

SECRET

1	COMMO	10	AB
2	"	11	
3	SS	12	
4	DDPS	13	
5	JDEA	14	
6	DDSA	15	
7	"	16	
8	DSA		

TO :
FROM :
ACTION:
INFO :

IN 56860

OSA 1-20 *BT*

TO INFO CITE

25X1A SECRET 220810Z CITE [REDACTED] 0016

25X1A IMMEDIATE [REDACTED]

25X1A RYBAT IDEALIST [REDACTED] SECUR [REDACTED] RYBAT

NO NITE ACTION

25X1A 1. AT 2100L 21 FEB WHEN [REDACTED] VISITED THE COMCENTER OF THE CONSTELLATION A SEAMAN ON WATCH TOLD HIM THAT THE SHORE STATION WATCH OFFICER ADVISED THAT [REDACTED]

25X1A

25X1A INDICATOR AND IT WAS INVALID. [REDACTED] PASSED IT OFF LIGHTLY AND OFFERED NO COMMENT AND ASKED FOR OUR TRAFFIC. THE SEAMAN DID NOT SEEM OVERLY INTERESTED.

25X1A 2. [REDACTED] TALKED TO CMDR RALPH AND ADVISED HIM OF ABOVE FACT. [REDACTED] REQUESTED THAT ABOVE SHOULD BE LOW-KEYED BUT IF COMMENT IS MADE TO ADVISE HIS PEOPLE THAT OFFICE OF NAVAL RESEARCH IS FOLLOWING SAME POLICY AS NAVAL COMMUNICATIONS WHEN ASSIGNING ROUTING INDICATORS. IT JUST HAPPENED THAT [REDACTED] WAS PREVIOUSLY ASSIGNED AGENCY AND WAS INVALID FOR PERIOD OF TIME UNTIL ASSIGNED THIS PARTICULAR ONR PROJECT.

25X1A

SECRET

GROUP 1
EXCLUDED FROM AUTO-
MATIC DOWNGRADING
AND DECLASSIFICATION

25X1A

016 IP 56360 S E C R E T PAGE 2

3. ADVISE IF ANY FURTHER ACTION SHOULD BE TAKEN BY COMMO OF SECURITY PRIOR TO DEPARTING SAN DIEGO. FYI CAPT LINDBERG ALSO ADVISED OF ABOVE.

4. FILING TIME OF THIS MESSAGE 220320Z.

S E C R E T TOR: 220925Z FEB 67

S E C R E T

[REDACTED]

25X1A

Memorandum for the Record

Communications Report:
Wallops/USC America [REDACTED] 25X1A

25X1A

NOTES FOR [REDACTED] CRITIQUE

1. Communications support for [REDACTED] consisted essentially^{25X1A} of:

- a. [REDACTED]^{25X1A} for both articles.
- b. A one-time-tape link directly between Wallops Station and OPCEN using an acoustical coupler.
- c. A one-time-pad link between the carrier and OPCEN for over-the-counter filing if needed.
- d. An HF/SSB voice "liaison" link between Wallops Station and the carrier.

2. Several messages were exchanged between Wallops and OPCEN but only an activation and a deactivation message was filed from the carrier. Each message from the ship took about three hours to arrive at OPCEN and be broken out.

3. Communications coverage to [REDACTED] is considered to have^{25X1A} been adequate in meeting the requirements of the operation.

Commo Report

Summary:

Overall trip/operations from the Commo standpoint went very smooth. Excellent cooperation and assistance was rendered to Commo by both enlisted men and officers. The officers, particularly land based, were extremely considerate of commo's needs and wishes. There were no major glitches, and communications went very smooth.

Specifics:

Land Base:

On arrival all equipment had already been off-loaded, so no work was required from this standpoint. This was a big help as it was after dark and raining at the time of arrival. Transportation was provided to the barracks by bus, and the mess hall was on standby by prior arrangement.

At approximately 0800L on 20 November 1969, commenced installing all the commo equipment and antennas, etc. While the antennas were being installed, other officer/enlisted men crews were putting the commo gear in place with the aid of a forklift.

We were fortunate from the antenna mounting standpoint in that there happened to be places available where we could tie-down our guy lines, as we were located on the roof of the second deck and the roof of the hangar proper. I don't think it would have been appreciated if we drove ground tie-stakes through the roof. As it was, we were able to make use of the base of the ladder going to the main hangar roof, vent systems housing base, and one bedded metal bracket located on the roof edge for guy tie-points for the HF antenna. As it was, we did not carry enough extra guy line to do the job, but were able to get some clothes line to use as extra rope for guying purposes. Much thought was given as how to mount the UHF antenna, but it was finally determined that by lashing the antenna to the top of the aforementioned ladder going to the roof, which proved very adequate. In the future "C" clamps or other types of clamping devices should be considered for this purpose. Again, I don't think it would have been appreciated if we drove holes through the roof for mounting purposes, which would have proven difficult as the entire roof was lined with a metal plate.

The maximum run of coax was 75 feet in length, for UHF and 50 feet for HF. The coax was dropped down the roof and through the window to the equipment below.

The Command Post, commo/crypto equipment were all located in the same room. This proved satisfactory, but did not enhance the overall

operation from the security standpoint. It also caused much noise so that it was extremely difficult, if not impossible, for the communications officer to monitor the radio circuits. As it was, all monitoring was performed by the officer in charge of the Command Post, therefore, adequate logs were not maintained by the commo radio operator on duty, as he was not able to hear all conversations taking place. We attempted to get a drop cloth from security but they were unable to come up with this item, to make the crypto area more secure. As it was, due to the actual placement of equipment, very little if any of the crypto operations could be observed.

25X1A On the air and in operation at approximately 1000L. Home base and [redacted] were loud and clear, as well as the articles. No problems encountered from the commo standpoint. Birds landed approximately 2016Z and 2040Z, afterwhich the monitor was secured.

On 21 November, we were up and on the air at approximately 0530L and contact with the aircraft carrier was attempted at 0600L on the appropriate pre-arranged frequencies. Contact was not established on these frequencies so we went to the [redacted] net freq., good contact was made 25X1A and we requested that they QSY to our assigned 4KHZ operating frequencies. Still no contact and return to [redacted] net. They informed us 25X1A that they heard us on the 4KHZ freqs, but we did not hear them.

After our comm man arrived on the ship, further testing on various frequencies was attempted and it was determined that 6835KHZ would be the best freq. for the remainder of the days operations. Watch was maintained on this freq. for the rest of the days operations. The radio watch was secured at approximately 1700L.

On 22 November radio watch set at approximately 0530L on 6835KGZ. Eventually we QSY to 4384KHZ, which proves to be better freq. than the 6 KHZ frequency and we maintain this freq. for the duration of the trip. Overall, from the commo standpoint, (equipment wise) no further incidents to report this date. BUT from the security standpoint (commo), this should have been a happy day for the reds. If they didn't already have some idea of the operation, they had names, mission numbers, number of touch and goes, traps, etc., provided for them by the articles CP on board ship, as well as the next days time schedule. All this included name of individuals, who had been promoted as well as to rank of promotion. Also names of other people were mentioned, some first names and in one case the last name of members of this operation. It should be noted that all logs [redacted] reflected this use of 25X1A names and poor commo security. Tapes of these conversations are available at Headquarters. To the writers knowledge no use of the code words provided to both Base Ops and Shipboard Ops were ever used on this operation.

On 23 November, watch was set approximately 0500L on the MIZ freq. Commo-wise, this again was an uneventful day. BUT - commo security again went west as per yesterday. This again a repeat of yesterday's

conversations, just different situations, and just no good from the commo security viewpoint. Watch was secured at approximately 1200L. At the commander's orders, we commenced securing antennas, radio equipment and send final messages and prepare for departure. Everything completely wrapped up and ready to go by approximately 1630L.

24 November: Assist in loading various aircraft for departure. Shortly after departure of birds, IFF problems were encountered on one bird, causing much confusion/turmoil, etc. Officers and various ranks using phones trying to contact various centers and clearances for aircraft. We informed the commander (after talking with [REDACTED], that we have a direct phone patch available with the aircraft in question, if he so desires. He was very appreciative of this but did not utilize this facility.

Uneventful trip home. Departed Wallops approximately 1300L arrived North Base at approximately 2030L.

Crypto/Equipment Comments:

We failed to take with us a drop cloth, and none available where we were operating. It was not actually necessary but would have made the work a bit easier. Tapes after being run through one of the TD's would become mutilated and caused many new swear words to emanate from the operator as he would break-back the tapes. The motor stop on the HW28 also caused swear words to flow. It was recommended that this motor stop be either removed or hooked up in a different manner than at the present if possible. The acoustics coupler performed very well, and the phone lines were at least adequate. One rerun only was required from Wallops to Opcen and one service was requested by Opcen on a two word garble. No reruns or services required by Wallops. A total of nine messages were sent from Wallops and five received. All in all things went smoothly.

- Attached:
1. Logs - Wallops/USS America
 2. Trip report for [REDACTED] w/logs [REDACTED]
 3. Trip report fro shipboard segment

25X1A

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25X1A

Shipboard Segment

21-23 November 1969

After an exciting landing on the USS America and some stumbling around, the SSO, LCdr Dearrie, was located. A brief introduction was made and soon all of the pertinent Navy personnel needed were at the communicator's disposal.

25X1A

First, there was a brief shipboard orientation covering all the major communications areas. Then, after thirty minutes work with [REDACTED], an operational HF frequency was established and patched to PRI FLI at 21/1607Z. Some difficulty was experienced with the SRC-16, a semiautomatic tuning transceiver. When using this particular configuration a minimum of 15% frequency separation is required. Otherwise, because of the antenna matrix/multicoupler system, crosstalk and or feedback will result in tuning and or equipment trouble. This problem was soon overcome with the use of a manual transceiver and a thirty-five foot whip. HF communications were excellent for the duration. One other minor incident should be mentioned. That being a T-site operator error in taking down our transmitter for a shipboard commitment. This was soon corrected, but resulted in the loss of the HF send frequency for one half hour.

After securing the HF net for the day, a one time pad activation cable was introduced into the criticom network and receipted for with very little delay.

The next day, 22 November, went much smoother. Once the HF circuit was activated there was little to do except to keep a monitor log. This in itself proved to be quite a handful at times. Much time was spent that evening with the ships leading radioman in radio three (3). This is the ships communications backup location and the site approved by the communications officer for the [REDACTED] setup if and when it is required. Attached is a detailed report on the findings along with a general comment on the suitability to our needs.

The final day was spent in hustling around to get the one time pad deactivated cable out and monitor the HF net at the same time. The circuit was deactivated at 23/1635, and twenty minutes later departure for the shore commenced. Needless to say, the take-off from the carrier was just as breathtaking and spine chilling as the landing. Another first that will long be remembered.

Although shipboard communications were more than adequate, one cannot help feeling that the poor one-the-air security did nothing but detract from this. At no time, to the communicator's knowledge, was there use made of the code word lists. This is sad, but must be admitted. It is felt that the attached logs should amplify the above statement.

In general then, the shipboard segment of the [REDACTED] mission 25X1A was very smoothly both operationally and technically. All pertinent communications personnel were aware of what the communicator's name was and what his requirements would be. This was very comforting. The HF and UHF circuits were given high priority. Again the Navy personnel could not have been more helpful. As a result, very little difficulty was encountered and the few shipboard HF idiosyncracies were soon compensated for with a change from a semi-automatic tuning transceiver to a manual operation. Some difficulty was experienced with the UHF circuit, but this is believed to have been a faulty aircraft UHF set. On-the-air security left much to be desired. At no time, to the communicator's knowledge, was there use made of the code word list. This is the one real sore spot. Although operations were smooth, it is felt that under normal shipboard operating conditions there would be complications.

25X1A During the evenings, several trips were made through radio 3 aboard the USS America. Radio 3 is the ships backup communications location. It is the site recommended and approved by the ships communications officer for the [REDACTED] if needed for a full blown deployment. The results of the findings are enclosed within. Here also are the communicator's comments on those findings. 25X1A

25X1A To begin, there is more than enough room to house any of [REDACTED]. There is a CW operating position for ship/shore use. In addition, there is one transceive rack (WRC) that can be used in any mode but only at 100 watts output. One other semi-autotune transceiver (SRC-16) can be remoted from radio central, but this is the ships data system and could not be made available at all times. Of course, any of the other manual transceive setups could be remoted if needed. There is also an antenna patch panel in this room which gives tremendous antenna flexibility. In the event this room is not used for our commitment, an antenna can be installed with very little trouble in any other area. But, coax is scarce and takes many reels of red tape to procure. We would either have to take our own, or give the Navy ample prior notice. There is no safe in this room. The SSO can make one available, however the SSO is located six decks down and about fifty frames back.

25X1A Other points of interest might include the communications available between the [REDACTED] and the Command Post (which would probably be in CIC-Combat Information Center). The phone system is good, but can and does get busy. There is also a sound powered phone and an intercom both of which could become confusing. A UHF circuit on dummy load antennas between the Command Post and the [REDACTED] would be the best combination. If this sounds acceptable, it would require that we furnish one dummy load antenna. In addition, phone patch capability is available. The circuit reliability depends on the HF circuit from ship to shore. The autovon system through CINCLANFLT has proven very reliable in the past. 25X1A *

Along these same lines, power availability is straightforward. All power is 110 volts, 60 cycles. There are four dual AC outlets in the room. All take the standard three prong plugs. It might be interesting to note that all circuit breakers are rated at 5 amps. 25X1A !

Frequency restrictions are according to JANAP 195 or previous outside arrangements. It would be useful for the shore based operator to hold a current copy of this publication. It would facilitate on-the-air security for frequency change requirements. [REDACTED]

The crypto outlets include OTP, over the counter service, OTT with the use of ZZR in line five of the criticom heading will pas through the criticom net, and there are numerous outlets for unclassified traffic. There are no HW-28's on board the ship. We would have to supply our own for handling OTT. There is a safe available for crypto storage in the SSO's office which is located in the SI area. In addition, a

drop cloth is needed. An old Navy mattress cover had to suffice on the [REDACTED] deployment.

25X1A

The above paragraphs are only a sampling of what is available for our use. The attached detailed report in sentence outline form will provide much greater insight into what we can do in case of need. It must be remembered however, that although the list seems comprehensive it can in no way exhaust the numerous limitations and or capabilities of our on board operating. But it can supply the appropriate people with enough facts to aid and abet them in planning for the future.

RADIO 3 - USS AMERICA CVA-66

1. HF Is Available in the 2-30 MCS Range.
 - A. SSB-USB
 - (1) There is a WRC and a WRT transceive unit. Both are manual tune and require about 2-3 minutes to tune.
 - (A) Power out for the WRC is 100 watts.
 - (B) Power out for the WRT is 100-500 watts pep.
 - (C) Antenna change time for the WRC is a matter of seconds, but the WRT is hard wired to a 35 foot whip.
 - (D) Both transmitters are hard to detune for low power out (50 watts and below).
 - (E) Transceive operations with the WRT requires the use of a SSB convertor/R390A. Both are located in this room.
 - (F) There are no patching problems. Antennas and or circuits can be patched very readily.
 - (G) There is basically no frequency limit. Frequencies are selected from JANAP 195 or by outside arrangements.
 - (H) In all areas of the ship, there is a slight interference generated from a rotating radar antenna. This would be no problem, but it is there.
 - (2) In addition to the above, there is a SRC-16 semi-autotune transceiver located in radio central that can be remoted.
 - (A) This unit requires only a few seconds to tune.
 - (B) However, the frequency selection must range from 10-15% difference between any one frequency in use. The reason being, that the antenna selection is made through an antenna matrix/multicoupler system which is subject to cross talk and or feedback resulting in tuning and or equipment trouble.
 - (C) The power out is 5KW up to 5.5 MCS, and drops to 500 watts above 5.5 MCS.
 - (D) The SRC-16 is used for the ships data system and would be available on a limited basis. However, 6723 KHZ on

this system can be used to coordinate any circuit whenever the need arises.

- B. Radioteletype secure via the KW-7 and KW-26 located in the SI area and a CW circuit at 18-22 WPM are available for ship/shore use.
- C. Facilities for radioteletype communications are numerous. There is on line broadcast via KWR-37 and KW-26 specifically for SI traffic. The same facilities are available in radio central for fleet broadcast coverage. In addition to receiving, there would be no problem transmitting radioteletype. The circuit reliability is good with an average of less than an hour daily outage.
- D. Radio 3 is the ships backup communications location and the site approved by the ships communications officer for the BW location in the event of a full blown deployment aboard this carrier. Radio 3 is located at midships, Frame 06-154-3-Q.
 - (1) There is more than enough operating room available in an area of 10 X 30 feet.
 - (2) Antenna flexibility is provided by an antenna patch panel. There is one whip and one longwire hard wired to this panel. There are three trunks available for remote antenna patching from radio central. The type cable used is RG-213-U, female connection required is 83870-UG-1278/U and is spring loaded for push on operation. Also on this panel, there are various frequency filters with separate outlets to cover a range from 2-30 MCS.
 - (3) Equipment in the room includes:
 - 1. SRR-11A HF Receiver.
 - 1. CV/591A SSB Convertor which is used in conjunction with the R390A.
 - 1. WRC Transceiver with the particulars listed in para A.
 - 1. WRT Transceiver with the particulars listed in para A.
 - 1. Telephone.
 - 1. Sound Powered Phone.
 - 1. Intercom.
 - (4) In addition to the above listed for the WRC, a few comments should be made. The fuse breaker for this setup is located at Frame 2-219-1-P-F on the aft bulkhead. For BW operations you could split the audio output through a T-connector. One output for the recorder and one output for the demod unit. The cable used for the audio output is the same as that used for the R390A audio output. The tune up time for this unit is 1-2 mins depending on the ease with which you can lower the SWR. What's new?

- (5) Power availability is straightforward. All power is 110 volts, 60 cycles. The four AC outlets take the standard three prong plug. All circuit breakers are rated at 5 amps in this room.
 - (6) UHF can be remoted to this area if need be. However, it is felt that the Command Post would be located in the CIC (Combat Information Center) and would require UHF there.
 - (7) Phone patch capability is available through radio central. The quality of the phone patch will depend on the quality of the HF circuit from ship to shore. Reliability of the autovon patch through CINCLANTFLT has proven excellent in the past. Here is a possibility for use of the acoustical coupler if needed. Not to mention the various other requirements that might arise.
 - (8) There is no safe available in this room. Use of the safe in the SI room would not be practical since the SI room is located six decks down and about fifty frames back.
2. There are various crypto outlets available, some in the SI area and the others in radio central area. 25X1D