11.4	5.2	9	0	0	0
TOTAL	1,792.8	1,381.6	401.2	603	36	131.7	131.7

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1973 FLIGHT TIME STATISTICS - PART II

Day Carrier Landing	421
Night Carrier Landings	116
Day Field Landings	177
Night Field Landings	56
Day FCLP	140
Night FCLP	562

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