U.S.S. PRINCETON (CV-37)
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CONFIDENTIAL
SECURITY INFORMATION

From: Commanding Officer, U.S.S. PRINCETON (CV37)
To: Chief of Naval Operations
Via: (1) Commander Task Force SEVENTY-SEVEN
(2) Commander SEVENTH Fleet
(3) Commander Naval Forces, Far East
(4) Commander in Chief, U.S. Pacific Fleet

Subj: Action Report for the period 28 September 1952 through 18 October 1952

Ref: (a) OpNav Instruction 3480.4
(b) CVG-19 conf ltr ser 038 of 16 October 1952 (Air Attack Reports for the period 5 October through 16 October 1952)

Encl: (1) Statistical Summary and Final Recommendations for USS PRINCETON Far Eastern Tour, April through October 1952

1. In accordance with reference (a) the Action Report for the period 28 September 1952 through 18 October 1952 is hereby submitted.

PART I GENERAL NARRATIVE

On 28 September 1952 the U.S.S. PRINCETON with Carrier Air Group NINETEEN embarked, departed Yokosuka, Honshu, Japan and proceeded to rendezvous with Naval Amphibious Forces carrying the 19th Regimental Combat Team for participation in landing exercise Seadog One. This exercise was conducted on 29 September 1952 but only twenty-six sorties were flown due to inclement weather.

At the conclusion of Seadog One, the PRINCETON returned to Yokosuka for two days before departing for the operating area, (in accordance with CTF-77 confidential dispatch 271326Z of September 1952). On 4 October 1952 the PRINCETON rendezvoused with Task Force SEVENTY-SEVEN.

[redacted]
SECURITY INFORMATION

Task Force SEVENTY-SEVEN was composed of four aircraft carriers: PRINCETON, ESSEX, BON HOMME RICHARD and KEARSARGE with various heavy support and screening ships.

The mission of this force was as set forth in Commander Task Force SEVENTY-SEVEN Operations Order No. 22-51 (Second Revision).

Throughout this period of combat operations the PRINCETON furnished strikes, close air support, naval gunfire spot, electronics counter-measures, combat air patrol, anti-submarine patrol, and photographic and visual reconnaisance missions in support and defense of United Nations Forces in Korea.

A continued program of maximum effort against the enemy's supply, storage, industrial, and transportation facilities keynoted the first half of this operating period. From 11 through 15 October the emphasis changed to relentless close air support, naval gunfire spot, and strategic strike missions along the East Korean coastal areas in preparation for and support of a Joint Amphibious Landing Exercise in the Kojo area, "D-Day" of which was to be simulated on 15 October 1952.

On 7 October, in the face of increased and intense enemy anti-aircraft opposition, PRINCETON aircraft flew numerous close air support missions over United Nations front-line troops. On the same day, together with other aircraft of Task Force SEVENTY-SEVEN and Fifth Air Force fighter-bombers, PRINCETON pilots delievered a concentrated bombing attack on Yongpyong-ni in Communist Korea. The PRINCETON flights distinguished themselves by systematically destroying transformer stations, railroad bridges, radar positions, and other key targets in these as well as on other operations.

On 8 October, a similar coordinated Navy and Air Force attack was made on Kowon, North Korean rail center, with equally good results.

United Nations carrier based aircraft encountered increased enemy jet-interceptor opposition during this period. Russian built MIG-15's were especially numerous over the Wonsan area and ranged as far south as Kojo in their almost daily sallies. On 7 October, PRINCETON aircraft returning from strikes had three encounters with the swept-wing Communist planes. One Corsair pilot was forced to bail-out after his plane had been damaged by a MIG just north of Wonsan. He was recovered from the ocean nearly drowned and subsequently died. Another group of Communist

fighter planes making passes on PRINCETON attack bombers found the going much rougher when at least one of the AD's was able to turn into the MIGS and return the fire.

Increased friendly jet combat air patrol by PRINCETON and Task Force SEVENTY-SEVEN aircraft reduced the MIG hazard. On 8 October, enemy interceptors were sighted but no attacks were sustained.

On 9 October, PRINCETON aircraft struck the East Coast Korean City of Wonsan. The concrete paved Wonsan Airfield was rendered completely useless by over eighty direct bomb hits. Highways in the vicinity were also torn along key points with as many as thirty-five hits in a target area.

On the same day, two more important railroad bridges as well as numerous railroad cars were destroyed by PRINCETON strike pilots. The Hecklers too had a field day by destroying over fifty of almost five hundred trucks found along Communist supply routes.

Beginning on 12 October, designated as "D-3" day, PRINCETON aircraft with other planes of Task Force SEVENTY-SEVEN began a series of close air support and naval gunfire spot missions in preparation for the forthcoming "landing". Strikes and close air support flights stifled enemy daylight activity in the "Objective Area" while the naval gunfire spot sorties accurately guided the big guns of the fleet in suppressing Communist emplacements and other targets. These concentrated efforts continued through the next day.

On 14 October, the ship replenished at sea during the morning, then continued to participate in the blanket coverage of the "Objective Area" during the afternoon and evening. Communications and transport facilities which abetted the overall Communist position were also bombarded.

On "D-Day" with troops ready to simulate a landing, the intensive preparations of Task Force SEVENTY-SEVEN were voided by inclement weather. Rough seas and poor visibility frustrated efforts to attack and suppress areas around the designated "Landing Beach."

During the ~~four~~teen days that flight operations were conducted 868 sorties were flown and about 675 tons of ordnance were dropped on targets. Two Corsairs and two pilots were lost due to enemy action.

On 16 October, a ceremony was held honoring the pilots and aircrewmen of the PRINCETON. Present at this ceremony were Captain W.R. HOLLINGSWORTH, PRINCETON Commanding Officer and Captain P.D. STROOP, whom he relieved. Vice Admiral J.J. CLARK, Commander SEVENTH FLEET, made the presentation of medals and awards. At the conclusion of the ceremony, PRINCETON departed the operating area for CONUS via Yokosuka.

PART II CHRONOLOGICAL ORDER OF EVENTS

29 September

Departed Yokosuka, Honshu, Japan. Conducted air operations off Chigasaki Beach, Honshu, Japan in support of Amphibious Operation Seadog One.

Due to inclement weather only twenty-six sorties were flown.

30 September - 1 October

Moored to Buoy 11 Yokosuka Harbor.

2 - 3 October

Enroute Task Force SEVENTY-SEVEN. Conducted gunnery exercises 3 October.

4 - 5 October

Conducted air operations. One hundred sixty-four sorties were flown.

6 October

Replenished at sea. Conducted gunnery exercises.

7 - 9 October

Conducted air operations. Two hundred ninety-nine sorties were flown.

10 October

Replenished at sea. Conducted gunnery exercises.

11 - 13 October

Conducted air operations. Two hundred twenty-five sorties were flown.

14 October

Replenished at sea during morning. Conducted air operations. Sixty-five sorties were flown.

15 October

Conducted air operations in support of Joint Amphibious Training Exercise. Due to adverse weather conditions only forty-one sorties were flown.

16 - 18 October

Proceeded to Yokosuka, Honshu, Japan to await further routing CONUS. Conducted ferry of aircraft. Forty-eight sorties were flown.

PART III ORDNANCE

A. Performance

1. Ship's

a. Fire Control Equipment

Performance of fire control equipment during this period of operation was excellent. No serious casualties were encountered. The manning of directors and gun mounts is on a rotational basis. Condition III watches are organized so that only half of the fire control and ordnance equipment is in service at a time. This arrangement provides maximum Condition III coverage and allows time for the preventive maintenance that is necessary for efficient operation of fire control equipment.

b. Ordnance Equipment

The only serious ordnance equipment casualty of the period occurred in the Mark 12 Mod 1 training mechanism of 5"/38 mount No. 56. Trouble was detected when, during a transmission check conducted with Mark 56 director No. 54, the mount did not follow signals in automatic or local control. Investigation disclosed that the training worm gear was moving back and forth on its bearings and that the training worm collar adjustment had no effect on the lost motion.

The complete cause of the difficulty has not been determined at this time, but it is believed that the thrust bearings are worn and are not holding the worm gear properly. Additional investigation and repair by tender personnel may be necessary, although it is believed that the repair is within the capacity of the ship's force.

2. Aircraft

It was noted in several instances that on F4U-4 aircraft equipped with Aero 14A launchers arming wires pulled out of the arming solenoid upon take-off. Investigation revealed that these accidents were the result of bombs swaying on the racks. Since it is impossible to tighten the sway braces on the Aero 14A launcher with wings folded (as the F4U wings are during loading), it is recommended that the Fahnstock clips on the arming wires be installed in such a manner that slack will be left in the wire. This measure should eliminate the difficulty.

One hundred pound type G.P. bombs were used extensively during the early part of the cruise for rail cut strikes. On several occasions pilots reported direct hits between rails with no apparent damage resulting. Better results were obtained using 250 pound G.P. or larger bombs.

Pilots also reported instances of 5.0" rockets with the 6.5" ATAR head attached being erratic in flight. During the latter part of the cruise the 5.0" ATAR was used and gave better results.

It is recommended that aviation ordnancemen who are to be deployed with an air group be assigned to their squadrons three to four months in advance of the deployment date of the unit. This procedure would not only permit better individual training but provide the men with vital experience in working together as a team. It is also recommended that all men assigned as aviation ordnance strikers be trained in the appropriate class "A" school.

3. Hung Ordnance Report-28 Sept to 18 Oct 1952:

Type Ordnance	AERO 14A	Mk 8 Mod 2	Mk 51	Mk 55	Douglas Bomb Ejector	Totals
100#	4					4
Frags	1			2		3
250#	1			7		8
500#						
1000#		1				1
2000#						
Napalm Incend.						
	6	1	0	9	0	16

Disposition of Hung Ordnance:

Type Ordnance	Later manual release	Release by jerking	Remaining on Racks	Drop offs on landing	Totals
100#			4		4
Frags			3		3
250#			8		8
500#					
1000#			1		1
2000#					
Napalm Incend.					
	0	0	16	0	16

Of the 3,698 bombs carried a total of sixteen bombs or .43 percent hung up.

4. TOTAL AVIATION ORDNANCE EXPENDED 28 SEPT THROUGH 18 OCT 1952

Quantity	Code	Description
204	K2	1000# GP
427	K3	500# GP
1272	K4	250# GP
871	K5	100# GP
874	K9	220/260# Frag
64	K19	Fuze, Nose, AN-M103A1
3124	K20	Fuze, Nose, AN-M139A1

TOTAL AVIATION ORDNANCE EXPENDED 28 SEPT THROUGH 18 OCT 1952
(Continued)

Quantity	Code	Description
134	K21	Fuze, Nose; AN-M140A1
8	K23	Fuze, Nose; AN-M146
62	K26	Fuze, Nose; VT, T50E1
113	K27	Fuze, Nose; VT, T50E4
215	K29	Fuze, Nose, AN-M168(T91E1/91)
3065	K35	AN-M100A2 (ND)
483	K36	AN-M101A2 (.025)
219	K37	AN-M102A2 (.025)
30	L2	3.5" Rocket, Smoke, Complete Rd.
14	L2A	3.5" Head, Mk 6 (FS, WP or PWP)
14	L2B	AN-Mk 155
16	L4B	3.25" Rocket Motor Mk 16 Mod 5
10	L5B	AN-Mk 149
489	L6A	6.5" Rocket Head. (ATAR) Mk 2
173	L6B	5.0" Rocket Head, (ATAR) Mk 25
663	L8B	5.0" Rocket Motor, Mk 10-5
663	L9	Fin Assembly for 5.0" Mk2 &
30093	M1	20MM HEI, M97 (Mk 10
26853	M2	20MM INC, M96
21012	M3	20MM AP-T, M95
76225	M4	Link, 20MM M8E1 (M10)
680	M6	Cal. .50, API, M8
680	M7	Cal. .50, INC, M1
340	M8	Cal. .50, API-T, M20
1700	M9	Link, Cal. .50, A/C, M2
91900	M10	Cal. .50, Belted, (2-2-1)
56	P2	Flare, Parachute Mk5
8	P7	Flare, Parachute AN-M26
4	P13	Signal, Drift, (N) AN-Mk 5
131	P38	Bomb Ejtr. Ctg., Mk 1

PART IV BATTLE DAMAGE

A. Own

The ship sustained no battle damage. See reference (b), Air Attack Reports 394-52 through 452-52, for battle damage sustained by PRINCETON aircraft.

B. Enemy

See reference (b), Air Attack Reports 394-52 through 452-52 for damage inflicted upon the enemy.

PART V PERSONNEL

A. Performance

Performance of Ship's Company and Air Group personnel was outstanding.

B. Casualties

Ship's Company personnel suffered no casualties.

Two pilots were lost to enemy action; five pilots were grounded for short periods of time; two pilots were wounded in action.

4 October: LTJG Carl B. AUSTIN, VA-195, was wounded in action when his AD was hit by ground fire while he was participating in a close air support mission near Nop'yong. He suffered fragmentation wounds in the left side of the neck.

7 October: ENS Conrad L. NEVILLE, VF-192, was killed in action when his F4U was hit by enemy ground fire while he was participating in a close air support mission. The aircraft crashed leaving no chance of survival.

7 October: ENS John R. SHAUGHNESSY, VF-193, died as a result of enemy action after his F4U was attacked by a MIG-15 in the vicinity of Hungnam. ENS SHAUGHNESSY parachuted into the water and was recovered by the USS BOYD (DD-544). However, he had become entangled in his parachute shrouds and underwater rescue was necessary. When recovered his condition was grave. He died shortly after being rescued.

16 October: LT Charles G. HAMM, VF-191, was wounded in action when his F9F was hit by ground fire while he was participating in an armed reconnaissance mission. He suffered fragmentation wounds in both legs.

Summary of pilots lost from the Air Group from 4 October 1952 to 16 October 1952:

Deaths	2
Psychological	0
Injury	2
Disposition Board	0
Total	4

PART VI SPECIAL COMMENTS

A. Air Group NINETEEN

1. Operations

During the period 4 October through 16 October 1952, Carrier Air Group NINETEEN flew 805 sorties totaling 1,915 flying hours during eleven operational days. The average number of flights per pilot was twelve for jets and 5.8 for prop pilots. Average time in the air was 17.2 hours per pilot.

Operations during the first half of this period consisted of interdiction strikes on bridges and key targets in the enemy's communication and supply routes and destructive blows against concentrations of supplies and troops in areas south of Wonsan. During the latter half of the period emphasis was shifted to close air support missions on the western front and strikes in and around the areas of the Joint Amphibious Training Exercise on the east coast.

Several close air support missions were flown along the front lines in central and western sectors of the battle line. All flights in these areas were controlled by Air Force and Marine controllers. These controllers found it difficult at times to assign targets and expedite Navy missions due to the lack of forward controllers or mosquito escorts. Consequently, many missions were forced to orbit during a major portion of their scheduled time over target. It is recommended, therefore, that some targets of secondary importance well beyond the front lines in enemy territory be available to controllers for secondary assignment in order that close air support flights will not be delayed in their missions. It is also recommended that a definite sector of the front be assigned to the Navy for close air support in order to expedite missions, more thoroughly familiarize pilots with a definite area, and increase the overall efficiency of the mission and damage to the enemy.

Several attacks by enemy MIG-15's were encountered by PRINCETON strike groups in the Wonsan and Hungnam areas. The group doctrine of jet cover was immediately put into effect. Eight to twelve F9F aircraft were scheduled to accompany each major strike in this area. The jet cover was placed about one thousand to two thousand feet above the base

element of AD's which were flanked by close support VF propeller aircraft. Unscheduled post-strike reconnaissance flights were discontinued and the strike group remained intact and returned to the force as one element immediately after completion of a strike.

Strikes that were escorted by jet cover were not attacked at any time by enemy MIG's. The enemy seemed reluctant to oppose this type of a formation and preferred to jump a single division or less, making only one pass then breaking away sharply and leaving the area immediately. MIG attacks encountered were all in the Wonsan and Hungnam areas and were against flights unescorted by jet cover. Flights assigned northern coastal targets without cover successfully carried out their missions without enemy air opposition. This information indicates that the MIG's may operate only under the positive radar control which is available to them in the Wonsan-Hungnam area.

VF-192 augmented the VC-3 team on night heckler missions whenever day strike committments permitted in order to effect a six-plane flight for each launch. No difficulty was experienced in conducting these missions although several were flown in adverse weather. The radar installation in the F4U-5N gave the plane only a slight advantage over the F4U-4 for heckler missions and this advantage was limited to orientation at the coastline during bad weather. The "YE" and assistance from shipboard radar proved adequate for over-water navigation of the F4U-4 at night and no special equipment was required for air to ground attacks in the objective area. All pilots had had an average of four night carrier landings prior to deployment and, although in some instances the pilots had made no other night landings until they flew a dusk heckler mission three or four months later, no difficulty was experienced in coming aboard. It is felt that a pilot who has made four or more familiarization landings at night and has been engaged in nearly continuous day operations is capable of landing aboard at night with little difficulty--even though several months may have elapsed since his last night landing. This belief is substantiated by the fact that day pilots who had been flying regularly experienced less difficulty in coming aboard at night than night pilots who had not flown for several days. In this connection, it was also found that scheduling the night team pilots for day missions, to compensate for the relatively infrequent night operations, greatly aided their proficiency in the use of their primary weapons.

2. Maintenance

Very few maintenance problems were encountered during this tour in the operating area. There is still a shortage of some section "B" items, however, and only a few priority orders are being delivered by COD planes.

During the first operating period on the line many ignition system malfunctions were encountered. It was determined that a high percentage of these malfunctions was due to high engine temperatures brought about when pilots failed to open cowl flaps after landing and before shutting down the engines. Ignition troubles were reduced materially by turn-up of all aircraft on the flight deck for a thorough engine check following pinwheel operations. In several cases ignition trouble was caused by oil in the distributor and overhauled RB 19-R2 plugs.

The AD's and F9F's had few hydraulic difficulties, but about thirty-five percent of all discrepancies on the F4U's were hydraulic. Many of these malfunctions were due to line failures. All the unloader valves (R83 ELE-253J) received by the ship in one shipment were faulty and frequent changing of these valves was necessary until the stock became depleted. Because of the rather high incidence of hydraulic malfunctions on the F4U's, particular attention was given to the CO_2 emergency systems and the skid plates in the wheel wells were kept well greased. However, there were no failures in the emergency systems.

The most frequent engine trouble was encountered in the rocker-box cover gaskets and push-rod packings. By using two rocker-box cover gaskets instead of one, the useful life of a given rocker-box cover gasket was lengthened.

High operation oil temperatures were encountered in a few cases in the F4U's when the oil cooler shut-off valves stuck in the closed position. This trouble was due to infrequent use and was corrected by periodic checks, and cycling at least every sixty-hour check.

It was found that locally made metal or canvas boots used to cover the F4U brake hydraulic reservoirs prevented hydraulic fluid from being sprayed about the cockpit on catapult shots.

B. Gunnery Department

Attention is drawn to the lack of a satisfactory covering for interior steel decks. Decks at present are painted. In areas of heavy traffic the decks must either be left bare or painted every week. The non-skid treads laid during the last major overhaul lasted approximately four months. It is recommended that a survey of available plasitcs and similar materials now on the market be made to find a non-inflammable, tough, light, chemical resistant deck covering that can stand normal shipboard usage.

C. Medical Department

The health of the crew continued at its previous excellent level. There were no serious diseases or accidents. Two pilots were killed due to enemy action;

There were ten admissions to the Sick List for venereal disease.

Basic work, that is, X-rays, Blood Kahns, EKG's were completed on all officers for their Annual Physical Examinations.

There were four patients transferred from other ships for medical treatment; two cases were operated for appendicitis.

There were five major surgical procedures accomplished.

Infectious Hepatitis still remains one of the leading diseases. There were six admissions to the Sick List for this disease.

W. R. Hollingsworth
W. R. HOLLINGSWORTH

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Carrier Air Group 15
Carrier Air Group 17
Carrier Air Group 19
Carrier Air Group 101
Carrier Air Group 102
Carrier Air Task Group 1
Carrier Air Task Group 2
CO, FairBcTuPac (2)
CO, Composite Squadron 3
CO, Composite Squadron 11
CO, Composite Squadron 35
CO, Composite Squadron 61

STATISTICAL SUMMARY

AND

FINAL RECOMMENDATIONS

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USS PRINCETON (CV-37)

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FAR EASTERN TOUR

APRIL through OCTOBER 1952

A. Air Department-(Statistics for period 14 April through 16 October 1952)

1. Catapults

a. Total Shots - 3,217

Day Live Shots - 2,991
Night Live Shots - 216
Dead Load Shots - - 0
No Load Shots - - - 10

b. Pump Attrition

All the below pumps were replaced by SRF, Yokosuka. None of the port pumps required replacement.

Starboard pump No. 1 was replaced on 2 July 1952 after 1,967 shots.

Starboard pump No. 2 was replaced on 2 July 1952 after 1,616 shots.

Starboard pump No. 3 was replaced on 13 August 1952 after 1,764 shots.

Starboard pump No. 4 was replaced on 13 August 1952 after 2,287 shots.

c. Forged-Eye F9F Pendant (R9ONAF-313949-1)

Experiments were made with the new forged-eye F9F pendant and the arrester described in H4B Catapult Bulletin No. 92. These instruments were found to be generally unsatisfactory. Somewhat more success was achieved by use of an arrester designed by the crew. A full report is being made by RUDM.

d. New Launching Pressure System

The new launching pressure system (described by H4B Catapult Bulletin Nos. 88 and 92 - 100) was instituted during the first part of September 1952. This system is most satisfactory and a considerable improvement over former methods. It is flexible and materially reduces the possibility of error, particularly on night launches.

2. Arresting Gear

a. Total Landings - 7,338

Day - 7,257
Night - 81

b. Total Barrier and Barricade Engagements - 13

Prop Barrier - 6
Jet Barrier - -6
Jet Barricade -1

c. Description of Barricade Engagement

On 9 June 1952 at 1508I an F9F-2 (Bureau No. 123031) made what appeared to be a normal approach. The pilot received a late wave-off, which he attempted to take. The plane, however, began to stall and was consequently brought into the deck and the Barricade.

The resulting engagement tore out the Davis Webbing on B2 and B3 but did not actuate the barriers. The aircrafts's port tip-tank struck the port barricade stanchion and the plane engaged the barricade at a forty-five degree angle. A barricade arrested landing was effected: the airplane came to rest in an athwartships attitude abreast the forward edge of the deck-edge elevator. The pilot was uninjured.

d. General Comments

The crew has become adept in the maintenance and operation of the barricade. It has been found that most of the attrition on barricade webbings is due to routine deck traffic.

3. Aviation Ordnance

a. Equipment

The present allowance of rocket launcher firing circuit test kits is five for every twenty aircraft. It is felt that an allowance of six for every twenty aircraft would be more in keeping with actual operating conditions in the forward area.

It has been found that the present allowance of sixteen Mark 8 Mode 0 bomb skids is inadequate for operations in the forward area. An allowance of at least twenty, and preferably twenty-four, is considered more desirable.

b. Total Aviation Ordnance Expended 30 April through 15 October 1952.

QUANTITY	CODE	DESCRIPTION
510	K1	2000# GP
2195	K2	1000# GP
3264	K3	500# GP
10,033	K4	250# GP
6471	K5	100# GP
16	K8	350# Depth Bomb, AN-Mk 54
3345	K9	220/260# Frag.
1128	K12	100# INC Cluster, AN-M12
2275	K19	Fuze, Nose, AN-M103A1
16,583	K20	Fuze, Nose, AN-M139A1
1652	K21	Fuze, Nose, AN-M140A1
170	K23	Fuze, Nose, AN-M146
439	K26	Fuze, Nose VT, T50E1
163	K27	Fuze, Nose, VT, T50E4
680	K28	Fuze, Nose, VT, AN-M166 (T51E1)
1994	K29	Fuze, Nose, VT, AN-M168 (T91E1/91)
2432	K30	Fuze, Nose, AN-Mk 219
19,834	K35	AN-M100A2 (ND)
3238	K36	AN-M101A2 (.025)
2705	K37	AN-M102A2 (.025)
7	K38	M115 (4-5)
9	K39	M116 (4-5)
8	K41E	M123/A1 (24 hr)
17	K42C	M124/A1 (6 hr)
16	K48	Hydrostatic Fuze, Tail, AN-Mk 230
116	L1	3.5" Rocket, Solid, Complete Rd.
30	L2	3.5" Rocket, Smoke, Complete Rd.
14	L2A	3.5" Head, Mk 6 (FS, WP or PWP)
14	L2B	AN-Mk 155
162	L4B	3.25" Rocket Motor, Mk 16 Mod 5
322	L5B	Fuze, Nose, AN-Mk 149
2984	L6A	6.5" Rocket Head, (ATAR) Mk 2
322	L6B	5.0" Rocket Head, (ATAR) Mk 25

QUANTITY	CODE	DESCRIPTION
3377	L8B	5.0" Rocket Motor, Mk 10 Mod 5
3377	L9	Fin Assembly, F/5.0" Mk 2 & Mk 10
212;769	M1	20MM HEI; M97
202,882	M2	20MM INC, M96
172;800	M3	20MM AP-T, M95
593;138	M4	Link, 20MM M8E1 (M10)
346;335	M6	Cal. .50, API, M8
346;335	M7	Cal. .50, INC, M1
167;270	M8	Cal. .50, API-T, M20
1,859;940	M9	Link, Cal. .50, A/C M2
69;700	M10	Cal. .50 Belted, (2-2-1)
10,836	N1	Napalm, Type 1 or M3
206	N2	Igniter; M15 or M215
206	N4	Igniter, M16 or M216
396	N6	Fuze, M157
242	N7	Gas Tank, F51 Type
50	N8	Fire Bomb, Mk 78 Mod 1
255	N10	Xylenol
158	P2	Flare; Parachute; Mk 5
8	P3	Flare; Parachute; Mk 6
18	P5	Flare, Parachute, Mk 8 Mod 2
202	P7	Flare; Parachute, AN-M26
20	P9	Light, Float, A/C AN-Mk 6
139	P13	Signal, Drift, (n), AN-Mk 5
913	P38	Bomb Ejector Cartridge, MK1

Approximately eleven million pounds (5500 tons) of aviation ordnance, costing about $3,616,000, were expended. In comparison, during the PRINCETON'S first combat tour in the Korean War, 17,840,322 pounds (8,920 tons) of aviation ordnance were expended from 5 December 1950 to 10 August 1951.

c. Personnel

It was found that the allowance of AO's for the VC-35 Detachment (using VAN aircraft) was inadequate to meet the demands of operating schedules and conditions in the forward area. This situation, however, was very satisfactorily remedied by consolidating the VC-35 Ordnancemen with VA-195 Ordnancemen under the direction of the senior Chief Aviation Ordnanceman. The solution also increased the overall productivity of current on-board man power and proved extremely practicable and workable.

4. Gasoline

This ship has experienced considerable delays in connecting aviation gasoline hoses when preparing to replenish from Fleet Tankers (AO's). Among descrepancies noted were:

a. Heavily rusted couplings
b. Steel blank flanges and steel bolts.
c. Bolts and nuts with damaged threads.
d. Defective quick-release couplings.
e. Jury-rigged tricing gear.
f. Excessive amounts of trapped gasoline in the delivery hoses.
g. Quick-disconnect couplings attached to the hoses with the handles on the bottom.

It is recommended, therefore, that AO's sustaining Task Force SEVENTY-SEVEN be furnished good quick-disconnects and brass bolts and nuts for servicing aircraft carriers.

During large scale defueling operations, and especially in heavy weather and typhoon conditions, the defueling pumps have proved inadequate. A larger capacity fuel pump or vacuum set-up for the present fuel system should be devised to enable all stations to de-gas simultaneously.

The total amount of aviation gasoline (130/145) burned for the period was 3,398,180 gallons. The total amount of lubrication oil (Navy Spec 1120) used was 21,589 gallons.

5. Flight Deck

Nylon tie-down lines, as developed by the USS VALLEY FORGE, have been used extensively on jet type aircraft throughout this cruise. It has been found that they offer faster action, more strength, and far more durability than the tie-down reel or twenty-one thread line. It is recommended that nylon tie-down lines be manufactured and put on the allowance list for all CV-9 and CV-27-A class carriers.

6. Aircraft Maintenance

No unusual difficulties were encountered during the past tour of operations. Quick engine change units were kept built-up and ready for installation at all times. Spare parts were always accessible and the number of AOG aircraft was

kept to a minimum. Cooperation between the Air Group and V-4 Division maintenance crews was splendid and a high availability of aircraft was maintained during the entire tour.

QUICK ENGINE CHANGE UNITS BUILT-UP

R-3350-26W	6
R-2800-18W	11
R-2800-32W	2

AERO PROPELLERS ASSEMBLED AND ISSUED

12

HAMILTON STANDARD PROPELLERS REPLACED

F4U-4	17
F4U-5	2

7. Rolling Stock Maintenance

Difficulty was experienced in obtaining certain spare parts for tractors and SZEKELY three-wheeled jeeps. Spark plugs for these vehicles were extremely hard to obtain, but plugs on hand were kept in a usable condition. Other small items, such as carburetor kits, points, condensors, and coils, were also hard to obtain.

8. Aircraft Electronics Maintenance

Aircraft Electronics Technicians experienced difficulty in obtaining vacuum tubes for the UPM-8 test equipment used to maintain the APX-6 Mark 10 identification equipment.

No spare replacement parts could be obtained for the TS-419-U electronics signal generator. No replacement equipment was available either, with the result that emergency repairs had to be done with similar parts from other units.

The maintenance of the AN/APS-31B radar equipment was slowed down and made difficult by the lack of proper test bench components. Time delay in the arrival of these parts placed a burden on maintenance personnel and added to the department's work load.

9. HU-1 Unit NINE

Month	Flights	Hours	Availability	Passengers	Cargo	Rescues
April	41	21.0	100%	2	10#	
May	176	59.8	97%	65	770#	
June	196	107.0	100%	57	900#	2
July	203	103.4	100%	33	1210#	1
August	156	64.7	100%	73	1115#	
September	117	77.6	100%	35	2250#	
October	185	66.6	100%	81	2820#	
Totals	1074	500.6	99.6% (Average)	346	9075#	3

B. Air Group NINETEEN

1. Summary of Total Aircraft Sorties

	MARCH-APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	TOTAL
CLOSE AIR SUPPORT				21	12	71	124	228
NGF SPOT		27	24	10	12	22	12	107
STRIKE		529	1024	673	439	723	322	3710
COMBAT WEATHER								
RECONNAISSANCE			2	4	4			10
RES CAP				8				8
HECKLER		41	40	64	17	23	40	225
PHOTO		35	55	43	21	53	30	237
PHOTO ESCORT		35	48	43	19	48	29	222
ARMED RECONNAISSANCE		16	30	129	52	73	116	416
TAR CAP						16	8	24
RCM-ECM			8			17		25
OTHER COMBAT							8	8
LSP		30	46	46	15	27	22	186
GATOR		29	46	47	16	25	22	185
CAP		179	229	195	80	164	32	879
TRAINING	1087	145	48		49	26		1355
FERRY		7	7	36	20	14	62	146
SLOW TIME		10	16	19	11	9	5	70
TEST		8	5	4	4	3	8	32
ABORT		16	9	15	10	7	13	70
TOTAL	1087	1107	1637	1357	781	1321	853	8143

TOTAL COMBAT	6470
TOTAL NON-COMBAT	1673
TOTAL	8143

2. Intelligence

When deployed, the Air Group had a full complement of Air Intelligence Officers. At the end of the second tour on the line the Air Intelligence Officer of Fighter Squadron 192 returned to the United States for discharge. Due to the Air Group's heavy flight schedules, the vacating of the billet put an unnecessarily heavy work load on the other squadron Intelligence Officers and the CVG Air Intelligence Officer. It is recommended that all Air Intelligence Officers being deployed have sufficient obligated service to insure that they will complete the cruise.

It is also recommended that all Air Intelligence Officers report to their squadrons at least three months prior to deployment to WesPac. Such a measure should insure the acquisition of pre-deployment intelligence materials and the completion of prescribed lectures and training for the pilots.

In the case of Air Intelligence Officers that have had no previous operational experience, it is further recommended that the program of sending these officers to one of the carriers in the operating area one month in advance be continued. If possible, these officers should spend the majority of this advance period with the units they are to relieve. This indoctrination would give them access to the most experienced carrier in the operating area and would provide ample time to arrange for future transfer of necessary operational intelligence materials.

During the first tour on the line Ready Room Three installed a curtain on rods to screen off the rear part of the ready room. Chairs were placed in a square in this area and it has since been used for de-briefing. The arrangement has proved highly satisfactory and permits the conducting of simultaneous briefings and de-briefings in the same ready room without interference.

Ready Room One, used by the jet squadron, also was set-up with a briefing and de-briefing area in the rear of the ready room. This arrangement has been made because approximately seventy-five percent of all jet hops are composed of eight planes or less. The rear rows of seats have been turned so that they face aft and thereby provide ample space for these small briefings. The set up also provides the Air Intelligence Officer with a permanent working area.

Some provision should be made for Squadron Air Intelligence Officers to have two-drawer file safes in their

ready rooms for Secret and Confidential materials. Squadrons should requisition these safes well in advance of deployment.

3. Pilot Survival

a. Briefing

Survival hints were made a part of the briefing for each mission of this command. The hints covered survival equipment and techniques together with the best available information and procedures regarding evasion and escape. If for no other reason, these daily hints were considered extremely valuable in that they kept the pilots continually survival-conscious.

b. The ADSK-1 Droppable Survival Kit

This kit should be issued as a summer kit only. The necessary gear to modify it for winter use can then be issued in less quantity and placed in the kits to modify them for winter use. This procedure would also result in a saving of the kits and gear.

The .30 caliber carbine contained in the kit could well be replaced with a rifle such as the Air Force "Hornet" .22 caliber. This change would give lower costs for both weapons and ammunition. If such substitution is not feasible, then the carbine might well be modified for better packing by the method used by the USS ESSEX and recommended in their Action Report for the period 18 July - 4 September 1952.

Five of these kits were dropped by this command during the period in the forward area. None were recovered to determine the damage, if any, resulting to the contents. All were dropped either accidentally or jettisoned to save the aircraft.

A container for the gear should be included as part of the kit. Such containers, which could also be used for knapsacks, were manufactured by the ship's paraloft out of light weight canvas, thirty-six inches long and 13.5 inches in diameter with a zipper opening.

c. The AN/CRC-7 and AN/PRC-17 Survival Radios

These radios are considered to be too bulky to

serve satisfactorily for all-purpose survival. They are not well adapted for carrying on the person along with the other gear that is required. In addition, much difficulty has been experienced in keeping them operating. It is again recommended they be replaced with a lighter and more compact radio that can be carried comfortably on the person. The pilots feel such a radio would be much more suited to survival purposes and that personal issue would result in greater reliability due to the better care given it by the man to whom it is issued.

d. Carrying of Survival Gear:

Further consideration regarding the carrying of survival gear is indicated. A method of carrying the necessities for survival on the person is mandatory, particularly in the Korean Theater of combat. Pilots feel that since the period on the ground immediately after bailing out is so critical, there is not enough time to go through a pararaft and pick up all the needed equipment. Many have suggested the back pack, such as was used in World War II, as a possible answer.

The supporting carrier should be issued greater quantities of those items which are generally lost after a bailout or ditching, such as helmets, gloves, sheath knives, and compasses. Pilots find it difficult to obtain a re-issue after return to the ship due to the limited quantities allowed on board as reserve stock.

e. PK-2 Raft

Rations and hand paddles should be put back into the pararaft kit. Hand paddles are particularly needed, especially during the winter months when the water is extremely cold.

VF-191 developed a small knapsack for the PK-2 that is placed within the container itself. It holds all the gear of the kit and is easily removed, assuring the pilot the immediate availability of all his equipment if time is limited. It is recommended that it be colored green for summer use and white when snow is on the ground.

f. Other Recommendations:

The pilots have recommended that signal mirrors be made a part of the standard equipment of the Mae West life jacket. Most of them have modified their present Mae Wests to carry a mirror.

A locally manufactured tourniquet and an ammonia capsule have been placed in the cockpit of each plane for emergency use. One pilot was wounded in the arm by small arms fire and made use of the tourniquet to stop the bleeding. The tourniquet is made of webbing about thirty-six inches long with a five-inch loop on one end for easy one-handed application to an arm or leg. The pilot who was injured stated that one-hand application was quite simple because of the loop.

Some pilots have made a practice of wearing their goggles, unattached oxygen masks, and scarves during their runs for greater protection from flak or pieces of plexiglass in the event of a hit in the windshield. Several have stated that such a practice saved them from more serious injury when they were hit.

Summer flight suits and anti-blackout suits were found to be excellent camouflage aids when on the ground. Our downed pilots wore both suits and used the one that blended best with the terrain. The anti-blackout suits were also found to be excellent flotation gear in the water.

g. Helicopters:

It is recommended that helicopters have some kind of distinguishing painting for better visibility from above. RESCAP pilots experienced difficulty at times in keeping the helicopter in sight when accompanying it in for a rescue. One suggestion is that bright spots be painted on the rotor blades, a step which would appear to make colored circles when a helicopter is in flight.

Pilots have recommended that the rescue helicopter carry smelling salts to aid pilots in counteracting faintness or dizziness after pickup and a blanket to help the rescued pilot stay warm after a water rescue.

It is strongly recommended that helicopters and ships be made available in the general area of strikes, especially when the strikes are conducted at a long distance from the carrier. On strikes conducted in the northern area of Korea, pilots were, on occasion, at such a great distance from helicopter assistance that recovery would have been delayed for some time.

Web tabs have been installed on parachute harness buckles (as outlined in the proposed technical order

of BuAer letter 54438) and found to be very helpful. Pilots who ditched following installation of tabs reported a greater ease in loosening the harness because of the tabs.

h. Survival Exposure Suit MK III.

Many pilots have voiced complaints concerning various features of the Mk III exposure suit. One major complaint concerns the bulkiness of the suit. It is doubted that much can be done to eliminate the bulkiness, have the suit do the job for which it is designed and still allow the pilot any freedom of movement in his plane. It is believed however, that the new Mk IV suit will answer most of the complaints satisfactorily.

i. Comments:

Fundamentals should never be overlooked in survival. All-pilot meetings were held at the beginning of each tour on parachute descent and landings, getting out of the parachute, ditching, inflation of life vests, helicopter techniques, and evasion and escape techniques.

Since entering combat operations this command has suffered the loss of twelve personnel, has two missing in action, and has had twenty-three instances of pilot recoveries after aircraft have been shot down. One pilot lost was recovered following a successful bailout from his plane but succumbed to asphyxiation by drowning shortly after his recovery. It is felt that these losses would have been higher were it not for the excellent training, teamwork, and courage shown by downed pilots, RESCAP pilots, and helicopter pilots.

The pre-deployment survival training with the bailout trainer proved of immense value to pilots who were forced to jump. It is recommended that indoctrination and practice in the use of survival gear, particularly signaling devices, be periodic and involve field problems whenever practicable.

Pilots have shown a high interest in survival and evasion and escape during the period this command has been in combat. This interest is only natural since it is vital to their successful return if they should be forced down in the water or in enemy territory. The concensus of pilot opinion is that as much time as possible should be alloted to survival and escape and evasion pre-deployment training.

has to date processed, typed and forwarded approximately 650 requests for ship's company personnel for change of duty, schools, shore duty, and overseas shore duty.

2. Marine Detachment

The Marine Detachment has realized practically a one hundred percent turnover of enlisted personnel during the period covered due to the Marine Corps' policy establishing the tour of sea duty as two years. Of the sixty-four enlisted personnel compromising the detachment, forty-five have been transferred to the continental United States for reassignment, while forty-six others have been received as replacements. Of those persons remaining in the detachment who were aboard the ship when it departed the United States for the Western Pacific area, eleven are either presently awaiting execution of detachment orders or were aboard only a short time prior to PRINCETON's departure from the United States.

During the period covered by this report, the Marine Department has had eighteen promotions:

One First Lieutenant to Captain

One Second Lieutenant to First Lieutenant

One Staff Sergeant to Technical Sergeant

Seven Sergeants to Staff Sergeants

Four Corporals to Sergeant

Four Privates First Class to Corporal

In addition, three enlisted personnel have been recommended and accepted for officer candidacy.

3. Religious Activities

With both a Catholic and a Protestant Chaplain on board, the spiritual needs of the ship were ministered to adequately. In addition, members of the Church of Latter Day Saints organized themselves into an active group. Total services were held as follows: Catholic, 251, Protestant, 191, Latter Day Saints, 31. The two Chaplains alternated in offering an evening prayer at the commencement of the nightly news broadcast each evening in the combat area. Various discussion groups were held, including a series of twelve forums on the religious, psychological and economic aspects of family life.

4. Morale

Morale is considered to have been very high throughout the operating period. The long periods on the line curtailed many recreational activities. Movies were shown nightly with two showings given each night that operations prohibited use of the hangar deck. Upon the formation of the O-L Division, the band was relieved of lookout duties and able to perform more often. The band played a total of 137 concerts on board. In port, full use was made of the special service hotels; approximately six hundred enlisted and 230 officer reservations were utilized. Tours to places of interest in Japan were organized, including a two-day climbing trip to Mount Fuji. An intra-division/squadron athletic tournament was organized, and competition was provided in softball, baseball, golf, swimming, horse shoes, and tennis.

5. Public Information

The volume of work in the public information field has been steadily increasing. To provide for more effective public relations, the command has established a Public Information and Morale Board consisting of one Lieutenant Commander from the ship's company, one Lieutenant Commander or Lieutenant from the Air Group when embarked, and two ship's company junior officers. This board further serves as the Awards Board. The following material was prepared:

One hundred sixteen Daily Press dispatches

Thirty-five General Feature stories

One hundred twelve Fleet Hometown News stories

Every crew member aboard will have a home town press release forwarded prior to arrival in the United States.

Seventy-eight Fleet Hometown News still pictures

Forty-four general still pictures

Twelve issues of "Slipstream", the ship's newspaper.

One hundred seventeen issues of the Morning Press News

6. Information and Education:

The Information and Education Program has almost tripled in activity during the period covered by this report. The ship is a USAFI testing center, and 203 men are currently enrolled in USAFI correspondence and self-teaching courses. About 215 General Education Development Test batteries (one thousand seperate tests) have been administered. The Chief of Naval Personnel, in a letter dated 10 September 1952, commented favorably upon this large volume of educational work.

D. Dental Department

The activity of the Dental Department was of routine nature during this period. All demands upon the department were satisfied, and a good coverage of ship's complement plus air group was attained. In spite of an over full appointment schedule, the demand for treatment was at no time so overwhelming that thorough, high grade dentistry had to be sacrificed for speed.

The following statistics indicate a good average for the dental facilities and conditions prevailing in this type ship, and are commensurate with the time available after deductions for drills, training programs, and other non-productive intervals:

Number of	During Period	Average per month
Patients treated	1582	264
Visits	3923	654
Restorations	2705	451
Extractions	457	91
Gingival pathology cases	116	19

Seven patients were treated and returned to other ships in the force.

The only weak link in treatment occurred in the prosthetic phase of dentistry, since all such cases had to be referred to shore establishments. The dental prosthetic department of the U.S. Naval Hospital, Yokosuka, cooperated to the limit of its capacity throughout the period but was able to complete only about seventy-five percent of the prosthetic requests.

At the midway point of this period an exceptionally high incidence of gingival pathology was noted. Treatment for

these cases is time consuming, and danger of contamination is greatly enhanced aboard ship via coffee messes, crowded spaces, et cetera. In seeking the cause, it was ascertained that only a very hard nylon-type tooth brush was available aboard ship. Instruction in proper tooth-brush technique was, therefore, instituted. Subsequently, and with the arrival of a softer type brush, a fifty percent decrease in gingival treatment requirements was noted. It is felt that this program was well worth the time and trouble, and is recommended for the consideration of other units.

E. Engineering Department

1. Statistics (Period 14 April-16 October 1952)

Miles traveled (engine miles)	54,360
Gallons of fuel oil used	10,097,775
Barrels (42 gallon) of fuel oil used	240,423
Gallons of fresh water used	20,006,615
Gallons (by meter) of fresh water made	18,223,705
Average water consumption (in gallons) per day per man	19.28
Number of days on water rationing	18

2. Personnel

The Engineering Department has maintained an excellent state of readiness. Some difficulties are present, however, in the personnel set-up. The on-board personnel in the Electrical Division has been less than necessary for efficient operation. Boiler maintenance, an around-the-clock job in port, has prevented men of "B" Division from having a normal amount of liberty since that division also is undermanned. The operating schedules and the necessity of split plant operation do nothing to alleviate this situation. Furthermore, the capacity of the evaporators coupled with the limited storage available for feed and fresh water (5.6 days for the former and 2.7 days for the latter) leaves a very small margin of safety.

3. VHF/UHF Antennae

During the initial part of the last operating period the ship experienced considerable difficulty with VHF/UHF communications. The largest percentage of these difficulties was a result of shielding of the antennae in use by the ship's structure. A strong, clear signal would fade, or sometimes

completely disappear when the relative bearing to the transmitting ship was changed. To remedy this situation a pair or transmitters and receivers using antennae located on opposite sides of the ship were set up for each of the following channels: Primary Tactical; CI Net; UHF RATT. Each pair was keyed simultaneously and the audio was paralleled. The arrangement proved most satisfactory and almost eliminated the directional difficulties.

F. Gunnery Department

1. Summary of Gunnery and Deck Seamanship Evolutions

Fired Gunnery Practices on 20 separate occasions.	
Number of underway replenishments.	29
Total gallons of aviation gasoline received.	2,663,724
Total gallons of fuel oil received.	10,735,498
Total gallons of aviation lub oil received.	13,460
Total tonnage of provisions received. .	647.1
Total number of times provisioned.	7
Total tonnage of aviation type ammunition received.	6,030.12
Rounds fired during gunnery practices	
5 inch.	947
40MM.	17553
Total number of personnel transferred to or from destroyers.	398
Total number of destroyers refueled:	
Days.	11
Nights.	27

During the period covered by this report, 398 personnel and approximately seven tons of light freight plus 695 movies were transferred to and from destroyers. The highest single personnel transfer took place on 29 August 1952, when sixty-eight men were transferred to the USS ROGERS (DD 876) in one hour and thirty-nine minutes, after dark.

During the latter period of Air Operations some signs of operational fatigue were observed, that is, increased anxiety as to minor physical complaints and more frequent request for temporary grounding. It is felt, however, that this anxiety is no more in excess than that shown by similar groups undergoing final operations, and that the leadership and understanding were outstanding. Morale among the pilots remained very high. This Air Group has suffered the loss of eleven pilots and one crewman killed and two pilots missing in action. Nine pilots were returned to the ship for medical treatment for enemy-inflicted wounds. There were 114 pilots temporarily grounded, three appeared before a disposition board, two were permanently grounded, one required retraining within the Squadron, one was returned to the United States for retraining and one pilot declined further aviation assignments.

LT R.S. GRAHAM, MC USN, ComNavFE Staff, visited the ship on 20 September 1952 in relation to Venereal Disease problems encountered in the Japan area.

During the ship's period in port from 20 September 1952 to 28 September 1952, eighty-five personnel gave blood to the Blood Bank at U.S. Naval Hospital, Yokosuka, Japan.

It is felt that a combat period of three weeks is the optimum period. After this length of time minor accidents are more prevalent on the part of both Air Group and Ship's Company-especially flight deck handling crews.

It is felt that more equable rotation could be exercised in the assignment of Medical Guard. During the ship's last rotation in port, PRINCETON had the Medical Guard for the last two nights in port and on the first day of return after thirty-five days on the line. This, regardless of the fact that a Hospital Ship was anchored in the stream.

H. Navigation Department

The various journeys "to and from" were uneventful and unnoteworthy in a navigational sense. In the Operation Area, LORAN was used extensively and successfully, and use of the DRT, during operations of a nature to prohibit an accurate "manual" DR plot, was noted as valuable and surprisingly accurate.

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Actual employment during the dates of 14 April through 18 October was as follows:

On the line	108 days
Enroute (to and from) Yokosuka and Operating Area	30 days
Alongside Piedmont Pier, Yokosuka	31 days
Moored to buoy, Yokosuka	20 days
Anchored, Yokosuka.	5 days

The Officer of the Deck training program may be of interest to other commands. The PRINCETON emerged from the un-enviable position of having only one officer fully qualified to stand OOD watches in a fast carrier Task Force, to the enviable one of having seventeen officers fully qualified. Over twice that number of Junior Officers received extensive experience. This program, aimed at the qualification of OOD's and the rounding out of qualifications for more senior officers, consisted of an organized program of practical instruction combined with related study and actual experience for both Ship's Company officers and interested members of the Air Group. The program was built around an "OOD Instruction Folder", promulgated by the Navigator, which consisted of three parts:

1. A study guide section covering:

Applicable Publications.
Maneuvering Board.
Communications (interior and exterior).
Radar (practical usage).
Engineering Plant Capabilities.
Navigation Bridge Familiarization.
Emergency Bills.
Steering Gear.
Air Operations.
Replenishment.
Relationship between the Commanding Officer; Executive Officer, OOD, Conning Officer, CIC Watch Officer, Engineering Officer of the Watch, et cetera.
The Log.
Administration of the Watch.

2. A guide to administration of the watch.

3. An Emergency Bill folder, listing specific action for designated emergencies.

By supplementing this folder with tours, lectures, and actual experience, a large number of officers were trained together, and a high degree of interest was maintained.

The program was considered a success on this ship, and it has received considerable recognition throughout Task Force SEVENTY-SEVEN, AirPac, and the Pacific Fleet.

I. Operations Department

1. General

During Ready Carrier periods in port, it is recommended that refresher air operations, anti-aircraft firing, air to air gunnery, Ground Controlled Intercept exercises with the Air Force, et cetera, be conducted while the ship is enroute to the operating area. This program can be accomplished by sailing one to two days ahead of the assigned schedule, thereby not only giving the ship and air group a longer unbroken maintenance, upkeep, and rest and recreation period, but also presenting to the operating area a ship and air group recently refreshed in all respects and ready to return to full scale operations.

Upon the arrival of the PRINCETON, in Yokosuka, the ship had no copies of Commander Task Force SEVENTY-SEVEN's current Operation Order, Carrier Division Instructions, or Commander SEVENTH Fleet's Operation Order. Copies of Commander Task Force SEVENTY-SEVEN Operation Order and Commander SEVENTH Fleet Operation Order were finally obtained from the ANTIETAM, but not in sufficient quantity to satisfy the needs of a ship newly arrived in the area.

Recommendation:

a. That each carrier enroute to operate with Task Force SEVENTY-SEVEN pick up in Pearl Harbor ten copies of Commander Task Force SEVENTY-SEVEN Operation Order, one copy of Commander SEVENTH Fleet Operation Order, and five copies of COMCARDIV ONE, THREE, and FIVE Standard Operating Instructions. Upon the return of the ship to Pearl Harbor, the subject publications would be turned in for re-issue to the next deploying carrier.

b. If the above recommendation is not practical, it would seem wise to insure that each carrier being relieved have on board the number of recommended copies ready

to turn over immediately to the relieving carrier.

c. Regardless of how many copies of each publication are issued, one copy of each should be issued to each carrier on a permanent custody basis.

Throughout the entire period of operation in Korean waters all carrier division staffs held daily conferences for one Ship's officer and one Air Group officer. This daily conference was of inestimable value to the Ship and Air Group and it is strongly recommended that this practice be continued by all carrier division staffs as long as feasible.

Each time this ship returned to Yokosuka for availability, and rest and recreation a conference with Commander Fleet Air Japan was arranged by dispatch to take place on the day of arrival in port. The ship in turn prepared a complete list of items to be discussed, broken down by departments, which was distributed to all attending parties at the beginning of the conference. This system proved fruitful to both the ship and ComFairJapan Staff and is recommended for all carriers operating in the Korean area.

2. Aerology

a. Weather

With the exception of days when the ship was under the influence of frontal systems or storms, flying conditions were average to good. Storms occurred on the following dates: 28 through 31 July, 19 August (typhoon "Karen"), 22 and 23 August, 3 and 4 September (typhoon "Mary"), and 10 and 11 September 1952.

Maximum temperature - 87 degrees F. (25 July 1952)
Minimum temperature - 47 degrees F. (4 May 1952)
Average temperature - 71 degrees F.
Maximum sea temperature - 86 degrees F. (16 Aug 1952)
Minimum sea temperature - 44 degrees F. (4 May 1952)
Average sea temperature - 71 degrees F.
Maximum wind velocity - 74 knots (3 September 1952, Typhoon "Mary")
Minimum wind velocity - calm
Average wind velocity - 11.6 knots
Prevailing wind direction - southerly

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Prevailing wind direction - southerly

b. Communications

Facsimile-reception in general was good. There was some interference from CW transmissions and during periods when the ship was in the area of a storm.

Reception of radio-teletype, Guam, was good but coverage of Korean area in weather broadcasts was incomplete for our purposes. Radio-teletype, Tokyo, reception was good except when storms or active fronts existed between Tokyo and the operating area. Coverage of Korean area reports by Tokyo was good.

The Mk 37 and Mk 56 directors were successfully used for rawins (upper winds taken by radar).

The radiosonde receiver was given a complete check while in port (August). Performance of the radiosonde receiver since the check has been very good.

c. Comments and Recommendations

It was possible to receive Guam (radio-teletype) approximately ninety percent of the time, although Guam did not have all the desirable reports. It was not possible to receive Tokyo (radio-teletype) all the time, although that station transmitted the maximum number of reports. Tokyo was received sixty percent of the time.

All weather information obtained from a de-brief after a PRINCETON strike was always sent to Commander Task Force SEVENTY-SEVEN but de-brief weather from the other carriers was not exchanged between the carriers or sent to the PRINCETON by the Task Force Commander. It is recommended that all debrief weather be exchanged between carriers within the Task Force.

The ship failed to receive CTG 95.11 (carrier force off the west coast of Korea) three and six hour reports. This group was in a position to report frontal systems approaching from the west before reaching Korea.

Radio facsimile reception was as noted above. Data, however, was a bit old. The information being transmitted was for the use of the fleet--primarily the fleet off Korea. In view of this, more detail and accuracy should

be shown in this area. Moreover, a speed-up in obtaining, analyzing, and transmitting data is necessary to make up-to-date information available. It is understood that this is being attempted with the establishment of a Fleet Weather Central at Yokosuka, Japan.

It is recommended that each carrier, as it comes out to this area, have its Aerological Officer visit the Fleet Weather Central at Yokosuka to obtain the latest information on radio and facsimile schedules, as well as other sources of weather information. It is imperative to obtain latitude and longitude positions of reporting ships and current code names for areas covered by established aircraft weather reconnaissance.

3. Combat Information Center

A new technique for radar piloting and navigation during Sortie and Entry has been experimented with and proved effective. Very accurate ranges and bearings can be obtained continuously by using both Mk 25 radars, one radar being kept locked on a target while the other is being coached to a new target. Selection of targets that are isolated and can be used in critical periods, such as shallow water passes, narrow channels, or approaches to anchorages is the most important consideration in using this method of radar piloting. Surface search radar, however, should be used at all times to check the accuracy of fixes obtained by the Mk 25 and to provide information in the event of failure of the Mk 25 system.

The URD (VHF/DF) equipment has been utilized with excellent results to assist in identification and location of strikes and friendly aircraft.

In an effort to promote a more efficient relationship between CIC and Officers of the Deck, five CIC Officers have been qualified as Officers of the Deck Underway and the remainder are in the process of qualifying. It is planned that all Officers of the Deck will become qualified as CIC Surface Watch Officers.

matic tube carriers in use at the present time are not considered adequate. Average tube carrier life in the operating area is approximately six weeks. Twelve of these carriers were overhauled by the joint efforts of the Sail Locker and Cobbler Shop personnel in an effort to obtain a more suitable closing cover. They were not successful, however, despite the reasonable amount of care that was exercised in the handling of these carriers; the metal container invariably cut through the leather hinge and finally severed it. It is believed that with a quick-release metal cap--either threaded or snap-in type--the useful life of the pneumatic carrier would be increased ten-fold.

d. Visual Communications

Since the FOX flag was in constant use, it was found helpful to rig two additional halyards. These halyards, one port and one starboard, were rigged from the radar platforms directly down to the after end of the flag bags and well clear of the yardarm halyards. They are used exclusively for the FOX flag and insure no interference with flaghoist signals.

Greater use is recommended of the flashing light and "Nancy" in the transmission of administrative traffic. They would serve to lighten the circuit load and, in many cases, expedite the delivery of radio traffic. To make full use of these methods, it is necessary to insure that all CWO's are fully indoctrinated and that originators are familiar with the relative speed of visual and radio transmissions after consideration of the precedence and group count involved.

In order to insure positive liason between the Conn, CIC, and the Signal Bridge and to insure a minimum of interference with other stations, these three stations were set up separately on the JX circuit. As a result, use of the 23 and 24MC units was reduced to a minimum. The noise level on the bridge was reduced and prompt verification of all tactical signals to the OOD was accomplished with a minimum of interference and effort on the part of all concerned. Furthermore, the JX talker on the Signal Bridge intercepted all formation and maneuvering data, thereby providing at all times an accurate surface plot for the use of the Signal Bridge.

The following figures represent the volume of traffic handled by visual means during the period 15 April - 15 October 1952:

	In	Out
April	236	156
May	338	258
June	291	260
July	447	336
August	343	337
September	245	270
October	150	53
	2050	1670

Grand Total 3720

e. Post Office

(1) Statistical Summary

Incoming: 1922 mail bags containing:

over one-half million letters.
54,000 parcels and newspapers.

Outgoing: 2910 mail bags containing:

over 600,000 letters and small parcels.
450 large items (such as cases of china).

Stamp Sales: $17,483.26

Money Order Sales: $424,336.06

(2) Recommended Operating Procedures

The word was passed on the LMC at 1600 as to mail closing time the day prior to replenishment.

An available area on the hangar deck was roped off and division signs suspended to facilitate and expedite sorting of incoming replenishment day mail. Members of the Marine Detachment and Division Mail Petty Officers assisted in the sorting. The average replenishment mail measures 324 cubic feet.

Money orders were sold in the ward-room as well as at the Post Office throughout payday.

5. Photo Interpretation

The large distribution of photography required of each carrier during the entire 1952 cruise has imposed a tremendous work load on both the photographic laboratory and the photo interpretation unit. As a result, the quality of the prints turned out has been greatly reduced and the Photo Interpreter has not been able to utilize the material received from other ships.

It is recommended that only a selected distribution be made to the various staffs and that none, except on unusual occasions, be made to other ships. The only need for other ships' photography has been in the preparation of target mosaics for briefing purposes. This need would be entirely eliminated if the Photo Interpreter on the staff of the Task Force Commander could furnish these mosaics with the target plan or if the various ships were assigned targets covered by their own photography. This system was successfully implemented during the last part of the cruise.

It is believed that a reduction in the present distribution would result in a saving of time and funds and would greatly increase the efficiency of the Photo Interpreter and Photographic Laboratory.

6. Photographic Laboratory.

During the 1952 tour of duty in the Far East, the Photographic Laboratory of the USS PRINCETON has experienced difficulty with the A-10A Aerial Film Dryers (Stock No. E18-D-791-2). The original switches burned out in a very short time and were replaced by heavy duty switches furnished by the Ship's Electrical Shop. Eventually the new switches also burned out and as a final solution "500 V 30 AMP" switches were attached to the bulkhead adjacent to the dryers. This arrangement solved the problem but proved to be very impractical.

The furnishing of photographs for the ship's Cruise Book and the Public Information Office plus the unexpected arrival of "VIPs" and survey groups necessitated a large expenditure of flash bulbs.

For the report of one survey group flash photographs were taken requiring over 150 flash bulbs.

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On certain items such as Sonne Paper, 16MM movie film; enlarging paper (used for flak touraids and K-25 negatives), hypo, developers D-72 and D-19, the allowance had to be exceeded to furnish the necessary photographs required by the Air Intelligence Office. A recommended allowance for the Korean Area has been submitted by this command.

The following film and paper were expended to Air Intelligence and Photo Squadron VC-61, Detachment "E" during this cruise:

NEGATIVES	PRINTS
9 x 9 - 19,530	9 x 9 - 168,522
8 x 10 - 317	8 x 10 - 5,275

16MM TYPE G MAGAZINES (EXPENDED TO VF-191, VF-192, VF-193, VA-195)

Black and White - 1,562
Color - 479

J. Supply Department

1. Summary Data:

a. Aviation spare parts and material

Number of individual requests from squadrons per month.	852
Number of such requests filled from stock on board per month	799
Number of such requests passed to other sources supply:	
Allowance list items.	19
Non-allowance list items. . . .	45
% efficiency, over-all.	84.8%
% efficiency for allowance list items	97.5%

Major components issued operating period:

Engines.	21
Wings.	13
Propellers	21

b. General Stores and non-aviation repair parts

Individual issues per month. . . 1705
Monthly average of items received aboard from all sources:

General stores. 215
Ship's repair parts 65
Electronics parts 515

c. Commissary

Receipts at sea . . . . . 708 tons
Receipts in port. . . . . 693 tons

Ration data:

Value rations served $677,751.83
Value stores consumed $677,751.83
Average cost of ration 1.2554

d. Ship's Store and C&SS:

Ship's Store	Average per month
Cash from sales.	$35,494.00
Sales at cost price.	$29,752.00
Inventory at cost price. . . .	$48,279.00
Stock-sales ratio.	1.62
Net Profit	$ 4,097.00
Profit percentage.	13.8%

Clothing & Small Stores

Cash from sales.	$11,146.00
Inventory.	$31,669.00
Stock-sales ratio	2.8

2. Foreign Merchandise

A conservative policy of buying foreign merchandise was followed. Relatively small quantities of each item were ordered, then re-ordered if demand warranted. That no single item should exceed five hundred dollars on any one order regardless of the unit price, was the rule of thumb followed. The three sources of foreign merchandise employed

were: purchases from Central Purchasing Office, GHQ, Far East Command, Tokyo (interpreted by NSSO to be equivalent to purchases from Army Exchanges); purchases from International Merchandise Co., Yokohama, on MCAB orders not exceeding $500; and transfers from Ship's Stores ashore and other ships. Statistics on foreign purchases are as follows:

Total foreign merchandise procured	$50,000
Purchases from Central Purchasing Office	$15,000
Purchases from International Mdse. Co.	$14,000
Receipts by transfer from other Supply Officers	$21,000
Total markdowns taken on mdse. procured	500