

DECLASSIFIED

UNITED STATES PACIFIC FLEET  
AIR FORCE  
CARRIER AIR GROUP FOURTEEN

FF12/CVGL4/A1  
HPA:emj  
Ser: 07

MAR 15 1953

  
From: Commander Carrier Air Group FOURTEEN  
To: Commanding Officer, USS KEARSARGE (CVA-33)

Subj: Summary report of operations of Carrier Air Group FOURTEEN  
from 14 September 1952 to 28 February 1953

Ref: (a) OPNAV INSTRUCTION 3480.4

Encl: (1) Summary report

1. This report is forwarded as enclosure (3) for inclusion in the Action Report of the USS KEARSARGE (CVA-33) for the period 8 January to 28 February 1953.
2. Information, comments and recommendations are presented under the headings indicated below:

- I ORDNANCE SUMMARY
- II DAMAGE SUMMARY
  - Inflicted on the enemy
  - To own aircraft
- III PERSONNEL PERFORMANCE AND CASUALTIES SUMMARY
  - Performance
  - Casualties
  - Flight Surgeon's comments
- IV OPERATIONS SUMMARY
  - Summary of combat sorties by type and mission
  - Summary of average combat flight hours, average number of sorties by squadron
  - Photographic
  - Tactics
  - Composite Squadron 35 Det FOX comments and recommendations
  - Landing Signal Officer comments and recommendations
- V MAINTENANCE AND MATERIAL SUMMARY
- VI AIR INTELLIGENCE SUMMARY
- VII SURVIVAL SUMMARY
- VIII AVIATION ELECTRONICS SUMMARY

  
H. P. ADY, Jr.

  
511

PART I

ORDNANCE SUMMARY

PERFORMANCE

1. GUNS, 20MM

Performance of these guns was very good. Normal stoppages and malfunction occurred due to mechanism jams and broken ammunition belts. Gun and feed mechanism heaters were disconnected as new cold weather lubricants became available.

The Aero 14A (two-way hydraulic) gun charging system installed in F9F aircraft was considered excellent. However, in AD type aircraft, trouble was caused by the pressure switch, and considerable difficulty was experienced in adjusting the low pressure switch.

On F2H aircraft a circuit breaker was installed on the gun charging leads in the gun-bay. This prevents inadvertent charging and firing of guns on the flight deck prior to being catapulted. A gun sight adapter was installed on this type aircraft. This increased the available mil lead from 70 to 320 mils.

2. .50 CALIBER

These guns were very dependable throughout the cruise.

3. BORESIGHTING

Fighter aircraft used a portable boresight template to good advantage. However, because of space limitations, all boresighting was accomplished while in port. The fighter squadrons felt that this should be accomplished after each tour on the line.

4. RE-ARMING

This Air Group had considerable difficulty meeting re-arming schedules during the early stages of the cruise. This was attributed to awkward deck spots, poor coordination and inexperienced personnel as well as close launching schedules. This situation rapidly improved with experience. By spreading the wings of the AD aircraft, loading time was cut to one-third that required with the wings folded.

5. BOMB RACKS

a. MK 55 MOD 1

Present sway braces on these racks are unsatisfactory unless reinforced to withstand loading with wings folded and for catapult shots. Racks installed on F9F-2 aircraft were reinforced with a 1/16" spring steel strip welded to the underface of the brace. Results of the reinforcement were satisfactory. In addition, the added thickness assured a snugger fit of the brace against a 100 pound GP and 260 pound fragmentation bombs. All moving parts of racks, and the external surfaces of all solenoids were lubricated with a light coat of cold weather gun oil to prevent moving parts from freezing and jamming.

DECLASSIFIED

b. MK 51

Trouble was experienced in releasing 2000 pound bombs when carried on these racks. Racks functioned normally on the ground checks; therefore, it is believed that release solenoids are too weak to overcome the additional drag-weight of the 2000 pound bomb in flight.

c. DOUGLAS BOMB EJECTOR

A few misfires and hangfires were experienced with this installation on the AD type aircraft. Also a few ejector "feet" were blown off with the suspended bomb during releases. The misfires and hangfires were caused by bad cartridges and loose electrical connections. The loss of the foot of the ejector was caused by improper installation of the retaining lock key (VA-145 RUDM 7-53 refers. To alleviate this the ejector should be disassembled once every third or fourth day of operations and checked for excessive wear of the retaining key. It is recommended that the ejector foot be placed in stock as a separate replacement part to avoid having to draw the entire ejector assembly.

d. AERO 14A

This rack proved to be dependable. The following procedures were used to insure most effective results:

- (1) Use loose sway brace settings on all bombs.
- (2) Installation of rocket pig-tail shortening clips to take-up the slack and prevent whipping of the pig-tail.
- (3) Oil the sway brace worm gear frequently (every 3 or 4 days) with light lube oil to prevent freezing.

e. MK 9 ROCKET LAUNCHER

The main trouble encountered with this launcher was the breaking of the rocket pig-tail due to whipping in the air stream during flight. No practical method of securing the pig-tail was found. However, the number of duds was reduced by careful winding of the pig-tail around the rocket fins and taping to the rockets.

6. BOMB SYSTEMS

The attack squadron had trouble releasing the wing stations by the intervalometer or pairs. Therefore, wing stations were dropped singly. Manual bomb release cables are too long as installed by the factory. It is recommended that release cables be shortened as much as possible.

Hung Ordnance was cut tremendously in AD's when the Bomb-Smoke switch was safety-wired in the bomb position on the instrument panel.

ORDNANCE EXPENDITURES

1. 17 September 1952 through 21 February 1953:

DECLASSIFIED

CONFIDENTIAL INFORMATION

<u>TYPE ORDNANCE</u>	<u>AD-4</u>	<u>F4U-4</u>	<u>F9F-2</u>	<u>F2H-2</u>	<u>F4U-5N</u>	<u>AD-4N</u>	<u>TOTAL</u>
100 lb. GP	855	554	1763	2800	132	706	6,810
250 lb. GP	4376	1828	2191	2389	451	422	11,756
500 lb. GP	1428	765	- -	114	191	153	2,651
1000 lb. GP	1928	116	- -	- -	- -	- -	2,044
2000 lb. GP	98	- -	- -	- -	- -	- -	98
260 lb. Frag	1731	780	1691	1362	528	87	6,179
5" Mk 25 ATAR	724	243	373	676	56	- -	2,072
6.50" ATAR	55	39	69	146	- -	- -	309
3.25" ASAR	69	- -	- -	- -	6	102	177
11.75" Rocket	4	3	- -	- -	- -	- -	7
M29 Cluster	- -	2	- -	- -	- -	- -	2
350 ADB	- -	- -	- -	- -	1	- -	1
Napalm Tanks	62	30	- -	- -	- -	- -	92
Napalm Mix	2480 lbs	1200 lbs	- -	- -	- -	- -	3,680lb
Mk 6 Flares	- -	- -	- -	- -	315	811	1,126
Mk 8 Flares	- -	- -	- -	- -	- -	1	1
20 MM	198,620	- -	226,278	309,957	63,775	45,025	843,655
.50 Caliber	- -	577,065	- -	- -	- -	- -	577,065

Total Pounds	4,542,840	1,297,892	1,273,152	1,404,614	367,070	282,571	9,168,139
Total Tons	2,271.42	648.95	636.58	702.31	183.54	141.28	4,584.08
Total Bombs	29,518						
Total Rockets	2,565						

PART II

DAMAGE SUMMARY

17 September 1952 through 21 February 1953

DAMAGE INFLICTED ON THE ENEMY

<u>TARGET</u>	<u>DESTROYED</u>	<u>DAMAGED</u>
BOATS	34	195
BUNKERS	168	229
BARRACKS & BUILDINGS	1024	922
FACTORIES	3	10
GUN EMPLACEMENTS	72	65
HWY BRIDGES	11	34
LOCOMOTIVES	4	21
OXCARTS	333	128
RR CARS	79	165
RR BRIDGES	35	32
SUPPLY DUMPS	41	39
TRUCKS	442	274

CONFIDENTIAL INFORMATION

57

DECLASSIFIED

TARGET

DIE S TROYED

DAMAGED

TROOPS	1119 KIA	237 WIA
WAREHOUSES	47	33
DOCKS	2	5
SUPPLY & PERSONNEL SHELTERS	393	241
WAGONS	1	38
ARTY POSITS	11	10
COASTAL GUNS	1	2
MORTARS	80	17
STORAGE TANKS	3	3
CONSTRUCTION EQUIPMENT	1	1
SIGNAL TOWERS	1	2
SEARCHLIGHTS	1	1
RR REPAIR SHOPS	1	1
VEHICLE SHELTERS	6	38
BARNs	2	0
CATTLE KILLED	50	(W) 0
OXEN KILLED	24	(W) 0
BRICK KILN	0	1
AA POSITS	2	3
JEEPS	0	1
HANDCARS	2	0
SAWMILL	0	0
CRANES	0	1
POWER INSTALLATIONS	0	7
RR BYPASSES	0	5
RR TUNNELS	0	3
TANKS	0	1
PENSTOCKS	0	1
RADIO TOWERS	0	1
RADIO STATIONS	0	1
CAVES	0	7

DAMAGE TO OWN AIRCRAFT

	<u>F2H-2</u>	<u>F2H-2P</u>	<u>F9F-2</u>	<u>F4U-4</u>	<u>F4U-5N</u>	<u>AD-4</u>	<u>AD-4W</u>	<u>AD-4N</u>	<u>TOTAL</u>
Aircraft losses (all causes)	2	0	4	5	0	3	0	2	16
Damaged by enemy action	17	2	14	16	3	21	1	4	78
Operational Damage	13	2	16	6	1	12	0	1	51
Other Damage	11	8	48	21	2	14	9	7	120

PART III

PERSONNEL SUMMARY

1. COMPLEMENT

a. The average on board count for detachments and squadrons during the entire combat period was as follows:

DECLASSIFIED

	<u>Officers</u>	<u>Enlisted</u>
CVG-14(Staff)	11	15
VF-11	25	130
VA-145	26	130
VF-141	22	109
VF-144	22	106
VC-61 Det. FOX	5	22
VC-35 Det. FOX	9	46
VC-11 Det. FOX	7	29
VC-3 Det. FOX	5	36
Total	135	623
* VC-3 Det. "FB"	4	24
* VC-35 Det. "W"	0	14

\* NOTE: These detachments reported to CVG-14 just prior to deployment for transportation to WESTPAC area and were based ashore at NAS, Atsugi, Japan on arrival.

b. The average number of personnel assigned to ship's divisions from the Air Group was as follows:

Mess Cooks	28
Ship's Cooks	5
Stewards	20
Ship's Servicemen	8
Corpsmen	5
MAA Forces	4
Flight Surgeon	1
Total	71

#### RECOMMENDATION

The lack of rates such as ship's servicemen and boatswain mates in the squadrons robbed them of airmen and aviation strikers to fill these required billets while aboard ship. It is recommended that squadrons have a full complement of such rates prior to employment.

#### 2. CRITICAL RATES

Critical rates are ordnancemen and metalsmiths which are vital during combat air operations. The work load was critical at times in the F4U and AD squadrons because of the heavy ordnance loadings carried and a higher percentage of battle damage received over the jet squadrons. These rates had to work excessively long hours to accomplish a satisfactory performance.

#### RECOMMENDATION

It is believed that a well rounded complement of experienced and rated personnel in all departments of each squadron would alleviate problems experienced by this Air Group. The loss of key personnel (separation and transfers) just

DECLASSIFIED

prior to deployment of the AD squadron left them practically depleted of metal-smiths and those left had no previous experience on this type aircraft. It is imperative that such critical rates be assigned to squadrons in the earliest phases of reforming and remain frozen during deployment to the combat area.

SUMMARY OF RECOMMENDATIONS

(1) Squadron allowances for rated personnel are considered adequate providing the major portion of the "deployment complement" is selected during the reforming and initial phases of training.

(2) Key personnel, officers and enlisted, should be frozen during a combat tour.

(3) Those expecting shore duty at any time during the course of the tour should be detached prior to deployment.

3. BERTHING

a. Officers berthing, although cramped at times, is considered adequate.

b. Enlisted berthing created quite a problem upon deployment due to the number of "hitch-hikers" to the WESTPAC area. Present conditions are barely satisfactory.

4. MORALE

Morale of the officers and men of the Air Group created no serious problems during the entire combat tour. The fatigue of long strenuous hours became quite noticeable after a four week period on the line. From 14 September 1952 to 25 February 1953, this Air Group spent two eight (8) day and one 10 day periods in port. However, the results obtained by this Air Group at all times speaks for itself.

RECOMMENDATIONS

(1) During winter months a three (3) week tour on the line should be the maximum under a heavy operating schedule.

(2) Extensions of tours should be avoided if at all possible.

5. TRANSFERS

The lengthy period for replacement of key personnel leaves much to be desired in the forward area. Extensions and frozen billets of these personnel during deployment would preclude such problems.

6. CASUALTIES

The following is a breakdown by unit of casualties during the entire combat tour:

~~SECRET~~  
**DECLASSIFIED**

VA-145 (702) (AD-4 Aircraft)

10-16-52: Commander B. T. SIMONDS, USN - Operational - Spun-in on take-off. Missing.

2-28-53: LTJG D. H. HAGGE, USN - Enemy Action - Shot down by AA fire. Missing in action.

VF-11 (F2H-2 Aircraft)

12-30-52: LT J. F. LEE, USN - Enemy Action. Shot down by AA fire. Missing in action.

1-23-53: CDR D. P. PHILLIPS, USN - Enemy Action. Shot down by AA fire. Missing in action.

VF-141 (721) (F9F-2 Aircraft)

11-1-52: LT C. O. GLISSON, USN - Operational. Crashed at sea. Missing.

11-21-52: LCDR R. C. HOPPING, USN - Enemy Action. Shot down by AA fire. Missing in action.

VF-144 (884) (FAU-4 Aircraft)

9-30-52: LTJG J. W. SHOOK, Jr., USN - Probably Enemy Action. Shot down by AA. Missing in action.

10-4-52: LT E. F. JOHNSON, USNR - Enemy Action. Shot down by MIGS. Killed in action.

11-1-52: LT R. G. RIDER, USN - Enemy Action. Shot down by AA fire. Missing in action.

11-8-52: LCDR F. W. BOWEN, USN - Enemy Action. Shot down by AA fire. Missing in action.

VC-35 Detachment FOX (AD-4N Aircraft)

1-28-53: LT F. C. ANDERSON, USNR - Probably Enemy Action. Missing in action.

1-28-53: SCHMID, J.R., AT3, USN, Aircrewman - Probably Enemy Action. Missing in action.

7. FLIGHT SURGEONS COMMENTS

In general, the physical well being of the pilots and combat aircrewman, as well as the supporting contingents of enlisted men in all squadrons was maintained at an extremely high level considering the inclement weather which most of these individuals had to contend with day in and day out. The primary disabling factor from a man-hours standpoint was upper respiratory infections. The apparent work efficiency and enthusiasm which prevailed the air group the first 20-25

days on the line took a sharp and obvious decline after that period.

OVERALL EVALUATION FROM A MEDICAL POINT OF VIEW

The very gratifying level at which the Air Group functioned as a whole throughout the entire time in WESTPAC can be credited to the admirable way in which the medical facilities of the ship were integrated with the needs of the Air Group.

The facilities made available for adequate diagnosis and therapy were of a superior nature. The great importance of the laboratory, pharmacy, and a cheerful sick bay cannot be overestimated.

PART IV

SUMMARY OF COMBAT SORTIES BY TYPE AND MISSION

1. 16 September 1952 through 22 February 1953:

	<u>F2H</u>	<u>F9F</u>	<u>F4U</u>	<u>AD</u>	<u>F4U-5N</u>	<u>ADN</u>	<u>ADW</u>	<u>F2H-2P</u>
STRIKE	487	538	632	969	6	5		
RECCO	532	538	2					
RR HECKLERS					94	76		
ASP (Day)						13	159	
ASP (Night)						19	41	
HECKLERS (Night)					82	75		
NGF SPOT			60	6	32			
PHOTO								278
PHOTO ESCORT	234	2						3
CAP	476	461			1			
ECM						48		
CAS			268	319				
SPECIAL	28	9	33	48	15	40	13	
RESCAP		8	2			3		
TARCAP	47	44						
OTHER	4	17	55	136	21	95	3	4
<u>Totals:</u>	1808	1617	1052	1478	251	374	216	285

Grand Total (Less Aborts)            7081

Included in the above are 148 refresher sorties.

Aborts per squadron:

F2H-2	39
F9F-2	24
F4U-4	17
AD-4	7
AD-4N	8
F4U-5NL	2
AD-4W	1
F2H-2P	6
Total	<u>104</u>

Grand Total (including aborts) 7185

SUMMARY OF AVERAGE COMBAT FLIGHT HOURS, AVERAGE NUMBER OF SORTIES BY SQUADRON

1. 16 September 1952 to 22 February 1953:

	<u>F2H</u>	<u>F9F</u>	<u>F4U</u>	<u>AD</u>	<u>F4U-5N</u>	<u>ADN</u>	<u>ADW</u>	<u>F2H-2P</u>
Sorties	69.9	71.0	51.8	54.0	50.1	78.0	47.4	58.0
Hours	114.5	111.7	145.6	153.8	157.0	218.8	132.6	93.5
CV Landings	69.0	71.0	51.8	53.6	50.0	74.8	47.4	57.1

GROUP AVERAGE

Sorties	60.1
Hours	141.0
CV Landings	59.4

PHOTOGRAPHIC

It is believed that fuller utilization of the Banshee's capabilities could be realized if the photo flights from TF-77 were lengthened to two hours and the assignments increased proportionately. During the period of this report Photo Unit FOX used the 36" K-38 on all but a few special assignments. For the usual 1/5000 scale, therefore, 15,000 feet was the lowest flight altitude and the Photo Banshees often returned from their missions with over 3000 pounds of fuel.

Regarding the stocking of rolls of film aboard deploying carriers, it is suggested that all rolls be of the 400' length with a small number of 200' rolls to load initially the K-17 cameras. 400' rolls exclusively would then be used in the K-38 and odd ends left from the 400' rolls could be loaded in the K-17's. Use of the K-17 cameras is so limited that fifty or so exposures in each should be sufficient unless a special K-17 mission is planned. Constant use of the 400' roll rather than the 200' roll in the K-38 may increase the possibility of camera breakdown but this should not have to be a consideration if the cameras were new. New or overhauled cameras should be furnished each deploying ship.

As just stated, the K-17, 6 and 12 inch cameras, in the forward and middle bays of the F2H-2P, are seldom used for target photography. However, with the introduction of the 1/800 second K-17 6 inch, which will allow the photo plane to shoot close-in obliques at high speed, the taking of obliques and therefore the use of the K-17 camera may be more frequent in the future. But in any case, one camera - a high speed K-17, 6 inch - should be sufficient and it is recommended that the center camera bay be modified to take this 6 inch camera and that the forward bay and radio compass loop-antenna nose section be used to mount a forward firing (actually depressed a few degrees) K-17 24" or even a K-18 or K-38 36" with the long dimension of the negative set horizontally. Such a mounting would permit large-scale obliques to be shot without danger of image motion.

The K-38 36" camera, once it was made available to this unit, was used for all vertical photography. However, its 1/150 second shutter necessitates slowing the aircraft down considerably to avoid image motion at a large scale of photo-

# DECLASSIFIED

graphy. The BUAER No. 000000 Calculator for Vertical Aerial Photographs indicates a maximum ground speed of 150 knots with a 1/150 second shutter at 1/5000 scale (the scale usually required) to limit image motion to 1/250". While no tests have been conducted by this unit to determine the maximum permissible speed for 1/5000 K-38 photography, individual pilots have been using various indicated airspeeds from 220 to 260 knots and getting satisfactory results. However, a faster shutter or an image-motion compensator on the magazine is recommended in order that faster flight speeds can be realized over the target. To state the obvious, the F2H-2P is considerably ahead of the cameras with which it is equipped - excepting the new 1/800 second K-17 6".

One aircraft (BUNR 128865) suffered Class B damage to the port wing on 22 January 1953 when the outer wing fold mechanism support fitting failed. A RUDM was submitted on this part. Internal inspection revealed a cracked and bent spar cap, the repair of which was beyond the capabilities of shipboard facilities. Other than this there has been no serious trouble with the aircraft or cameras.

## TACTICS

### 1. BREAK-UP AND RECOVERY

a. When the Task Force is operating with three or more carriers it was found to be much more feasible to use section break-ups rather than division break-ups for the jets. When jet division break-ups were used the astern and starboard side carrier pattern tends to embarrass the other two groups patterns.

b. For best recovery results, a comfortable 30 second landing interval proved to be the optimum for jet aircraft. Slow operation of the jet barricade and the spotting of aircraft on to number two elevator precludes an interval much shorter than 30 seconds because of excessive foul deck wave-offs.

2. Combat Air Patrols have remained much the same throughout the entire tour with the exception that during the last tour on the line the C&P strength was doubled.

3. Flak continues to be the most serious problem confronting each squadron operating over Korea. Close coordination between Fifth Air Force and Task Force 77 through JOC Korea has resulted in excellent up-to-date flak information in the bomblines area. The presence of the self-destructing feature of medium calibre flak was noticeably lacking during the last two or three months of operations and only during early morning or late evening hours, when tracers could be seen, was the pilot aware of the amount of AA fire present. AD and F4U strikes on targets, where the AA was not considered of sufficient intensity to warrant the use of flak suppression, employed the usual evasive maneuvers of jinking, avoided low altitude pull-outs, and varied direction of attacks. In general, on a prop strike, unless the target was completely devoid of all but small arms fire, the strike group was rendezvoused after each run prior to commencing the next attack, thus ensuring minimum time over the target. The flak picture can change so radically in such a short period of time that it is absolutely essential to keep the best up to the minute information that is available. These radical changes are noted particularly after coming back on the line after only a two week R & R period. One of the most formidable allies of the Communist Forces is pilot complacency which must be fought continually, especially as the group gains more

experience.

4. Jet flak suppression was employed on those targets where the concentration of AA dictated it advisable. The optimum number of jets for good flak suppression is considered to be twelve jets, however, in most cases only eight were available. In the case where twelve jets are available an attempt was made to have one division of jets on each side of the attack group and commence the suppressing run 15-30 seconds prior to the first drop. These two divisions would open strafing runs at a fairly high altitude and concentrate points of aim for both strafing and fragmentation bombs on known AA positions. The remaining division would remain at altitude and either attack any unknown positions which opened up or follow the last prop plane down to cover retirement, whichever developed first. In the case of only eight jets being available the attack was conducted in a similar manner with the exception that only one division would provide the initial suppression but would then immediately climb back and cover the retirement, either above or with the second division. In those cases where flak suppression was scheduled and the AA did not justify their employment they joined in with the strike group on the primary target.

5. Recco missions in general were scheduled for a full four plane division. A dump or strafing target was preassigned to each recco hop so that ordnance could be profitably expended if a target was not located. On certain occasions due to availability or diversion of planes, two plane recco flights were flown. In these cases the planes made no attacks, and in this event, their mission was automatically changed to recco coverage only.

#### VC-35 NIGHT ATTACK COMMENTS & RECOMMENDATIONS

1. ASP which is certainly the most important capability of the unit was performed as a matter of complete routine. Although the sonobuoys were never used in an actual drop, a sonobuoy battery check and a test drop from the dispensers was made every replenishment day. This insured that they were always in an operable condition. The major problem in connection with the ASP was how to carry the assigned ordnance load and still not exceed the maximum landing weight. To lower the landing weight, as much armor plate as possible was stripped from one ADN and the plane used exclusively as ASW escort.

2. ECM in the ADN is effective and successful search can be made, however, it is felt that the only way to actually pin point a radar is to photograph a location after an ECM fix has been established. The practice of accompanying the ECM aircraft with 4 VF or 4 VA to act as an attack unit has merit but due to the fact that it is quite difficult to locate a radar except through photo interpretation, following an ECM fix, this appears to be a somewhat questionable effort. ECM search, photograph, and attack, in that order is the recommended procedure.

3. HECKLER MISSIONS. The heckler flights over the beach were quite successful, especially the predawn flights. Many trains were located and attacked through the simple expediency of a thorough search. It is considered that it takes approximately one hour to properly recco a 40 mile rail route at night. Flares were used as an aid in searching for trains. They proved most fruitful when dropped over marshalling yards.

DECLASSIFIED

4. SAR. Search and Rescue continues a problem for the night pilot. It is imperative that the coastal units maintain a listening watch on the proper frequencies. They form the only means of ASR available to the night pilot.

5. INCLEMENT WEATHER FLYING. Traffic control of aircraft within the force during periods of low ceiling and visibility - i.e. 300 feet - 1/4 mile, is a serious problem. When conditions are at a low minimum it is recommended that CIC hold the aircraft on top and bring them down one section at a time or one aircraft at a time if conditions so warrant or if the aircraft are below the clouds assign them sectors in order to preclude a mid-air collision.

6. LANDING SIGNAL OFFICERS COMMENTS & RECOMMENDATIONS. Carrier Air Group FOURTEEN did not experience any unusual difficulties with the recovery of aircraft. It is strongly recommended, however, that a waterproof speaker be installed at the Landing Signal Officer's platform. Such a speaker was temporarily installed on the KEARSARGE on the land-launch frequency and it proved to be invaluable in the expeditious handling of emergencies and low fuel jet aircraft.

On the beach during field carrier landing practice, the LSO should stress landing technique and should correct any bad tendencies during this phase of training. Stress on landing techniques on the beach played an important part in the fine safety record of this air group.

#### PART V

#### MAINTENANCE & MATERIAL SUMMARY

##### 1. MAINTENANCE WORKING SPACE

a. Maintenance working space configurations were evidently predicated upon employment of the CASD maintenance concept and are inadequate to support the maintenance system currently in practice. Although the two Aviation Tool Lockers were each capable of being used as a working space for one jet squadron each, with certain alterations, the extremely small size of the two Aviation Tool Issue Rooms permitted only the barest minimum of work to be accomplished in these spaces and made it necessary for tools, parts, and equipment to be stowed on the hangar deck.

b. Crew shelters for line maintenance personnel were extremely overcrowded and void of any heating facilities. In some instances, it was physically impossible for assigned personnel to fit inside the assigned shelter.

c. Squadron armories were likewise congested, necessitating the partial accomplishment of armament disassembly, repair, and cleaning on the flight and hangar decks.

No space was available for the use of squadron material personnel, making it necessary for them to either work out of cruise boxes or add to the congestion in the maintenance work spaces.

It is realized that the problem of satisfying maintenance space requirements for an embarked air group is neither new nor limited to this instance, and that

personnel to fit inside the assigned shelter. In some instances, it was physically impossible for assigned personnel to fit inside the assigned shelter.

DECLASSIFIED

certain cognizance must be taken of anticipated requirements in event that the CASD maintenance system is implemented. However, it appears to be common practice to relegate current space requirements to a relatively unimportant role, losing view of the fact that maximum aircraft operational availability is directly related to the maintenance program. Encroachment on hangar deck space for stowage of frequently used tools, parts and equipment is obviously undesirable and results in lost man hours, damage and pilferage. Maintenance spaces should be of adequate size and configuration for the models of aircraft being supported, with each squadron (and associated VC unit) assigned its own space. The assignment of one space to two or more squadrons, even if they are operating the same model aircraft, is not desirable. The assignment of crew shelters for squadron line maintenance personnel should at least be on an equitable density ratio with flight deck handling crews, and portable type fireproof radiant heaters should be made available for unheated crew shelters during cold weather operations.

Unless plane handling crews and directors are well experienced as a team, numerous aircraft handling accidents will occur in the initial phases of a cruise. This problem is further aggravated by the necessity of accomplishing much of the respotting during darken ship conditions.

The F9F-2 is particularly susceptible to handling damage. Due to its configuration when the wings are folded, it is necessary for the director to watch the tip tanks, flaps and empennage simultaneously during respotting. Strategic placement of an assistant director is usually necessary.

Extra rudder and elevators, especially, should be stocked for all models on board during the initial phases of a cruise.

d. The J34 Class "C" Maintenance Program has been highly gratifying. During the entire cruise 16 engines were saved, and are currently in service, through class "C" maintenance. All of the class "C" Maintenance and engine build-up was accomplished by squadron personnel. The majority of work was accomplished with the engines remaining in the aircraft, due to maintenance space limitations. During the latter part of the cruise, all turbines and combustion liner replacements were accomplished without removing the engines from the aircraft. All class "C" maintenance, "A" checks, and "B" checks were accomplished at night.

The major discrepancy on J34 engines was the erosion encountered on the first stage turbine blades. Erosion was most evident during 330 hour checks and only one engine reached the regular 420 hours. A total of twelve turbines were replaced with the average replacement occurring at 330 hours. Generally, when turbines required removal at 360 hours or more, engines were rejected and sent to major overhaul. As erosion increases, turbine efficiency decreases, causing an increase in turbine out temperatures and a reduction in RPM, especially near 100%. Setting up fuel controls actually is of no value, for tail pipe temperatures increase tremendously. The only solution is the changing of turbines, which in some cases has resulted in 90 to 100° C lower temperatures at the higher RPM's.

67

DECLASSIFIED

c. RUDM DIGEST. It is recommended that a RUDM Digest be initiated for the Pacific Fleet. The monthly publication of such a digest, containing briefs of all RUDM's submitted by Pacific Fleet activities, would be extremely valuable to operating activities as a guide for anticipating potential troubles and focusing preventative maintenance against their occurrence. It would further serve to disseminate to all interested activities any recommended corrective action by the Fleet Commander or BUAEER, and provide activities with an added incentive for submitting RUDMS. It is considered that the prompt dissemination of reports of material failures and recommended corrective action provided by a RUDM Digest would improve the efficiency of the maintenance and the material conservation program.

f. PARTS PROBLEM. The most serious problem encountered was the shortage of aircraft spare parts due to initial outfitting for wrong aircraft models or bureau number series, failure to fill outfitting shortages prior to arrival in the combat area, and inadequate tailoring of Section "B" Allowance lists. This problem can be licked only if sufficient advance notice is given the ship concerning all models to be supported. The initial shipboard outfitting contained parts for F9F-5 aircraft and F2H-2 aircraft of the 123000 series. Most of these parts were off-loaded immediately prior to deployment but not replaced with the correct parts due to insufficient time. No replacement parts were ever received for the Aero 14A gun charging system, and parts for the MK 55 Mod 1 bomb rack were not available until late in the cruise. QECU's were not completed until well after arrival in the combat area. Outfitting shortages of F2H-2 and F2H-2P engine airduct guard assemblies resulted in eight (8) J34 engines being returned to overhaul due to damage by catapult hold back rings. The lack of duct guards also presented a constant potential danger to personnel during run-up.

Special emphasis should be given to completely outfitting the Section "B" and "G" Allowance lists prior to deployment. Adequate tailoring of Section "B" Allowance Lists to insure sufficient stocks of high usage items is especially important in the case of VC units operating less than six airplanes which are not common to a supported squadron on board.

Usage data and recommended revisions to the Section "B" Allowance list are being forwarded by separate correspondence.

g. Engine Changes

The following engines were changed for the reasons indicated:

(1) J34-WE-34

Catapult holdback ring through compressor	8
AA Damage	4
Unable to remove turbine shaft nut	4
High time	5
Turbine Erosion (no replacement turbines aboard)	3
Oil pump failure	1
High Oil Consumption	1
Damage by Foamite following fire on shut down	1
Out of calibration following incorporation	1
Bulletin 2191	1

48

SECRET INFORMATION

██████████

DECLASSIFIED

(2) J42-P-8

High fuel consumption	1
AA Damage	1
Gun Fire Damage	2
Total	<u>4</u>

(3) R-2800-18W

High time	1
Metal in oil strainer	1
Cracked auxiliary blower case	2
Impeller oil seal failure	4
Excessive oil leakage at crankcase parting surfaces	<u>1</u>
Total	9

(4) R-2800-32W

Engine Seizure	1
Impeller oil seal failure	<u>1</u>
Total	2

(5) R-3350-26WA

Metal in oil strainer	5
Sudden stoppage	2
Low compression	1
AA Damage	<u>1</u>
Total	9

h. Statistical Summary

	F2H-2	F2H2P	F9F2	F4U4	F4U5N	AD4	AD4W	AD4N	Total
Aircraft repaired on board	40	11	74	40	3	45	10	12	235
Aircraft non-repairable on board	1	1	4	3	3	2	0	0	14
Engines changed	27	1	4	9	2	9	0	0	52
Aircraft Availability (less ACOG)	96.4	96.6	96.6	91.9	98.7	91.7	96.2	98.2	
Non-Availability due ACOG	8.7	3.8	2.6	4.8	9.6	7.5	1.8	3.3	

PART VI

AIR INTELLIGENCE SUMMARY

1. Personnel At the beginning of the cruise there were no "experienced" Air Intelligence personnel attached to either the Air Group or ship. Through the cooperation of all personnel the intelligence department was organized as a team with the ship's AIO in charge and the air group AIO as his assistant.

██████████

ENCLOSURE (3)

69

~~SECRET~~  
DECLASSIFIED

This is highly recommended as it makes a working organization whereby each officer is able, in a short time, to understand all phases of the organization and have the capability of taking over in case a relief is needed. In addition, this furthers the training of junior officers for a billet of greater responsibility such as staff or ship air intelligence officer.

The fact that the ship's AIO and two squadron AIO's returned to CONUS and were replaced, did not alter the efficiency of the air intelligence department. The working and administrative organization proved efficient not only during routine operations, but also during special exercises and the mock invasion of 15 October 1952. Operating as a team the intelligence officer personnel could very well have been reduced to 7 or possibly 6. There would have to be a minimum of 5 enlisted men attached to the team to accomplish yeoman and intelligence specialists duties.

Having been given definite job assignments before deployment, enlisted personnel performed admirably in their jobs throughout the cruise.

## 2. FLAK AND TARGET DATA

Squadrons were briefed on flak in target areas with 1:50,000 charts pre-plotted by the air intelligence office. This system proved very satisfactory as greater and more exacting detail could be shown to all pilots, while repetitious plotting was eliminated. Effective range circles were drawn on flak charts for heavy and medium AA posit. This gave the pilots a better graphic aid for planning approach and retirement attitudes and courses.

For orientation and target information, pilots were briefed from the following maps and mosaics:

- (a) 1:250,000 AMS (L-552 Series) showing overall area
- (b) 1:50,000 AMS (L-751 Series) showing approach to target.
- (c) 1:250,000 AMS (L-752 Series) Terrain Chart.
- (d) 18" x 22" anotated mosiac of target. A blow up of pilot hand out mosiac (8" x 10").

After pilots had been in area for 1 tour on the line the need for 1:250,000 charts dropped off while the 1:50,000 charts were in great demand. This was due to quick familization with general area while more details of target area was desired.

Most of the pilots perferred the AMS 1:250,000 chart over the 1:250,000 approach chart. This was due to the following advantages:

- (a) Terrain features more discernable (actual terrain features appeared as pictured on charts)
- (b) MSR's more prominent.
- (c) Rail lines and highways more prominent.
- (d) Greater accuracy of information and layout.

DECLASSIFIED

3. BRIEFING AND DEBRIEFING

As stated in previous action reports, it would be highly desirable to have sliding panels in each ready room with improved lighting conditions. It was necessary to improvise, and in most cases briefing display spaces were found to be inadequate. Briefing of flights varied from 1 1/2 to 2 hours before scheduled launch time depending on the type of mission. When more than one squadron in the air group was involved in a mission it was advantageous to have a combined briefing. As a result, better coordination and understanding was obtained from the attack and flight safety standpoint.

Debriefing spaces were curtained-off to reduce the noise and confusion of the other sections of the ready room after a flight. This had the advantage of enabling AIO's and pilots to complete debriefings as soon as possible with a minimum of disturbances.

The important task of accurate and detailed debriefing of pilots by squadron AIO's can not be overemphasized. Information of flak can be a life-or-death matter. All pilots must know flak identification as to type weapon, type and intensity. The time, money and effort spent in checking a false flak position report by aerial photography is extremely high and costly to reconnaissance efforts.

Many pieces of intelligence information gleaned from pilots through good debriefings directly governed the planning of missions, consequently the know-how of visual reconnaissance by pilots is of vital importance. Emphasis should be placed on the use of camouflaged ranges such as the one at Camp Pendleton to instruct pilots in the observation phase of a mission.

During the past operating period a greater effort was made toward understanding the mission of the VC detachments and coordinating air intelligence with their operations. It was brought to light that air intelligence did not have a full knowledge of the mission and capability of some of the VC detachments (i.e., ECM, ASP, Photo).

PART VII

SURVIVAL SUMMARY

1. MK III ANTI-EXPOSURE SUIT

The tearing of wrist and neck seals of the suit proved to be a constant problem in the maintenance of this gear. It is suggested that a tougher or heavier rubber material could be used in the construction. It was also noted that if the suits are hung in a designated area instead of just anywhere in the ready rooms there is less likelihood of tears resulting from being carelessly thrown around. It was found necessary to devise a method of testing these suits while at sea. Half of an aircraft engine shipping container was set up on the hangar deck and filled with water. A chain fall was used to simulate a helo sling. This not only afforded the pilots an opportunity to check their exposure suits for leakage, but gave them practical experience in getting into the sling. This procedure was very well received by all pilots.

DECLASSIFIED

2. ADSK-1

On the first tour on the line, four kits were inadvertently dropped over the beach. It was therefore necessary to devise some means to insure against further occurrence of such incidents. The survival kit was carried on the AD aircraft outboard wing station #12 (port wing, inboard Aero 14A rack). An extra switch was wired in series between #12 selector station and rack, which must be turned on in order to drop the kit, or K-25 camera switch might be used, located to right of master armament switch. Four doubler plates were placed at the sway bearing points of sway braces to prevent puncture of the kit (bomb type) body. Contents of kit were packed in a seabag type bag with two shoulder straps and chest snaps from a parachute harness.

3. SIGNAL EQUIPMENT

It was thought that some signalling device was needed whereby it could be used if the pilot ditched and had the use of only hand. A neck scarf (1' x 5', Red on one side and Yellow on the other), made of fluorescent material, was developed for use in case of ditching or a beach landing. Signals were devised (see next page) for use by this air group. By wearing the scarf in regular fashion with one end as long as possible a pilot could, by the flick of his hand, expose enough of the material to be seen from a great distance. If on the beach, ground to air signals could be given with little chance of enemy detection, by spreading the scarf (panel) in a depression in the ground. The scarf could also be folded and kept in a pocket of trousers or flight suit for concealment. It was felt that this scarf would be invaluable in locating a downed pilot.

4. PARACHUTE HARNESS.

Due to a number of complaints by pilots who were involved in ditching incidents, it is recommended that the leg strap extensions be made longer or a quick release harness be used due to difficulty experienced in getting rid of the chute before or after ditching.

5. MISCELLANEOUS

The Navy flight suit which is standard issue is not suitable for camouflage during winter months as their color contrasts sharply with snow covered terrain. An excellent article can be found in Fifty Air Force Intelligence Summary (Secret) of 20 November 1952 pertaining to this matter. It is recommended that this gear be made up prior to deployment for inclusion in the ADSK-1 or PK II raft. Flight suits should be of a color to afford maximum concealment in summer or winter on original manufacture. The PRC-17, with a longer battery life, radio is a big improvement over the CRC-7 but there is definite need for a pilot carrier survival radio, of lighter weight. With the advent of UHF in the forward area the size and weight could be reduced and incorporated in a survival vest or the flight suit. It is suggested that all units try to obtain as much of their survival gear as possible before deployment, as it is extremely difficult to obtain miscellaneous items in the WESTPAC area.

██████████  
██████████  
DECLASSIFIED

PART VIII

AVIATION ELECTRONICS SUMMARY

An attempt has been made to offer a general summarization of aviation electronics for the entire cruise on the line in Korean waters. Suggestions and recommendations are submitted in the hopes that they will be of some help to air groups and carriers, which will be deployed to WESTPAC at some future date. No major operational or maintenance problems were encountered during the period covered by this report. This can largely be attributed to the following:

1. Foresight, vigilance and industry of the maintenance personnel. "Preventative maintenance rather than corrective maintenance was the goal."
2. Cooperation and coordination between the various squadrons and between the squadrons and appropriate divisions of ship's company.
3. The supply department seldom failed to have or to produce necessary material expeditiously.

Several minor difficulties were encountered from time to time. The problems encountered, the action taken to solve them, and recommendations are submitted for information and inspection as the remainder of this report.

1. PREPARATION OF EQUIPMENT

a. PRE-DEPLOYMENT

Prior to deployment all subject equipment in the aircraft to be taken aboard ship was thoroughly checked. All defective material and items that indicated possible failure in the near future were replaced. Required bureau changes were made and compasses swung. These measures are considered imperative in view of the comparatively limited maintenance and supply facilities aboard ship. Quick disconnect plugs and receptacles were installed, on all batteries and leads.

b. WINTERIZATION

Winterization of all aircraft and equipment was necessary during this period. Cockpit heaters, gun heaters and pitot heaters were carefully and frequently checked. Several failures of the ram air pressure switch for the cockpit heater occurred. Replacements were not immediately available, since this item was not on the section "B" allowance list. The landing gear micro switch was incorporated in the heater circuit to supply the necessary safety. It is recommended that a micro switch actuated by the landing gear, such as used on the AD-4 type aircraft, be used exclusively as a safety device for cockpit heaters. Oil pressure instrument systems were flushed with light weight oil in accordance with TN 16-51. Improvisation by the electrical crew simplified this job. A brake service tank was cleaned and partially filled with light weight oil and then pressurized. Necessary lines of rubber tubing were made to go with the tank. This made a simple, portable device that proved very satisfactory in the operation. Generator voltage was set slightly high (28.5V). Strong well charged batteries were kept in the planes.

[REDACTED]

DECLASSIFIED

c. SUPPLY

Several items required were not carried by the ship and in a few instances the ship's supply of certain items was exhausted and could not be replenished. Most of the items not carried were not on the appropriate allowance lists. A few of the items most frequently unobtainable are listed as follows:

(1) Capacitor, oil filled, for power supply filter of AN/ARR-2 - not on allowance list. This necessitated drawing an entire new piece of equipment.

(2) Pressure switch for cockpit heater - not on allowance list.

(3) Glow plug for cockpit heater - not on allowance list.

(4) AD/APN-1 antenna - supply exhausted while in forward area.

(5) Various sizes of cannon plugs, ferrules, brass screws (for instruments), electrical wire and electrical tape. Shortages of these items usually lasted only until the following replenishment day. In view of the high and spasmodic usage of such items, it is considered mandatory that each squadron procure small quantities of vital cannon plugs, brass instrument screws, electrical tape, ferrules, resistors, capacitors, cockpit heater glow plugs and electrical wire prior to deployment. This "private stock" must be replaced as used to give the supply department proper usage data.

2. PERSONNEL

a. The personnel allowance for Electricians is inadequate. One AEC, one AE2 one AE3, and three strikers could cope with any situation encountered, particularly if the strikers are class "A" School graduates.

b. Personnel allowances for Electronics Technicians were found adequate. The problem of a large number of men (15-20 percent of the complement) being on special detail, such as compartment cleaning, mess cooking, etc., must be considered when setting up a working organization. Electricians must work very closely with other divisions in both trouble shooting and maintenance. The maintenance department is required to work on a 24 hour basis, which necessitates at least one competent electrician and a helper on duty at all times. Personnel requiring glasses at all times are handicapped while working on the flight deck. This must be considered when selecting men to take aboard ship, since a large percentage wearing glasses would give an inadequate crew for the flight deck. Man power could be saved by a closer integration of the splinter units and the squadrons to which they are assigned. The squadron could be made responsible for the maintenance of the equipment assigned to the particular VC detachment concerned, which would require some additional men, but the complement of the teams could be reduced to those specialists, (experienced 1st or 2nd class) required for the special equipment not held by the squadron. An over-all saving of manpower would result, while the squadron could better operate on an "around-the-clock" basis.

~~CONFIDENTIAL~~  
~~CONFIDENTIAL~~  
DECLASSIFIED

### 3. SPECIAL ELECTRICAL PROBLEMS

Starting cold aircraft proved quite difficult. No electrical outlets adequate for starting cold engines were available aft of the island structure of the ship. Jump cords from one plane to another were tried, resulting in several generator failures. Portable auxiliary power units were the only solution in spite of hazards and inconveniences.

b. Facilities for testing components of the G-2 compass were inadequate. A mock-up similar to the FAIRBETUPAC test set-up in the shop might prove worth while.

### 4. SPECIAL ELECTRONICS PROBLEMS

a. Spare radios and other electronic equipment could simplify maintenance since the malfunctioning equipment could be replaced with the spare and the aircraft concerned would be ready for flight. Repair of the malfunctioning equipment could then be made without keeping an airplane "down". Therefore, it is recommended that each squadron be authorized to have one (1) spare of each of the essential electronics equipments and the CAG be authorized two (2) to care for the VC detachments and emergencies. Also the spare equipments could and should be used for training purposes whenever possible.

b. Electronic "A" kits should be furnished with many more hand tools. Recommendations for these additions have been made to proper authority and it was suggested that many of the items be listed as optional.

c. Since F4U-4 aircraft may have one of three difference AN/ARC-1 mounting bases installed, (MT-100/ARC-1, MT-360/ARC-1, MT-360A/ARC-1) which are not interchangeable in the aircraft, and since the ships aviation supply does not often have sufficient quantities of all three mounting bases in stock, it is recommended that a larger number of spare rack cabling harness (CX-181/ARC-1) be stocked, and fewer complete racks. Many complete mounting base changes would be made unnecessary, since the majority of ARC-1 mounting base failures are due to faulty CX-181 cabling and pin connectors.

### 5. AN/ARC-27 UHF TRANSCEIVER

a. The aviation electronics personnel of CVG-14 constructed and installed an AN/ARC-27 bench test installation for the purpose of maintenance training. This summary is submitted as information for those activities which desire to fabricate a test installation for training purposes before such time as the ARC-27 bench harness is available in supply.

(1) "AN" numbers and ASO stock numbers of the required cannon plugs are listed in the ARC-27 HMI AN 16-30-ARC-27-3. However, it was found that in many instances some of the stock numbers listed were not available in ship's supply. Therefore, other plugs of the same shell size and insert arrangement were substituted, and in some cases, it was necessary to remove the insert from receptacles of the proper shell size and insert arrangement in order to make up the desired plug.

DECLASSIFIED

(2) Test equipment required for the complete bench alignment was available in the aviation electronics shop. It consisted of the following: The Measurements Corporation Model 80 and the TS-413 signal generators, TS-375 Vacuum Tube Voltmeter, ME-11/U Wattmeter and Weston 487 Audio Output Meter. The model 80 signal generator was found to be satisfactory provided that the "modulation percentage" control was properly set on various frequencies through the 225-400 MC band. An IM frequency meter may be used to calibrate the TS-413 signal generator used in the 5.7 - 4.8 MC IF and 3.45 IF alignments.

(3) A "Tune-Track" switch was made, which permits stopping the autotune cycle at any desired point to make accessible the proper capacitor rotor plates for bending. The circuit for this switch may be found in the ARC-27 HMI, Section V, page 56. Rotary switch GSK Stock Number N 17 S 65285-3551 may be used.

(4) Also required is a "Swamping Network" for use in aligning the Fixed IF in the Main and Guard receivers. Information may be obtained from the ARC-27 HMI, Section V, page 51.

(5) In order to make adjustments under the "IF" and "Audio" and Guard receiver chassis, it is necessary to construct extension cables, so that these chassis may be removed from the ARC-27 chassis, but still have power applied to them. Receptacles and stock numbers are listed below:

1 each Receptacle R-17-R-2052  
1 each Receptacle R 17-R-2052-10  
1 each Receptacle R 17-R-2052-25  
1 each Receptacle R 17-R-2052-50

(6) A dummy microphone was constructed, which permits adjusting the transmitter modulation percentage. The circuit for this unit, which will be available in the future in supply as the AN/URM-14, may be found in the July 1952 issue of the Electronics Digest.

(7) An excellent ARC-27 training program was put into effect by VF-144 made available not only to the personnel of the squadron, but also to the electronics personnel of the entire air group. Photographic copies of the necessary schematics were made by the ship's photo lab from the schematics in the ARC-27 HMI. These copies have proven to be of great help in giving lectures on the gear.

## 6. AN/APX-6

a. The AN/APX-6 Receiver-Transmitter, as employed in the Mark X IFF system, has proven to be a stable and comparatively trouble-free unit from both the operational and a maintenance standpoint.

b. For the six month operational period, the Air Group has had a total of only 64 discrepancies reported on the APX-6 equipment and associated components. Of the total number of discrepancies reported; 29.6 percent resulted from tube failures, 28.1 percent from blown fuses, 23.4 percent from failure of the RT-82/APX-6 unit to retain alignment settings when subjected to vibration and hard landings over a considerable period of time, and 13.9 percent from shorted capacitors, blower motor failures, and aircraft cabling. 5.0 percent of the total failures resulted when three APX-6 units were detonated by tripping of the SA-3/A impact switch on hard landings.

DECLASSIFIED

c. The test equipment associated with the APX-6 equipment has also proven to be extremely accurate and reliable. The portable test set AN/UTM-8 has proven to be of great value in ground checking APX-6 units installed in aircraft. The AN/UPM-44 has permitted thorough and rapid bench checking and alignment of the RT-82/APX-6, and has reduced the time required for a complete bench test to an average time of twenty minutes, as opposed to an average time of one hour when the UPM-1, UPM-2, TS-419 and Paired Pulse Generator system was employed.

d. It is believed that preventive maintenance performed during the regular aircraft checks, training programs initiated by individual squadrons, and the inherent stability of the RT-82/APX-6 have contributed equally in keeping APX-6 failures at the minimum attained by this Air Group.

#### 7. TS-80/U METERS AND ME-11/U WATTMETERS

A lack of TS-80/U meters and ME-11/U wattmeters, used with the AN/ARC-1, has become evident in many instances, particularly when several squadrons have VHF discrepancies at the same time and have to repair units in sufficient time to meet the next launch. In view of the fact that both of the above mentioned meters will be standard test equipment for the AN/ARC-27, it is recommended that each squadron allowance list be revised to include at least one of each of these meters.

#### RECOMMENDATIONS AND SUGGESTIONS

##### 1. F9F-2 Aircraft

It is recommended:

a. That spare flush type APX-6 antennas be stocked by ship's aviation supply. This antenna was installed in F9F-2 aircraft in accordance with Aircraft Service Change #98. The part number for this antenna is 135225-1 and the ASO stock number is R82-GR-135225-1.

b. That the ship's aviation electronics shop be equipped with one TS-685 test unit for each squadron aboard using the AN/APG-30.

c. That the allowance for the APG-30 Range Computer sub-assemblies be increased, in order to service this radar in shorter time. The ASO Stock Number is RL6-C-29930.

d. That squadrons requiring external AC power to service radar and IFF gear be permitted to build a small power unit in accordance with TN 10-52, in order to perform maintenance more expeditiously. The shortage of parts for this unit hampers its construction.

##### 2. AD-4 Aircraft

a. That a more adequate and accessible storage space be provided for the AN/APS-19 radomes. At present, five to six radomes are stored in the Radio Issue Room, while the remainder are stored in the overhead on the Hangar Deck. A method of lowering the gear to the deck must be utilized and aircraft having checks pulled, must be moved before this gear can be made available.

~~CONFIDENTIAL~~  
**DECLASSIFIED**

3. AD-4N Aircraft

a. That at least one spare AN/APS-31 Radome be stocked by ship's aviation supply. At present, any trouble encountered with the bomb itself, necessitates sending the aircraft to a FLSRON activity in Japan, thereby lowering the teams' availability by 25%.

8. A consolidated summary of recommended changes to allowance lists will be submitted by separate correspondence.