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WORLDWIDE UTE NEWS
An Electronic Club Dealing Exclusively in Utility Stations
Special Report 03

NIGHTWATCH! by tim@umcc.umcc.umich.edu (Tim Tyler)

who are the NIGHTWATCH stations?

Over the past year & a half or so, the callword NIGHTWATCH, usually along with a 1/2/3/4 suffix (turning the callword into a callSIGN) has been heard on some of the GHFS, SCACS, and SHARES nets, among others. It was always pretty clear to myself that these NIGHTWATCH stations were most likely E-4B Advanced Airborne Command Post aircraft which perform the National Airborne Operations Center (NAOC) mission. These E-4Bs are the Boeing 747-200B airframes sometimes called the "Doomsday Plane" and also referred to as NEACP ("kneecap"), which stands for National Emergency Airborne Command Post.

NEACP was replaced with the NAOC moniker last year, after the Secretary of Defense expanded the mission of the E-4B beyond that of a nuclear war airborne command & control platform, although NEACP is still used occasionally as a reference to the aircraft/mission.

However, a few other military monitors have concluded that the NIGHTWATCH stations, while they certainly involved with strategic command & control, aren't necessarily E-4B aircraft. In fact, the claims are that one is specifically a Navy E-6A 'TACAMO' aircraft, with suspicion that callword NIGHTWATCH (no suffix) is a command center at Offutt AFB, in Nebraska (where the US Strategic Command has their HQ & Command Center, and also the home base for the USAF strategic airborne command & control fleet--EC-135s & E-4Bs). This supposition has apparently even been published in one of the monitoring hobbyist magazines, although I don't know if the wording made it seem like it was factual, or a hypothesis.

I was still quite confident that the NIGHTWATCH stations were E-4Bs, and always tend to trust my own observations & educated guesses in this hobby above those of most other sources. Nonetheless, I felt compelled to continue to investigate & hopefully confirm or deny my thoughts about the NIGHTWATCH callsigns. I recently obtained some pretty hard info supporting my assertion, and that information will be included towards the end of this article.

First, some history concerning the Joint Chiefs of Staff 'NIGHTWATCH' mission. Some of this is taken from Internet email correspondence I had a few months ago with one of the people who was pretty sure that the NIGHTWATCH stations weren't just E-4B aircraft. I'm only posting my comments here.

NIGHTWATCH is the project name for the National Emergency Airborne Command Post mission, which was set up in 1962 as a method of providing a 'secure' C3,I platform for the National Command Authority (NCA) during a nuclear crisis. The first NIGHTWATCH birds were EC-135Js, with one always being on a hot ground alert at Andrews AFB or DC National Airport. The NCA are the few officials who are capable of initiating the Emergency War Orders which would initiate the employment of US nuclear weapons. This NIGHTWATCH mission serves two major purposes. The first one is of course to be a reliable vehicle to evacuate the NCA from known enemy target areas and provide the capability to command and control U.S. nuclear operations. Proper command and control requires two things: intelligence (the who/what/where/why/when/how near-real time information needed in order for the NCA to issue the proper response), and communications (redundant, reliable & secure methods of transferring intelligence, and commanding/controlling/assessing forces). This role of NIGHTWATCH, performed by the USAF and a JCS Joint-Staff Battlestaff operations team, is the tangible one. Yet perhaps a more important, albeit intangible byproduct is one called deterrence. Those who might have the means and desire to initiate a nuclear war against the United States of America haven't done so

because they realize that with programs such as NIGHTWATCH in operation, it is highly unlikely --no matter how swift and strong their attack is-- that the USA won't have the weaponry or C3,I mechanisms left to launch a counterattack.

In the late 1960s it was decided that the EC-135Js were no longer the proper airframe to fulfill the NIGHTWATCH mission, and the USAF contracted with Boeing (E-Systems was the primary subcontractor) for some 747-200B airframes, which were designated as E-4As. The original plans were to have a total of seven E-4 AABNCPs--three to be based at Andrews AFB for the NEACP mission, and four to be based at Offutt, to perform the Looking Glass (SAC ABNCP) duty with the EC-135s. Fairly quickly, it was decided to purchase 6, and then fewer again. Three aircraft finally were ordered from Boeing Military Airplane Company, pretty much just to be used for the NEACP role. The airframe #s are 73-1676, 73-1677, and 74-0787. With these three E-4As, they simply had them down on the flight-line at E-Systems in Greenville, Texas along with some EC-135Js, & pulled out all the comms gear from the 135Js & hooked it up into the E-4As! Later on, the white House Military Office/JCS decided they needed another E-4, so a forth & final one, 75-0125 was ordered.

This one was different, though. It was built as a testbed, with better avionics, and a new comms/computer suite, so it was designated an E-4B. The first E-4B was delivered to the USAF on 21 December, 1979 and entered operational service in January, 1980. Eventually, the three other E-4As were mod'ed to the E-4B configuration (most noticeable change was the Defense Satellite Communications System [DSCS, a 7/8GHz secure comms system] antenna hump--which also has a UHF SATCOM & a UHF WBFM antenna in it), the last E-4A converted to the E-4B standard being delivered on 30 January, 1985.

So, there are four E-4B aircraft capable of performing the NIGHTWATCH mission, just like we now hear callsigns NIGHTWATCH (01), 2, 3 & 4 on HF now... To be succinct, I think that all of the NIGHTWATCH stations we hear are the E-4Bs. I don't believe at all that NIGHTWATCH = Offutt, NIGHTWATCH 2 = the PAC TACAMO, etc.

All E-4Bs, most EC-135Cs, and some 89th Airlift wing aircraft have their own Defense Switched Network (formerly AUTOVON) numbers, most using the CONUS 939 prefix. These are direct calls to/from the aircraft via the UHF WBFM channels that link the aircraft with the Ground Entry Points (sometimes after being relayed by another aircraft) tied into DOD telephone trunks. Hearing a station ask for a phone patch to NIGHTWATCH 01 at DSN 939-1851 might make the listener assume that NW01 is a ground facility, but that isn't the case...

Hearing reference to NIGHTWATCH 01 being "at Offutt" is probably an operational-security violation, but doesn't imply that it can't be an aircraft on the ground. As one of the three primary National Military Command System command centers operated by the Joint Chiefs of Staff (the National Military Command Center in the Pentagon, the Alternate National Military Command Center [semi-mothballed] --WAR-46, located at Site R in Pennsylvania, and the E-4B aircraft on primary NIGHTWATCH duty), the E-4B pulling alert duty is normally on the ground and 'plugged-in' to various RF & wire-based networks. New Ground Entry Points (GEPs) have been put in at some of the bases which have NIGHTWATCH Alert Facilities, so that the aircraft can continue to talk and "burn" (send/receive data-mode transmissions) using the multiplexed UHF circuits while on the ground. The USN E-6As don't have this UHF WBFM/MUX capability as of yet, and probably won't be operating as USSTRATCOM ABNCP until they get that capability (an upgrade for the E-6As is in the works, once upgraded, they'll be designated E-6Bs).

Over the years, I see references in some articles & publications of callword ELECTRIC being one used by the E-4B aircraft. I've never heard it in use, and I've checked with a few other monitors who are in a better position to be familiar with E-4B communications, and they haven't heard anyone using that callword either. Perhaps it is/was used by them only on a specific comms system or for a specific purpose, perhaps it is a white House Communications Agency/Secret Service callword used on their circuits to refer to the aircraft. But also easily plausible to me is that someone a long time

ago heard ELECTRIC, rightly or wrongly assumed it to be an E-4B, told someone else, who told someone else, and next thing you know, it snowballed into appearing in many of the publications & books as being a static callword for the primary NEACP aircraft!

The NIGHTWATCH aircraft, in addition to 'Air Force One,' are the only stations which are permitted to access the Defense Informations Systems Agency-managed 'MYSTIC STAR' HF voice/data network without prior approval.

I could ramble on further about the capabilities, history, and mission(s) of the NIGHTWATCH program & E-4B aircraft, but doing so would stray from the purpose of this article, let alone the policies of WUN.

Here are some specific reasons for my conclusion that NIGHTWATCH = E-4B aircraft:

#1. NIGHTWATCH has always been project name (& in the past, just an occasional callword, most often heard on UHF MUX) for the JCS NEACP (now NAOC) mission, which is solely performed by E-4Bs.

#2. I hear NIGHTWATCH 1, 2, 3 & 4, and there are four E-4B aircraft in existence.

Specifically countering the claim that NIGHTWATCH is a ground station at Offutt, I offer some of the following...

#3. With a nice, strong signal from the NW aircraft, you can hear the 400Hz whine of the aircraft power buss.

#4. Although due to my location it is rare, over the period of time that these stations have started to ID as NIGHTWATCH (#), I've caught them all on their UHF WBFM links at least once. This means the stations (including NIGHTWATCH) were within a few hundred miles of me (if airborne), or even closer if they were on the ground. I WISH Offutt were within a few hundred miles of me, but at least in 1993 when I was last on base, it is around 1000 miles away!

#5. I know of some other people who frequently listen to the non-secure (obviously) de-multiplexed UHF WBFM calls, some of whom are able to hear the GEP-side as well as the aircraft's RF channel, & they seem to concur that all of the NIGHTWATCH stations are E-4B aircraft.

#6. I've heard all of the NIGHTWATCH stations at various times make phone patches via GHFS for metro forecasts for certain bases (including NIGHTWATCH getting a forecast for Offutt...) that are known to be routine deployment bases for E-4B aircraft.

#7. The USAF Security Police team that deploys with the E-4Bs & helps guard the aircraft while on the ground refer to their aircraft as "NIGHTWATCH" on their radio comms.

What do the numerical suffixes attached to the NIGHTWATCH calls represent? Unknown for sure, but there are enough aircraft so that at any one time, one would be on primary NIGHTWATCH duty (on a high state of ground alert, probably with a battlestaff team and communications personnel aboard at all times, and with flight crew kept within 5 minutes of the aircraft), another would be on secondary NIGHTWATCH duty, perhaps being capable of launching within a half hour or an hour, and the remaining two aircraft possibly being used for training missions, down for maintenance, etc. NW (01) would be the primary bird, NW 02 the secondary, and of course NW 03 & 04 might not be immediately capable of performing the NEACP/NAOC mission due to not having a fully mission-qualified crew at the time, etc. This tends to make sense especially if you've noticed (as I have) that most of the NIGHTWATCH stations heard actively participating in some of the HF nets are using

the 01 & 02 suffixes!

A few bits to specifically counter the claim that at least one of the NIGHTWATCH aircraft is a Navy E-6A 'Mercury,' although I think much of the above points invalidate that notion already:

#7. As you know, Navy communicators often have a very distinctive style, e.g. "Interrogative." This is a weak point, though, as nothing prevents any communicator from using that phraseology...

Also, USN communicators are scheduled to take over the ABNCP communications slots from the USAF EC-135s.

#8. I believe that the E-6A TACAMOs operate using the normal AFKAI-type tactical callwords that the EC-135s do--a callsign for the 'front-end' crew to use with ATC, and a primary & alternate callword used by the mission communicators/battlestaff. Intercepting various phone patch traffic from E-6As backs this up, especially if you're familiar with their home base and the locations of their Alert Facilities & TDY spots. Less than a year ago, I was able to get a great QSL from an E-6A that I caught on 11243. It used a tactical callword, and of course never stated that it was an E-6A TACAMO, etc. but the way they operate made it clear to me who it was, & my assertion was confirmed with a great QSL letter from VQ-4, one of the two USN squadrons that operate the E-6A.

I recently had the opportunity to make a walk-through of an EC-135C at an air show, and spent some time talking with a few aircrew members who were involved with the various communications systems aboard the aircraft. They readily confirmed that the NIGHTWATCH callsigns are the E-4B aircraft operated by the 1st Airborne Command & Control Squadron! I asked why it was that the EC-135 & Navy E-6 ABNCPs continued to use the computer-generated tactical callwords (referred to as AFKAI calls), while the E-4B aircraft now use a static callsign, but they didn't know the answer.

You don't get this impression from listening to the nets on HF or UHF, but there is a good amount of animosity between the crews of different types of strategic airborne command platforms! Apparently, the E-4B people are somewhat stuck-up, due to their opinion that they have the most crucial mission, the EC-135 crews resent the E-4Bs because of that, and very much resent the fact that the Navy E-6B 'Mercury' aircraft will be taking over the USSTRATCOM ABNCP 'Looking Glass' mission within a few years.

The E-4B aircraft now are also available to the Federal Emergency Management Agency for use in major regional or national civil disasters -- events similar to the Hurricane Andrew aftermath or the 1993 flooding in some midwestern states. The E-4B provides FEMA with a rapidly-deployable command center to oversee initial disaster control and relief efforts (either from the air, or most likely, any nearby airfield capable of supporting a 747) until FEMA can deploy their own Multi-Radio Vans to the affected area. This memorandum of understanding between the Director of FEMA and the Chairman of the Joint Chiefs of Staff was a blessing for both. FEMA has taken some criticism in the past for not quickly responding to some major disasters in the past, and the DOD/USAF had been struggling to justify keeping the four E-4B aircraft operational as not only peace, but 'strategic friendship' breaks out around the world, thus lowering the likelihood of the large-scale nuclear war scenario that the NIGHTWATCH program was designed as a response to. FEMA's use of the E-4B aircraft is always secondary to that of the Joint Chiefs of Staff. This means that if there's a nuclear war in progress and the Hoover Dam bursts, FEMA probably won't get to borrow one of the E-4Bs to respond to flood damage in Nevada! ;) The strategic command, control, communications & intelligence mission of the E-4B platform always takes priority over FEMA's requests. But with four aircraft available, it is doubtful that the JCS would ever refuse FEMA's request to use an E-4B, except for the scenario which I jokingly depicted above. It is unknown by me if FEMA has issued a WGY-9### callsign for use by an E-4B loaned to FEMA, although I have heard NIGHTWATCH on some FEMA nets.

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The redesignation from NEACP to NAOC certainly reflects the more generalized mission given to the E-4Bs, but in my humble opinion, was probably done for political reasons. The National Emergency Airborne Command Post aircraft were nicknamed the "Doomsday planes"--I have a ball cap with the image of the 'Grim Reaper' holding his sickle in one hand, and a button in the other, with a mushroom cloud in the background. The caption reads: DOOMSDAY AIRCREW MEMBER--Don't push me! These hats were designed & worn by the 1st Airborne Command Control Squadron and Joint Staff operations teams up until a few years ago when word came down that the hats were basically 'politically incorrect' to display! Likewise, the replacement of NEACP with NAOC helps deflect the image of the USA having a stable of four aircraft used to control US nuclear warfighting, even though this is still the primary mission focus of these aircraft!

HF radio capability aboard the E-4Bs include 5 HF transceivers and 4 receive-only (usually used with semi-duplex data circuits) HF radios. These are tied into KY-75 'Parkhill' series analog secure-voice gear and USC-43/KYV-5 Advanced, Narrowband Digital Voice Terminals, referred to as ANDVTs, as well as a few different types of MODEMS for data (TE-204, CV-786 KL-43, etc.). Being a joint asset, the aircraft crypto systems have keying material in use by all military branches. For this reason, you'll occasionally hear them refer to the "USAF key list" or "USN crypto key," without it really providing a clue as to whether the aircraft is a USAF ABNCP or a Navy E-6. Additionally, the E-4B aircraft have a special HF system for anti-jam/low probability of interception, part of the Minimum Essential Emergency Communications Network. HF antenna systems include a total of 4 wingtip probes (one on each wing, + one on each horizontal stab), plus a couple of longwires. E-4Bs also have extensive LF/VLF/MW broadcast capability, using trailing wire antennas.

So that's my info concerning the NIGHTWATCH callword that we hear on HF. By no means am I indicating that the E-4Bs don't use other, tactical callsigns, just that the NIGHTWATCH calls we hear are indeed E-4B aircraft.

I cannot 'prove' that I'm right, but I can state my case, and invite people who think otherwise about the NIGHTWATCH stations to counter my claims & support theirs!

By the way, the 'front-end' callsign for the E-4Bs is GORDO ##. i That's the static callsign used by the co-pilot, etc. when dealing with air traffic control, for local area pattern work, etc. I recently saw one of the E-4Bs at Andrews AFB, using callsign GORDO 55 (probably not a coincidence that the 1st ACCS is part of the *55*th wing at Offutt...). The 7th ACCS EC-135Cs use LOOK ## as a static callsign, normally used by their front-end crew but occasionally also by the communications systems operators. The number suffix after LOOK is usually the crew number (the crews are teams, that normally fly the same aircraft together).

Years ago, I was lucky enough to QSL E-4B # 50125. I got great verification letters from both the commander of the 1st ACCS, as well as the communications NCOIC for that aircraft. I was also the shocked recipient of an HF phone patch (via Albrook) from that same aircraft. I asked them what callword/callsign they were using on the PACCS net, & he said that it wouldn't be a good idea to tell me, but that if I listened to them on the primary PACCS channel for that night (it was good old Alpha Papa One, 8101kHz), I might figure it out... A few minutes after the end of our phone patch, I heard a station using a tactical callword call another station on 8101USB. There was no answer, so when the calling station cleared out, his last words were "Seeya, Timmy!" I'm not sure what their current policy is regarding QSL'ing now that they're apparently using the static NIGHTWATCH callword much of the time.

General sources for information on the E-4B aircraft include:

* Many old Aviation Week & Space Technology articles, mostly occurring in the
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1970s & early 1980s.

* Official Boeing 'Background Information' sheets & USAF Fact Sheets. In the past, the JCS also had an info sheet about the NEACP mission.

* Any comprehensive book on USAF aircraft, or specifically on command, control & communications.

The most recent articles I've seen about the E-4B appeared in the December, 1994 issue of the _APCO Bulletin_ (APCO = Association of Public safety Communications Officers) and the E-4B aircraft & mission was the cover-story of the May, 1994 _Popular Mechanics_.

Late last year, ABC's 'Good Morning America' show had a brief segment on the E-4B & FEMA's use of it, and there was video footage of some interior sections of the aircraft!

Lastly, the HBO cable TV channelback in 1990 released a nuclear war movie called 'By Dawn's Early Light,' starring James Earl Jones, Powers Boothe, Martin Landau & Rebecca De Mornay among others. It prominently & somewhat accurately depicts the NIGHTWATCH mission in the last third of the movie. A good video store should have it, or be able to order it for you.

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