

LIBRARY

(NPM 1546)

NR7

DECLASSIFIED

REGISTER NO. 24187

This publication is
no longer required
to be retained in the list
of the Registered Publications of the

7166
205

CURRENT DOCTRINE

BATTLESHIPS

U.S.E. 12

PREPARED BY:
COMMANDER BATTLESHIPS,
BATTLE FORCE
OCTOBER 1938

REGISTER NO.

RESTRICTED

Date

From:

To : Chief of Naval Operations
(Registered Publication Section).

Subject: USF-17, Register No., receipt for.

1. Receipt of USF-17, Registered Number is hereby acknowledged.
2. This copy has been checked with list of effective pages and agrees in all respects.

.....
Signature of Holder.

REGISTER NO.

RESTRICTED

Date

From:

To : Chief of Naval Operations
(Registered Publication Section).

Subject: USF-17, Register No. receipt for

1. Receipt of USF-17, Registered Number is hereby acknowledged.
2. This copy has been checked with list of effective pages and agrees in all respects.

.....
Signature of Holder

CONFIDENTIAL

REGISTERED NO. 2697

AT-3(4181)

**UNITED STATES FLEET
BATTLESHIP, BATTLE FORCE
U. S. S. WEST VIRGINIA, Flagship**

**San Pedro, California,
8 November, 1938.**

From: Commander Battleships, Battle Force.

To: 1 HOLDERS OF UNF-17.

Subject: Current Doctrine, Battleships, (UNF-17).

1. The publication, Current Doctrine, Battleships has been prepared in accordance with directives from the Commander-in-Chief, United States Fleet.

2. Current Doctrine, Battleships, is a confidential publication and shall be handled and accounted for as prescribed in the current edition of the Registered Publication Manual. All reports of loss, transfer, destruction, or compromise shall be made to the Chief of Naval Operations.

3. When not in actual use UNF-17 shall be given class "C" storage, as defined in Registered Publication Manual. It is not to be carried in aircraft for use therein. The methods of transportation authorized for UNF-17 are prescribed in Navy Regulations and the Registered Publication Manual.

4. IT IS FORBIDDEN TO MAKE EXTRACTS FROM OR TO COPY THIS PUBLICATION WITHOUT SPECIFIC AUTHORITY FROM THE COMMANDER-IN-CHIEF, EXCEPT AS PROVIDED IN ARTICLE XIX(d) OF THE CURRENT EDITION OF THE REGISTERED PUBLICATION MANUAL.

5. This publication becomes effective upon receipt.

**J. W. GREENGLADE
Vice Admiral
Commander Battleships, Battle Force**

CONFIDENTIAL

UNP-17
Original

RECORD OF CORRECTIONS

[illegible]

CONFIDENTIAL

**UNF-17
Original**

**LIST OF EFFECTIVE PAGES
(All Page Numbers Are Inclusive)**

<u>Page</u>	<u>Change No.</u>	
I	Original	Letter of Promulgation
II	Original	Record of Corrections
III	Original	List of Effective Pages
IV	Original	Table of Contents
V	Original	Foreword
1	Original	Chapter I
2 to 9	Original	Chapter II
10	Original	Chapter III
11	Original	Chapter IV
12	Original	Chapter V

CONFIDENTIAL

**UNP-17
Original**

TABLE OF CONTENTS

	<u>Page</u>	<u>Article</u>
Letter of Promulgation	i	
Record of Corrections	ii	
List of Effective pages	iii	
Table of Contents	iv	
Foreword	v	
 Chapter I		
COMMAND AND OPERATIONS.		
Section 1. Command.		2101
Section 2. General Doctrine for Action.		1201
 Chapter II		
BAZES FOR ACTION.		
Section 1. General.		2101
Section 2. Main Batteries.		2301
Section 3. Secondary Batteries.		2501
Section 4. Antiaircraft Batteries.		2401
 Chapter III		
AIRCRAFT.		
Section 1. General.		3101
 Chapter IV		
DAMAGE CONTROL.		
Section 1. General.		4101
 Chapter V		
SHORE BOMBARDMENT.		5101

CONFIDENTIAL

UNY-17
Original

FORNWORD

(WTP 143, Page X, Forward)

The orders, instructions and principles enunciated in the various Department and Fleet publications are designed to lead to mutual understanding. This publication is issued to supplement, for battalions, the general instructions and doctrine contained in the War Instructions to the end that ship and Division Commanders may act in all situations to accomplish the mission of the battle line and of battalions. These actions will more probably succeed if a state of mutual understanding exists and forms the basis for the actions taken.

The Battalion Instructions and Orders for Tactics, Damage Control, Gunnery, Engineering, Aircraft and Communications are generally adequate to impart such mutual understanding.

To provide for certain situations wherein previous knowledge of conditions cannot be foreseen, thus making it impossible for Commanders to provide the detailed action to be taken, additional doctrine is set forth herein. They will not repeat specific doctrine for the many technical activities but will be restricted to those doctrine most closely allied to command. They do not purport to cover all situations which may arise, hence will be augmented as necessary demands.

CONFIDENTIAL

USF-17
Original

CHAPTER I.
COMMAND AND OPERATIONS.

Section 1. COMMAND.

1101. Battleship Command Doctrine is enunciated in YTP 143, paragraphs 504 to 507.

Section 2. GENERAL DOCTRINE FOR ACTION.

1201. Battleship General Doctrine for Action is enunciated in YTP 143, paragraph 524.

CONFIDENTIAL

UNF-17
Original

CHAPTER II.

BASIS FOR ACTION.

(FTP 148, paragraphs 900-932 and 1275-1287)

Section 1. GENERAL.

§101. The doctrine referenced above provides the general basis for action by battleships of the battle line. The basis for action set forth herein will govern under circumstances described, in the absence of modifying instructions or orders from superior authority.

§102. Battleship units operating independently or as station units in a disposition will in case of light force, submarine, or aircraft attack take measures for defense and for quick development of gun fire comparable to those laid down for the battle line in UNF-16 Articles 5303 and 5304 and in UNF-11.

§103. It may be expected that, normally, battleships will be protected by an adequate screen when at sea during war. Only in the most unusual circumstances should battleships be at sea without adequate screening forces.

§104. Whether screened or unscreened, it is essential that measures be taken to:—

- (a) Prevent the observation of the disposition or formation by the enemy during day-light.
- (b) Determine the position of enemy light forces which may threaten the disposition or formation during the night.
- (c) Evade an enemy night attack by changes in course and speed after the enemy has had his last opportunity before dark to obtain the position, course and speed of the disposition or formation.
- (d) To reduce the hazard of submarine attack by the use of high speed, zig zag, and air patrol.

§105. Circumstances such as low visibility, restricted waters, lack of observation aircraft, or lack of screening forces may prevent any of the steps listed above from being taken. The necessity for extreme vigilance and instant readiness to repel attack is then paramount since an attack by enemy light forces may be initiated as a complete surprise or, even if an attack be expected, the time of the attack and the direction from which it may come may not be anticipated.

§106. If such a surprise attack be made, the disposition or formation should be maneuvered to nullify the attack. If this be impracticable, the disposition or formation should be maneuvered to prevent the attacking light forces from obtaining a favorable position from which to fire torpedoes.

§107. The formation of the battleships will depend upon the presence or absence of the screening forces, the nature and strength of the attack expected, and the weather and visibility conditions. If screening forces are present, the formation of the battleships will further depend upon the strength and suitability of the screening forces and the nature of the disposition.

§108. Under the most favorable weather and visibility conditions, the formation of the battleships should be such that it may be maneuvered with facility to evade attack, or to prevent enemy light forces from gaining a favorable position to attack. Line of division guides with each division in column appears most suitable under these conditions. When reduced visibility exists or is probable, line of squadron guides, with each squadron in column seems to be more suitable than line of division guides, since the freedom of maneuver is only slightly curtailed, more sea room is available, and the battleships may be retained in an orderly formation with less difficulty. Under conditions of low visibility or fog, in restricted waters, or in other circumstances when the

CONFIDENTIAL

USP-17
Original

continuity of the formation is a primary consideration and its control would otherwise be difficult, column of division guides, each division in column, is probably the best formation for battleships. When zig zapping, the line of bearing of ships of the evolution units should not be the same as the base course of the zig zag. (See paragraphs 2317, USP-10).

2109. Maneuvering circuits should be kept clear for the prompt maneuvering of the battleships by radio.

2110. The conditions of readiness prescribed by Commander Battle Line shall be the minimum conditions permissible in any ship. It does not imply that any division commander or commanding officer may not direct a higher condition to be set within his command. Readiness for Action Condition One and Material Condition Zed shall be taken without order if action is imminent.

2111. It is anticipated that enemy destroyers will attempt to approach the battleships to the closest range necessary to deliver an effective torpedo attack whether the battleships are screened or not. Cruisers, equipped with torpedoes, may take similar action, or other cruisers may force their way through the screen.

2112. As soon as practicable after battle or an action each battleship, having due regard for radio and visual conditions in effect, will report to Commander Battle Line, via its immediate superior, the following information:—

- (a) Rounds of ammunition remaining per gun,
 - (1) Main Battery,
 - (2) Secondary Battery,
 - (3) Antiaircraft Battery.
- (b) Serviceable guns in each battery.
- (c) Maximum speed that can be made.
- (d) Number of serviceable aircraft.

When made visually General Signals will be used. Commander Battle Line will report to the O.T.C.

Section 2. MAIN BATTERIES.

(FTP 143, paragraphs 524 (c), (d), (e) and 1278)

(FTP 143, Chapter XII, Section IX)

DAY.

2201. The initial method of fire will be selected from one of the following:

- (1) Selected level,
- (2) Selected cross level,
- (3) Continuous aim.

Direct fire will normally be used in opening an engagement, but when the use of the main batteries is imminent, ships shall have all means of controlling fire ready for use.

2202. The fire distribution of the main battery is usually ordered by signal from the Commander Battle Line. Commanding Officers and officers controlling the fire must be so expert in interpreting these signals and instructions that there will be no delay in their execution.

2203. When Commander Battle Line or the O.T.C. does not designate otherwise, Division Commanders and Commanding Officers will use the following fire distributions for main batteries:—

- (a) Number of own ships less than enemy:
 - Single fire from own van and divided fire from own rear.

CONFIDENTIAL

USF-17
Original

(b) Number of own ships equal to that of enemy:
Single fire throughout.

(c) Number of own ships greater than enemy:

Double concentrations from own van and single fire from own rear. Triple concentrations will not be employed unless there is more than a two to one ratio in numbers of own versus enemy ships.

(d) Changes in fire distribution:

(1) Enemy ship or ships drop out:— Ship or ships firing on a target that drops out will continue to fire on her as long as guns will bear for effective fire, after which a new target will be selected in accordance with the foregoing instructions.

(2) Own ship drops out:— A Division Commander losing a ship will immediately re-distribute his division fire to cover the same enemy ships as were previously covered by his division until a new fire distribution is indicated. Ship dropping out will fire at available targets in line with general directives expressed above.

(3) Enemy maneuver causes relative positions of targets to shift:— Continue fire on old target as long as an enfilade or overlapping of enemy ships exists, then shift to new target using normal rules for fire distribution.

(4) Part of enemy line obscured (other than momentarily):— (A) Ships with target in view continue fire, ships with target obscured shift to visible target, following the normal fire distribution given in the preceding paragraphs. Commander Battle Line will, if the situation warrants, order a new fire distribution. Ships be prepared to again engage original own targets should they reappear. (B) Airspot available:— Continue to fire on same target as long as effective indirect fire can be maintained.

2204. Upon receipt of the General Bearing Line, all turrets and fire control instruments will be trained on the bearing and search made for the enemy. Tracking will be commenced as early as possible. Until General Bearing Line is indicated, the fleet axis will be assumed as the best bearing on which to train turrets as a preliminary step of readiness.

2205. Rapid fire should not be ordered until hitting gun range and hitting deflection have been established with reasonable accuracy. At indirect fire, in particular, the rapid fire order should be withheld until straddles are obtained. On shifting to indirect fire, after fire has been opened by direct methods, rapid fire should be continued until:—

(a) (When plane spots are available) —

A spot greater than one half pattern size becomes necessary.

(b) (When plane spots are not available) —

Fire control information becomes sufficiently inaccurate to preclude possibility of hitting. Three salvoes, at the most, — (about two minutes) — should be the extent of fire after ability to spot is lost.

2206. In concentration fire, when spotting projectiles are being used, ships will proceed without regard to each other, as in the case of single or ship-for-ship fire. When spotting projectiles are not used, ships in concentration will fire in rotation beginning with the concentration leader, but no ship will wait appreciably more than one half salvo interval for a preceding ship to take its turn. When ships are firing in rotation, a ship must not fire a salvo within five seconds of another ship's salvo.

2207. Concentration dials will be kept set to the present range at all times.

2208. INDIRECT FIRE. When opening fire, with the visibility less than the gun range, each ship should use the true bearing and range information obtained by the planes assigned for this purpose. Ships receiving such information will insure that it is passed on to the other ships requiring it.

CONFIDENTIAL

USF-17
Original

Normally, all ships within range should open fire with all turrets. In order to conserve ammunition, Commander Battle Line may at his discretion order partial salvoes to be fired. Rapid fire will be used under the same conditions as to M.P.I. error as specified above for Direct Fire.

2209. USE OF MAIN BATTERY TO DESTROY ENEMY LIGHT FORCES AT ANY TIME BATTLE LINES ARE NOT ENGAGED. Should enemy light forces project themselves within effective range of our own main batteries when the battle lines are not engaged, Commander Battle Line may, if existing circumstances warrant, direct certain ships to employ their main batteries against such targets. Should it be evident to the flank division commanders that effective action can be taken before the main batteries will be required for use against the enemy battle line, they may open main battery fire on the light forces without orders from Commander Battle Line.

The division commander in the van, when Commander Battle Line is not such, and the division commander in the rear should inform Commander Battle Line if the above situation as regards enemy light forces develops on their respective flanks.

The decision to use the main batteries should be made after consideration of:—

- (1) The need of holding main battery fire for instant use against the enemy battle line.
- (2) The necessity for conserving main battery ammunition.
- (3) The choice of targets that will most effectively support the efforts of our light forces and inflict the maximum damage.

2210. USE OF MAIN BATTERY AGAINST LIGHT FORCES CONCENTRATING IN VAN OR REAR. During an action in which the enemy effects a concentration of light forces in the van in a threatening position, or in the rear for attaining a favorable position in event of a countermarch, and in such strength that our light forces are unable to effectively oppose them it may be expected that Commander Battle Line will:—

- (a) When battle lines are equal numerically, order the van or rear division to shift their forward or after turret groups, respectively, onto the threatening light forces.
- (b) When our battle line is superior, order van or rear ships to shift their entire fire to light forces in such a manner as to maintain at least ship for ship fire in the battle line.

Until it is manifest that one's enemy battle line opponent is defeated, a division commander or commanding officer should not shift fire to light forces except on order of Commander Battle Line or to counter a greater menace. All effective ships in the enemy battle line must be kept under fire.

NIGHT.

2211. The main battery shall be prepared to open fire in the shortest possible time, but resulting damage to planes must be weighed before ordering the after turrets to open fire. The best fire control plan shall be set, normally an aloft director in train, and director VI (plot) in control of elevation and firing circuits. Guns shall not be loaded with powder but ammunition trains shall be filled.

At night the antiaircraft battery shall be prepared to provide illumination for the main battery by illuminating projectiles. One antiaircraft gun is normally sufficient as it is expected that the target will be initially illuminated by the screen. Searchlights shall be standing by.

2212. At night the main battery shall normally be employed as follows:—

- (a) Against a battleship or battle cruiser use the entire battery.
- (b) Against a cruiser, if it has penetrated to the inner screen, and the battleship's position has been disclosed, use forward group only. Use of the after guns of the main battery is permissible only when the necessity therefore out-weighs the need of retaining aircraft intact for subsequent use.
- (c) A battleship brought under fire by a capital ship or cruiser before fire distribution signals have been made shall open fire without orders with all or part of the main battery as may be required by the circumstances.

CONFIDENTIAL

USF-17
Original

Section 2. SECONDARY BATTERIES.

DAY.

2201. When the battle line is deployed, the division will be the unit for fire distribution of secondary battery fire against cruiser and destroyer attack. In repelling any attack both divisions and ships will distribute fire so that units nearest the van will fire on enemy units in the direction of the van, thus avoiding cross fire and failure to cover all targets.

2202. Division Commanders will open fire against enemy light forces attaining effective attack positions as soon as they are within range. Generally, fire will be initiated by the leading division of the battle line. Divisions in the rear shall not hesitate to initiate the fire if it appears that the leaders are not doing so, or if the leaders are engaging other targets. Rear divisions shall assist in the fire whenever they can effectively do so.

2203. The fire of a division will not be shifted from a target under effective fire unless the target will remain under effective fire of another division or unless a greater menace which cannot be coped with by an unengaged division develops.

2204. When light forces are not threatening, secondary batteries should be trained on and ready to fire into sectors where torpedo plane attacks are most likely to develop.

2205. Fire against periscopes should be by single guns or small groups as it may be initiated profitably only to indicate the presence of the submarine to screening destroyers, planes, or other ships in company.

2206. Collective fire with each battery controlled from a forward director will be the normal initial condition.

NIGHT.

2207. At night, if attacking enemy destroyers or cruisers are engaged by our screen their position will be disclosed by the resulting illumination and gun fire.

2208. Battleships should open fire on attacking destroyers as soon as they come within effective range if it appears that the attacking destroyers have sighted the battleships. This will usually be after the destroyers have broken through the inner screen and when screening ships will not be endangered by own fire. The secondary battery should normally be used against attacking destroyers, but the antiaircraft or even the main battery shall be used if the situation warrants.

2209. Battleships should open fire on attacking cruisers as they come within effective range generally after the cruisers penetrate the screen to the vicinity of the inner line of screening ships, and only if the battleships position has been disclosed to the enemy.

Normally the secondary battery only should be used against attacking light cruisers, but as secondary battery gun fire on destroyers must be given preference over its use on cruisers, the forward guns of the main battery should be used on the cruisers when the situation so demands (see Article 2210 (b)).

2210. Battleship division commanders should normally initiate gun fire on attacking destroyers and cruisers by directing their flagships to open fire. Other ships of the division should follow the lead of the division flagship without orders. When immediate necessity requires, the commanding officer should open fire without waiting for the division flagship to open fire.

2211. Battleships should not illuminate attacking destroyers unless illumination by screen is inadequate. Illumination by star shell should be used first followed if necessary by searchlights. The latter should not be used to search for attacking cruisers and destroyers.

CONFIDENTIAL

USP-17
Original

2312. Battleships should not use searchlights to illuminate attacking destroyers:—

- (a) Unless illumination by screen and own star shell is insufficient, and,
- (b) Until it appears that attacking destroyers have sighted the battleships, and,
- (c) Until they have come within effective range.

2313. Battleships should not normally use searchlights to illuminate attacking cruisers but should use star shells for this purpose if the illumination is otherwise insufficient for gun fire.

2314. Fire Distribution.

- (a) Fire distribution should be without signal.
- (b) The unit for fire distribution should be the battleship division.
- (c) Crossing searchlight beams and crossing fire short of the target must be avoided.
- (d) All destroyers and all cruisers which should be fired upon in accordance with Article 2302 should be taken under fire, battleships dividing fire as necessary for this purpose.
- (e) Over concentration on a single destroyer should be avoided.
- (f) If battleships are maneuvered while engaging destroyers or cruisers, they should continue to fire on the same targets as long as the batteries can bear and the fire is effective.

2315. Division Procedure.

In the succeeding articles, the battleship formation is considered to be composed of more than two battleship divisions. The basis for action given therein should be followed in general for one or two divisions in the formation.

2316. Column of Divisions—Each Division in Column.

(a) If attacking destroyers break through the inner screen forward of the beam of the leading battleships in column, and if it appears that they have sighted the battleships, the leading battleship of the leading division should open fire on the attacking destroyers and each battleship of that division should open fire in succession, the battleships in the van shifting their fire forward and firing on successive destroyers or destroyer groups as they come within sight. Other battleship divisions should take up the fire in succession as the division next ahead shifts its fire toward the van and leaves an advancing target uncovered. Only the rear division should continue to fire upon destroyers which have passed the beam of the rear battleships.

(b) If attacking destroyers break through the inner screen abaft the beam of the rear battleship division, the destroyers should be fired upon by the rear division and the fire taken up in the same manner as described above.

(c) If attacking destroyers break through the inner screen approximately abeam of the battleship formation the battleship division adjacent to them should initiate the fire.

2317. (a) If cruisers penetrate the screen and reach a position where they should be fired upon in accordance with Article 2309, battleship divisions should fire on them in the same manner as described in Article 2316 for fire against destroyers.

(b) If the main batteries are used against cruisers on both flanks, the third division in column should fire on the same side as the leading division and second and fourth divisions in column should fire on the opposite side from the leading and third divisions.

(c) Normally not more than two divisions on a side should employ main batteries against cruisers.

2318. Line of Divisions.

(a) The flank divisions should open fire on destroyers approaching on any bearing between dead ahead and dead astern on the side away from the other divisions of the formation.

CONFIDENTIAL

USF-17
Original

(b) The interior division or the two interior divisions should open fire on destroyers approaching from dead ahead to either bow or dead astern to either quarter which are not under fire of the two flank divisions. Fire should be discontinued before adjacent battleship divisions are endangered.

(c) The same procedure should be followed in firing on cruisers penetrating the screen.

2319. Line of Squadrons — Each Squadron in Column.

In opposing attacks by cruisers or destroyers, each squadron should open fire and pass the fire from one division to the other in the manner described for the battleships when in column of divisions.

Gun fire must be discontinued on bearings and at ranges which would endanger the other squadrons.

2320. Line of Bearing of Divisions, or Line of Bearing of Squadrons.

(a) In maneuvering from line of divisions or line of squadrons to evade a torpedo attack, the formation may become one of those listed in this heading. The relative bearing of units of the battleship formation and the units of the screen will change. Battleships must be alert to these changes in relative bearings, and avoid firing on own battleships and screening ships. This injunction also applies for changes of course of fleet by station units.

(b) In opposing attacks by enemy destroyers and cruisers, while in these formations, and the line of bearing of division guides or squadron guides is greater than 185°, battleships should take as a basis for gun fire distribution the procedure described for column of division guides, each division in column.

(c) If the line of bearing is less than 185°, battleships should take as a basis for gun fire distribution the procedure described for line of division guides.

2321. Maneuvers.

(a) As division commanders or commanding officers of individual battleships stationed singly may be in a better position to determine when and on what courses torpedoes have been fired, they should maneuver their units to avoid torpedoes within such limits as will not endanger other vessels.

(b) Individual battleships, and battleship divisions acting as station units, should in general follow the procedure of Articles 2314 to 2320 as regards fire distribution, either in relation to other station units if acting singly, or to the other ships in the division if the division is the station unit.

Section 4. ANTI-AIRCRAFT BATTERIES.

2401. During simultaneous coordinated attacks priority of fire for batteries is normally as follows:—

- 5" A.A. Battery —**
- (1) Strafing planes in their initial dive,
 - (2) Horizontal bombers,
 - (3) Dive bombers,
 - (4) Smokers,
 - (5) Torpedo planes.

- Machine Guns —**
- (1) Strafing planes,
 - (2) Dive bombers,
 - (3) Torpedo planes.

The Secondary Battery may be used against torpedo or smoke laying planes if not otherwise engaged.

CONFIDENTIAL

USP-17
Original

2402. Battle lookouts shall be augmented by the lookout organization of the 5-inch antiaircraft and machine gun batteries and control stations. Lookout sectors in azimuth and elevation are assigned back in current Battleships Gunnery Instructions.

Officers in charge of battle lookouts and antiaircraft lookouts shall be constantly vigilant that sectors are properly observed.

THE SPECTACLE OF AIRCRAFT DISCOVERED AND UNDER FIRE SHOULD NOT BE PERMITTED TO DISTRACT THE ATTENTION OF LOOKOUTS. THEY SHOULD KEEP CONSTANTLY ALERT TO DETECT ANY NEW ATTACKS.

2403. The division is the unit for the distribution of antiaircraft fire.

Engage targets that are major menace to own unit.

If repelling a formation engage nearest target first.

Ships should not use divided fire except when ships are acting singly and simultaneous attacks are widely divided.

Open fire at maximum effective range. Do not delay opening fire to attain small refinements of tracking.

Fire on retiring aircraft as long as there is probability of hitting unless another attack formation is approaching.

2404. Night Antiaircraft Fire. Since the best defense against aircraft is concealment, antiaircraft fire should be avoided unless conditions of bright moonlight, effective use of flares by the enemy, or engagement of own battle line with surface craft have disclosed the position of the battleships. If it becomes necessary for battleships to open fire with the antiaircraft guns and thus reveal their position, conditions may favor use of searchlights to blind pilots or to assist in gun fire.

2405. In Conditions TWO and THREE, half the antiaircraft battery and control stations will be manned at all times. To reduce the watch load, personnel not actually manning communications or on lookout on the guns, should be allowed to sleep on stations at night. The times of greatest danger of an attack are in morning and evening twilight. The entire battery should be fully manned at all times when attack is probable, from one hour before sunrise to a half hour after, and from one half hour before sunset to one hour after, or for such periods as will assure full protection throughout the twilight period.

2406. When air attacks are imminent the antiaircraft batteries should normally not be used for any other purpose than to repel such attacks. When air attacks are not imminent antiaircraft guns may be used to assist main and secondary batteries.

2407. The distribution of antiaircraft fire requires quick action, alertness, and good judgment. Generally, the fire of one division should be ample to repel a single attack. If an attack is being effectively stopped by such fire, other divisions should reserve fire for probable coordinated or successive attacks.

2408. When more than one division is firing on an attack already in progress, and a new attack develops which requires a division to shift fire, the shift will be so made that cross fire will not result.

CONFIDENTIAL

**USF-17
Original**

CHAPTER III

AIRCRAFT

(FTP 143, Chapter X, Section XIV)
(FTP 143, paragraphs 1104 and 12-123 to 12-127 (na.)
(FTP 143, Chapter XII, Section XV)
(USF-74 and 75)

Section 1. GENERAL.

§101. The instructions for Observation Aircraft are so closely involved with their tactics that they have been principally placed in USF-74 and 75.

§102. The decision of Commander Battle Line as to time, relative to deployment, of launching battleship observation aircraft will be governed by the following considerations:--

- (1) The necessity for completing the launching prior to opening fire,
- (2) The necessity for completing the launching prior to being fired on,
- (3) The necessity for their use as scouts or patrols during the approach, deployment, or battle,
- (4) The probable duration of the impending action,
- (5) The urgency for obtaining early information,
- (6) The availability of relief spotting planes.

Generally observation aircraft required for spotting gun fire will be launched at the latest moment before opening fire consistent with their ability to reach spotting stations on time.

§103. The decision of Commander Battle Line as to launching and recovery of VO anti-submarine patrol will be governed by the following considerations:--

- (1) The nature of the disposition and other protection available,
- (2) The necessity for conserving planes for observation of gun fire,
- (3) The extent of the submarine menace,
- (4) The imminence of the main engagement,
- (5) The available time and opportunity to recover the planes.

The minimum number of planes consistent with effective patrolling will be launched. When patrols are relieved, new patrols will invariably be launched prior to recovering old patrols.

§104. The decision to recover planes and the method to be used when in the presence of the enemy will be governed by the following considerations:--

- (1) The nature of the enemy opposition,
- (2) The state of the weather and sea,
- (3) The effect of the recovery on the tactical situation,
- (4) The effect of non-recovery on morale,
- (5) The effect of the loss of planes on future operations.

In submarine waters the "C" recovery method provides a satisfactory zig zag plan.