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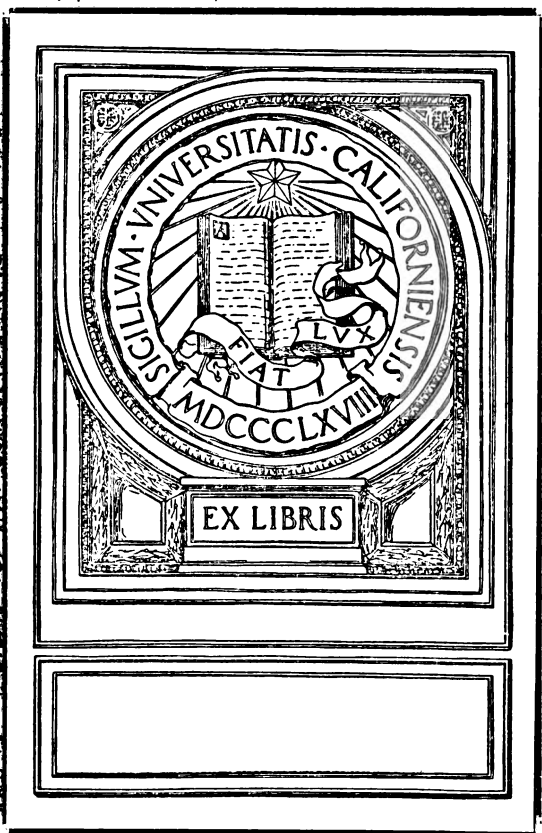
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WATCH OFFICER'S MANUAL

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WATCH OFFICER'S MANUAL

UNITED STATES NAVY

1917

BY

ENSIGN C. E. HOVEY, U. S. N.

REVISED AND ENLARGED

BY

LIEUTENANT S. ENDEL, U. S. N.

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ANNAPOLIS, MD.

THE UNITED STATES NAVAL INSTITUTE

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Price \$1.10. postpaid.

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J. W. CONROY,
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PREFACE.

This volume is the result of an endeavor to collect and put in a compact form those details appertaining to deck duty which will be found necessary or convenient to an officer carrying on a watch. While every line officer in the service is cognizant of most of the details, it is because they are so nearly infinite in number as to be easily forgotten that an attempt to compile them was begun.

The regulations, as far as they concern the officer of the deck, are quoted in full; many of the notes were found scattered through various professional publications; and the balance consists of those small practical facts, hints and suggestions, not given elsewhere, which must generally be learned by actual experience on deck.

With the generous permission of Lieutenant R. A. R. Plunkett, Royal Navy, and Captain Jas. A. Moss, U. S. Army, I have taken a few notes from their respective books. And I am indebted to several officers of the U. S. Navy for many of the notes and for reading and correcting my manuscript.

C. E. H.

U. S. S. "MINDORO," COTABATO, P. I., January 20, 1911.

PREFACE TO 1913 EDITION.

The present edition having become exhausted, it was deemed advisable to revise the manual in accordance with the new Navy Regulations and Naval Instructions of 1913. The extracts from the regulations have been renumbered accordingly and corrections made as found necessary. The numbers refer to the articles and paragraphs thereof, and the letters "R" and "I" to Navy Regulations and Naval Instructions, respectively. The original text has not been altered except where errors due to recent changes in the regulations were found.

It is hoped that in the revised form the manual will prove of greater use to young watch officers.

A. K.

PORTSMOUTH, N. H., July 24, 1913.

PREFACE TO 1917 EDITION.

This revision of the Watch Officer's Manual, by the late Ensign Charles E. Hovey, U. S. Navy, is made in an effort to enlarge the sphere of usefulness of the original work; to realize to the fullest extent the possibilities of the original author's ambition to benefit the service, for which he laid down his life; and to correct the text which is now inconsistent with the changes due to time.

In attempting this revision a great amount of new matter was available, which necessitated a complete rewriting and rearrangement of the applicable subject matter in its relation to the new material.

The following books were consulted:

Modern Officer of the Watch, Lieutenant R. A. R. Plunkett, R. N.

Whispers from the Fleet, Admiral Sir Christopher Cradock, R. N. C. B.

Fleet Signalmen's Handbook, Lieutenant Byron McCandless, U. S. N.

My thanks are extended to Commanders G. W. Laws and J. W. Green-slade, U. S. Navy, for reading and correcting the manuscript of this volume and for their many suggestions.

S. ENDEL.

U. S. ATLANTIC FLEET, May 25, 1917.

INTRODUCTION.

This book is a compilation of matter relating to watch keeping for use as a ready reference by the officer of the deck; if found valuable for the above, it will have served its purpose.

S. ENDEL,

Lieutenant, U. S. Navy.

U. S. ATLANTIC FLEET, May 25, 1917.

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PERSONALITY AND AUTHORITY OF WATCH OFFICER AND OFFICER OF THE DECK.

Personality.

- 2508 I (2) "The officer of the deck is the officer on watch in charge of the ship."

Responsibility.

- (3) "The officer of the deck shall be responsible for the safety of the ship, subject, however, to any orders he may receive from the commanding officer."

Authority.

- (4) "Every officer or other person on board the ship, whatever his rank, who is subject to the orders of the commanding officer, except the executive officer, shall be subordinate to the officer of the deck."

Day's Duty.

An officer standing the day's duty, under proper authority of the commanding officer, is the watch officer having the day's duty. If, however, junior officers are standing regular deck watches under him, the watch officer having the day's duty can only exercise his authority through such officers of the deck whom he is authorized to relieve at any time.

Readiness for Duty when Standing Day's Duty.

A watch officer standing the day's duty shall be ready to appear the moment his presence is required and he shall receive all reports direct regardless of where he may be; he shall also be on deck from "all hands" in the morning watch until after "taps," except during meals.

Attention to Duty.

- 2602 R (2) "He shall remain in charge until regularly relieved and shall not engage in any occupation which may distract his attention from duty."

Time of War.

- (8) "In time of war, or when hostilities may be expected, he shall not make any dispositions that will interfere with the immediate use of the armament. If at any time he sights a suspicious ship or other object that may, by any possibility, have a hostile purpose, he shall instantly make preparations for battle, and inform the commanding officer."

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Signals, Lookouts, etc.

- (9) "He shall not make any official signal, either by day or by night, without authority from the commanding officer, except to warn ships of immediate danger. He shall see that a good lookout is kept for signals; that none are answered until understood; and that the authorized appliances for making signals of all kinds are at hand and ready for use, night and day. He shall see that all signals and official messages, including those transmitted orally, sent or received, are immediately entered in the signal record book, noting the time and the vessel or vessels or station to or from which the signal was made. Upon being relieved he shall sign the signal record for the time covered by his watch. On board a flagship the duty of keeping the signal record shall be performed by the personal staff of the flag officer."

Petty Officer Inspections.

- (13) "He shall see that the petty officer, or corporal of the guard, or other person detailed for the purpose, makes the rounds of the ship, visiting all accessible parts below the main deck every half hour after 10 p. m., and until all hands or the idlers are called in the morning. During these rounds the petty officer, or corporal, is to inspect the lights and the prisoners, and see if irregularities of any kind are taking place, reporting the result to the officer of the deck. The latter shall also require a junior officer of the watch, if there be one, to make these rounds every two hours, or oftener if necessary, when his services on deck can be spared."

Routine Book.

- 2603 R (1) "The officer of the deck shall carry out the instructions laid down in the routine book, the weather and other circumstances permitting, modifying them as may be necessary to comply with the orders of the commanding and executive officers."

Motions of Senior Ship.

- (2) "When the bell or bugle of the flag or senior ship can be heard, ships shall follow her in striking the bell and in sounding routine calls."

Instruction of Junior Officers.

2809 R "The officer of the deck shall carefully and patiently instruct the junior officers and crew in their respective duties, pointing out any mistakes made and how they may be avoided."

Manner of Performing Duty.

2810 R (1) "The officer of the deck shall bear in mind that his manner of performing duty has a great influence upon the discipline of the crew and the efficiency of the ship; that he should be dignified, discreet, zealous, energetic, and subordinate, displaying a feeling of deference to superiors and a spirit of kindness to inferiors. He shall himself scrupulously obey all orders and regulations, and require the same of his subordinates. He shall avoid the use of harsh language, and, while never permitting any duty to be performed in a careless, indifferent, or dilatory manner, he shall protect the crew from all unnecessary annoyances."

Service Phraseology, Use of.

(2) "He shall, when giving orders, use only the phraseology customary in the service, without any unnecessary repetition. He shall use a decided and authoritative tone, sufficiently loud only for the occasion. He shall, when giving orders that are to be repeated or passed, use the exact words proper to pass them, and not permit any changes or additions by his subordinates."

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WATCH OFFICER, UNDERWAY.

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INFORMATION AND REGULATIONS.

Information to be Obtained Before Taking the Deck.

Before taking the deck when underway the officer coming on duty should make himself thoroughly familiar with:—the position of the ship; the standard speed, with number of revolutions to make that speed; the course (compass, magnetic and true); the deviation of magnetic compass; any error that may exist in the gyroscopic compass; position in relation to other ships; land, rocks or shoals in sight or in the immediate vicinity; boilers and engines in use; the general condition of the weather and preparations made for imminent heavy weather; all unexecuted orders; captain's night orders; condition and operation of all running lights; the availability and condition of all apparatus for preventing collisions; the force of the watch and lifeboat crews; the readiness of lifeboats for immediate use; the status of gun-shutters and air ports in the hull of the ship; hatches open on main deck; awnings spread; during actual or impending hostilities, readiness for action.

Additional Information in Formation.

When in company with two or more ships underway, the following additional information should be learned before taking charge:—

Character of formation and the order of ships in formation; the guide ship; average number of revolutions necessary to maintain station; the masthead heights of the guide and ship next ahead; signals up on flag-

ship, on own ship and in process of execution; any evolutions previously provided for to be made; any recent fleet orders to be observed, such as modification in use of speed or running lights; any other general information that may be of interest and value in the performance of duty.

When One May Refuse to Relieve the Deck.

When ship is out of station, watch is not up ready for duty or ship is in a perilous position, an officer may refuse to take the deck, and in any of these cases, the fact may be reported to the commanding officer and his orders awaited.

Approaching Land or in Pilot Waters.

2602 (1) "When at sea, and especially when approaching land or in pilot waters, the officer of the deck shall keep himself informed of the position of the ship; whether land or lights are in sight or whether either are likely to be seen, and of all other particulars which may be of use to him in keeping the ship out of danger. If approaching land or shoals, he shall keep leadsmen in the chains and have anchor and chain clear and ready for use."

Alertness and Attention to Duty Underway.

(3) "He shall see that the junior officers and the watch are at all times alert, at their stations, attentive and ready for duty; that every necessary precaution is taken to prevent accidents; that a boat is always ready for lowering and the life-buoys ready for letting go; that the lookouts are in place and vigilant and that they understand their duties. He shall exercise great care that the ship is carefully steered and kept on her course and shall keep a correct account of the courses, the speed, and leeway made. He shall see that the running lights are kept bright from sunset to sunrise and their condition reported every half hour; that during a fog, when approaching vessels, and at all other times, the precautions required by law to prevent collisions are fully complied with; that when in pilot waters the leads are kept going or that other means to ascertain the surroundings are at hand and are frequently used; and that nothing is placed near the compass that will change their errors."

Keeping Station, Care in.

(4) "When in company with other ships he shall be very careful to keep in station; if unable to do so, he shall report at once to the commanding officer."

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Commanding Officer on Bridge.

- (5) "When the commanding officer is on the navigating bridge, the officer of the deck shall not change the course, alter the speed, nor perform important evolutions without consulting him."

Reports to Commanding Officer.

- (6) "He shall promptly report to the commanding officer all land, shoals, rocks, lighthouses, beacons, buoys, discolored water, vessels or wrecks discovered; all changes in the weather or shifts of wind; all signals made; all changes of sail, speed, formation or course by the senior officer present of the ships in company; any change in course or speed made by himself; any marked change in the barometer, force of the wind, state of the sea or marked indications of bad weather; the display of storm signals on shore; all serious accidents; the winding of chronometers; the hours of 8 a. m., meridian and 8 p. m.; when at sea, the latitude at meridian, if obtained; the movements of men-of-war, mail steamers and other large vessels; and, in general, all occurrences worthy of notice."

Authority to Change Course.

- (7) "He shall not, except when to avoid immediate danger, change the course without directions from the commanding officer, and then he shall report the change to him as soon as possible. When on soundings he shall regard advice from the navigator as sufficient authority to change the course; he shall at once report the change to the commanding officer."

COMMENTS.**Responsibility Begins.**

Do not relieve the deck until thoroughly acquainted with the existing situation, for as soon as "I relieve you" is said, you are responsible.

Details to Check Up on Taking the Deck.

Check up all details: such as, compass course; orders to be carried out; pennants or flags hoisted; revolutions of engines; bearing of guide; ship's position if near land; distances of guide and ship next ahead; the names and order of the different ships in formation; ships or lights in sight; running speed and flag (if any) lights burning brightly; check steering compass with standard or gyro-compass.

Prevent Laxness on Bridge.

See that all bridge details keep a bright lookout and that they are all at their proper stations. Unless properly supervised, the details on the bridge will become lax in the performance of their duties and just at the moment when they should be on the alert, they will be engaged in trifling. Any tendency toward laxness should be quickly and firmly checked.

Care in Performance of Duty.

The officer of the deck is not only responsible to the captain, but he has several million dollars worth of government property in his care; he not only owes a patriotic duty to the country, but is getting a certain compensation for government service, and during every instant he is on watch (particularly when underway) all of his energies should be directed towards the preservation of this property and the lives of those on board the ship. To accomplish this he must see that all persons under his immediate authority perform their duty in a careful and diligent manner.

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Personally Responsible.

However alert the men on watch may be, the officer of the deck must always be on the lookout for all details, as he alone is responsible.

Consideration of State of Weather.

The state of the weather should have careful consideration at all times. If not properly prepared, sudden (apparently) storms or squalls may not only wet the ship through and through, but do considerable damage before all is secured. The first thing to do in sudden rough weather is to close the forward hatches and gun ports. After this has been done other details, such as taking in any awnings that might be spread, closing hatches as may be necessary, putting extra lashings on boats, rigging extra life lines, and securing any other loose gear about the ship should be attended to.

Securing the Ship.

If it is dangerous or impossible to properly secure the ship when such a condition as above exists, do not hesitate to stop at once and then inform the captain.

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Physical Condition of Officer of the Deck.

The constant vigil, which is necessary while on watch, requires the complete possession of all the faculties and a sense of physical well-being, and an officer who feels that he is not capable of meeting all emergencies on account of illness owes a duty to himself and the ship to ask to be put on the sick list. The reason for stating this is that time and time

again officers who are temporarily physically unfit will take their regular watch when they ought to be under the doctor's care; the safety of the ship and of the lives on board demands this precaution.

Ventilators and Wind Sails.

Care should be taken at all times to see that the ventilators and wind sails are always properly trimmed to or away from the wind, as the state of the weather demands. Particular attention to this in hot climates is well repaid by a hearty cooperation of the engineer's force and increased efficiency of the ship. If, however, everything possible in regard to ventilating the fire and engine rooms has been done and there is an insistent demand for more air, call the engineer officer of the watch (personally) to the voice tube and let him know the state of affairs; this will save a great deal of annoyance from the clatter of bells.

Darkening Ship.

When darkening ship for the night see that tarpaulin covers are hauled over all fire and engine rooms and other hatches, as lights reflecting up through the hatches are easily seen. Search-lights should be kept turned off until needed, as the shutters do not completely screen the lights.

Information to be Sent to Navigator.

The navigator should be informed of all changes of course and speed and the sighting of any aid to navigation. He should also be informed if the patent log fails to operate or shows a variable discrepancy compared to the revolutions of the engines. Although it is well and wise to render all the assistance possible to the navigator, the officer of the deck is not under his immediate authority and the responsibility for the ship's safety is in his (the officer-of-the-deck's) hands.

Screening Lights that Interfere with Vision of Officer of the Deck.

At night all lights on the ship should be carefully covered so as not to shine forward of the bridge; it is impossible to see farther than the bow of the ship with lights all over the bridge and shining out of the forward hatches. Indicator lamps should be screened so as to give off a very dim light.

Apparent Lights.

The corner of the eye is more sensitive than the center of the pupil and this fact may be made use of in determining the actuality of lights apparently sighted. If a light is apparently visible while looking ahead, turn the head so as to be looking out of the corner of the eye and if the light remains visible, it is actual and not apparent.

Position Buoy.

The position buoy should be on the quarterdeck at all times when underway in formation ready for use.

Search-Lights.

One search-light forward and one aft should always be ready for use. A signalman of the watch should be specifically detailed and ready to operate the search-light whenever an emergency may demand. During foggy or misty weather an electrician should be detailed for this purpose instead of a signalman.

Boatswain's Mates, etc., Stations of.

The boatswain's mate, bugler and messenger should always be near at hand and should not have to be called when needed.

Gunner's Mate, Station of.

The gunner's mate should never leave the signal gun (in formation) without permission from the officer of the deck and when he does leave with such permission, he should always be relieved by some one who can close the breech and pull the trigger.

ROUTINE AT SEA.*

Routine at sea follows:

Midwatch.

Midnight. Relieve the watch. Watch to muster. Lifeboat's crew of the watch to muster. Receive reports from carpenter's mate, gunner's mate, coxswain of lifeboat, boatswain's mate and corporal concerning soundings of bottoms, signal gun and battery, lifeboat and crew, reliefs of watch, and police condition of ship respectively. With exception of lifeboat's coxswain and boatswain's mate and corporal, these reports should be made every hour until sunrise. The corporal of the guard makes his rounds every half-hour.

1.50 Relieve the wheel, lookouts, lifebuoys.

3.00 Call cooks and baker on duty.

3.40 Call the watch. (It has previously been the custom to call the watch 15 minutes before the hour, but on big ships it will be found that it will take fully 20 minutes to get the watch roused up.)

3.45 Call relief officer of the deck. On calling the officer of the deck always inform him of the state of weather.

3.50 Relieve the wheel, lookouts and lifebuoys.

* Force commanders are authorized by Fleet Regulations, 1917, to formulate routines for their respective forces.

4 a. m. to 8 a. m.

- 4.00 Relieve the watch. Watch to muster. Lifeboat's crew of the watch to muster. Receive reports as at midnight.
- 5.00 Call the idlers and all hands except midwatch. Light smoking lamp.
- 5.30 Turn to. Out smoking lamp. Carry out morning orders. 5 minutes to sunrise. Stand by running lights, speed cones, speed light.
- Sunrise.** Hoist speed cones; turn off speed and running lights; follow senior ship, if any. Relieve bridge and station masthead look-outs. Station detail for breakdown flag.
- 5.50 Relieve the wheel, lookouts and lifebuoys.
- 6.55 Time and uniform signal is hoisted on senior ship.
- 7.00 Time signal is hauled down. Test whistle and siren. Call relief officer of the deck. Make uniform, weather and other reports to commanding officer. Up all hammocks.
- 7.15 Master-at-arms reports hammocks up and stowed.
- 7.15 Mess gear.
- 7.30 Pipe to breakfast. Pipe the uniform to crew.
- 7.50 Relieve the wheel, masthead, speed cones and lifebuoys.

Forenoon Watch.

- 8.00 Relieve the watch. Report 8 o'clock to commanding officer.
- 8.15 Turn to. Out smoking lamp. Sound bright work. Pipe sweepers.
- 8.30 Sick call.
- 9.00 Knock off bright work. Clear up for quarters. Down towel lines.
- 9.10 Officers' call. Notify the navigator.
- 9.15 Quarters. Muster. Physical exercises. Drill call.
- 9.50 Relieve the wheel, masthead, speed cones and lifebuoys.
- 10.00 Signal: (1) Number of absentees; (2) number of sick (absentees omitted after 24 hours out of port).
- 11.30 Retreat from drill. Pipe sweepers.
- 11.45 Mess gear. Prepare 12 o'clock signals.
- 11.55 Report 12 o'clock and chronometers to commanding officer (see Watch at Sea).

Afternoon Watch.

- 12.00 (noon). Strike 8 bells. Make 12 o'clock signals: (1) Coal on hand; (2) coal expended preceding 24 hours; (3) latitude; (4) longitude.
- 12.25 Relieve the wheel, masthead, speed cones and lifebuoys.
- 12.55 Stand by scrubbed and washed clothes. Stand by aired bedding.

- 1.00 Turn to. Out smoking lamp. Pipe down clothes, bedding, etc.
Pipe sweepers.
- 1.15 School or drill call.
- 1.50 Relieve the wheel, masthead, speed cones and lifebuoys.
- 2.30 Retreat from school or drill. Pipe sweepers.
- 3.45 Notify relief officer of the deck.
- 3.50 Relieve the wheel, masthead, speed cones and lifebuoys.

The Dog Watches.

- 4.00 Relieve the deck.
- 5 minutes to sunset. Stand by speed cones, speed, running and flag lights (if any).
- Sunset.** Turn on speed light (follow senior ship), running and flag (if any) lights. Down speed cones. Relieve masthead. Station deck lookouts. Station signal gun watch (in formation). Lifeboat's crew of watch to muster. See search-lights and signal lights ready for use.
- 5.45 Mess gear.
- 6.00 Pipe to supper.
- 6.25 Relieve the wheel, masthead, speed light or speed cones and lifebuoys.
- 6.30 Scrub clothes.
- 7.30 Hammocks. Trice up hammock cloths. Pipe down.
- 7.45 Notify relief officer of the deck.
- 7.50 Relieve the details. Call the watch.

First Watch.

- 8.00 Report 8 o'clock, 8 o'clock lights and galley fires out, and prisoners secure to commanding officer. Send 8 p. m. signals (latitude and longitude). Muster and set the watch. Lifeboat's crew of watch to muster. Receive reports as given above for midnight.
- 9.50 Relieve the details.
- 11.40 Call the watch.
- 11.45 Notify relief.
- 11.50 Relieve the wheel, lookouts and lifebuoys.

For weekly routine, United States Atlantic fleet, see page 68.

THE WATCHES AT SEA.**All Watches.**

Take careful note of existing situation and decide what orders you would give in the event of man overboard (page 55), breakdown, fire and collision. (Consider the most likely cases.)

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Midwatch.

See that watch and lifeboat's crews are properly mustered and reported, and that lifeboats are ready for lowering. See that all details are promptly relieved and that they remain alert on stations. Read and familiarize self with captain's night order book. Check course and the steering compass frequently with standard compass. Have junior officer make at least one inspection below during watch. Change revolutions as little as is consistent with keeping station generally. Check station occasionally. Read over morning orders and make any preparations that may assist in their execution. Keep a bright lookout. Keep the ship as well ventilated as is consistent with the state of the weather.

Morning Watch.

Read captain's night orders. Read morning orders and prepare to execute same. Check compasses, course, revolutions and station frequently.

See that watch and lifeboats are properly mustered and reported. Have speed cones ready for hoisting at sunrise. See that details are properly relieved and reported. When the letter "F" is "turned on" on flagship (or five minutes before sunrise), man speed and running lights (also flag lights, if any) and speed cones, and as soon as letter "F" is "turned off" (or sunrise), hoist speed cones, turn out speed and running lights (do not turn off speed light until speed cones are hoisted), station masthead lookout, relieve bridge lookouts, round up breakdown flag at fore and station detail for same, relieve gunner's mate at signal gun, relieve search-light detail if weather is clear, and, if guide, hoist guide flag.

At turn to: clean ship in accordance with morning orders (see page 69). Have junior officer of watch keep about the decks to see that boatswains' mates are on job and have all their men at work. Trice up clothes-line on the lee side.

The chief boatswain should be on deck at "turn to" to personally supervise cleaning the ship and should make an inspection and report of ground tackle and boats. If he reports either as not being properly secured, steps should be taken at once to make them secure. All awnings rigged, stays, lines, etc., should be examined by the chief boatswain and if not in shipshape condition, should be made so.

If any leaks in hatches, dog house, gun ports or air ports have been discovered and not remedied, the chief carpenter should be so notified and ordered to repair them. Any leaks of importance would be attended to immediately on occurrence, but minor leaks may have been over-

looked during the night watches and the chief carpenter should make an inspection during the morning for the purpose of discovering or locating same.

If there seems to be difficulty in getting pressure on the deck pump, send to the master-at-arms to see that "slop chute" valves are closed.

At 6 bells test whistles and sirens. One long blast on whistle and three blasts on siren. This should be done as soon as uniform signal is hauled down.

Inform the engine room when finished with deck pump.

Have colors bent on, but not hoisted, at sunrise so as to return salutes of passing vessels. Follow the motions of senior ship in hoisting colors. Remember that the ceremony of colors as executed in port is dispensed with at sea.

See that the band plays in accordance with ship's orders—usually beginning at 7.45.

Make necessary preparations for orders to be carried out in the next watch and turn over to relief all uncompleted morning orders.

Make 8 o'clock reports to captain (see morning watch in port, page 69)

Forenoon Watch.

Check course, revolutions, position and station frequently.

The forenoon watch at sea differs very slightly from the forenoon watch in port (page 70). Naturally, boat trips and such routine matters have no place in the watch at sea. Other exceptions follow:—

Absentees are not reported after 24 hours out of port.

Usually at 11.20 or thereabouts, the clocks are set ahead or back for longitude. The navigator does this through the officer of the deck, and it is reported to the commanding officer as well as entered in the log.

The navigator generally takes the deck during drills, but the officer having the watch regularly should relieve as soon as possible so that the navigator may be given sufficient time to work out his noon position.

Have all the signal force on the bridge properly stationed and signals bent on ready for the 12 o'clock reports.

Make 8 bells with the senior ship; hoist signals (if no tactical signals are flying on flagship) with the senior ship and report same to commanding officer. If you are alone, or senior, do not make 8 bells until 12 o'clock has been reported to the captain and he has replied "Make it so." Report chronometers with the 12 o'clock report to captain.

Afternoon Watch.

See afternoon watch in port (page 71).

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The Dog Watches.

Be ready for sunset. See that running, signal and search-lights are ready for use and so reported. Have oil lanterns ready to use as running and speed lights in event of failure for any reason of electric lights. About five minutes before sunset have speed cone men take halliards in hand and station detail to turn on running lights. As soon as the senior ship hauls down her cones at sunset, turn on speed and running lights and then do likewise. Turn on flag lights, if flagship. Haul down breakdown flag; relieve this detail. Station deck lookouts; relieve masthead lookouts. Have some competent person inspect stern and flag lights (if any), to make sure they are burning brightly. Bridge lookouts should report the running lights on taking stations and they should be reported every half hour thereafter until sunrise. The chief gunner's mate should report patent lifebuoys primed and ready for releasing. The regular watch (gunner's mate) is stationed at signal gun. Muster lifeboats' crews and receive reports from coxswains of crews as to readiness of boats for use.

If ports have been open during the day, they should be closed and the carpenter's mate on watch should report them so.

Clothes may be scrubbed after 4 p. m. and until 8 p. m. (see weekly routine, Atlantic fleet).

If "movies" are to be held, the screen should be rigged aft on the weather side and light so placed that it will not interfere with the vision of the officer of the deck or with other ships in formation. Word should be sent to all officers' messes when "movies" are to begin. If "movies" are to be held, "hammocks" should be sounded and piped down before starting the pictures.

Hammocks should not be sounded before the master-at-arms reports the decks ready and no hammocks should be allowed to leave the nettings, except by permission of the officer-of-the-deck, until piped down. Unless this procedure is strictly carried out, there will be hammocks all over the decks and men will have difficulty in getting their own hammocks. Hammock stowers restow nettings.

Call the watch about 20 minutes before the hour.

If there are indications or probability of rough weather, the awnings (if spread) should be furled and forward hatches closed by 8 p. m. If there is no probability of very rough weather, the awnings should be housed. Hatch covers need not be hauled over if there are no immediate indications of rain, as the watch on deck can easily handle them. Permission must be obtained from the executive officer before furling awnings.

See that 8 o'clock signals are ready for transmission on the hour.

Relieve the details about 10 minutes before 8 o'clock so as to avoid congestion.

Make the 8 o'clock report as per procedure for noon. At this time also report 8 o'clock lights and galley fires out and prisoners secure. Set the watch and muster same as at 8 bells.

First Watch.

Send 8 o'clock position and signals to commanding officer.

Receive reports from boatswain's mate and coxswain of lifeboat crew. Check compasses, course, revolutions and position frequently during the watch.

Test out search-light and see that men on watch are familiar with operation of same.

Check all details.

See that running lights are reported every half hour as burning brightly. Have junior officer of watch inspect lifebuoy details to see that they are familiar with their duties.

Receive reports every hour from gunner's mate regarding signal gun and battery, and carpenter's mate regarding soundings, and every half hour from the corporal regarding police condition and prisoners.

There are no 9 o'clock lights to be reported at sea, but the 10 o'clock report is made to the commanding officer.

Care should be taken to see that no "standing lights" are switched off.

After pipe down, no unnecessary noise should be allowed about the decks or elsewhere in the ship.

The captain's night orders should be read as soon as received on deck. If morning orders have not been received by 10 p. m., send a request to the executive officer for them.

SHIP CONTROL.

Steering.

Except to avoid immediate danger, the course shall not be changed without permission of the commanding officer. On soundings, however, as herein previously stated, the advice of the navigator is sufficient authority to change the course. When it appears that a change of course will be necessary to clear a ship or obstacle (and there is sufficient time), word to this effect should be sent to the captain immediately.

G. O. 154 (Conning).

"In conning: in giving commands to the quartermaster or steersman the first command will be one of direction, i. e., Right! or Left!

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followed by the amount of rudder, such as **Right, standard rudder!** **Left, 10 degrees rudder!** The object being to insure the quick carrying out of the order by the steersman, who starts turning his wheel instantly on receiving the command **Right!** or **Left!**

Standard Orders.

"Right (left) rudder!" or **"Right (left)."** A command to give her right (left) rudder instantly, an indeterminate amount. In all such cases the officer conning the ship should accompany the order with a statement of his motive, or the object to be obtained, in order that the steersman may execute the order with intelligence and judgment. Thus, **"Right rudder! Head for the lighthouse."** **"Left rudder! Pass the buoy close on your starboard hand."**

"Right (left), full rudder!"

"Right (left), standard rudder!"

"Right (left), standard half rudder!"

"Right (left), 5 (10, etc.) degrees rudder!"

This order is used in making changes of course. The steersman should then be informed of the new course (by such terms as **"Course 275!"**) in time to permit him to **"meet her"** on the new course.

"Right (left), handsomely!" This order is given when a very slight change of course is desired.

"Give her more rudder!" Increase the rudder angle already on, to make her turn more rapidly.

"Ease the rudder!" Decrease the rudder angle already on, when she is turning too rapidly, or is coming to the heading required. The order can be given **"Ease to 15! (10, 5, etc.)."**

"Rudder amidships!" In battleships when making a turn put rudder amidships when about 20 degrees from new course.

"Meet her!" Use rudder as may be necessary to check, but not entirely stop, her swing. Given when the ship's head is nearing the desired course, and she is to be kept from swinging by the new course.

"Steady!" or **"Steady so!"** or **"Steady as you go!"**

"Shift the rudder!" Change from right to left rudder or vice versa. Given, for example, when the ship loses headway and gathers sternboard, to keep her turning in the same direction.

"Mind your rudder!" A warning to the quartermaster (or steersman), (a) to exact more careful steering, or (b) to put him on the alert for the next command to the wheel.

"Mind your right (left) rudder!" A warning that the ship shows a tendency frequently to get off her course, and that if right (left) rudder

be not applied from time to time to counteract this tendency, the ship will not make good the course set.

"Nothing to the right (left)!" Given when the course to be made good is a shade off the compass eard mark, and therefore that all small variations from the course in steering must be kept, for example, to the southward of the course set.

"Keep her so!" A command to the quartermaster (or steersman) when he reports her heading, and it is desired to steady her.

"Very well!" Given to the quartermaster (or steersman) after a report by him, to let him know that the situation is understood. (The expression **"All right!"** should not be used. It might be confused as an order to the wheel.)

All orders as to the course should be preceded by the word "compass": **"compass course, zero (two one; three-o-four; six five, etc.),"** in every case naming the numbers separately.

All orders to the wheel must be repeated by the quartermaster (steersman). In all cases the officer of the deck must check the execution of his orders.

Elements that May Affect Deviation of Compasses.

The various elements which tend to create additional deviation in the compasses should be carefully guarded against. No one should be allowed to have keys or knives in the near proximity of the compasses. Turret turning, turning on the forward search-light, hot forward smoke-pipe, and varying distances and changing relative position in formation are all conditions which will affect the magnetic compasses.

Rudder Angle and Steersmen.

For steering a course in moderate weather five degrees of rudder angle is sufficient. Inexperienced or poor steersmen invariably use too much rudder angle and consequently steer all over the ocean. Unequal revolutions of the engines or currents may produce a constant rudder angle, and this should be properly allowed for. The ability of a steersman should be well known, but if it is not known, he should be carefully observed as soon as he takes the wheel. Do not allow poor or inexperienced steersmen to take the wheel in close formations or in the near vicinity of land.

Swinging of Ship.

When using magnetic compasses, it is easier to tell when the ship is swinging off her course by observing the relation of bow or stern of the ship to a steady cloud or one of the astronomical bodies. With the gyro-compass the swing of the ship is instantly apparent and observations as above are needless.

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Gyro-Compasses, Operating.

The repeaters of the gyro-compass are operating when the click is heard. If this click ceases, the master gyro-compass has stopped or the repeaters' circuit has become inoperative. This should be reported to the navigator at once and the gyro-compass electrician should be put on the job immediately. In the event of failure of the gyro-compass, the steersman should be ordered to steer by magnetic compass.

Turning Over the Course by Steersmen.

Steersmen should always be made to report the course turned over on being relieved.

Speed Control.**Speed Changes.**

All permanent changes are made by orders of the chief engineer who receives his orders from the captain. This fact, however, in no manner whatsoever prevents the officer of the deck from ordering any speed he thinks necessary to keep station, conform to changes in formation or avoid dangers. When an excess over standard speed is required to keep station, the captain should be notified. The engine room should be kept as fully informed as possible of contemplated changes in speeds with approximate length of time the change will be maintained.

Information to Engine Room on Entering Port.

The engine room should be kept fully informed as to probable time of anchoring when entering a port.

Speed when Guide.

When guide in formation the speed of engines should be continuously checked by the indicators on bridge.

Emergency Signals.

In emergency, to obtain the highest possible speed, ahead or astern, capable with boilers in use, "ring up" two or three times in rapid succession on engine room telegraph.

Handling Engine Room Telegraph.

Unless the ship is in actual danger of collision or grounding, do not ring from ahead to full astern. Always in ordinary circumstances put the telegraph on **stop** before indicating astern.

The men stationed at the engine room telegraphs should be carefully instructed to move the handle smartly, but steadily. A quick, jerky motion will surely break the connecting wires or disable the instrument.

When making a turn of 45° or more the handles of both revolution indicators should be put on **turn** and left there until the rudder is again amidships.

Orders to the Engine Telegraphs.

G. O. 154.

The command is in three parts:

Standard Orders.

(1) The first part is to the engine, as: "Starboard (port) engine!" or "All engines!" This puts the proper telegraph man (or both) on the alert. This is the preparatory command, and he should at once start his lever.

(2) The second part of the command is the command of execution and it is the direction the engine telegraphs are to be moved, as: "Ahead!" or "Back!"

(3) The third part of the command gives the speed at which the engines are to be moved.

The following are all the commands to the engine telegraphs:

"(1) All engines, ahead one-third (two-thirds, standard, full); or All engines, back one-third (two-thirds, full)."

"(2) Starboard (port) engine, ahead one-third (two-thirds, standard, full); Port (starboard) engine, back one-third (two-thirds, full)."

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Checking Telegraphs.

When the order to the engines is acknowledged by the engine rooms, and the indicator shows that the engines are obeying, the telegraph men must report, for example, "Starboard engine backing one-third, sir."

In all cases the officer of the deck must check the execution of his orders.

Full Speed Signal.

When full speed is being used in formation, be sure that the "meal pennant" is hoisted at the weather yardarm when two cones are up; and on the same side as cone when only one is used.

Speed Indicators.

Speed cones or the speed light should be changed the instant speed change is put on engine room telegraph.

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Interference of Signal by Smoke.

In formation the smoke of a vessel is likely to make the speed light apparently flash. This must be looked out for.

Orders to Engine Room Repeated.

Orders to engine room should be carefully repeated from engine room over voice tube. This should be insisted upon.

Piloting.

Authority to Change Course.

When on soundings the advice of the navigator is sufficient authority to change course, but any change should be immediately reported to the captain.

Information to the Navigator.

The navigator should be kept fully informed of any changes of course of which he is not aware; all changes of speed; sighting of lights; buoys and any other aids to navigation.

Doubtful Position, Lights, etc.

When in any doubt as to the ship's position or to lights visible, the fact should be referred to the navigator at once.

Entering Pilot Waters.

On entering pilot waters or on soundings, the leadsmen's platforms should be rigged; the lead line should be coiled clear for use and leadsmen detailed for the chains. Frequent casts should then be made so as to check positions. If the position of the ship is in doubt, the speed should be reduced so that correct soundings may be obtained. In cold weather have leadsmen relieved frequently. If steaming on soundings for a long period outside of shallow water or if in such locality that the leadsmen may not be necessary, they may be dispensed with providing permission for so doing is obtained from the captain.

Check Position Frequently.

When in sight of land the ship's position should be frequently checked.

Danger Imminent Along Coast.

When steaming along the coast always be sure of your position; when in doubt and danger is imminent stand out on course at right angles to the course being steered, having due regard for any obstructions to navigation on such new course. Resume original course when distance steamed gives a safe offing.

Needless Risks.

The ocean is big, the dangers to navigation are many, so it is needless to increase these dangers by standing too close to the shore or cutting close around land, rocks or other obstructions.

Allowance to be Made in Position.

In the methods given below involving run of ship to obtain positions, allowance is not made in the tables or rules for currents, so due corrections must be made in all observations.

Kind of Bearings to Use.

Each set of bearings should always be of the same kind; either compass, magnetic or true.

Methods of Finding Position.

The methods for checking positions, briefly summarized, follow:

Two objects in line or range: this gives a line position which may be crossed by bearing of another object and the ship's exact position obtained.

Cross bearings of two or more objects not in line subtending angle or angles larger than 30 degrees.

Two angles subtended by three objects: the three-point method; the three-arm protractor is used for plotting this.

Bearing of single object and distance of stadimeter or range-finder.

Single known object with two different bearings and run between. This method is most frequently used and a number of special cases are very easily applied. Tables 5A and 5B, Bowditch (American Practical Navigator, 1916) give solutions for any pair of bearings, and the special cases are derived from these solutions. Either the distance away from object at last bearing or distance abeam on same course may be obtained by this method.

The special cases of the above are:

Doubling the angle on bow: the distance away at second bearing is equal to the run from first bearing. Taking bow and beam bearing is a familiar example of this.

$26\frac{1}{2}^\circ$ and 45° from ahead: the distance object will be passed abeam is equal to run between bearings. The following pairs of angles give the same result:

$22^\circ-34^\circ$	$32^\circ-59^\circ$
$25^\circ-41^\circ$	$40^\circ-79^\circ$
$27^\circ-46^\circ$	$44^\circ-88^\circ$
$29^\circ-51^\circ$	$45^\circ-90^\circ$

Seven-tenths rule: $0.7 \times$ run between two- and four-point bearings on the bow will be the distance object will be passed abeam.

Seven-thirds rule: $7/3 \times$ run between bearings at $22\frac{1}{2}^\circ$ and $26\frac{1}{2}^\circ$ on the bow will be the distance object will be passed abeam.

The Run.

The "run" is the difference between certain readings of the patent log taken at the same time as certain bearings, the run between which is desired. When data concerning bearings are entered in the log (the times

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and distances of prominent objects on all beam bearings should be) the patent log reading should also be entered.

Distance to Lights.

When a light appears on the horizon its distance may be determined as follows:—

The distance to sea horizon in miles is approximately equal to $8/7 \times \sqrt{h}$, where (h) is equal to the height of the observer's eye in feet. The distance of horizon to light is calculated in same manner, (h) here being the height of light, and the sum of the above two distances is equal to distance of observer to light.

Bobbing Lights.

Lights of lighthouses and the less brilliant ones of vessels may be distinguished by "bobbing" the lights sighted. On sighting the light decrease the height of the eye above the water-line. If the light disappears it obviously is at a great distance beyond the horizon and if it remains visible is carried by a vessel. If the light disappears the assumed position should be retained until the light again becomes visible. This should be repeated to avoid errors. Determining the status of a light by this method is of considerable value.

To Pick Up Lights at Distances.

When in doubt as to position or anxious to sight a particular light at a certain time, send a man aloft to be on the lookout for it and let him follow it down.

Effect of Weather on Color of Lights.

Hazy or foggy weather may make white lights appear red; therefore, caution should be used in determining lights in this kind of weather.

Following the Leader, Care to be Taken.

"It should be thoroughly understood on every ship that whether in formation or acting singly, the officers of the ship are always responsible for her safe navigation. Therefore, on entering and leaving harbor as well as at times when maneuvering on soundings, you should not blindly follow your leader under the supposition that because he safely passed foul ground ahead you are bound to do likewise. There are several things to be considered: the tide, the wind, and the natural deflection of the tail of a long column in turning. The resultant of these may be sufficient to set the ship down on the danger. Under these circumstances you should turn over the same ground as the leader and not in the same water, as this may have changed position considerably."

Maneuvering—Single Ship.**Ship's Individual Characteristics.**

Every ship has its own peculiarities, but those of the same type generally have about the same tactical characteristics. It follows that an officer should not only know the general elements that affect the maneuvering qualities of a ship, but he should also learn by experience the behavior of his own ship under various conditions.

Pivoting Point.

The stern (not the bow) of a ship does the sheering. The pivoting point is roughly about one-quarter the length of the ship from the bow.

Shallow Water.

A ship will not maneuver well in shallow water.

To Turn Short with Headway.

To keep headway on and turn short, reverse one engine and use the rudder as for going ahead.

To Turn in Shortest Space.

To turn in shortest space, keep one engine going full astern and the other standard ahead, or two-thirds ahead and standard astern.

To Turn in Shortest Time.

To turn in shortest time, both engines full ahead and use hard over rudder.

Effect of Speed on Turns.

The higher the speeds the quicker the turns; the slower the speeds the slower the turns.

Speed only slightly affects the turning circle of a ship as long as the rudder angle and draft are the same. The speed does, however, affect the time of travel around the circle.

Effect of Wind and Sea on Turning.

Wind and sea both have a decided effect on the maneuvering of a ship. Ships with high bows turn slowly into the wind and more rapidly away from it.* With heavy seas and strong wind, it is nearly impossible even with hard over rudder, to turn one of the new destroyers into the wind. Heavy seas make all maneuvers uncertain.

In Backing.

In backing, a ship will generally back into the wind; right-handed screws usually throw the stern to port.

Standard Diameter.

The standard diameter of a ship's turning circle is that of the standard turning circle as designated by the commander-in-chief.

* This is apparently not true of ships of the Pennsylvania class where the after underwater section is cut away, as it is very difficult to keep such ships from turning into the wind when once started swinging.

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Tactical Diameter.

The tactical diameter of a ship's turning circle is that of the turning circle of a ship at 12 knots speed with draft at load water-line and rudder angle of 35 degrees.

Diameter of Turning Circle.

With hard over rudder, both engines ahead, the diameter of a battle-ship's turning circle is approximately three times her length.

Carrying Way.

The "way" carried by a ship varies as her displacement; *i. e.*, the larger the ship, the greater the momentum and the farther the distance traversed after stopping of engines. The larger the ship, the longer it takes to gather way and vice versa.

In this regard due consideration must also be had to the lines of the ship, as the finer the lines and the narrower the beam, the less the resistance of the water to the ship and the farther she will carry her way.

Losing Headway.

The average ship steaming ahead and suddenly reversing engines (using the same power in backing as in going ahead) will usually lose headway in three to five times her length.

Floating Objects, To Pick Up.

To pick up a floating object from a ship at sea, go to the windward of it and stop beam to the wind; your drift to the object will depend upon the wind's strength. As the ship is usually much larger than objects drifting in the water, it is logical that she will drift much more rapidly than such objects.

Steam Whistle, Use of.

When acting singly in foggy, misty or thick weather, the steam whistle shall be used in accordance with Rules of the Road. Additional lookouts should be placed in the eyes, on the beams, on the quarterdeck and in the tops. Speed is controlled in accordance with Rules of the Road.

Maneuvering—in Formation.*

General.—Ship handling is one of the most important duties that officers are required to perform, and unless an officer is proficient in this he will not only be the cause of mortification to the other officers of his

* From "Notes on Cruising in Formation," translated from the German by Commander R. R. Belknap, U. S. N.; "Whispers from the Fleet," by Captain Christopher Cradock, R. N. C. B.; "School of the Ship," by Captain A. W. Grant, U. S. N.; and from experience in the fleet compiled by the Seamanship Department, U. S. Naval Academy, Commander G. W. Laws, U. S. N., Head of Department.

ship, but will be a source of danger to his own ship and to other ships in formation. The importance of maneuvering can be realized when one thinks that it is by this means that the guns are brought within range of the enemy. A fleet or squadron that is poorly drilled and incapable of rapid and accurate maneuvering is at a great disadvantage and will be unable to place the ships in such a position relatively to the enemy as to enable the maximum gun-fire to be developed. The opportunities for officers to practice handling and maneuvering battleships is very limited, and for this reason no chance for experience or information along this line should be neglected. Much can be learned by watching other officers, especially those who have gained reputations for skilful work in handling ships; but a great deal can also be learned by watching those who are not so skilful, and by deciding in your own mind the causes of the failure or lack of skill.

Handling destroyers and smaller craft is the best practice that can be had, and an officer who has developed his judgment, nerve and seaman's eye on a fast running destroyer is not likely to fail later when it comes to handling the slower moving battleship.

Conning.—An officer in conning from the bridge should stand in the place where he can best see what his own and other ships are doing.

In column, the best place usually is amidships near the wheel so that he will have this immediately under his eye and can see what the ships ahead are doing.

In line or line of bearing, the best place is near the pelorus on the side towards the guide and in such a position that he can still keep his eye on the wheel. The terms used in giving orders to the wheel and to the engine room telegraphs are prescribed by General Order No. 154. These terms should be thoroughly familiar to every officer and should be carefully adhered to.

Getting Underway and Standing Out.

The details of this maneuver vary in accordance with the relative position of the flagship, the space for maneuvering, and the state of the tide. The usual faults that tend to spoil the maneuver are: (1) Ships do not get up anchor at the same time; (2) when it is necessary to turn the ships before standing out, the turns are not made together; and (3) in standing out distance is lost by one or more ships.

The ships are anchored with the same amount of chain out and unless the order is given beforehand to "Heave short," no chain should be heaved in by any ship until the signal is executed to "Get underway." The anchor engine should be well warmed up, however, so that the instant the signal is executed, the order to "Heave around" can be

given. The anchors of the various ships should break ground about the same time, ships having powerful, fast running anchor engines waiting for those having slower ones. In order that all ships may weigh their anchors about the same time, the order to "Heave short" should be given first. As soon as their anchors are up, ships should be ready to promptly take standard speed with the guide.

First Case (Fig. 1).—Ships anchored in column, lying to flood tide. This case presents little difficulty. The precaution necessary here as in all cases of getting underway is to have plenty of power in order

- 1 that you may keep closed up and not lose distance. If necessary an extra boiler should be in use, the fires in good condition and the
- 2 engines well warmed up. It is important that no ship should gather way until it is time for her to move, but when the proper
- 3 time arrives ships should go ahead promptly and with such speed as to insure that standard distance will be maintained. One point
- 4 that has usually to be considered in order to keep in position prior to starting ahead, is the swing or way given to the ship by the anchor engine in heaving in. This is counteracted by the engines when the anchor is aweigh. It is necessary for the officer of the deck to carefully observe the effect of weighing and also the effect of tide and wind on the ship, in order that any forces tending to take the ship out of position may be overcome at once and before they have acquired their full effect.

Second Case.—Ships anchored as before, but lying to the ebb tide or athwart the channel.

In this case it will be necessary for the ships to turn before standing out. All the ships should turn together following the motions of the flagship and keeping her on the bearing of the anchorage. You must know beforehand how to turn your ship on its heel, or if this is impossible, then in the shortest possible space. With out-turning twin screws, ships will usually turn on their heel by backing full on the inner screw and going ahead two-thirds on the outer screw with rudder amidships. The revolutions of the backing engine should remain constant and those of the one going ahead should be varied in order to keep way off the ship. The quartermaster in the chains will let you know, when required, what the ship is doing over the ground, and shore ranges should always be watched when practicable for the same purpose.

In shallow water (that is, with little water under the keel) it is better not to work either screw at full speed—backing one-third—with the inner screw and slightly faster ahead with the outer has been found successful.

With ships having four shafts and small propellers, it may be necessary to start the ship swinging in the proper direction by going ahead on all engines with hard over rudder before backing the screws on the side toward which the turn is to be made. With four propellers, the rudder will assist when turning short around, and should be placed in position as if ship had headway on.

Experience is necessary in order to stop the swing at the proper point. Usually the engines are stopped when about 20 or 30 degrees short and then reversed when within about 10 degrees of the desired course.

Third Case (Fig. 2).—Being anchored in column inverted order to get underway and stand out in natural order, ships lying to flood tide. (This is the case where the flagship led the way into harbor and is going to lead in going out.) Signal is made to cast to starboard or port. The rear ship obliques to the right (or to the left) as ordered, and upon gaining half distance (unless channel is too narrow or otherwise directed) stands out or on course indicated. Other ships oblique in succession and follow the new leader. The flagship takes standard speed as soon as possible. In this case the difficulty for ships Nos. 2, 3 and 4, is to decide when to start their engines and when to go standard speed so that they will arrive in wake of the leader at standard distance.

In order to drop into column with ship starting from rest, go ahead one-third speed when your new next ahead is passing and is about two points abaft your beam; go ahead standard speed, when she is abeam.

When ships are lying to the ebb tide, the maneuver is the same except that ships turn together first. The same remarks apply here as in Cases 1 and 2 about holding position, turning and going ahead promptly at the proper time; usually, however, ships turn about two points short so that they are in position to go ahead immediately.

In Column.

There is one general cautionary remark regarding handling ships in column with which all officers should be familiar and bear in mind at all time. It is "Always consider your next astern." From this comes a more particular saying, "In column, ships should always be a little ahead rather than astern of position."

Steady steaming and uniformly good steering by the leading ship or guide are essential for good station keeping.

The officer of the deck of the leading ship should devote his energies to keeping the revolutions of the engines of his ship constant and to



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seeing that a steady and accurate course is steered. Any unsteadiness on the part of the guide is communicated down the line in an increased ratio, causing considerable increase in the coal consumption of the following ships and making it difficult or impossible for these ships to keep in position. In formation the revolutions of the engines of all ships should be checked frequently by revolution indicators on the bridge.

The officer of the deck of a following ship should, when coming on watch, pay careful attention to the station of the ship. By so doing for the first quarter of an hour, he may save himself trouble for the remainder of the watch. He should ascertain the average number of revolutions during the preceding watch, and providing the speed is the same, this number ought to keep the ship in position, when once she is steadied.

When steaming in column and a ship is out of position there are two ways of getting her back and steadied. Suppose that a ship is 50 yards behind position. When she started to lose distance the officer of the deck probably increased the revolutions by one or two turns and when she continued losing he did the same thing again until finally he had her steadied. At this point an addition of one or two turns should cause her to gain slowly, but he must remember to take off the additional turns before the ship arrives at the proper distance, or she will over run due to her additional way. The mass of a battleship is very great and momentum is acquired and lost very slowly and an officer can only judge by past experience the exact time to increase or decrease the revolutions in order to have the ship steadied at the proper distance. Another method, and one probably more exact, is by using a fixed increase for a certain period. Suppose the officer of the deck has the ship steadied 50 yards astern of distance, and he knows that an increase of 6 revolutions of the engines will increase the speed 1 knot per hour. This will mean $\frac{2000}{6}$, or $33\frac{1}{3}$ yards per minute. By increasing the speed by 6 turns for $1\frac{1}{2}$ minutes he will therefore gain the necessary 50 yards and he will know the exact time to reduce the revolutions.

When cruising in column an officer should endeavor to keep the ship in position with few changes of revolutions. Ten or 12 changes during a four-hour watch should be sufficient.

To Change Course in Succession in Column.—This is a very common movement and one with which all watch officers should be familiar. In making a column movement each ship should turn in the same water and on the same arc as the leader. The test is, that on each ship after having completed the turn of the number of degrees indicated, the

officer of the deck shall see the masts of the ships ahead in line on the correct bearing and have his ship at the proper distance.

Common Faults.—(1) **Steersman Following Stern of Ship Ahead:** When the ship ahead puts her rudder over, her stern swings outward in the opposite direction across the course. The steersman, seeing that his ship is headed for the quarter of the ship ahead, eases off and follows her stern. This causes a sag of the column away from the direction in which the turn is to be made.

Remedy: When ship ahead puts her rudder over caution the steersman to "Steer the compass course."

(2) **Turning Outside:** In this case the rudder is put over too late, causing the stem of the ship to get outside of the wake of the ship ahead. In this position the screw current strikes her on the inner bow and causes her to go still further outside.

Caution: Tactical instructions require that "a ship that turns outside of the wake of the next ahead shall not attempt to take her position in column at once, but shall steer a course parallel to that of the leader until the next astern has made her turn and shall then gradually sheer into position."

Remedy: If the turn is started only a little outside, increase the speed to full, and give her more rudder—hard over if necessary. This should bring her back in the wake of the next ahead when the rudder can be eased and the speed reduced to standard. If the turn is started too late to attempt to get back, ring up full speed, increase rudder to standard, but ease it in plenty of time to follow tactical instructions.

(3) **Turning Inside:** Rudder is put over too soon.

Remedy: Decrease speed considerably, ease the rudder handsomely. If ship straightens out and threatens to cross the wake of the ship ahead, increase speed and rudder angle. If the ship actually crosses the wake, tactical instructions for a ship turning outside apply.

Caution: Great care must be exercised in easing the rudder when turning inside as the ship will forge ahead when relieved of the drag of the rudder, causing the stem of the ship to get in close proximity to the quarter of the next ahead.

(4) **Loss of Distance During a Turn:** This is usually due to inexperience. In the turn, as the ship closes on the ship ahead, the officer of the deck, thinking the ship too near, reduces speed, with the result that when the turn is completed the ship is well behind position. This closing up during a turn is very alarming to a beginner, but he should realize that when the ship ahead puts her rudder over and starts to turn, her speed is greatly reduced due to the turn and the drag of the rudder across her stern. The ship astern still has standard speed and hence

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closes rapidly until the turning point is reached. At this point her rudder goes over, her speed is reduced and the ship ahead, having straightened out on the new course, rapidly draws away. When both ships are straightened out they should be at standard distance, the engines not having been changed.

How to Make a Turn.—When the ship ahead puts her rudder over, caution the steersman “Steer the compass course.”

When the kick of the ship ahead caused by putting rudder over is at the exact spot abaft the stem of your ship (a certain stanchion or some well-marked place ascertained by experience), give the order “**Right (or left), standard half rudder.**” Keep the stem of your ship inside the rough water of the wake of the ship ahead, a distance equal to the beam of your ship—small changes of the rudder should accomplish this. When within 20 degrees of the new course give “**Rudder amidships.**” When within about 10 degrees of the new course, “**Meet her.**” When on the new course, “**Steady.**” Avoid stopping short by meeting her with too much rudder, but also avoid swinging past the new course.

The officer of the deck of the leading ship must exercise great care to come at once to the course after a turn, otherwise the maneuver will be made difficult for the ships astern and a delay will be experienced in forming a properly aligned column.

Points to Remember About Turning.—(1) Tactical instructions prescribe that “the throttle shall not be touched during a turn except in obedience to an order from the bridge.” The engine room should therefore be notified when a turn is started. This is usually done by means of an electric indicator worked from the bridge that shows in the engine room during the turn, or by a rudder indicator in the engine room.

(2) There is nothing in this or any order which precludes the officer of the deck from ordering a change of speed during a turn if he considers it necessary. It is better not to do so if it can be avoided. He should remember that **easing the rudder during a turn increases the speed, and that increasing the rudder angle decreases the speed.**

(3) When the ship ahead turns outside of the wake of the leader, attention and experience are necessary to avoid duplicating her mistake. In this case the officer of the deck cannot go by her “kick” and wake and has to take his direction from the second ship ahead or from the line of ships that have turned. In turns up to 8 points a ship may be headed at first for the middle or even the bow of the ship ahead. If need be the inboard engine can be stopped and the speed reduced. When the fault of the ship ahead is great a ship turning properly will range close alongside of her. It is better in such cases to start the turn a little early and get it well in hand.

(4) The turn in day time may be made on "time" and the turn at night and in a fog should be always so made, if practicable. Suppose standard speed is 12 knots, ships are at 500 yards distance, and that the ship is steadied in position. It is desired to start the turn at the point where the ship ahead started to turn. The time should be marked when in day time it was noted that the ship ahead put her rudder over, or at night when she sounded one or two short blasts on the whistle indicating this fact. At 12 knots it will take $1\frac{1}{2}$ minutes to cover 500 yards. The order to the steersman should be given about 10 seconds less than $1\frac{1}{2}$ minutes from the time marked to allow for time to put the rudder over and the delay in executing the order. If the ship is ahead or behind distance, a rough allowance should be made for this fact.

(5) Standard half rudder has been prescribed for all turning movements in formation when making turns of more than 20 degrees, and it is required that the rudder shall be put over in as near 6 seconds as practicable.

(6) The officer of the deck must realize that the same amount of rudder does not always produce the same effect in the same time. It is necessary therefore that he should be alive to the actual conditions when executing an order to turn. If the ship is not steadied but is swinging at the time the order is given, and standard half rudder is maintained, the turn will be inside if the ship's head was swinging in that direction at the time the rudder was put over and will be outside if swinging the other way. In the first case the rudder will have to be eased a little immediately. In the latter case it will be necessary to give considerable additional rudder at first in order to overcome the inertia of the swing and to start her swinging the other way promptly.

(7) Under certain conditions the wind exercises a considerable influence on the size of the turning circle and on the time of turning. Ships in turning usually pivot at a point about one-quarter of their length from the stem. In turning into the wind therefore, a force caused by the pressure of the wind on the three-fourths of the wind area of the ship is acting with greater leverage to assist the turn, and is opposed by the wind pressure on one-quarter of the area, acting at a much smaller leverage. In making turns away from the wind the large force opposes the turn and the small one assists. Therefore a ship in turning with way on will fly up into the wind quickly, but will turn very slowly away from the wind. A ship going astern pivots very close to the stern due to the hold of the propellers on the water, and practically the whole surface of the ship in this case acts as a wind area to force the stern up into the wind.

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In Line.

In line, the **bearing** is taken from the foremast of the guide, and the **distance** from the next vessel towards the guide. If this latter ship is manifestly out of position, the distance may be taken temporarily from the second ship towards the guide until she regains position.

Although changes of speed do not affect other ships as in column, still it is important to steam as **quietly and steadily** as possible. The bearing of the foremast of the guide should be constantly observed. Immediate action must be taken as soon as any change in the bearing has been noticed.

If the distance is correct and the bearing is out a little, it is only necessary to increase speed if behind or decrease if ahead, but if out considerably it will be necessary to alter the course so that distance will be correct when on the bearing.

If the bearing is correct, in order to rectify distance a change of both course and speed are necessary. Only small changes of course should be made, not over 5 degrees as a rule. In this case, it must be remembered that a change of course in either direction necessitates an increase in the speed in order to maintain the bearing.

If ahead of bearing and inside or outside distance, by keeping standard speed and changing course either way from or toward the guide, the ship will drop back on the bearing at the same time gaining or losing distance.

If behind bearing and distance is out also, it will be necessary to speed up considerably in order to gain on the bearing and at the same time change course to gain or lose distance. In general, stick to the rule "that keeping correct bearing must be rated higher than keeping correct distance, and that above all never forge ahead of the line."

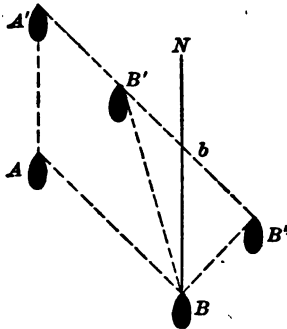
Gaining Ground to Right or Left.—All watch officers should know how many yards are gained per minute to starboard or port when changing course, 5, 10 and 15 degrees, etc., for the usual steaming and maneuvering speeds. By having such information a certain distance can be gained "working on time." Suppose the speed is 12 knots, then the distance steamed in one minute is 400 yards and the amount gained to the side for changes of course of 5, 10 and 15 degrees is 34.9, 69.5, and 103.5 yards. It is only necessary to remember that about 35 yards per minute are gained to the side for a 5-degree change of course at this speed, twice this for 10 degrees, and about three times for 15 degrees. The increase of speed necessary in maintaining bearing while closing and opening distance is small, as can be readily seen from Table 2, Bowditch (American Practical Navigator, 1916).

In steaming in **line and line of bearing** it usually requires a slightly fewer number of revolutions of the engines in order to hold position than when steaming in column. This is due to the fact that there are no ships immediately ahead to disturb the water and set it in motion.

Line of Bearing.

Steaming in line of bearing is generally found difficult by the beginner, but with a little practice and a knowledge of a few fundamental rules it becomes much easier. The guide is always on the side towards the advanced flank. The bearing of the foremast of the guide should be constantly observed either by the pelorus or by marks on the bridge.

(1) To correct distance and maintain the bearing, increase speed if heading towards the guide and decrease if heading away from the guide. This may be better understood by reference to Fig. 3. A ship *B* is on a line of bearing *AB* from ship *A*, course north. If *B* is outside distance but on correct bearing, she must change course towards the guide *A* and instead of steaming along the line *Bb* she must steam along *BB'* which is longer than *Bb*, speed must therefore be increased to keep on the bearing.



If she had been on the bearing but inside distance she would have had to steam away from the guide as along *BB''* which is shorter than *Bb*, and therefore speed would have had to be reduced.

(2) If distance is correct but ship is ahead of bearing, it will be necessary to head in towards the guide, at the same time reducing the speed a little in order to be at the proper distance when on the bearing. The bearing will have to be carefully watched in order to resume standard speed in time, as the ship will drop back quickly due to a reduced number of revolutions and a change of course towards the guide.

If when ahead of bearing the distance is much too small, it will be necessary to head away from the guide and considerably reduce the revolutions in order to get in position quickly.

(3) If astern of bearing and with correct or too little distance, it will be necessary to head away from the guide to be at proper distance on the bearing. Only a small increase in the revolutions, if any, will be necessary, as heading away from the guide causes a gain on the bearing. If, however, you are astern of bearing and your distance is too great, you must change course towards the guide and at the same time considerably increase the revolutions.

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(4) As in line, keeping correct **bearing** is more important than keeping correct **distance**. If off the bearing and it is desired to get back quickly, change course towards the **guide** if ahead and away from the **guide** if behind the bearing.

After a little experience it will be found that changes of course and speed necessary to keep position are usually small, and due to absence of screw currents from ships ahead, courses are more easily steered and ships are more readily kept in station.

General Instructions.

To hold position correctly in any formation requires constant attention and alertness on the part of the officer of the deck. He should accustom himself not to rely too much on instruments, but educate his eye to judge distances so that he will be independent of them to some extent.

In maneuvering, when one movement is closely followed by the signal for the next, a ship out of position must regain it as quickly as possible by radical changes of course and speed. Until all ships are approximately in position, the signal for the next maneuver cannot be made. The importance of regaining position quickly is therefore obvious. It is quite as important to maneuver rapidly as to fire the battery rapidly.

A simultaneous movement is considered "well done" when all ships are in position when the movement is completed. To accomplish this rudder angles must be carefully standardized and turns must be started the instant the signal is hauled down. In case a ship is a little out of position when starting the turn, or gets out of station during the turn, the rudder angle and speed must be changed to bring her into position. All ships must put their rudders amidships when 20 degrees from the new course and must meet the swing so as to steady at once on the new course.

When a signal calling for a change of speed is executed, all ships should change promptly to the new speed and not wait for indications of a change from their next ahead.

When taking station in a moving column or a station relative to some other ship, it is the best and safest plan to use the mooring board in order to get the time to put over the rudder, or the shortest course to the assigned position. If done by judgment the rudder is usually put over too late in the first instance and a greater initial change of course than necessary made in the second.

When the ships of the fleet are scattered and a signal to form is made, movements are governed by **Rules of the Road**. This applies also to ships changing position independently at any time. Nothing justifies

getting a ship to position smartly at the risk of her safety or that of another ship.

When standing up to communicate either verbally or by boat with a ship that is stopped reduce speed in plenty of time, and keep the stem of your ship pointed away from the other ship. When time to back, be sure your ship is steadied or that the bow is swinging away from the other ship.

Coming to Anchor in Formation.

It is important that two-thirds and one-third speed should be standardized as carefully as "Standard speed," and that the leader of the column, when indicating either of these speeds, should maintain the proper number of revolutions as carefully as at other times. A little carelessness on the part of the leader when approaching an anchorage can make serious trouble for the ships astern.

When approaching an anchorage or at any time in formation when the speed is much reduced and the ship is out of position, a radical change should be made in the revolutions for a short period of time. This is necessary in order to regain position quickly. When a ship has little way it requires a considerable change in the speed of the engines to overcome her inertia and get her back in position within a reasonable time. Turning the engines at low speeds when the ship is at rest or nearly so, is ineffective.

An anchorage is usually approached in column and the ships anchor simultaneously when the signal is executed by the flagship. Any ship not in position when the anchor is let go will have to get up anchor and shift her berth. It is very important then that ships should keep position carefully and that any ship out of position should get back as quickly as possible.

Sometimes a flagship slows to two-thirds speed, then later to one-third and stops the engines when at a distance from the anchorage such that the speed will be reduced to about three or four knots when arriving at the designated place. Another method is to hold on at full speed until such a point is reached that when the engines are stopped the way will be sufficient to carry the ships to the anchorage. In this case it is necessary to know what distance is required for the ship to lose the way from standard speed to that for anchoring and allowance made for wind and tide. This method gets the ships to the anchorage in the quickest time, but unless ships are all about the same displacement it is impossible for them to retain position without using their engines.

When anchoring in formation, as well as when approaching an anchorage in a crowded harbor, or in the vicinity of other ships, ample steam

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pressure should be maintained so that the ship may be controlled in case of emergency.

If during the approach it becomes necessary to back the engines for any cause, the speed cones or light should if possible indicate this fact **before** the engines are backed. This applies at all times to ships in column formation.

If in backing it is desired to retain the same heading, care will have to be used to see that the ship is steadied with rudder amidships **before** the engines are moved. If a ship starts to swing, the only way to check her is to go ahead full speed all engines with rudder hard over and start her to swinging in the other direction and then reverse again. When anchoring in succession or approaching another ship, and it is desired that the ship's stern shall swing in a certain direction, the swing must be started **before** the engines are backed. The ship may be relied upon to continue the swing after the engines start backing.

In anchoring, a ship should never be snubbed by the chain, but should be brought up by the engines, veering chain as necessary, and later heaving in if beyond the required scope. Battleships are very heavy and their momentum is very great; the chain, if used to bring them up, may not part at the time, but it will suffer a severe strain and may part later when subjected to a sudden stress as produced by a heavy squall. It should be remembered that bower chains when stretched out taut will stand a tremendous strain, but when they are nipped in the bend of a hawse pipe will snap very freely.

If the engines are used for any purpose when the anchor is down, speed cones or lights should not be used to indicate this fact.

Backing in Column.

Never back in column except in emergencies or as provided for in the battle signal book.

Ship Ahead Turns Outside.

If the ship ahead turns outside and tries to regain position too quickly, it is better to reduce speed than to change course.

Hitting Ship Ahead.

It is almost impossible to hit the ship ahead as long as she has way on, as the least change of rudder will clear.

In Line.

Never get ahead of position when in line.

Foggy or Misty Weather.

In addition to action taken for fog or misty weather when acting singly, the following duties must be performed: The signal gun should be manned and ready for use; on the settling of a fog the motions of

senior ship should be followed in putting over the position buoy and training search-light on it. If ship astern cannot be seen, put it over anyway. In compound formations, train search-lights towards bridges of the ships on the beams or lines of bearing. When on soundings or approaching narrow waters, be ready to anchor on radio or gun signal by flagship as prescribed by the signal book. The motions of the senior ship should be followed in sounding the steam whistle and this shall be done in accordance with the Rules of the Road.

Keeping Position in Fog.

In keeping position in a fog, follow the position buoy of the next ahead closely, keep it just under the chains, and do not lose distance, as it will be found almost impossible to regain position when once lost. If the buoy of the ship ahead is not watching, keep as close to her as is consistent with safety, judging your distance by her search-light.

Commanding Officer Informed of Fog.

Make sure that the commanding officer is always promptly informed when a fog is apparent or when a fog settles down.

Water-Tight Doors in Fog.

During foggy, misty or thick weather close all water-tight doors not absolutely necessary for use.

Formation for Fog.

The formation to be taken for fog is designated by the commander-in-chief, and a signal is assigned for that formation.

When to Use Passing or Fog Signals.

Remember that "passing signals" are never used unless vessels are actually in sight of each other. And, above all, in a fog in formation pray for the best, but be prepared for the worst.

Keeping Station.

Revolutions, Knowledge of.

The officer of the deck should always know the exact number of revolutions the engines are making.

Varying of Revolutions.

It will be found in cruising that the revolutions toward the end of the hour may vary, as some machinists have a bad habit of varying the number of revolutions to make the required average.

Stadimeter Terms.

To avoid ambiguity, always make the stadimeter observer report "opening" or "closing." When stadimeter reading is taken from the mainmast, be sure to add the distance to the foremast to get the correct distance.

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Keeping Average Revolutions.

The officer of the deck should learn the average revolutions per minute for the preceding watch; the whole number nearest to it will probably give the best results when the ship is steady in station; after this, if reasonable care is taken, it should never be necessary to make a change of more than one revolution at a time to keep in station, except in a seaway, when it takes larger changes in revolutions to affect the speed.

Station at Night.

Ships usually keep in station better at night when fewer changes in speed are made, as the column or formation has an opportunity to settle down. It is much better practice to gain position slowly by the use of small changes of revolutions than to gain it rapidly by larger changes. One revolution only makes a small change—five or six yards a minute—and its effect will not be immediately noticeable, so give it time to act before making another change.

Effect of Bad Steering.

A ship will lose distance, if steering is bad.

PREPARATIONS FOR COMING INTO PORT AND ANCHORING.**Patent Log.**

On entering narrow waters take in the patent log.

Inform Engine Room.

Give the engine room as much advance information as possible regarding time of anchoring. Also warn the engine room to eject ashes before entering ports having no tideway or where harbor regulations forbid dumping ashes.

Garbage.

See that garbage is disposed of before entering port; to be disposed of according to Fleet Regulations or special orders.

Whom to Notify.

Notify the executive, first lieutenant, gunnery and engineer officers as to time of anchoring and also see that the chief boatswain, chief carpenter and chief gunner are informed of time and that they make the necessary preparations.

Getting Boats Ready.

Find out from the executive officer which boats are to be hoisted out; call the coxswains of the boats to be hoisted out and have them get their boats ready. See that boats are supplied with fuel and water. Test out motor boats in the skids. It is well to see that fires in steamers are started in due time, that the boats are hooked on and that power is up

to the crane motor. See that the captain's boat has boat cloth, colors and pennant ready for use. If coming into port near sunset or at night, see that boats going out have running lights ready for use. If boats are to be used to transport supplies, see that all the proper gear is in the boats.

Prepare for Guard Trip.

A boat is usually needed and should be prepared to make a guard trip.

Working Parties.

If working parties are to leave the ship on anchoring, have the petty officer in charge muster them near port gangway and hold them there ready to embark.

Ground Tackle.

Prepare necessary ground-tackle for anchoring and have steam turned on anchor engine.

Tidiness of Ship.

Down clothes-lines and tidy up ship generally.

Booms.

Rig booms and have them ready to go out as soon as anchor is dropped.

Honors.

Be prepared to render honors as may be necessary. Have saluting guns' crews, band and guard at their stations. The junior officer or a chief petty officer should inspect the side boys (see Table, page 100)

Stewards and Mail Orderly.

Have stewards and mail orderly ready to go ashore as ordered.

Color Details, etc.

Station details at the colors for returning salutes, for shifting colors, and hoisting the jack on anchoring. If at night have detail ready to turn on anchor lights and also have a forward search-light manned for use in piloting.

Simultaneous Action with Booms, etc.

On anchoring, booms, gangways and boats should go out together.

RULES OF THE ROAD.

Several Comments.

The following observation is obviously true: "The greater your speed the easier is the Rule of the Road, for if your speed is double that of a crossing steamer you cannot foul her unless she bears within $2\frac{1}{2}$ points (30 degrees approx.) of right ahead; while if your speed is only half that of passing vessels you may have to alter course to clear a

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ship bearing $2\frac{1}{2}$ points forward of your beam; which is very inconvenient."

"Always take a bearing of crossing vessels; if the bearing draws forward or aft she will pass ahead or astern of you as the case may be, if it remains the same you will collide. The only difficulty you will find will be with the bearing of a steamer on your starboard bow drawing very slowly aft, when you cannot be sure whether or not you can pass clear ahead of her. There is no rule as to how fast the bearing should alter, nor is it possible to formulate one; so wait until she is fairly close and the bearing has commenced to alter rapidly, when it is much easier to judge; if you still have any doubt swing sharp around and bring her on your port bow."

It is well to remember the fact that "the privileged vessel is required to keep her course and speed until danger of collision becomes imminent."

The officers of tramp steamers are not as likely to be familiar with Rules of the Road as officers of regular liners and it is a good policy to give them as much room as possible and be prepared to make any maneuver to keep out of their way.

When so close that collision is probable, any maneuver that will most likely avoid it is legitimate.

Some captains of ships have a practice of always maneuvering to keep ships on their port bows in all circumstances. Such captains as these are dangerous in crowded waters and must be carefully avoided.

SPEED AND DISTANCE TABLE.

Speed in knots.	400		800		1200		1600		2000		2400		50 yards distance, diff. col.
	Min.	Sec.	Min.	Sec.	Min.	Sec.	Min.	Sec.	Min.	Sec.	Min.	Sec.	Sec.
5	2	22	4	44	7	06	9	28	11	51	14	13	18
6	1	58	3	57	5	55	7	54	9	52	11	50	15
$7\frac{1}{2}$	1	35	3	09	4	44	6	19	7	54	9	28	12
8	1	29	2	58	4	26	5	55	7	24	8	52	11
9	1	19	2	38	3	57	5	11	6	35	7	53	10
10	1	11	2	22	3	33	4	44	5	55	7	06	9
11	1	04	2	09	3	13	4	18	5	22	6	20	8
12	0	59	1	58	2	58	3	57	4	55	5	55	7
13	0	55	1	49	2	44	3	38	4	33	5	28	7
14	0	51	1	42	2	32	3	23	4	14	5	04	6
15	0	48	1	35	2	22	3	09	3	57	4	45	6
18	0	40	1	19	1	58	2	38	3	17	3	57	5
20	0	36	1	11	1	47	2	22	2	58	3	34	5
21	0	34	1	08	1	42	2	15	2	49	3	23	4
22	0	32	1	05	1	37	2	09	2	41	3	03	4
30	0	24	0	47	1	11	1	35	1	58	2	22	3

MASTHEAD HEIGHTS.

(Paste data for the above here.)

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MAN OVERBOARD.*

Single Ship.

Stop engines; rudder hard over; back engines; away lifeboats; throw over lifebuoys. Send lookouts aloft; maneuver to pick up man. At night train search-light to locate man.

In Formation.

Column or Minor Columns Well Separated.

Stop; hold course; toot whistle; break and half-mast breakdown flag.

Ships Astern of Ship Losing Man.

Stop; toot whistle; break and half-mast breakdown flag; sheer out of column—odd ships 10 degrees right and even ships 10 degrees left. The three ships next astern of the one losing man shall back, *lower boats* and pick up man. In case the ship losing man is next to rear or is the rear ship of a column, the rear ship, in addition to making the signals prescribed above, will put the rudder hard over, back full speed and maneuver to pick up man.

In Line or Intermediate Line of Bearing.

Single Formation.

Ship losing man. Stops; toots whistle; breaks and half-masts breakdown flag, and as soon as she can safely clear the ship next toward the guide, backs full speed, turns towards guide with hard over rudder and maneuvers to pick up man.

In Column of Divisions or Squadrons.

Ship losing man. Stops; toots whistle; backs full speed; breaks and half-masts breakdown flag; lowers boats, if practicable, when headway is sufficiently reduced.

* During hostilities procedure for action with man overboard in formation is governed by special fleet doctrine.

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All Ships of All Divisions or Squadrons in Rear of the Division
Losing Man.

Stop; and the ships immediately following the ship losing man *back*
when necessary and be prepared to lower boats and pick up man.

At Night. All Cases. In Formation.
And Always in Fog or Thick Weather.

Ship having man overboard *makes man overboard signal; fires
signal gun; trains search-lights on man.*

General.

When the man has been picked up or search abandoned, "Affirma-
tive" shall be made by each ship, except flagship of senior officer
present, to indicate when she is ready to go ahead.

FIRE.

Calls.

General alarm.

Ship's bell rung rapidly, followed by designated strokes to indicate
location.

Fire quarters on bugle, followed by blasts to indicate location.

Word passed by boatswain's mate as to location of the fire.

See that men go to their stations on double.

Report to commanding officer.

Navigator relieves the deck.

BREAKDOWN.

Break breakdown flag at the fore.

Even ships sheer out to *port*.

Odd ships sheer out to *starboard*.

Maneuver to avoid collision.

COLLISION.

At Anchor.

The officer of the deck shall be prepared: to veer if necessary; to clear
the sides; to rig in booms and put over collision mat.

The Calls.

General alarm.

One long blast on siren.

The warning howlers.

Word passed by boatswain's mate as to location of the injury.

Assembly on bugle.

Close water-tight doors. Crew assembles at quarters. See that all hands go to their stations quietly on the double.

Report to commanding officer.

Navigator relieves the deck.

ABANDON SHIP.

Sound "Provision Call" and "Away all boats."

Navigator relieves the deck.

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WATCH OFFICER; IN PORT.

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INFORMATION ON RELIEVING IN PORT.

On relieving the deck in port all information relative to the following subjects should be obtained:

Position of ships; bearings of anchorage.

Status of ground tackle; anchor in use, depth of water, and amount of chain out.

Shipping: public vessels at anchor and underway, merchant vessels near anchorage.

Boats: running boats, trips in progress; fuel necessary for power boats; boats ready for use; boats to be prepared for duty; those out of commission; boat schedule; orders for special trips.

Liberty: watch entitled to; time for going; time for return; location and status of liberty book; special lists.

Officers: location of captain and executive officer; officers ashore.

Orders: those to be carried out in watch, those to pass on; morning orders; officer of the deck's order book; navy yard regulations and fire bill; harbor regulations.

Guard ship: location; the relief.

Work: in progress; in abeyance.

Visitors: time allowed on board; privileges; those on board; transportation provided for.

Guests: official and social.

Visiting parties: lists of same; those on board; those to go; time of going and returning; those away with time of return.

Athletic teams: place of exercise and time of going and returning.

Bumboats: privileges granted.

Routine matters: such as bedding, scrubbed canvas, scrubbed and washed clothes; the jack, colors and lights; search-light ready for use; lifeboat ready for use; watch on duty; drills in progress; awnings spread; flags hoisted; lighters or barges alongside; boats waiting; duty electrician; boatswain's mate; quartermaster; gangways rigged; magazines open, if any; uniform of the day.

Tide: state of, force and direction.

Weather: barometer, thermometer; direction and force of wind, recent shifts or sudden changes.

Engineering department: status of engine, boilers and dynamos in use.

Binnacle list.

Prisoners: confined and at large.

Miscellaneous: any other information that may be of interest.

The above information should be "turned over" in detail and the officer taking the deck should verify the important details at once.

A point should be made by the officer going off watch to have all work completed as far as possible during his watch so as not to have to turn over unfinished work. The officer going off watch should anticipate the work of the next watch and have same well in hand when his relief takes the deck. This will save the latter much embarrassment in carrying on his work.

GENERAL COMMENTS.

Safety of the Ship.

The officer of the deck is responsible for the safety of the ship and with this in view must always take the utmost precautions.

Dragging.

The regulations provide certain precautionary measures to indicate dragging of the anchor and these must always be taken so as to insure the safety of the ship.

In regard to the above, the regulations state that the drift lead must be put over the side when anchored in a strong tideway or with a strong wind blowing; a range observed on shore and all other necessary precautions taken to ascertain at once if the ship drags. Either of the above precautions will do very well if the anchor drags rapidly, but neither are very effective when the anchor drags slowly. The only reliable means of determining whether or not the anchor drags is to take occasional accurate bearings of some definite stationary object. Keeping the lead line slack to allow for swinging of the ship will increase its usefulness.

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Heavy Weather.

On the approach of heavy weather, hoist all boats not urgently needed, get anchor ready to let go, be on the lookout for dragging and, when the sea begins to get rough, trice up the accommodation ladders to clear the waves. On marked shift of wind, especially in an open roadstead where a lee shore may come in, "call the captain." Do not hesitate to state your opinions regarding the safety of the ship to the commanding officer; asleep or awake, he will probably appreciate it, and at any rate it is the officer of the deck's duty. Keep fully informed as to the status of engines and boilers that are in use even though the orders do not come through the officer of the deck.

Anchored in Tideway.

To prevent sheering back and forth in a tideway, put a slight amount of rudder away from the anchor.

Handling Explosives, Gasoline, etc.

Do not forget to hoist the powder flag, to have all unauthorized lights and fires extinguished and to put out smoking lamp whenever powder, oil fuel, gasoline or any explosive is taken on board or disembarked. In transporting powder to and from the ship or out of magazines for any cause, it is not to be exposed to the direct rays of sun, but always to be well shaded.

Precautions with Powder.

Except during target practice, all powder out of the magazines must be kept in tanks with lids screwed down, and in charge of a sentry.

Signalmen and Quartermasters on Lookout.

Do not rely on signalmen or quartermasters for information, as they may fail to report important occurrences when most needed. For failures in this regard, however, these men should be thoroughly called to account. The signal force of a flagship is under the control of the flag lieutenant and all information desired from the bridge force must come through him. On some flagships a dual control is used, but unless the system is thoroughly understood by the watch officers, flag lieutenant and bridge force, confusion will result.

Minor Matters Handled by Subordinates.

A bright lookout should be kept at all times. All matters over which the officer of the deck has control should have careful attention, but do not let minor matters prevent any inattention to the general business of the watch. As far as consistent with the proper performance of duty, turn over all minor matters to subordinate watch officers.

Appearance of Ship.

The general appearance of the ship should have the officer of the deck's careful attention at all times. The flagship's motions in such matters as colors, the jack, air bedding, awnings, etc., should be followed. Details, such as all flags or pennants "chock up" and clear, no gear adrift about the decks, clothes-line and all other gear taut, no Irish pennants showing, ventilators and windsails trimmed, nothing hanging over the sides, boat keepers alert and sitting up, gangways clear of seaweed and spotlessly clean, should always be given careful observation.

Lounging, etc.

Do not let any one lounge around near the starboard gangways nor litter up the vicinity with newspapers or magazines. A mess bench should be kept on the port side abreast the starboard gangways for side boys.

Do not let men hang over the rails or life lines at any time. During ceremonies, hanging over rails as well as loitering around gangways should be strictly forbidden.

Rains, etc.

Do not let a deluge catch you before hauling over hatch covers, housing the awnings, piping down clothes, bedding and canvas gear. If in exposed positions, hawsers and ammunition should be moved to protected places at first indications of rain and halliards should be slacked. In hot climates, all covers to lower decks should be kept off as long as possible without getting the "insides" of the ship thoroughly soaked. For very light showers in these climates, it is hardly necessary to cover the hatches, as the increased heat below is more deleterious than the rain. However, when hauling over covers, do not forget, as is frequently done, the fire and engine room hatches. During rainy seasons, always have hatch covers broken out and awnings housed by 8 p. m.

Manner of Performing Duty.

The officer of the deck should protect the crew from unnecessary annoyances and see that they receive every comfort and pleasure consistent with the regulations and good discipline.

If possible, see that all members of the crew have their meals on time. Work should be handled with this in view, but circumstances will occasionally make this impossible and the meals should be saved and kept warm for or sent to those who are absent.

Politeness as well as cheerfulness in giving orders has its rewards, but these, as well as gruffness and harshness, may be carried too far.

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Reports and Salutes on Leaving and Returning to the Ship.

- 2806 R** (1) "All persons over whom the officer of the deck has authority must report to him or his representative upon leaving the ship, stating that they have **permission to do so**, and also to report their return on board."
- (2) "The absence from the gangway of an officer of the watch at the time of the departure or return of any officer, is not to be construed by the latter as sufficient reason for omitting this report."
- (3) "The officer of the deck shall report to the executive officer the departure and return of all officers senior to that officer."

As soon as it is known that the commanding officer is about to leave the ship notify the executive officer.

Whenever officers or men arrive on the quarterdeck of ship, the colors shall always be saluted. This salute is entirely independent of the salute to the officer of the deck. If necessary to salute the officer of the deck, he shall be saluted after the foregoing salute. The officer of the deck shall return all salutes to the colors as well as those to himself.

Colors.

- 1254 R.** The full force of field music shall sound first call to the colors. The field music, guard of the day and band, if there be one on board, shall be present for the ceremony. At morning "colors" the band shall play the National Anthem, at the beginning of which the ensign shall be started up and hoisted smartly to the peak or truck. All hands face aft and salute if covered (those uncovered standing at attention) at the first note of the Anthem, retaining the position of salute until the last note of the Anthem. Sentries and guard "present" at the beginning and "order arms" on the completion of the music. If there is no band on board, the full force of field music sound the "colors" call in lieu of the National Anthem. When foreign men-of-war are present (morning colors only) the airs of the various nations represented are played in order of their ships' seniority after the completion of our own National Anthem, except when in a foreign port the national air of the port should follow our National Anthem and the ceremonies completed as above.

The ceremonies at evening colors shall be the same as above (exception included), but the ensign is lowered slowly.

In half-masting colors, always hoist full up to the truck or peak then lower to half-mast; the reverse procedure holds for lowering from half-mast.

In hoisting, lowering or half-masting the colors, the motions of the senior ship present in sight shall be followed.

Salutes by Dipping.

All salutes from vessels by "dipping" their colors shall be answered "dip" for "dip." This should be done promptly and smartly; do not wait for the saluting ship, "round up" immediately. If such a salute is made before 8 a. m. or after evening colors, the colors shall be hoisted and the salute returned as above. The colors should then be hauled down when saluting ship is well clear.

Union Jack.

The union jack is displayed from morning to evening colors. It should be half-masted when colors are at half-mast. The jack at the yardarm signifies that a general court martial or court of inquiry is in session. It is hoisted and a gun fired when the court meets and is hauled down on the adjournment of same.

Men-of-War Entering Harbor.

When a man-of-war enters a harbor be ready to turn on your own man-of-war lights with the senior officer present. If the entering man-of-war is to anchor in berth nearby, turn on the fore truck light and turn off same as soon as she is anchored.

Complaints.

In hearing complaints exercise patience; hear both sides of the story fully before deciding on action. If the complaint is serious, refer it to the executive officer immediately. If it is a question of the accused being a menace to the ship or ship's company, report the fact to the commanding officer and ask permission to put the accused under sentry's charge for safe keeping.

Uniform.

Between morning and evening colors, no men except artificers, the gunner's gang and engineers, wearing dungarees, should be allowed on the upper decks out of uniform and these only when actually engaged in work.

Provisions, etc.

The necessary instructions to send to supply ships for frozen and other supplies are made in the office of the executive officer, but it remains for the officer of the deck to carry them out. It is usually neces-

sary to send for frozen supplies around 3.30 a. m., or in any event before reveille. This requires breaking out the working party, providing breakfast or coffee for them; getting out the necessary boats; calling the commissary steward and providing gear for the boats. The officer having the first watch should see that all of the working party sleep in the same part of the ship and word as to their whereabouts should be passed along. If it is found that the working party is not sleeping in the same part of the ship, immediate steps, such as getting the master-at-arms after them, should be taken to get them together. The details in preparation of boats for the supplies should be begun sufficiently early so that they will be alongside when it is time for the party to "shove off." The return of frozen supplies should be particularly looked out for, and to this end all preparations for receiving them on board should be made. These supplies should be struck below immediately; the junior officer of the watch or a responsible chief petty officer should be in charge of this. Supplies should be checked as received on board by a representative of the pay department. The executive officer should be kept informed of supplies received and amount remaining to be received.

Weighing Provisions.

The regulations require that all provisions delivered on board by a contractor be inspected upon delivery by a commissioned officer (the officer of the deck, junior officer of the deck or relief), who shall personally and without delegating this duty to any other, ascertain the exact quantity of each article received, certify the fact on a memorandum over his official signature, and at once deliver the same to the supply officer who shall have it checked with the retained copy of the order and file them together for subsequent comparison with the dealer's bills. This inspection is in addition to that required to be made by a medical officer of the ship as to the quality of the provisions.

Further, the regulations require that whenever provisions are delivered on board by a contractor, an entry shall be made in the ship's log showing the contractor's name, the exact quantity of each article delivered, and the names of the officers who made the above required inspections.

Liberty Parties.

Liberty parties should be assembled in ranks and carefully inspected before being allowed to go ashore. If rigid inspections of the liberty parties are made a regular habit, the men will come aft clean and tidy; when in a condition otherwise, in any respects, they should not be allowed to go ashore until the defects have been remedied. Fobs, tobacco tags, buttons and other articles must not be worn with the uniform, but liberty parties will probably be covered with such articles

before leaving the ship, if not regularly inspected. There is a certain aristocratic element on board ship which invariably indulges in the wearing of bright-colored silk socks when making "liberties" and at other times; this tendency should be completely checked.

Be sure to inform men when leaving the ship of the time of expiration of liberty.

Men should not be kept waiting to go ashore any longer than is consistent with ships' or other orders regulating same or with regard to the availability of boats for transportation. On rainy days boats should be provided with tarpaulins or boat awnings.

Extreme precautions should be taken in embarking men in boats. When the water is smooth, no more than the number of men designated on boat plate should be embarked in a boat, and on rough days a special safety factor depending on the state of sea and weather conditions should be introduced.

Men returning from liberty should be sent forward as soon as checked off or cards taken. This should be expedited. The master-at-arms or corporal of the guard should always be present when men return from liberty.

Do not argue with a drunken man. Put all such cases in charge of the master-at-arms; send them to the sick bay and then send word to the doctor to make an examination.

Visitors.

All visitors should be courteously and politely treated, but cameras should be taken care of and suspicious bundles investigated even though objection is voiced thereto. No visitors should be allowed to go below the protective deck, in turrets, fire control, or conning-tower and radio room, nor should they be allowed to handle guns or gear of any sort. Escorts should always be provided for visitors and carefully instructed in the above. The corporal or a master-at-arms should always be at the port gangways when visitors arrive. A lookout should be kept on all shore boats for contraband traffic and it is a good plan to have some one at the foot of the gangways and a lifebuoy handy when shore boats arrive in numbers.

ROUTINE IN PORT.

The officer of the deck is responsible for the execution of all routine during his watch, and if circumstances prevent the carrying out of any part of same, he should notify the executive officer.

All activities engaged in under proper orders may be considered as routine matters of the ship.

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The actual scheduled routine of ships varies according to fleets' and ships' orders.

The usual scheduled routine of a ship in port follows:

a. m.

3.00 Call cooks and baker on duty.

4.00 Relieve the deck.

4.45 Call master-at-arms, boatswains' mates, bugler.

5.00 On week days when sunrise is earlier than 6.30, reveille. Call steamer's crew except boat making late trip. Light smoking lamp. Pass word regarding mattress covers or bedding to be scrubbed, if any.

5.30 Turn to. Out smoking lamp. Carry out morning orders. On week days when sunrise is later than 6.30, reveille and carry out routine as at 5.00.

Sunrise. Out all lights. If guard, hoist guard flag.

6.00 Trice up clothes-lines. On Sundays, reveille, etc., as above. Or when reveille is 5.30 turn to, etc., as above.

6.55 Uniform and time signal is hoisted by flagships.

7.00 Strike bells when above signal is hauled down. Report uniform and time signal to commanding officer. Call relief officer of the deck.

7.15 Mess gear; light smoking lamp.

7.30 Pipe to breakfast; pass word about uniform; hoist meal pennant.

7.45 Flagship hoists signal for size colors.

7.50 Call guard and band; notify signal watch if guard flag is to be hoisted.

8.00 Report 8 o'clock to commanding officer; make colors. Air bedding, if fleet schedule. Relieve the deck.

8.15 Down meal pennant; out smoking lamp. Turn to. Sweep down. Sound bright work. Make preparations for quarters.

8.30 Sick call.

9.00 Knock off bright work. Clean up deck for quarters. Send mail to division flagship (Atlantic fleet).

9.10 Officers' call. Notify navigator.

9.15 Quarters. Inspection and muster. Physical exercises. Test water-tight doors. Drill call.

9.30 Division flagships send mail to force flagship (Atlantic fleet).

10.00 Signal number of absentees, sick, and men for hospital.

11.00 Reports and requests to mast.

- 11.30 Retreat from drill. Relieve the navigator. Pipe sweepers.
- 11.45 Mess gear. Inspect crew's dinner.
- noon.
- 12.00 Report 12 o'clock and chronometers wound. Pipe to dinner.
Signal: (1) coal on hand; (2) coal expended during preceding 24 hours. Relieve the deck.
- p. m.
- 12.55 Stand by, scrubbed and washed clothes, and aired bedding, if any.
- 1.00 Turn to. Pipe down clothes and bedding. Pipe sweepers. Down meal pennant. Send mail to division flagship (Atlantic fleet).
- 1.15 Drill call or school, except Wednesday, Saturday and Sunday.
- 2.30 Retreat from drill or school. Division flagships mail to force flagship (Atlantic fleet).
- 4.00 Knock off work. Pipe sweepers. Relieve the deck.
- 10 minutes before sunset. Call guard and band; stand by colors and lights; receive reports as to condition of all anchor and signal lights.
- 5 minutes before sunset. Preparatory signal for colors on flagship. Sound first call.
- Sunset. Make evening colors. Turn on lights. Receive reports regarding lifeboats and search-light.
- 5.45 Mess gear.
- 6.00 Pipe to supper. Hoist meal pennant.
- 6.30 Turn to. Scrub clothes.
- 7.15 Master-at-arms reports decks ready for hammocks.
- 7.30 Hammocks.
- 7.45 Inform relief of time and weather conditions.
- 8.00 Report 8 o'clock, lights and fires out, and prisoners secure to commanding officer. Muster anchor watch. Relieve the deck.
- 8.55 First call.
- 9.00 Tattoo. Report 9 o'clock lights out to commanding officer.
- 9.05 Taps.
- 10.00 Report 10 o'clock lights to commanding officer.
- 11.45 Call relief.

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Weekly Routine (Atlantic Fleet).

Day.	Morning.	Forenoon drills.	Afternoon.	Evening.
Monday...		Battery or divisional.	Ship's work. Boat exercises. Seamanship instruction school.	Night signaling or other exercises.
Tuesday...	In port 1st and 3d. Scrub bags and hammocks.	Same as Monday.	Same as Monday.	Same as Monday.
Wednesday	Scrub mattress covers.	Fire and collision and divisional.	Mending. Bag inspection. School.	Night signaling. Searchlight exercises.
Thursday..	Boats and bright wood work.	General quarters.	Same as Monday.	Same as Monday.
Friday....	Hose and canvas.	Air bedding. Overhaul battery. Inspect material.	Inspect bedding. Same as Monday.	Same as Monday.
Saturday..	General cleaning.	Commanding officer's inspection.	Holiday.	Holiday.
Sunday....		Quarters for divisional muster and inspection at 9.30.	Holiday.	Holiday.

(1) Bedding shall be aired on Fridays immediately after breakfast; care shall be taken that all parts thereof are open to the air.

(2) At general quarters open and close and secure all armor doors and hatches, including conning-tower.

(3) Overhaul battery includes all ordnance material and especially that found out of order during general quarters on Thursday.

(4) The inspection of material on Friday mornings refers to the requirements of the Navy Regulations.

(5) If coaling on Wednesday afternoon the routine prescribed shall be carried out on Thursday afternoon.

(6) The seamanship instruction prescribed for afternoons shall be carrying out anchors, knotting and splicing, heaving the lead, etc.

(7) Commanding officer's inspection shall be made on Saturday forenoon; no inspection shall take place or be completed on Saturday afternoon.

SURVEY OF THE WATCHES.**Midwatch.**

The safety of the vessel and of boats is the primary consideration during this watch. The morning orders should be read and any preparations necessary to assist in their execution begun.

Morning Watch.

Execute the morning orders. Carry out weekly routine that may be necessary. See that the chief boatswains and boatswains' mates read and are familiar with orders concerning them. Be sure to pass any word about scrubbing mattress covers or bedding at reveille. At the same time get up steam (unless otherwise ordered) in all steamers except the one making the late trip. As soon as ascertained, send word to the engine room as to the amount of coal needed for the steamers and where to hoist same. At "turn to" hoist out all boats that will be needed for the morning watch. See that running boat is made ready for the early trip and that one steamer is ready for coaling at "turn to." Make sure that all stewards going ashore in the market boat are on deck when the boat arrives alongside. Coal running boat as soon as possible after return from first trip; then coal remaining steamers. Do not ring boat bells before 8 a. m.

Five minutes before sunrise the letter "F" is displayed by the senior officer's ship and division flagships as a preparatory signal to stand by all anchor, boom and gangway lights. These lights should be turned off simultaneously with the letter "F" at sunrise.

Before washing down the decks give them a clean sweep and see all gear laid up clear. Have water turned on by 5.15 a. m. so that men wishing to scrub clothes may do so, and also see that there is sufficient force on the deck pump at "turn to." Do not allow clothes to be scrubbed before the deck is wet down. At "turn to" the decks should be wet down and then sprinkled with sand. The decks must then be thoroughly scrubbed as the sand alone will not clean them. In washing down, keep the nozzle of the hose down and away from the hatches. The decks should be dried down by breakfast; all pockets in manhole plates, waterways, and corners of the decks should be thoroughly dried out. Be sure to notify the engine room when through with the deck pumps. (A knock in the firemain signifies that the pressure has not been relieved.)

When the temperature is such that water freezes on the deck, do not wash down. If the executive officer has not provided for this contingency in the morning orders, notify him of the existing state of weather.

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When alongside a dock, have sweepers clean it and sweep down.

Orders for side cleaners are usually in the morning orders and if there are none, have them start work at "turn to." Side cleaners should knock off work and punts should be hoisted at 7.30 a. m., unless permission has been obtained from division flagship (or commanding officer when alone). Side cleaners should not be sent over the side after 8 a. m.

When orders and circumstances permit, swimming should be held before breakfast and the men should not be in the water longer than 15 minutes. At least one boat properly manned, well supplied with life preservers, and in charge of a petty officer should always be at hand whenever there is swimming from the ship. See that flushing system is shut off 15 minutes before swimming call on side desired to hold swimming.

Clothes may be scrubbed every morning except Sundays and holidays.

Fire hose should never be scrubbed with sand nor on decks covered with sand.

As soon as the uniform signal is made at 7.00, send word regarding it to the commanding officer, the executive officer, the master-at-arms, the sergeant of marines and the officers' stewards. When making this report to the commanding officer, inform him of the weather and send in any routine signals or reports he has not received. Have the word as to the uniform and airing bedding passed to the crew at breakfast.

If there is any routine to be carried out at the completion of colors (or shortly thereafter), pass the word or make the necessary calls pertaining thereto before first call so as to be ready for execution at the designated time.

If not on the senior ship present, have the orderly report 8 o'clock to the commanding officer as soon as the senior officer present strikes his bell. If on the senior ship present, report 8 o'clock to flag and commanding officers several minutes ahead of time. The procedure will then be to make it on the senior officer's "make it so." At 8 o'clock with the bell, make colors as detailed on page 62.

The Forenoon Watch.

Execute morning orders that have not been completed. Carry out routine. If bedding is to be aired, see that it is done promptly on completion of colors and have the master-at-arms make inspection to see that all bedding is neatly and properly secured to the life line and that the hammock nettings are empty.

At the call for bright work, see that all hands are busy on their cleaning stations. Make the usual preparations for quarters and, if Saturday, for commanding officer's inspection. At the call "knock off bright

work," clear up the deck for quarters, down towel lines, flemish or make up all gear and, if possible, allow men time to get into clean uniform.

As soon as liberty has expired, or if it has expired in the previous watch, check up absentees, report same to the commanding and executive officers, send a written memo to ship's writer office.

At officers' call notify navigator of the time and condition of the weather. If raining, notify the navigator earlier. Be sure to instruct buglers to sound first call so that it can be heard all over the ship.

As soon as assembly is sounded the executive officer takes charge of quarters, drills, etc., but the navigator takes over the deck. When the drills are not of a general character the deck may be taken by such officer as may be designated by the commanding officer.

Relieve the navigator at retreat from drill or as soon after drill as possible. After drills sweep and "clamp down" the decks. In clamping down see that the decks are not soaked, only sufficient water should be used to clean them. Soaked decks can never be made to look clean.

When all "reports" with witnesses and ship's writer are aft, the executive officer should be so informed. The executive officer will usually notify the officer of the deck when to report to commanding officer, but if this is not done, inquire of the executive officer if he is ready for the commanding officer before making the report.

If the chronometers have not been reported by 11.45, suggest the fact to the navigator and send for the chief quartermaster.

At noon report chronometers wound; and report 12 o'clock as per procedure for 8 a. m. (see Morning Watch).

Pipe to dinner.

Afternoon Watch.

Carry out daily and weekly routine and special orders. Preparations to complete or carry out the preceding should be made as soon as taking over the deck.

The signal for piping down scrubbed and washed clothes and aired bedding, if any, is hoisted by flagships at 12.55. The word to "stand by" for the above should be passed throughout the ship immediately and should also be sent to the engine and dynamo rooms. The piping down should be executed with the hauling down of the signal at 1.00. When bedding is aired, it is usually inspected on piping down. If clothes are not dry, the fact should be reported to the executive officer. He will give orders as to where they may be dried.

The regular routine work and special orders for this watch will usually keep the officer of the deck busy, and the boat question will require considerable foresight to meet the numerous demands. Except when in

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navy yards, nearly all the ship's boats will be in use for one thing or another during the watch and should be in the water in sufficient time for the purpose demanded. The fleet (Atlantic) regulations require boat exercises every afternoon except Wednesdays, Saturdays, Sundays and holidays, and if the boats are not sent out for drills, they will be needed for supplies and liberty and athletic parties. In ports such as Vera Cruz and Guantanamo, sailing races are held in lieu of boat exercises, and boats must always be ready to start by 2 o'clock. It occasionally happens that boats will be needed for supplies, boat races, liberty and athletic parties at the same time and then the only thing to do is to employ every boat for the most important duties and the other demands will have to be met as soon as boats are available. When such a condition as just mentioned exists, it should be referred to the executive and he will usually issue the necessary orders relieving the officer of the deck of the responsibility for the boats' employments.

Dog Watches.

Carry out routine and special orders; send liberty parties ashore and send for athletic and other parties on the beach. Where parties are ashore to be returned to the ship, send boats into landings sufficiently early so as to keep men from waiting impatiently on the dock.

Swimming should be allowed, if circumstances, orders and conditions warrant it.

Colors are made at sunset, as on page 62, and all anchor, boom and gangway lights are turned on with the senior ship. When "preparatory" is hoisted, men should be stationed at the switches to turn on, and on completion of colors and inspection they should be made to see that all lights are burning.

All anchor, gangway and signal lights should be tested and condition reported to the officer of the deck at least 10 minutes before colors.

At sunset the "port" lifeboat and at least one search-light should be reported as ready for instant use.

See comments, page 76, regarding hoisting boats and page 61 with regard to rainy seasons.

When circumstances and conditions permit, request permission to hold moving pictures. If permission is granted, the necessary orders should be given to "rig the screen" and handle the machine. When moving pictures are to be held, it is better to have decks cleared immediately after supper and have hammocks at 7.00 instead of 7.30 or after "movies." No men except chief petty officers should be allowed to select seats until hammocks have been piped down. The commanding

officer and all other officers should be notified when "movies" are about to begin. The decks should be "clamped down" before "movies"; the reason is obvious.

Notify relief. Report 8 o'clock (see **morning watch** for procedure in reporting 8 o'clock), 8 o'clock lights and galley fires out and prisoners secure.

First Watch.

Carry out routine and special orders. If no orders have been given to secure boats, ask the executive his desires in the matter. When coxswains report boats secure, notify them of the time they will be required to have steam up and be ready for trips. Muster the anchor watch (unless "movies" are being held) and see that each man knows his station, his relief and where he billets. Each man should know the coxswain's billet and the watch is assigned to sleep in the same part of the ship for the night. Billets in a special part of the deck in close proximity to the officer of the deck's station are usually assigned for this watch.

If "movies" are held, delay the above muster until their completion and then have the full anchor watch unrig and sweep down. See that all men of special working parties who are to be called before reveille are sleeping in the same part of the ship and that the petty officer in charge knows their location.

See that the corporal of the guard makes a thorough inspection after taps. He should inspect the ship and make reports to the officer of the deck every half hour after 10 p. m.

If the morning orders are not on deck at 10 p. m., it is a good plan to inquire for them. Most captains will forgive you if you do not wake them to report 10 o'clock lights out; if the executive is up, make the report to him.

BOATS.

Boats Coming Alongside.

1803 I (1) "The officer of the deck shall inform himself of all boats that come alongside or leave the ship."

Lying Alongside.

Boats should not be allowed to lie alongside except on urgent duty. This rule should be particularly enforced in rough weather.

Line.

The boat line should always be ready for boats coming alongside, and if not rigged a light line of some sort should always be kept near at hand.

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Meeting Boats at Gangways.

The officer of the deck or his representative should be at the gangways on arrival and departure of all boats.

Schedule.

Even though no one is going ashore, the boat schedule should be rigidly adhered to, as there may be some one on the dock waiting to get to the ship. Ship's orders usually cover this subject fully.

Use of Boats.

The boats of a ship are for the purpose of transporting personnel and matériel and should be used without hesitancy, but due regard must be had for the crew of the boat and for the necessary future use of boats by the officer of the deck. Useless trips and lack of boats are caused by not thinking in advance and coordinating the various missions to be accomplished. Make one trip do as much as possible. For special trips of short distances, unless there are orders to the contrary, the executive officer should not be bothered. For special night trips or those of extended length, the executive's permission should **always** be obtained.

Orders to Coxswains.

On shoving off from the ship's side, every boat should be given definite orders. No boat, except the captain's or one being used by the executive officer, should be given such orders as "Wait for Mr. ———." If such orders are given, the officer of the deck will soon find himself without a boat when one is most needed. It is always a good precaution to warn coxswains to look out for their recall.

Captain's Boat.

The captain's boat should never be used without his express permission. If the business of the ship necessitates, it would be permissible to make such a request for the above through the executive officer.

Supervision of.

The officer of the deck has supervision over all ship's boats, and all other boats making the ship's gangway. In this connection he should pay particular attention to the uniform of the crew of the ship's boat. Boat crews should always be in the same uniform.

Appearance of.

The appearance of ship's boats reflects on the efficiency of the ship and efforts made to improve the personnel and matériel are well worthy of every consideration.

Inspection of.

The inspection of running boats should always be made after morning colors.

Waiting.

Boats waiting should be given orders as soon as possible and should not be allowed to get out of hail. To keep a visiting captain waiting 10 or 15 minutes for his boat shows a lack of alertness, if not inefficiency. If honors are necessary, do not report boat alongside until all preparations for same are made.

Waiting Definite Time.

Boats waiting any definite length of time should be allowed to haul out to the boom. Care should be taken in granting this privilege and if the boat is waiting for an officer, he should be consulted as to his wish in the matter.

Secured Alongside.

Boats secured alongside do not fly the ensign except when ship is full-dressed nor have running lights shipped, nor should fenders be over except when boats are in close proximity to each other.

Do not let steamers lying alongside to windward "fire up."

Boat Colors.

Boats in foreign ports fly the ensign, except as noted above. Boat colors are half-masted with colors of ships.

Lookout Kept on Boats.

A careful lookout should be kept on all ship's boats, and assistance rendered as quickly as possible in case of accident. Assistance should not be restricted to one's own boats and in accidents or breakdowns of other boats, it should be a point of pride to have the first boat at the scene to render assistance.

Boats at booms may not use whistles to call the boat's crew.

Guard Boat.

A boat should always be ready to make the guard trips as per fleet routine; and when a vessel is acting as guardship, a guard boat should be ready for trips on a moment's notice. Always see that guard boats are provided with clean guard flags before shoving off. Fleet orders cover this subject fully.

Life Boats.

2502 I (4) "In port, one or both lifeboats shall be kept ready for immediate use from sunset until colors next morning. It will be found that there are occasions when neither of the regular lifeboats are available for use, and on these occasions one of the other ship's boats should be prepared for this service." (A dinghy "hooked on" the crane is the usual substitute.)

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Loading Boats Alongside.

The officer of the deck is responsible for the loading of all boats alongside and care should be exercised so that the freeboard is not less than that designated. The water may be smooth, but it does not take very long for it to become rough enough to swamp an overloaded boat.

Equipment of Boats Sent for Frozen Supplies.

Boats sent for frozen supplies should always be equipped with tarpaulins. Boats sent for supplies of any sort should always be supplied with a couple of cargo nets. The last two "slings" should be left in the nets; this facilitates unloading. Boats sent to landings for stores should be also provided with block and tackle.

Supervision of Hoisting Boats on Large Ships.

On large ships it is very impracticable for the officer of the deck to personally supervise the hoisting of boats, but he should make certain that the chief boatswain or the boatswain's mate, in charge of boat deck or part of ship in which boat is to be hoisted, is supervising the operation. When boats are to be hoisted, notice should be sent to the dynamo room in advance, as power may not be sufficient. If winches are to be used for hoisting, an electrician should be on hand to operate them. Slipping of "falls" on drums is prevented by use of sand. Always hook on forward first, except when tide is running towards the bow or when that effect holds between the water and the ship.

Hoist Boats.

Except in well land-locked ports, before sunset, hoist all boats for the night that will not be needed for early trips. Permission to do this can easily be obtained from the executive officer, and it will save the night watches much trouble in breaking out hands to pick up boats that have gotten adrift or are knocking themselves to pieces against the side of the ship.

When at anchor in open waters, such as southern drill grounds, boats should be well provisioned.

Securing Boats for Night.

Orders for securing boats for the night emanate from the executive officer and none other than noted below should be secured without his permission. If the captain or admiral should give direct orders to secure their boats, the executive should be notified. In securing, do not allow boats to dump their fires to windward. Except when boats lie astern, they should be secured at both bow and stern. Boats lying astern should have a good bight of line to ride on and in rough weather this should be long enough to ride easily.

Fueling and Watering Power Boats.

The best time, with exceptions of course, for fueling boats is in the morning watch. Some may disagree with this, but if a careful plan is laid out and preparations started at earliest moment of the watch, it will be found to work very satisfactorily. Further, when the use of boats is great, the officer of the deck will not have to stop to fuel them. The engine room should be notified in advance as to the amount of coal needed, the hoist to be used and the time to begin sending up.

Gasoline for the motor boats is usually on deck and is easily hoisted out on the cranes. Motor boats should always lie off several hundred yards from the ship to take on fuel. These boats should never be fueled at night, except in cases of extreme necessity, and then in no circumstances should open lights be used in the boats.

Fire in Motor Boats.

Fires in motor boats may be best extinguished by flooding to the gunwales, extensive use of sand, use of steam from the launches or by foam type extinguisher.

Blowing Tubes.

Steamers should lie off to blow tubes.

Running Motors Alongside.

Motors should not be allowed to run unnecessarily in boats alongside. The noise is disagreeable and the smell is bad.

Awnings.

Awnings should be spread in all pulling boats in the tropics from 8 a. m. until 4 p. m. If spread, boat awnings should be furled at first call to evening colors.

Boat Equipment.

Boats must always be equipped with compasses and lifebuoys.

Reference: Arts. 28, 29, 30 and 35 of the Deck and Boat Book, 1916.

Controlling Boats from the Ship.

On large ships, except when hoisting, lowering or having a line made fast, it is impracticable for the officer of the deck to control boats' movements and, except in cases of emergency, it is best to leave the coxswains to their own resources.

Reference: Chapter V, Deck and Boat Book.

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Precautions Against Freezing.

All precautions should be taken in cold weather to prevent freezing of water and oil in boats. This not only applies to boats in the water, but to those in the "skids" as well.

During freezing weather fires should be kept up in steamers and all parts of propelling plant should be kept warm. This can be done by turning over engine frequently.

The engines of motor boats should be turned over regularly every hour in freezing weather and more frequently in accordance with the severity of the weather.

GETTING UNDERWAY.**Whom Notify.**

On receiving orders to get underway, notify the navigator, first lieutenant, chief boatswain, carpenter, gunner, chief quartermaster and chief boatswains' mates.

Hoist Boats, etc.

Hoist all boats and secure them for sea. If it is necessary to keep a boat down until immediately before getting underway, get everything in readiness to pick it up without delay. Rig in booms (do not forget the quarter booms). Rig in gangways and secure them for sea. On short trips gangways may be triced up, but the executive officer will give orders in this regard.

Steering and Anchor Engines.

Inform the engine room to put steam on the steering and anchor engines. Have the chief quartermaster test steering gear and carpenter take draft of ship; get the anchor engine ready for use.

Test Telegraphs, etc.

Have the chief quartermaster test and report on condition of engine room telegraph and annunciator, whistle and siren, and also have him get the sounding machine, patent log, lead lines, speed cones and stadiometer ready for use.

Ground Tackle.

Have the chief boatswain's mate make preparations to take in the anchor and buoy. (The executive officer may give additional orders in regard to scope of chain, etc., and these orders must be followed carefully.)

Sea Details.

About 30 minutes before time to get underway, send all sea details to their stations. These details are: Wheel, Leads, Speed Cones, Engine

Room Telegraphs, Breakdown Flag, Position Pennant, Colors and Jack, Steering Engine Room, Lookout and Lifebuoys. (Check these details before reporting ready.)

Test Engines.

When the engine room gets ready, see that there are no boats astern and request permission from the commanding officer to turn over main engines. When the request is granted, the officer of the deck should take station on the bridge and see that the bridge indicators follow the engine room. If, however, conditions or circumstances warrant, the bridge indicator should be put on **stop** and the engine room informed as to completion of test of engines.

Fog or Misty Weather Likely.

When there is a possibility of fog or misty weather, the position buoy should be placed on the quarterdeck ready for use.

Patent Buoys.

Have the gunner prepare and test patent lifebuoys.

At Night.

When getting underway at night, see that all running lights, speed lights and search-light are ready for use and that the running, speed and anchor lights are manned.

Ports, Shutters, etc.

See that air ports on side of ship are closed; the carpenter reports air ports on lower deck. Refer shipping gun shutters to the executive. See that all loose gear about the ship is properly secured. Train all guns and turrets to their locking positions.

Report to Executive and Commanding Officer when Ready.

When all departments have reported ready for getting underway and the ship is in all respects ready for sea, report the fact to the executive officer. After reporting to the executive officer, make the same report to the commanding officer.

Preparations for Honors.

If the occasion will demand, have the guard and band prepare to render honors. According to present practice and Navy Regulations, getting underway is not to be considered an all hands evolution.

"Chain Tierers."

Have "chain tierers" go below in sufficient time to be ready to stow chain as it comes in.

Deck Relieved by Executive.

The executive officer will relieve the deck at "all hands up anchor" and, except during drills, the officer of the deck will usually be required

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to remain on the bridge to carry out the routine or whatever duty the executive officer may designate.

The Affirmative.

When heaving in, in obedience to signal to get underway on all ships except flagships the "affirmative" should be broken at half distance when "hove short," and hoisted all the way up when anchor is "aweigh." The "affirmative" should be hauled down when ready to take and hold position in formation. When ordered to heave short in preparation for getting underway, the affirmative is not hoisted at the dip until the signal to get underway is executed.

COALING SHIP.

Coaling ship is primarily in the province of the executive officer, but will be touched on generally here as a matter of information to the officer of the deck.

On large ships the first lieutenant acting under the executive officer is in general charge of preparations and the coaling. On small ships where there is no first lieutenant, the duties in regard to coaling pass through the officer of the deck.

The preparations should be as follows:

Inform the carpenter as to the time expected to begin coaling and have him rig all temporary chutes. Also have him take draft of ship.

Notify the chief boatswain to prepare to receive collier or barges as the case may be and see that the following items are attended to: Rig in booms (except quarter) and gangways; prepare large fenders, lines and grappels; hoist out and anchor away from ship all boats except those necessary for carrying on business of the ship, and take in scupper lips.

See that guns are properly trained in such directions so as to be in no danger of fouling. Put on gun covers and "pants." Put in or close gun shutters.

Rig coaling booms and whips; rig single whip on crane; prepare blocks and tackle as will be needed, and provide a number of extra whips.

Provide shovels, bags and wheelbarrows for each division.

Close all air ports and cover all hatches.

Have power on all cranes and winches.

As soon as collier is alongside, spread cargo nets between the two ships.

With collier alongside and a stormy wind blowing, pay special attention to dragging and be ready to drop another anchor or cast off collier.

When coaling will continue into the night, have cargo lights rigged and search-lights ready for use.

THE LOG. LOG BOOK.

1807 (1) "In addition to the entries in the log book required by the established forms, and by special instructions, the officer of the deck shall see that every circumstance of importance or interest occurring during his watch is noted in the deck log book. . . ."

The officer of the deck is responsible for all entries in the log during his watch and should exercise particular care that the meteorological observations are carefully taken and entered in the log.

Information in regard to the following particulars should be entered in the log:

(1) Movements of own ship, United States and foreign public vessels. Time of getting underway or anchoring of above.

On anchoring of own ship: anchor let go, depth of water, amount of chain out and draft of ship; names of United States and foreign vessels in port.

On getting underway of own ship, the draft and orders for so doing. The latter must be obtained from the commanding officer.

(2) All official visits of own and foreign commanding officers, etc.

(3) All gun salutes and, if known, to whom rendered.

(4) All courts and boards held on board with times of meeting and adjournment, and authority for same. General courts martial on other United States ships are also noted.

(5) Time of arrival and departure of colliers, barges, lighters, tugs, etc., alongside. The duty requiring one of the preceding vessels alongside should be stated. If supplies, fuel or water are put alongside for ship's use, a list or amount of the contents to be put on board should be entered in the log. If colliers are put alongside, their draft should be entered.

(6) On fueling ship, the total amount of fuel taken on board for each hour, for each watch and on completion the final total.

(7) Diving alongside or away from the ship; give the name and time of each diver.

(8) Changing berth or entering or leaving dry dock, with times.

(9) Work done on hull or sea valves.

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(10) Quarterly overhaul of ground tackle with deficiencies, if any, of same. Loss of any part or rearrangement of ground tackle.

(11) All inspections: commanding officer's weekly, admiral's, ship's hull board, board of inspection and survey, inspections of magazines, gun-powder, gun-cotton, flood cocks and shells. Temperatures of magazines as reported by gunner are entered in blank provided for that purpose.

(12) Emergency drills with times of each from sound of alarm until retreat. At collision drill enter time of getting collision mat over the side and time for closing in doors, etc.

(13) Activities of athletic teams in scheduled games.

(14) Any noticeable accidents to other ships or their boats.

(15) Landing of armed force ashore for other purposes than drill; enter time of leaving and return of same. If for drill purpose enter in column provided for drills.

(16) Names and ranks or ratings of all persons who may join or be detached and where transferred from.

(17) All enlistments, transfers, discharges, deaths and desertions.

(18) All persons made prisoners by the enemy.

(19) All persons absent without leave.

(20) Officers going on leave—time of going and return.

(21) Passengers; names and authority with time of boarding and departing.

(22) Nature and extent of all punishments inflicted with name of offender, offence, and date of offence.

(23) All injuries, accidents or casualties among the officers, crew or passengers on board with full details.

(24) Any accident to the ship or equipment thereof, including all cases of grounding, and the loss or injury of boats, spars, sails, rigging and stores with all attendant circumstances and the extent of the injury.

(25) The dates of commencement and completion of each inventory of equipage and supplies.

(26) Fresh provisions, amount received, name of contractor, result of inspection for quality and quantity, and name of officer inspecting for quantity. Provisions condemned, amount and disposition. All alterations made in daily allowance of provisions or fresh water per man, with the authority and reasons thereof.

Additional Information to be Entered when Underway.

(1) Courses (compass and magnetic) steered and distance sailed.

(2) Time when any particular evolution is performed.

- (3) Sighting of land, lightships and all dangers to navigation.
- (4) Formation steaming in; order of ship in formation, and the guide and changes therein. The standard distance or interval.
- (5) All changes of courses and speed with times of changes and readings of patent log.
- (6) Beam bearings of prominent objects ashore and such others as the navigator may desire. Enter time abeam and reading of patent log.
- (7) Names of men-of-war fallen in with.
- (8) All other important events, such as target practices, runs, etc., steaming trials and assisting vessels in distress.
- (9) Soundings with character of bottom, if reached.
- (10) Tiderips, icebergs or any atmospheric phenomena.

In writing up the remarks of the log, special attention should be paid to brevity and clearness, but where details are essential they should not be omitted. Do not repeat in the remarks that which is already in the blank form provided. A letter in the Beaufort scale underlined shows increased intensity, as f "very foggy."

The deck log should always be written and signed before leaving the deck. The deck log should never be taken from the deck except to be copied ("turn to" in the morning watch is a good time for this) or when requested by the navigator or called for by executive or commanding officer.

The navigator is responsible to the commanding officer for the entries in the log, but the officer of the deck is responsible for the entries during his watch and, unless directed by orders of the commanding officer, he is not compelled to make changes in any entries he may have made.

DATA ON WRITING THE LOG.*

Notes for Officer of the Deck on Writing the Deck Log.

Upon completing his watch at sea or in port it is the duty of the officer of the deck to write up the remarks in the deck log, verify the columns, and sign his name. Writing the remarks must not be deferred, but must be done while the events of the watch are fresh in the memory

* Notes compiled by Seamanship Department, U. S. Naval Academy, Commander G. W. Laws, U. S. N., Head of Department.

of the officer having the duty. It is better to enter the events as they occur so that nothing remains to be done at the end of the watch but to verify the columns and sign the remarks. It is required that the ship's log shall be a careful, detailed, and accurate record of current events. It is frequently used as evidence before courts and boards and it is consulted in many cases which come up years later, such as requests for pensions. The smooth log is the ship's official log book and is a correct and certified copy of the deck log. Officers should therefore take pains to collect all the data required and to enter them into the deck log, using the proper phraseology.

The log must be written up before going below at sea or in port.

The navigating officer has charge of the preparation of the log and, except on flagships, of the signal record book. By the regulations he is required to carefully examine the deck log book to see that it is prepared in accordance with instructions and to call the attention of watch officers to any inaccuracies or omissions in their entries. The deck log should be copied into the smooth log book before morning quarters each day.

The regulations require that the smooth log book shall be signed by the watch officers and the navigator and submitted to the commanding officer for his approval, daily before 1 p. m. The navigator, generally through his yeoman, notifies the officers that the log is ready for signature and the place where it may be found. All officers having watches should sign the smooth log before noon.

The columns on the left-hand page of the log are generally filled in by the quartermaster of the watch, but the officer of the deck is responsible for their accuracy. The officer of the deck should make a practice of checking up the quartermaster's entries, especially with regard to the wind and the weather. At sea the entries that are necessary for the dead reckoning should be filled in by the officer of the deck, as the quartermaster frequently makes mistakes in entering courses steered and distances run.

In writing the log only well-known and generally accepted abbreviations should be used. The log is the official record of the ship, and should be written in such terms as admit of no misunderstanding.

Various circumstances that must be logged with examples of the phraseology used are set down below:

(1) **Absence Without Leave.**—"At 9.30, after a careful search, Jones, J. R. (oiler), was declared to be absent from the ship without leave."

(2) **Accidents to ship**, including cases of grounding, or loss or injury to boats, spars, sails, rigging or stores with extent of injury.

"At 1.15 the first motor sailing launch, Bu. C. & R. No. 202, while riding at the port quarter boom got under the head scupper and swamped. The following gear was lost: 1 set diving gear, complete; 1 boat box, 2 oars. Jones, B. E. (o. s.), was boat keeper and in the boat at the time of the accident."

NOTE.—All accidents which reduce the efficiency of the motive power of the ship or the strength of the battery should be carefully logged—anything which reduces the efficiency of the ship as a fighting unit.

(3) **Anchorage, Bearings of.**—When coming to anchor log the bearings of the anchorage as obtained from the navigator, the depth of water, the kind of bottom, anchor used and amount of chain out:

"At 9.30 anchored in 10 fathoms of water, starboard anchor, 45 fathoms chain. Bearings as follows: Rose Island Light 45°, Lime Rock Light 135°, ship's head 10° (all p. s. c., or p. g. c. if gyro-compass is used). Mud bottom."

(4) **Boilers in Use.**—In the first watch underway and always in mid watch at sea and in port log the boilers in use. "Steaming under boilers 1 to 12, standard speed, 15 knots." "Boilers 5 and 6 in use for auxiliary purposes."

(5) **Courses steered and distances sailed.** Entered in the columns thus:

Hour.	Knots.	Tenths.	Reading of patent log.	Courses steered by standard compass.
12.30	5	1	16.6	0°
1.00	5	2	21.8	25°
1.30	6	1	27.9	30°
2.00	7	5	35.4	90°

This means that from noon to 12.30 steered course 0° for 5.1 miles. Changed course at 12.30 to 25° p. s. c. and steamed 5.2 miles until 1.00 when changed course to 30° p. s. c., etc. **Do not** place the new course on the same line with the time when the course is changed. Quarter-masters are very apt to make mistakes of this kind if allowed to enter the dead reckoning. In the remarks, changes of course are logged thus: "At 12.30 changed course to 25° p. s. c. pat. log reading 16.6."

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If a great number of courses are steered during the watch as when standing up a channel to an anchorage, the courses are logged as "various." "Standing up James River on various courses; Captain conning."

(6) **Courts, Summary.**—When general, summary or deck courts meet on board log the time court met, time adjourned, name of the president or senior member, and list of persons tried.

"A general court martial of which Captain A. L. B. Cowles, U. S. N., is president met at 10.00 for the trial of Lieutenant C. J. Doyle, U. S. N.

"A summary court martial of which Lieut. Commander A. B. Young, U. S. N., is senior member met at 10.00, tried the following cases: Blake, J. F. (m. att., 1c.), Abele, J. T. (pvt.), and adjourned at 11.00."

(7) **Coaling Ship.**—When coaling ship the following data should be logged: The time of commencing coaling, the hourly totals, total taken aboard during the watch, time of knocking off, the draft of the ship before and after coaling, draft of the collier before and after coaling, and if coaling from barges, the numbers of the barges.

"At 5.00 commenced coaling, draft forward 26' 2", aft 27' 2", draft of collier forward 22', aft 23' 6". Hourly totals as follows: 6.00—150 tons, 7.00—200 tons, 8.00—50 tons. Total taken aboard during watch 400 tons. Knocked off for breakfast at 7.20."

(8) **Desertions.**—"The following men were this day declared deserters from this ship and the U. S. Naval Service, having been absent without leave since January 5, 1917: Smith, W. T. (c. p.), and Jones, C. L. (o. s.)."

(9) **Discharges.**—"In accordance with sentence of s. c. m., published January 10, 1917, Abbott, J. J. (m. att., 3c.), was this day discharged from the U. S. Naval Service with a bad-conduct discharge." "James, J. J., C. G. M., was honorably discharged from the U. S. Naval Service by reason of expiration of enlistment."

(10) **Draft Marks.**—Before leaving and after entering port, log the draft of the ship obtained from carpenter.

"Draft of ship forward 25' 8", aft 26' 5"."

(11) **Drills.**—The routine drills held during the forenoon and afternoon watches are logged in the columns. Any necessary explanations or any times recorded are placed under the remarks. Art. I 2605 requires that the time required at collision drill to close the water-tight doors and hatches and to get the collision mat ready shall be entered in the log. This is usually recorded as follows:

"Sounded collision quarters at 9.30. Divisions reported ready as follows: 1st, 3 min.; 2d, 3-30; 3d, 3.00, etc., collision mat, 3 min."

The executive officer's yeoman usually takes the times various divisions are reported and gives the slip to the officer of the deck.

(12) **Enlistments.**—Log all men that are enlisted or re-enlisted aboard during the watch.

"Stone, C. D. (sea.), this day enlisted (re-enlisted), in the U. S. Naval Service for 4 years' general service."

(13) **Evolutions or Exercises.**—

"At 8.15 executed ships right 90° course 180° p. s. c."

"At 8.45 formed column of divisions course 180° p. s. c."

"At 9.00 opened fire on enemy cruisers."

(14) **Getting Underway.**—State purpose and authority. (This information is received from captain.)

"At 3.15 got underway to hold torpedo practice in obedience to Commander-in-Chief's letter, 3501-12 of January 2, 1916."

(15) **Injury of Personnel.**—Log full particulars of every injury or accident however slight among officers, crew or passengers.

"At 7.45 while engaged in coaling ship, Ames, A. B. (sea.), suffered a compound fracture of the right leg; he was struck by a full coal bag which fell into the lighter, due to strap carrying away." A memorandum concerning the injury should be obtained from the medical officer.

When an enlisted man becomes disabled due to injuries received in line of duty he applies for a pension. The log is consulted by the Pension Board, and if the particulars of the injury are found there as claimed, the man gets the pension.

In case of injury to navy yard workman while on board, he should be sent to sick bay and given medical attention by the ship's surgeon. The medical officer of the navy yard and also the injury officer should be immediately notified and all the circumstances of the accident with the names of witnesses and the extent of the injury received should be entered in the log.

(16) **Inspections.**—The captain usually makes his weekly inspection of the lower decks and storerooms on Friday afternoon, and the inspection of the upper decks and crew on Saturday forenoon. These are logged as follows:

"At 2.30 the Captain in company with the medical officer and heads of departments concerned inspected the lower decks, storerooms and holds."

"At 9.30 mustered at quarters, absentees ————. The Captain inspected the ship and crew."

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(17) **Inventory of Equipage.**—Log dates of commencement and completion of each inventory of equipage and supplies. "The supply officer commenced yearly inventory of equipage and supplies this date." "Completed yearly inventory of equipage and supplies this date."

(18) **Leave.**—Log the time of going and time of returning of all persons attached to the ship. "Lieutenant A. B. Castle left the ship on 4 days' leave." "Kennedy, J. F. (f. 1c.), returned from 10 days' leave." In case a man returns overtime from leave, the time he came aboard should be noted.

(19) **Lighting Fires.**—Log every occasion when fires are lighted under a boiler or allowed to die out.

"At 5.07 lighted fires under boiler No. 6 and at 7.30 let fires die out under boiler No. 5."

(20) **Magazines, Inspections of.**—Daily log the fact that the magazines have been inspected, the condition thereof and of the smokeless powder samples. The slip is turned in by the gunner and the fact is reported to the captain.

"Inspected magazines and powder samples, condition normal." Record the maximum and minimum temperatures in the place provided in the columns. Once each week, generally Thursday, the weekly inspection of shellrooms, flood cocks and sprinklers is made. Log as follows: "Inspected shellrooms, tested magazine flood cocks and sprinkling system and found them in good condition."

(21) **Moon Rises or Sets.**—Record time of rising or setting of moon if observed. This data may be of use in time of war as it influences the visibility of objects at night.

(22) **Movements of Ships.**—Log the naval vessels that stand in, get underway, or stand out during the watch; if in foreign port log arrival and departure of mail steamers: "Delaware stood in and anchored in berth assigned at 1.45." "At 4.40 Wyoming got underway and stood out." "The Connecticut stood in and at 1.00 anchored 500 yards from this ship, bearing 150° p. s. c." "At 3.15 S. S. Segurancia stood in with mail."

(23) **Navy Yard Work.**—It is the custom in navy yards to log the number and rates of the yard workmen aboard and the job orders on which they are working. "Navy yard workmen on board from 8 a. m. as follows: J. O. No. 5516J, six machinists, four helpers; J. O. No. 5518J, three ship fitters and one helper." The data required for this entry are obtained from the yard leading men.

(24) **Overtime from Liberty.**—When men return to the ship over leave the fact should be logged.

"At 9.00 the following-named men returned two hours overtime from liberty: Jones, J. J. (o. s.), Smith, S. L. (c. p.)."

(25) **Passengers.**—Log the names of all passengers with the times of coming aboard, departing, and the authority therefor. "By permission of the Secretary of the Navy, letter No. 2707-6 of December 1, 1916, Mr. A. B. Post, of the *New York Herald*, came aboard at 2.20 as a passenger for Guantanamo, Cuba." "Mr. A. B. Post, a passenger, left the ship at 1.15." (The times when first coming aboard and leaving finally only to be logged.)

(26) **Passing lighthouses** and other aids to navigation. When coasting, steaming in a river or bay, or in entering and leaving port, log the time of passing principal lights or aids to navigation, their distance abeam and the side on which passed unless this last is obvious. "Standing up Chesapeake Bay on course 3° p. s. c., speed 12 knots. At 6.04 passed Wolftrap Light, distance abeam 2½ miles." "At 1.05 passed Cape Charles Light ship abeam, port side, distance 1 mile."

(27) **Punishments.**—Art. R 1433 requires that "entries in the log regarding punishments shall include the name, rank, or rating of the offender, the date and nature of the offence, and the kind and degree of punishment. The date of every suspension, arrest, confinement and restoration to duty shall also be entered upon the log book."

The most frequent occurrence of punishment is the daily award by the commanding officer at the mast.

"The captain held mast and awarded punishments as follows: Smith, R. C. (w. t.), absent over leave 36 hours, s. c. m." "Clark, H. S. (sea.), not scrubbing hammock, 5 hours' extra duty."

"Published following transcript of s. c. m. in case of Blake, R. A. (sea.). Offence, drunk on board ship, 3/2/17, not having been on liberty. Sentence, to lose pay amounting to thirty dollars (\$30.00). Approved by commanding officer 3/16/17. Loss of pay remitted accordance Art. I 4893, 1913, approved by s. o. p. 3/20/17."

"By order of the Captain (Commanding Officer) Ensign R. S. Blake was suspended from duty for 10 days for neglect of duty while officer of the deck 3/20/16."

NOTE.—When the officer ordered to command the ship holds mast, orders men in confinement, or makes inspections of the ship or personnel it is customary to use the term "Captain" in logging the fact. When, however, these duties are performed by some other officer, due to the absence or disability of the captain, it is customary to use the term "Commanding Officer."

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When sentences of summary or deck courts are carried into effect, log: "By order of the Captain (Commanding Officer), Falt, L. A. (q. m. 3c.), was placed in solitary confinement for 10 days on bread and water, with full rations every third day, pursuant to sentence of S. C. M. (deck court)."

(28) **Quarters, Absentees.**—Log as follows: "At 9.15 mustered at quarters. Absentees, Smith, A. B. (sea.), King, N. L. (f. 2c.)."

(29) **Reporting for Duty.**—Log the names, rank or rating of all persons ordered to or detached from the ship.

"Received from receiving ship at New York the following-named men with bags, hammocks and necessary papers: (insert names and rates of men). In case any bags, hammocks or papers are missing the fact should be logged.

"Lieutenant A. B. Smith, U. S. N., reported on board for duty in obedience to Department's Order No. 2345-16, of January 12, 1916."

"Ensign A. L. Hemp, U. S. N., was detached from duty on board this ship and ordered to report to the S. O. P. afloat for duty on board the *Michigan*, Department's Order No. 3506-16, of January 12, 1916."

(30) **Stores Received.**—The only stores logged are commissary stores, coal and ammunition.

"Received in the supply department from Jones and Smith the following provisions: 200 lbs. fresh meat, 500 lbs. fresh vegetables. Weighed and inspected by Ensign Brown."

The total amount of coal taken on board is logged in the watch at the time of completing, thus: "Total amount of coal taken on board 1560 tons." This is in addition to the hourly totals.

"Received from Naval Ammunition Depot, Iona Island, N. Y., the following ammunition: 100 12", A. P. Blind projectiles, 100 charges (200 tanks) 12" s. p. Index 404."

(31) **Sentry's Charge.**—When a man is placed under sentry's charge for safekeeping or for any other purpose the fact should be logged.

"By order of the Captain (Commanding Officer) Smoot, L. G. (sea.), was placed under the sentry's charge to await action."

(32) **Salutes.**—Log all salutes fired by any men-of-war present.

"At 10.30 H. M. S. *Bristol* stood in and fired salute of 17 guns, U. S. Ensign at the fore, which was returned by the U. S. S. *Wyoming* gun for gun."

"At 11.15 the *Delaware* fired salute of 13 guns, which was returned by the *Florida* with 7 guns."

"The Commander First Division returned the call of the Captain and upon his departure a salute of 13 guns was fired."

(33) **Sighting Land and Aids and Dangers to Navigation.**—Log, when at sea, the time of sighting and the bearing of all aids to navigation, also time of losing sight of a light or land mark.

“At 1.05 sighted Cape Charles Light, bearing 270° p. s. c., distant about 15 miles.”

“If the ship's head cannot be readily obtained from the columns of the log the heading p. s. c. should also be inserted.”

“At 7.50 passed derelict schooner J. B. Paler, dismasted and awash. Lat. 38c° 40' north, Long. 75° 00c' west.”

“At 8.10 lost sight of Cape Maysi Light, bearing 183° p. s. c.”

(34) **Soundings.**—All important soundings taken with the sounding machine or deep sea lead should be logged with the time taken, character of bottom and reading of patent log. “Took soundings every hour as follows: 1.00, 59 fathoms, fine gray sand; 2.00, 63 fathoms, sand, broken shell; 3.00, 65 fathoms, mud; 4.00, 70 fathoms, broken shell.” The reading of the patent log in this case was not necessary as it could be obtained on the hour from the columns.

(35) **Steam and Revolutions.**—While underway at the end of each watch log the average steam and revolutions for the watch. This is obtained from the engineer officer of the watch.

“Average steam 180, average revolutions 120.”

(36) **Tide.**—When at anchor in a tideway log to which tide the ship is riding, the time of swinging and the direction the stern swings.

“Riding to flood. At 3.15 commenced swinging to ebb, stern to star-board. Finished swinging at 3.45.”

(37) **Time.**—Any changes in the setting of the deck clock is always noted in the log. The navigator determines the amount of change necessary and gives a slip to the officer of the deck; permission to make the change is obtained from the captain, and the clocks are usually set by the chief quartermaster.

“At 11.20 set clocks back 15 minutes.”

(38) **Transfers.**—“Transferred to the receiving ship at New York the following-named men with bags, hammocks and necessary papers: (insert names and rates of men).”

(39) **Visits of Ceremony.**—Only official visits are logged. The captain or officer making the call furnishes the officer of the deck with the information.

“The Commanding Officer of the *Virginia* called on the Captain.”

“The Captain called on (or returned the calls of) the Commanding Officers of the *Virginia* and *Louisiana*. ”

“The First Division Commander called on the Commander-in-Chief.”

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(40) **Weather, Wind and Sea.**—Art. I 1877 (j) says: "The state of the weather and the sea will be entered in the columns of the log, but will not be duplicated in the watch officer's remarks unless circumstances render it necessary to a proper interpretation of the columns."

Under the "Directions for Keeping the Ship's Log," * paragraph 16, it is required that "in addition to the records made by the proper symbols in the respective columns . . . the general character and appearance of the weather, the kind of clouds, and the directions from which they move, and the state of the sea during each watch, will be recorded in the general miscellaneous remarks in popular and professional language."

These requirements seem contradictory in part and a compromise is necessary. The following should be entered in the remarks: Any unusual weather, and any signs of a change; all indications of the approach of bad weather, including storm signals displayed ashore, stating directions, etc.; any condition of the weather or sea which would interfere with the speed of the ship, or her efficiency as a fighting machine. It will be noted that in the columns there is a place for "State of Sea," but none for the direction, and this latter is important as it does not always coincide with the wind and may knock down the speed, interfere with the use of certain guns, interfere with the rapidity of fire, and by causing rolling or pitching interfere with the efficiency of the fire. In hazy or foggy weather the estimated visibility should be recorded. These items would be very important in time of war and recording them should be made a matter of habit.

* "Directions for Keeping the Ship's Log" are inserted on the inside covers of all deck log books.

HONORS.*

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HONORS IN PORT AND AT SEA.

Honors Varied.

Honors are so varied and are controlled to such a great extent by special orders that only general memoranda, with tables, will be included herein. Honors other than those given to officers of military and naval services are usually provided for by the executive officer and become merely a matter of execution.

Rendering Personal Honors.

"In rendering personal honors when the guard presents arms, officers in uniform and men not in formation, on deck and in view, shall salute with the right hand, so remaining until the end of ruffles and flourishes, or, if none, until 'order arms.'"

Attention on Bugle.

Before rendering honors to ships and commanding officers above the rank of lieutenant flying pennants, attention on bugle shall be sounded.

No Honors Are Rendered.

- (1) To officers in plain clothes.
- (2) After sunset and before 8 a. m. except to pipe foreign officers.
- (3) During meal hours for officers of the United States Navy and United States Marine Corps.
- (4) When coaling ship or "exercising at battle stations" for officers of United States Navy or Marine Corps.
- (5) When deck force consists of 125 men or less, no side boys for naval and marine officers.
- (6) On Sunday, no guard or band for naval and marine officers.
- (7) In navy yard alongside dock for all except official visits of commanding or foreign officers or public officials entitled to honors.

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* See also Chapter XII, U. S. Navy Regulations.

Meeting Officers at Gangways.

Flag officers meet flag officers and others ranking above at the gangway; flag lieutenant meets others making calls to a flagship. (Rank determined by the number of guns the officer is entitled to.)*

Commanding officers meet commanding officers and others ranking with and above them at the gangway.*

Officer of the Deck Notifies Flag Officer, etc., of Boats with Flags or Pennants Flying.

The officer of the deck of a flagship should always notify the flag officer, flag lieutenant and commanding officer of boats approaching the ship or underway with flags and pennants flying. If not a flagship, the commanding officer is notified. This notice should always be given in plenty of time so that a proper reception may be given officers making official visits. The movements of flag officers of our own service are indicated by the display of the "meal pennant" under the flag officer's flag five minutes before his departure and the hauling down of same as soon as flag officer "shoves off" from the side of his ship. As soon as the red pennant is observed, preparations for honors should be made immediately or the officer of the deck will be caught without the guard and band. During a flag officer's absence, the alphabet flag "E" is flown on the main yardarm.

Side Boys.

All commissioned officers of our own and foreign services, as well as others who "rate" side boys, with exceptions as noted under honors dispensed, are "piped" over the side. Ship's officers, except commanding officers or those wearing side arms, are not usually "piped."

Shore Boats Not Piped.

Shore boats are never piped, although officials entitled to honors or officers in uniform making passage therein, are piped on leaving or arriving on deck.

President's Flag Senior Officer Present.

The President's flag flying designates senior officer present. No other flags or pennants will be flown from the main when the President's, Secretary's or Assistant Secretary's flag is flying therefrom.

Band Required.

The band is required for everyone, except consul general, entitled to a salute of 11 guns or more.

* In Atlantic fleet when flag or commanding officers do not fly their flags or pennants a small hand flag (blue for flag and red for commanding officers) is displayed.

Before Firing Salute.

Before gun salutes are fired, care should be taken by the officer of the deck to see that the clothes-lines are lowered, canvas and bedding piped down and all other signs of undress removed.

Gun Salutes Dispensed.

Gun salutes and all honors except side boys are dispensed with during war.

Interval in Gun Salutes.

The interval between gun salutes is five seconds. Simultaneous salutes begin on seeing or hearing first gun of senior officer present.

Salute of 21 Guns.

A salute of 21 guns for those entitled to it (personal) is fired by all ships present, unless otherwise ordered. A salute of 21 guns to a foreign power is fired by the senior officer present.

Salutes in Presence of President.

When President's or foreign ruler's flag is flying, no gun salutes shall be fired for a personage of lesser degree.

Salutes to Flag Officer Taking Command.

When a flag officer taking command is senior to all others present, the flag officer only next senior in rank, after gun salute of flagship of flag officer taking command, fires the gun salute.

Salutes to Flag Officer Relinquishing Command.

When a flag officer relinquishes command, a gun salute is fired by his own flagship even though there are seniors (except in presence of President's or foreign ruler's flag) present.

Official Inspection.

A flag officer making official inspection of a vessel under his command or visiting officially for the first time a vessel of the navy (not under his command), the gun salute shall be fired even though there are seniors (except as in preceding paragraph) present. The same holds for a flag officer who is president of the board of inspection.

Official Visits, Same Command.

On official visits, except as noted above, flag officers of the same command are not given the gun salutes, but all other honors are rendered.

Different Commands.

A flag officer of a different command making a personal visit is given the gun salute with the other honors he is entitled to.

Boats Passing Flag Flying.

The personal salute with exception of guns is rendered to boat passing with flags flying. In this case no yards or rails (unless specially ordered) are manned for any one.

Attention to Rendering Honors.

Careful attention should be paid to rendering of honors, as carelessness in this respect not only reflects on the general efficiency of ships, but also on one's record.

Boat Keepers, Salutes of.

"Boat keepers and all other persons in boats, awnings not spread, not underway and not containing an officer, rise and salute when an officer is being piped or when boat with officer passes. If awnings are spread, the hand salute is given without rising. Steam launches are not considered as having awnings spread."

Dressing Ship.

The following procedure is taken to dress ship: All derricks, booms, etc., are lowered into their respective places and properly secured. Flag and jack of the ship should be hoisted and national ensigns at each mast, except in the case of a flagship. If the mastheads are of the same height, the ensigns should be of the same size. At the peak, or on a staff aft, the largest ensign with which a ship is furnished is displayed. When necessary to dress ship, it will be done at 8 a. m. and the ship shall remain dressed until sunset. If the ship is dressed as a compliment to some other nation, the ensign or standard of that nation is displayed at the main during the salute required by such compliment; and, where there is no salute fired, at the main until sunset.

Personal and National Flags.

When necessary to hoist the national ensign at the main, such as when dressing or full dressing ship, any such personal flag there hoisted shall be hauled down and hoisted at the fore. Further, whenever it is necessary to hoist a national ensign at the main during a salute, any personal flag there hoisted shall be displayed at the fore.

Passing Ships.

1159 R. "No honors other than attention on the bugle shall be rendered between vessels while they are engaged in maneuvers or evolutions. When two or more ships are in company, whether at anchor or underway, coming to anchor or getting underway, they shall be considered as part of the

same formation, and as engaged in maneuvers or evolutions, so far as concerns salutes. In case of a ship or ships joining such formation, honors shall not be rendered unless such ship or ships have been or are on detached duty. The term detached duty in this case does not apply to a ship or ships temporarily out of formation, but only to ships which, by order of competent authority, have been in some port other than the rendezvous of the division, squadron or fleet to which they may belong; or on duty which has kept them away from their immediate division, squadron or fleet for a period more than 48 hours. A ship is not considered as on detached duty when she leaves the formation, whether underway or at anchor, for target practice, coaling in the immediate vicinity, or for similar duty. Ships of divisions or squadrons of the fleet getting underway or coming to anchor at about the same time or in obedience to the same signal, shall be considered as engaged in evolutions, and no honors, other than 'attention' on the bugle, shall be rendered as they pass each other. Vessels engaged in tactical evolutions outside of port shall not exchange any salutes whatever."

157(6) R. "A vessel in full commission, in reserve or in ordinary being inspected by the board shall be considered as being on detached duty until the inspection is completed."

When the destination and duty of a vessel getting underway is not known, the commanding officer should be immediately consulted so as to comply correctly with the above regulations. These regulations may easily be applied improperly; for example, the U. S. S. ——— left Guantanamo for Guacanayabo Bay, but the impression prevailed in the ward-room and with the officer of the deck that she was bound north; the officer of the deck's orders were that ships going to Guacanayabo would not be considered as on detached duty; the officer of the deck paraded the guard and band and notified the commanding officer—the officer of the deck was then called in to have a talk with the captain.

Entering Foreign Port.

1191 R. "When a ship of the navy enters a port of any foreign nation, the government of which is recognized by the United States, where there is a fort or battery displaying the national flag, or where a commissioned ship of war of that nation is lying, she shall fire a salute of 21 guns unless her commanding officer has reason to believe that the

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salute cannot be returned ; and in this case he shall immediately take steps to ascertain the local regulations or customs. **This salute shall be the first fired after entering port.** The ensign of the nation saluted shall be displayed at the main during the salute. In case two or more ships enter in company, the senior officer present shall salute."

Falling In at Sea with Foreign Ships.

1192 R. "When a ship of the navy falls in at sea with a friendly foreign ship of war flying the flag or pennant of a flag officer or commodore, she shall exchange salutes with such ship of war in the same manner as when meeting similar ships of the United States (see below) except that the salute will be returned **gun for gun.**"

The national ensign of the country of the officer saluted shall be displayed at the fore during such salute.

Ship at Sea Falling In with Flag Officer.

1137 R. "When a ship of the navy other than a flagship falls in with a flag officer, the latter shall be saluted," as per Table III, etc. If two or more ships, senior officer present only salutes.

Fleet or Squadron Falls In at Sea with Another, etc.

1138 R. "If a fleet or squadron falls in with another fleet or squadron or if one flagship falls in with another salutes are exchanged according to rank."

Tables as follow are inserted for the guidance of the officer of the deck :

Table I. Personal honors.

Table II. General honors.

Table III. Hail and whistle signification ; absentee lights. French and English hails.

Table IV. Salutes in boats.

TABLE I.
Personal Honors.

Rank.	Uniform.	Arrival.	Departure.	Guns.	Ruffles.	Guard.	Air.	Side ya.	Flag.
President	S.F.D.	1	1	21	4	Full.	N.A.†	8	P. m. v.
Foreign rulers	do.	1	1	21	4	do.	do.	8	N. m. v.
Royalty	do.	1	1	21	4	do.	do.	8	N. m. s.
Ex-President	do.	1	1	21	4	do.	N.A.	8	N. m. a.
Vice President	do.	..	1	19	4	do.	do.	8	N. f. s.
Ambassador	do.	..	1	19	4	do.	do.	8	do.
Secretary of Navy	do.	1	1	19	4	do.	M.	8	S. m. v.
Assistant Secretary of Navy	Dress.	1	1	17	4	do.	M.	8	A. m. v.
Cabinet officer	do.	..	1	19	4	do.	M.	8	N. f. s.
Chief justice	do.	..	1	17	4	do.	M.	8	do.
Governor general, U. S. Is.	do.	..	1	17	4	do.	M.	8	do.
Governor state, territory or U. S. Is.	do.	..	1	17	4	do.	M.	8	do.
President pro tem. of Senate	do.	..	1	19	4	do.	M.	8	do.
Speaker of House	do.	..	1	17	4	do.	M.	8	do.
Committee of Congress	do.	..	1	17	4	do.	M.	8	do.
Envoy extraordinary	do.	..	1	15	3	do.	M.	8	do.
Minister Res. "dip. rep"	do.	..	1	13	2	do.	M.	6	do.
Chargé d'affaires	do.	..	1	11	1	do.	M.	6	do.
Consul general	Day.	..	1	11	..	Day.	..	6	do.
First secretaries	do.	..	..	..	..	do.	..	4	do.
Consuls	do.	..	1	7	..	do.	..	..	do.
Vice consul or consul agent	do.	..	1	5	..	do.	..	..	do.
Admiral of the Navy	Dress.	..	1	19	4	Full.	M.	8	N. f. s.†
Admiral	do.	..	1	17	4	do.	M.	8	do.
General	do.	..	1	17	4	do.	M.	8	do.
Vice admiral	do.	..	1	15	3	do.	M.	8	do.
Lieutenant general	do.	..	1	15	3	do.	M.	8	do.
Rear admiral	do.	..	1	13	2	do.	M.	6	do.
Major general (army or marine) ...	do.	..	1	13	2	do.	M.	6	do.
Commodore	do.	..	1	11	1	do.	M.	6	do.
Brigadier general	do.	..	1	11	1	do.	M.	6	do.
Chief of staff *	Day.	..	..	..	..	Day.	..	4	.....
Captain	do.	..	..	..	..	do.	..	4	.....
Colonel	do.	..	..	..	..	do.	..	4	.....
Commander	do.	..	..	..	..	do.	..	4	.....
Lieutenant colonel	do.	..	..	..	..	do.	..	4	.....
Lieutenant commander	do.	..	..	..	..	do.	..	2	.....
Major	do.	..	..	..	..	do.	..	2	.....
Other commissioned officers below lieutenant, commander and major.	do.	..	..	..	..	..	..	2	.....

* If not flag rank.

† Yards and rails.

‡ Foreign officers.

N.=National.
N.A.=National Anthem.
P.=President.
m.=Mainmast.
f.=Foremast.
v.=During visit.

S.=Secretary of Navy.
s.=During salute.
A.=Assistant Secretary of Navy.
a.=In foreign port.
M.=March.

Tables
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II
III
IV

TABLE II.
General Honors.

Passing vessels.	(a) Foreign man-of-war; U. S. man-of-war on detached duty.	Guard of day; band; attention by bugle. National air (foreign national air is played for foreign ships); hand salute at end.
	(b) U. S. man-of-war of own force or U. S. vessel under 3d rate or auxiliary flying a pennant.	Attention on bugle; hand salute. In outside tactical evolutions none.
Flag officers.	(c) Flag flying comes on board.	Full guard and band; attention by bugle; flourishes; march; tend side. Hand salute at command "present arms" and remain at salute until end of flourishes.
	(d) Flag flying passes close aboard.	Guard of day; band; attention by bugle; flourishes; march. Hand salute as (c).
	(e) Flag officer in uniform, no flag.	Attention on quarterdeck without bugle; tend side. Hand salute while piping.
	(f) Flag officer passing without flag.	No general honors; boat keepers, sentries, officer of the deck and others salute.
Commanding officers.	(g) Lieut. commander and above passes with pennant flying.	Attention bugle; all on watch salute, others attention.
	(h) same as (g) comes on board.	Same as (g) with guard of day; tend side; salute is made at present arms and completed on order arms.
	(i) Same as (g), except no pennant.	Attention on quarterdeck without bugle; tend side. Hand salute while piping over side.
Other officers.	(j) Visit in uniform.	Attention near gangway; tend side. Hand salute as in (i).
	(k) Passing or when coming on board out of uniform.	Boat keepers, sentries and others salute.

TABLE III.

No.	Official.	Hail.	Whistle.	Absentee lights.
1	President.....	United States.....	8	8
2	Secretary of Navy.....	Navy.....	7	6
3	Assistant Secretary of Navy.....	Navy.....	5	4
4	Admiral of Navy.....	.....	7	6
5	Admiral.....	See 7.....	6	5
6	Vice admiral.....	See 7, 9, 11.....	5	4
7	Flag officer in chief command.....	Fleet.....	See 5, 6, 10	See 5, 6, 9
8	Chief of staff not in command of ship.....	Staff.....	3	None.
9	Force commander.....	Force (name of) ..	See 5, 6, 10	3*
10	Other flag officers.....	See 7, 9, 11.....	4	3
11	Division or squadron commander.....	No. of div. or sqd..	See 6, 10	3*§
12	General officer marines.....	Aye, aye.....	4	None.
13	Marine officer com'd'g brigade.....	Brigade comdr....	3	None.
14	Flotilla commander.....	Flotilla (name of) ..	3	3*
15	Captain of ship.....	Name of ship.....	3	1†
16	Commander of a destroyer or submarine division.....	Name of division..	According to rank.	1†
17	Marine officer com'd'g regiment.....	Regimental comdr..	3	None.
18	Commissioned officers.....	Aye, aye.....	2	do.
19	Other officers.....	No, no.....	1	do.
20	Enlisted men and marines.....	Hello.....	1	do.
21	Boats passing.....	Passing.....	.....	.....

* If captain or commander. † None, if flag officer's lights are shown.

‡ If not flag officer. § Except divisions of destroyers or submarines.

Coxswains of boats in answering hails from sentries will use the language of their own country:

French replies are:

Admiral "Amiral."
 Captain (Name of ship) "commandant."
 Superior officers "Officier superieurs."
 Officers "Officiers."
 If coming alongside without officers..... "A bord."
 If not coming alongside..... "Au large" or "passant."

British replies are:

Boat going alongside with admiral..... "Flag."
 Captain and officers in command..... Name of ship.
 Officers of ward room rank..... "Aye, aye."
 Officers below ward room rank..... "No, no."
 Officer of the guard..... "Guard boat."
 All boats passing without coming alongside. "Passing."

TABLE IV.

Boat Salutes.

Rank or rate of senior in saluting boat.	Rank of senior officer in boat to be saluted.			
	Flag or general officer with flag flying.	Commanding officer above rank of lieutenant pennant flying. X.	Other commissioned officers.	Midshipman or warrant officer.
Flag or general officer. Commanding officer as in X.	(a) Junior salutes with hand. (b) Stops engines, lays on oars, hand salute.	Same as (a)		
Naval officers below flag rank and above lieutenant, and marine officers corresponding rank.	Same as (b)	Meeting a senior commanding officer or immediate commanding officer, same as (b).	Same as (a).	
Other commissioned officers.	(c) Stops engines, tosses or trails oars and salutes with hand.	Same as (b)	Same as (a).	
Midshipman or warrant officer.	Same as (c)	Same as (b)	(d) Salutes with hand.	Same as (a).
Officer or coxswain in loaded or towing boat or boat under sail.	Same as (d)	Same as (d)	Same as (a).	Same as (a).
Coxswain	Same as (c) and stands.	Same as (b) and stands.	Same as (d) and stands.	Same as (d)

DISTINGUISHING FLAGS AND MARKS.

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UNITED STATES NAVAL FLAGS



President's Flag



Secretary of Treasury

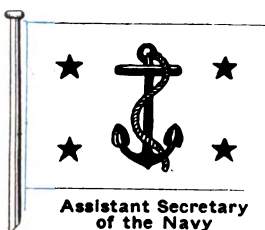


Secretary of Commerce

Secretary of War. Same as President's, with red field



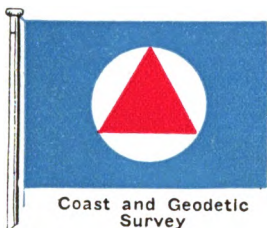
Secretary of the Navy



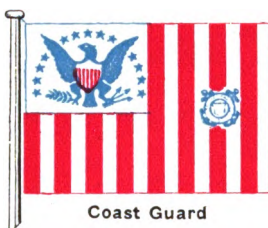
Assistant Secretary
 of the Navy



Consular Flag



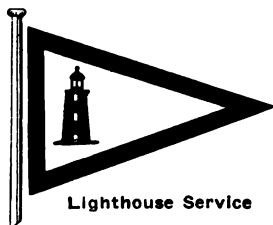
Coast and Geodetic
 Survey



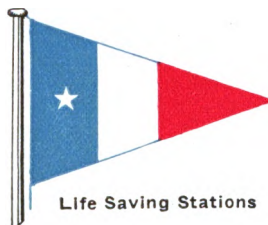
Coast Guard



Fisheries Commission



Lighthouse Service

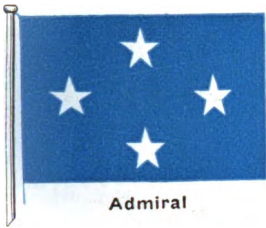


Life Saving Stations

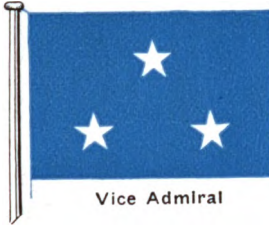


Mail Flag

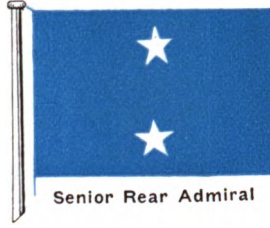
UNITED STATES NAVAL FLAGS



Admiral



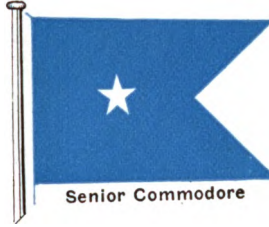
Vice Admiral



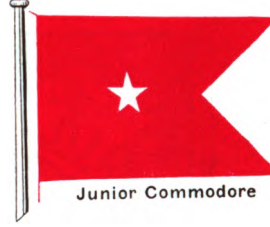
Senior Rear Admiral



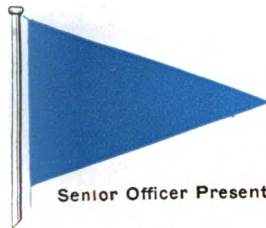
Junior Rear Admiral



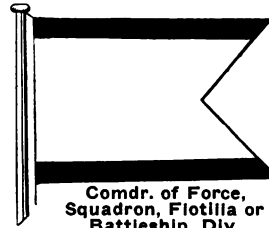
Senior Commodore



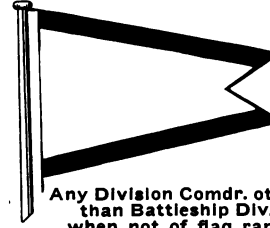
Junior Commodore



Senior Officer Present



Comdr. of Force,
Squadron, Flotilla or
Battleship Div.
when not of flag rank

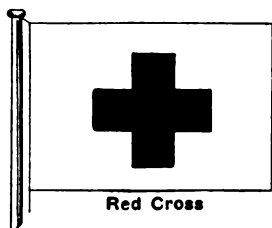


Any Division Comdr. other
than Battleship Div.
when not of flag rank



Commission Pennant

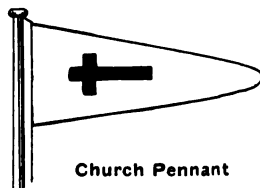
UNITED STATES SPECIAL FLAGS



Red Cross

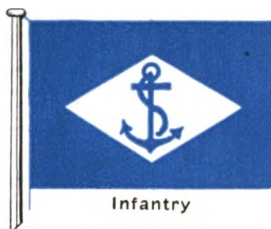


Submarine Warning



Church Pennant

BATTALION



Infantry



Artillery

NAVAL MILITIA



Distinguishing

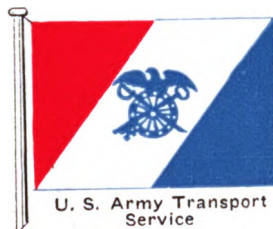
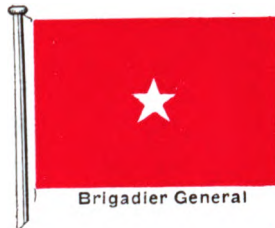


Commodore



Commission Pennant

UNITED STATES ARMY AND OTHER FLAGS



U. S. Army Transport Funnel Marks

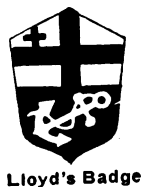
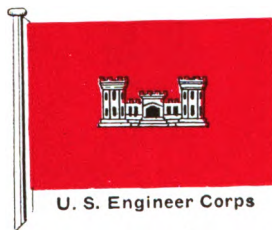
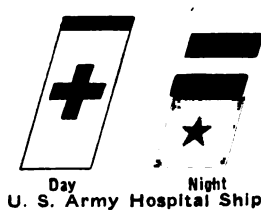
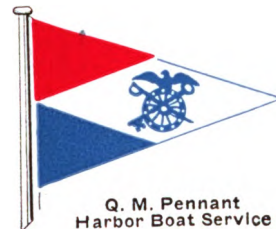
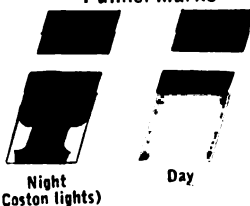
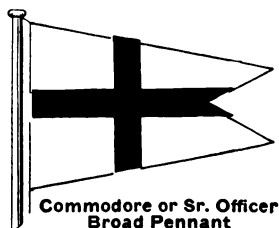
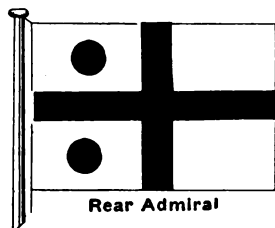
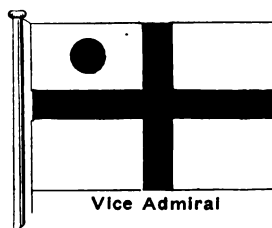
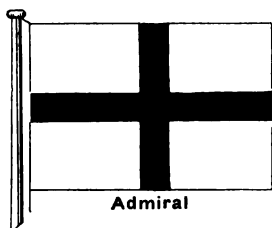


PLATE V

BRITISH NAVAL FLAGS



BRITISH NAVAL OFFICERS' SLEEVE MARKS



Admiral



Vice Admiral



Rear Admiral



Commodore



Captain



Commander



Lieutenant
(over 8 years)

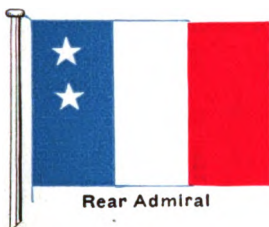
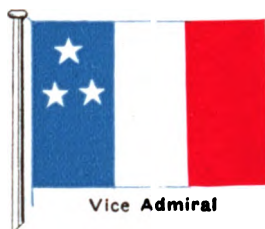
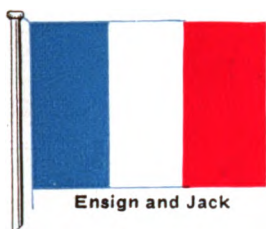


Lieutenant
(under 8 years)



Sub-Lieutenant

FRENCH NAVAL FLAGS



FRENCH NAVAL OFFICERS' SLEEVE MARKS



Vice Admiral



Rear Admiral



Captain



Commander



Senior Lieutenant



Junior Lieutenant



Sub-Lieutenant and Midshipman

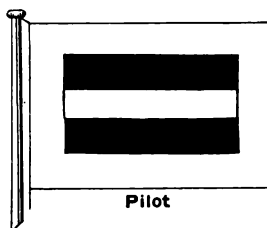
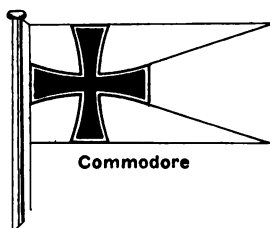
PLATE VII

GERMAN NAVAL FLAGS



Admiral. Same as Vice Admiral, without ball

Rear Admiral. Same as Vice Admiral, with ball in lower canton

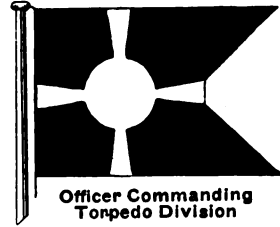
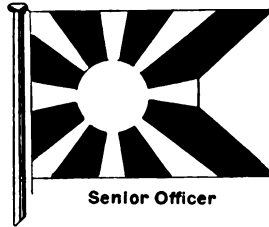
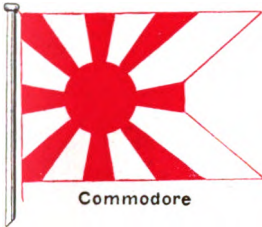
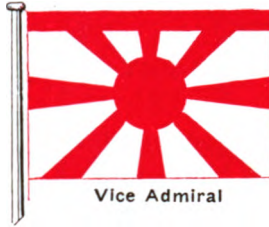
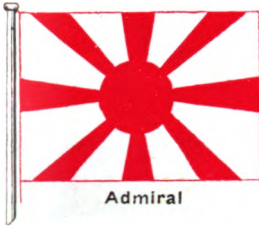


Flotilla Commander. Same as Commodore, with loose fly

GERMAN NAVAL OFFICERS' SLEEVE MARKS



JAPANESE NAVAL FLAGS

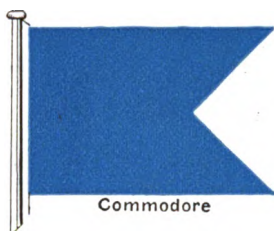
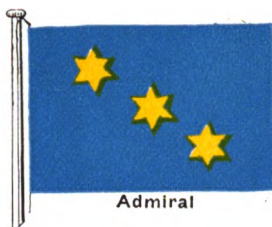
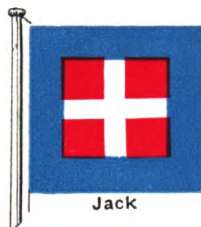


JAPANESE NAVAL OFFICERS' SLEEVE MARKS



PLATE IX

ITALIAN NAVAL FLAGS



ITALIAN NAVAL OFFICERS' SLEEVE MARKS



Admiral



Vice Admiral



Rear Admiral



Captain



Commander



Lieutenant
Commander



Senior
Lieutenant

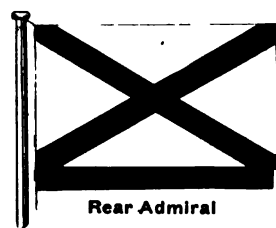
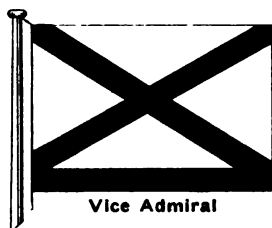
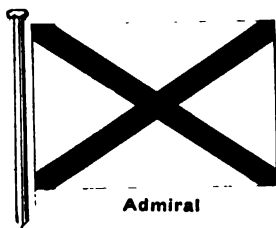
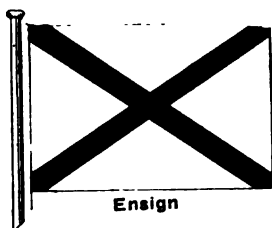


Junior
Lieutenant



Sub-
Lieutenant

RUSSIAN NAVAL FLAGS



RUSSIAN NAVAL OFFICERS' SHOULDER MARKS

(Have no sleeve marks)



Admiral



Vice Admiral



Rear Admiral



Captain



Commander



Senior Lieutenant



Junior Lieutenant



Midshipman



Engineers



Senior Physician



Junior Physician

AUSTRO-HUNGARIAN NAVAL FLAGS



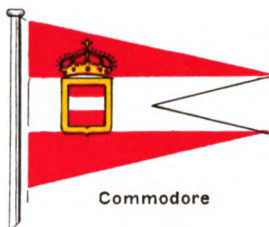
Admiral



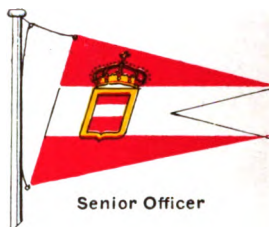
Vice Admiral



Rear Admiral



Commodore



Senior Officer

AUSTRO-HUNGARIAN NAVAL OFFICERS' SLEEVE MARKS



Admiral



Vice Admiral



Rear Admiral



Captain



Captain



Commander



Lieutenant
Commander



Sub-
Lieutenant

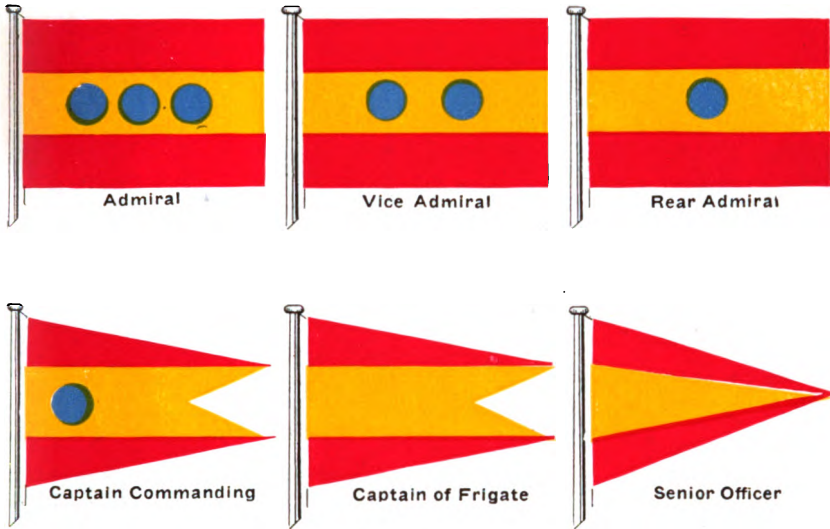


Midshipman

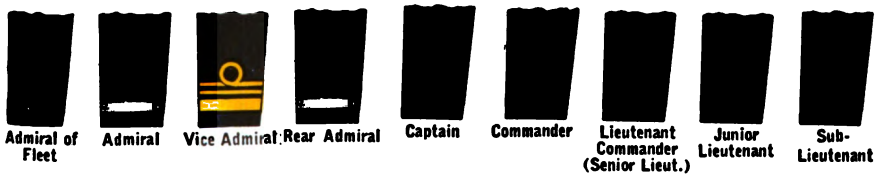


Naval Cadet

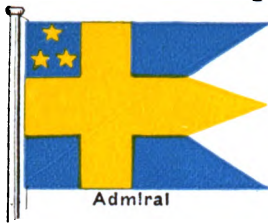
SPANISH NAVAL FLAGS



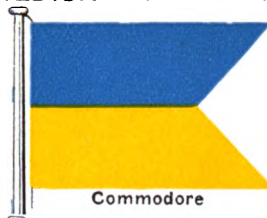
SPANISH NAVAL OFFICERS' SLEEVE MARKS



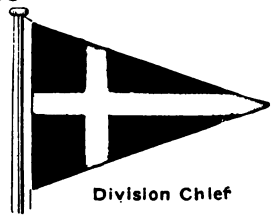
SWEDISH NAVAL FLAGS



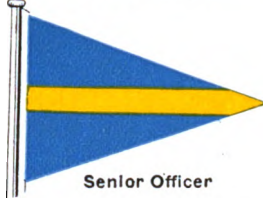
Admiral



Commodore



Division Chief



Senior Officer

Vice Admiral. Same as Admiral, except two stars

Rear Admiral. Same as Admiral, except one star

Minister of Marine. Same as Admiral, except cross instead of stars

SWEDISH NAVAL OFFICERS' SLEEVE MARKS



Admiral



Rear Admiral



Commodore



Captain
First Class



Captain
Second Class



Commander and
Senior Lieut.

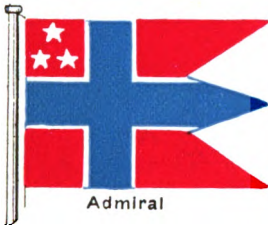


Lieutenant



Sub-Lieutenant

NORWEGIAN NAVAL FLAGS



Admiral



Senior Officer

Vice Admiral. Same as Admiral, with two stars

instead of three

Rear Admiral. Same as Admiral, with one star

instead of three

NORWEGIAN NAVAL OFFICERS' SLEEVE MARKS



Admiral



Vice Admiral



Rear Admiral



Commodore



Captain



Commander

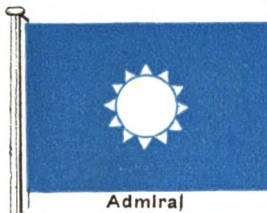


Lieutenant



Sub-Lieutenant

CHINESE NAVAL FLAGS



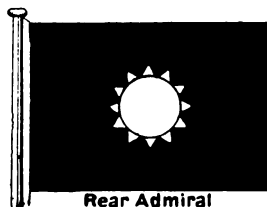
Admiral



Vice Admiral



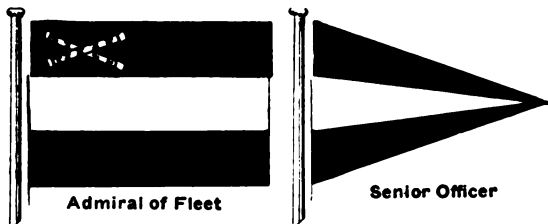
Acting Flag Officer



Rear Admiral

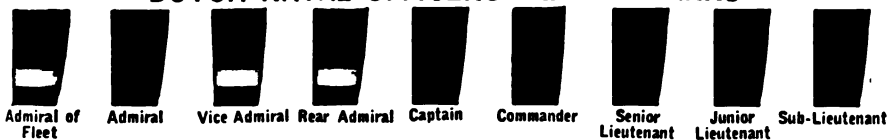
Sleeve Marks.
Same as British

DUTCH NAVAL FLAGS

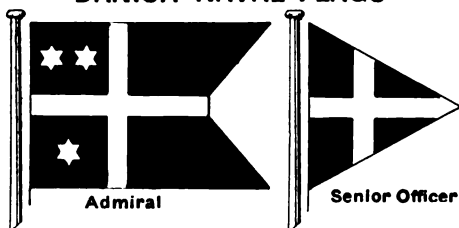


Admiral. Same as Admiral of Fleet, but in place of cross has four stars
 Vice Admiral. Same as Admiral of Fleet, but in place of cross has three stars
 Rear Admiral. Same as Admiral of Fleet, but in place of cross has two stars

DUTCH NAVAL OFFICERS' SLEEVE MARKS

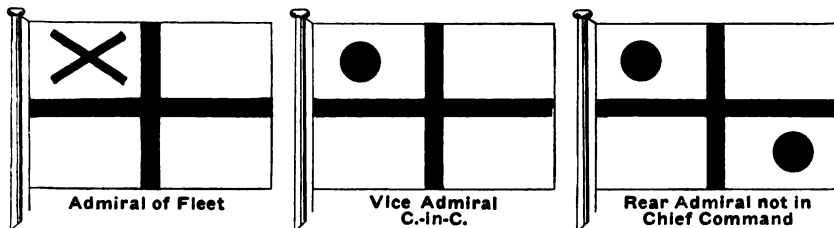


DANISH NAVAL FLAGS

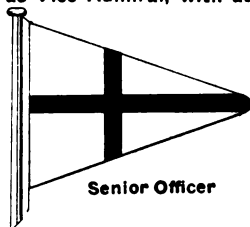


Vice Admiral. Same as Admiral, except has only one star in each canton next to fly
 Rear Admiral. Same as Admiral, except has only one star in upper canton

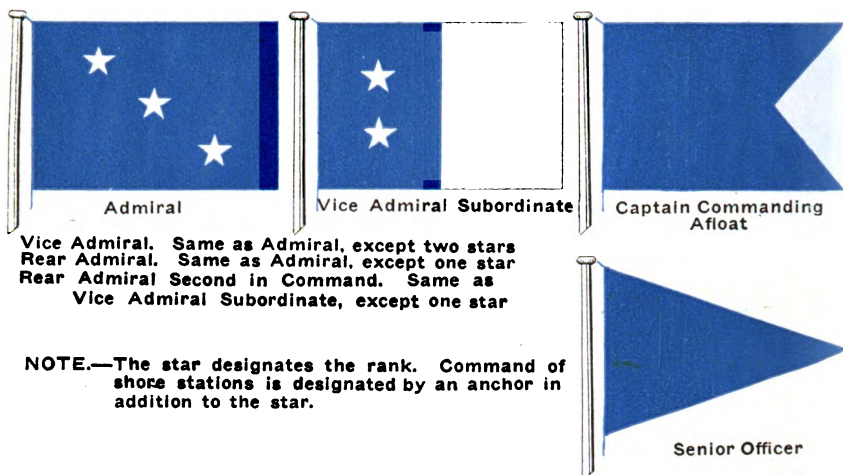
PORTUGUESE NAVAL FLAGS



Rear Admiral C.-In-C. Same as Vice Admiral, with additional red ball in lower left canton



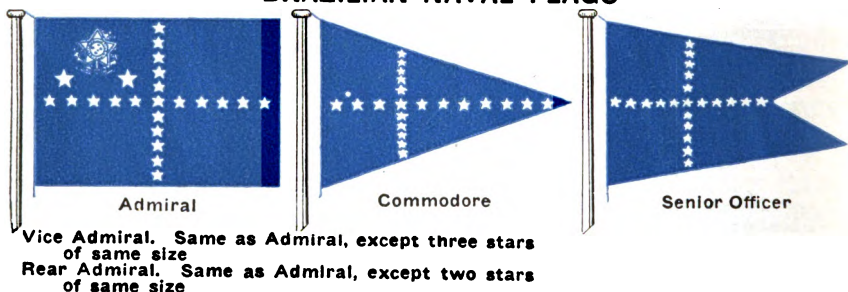
ARGENTINIAN NAVAL FLAGS



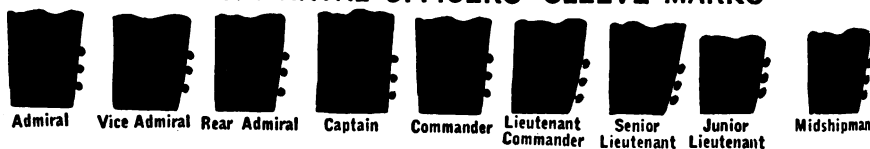
ARGENTINIAN NAVAL OFFICERS' SLEEVE MARKS



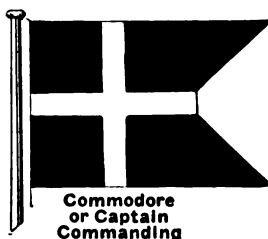
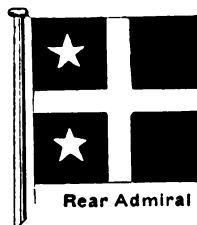
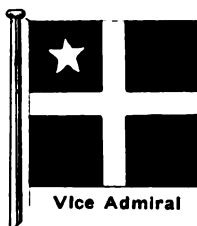
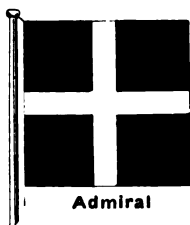
BRAZILIAN NAVAL FLAGS



BRAZILIAN NAVAL OFFICERS' SLEEVE MARKS



GRECIAN NAVAL FLAGS



GRECIAN NAVAL OFFICERS' SLEEVE MARKS



CHILEAN NAVAL FLAGS



Director of the Navy. Same as Admiral U. S. Navy
Vice and Rear Admirals. Same as U. S. Navy

CHILEAN NAVAL OFFICERS' SLEEVE MARKS



PERUVIAN NAVAL FLAGS



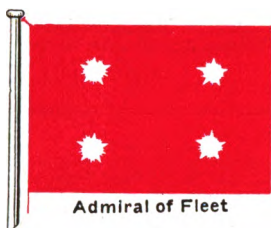
Rear Admiral.

Same as Vice Admiral, without anchors

PERUVIAN NAVAL OFFICERS' SLEEVE MARKS

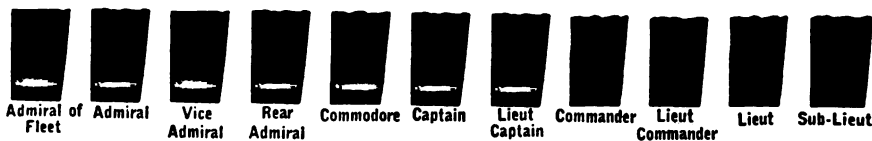


TURKISH NAVAL FLAGS



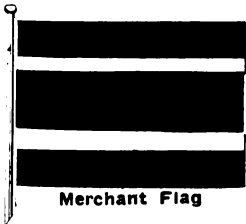
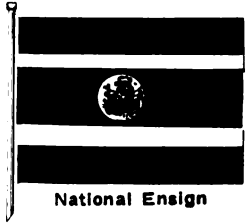
Admiral. Same as Admiral of Fleet, with three suns
 Vice Admiral. Same as Admiral of Fleet, with two suns
 Rear Admiral. Same as Admiral of Fleet, with one sun

TURKISH NAVAL OFFICERS' SLEEVE MARKS

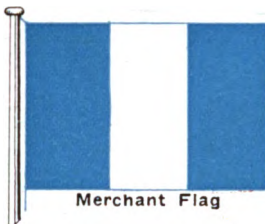


CENTRAL AMERICAN AND WEST INDIAN FLAGS

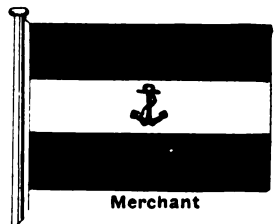
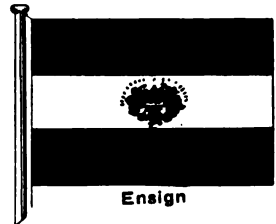
COSTA RICA



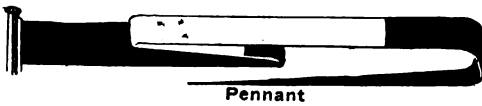
GUATEMALA



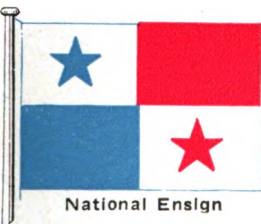
NICARAGUA



HONDURAS



PANAMA



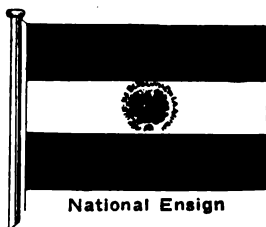
CUBA



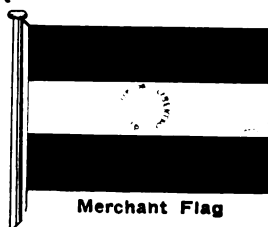
PLATE XIX

CENTRAL AMERICAN AND WEST INDIAN FLAGS

SALVADOR



National Ensign



Merchant Flag

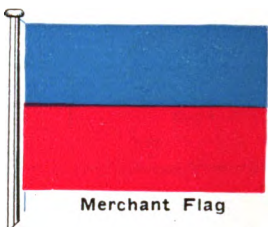


Pennant

HAITI

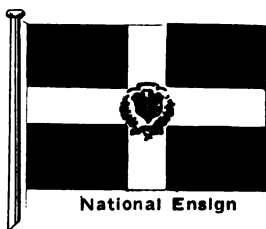


Ensign



Merchant Flag

SANTO DOMINGO



National Ensign



President's Standard



Commanding Officers Pennant



Pennant

MISCELLANEOUS.

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DISTRESS SIGNALS.

Day.

- (1) A gun or other explosive fired at intervals of about a minute.
- (2) International code signal of distress **NC**.
- (3) Distance signal, consisting of a square flag, having either above or below it a ball or anything resembling a ball.
- (4) A continuous sounding with any fog signal apparatus.

Night.

- (1) A gun or other explosive fired at intervals of about a minute.
- (2) Flames on the vessel, as for burning tar or oil barrel.
- (3) Rockets or shells throwing stars of any color or description, fired one at a time at short intervals.
- (4) A continuous sounding with any fog signal apparatus.

PILOT SIGNALS.

- (1) International code pilot signal P. T.
- (2) International code flag "S," with or without code pennant over it.
- (3) Distance signal, consisting of a cone point upward, having about it two balls or shapes resembling balls.

WEATHER SIGNALS

UNITED STATES



Small craft



NE. winds



SE. winds



SW. winds



NW. winds



Hurricane

GREAT BRITAIN, IRELAND AND PORTUGAL



(1)



(2)

(1) Strong winds at first from the north (passing from NW. to SE. through north).

(2) Strong winds at first from the south (passing from SE. to NW. through north).

Three lights of like color suspended from the corners of a triangle replace the cone at night.

CANADA



(1)



(2)

(1) Gale at first from an easterly direction.

(2) Gale at first from a westerly direction.



(3)



(4)

(3) Heavy gale at first from an easterly direction.

(4) Heavy gale at first from a westerly direction.

Night. Nos. 1 and 3 a red light.
Nos. 2 and 4 a white light over a red light.

MEXICO

Day Signals

Hurricane



in the vicinity



between W. I. Islands

Bad weather



in the Gulf of Mexico



to the northward



to the southward

Night Signals



Hurricane in the vicinity



Strong northerly winds



Strong southerly winds



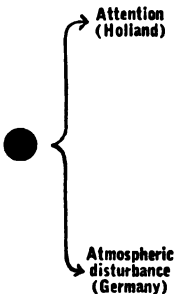
Strong easterly winds



Strong westerly winds

Strong winds are indicated by a square white flag, square red center; gales by a square red flag, square black center. A square blue flag over these indicates "norther."

GERMANY AND HOLLAND



Storm from SW.



Storm from NW.



Storm from SE.



Storm from NE.



Wind backing (NW. SE.)



Wind veering (NE. SW.)

FRANCE



For a gale commencing with wind in NW. quadrant



For a gale commencing with wind in SW. quadrant



For a gale commencing with wind in NE. quadrant



For a gale commencing with wind in SE. quadrant



For a hurricane

CLASSIFICATION OF VESSELS, UNITED STATES NAVY.

- 103 R** (1) First rates: men-of-war of 8000 tons and above.
- (2) Second rates: men-of-war of 4000 tons and under 8000 tons, and converted and auxiliary vessels of 6000 tons and above, **except** colliers, refrigerating ships, distilling ships, tank steamers, repair ships, hospital ships, and other vessels constructed or equipped for special purposes.
- (3) Third rates: men-of-war of 1000 tons and under 4000 tons; converted and auxiliary vessels of 1000 tons and under 6000 tons; colliers, refrigerating ships, distilling ships, tank steamers, repair ships, hospital ships, and other vessels constructed or equipped for special purposes of 4000 tons and above.
- (4) Fourth rates: men-of-war and converted and auxiliary vessels under 1000 tons, and colliers, refrigerating ships, distilling ships, tank steamers, repair ships, hospital ships, and other vessels constructed or equipped for special purposes under 4000 tons.
- (5) Torpedo-boat destroyers, torpedo-boats, submarines, torpedo or submarine tenders while so acting, tugs, sailing ships, and stationary receiving ships shall not be rated.

1037 R. Vessels of the navy shall be commanded as nearly as may be as follows:

First rates: by captains or commanders.

Second rates: by commanders.

Third rates: by commanders or lieutenant commanders.

Fourth rates: by lieutenant commanders or lieutenants.

Torpedo-boat destroyers: by lieutenant commanders or lieutenants.

Torpedo-boats, submarines, tugs or tenders: by lieutenants, lieutenants (j. g.) or ensigns.

Other vessels not rated, by such officers as the Navy Department may designate.

PROCEDURE FOR BOARDING VISITS.

Boarding visits divide themselves into two classes, viz.: Boarding men-of-war and boarding merchantmen.

Men-of-War.

Boarding visits to foreign men-of-war arriving in a port are always made to extend the courtesies of the nation and the port and to obtain

certain information. The information requested of a man-of-war must be restricted to:

- (1) "Name, nationality and kind of vessel."
- (2) "Name and rank of the commanding officer and, if a flagship, of the flag officer."
- (3) "Place from, time out and kind of passage."
- (4) "Probable date of departure from port and port then bound for."
- (5) "Any casualties, extraordinary events on the passage; general route taken; ships, fog, ice, etc., encountered."
- (6) "General remarks."

A boarding book should never be taken on board a man-of-war, nor should any member of the crew be allowed to go on board such vessels.

Regulations Concerning Boarding Visits.

Men-of-War.

1279 R (1) "The guard ship of the first division of a fleet or of the division of the senior officer present shall send an officer to board incoming men-of-war, except flagships and vessels attached to the fleet. Flagships shall be boarded by a line officer on the staff of the commander-in-chief or the senior flag officer present."

In visits to men-of-war the information to be secured will be the same as that provided for under "Merchantmen" below, with the following variations: (2) The name and rank of the commanding officer, and, if a flagship, of the flag officer; (3) omit.

Merchantmen.

Boarding merchantmen is for a different purpose than boarding men-of-war, and the procedure is necessarily different.

The regulations state that "guard ships of the first division or of the division of the senior flag officer present shall also send an officer or competent chief petty officer to board all merchant vessels or yachts flying American colors found in or arriving at foreign ports; also all vessels which are probably carrying mail for the fleet. If no flag be present, this boarding visit shall be made by the guard ship of the day."

The boarding officer shall carry a boarding book, in which the following information shall be entered:

- (1) Name, nationality and kind of vessel.
- (2) Name of owner (if a yacht), and whether or not he is on board; the master and the number of crew.
- (3) Tonnage and cargo.
- (4) Place from, time out and kind of passage.

- (5) Probable date of departure from port and port then bound for.
- (6) Any casualties, extraordinary events on the passage; general route taken; ships, fog, ice, etc., encountered.
- (7) General remarks.

The fact of a vessel carrying mail shall be entered under general remarks.

"The date and place at which the boarding visit was made shall be noted in every case and the signature and rank of the boarding officer appended."

"Immediately after boarding a vessel the boarding officer shall report on board the flagship of the commander-in-chief or the ship of the senior officer present and then enter in the boarding book a full record of the visit, and shall sign his name and rank to same."

"In boarding arriving vessels, care shall be taken not to violate the rules of the port; and in case they are subject to quarantine, the boarding officer shall, if possible, obtain the information required without going alongside."

"Vessels at sea, coming from a suspected port, not having a clean bill of health, or otherwise liable to quarantine, shall not be boarded, unless it be absolutely necessary, and the fact of such communication, when it occurs, shall be reported on arrival at port to the health officer."

Visit and Search.*

The belligerent right of visit and search may be exercised outside of neutral jurisdiction upon private vessels after the beginning of war in order to determine their nationality, character of cargo, nature of employment, etc.

When a vessel has been brought to, a boat must be sent with an officer to conduct the visit and search. If practicable, a second officer should accompany the officer charged with the examination. There may be arms in the boat, but the boat's crew shall not have any on their persons. The officer (or officers), wearing side arms, may be accompanied on board by not more than two unarmed men of the boat's crew.

The boarding officer after examination of the vessel's papers, followed by search and examination of cargo if deemed essential, must record the facts concerning the visit and search upon the log book of the vessel visited including the date when and the position where the visit occurred. This entry in the log must be made whether the vessel is held or not.

* See also Sections VI-XIV inclusive, Instructions for the Navy of the United States Governing Maritime Warfare, February, 1917.

The papers that should be found on a merchantman are:

- I. Ship's log.
- II. Muster list of officers, crew and passengers.
- III. Manifest of cargo.
- IV. Invoices and bills of lading.
- V. Bill of health.
- VI. The certificate of registry or nationality.
- VII. Charter party if chartered.
- VIII. Clearance papers.
- IX. A certified bill of sale, or certificate thereof duly authenticated, in the absence of certificate of registry or nationality, or in case of a vessel which has recently been transferred from enemy to neutral ownership.

"The evidence furnished by the papers against a vessel is conclusive. Regularity of papers and evidence of innocence of cargo or destination furnished by them are not necessarily conclusive, and if doubt exists a search of the ship or cargo should be made to establish the facts. If a vessel has deviated far from her direct course, this, if not satisfactorily explained, is a suspicious circumstance warranting search, however favorable the character of the papers."

HINTS TO YOUNG OFFICERS TAKING THE DECK.

[Reprinted from U. S. N. A. Seamanship Department Notes.]

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GENERAL PREPARATIONS.

1. The chapters of the Navy Regulations and Naval Instructions with which all junior line officers are required to especially familiarize themselves are itemized in chapter 17, United States Naval Instructions. Of these chapters the following are of particular importance in preparation for deck duty, and should be carefully studied and frequently reviewed: Navy Regulations, chapters 12, 14 (certain articles), 24, and 41; Naval Instructions, chapters 16, 23, and 24.

Before standing any watch at sea or in port an officer should know how to write up the log of his watch. To prepare for this, he should carefully read the "Directions for Keeping the Ship's Log," contained in the front part of the Deck Log, and also "Notes on Writing the Deck Log" (Chapter XI).

Before standing watch underway in formation, in addition to Chapter 41, Navy Regulations (Rules of the Road), he should review General Order No. 154, the Battle Signal Book, and "Handling Battleships in Formation" (Chapter IX).

It is well for young officers to get in the habit of taking their Navy Regulations on deck with them for port watches, and the Battle Signal Book for watches underway in formation.

SPECIAL PREPARATIONS.

2. An officer should know his own ship—her armament, construction, subdivision and water-tight arrangements; location of various fittings, magazines and store rooms, offices and living quarters.

In order that he may be prepared for emergencies while underway or at anchor, he should know the following:

(a) The locations of the instruments for springing the general alarm and warning howlers on bridge and quarterdeck, and how to operate them.

(b) The location of the instrument for closing water-tight doors mechanically, and how to operate it.

(c) The stowage place of the collision mat and its gear, and the method of getting the mat over.

(d) How to turn search-lights on and off.

(e) How to veer chain in an emergency.

(f) How to let go an anchor.

(g) The locations from which the ship may be steered, and the method of shifting from power to hand steering gear.

(h) Location of life-buoys and how to let them go.

(i) The interior communication system, and especially how to communicate with the captain in an emergency.

3. An officer should first study his ship and next the organization of the personnel for battle, administration, safety, and cleaning. He should familiarize himself with the *general* requirements of the watch, quarter, and station bill, and should make a thorough study of that part for which he is responsible as a division officer. In routine watch standing work, familiarity with the cleaning bill enables one to carry on work with intelligence and dispatch and at the same time to avoid friction.

An officer should know:

(a) The calls used on his ship for all emergencies, general drills, routine purposes, and boats, and where these calls are to be sounded.

(b) The sea details habitually stationed and the divisions from which they are detailed.

(c) The additional details made for fog or other circumstance.

(d) The details for "man overboard" evolution, including the lookouts.

(e) The detail of petty officers for duty at anchor engines and in connection with the ground tackle.

(f) Any special details, such as torpedo-defense lookouts, war-time cruising, etc.

4. In order to be efficient a watch officer should be familiar with the tactical data and maneuvering qualities of his ship.

He should know:

(a) The masthead heights (day and night) of his own ship and the ships adjacent in formation.

(b) The number of degrees of rudder for full, standard, and standard half rudder.

(c) The advance and the turning circles of his ship with full rudder, standard rudder, standard half rudder, and with one engine stopped or backing.

(d) How to turn ship on her heel from rest.

(e) How the ship loses way at various speeds when engines are stopped and when engines are backing.

5. Before taking the deck for the first time on the ship to which he is ordered, an officer should carefully read the captain's order book and the routine or executive officer's order book, making notes of all important orders. He should also examine the port routine and the sea routine. If the ship is attached to a fleet, he should ask for a copy of the "Fleet Regulations" and should study them carefully.

PREPARING THE MIND FOR EMERGENCIES.

6. Prior to and during his watch it is a good plan for an officer to mentally picture casualties that might occur requiring quick thinking and efficient action. For instance, at the beginning of a watch, one should decide in his mind exactly what he would do in case of "Man overboard," both from his own ship and from the ship ahead; in a fog, what he would do in case of collision or threatened collision; if a breakdown occurs in formation, which way he would turn; or if attacked by a submarine, how he would maneuver the ship and what he would do, depending upon her bearing.

An officer must be ready for all such occurrences, and in order to be ready it is necessary to anticipate ordinary emergencies by preparing in the mind exactly what orders should be given. This is the only way to avoid the loss of time that would follow, should it be necessary to think out the method of meeting an emergency.

MANNER OF RELIEVING THE DECK.

7. It should be a matter of pride with every officer to relieve the deck on time. In order to do this, at least five minutes should be allowed for obtaining the necessary information from the officer about to be relieved. All necessary preparations for the period of the watch should be made in advance. If necessary to examine the chart or to read the night orders one should do so before presenting himself to the officer having the watch.

The correct formalities to be observed in taking over the deck are as follows: The relief officer proceeds to the starboard side of the quarterdeck, or wherever the officer of the deck may be, salutes and reports, "Sir, I am ready to relieve you." The officer of the deck then turns over the necessary information as given in paragraph 8 or 9. When the relieving officer has grasped the situation and thoroughly understands the condition of affairs he again salutes and states, "I relieve you, sir." The responsibility of the deck is then his.

INFORMATION TO BE OBTAINED BEFORE RELIEVING AT ANCHOR.

8. Before relieving the officer of the deck at anchor, the following information should be obtained:

(a) *Condition of Ship.*

If anchored—anchor down; scope of chain out; depth of water; kind of bottom; bearings of anchorage.

If moored—scope of each chain; whether or not mooring swivel is on; whether mooring is taut or slack; condition of hawse.

If moored to dock—lines used and their condition; brows in place and whether camels or spur shores are used.

Tide to which ship is riding; time and direction of last swing, both when the ship is at anchor and when moored.

Anything affecting the appearance of the ship, such as scrubbed clothes or canvas up, bedding or bunting being aired.

(b) *Boilers and Engines.*

Boilers in use for auxiliary purposes.

Any repairs to engines, boilers, or auxiliary machinery that will prevent getting underway in the usual length of time.

(c) *Boats.*

Condition of all boats, location of those down, boat schedule, running boat, landing in use; any special orders concerning or given to boats.

(d) *Personnel.*

(1) Captain, location of. If ashore or away on duty, name of commanding officer.

(2) Officers, ashore, sick, or away on duty.

(3) Working, liberty, or recreation parties away from the ship, and orders concerning.

(4) Prisoners and their status.

(5) Visitors on board.

(6) Uniform for officers and crew.

(e) Work in progress on board.

(f) Weather—condition of, barometer reading and whether rising or falling.

(g) Ships present in sight; guard ship; senior ship.

(h) Orders—all unexecuted orders, standing orders, any special orders or instructions that are to be passed along.

Additional for Night Watches.

(i) Life-boat—which boat is designated as such, and its condition.

(j) Anchor watch—petty officer in charge and where to find watch.

(k) Where the following men swing or may be found:

(1) Boatswain's mate of division having charge of anchor gear.

(2) Petty officer stationed at anchor engine.

(3) Bugler.

(l) Morning order book—location of, any orders for which it is necessary to prepare.

(m) Any special watches, such as torpedo-defense group on duty.

INFORMATION TO BE OBTAINED BEFORE RELIEVING UNDERWAY.

9. Before relieving underway, the following information should be obtained:

(a) Course (p. s. c.) and by steering compass, or by gyro; speed in knots and revolutions of engines; amount of rudder ship is carrying.

(b) Boilers in use. Any boilers, engines, or auxiliary machinery under repairs or not in good condition.

(c) If in company with other ships, the standard speed, formation, distance, interval, number of revolutions to keep position, and the order of the ships in column, and especially whether own ship is odd or even; whether position buoy is ready to go over, and in addition that search-lights and signal gun are ready at night or in a fog.

(d) Location of ship on chart and with reference to land, shoals or rocks which may be near. Any landmarks or aids to navigation in sight or expected to be sighted. If on soundings, whether leadsmen are in the chains or details for sounding machine standing by.

(e) Condition of ship.

(1) Ground tackle—whether secured for sea or ready for letting go.

(2) Water-tight doors and appliances for operating, what doors are closed (especially night and fog).

(3) Gun and air ports, hatches; closed or not.

(4) Scrubbed clothes and canvas up.

(5) Life-boats and buoys—ready for instant use.

(6) Signal apparatus, including whistle and siren.

(f) Personnel.

(1) Location of captain.

(2) Lookouts and sea details stationed and instructed.

(3) Watch up and ready for duty.

(4) Life-boat's crew mustered and stationed.

(g) Weather, wind, and sea; reading of barometer, whether rising or falling. Any indication of approaching bad weather.

(h) Any vessels in sight and whether the bearings taken are drawing ahead, aft, or are stationary.

(i) Any work in progress on ship.

(j) All standing orders, unexecuted orders, or special orders to be passed along.

(k) Torpedo-defense crews on watch and their instructions.

Additional for Night Watches.

(l) Read and initial captain's night order book. Find out location of executive officer's morning order book and read any orders for which it is necessary to prepare.

(m) Condition of running lights. Location of "stand by" lights.

(n) If running without lights, what circuits are on.

AFTER RELIEVING AT ANCHOR.

10. After relieving at anchor, an officer should habitually stand his watch on the starboard side of the quarterdeck and carry out the "port routine." He should receive reports from, and give orders to, all boats leaving or returning to the ship (either in person or through the junior officer of the watch). He should have the junior officer of the watch inspect the upper decks by day at intervals when he can be spared. In making these inspections the junior officer should be cautioned particularly to see that: Men are in uniform; no infractions of smoking regulations; boat keepers alert and not lounging in their boats; ventilators properly trimmed; pennants and colors chock up and clear; awning stops properly passed and ends expended; no clothes hanging about in unauthorized places; decks cleanly swept down and waterways cleaned out; torpedo-defense crews on watch, alert, and keeping a bright lookout; chain properly secured, how tending, and if there is a strain on it. At night he should see that no unauthorized lights or fires are burning; that anchor lights are burning; that the signal watch is alert, and that men are not sleeping in unauthorized places.

At night the petty officer, or corporal of the guard, or other person detailed for this purpose, should be required to make the rounds of the ship every half hour after 10 p. m. and until "All hands" are called in the morning. During these rounds the petty officer should inspect the lights and prisoners; see if irregularities of any kind are taking place, and report the result of each inspection to the officer of the deck. The junior officer of the watch should also be required to make these rounds every two hours or oftener, if necessary, providing his services on deck can be spared.

The officer of the deck should see that the columns of the log are properly filled in and should check up entries therein as necessary. He should require the quartermaster to keep a notebook and to enter all occurrences therein, with the time of each.

The officer having the morning watch should initial the morning order book and return it to the executive's office by 8 a. m.

AFTER RELIEVING UNDERWAY.

11. After relieving underway an officer should :

Verify information turned over by previous officer of the deck.

Carry out " sea routine."

Frequently verify course and check up revolutions.

Be prepared to plot position of ship if called upon or if necessary for his own information.

Keep all sea details alert and instructed as to their duties.

Muster the life-boat's crew of the watch at the beginning of each watch, and receive reports concerning crew and life-boats.

Make sure that torpedo-defense crews on watch are alert and thoroughly prepared and instructed.

In all orders to the wheel or engine room telegraphs, use exact terms prescribed by General Order No. 154.

Check up the entries in the columns of the log, particularly those with regard to courses steered, distances run, wind and weather.

If in formation he should :

Require junior officer of watch to take and report distance by stadimeter constantly.

Keep proper distance. If unable to do so he should report to captain.

Additional for night watches.

Muster the watch at the beginning of each watch.

Inspect the running lights, see them burning brightly unless ship is darkened, and have their condition reported every half hour with the bell.

Have " stand by " oil lights ready and lighted.

Have inspections of lower decks made every half hour, as outlined in paragraph 10 for port.

Twice each watch have gunner's mate report the signal gun and condition of the battery and the carpenter's mate report the soundings of the double-bottoms.

If it is the morning watch, return the captain's night order book and the executive's morning order book to their respective offices by 8 a. m.

MANNER OF PERFORMING DUTY.

12. The manner in which an officer of the deck should carry on his duties, together with instructions concerning his bearing, etc., are fully described in Navy Regulations, articles R 1519, R 2609, R 2610, and R 2632. These articles should be read carefully and carried out scrupulously. By these Regulations orders are required to be given in a decided and authoritative tone, no louder than necessary, using the phraseology customary to the service.

and without any unnecessary repetition. An officer should make it a point to familiarize himself with the sea terms in ordinary use on board ship, to use these terms where appropriate, and to require those under him to do the same.

In giving orders that are to be repeated or passed the Regulations require the officer of the deck to use the exact words proper to pass them, and not permit any changes or additions by his subordinates.

An officer should require the boatswain's mate, the bugler, and the messenger of the watch to remain habitually at their assigned stations, alert, and ready for duty, unless away in execution of his orders. It should never be necessary to preface orders by such expressions as "boatswain's mate" or "bugler."

He should exact a silent and prompt performance of duty and should never permit any unnecessary noise or confusion in the execution of his orders. He should be just, impartial, and fair in his dealings with the crew, and, above all, *should never lose his temper.*

REPORTS TO CAPTAIN.

13. Article 2602, Navy Regulations, specifically prescribes a number of reports that are to be made to the captain, but the reports itemized there do not comprise all the reports that should be made. At the end of paragraph 6, will be noticed a very comprehensive clause requiring, "in general, all occurrences worthy of notice" to be reported.

It is better to make too many rather than too few reports. A safe rule to follow is, when in doubt, make the report. When reporting a change of course, sighting aids to navigation or anything important by the messenger or orderly, it is better to send a written memorandum to the captain, otherwise the report might be given to the captain incorrectly. At sea if the captain is on the bridge, or in port on the quarterdeck, all reports should be made to him, in person.

VARIOUS INCIDENTS.

14. Following are enumerated various incidents which frequently arise with the corresponding action which should be taken by the officer of the deck in each case.

INCIDENT.	WHAT DO.
<i>Accidents to equipage, material, etc.</i>	Require full reports from officers or petty officers of all damage to government equipage or material, including how damaged, when, responsibility for, extent of damage, etc. Log fully. Report to executive and also to captain if serious. Send slips to head of department concerned and supply officer.

INCIDENT.

WHAT DO.

- Affirmative, use of, in getting underway in formation.* After signal to get underway is executed, half-mast affirmative when (1) anchor is at short stay; run all the way up when (2) anchor is aweigh; haul down when (3) ready to take and hold position in formation.
- Aids to navigation sighted.* At night: turn on affirmative at (1); running and speed lights at (2); turn off affirmative at (3). Report to captain and navigator.
- Ammunition comes aboard.* Get bearings of, note time sighted, and log. Report to captain, executive, and gunnery officer. Notify ordnance gunner. Order chief police petty officer and corporal of guard to put out smoking lamp and extinguish unauthorized lights and fires. Hoist powder flag (boy). Log fully amount taken; kind of shell; number of charges of each index; from whence received; by what authority, etc.
- Ammunition is sent from the ship.* Report to captain and executive. Haul down powder flag. Cover ammunition with tarpaulin when on deck for any length of time and in transit (Bu. Ord. Ins.). See powder flags in bows of all boats carrying ammunition. See memorandum receipts on tug, before she shoves off; get them from gunnery office. Log fully (see above).
- Anchor or running lights go out.* Send for electrician of signal circuit. Have quartermaster rig "stand by" oil lights.
- Anchor, at, in tideway.* Have an efficient lookout stand by life-buoys. Put over drift lead; get range on shore. Take precaution to ascertain if ship drags. Notify first lieutenant and carpenter.
- Ash chute gets choked up.*
- Ashes, request to expel from engine room.* At anchor. Be cognizant of port instructions—if permitted, see boats clear of ship's side near discharge from expelling device.
- Ash lighter or water boat comes alongside.* Notify executive, engineer officer, and supply officer. Inform engineer officer of the watch by telephone. Inform captain of fresh water hold. If a local lighter, log owner, time of coming alongside and shoving off, and amount of water taken.

INCIDENT.	WHAT DO.
<i>Bags or hammocks to be served out.</i>	Notify first lieutenant, division officers, boatswain, and sailmaker's mate. Divisional officers usually send men to break out their division bags and hammocks. They are served out at quarters and results reported in memorandum form to first lieutenant. Report completion to executive officer.
<i>Barges, coal, coming alongside</i>	Report to captain and executive. Notify boatswain. Make preparations to receive. See properly placed and secured. Log time of arrival, number of each barge, how much it contains, where placed, and from whence received.
<i>Bells, striking of.....</i>	Follow motions of flagship or senior officer present in this respect.
<i>Binnacle lists.....</i>	If the medical officer wishes to place a man on the sick or binnacle list, he sends name to officer of the deck on a slip requesting permission. Send this to captain for approval, and return to the medical officer.
<i>Board of Survey comes on board.</i>	Report to captain. Have messenger show them to ward room. Notify head of department concerned and supply officer.
<i>Boats crews away during meals.</i>	Order commissary steward, chief police petty officer, and ship's cook to save hot meals for them.
<i>Boat, power, needs re-fueling.</i>	Put sufficient number of 5-gallon tins on board, have boat shove off from ship, fill tanks and then return empty containers to ship.
<i>Boats, power, break-down.</i>	Inform engineer officer of watch. Report to executive after an inspection how long boat will be laid up.
<i>Boats, heavy, to be hoisted out or in.</i>	Notify boatswain or chief boatswain's mate of boat deck. Allow only certain skilled men to operate cranes.
<i>Boat—requested by officer.</i>	Request permission of executive to use boat and report her return to executive.
<i>Boats at booms.....</i>	Have boat keepers in uniform of day. See boats in order, with no clothing hanging in steam launches. Do not allow steamers' crews to sleep on decks of boats at boom.

INCIDENT.

WHAT DO.

- Boats running*..... Carry out schedule, whether any one is going ashore or not. Shove boats off on time, both from ship and shore. Do not permit a running boat to be diverted by stopping at other ships or landings. See that coxswain knows landing in use and the compass course to the landing from the ship.
- Book, General Signal, whereabouts of.* One copy with captain; one with signal officer; make sure that latter informs you of its location, if he leaves the ship.
- Bugle calls*..... Follow flagship or senior officer present in sounding routine calls.
- Buglers, messengers, etc.* See in proper uniform at all times.
See that they remain at hand, except when engaged on duty that takes them away from station.
- Bunker or magazine fire alarm sounds.* Have engineer officer or gunnery officer investigate at once.
Notify engine room and ordnance gunner.
Report results to captain and executive.
- Calls for men, not answered.* Direct petty officers of division concerned to send men at once.
- Calling committee comes aboard.* Send to president of mess concerned and show guests to the proper mess room.
- Captain—commanding officer.* Note distinction between captain and commanding officer. The captain is ordered as such by proper authority—any line officer may be temporarily in command.
- Captain or executive leaves or returns to ship.* Notify next junior line officer. When captain leaves see boat cloth in boat. At night turn on his absentee light when he leaves and turn off when he returns, unless flag officer (if ship is flagship) is also absent.
- Captain wishes to be called.* Called by his orderly. Report weather conditions to him when you call him.
- Chain cable parts*..... Let go another anchor immediately. Buoy position of lost anchor at once, if not already done.
Notify captain, executive, first lieutenant and boat-swain.
- Change of course in accordance with previous orders.* Get captain's permission if he is on bridge. If not, change as directed, then report the change and the time to captain and navigator at once.

INCIDENT.

WHAT DO.

- Change of course or speed—emergency.* Make necessary change, then report to captain change made and necessity for.
Report similarly when back on original course or revolutions.
- Chronometers* At 7.45 a. m. or 11.45 a. m., ascertain from navigator if wound. Report their condition to captain at 8 a. m., or at noon, according to the custom on your particular ship.
- Clocks, set at sea.* Request comes from navigator. Obtain permission from captain. Send to chief quartermaster (navigation) to set clocks. Notify engine room. Notify commissary officer, steward, galley. Usually done after 11 a. m.
- Clothes left about decks. . .* Send to police petty officer and have them placed in lucky bag. If clothes are wet when piped down obtain permission from executive to hang in a designated place and have such word passed.
- Clothes, piping down, when acting singly.* Usually done at 11.30 a. m. or 1 p. m. Ascertain by messenger or signal force if dry. Obtain permission from captain. Have word passed. Notify engine room by telephone. Send to chief police petty officer to take care of clothes of men absent. Pipe down with bell. Do not allow clothes to hang about decks.
- Clothes, scrubbing.* Do not allow outside of routine hours and regular places. Men have habit of getting into corners and scrubbing when decks are not wet, thus leaving soap stains. Do not permit wet clothes to be hung in unauthorized places. A line is provided for that purpose.
- Collision, danger of, exists.* Sound general alarm, one long blast of siren, warning howlers. Close water-tight doors.
Maneuver ship to obtain glancing blow.
At anchor: Be prepared to veer, to rig in booms and to clear the side.
Report to captain.
- Collision occurs.* Same signals. Notify captain, executive, engineer officer, first lieutenant, and gunnery officer of location of injury and have word passed by boatswain's mate. Sound assembly on bugle.

INCIDENT.	WHAT DO.
<i>Colors are hoisted when first note is sounded.</i>	Hoist smartly and two blocks. Lower colors at first note very slowly. Never allow the colors to touch the deck or ground.
<i>Colors, boats, at boom...</i>	See colors of boats riding at booms unshipped, except when ship is dressed.
<i>Colors, dipping.....</i>	Answer dip for dip, rounding up immediately. Do not wait for other vessel to do so. See man stationed by colors in going into or out of port for this purpose.
<i>Colors, shifting.....</i>	Shift from <i>port</i> to <i>steaming</i> colors (a) when anchor is aweigh; (b) when last line has been cast off from dock. Shift from <i>steaming</i> to <i>port</i> (a) when anchor is let go; (b) when first line is ashore. See one set chock up before other is hauled down.
<i>Commanding officer's boat approaches flying pennant.</i>	Notify captain. Call guard of day and four side boys, unless commanding officer is of rank of lieutenant commander, then two boys only. Render prescribed honors when he comes on board.
<i>Court, general, or of inquiry.</i>	On meeting, hoist jack at yardarm and fire gun. Notify captain. When it adjourns, haul down jack; notify captain; log, giving president of court, time of meeting and adjournment and object of court.
<i>Court, summary.....</i>	Notify captain of both meeting and adjournment. Log, giving times, name of senior member, and names and rates of persons tried.
<i>Decks to be shellacked...</i>	Notify carpenter, painter, and chief police petty officer.
<i>Details, port, how called.</i>	Anchor watch calls relief; quartermaster calls officer of deck's relief; chief police petty officer calls buglers, ship's cooks, launches crew. Corporal of guard calls his relief and other orderlies.
<i>Discharged, enlisted man is to be.</i>	Obtain discharge papers from executive's office and make sure all formalities and paper work are completed. When man is ready to leave ship, give him his discharge. Report to captain. Log.
<i>Dishes reported dirty...</i>	Send for chief police petty officer and man in scullery. Investigate. Report to executive.

INCIDENT.	WHAT DO.
<i>Divine service on board.</i>	Sound church call. Toll the bell. Hoist church pennant at same staff with ensign, but above it, lowering ensign. Permit no disturbances. Out smoking lamp. Smoking is not permitted during divine service anywhere on board ship.
<i>Draft comes on board.</i>	Report to captain and executive. Notify commissary steward, supply officer, and chief police petty officer. Send to executive's yeoman for station billets. Log names, rates, from where received, and whether bags, hammocks, and necessary papers were also received.
<i>Extra duty.</i>	Remember that "extra duty as a punishment shall be discontinued on Sundays."
<i>Fire</i>	Sound general alarm. Ring ship's bell rapidly, followed by number of strokes to indicate location. Bugler sounds to fire quarters. Boat-swain's mate passes word as to location of fire. Send word to engine room. Notify captain and executive.
<i>Fire alarm rings, automatic.</i>	Have investigation made in bunkers or magazines affected by head of department concerned. Report to captain and executive.
<i>Fire main leaks.</i>	Notify first lieutenant and carpenter. If necessary to shut off system, get permission from captain. Notify executive.
<i>Flag officer or captain comes alongside when captain is away.</i>	Notify commanding officer. Have honors ready; go down gangway ladder and inform visiting officer before he leaves his boat that the captain is not on board. If a flag officer and he is entitled to a salute on departure, give it to him, as the fact that he did not come on deck is no excuse for not rendering suitable honors.
<i>Flag officer's boat approaches, flag flying.</i>	Call full guard and band. Have side boys, to which visitor is entitled, ready. Notify captain.
<i>Flag officer passes close aboard in boat flying flag.</i>	Render prescribed honors on arrival and departure. Call guard of day and band. Render honors as prescribed, when he passes.

INCIDENT.

WHAT DO.

- Fog comes up.....* *In port:* Notify captain.
 Set watch on ship's bell to sound fog signal.
Underway: Notify captain.
 Start automatic whistle. A hand should be stationed by whistle in case automatic gear fails. Sound one long blast every minute. Station additional lookouts. Close all water-tight doors not necessary for communication.
 If in formation, get over position buoy and train search-light on it. Get signal gun ready, ammunition up and gunner's mate on watch with it. Sound fog signal immediately after ship ahead.
- Food, enlisted man complains of.* Send for commissary steward and messman. Investigate. Inform commissary officer.
 Inform executive, if necessary.
- Gasoline comes on board.* Stow 50-gallon drums on weather deck. If sufficient number of 5-gallon tins are available, empty one 50-gallon drum.
 Hoist powder flag. Out smoking lamp. Extinguish all unauthorized lights and fires.
 Notify supply officer and executive officer.
- Guard mail to go.....* Call away guard boat. Send officer or petty officer to captain's office for guard mail. Send boat to division flagship to deliver mail. See guard flag in boat and officer or petty officer in prescribed uniform. Fleet routine shows time to send guard boats.
- Gun salutes in war time.* During the period of the war: (a) gun salutes by United States vessels and shore stations are discontinued, except in rendering honors to foreign officials or states or in return for similar honors; (b) national salutes and salutes to port or officials of nations at war are suspended.
- Hammocks, procedure at.* Sound hammocks. Have crew fall in abreast nettings. Have chief police petty officer report all up. Have silence maintained. Trice up hammock cloths and pipe down. Allow no hammocks to be taken from nettings before being piped down. See hammock stowers restow uncalled for hammocks. Have inspection made for this.

INCIDENT.	WHAT DO.
<i>Hatches, engine and dynamo.</i>	Allow no men to sleep over these hatches or to hang clothes thereon.
<i>Hatch tarpaulins.....</i>	Never permit hatch tarpaulins to be used for anything except covering hatches.
<i>Honors, rendering, in war time.</i>	(See note on gun salutes.) It is customary in war time not to render full side or passing honors. Acquaint yourself with the fleet orders on this subject.
<i>Land, discolored water, breakers, wrecks, etc., sighted.</i>	Report to captain and navigator. Get bearings. Log.
<i>Liberty party to leave...</i>	Pass word for liberty party to fall in. Inspect for uniform. Embark in boats, but <i>do not</i> overload. Police petty officer inspects cards as they go over the side. Inform party at what hour and place liberty expires.
<i>Liberty party returns...</i>	Have chief police petty officer at gangway to inspect men for intoxication or bringing back unauthorized articles. Have box ready to deposit cards. Report to executive and captain the names of any men who have overstayed liberty, this preferably by written memorandum.
<i>Life-boats, readiness of..</i>	Coxswains of both life-boats report boats ready for lowering at sunset. At sea coxswain of life-boat's crew of the watch reports both boats at beginning of each watch.
<i>Life-buoys tested.....</i>	Tested once a week and when getting underway. Done by ordnance gunner. Log.
<i>Lights, extension requested by officers.</i>	Request comes through chief police petty officer. Send request to captain. Send his answer to persons concerned.
<i>Lights of vessel sighted at sea.</i>	Take bearing by pelorus and check up to ascertain if risk of collision exists. Report to captain.
<i>Lights, running</i>	Have their condition reported every half hour at sea, with the bell.
<i>Magazine inspection....</i>	Daily. Ordnance gunner hands in a slip giving maximum and minimum temperatures, and reports that the magazines and powder samples have been inspected and found in normal condition.

INCIDENT.

WHAT DO.

Send report to captain and log the fact, entering temperatures in the columns of the log. (Gunner also reports weekly inspection of shellrooms, flood cocks, and sprinklers, and results thereof.)

Man-of-war lights..... Turn on when approaching an anchorage where men-of-war are likely to be found. Turn off when anchor goes.

At anchor: Turn on when sighting *incoming* vessel with this display of lights; turn off with her.

Man-of-war passes close aboard. Call guard of the day and band. When ships overlap sound attention; guard presents arms; band plays national anthem; hand salute by every one in sight on deck during anthem; order arms; carry on. Above done if ship is going on or has been on detached duty or is a foreign man-of-war. National anthem of passing vessel is played.

Report to captain.

Man-of-war reported standing in. Report to captain.

Have above honors ready if ship passes close aboard. Log, with time and place of anchoring.

Man is injured..... Send to sick bay for treatment.

Get report from medical officer. Investigate fully how it occurred and find out whether in line of duty or not.

Log *fully*.

Report to captain.

Man overboard. (At anchor.) *Day*: Away life-boat. Power boats available to rescue. Let go life-buoy if near man or heave over a ring-buoy.

Notify captain, executive, and medical officer.

Night: Same. Anchor watch mans life-boat. Turn on search-light to locate man.

Man over the side..... Never permit a man to go over the side when underway without a bowline on him well tended on deck.

Man reported missing from ship. Have careful search of ship and boats made by ship's police. If not found, report to captain and executive.

Log that man is missing from the ship without permission from proper authority, with the time.

INCIDENT.	WHAT DO.
<i>Man returns overtime from liberty or absence without leave.</i>	Send for chief police petty officer. Examine man. Report to captain and executive. Log, including time of return.
<i>Mast, reports at the</i>	When all reports are at the mast, together with <i>all</i> witnesses, including officers, inform the executive, who usually personally reports ready to the captain. In case a marine is on the report, send for the officer commanding marine guard.
<i>Meal hour delayed</i>	Inform commissary officer and steward and chief police petty officer.
<i>Meal hours of crew</i>	Meal pennant is hoisted at port yardarm only when at anchor. Boats are permitted to be absent only when on urgent public duty. All side honors are dispensed with for United States officers except courtesies by officer of the deck.
<i>Mess gear needed on mess.</i>	Inform first lieutenant and supply officer.
<i>Morning order book . . .</i>	Contains instructions for officer of the deck having morning watch. See returned to executive's office by 8 a. m.
<i>Offense. Police petty officer brings man to the mast.</i>	Investigate. If serious report to executive. If the case warrants immediate punishment, send to executive and captain.
<i>Officer reports aboard for duty.</i>	If in uniform send for orderly and show him to cabin. Inform executive. If not in uniform, show him to a room where he may shift. Log fully, including gist and file number of orders.
<i>Oil-burning ship to be fueled.</i>	Hoist powder flag at fore truck. Engineer's force connect up flexible pipe, open filling valves to oil bottoms, etc. Do not permit smoking within 50 feet of hose, tank, or vents from tanks.
<i>Oil or paint spilled on deck.</i>	Have wiped up at once, then carefully scraped by man or men responsible. Whitewash the spot.
<i>Orderly—time</i>	Detailed by executive, both at sea and in port—reports all routine occurrences, as given on sea and port routines.
<i>Overboard, throwing things.</i>	Permit no wood nor unpierced metal cans <i>nor anything that will float</i> to be thrown overboard at sea or in port. A ship might be trailed by these means.

INCIDENT.

WHAT DO.

- Overtime men, effects of.* Have chief police petty officer secure their bags, hammocks, and ditty boxes and stow in lucky bag for safe keeping.
- Pay officer brings government money on board.* Report to captain.
Log the amount and from whence received.
- Pay officer sends government money from ship.* Have line and buoy attached.
Log amount and authority for the transfer.
Notify captain.
- Pilot comes aboard.....* Have boat line and sea ladder ready, if necessary.
Report to captain.
Log name and time.
- Pilot leaves ship.....* Have boat line and sea ladder ready, if necessary.
Notify paymaster.
Report to captain.
Log.
- Ports, air, at sea, not to be opened.* Allow no air ports to be opened at sea without permission from the captain. Have those on lower decks closed at sunset. Carpenter's mate reports condition of air ports and soundings at least twice each watch during night.
- Position buoy to be rigged.* Notify boatswain and petty officers of division concerned.
- Prisoner sent from ship.* Send under guard of a petty officer (armed) with necessary papers. Get papers from captain's or executive's office.
Log details.
Report to captain.
- Prisoner to be confined..* Have police petty officer confine him.
Report confinement to captain and executive.
Log details.
- Prisoner to be released..* Obtain captain's permission. Send to chief police petty officer to bring man to mast and then release and restore to duty.
Log details.
Report to captain.
- Provisions, fresh, come on board for general mess.* Send for medical officer to inspect for quality. Inspect them yourself as to weights or have junior officer of watch or your relief do so.
Log amounts, contractor, weights of various provisions received, and name of inspecting officer.

INCIDENT.

WHAT DO.

Rain squall comes up. . . . Pipe down aired bedding or scrubbed clothes dry, if up. Haul over hatch hoods, gun and search-light covers. House awnings. Remove plugs from uncovered boats in skids. Slack all halliards and running gear. Prepare the ship first and then send for your rain clothes.

Recorder of summary court martial wishes to deliver specification. Have police petty officer bring man to the mast. If under sentry's charge, obtain captain's permission,

Report to captain when confined again.

Log.

Reports at 8 p. m., Notify executive officer. Following departments are reported: Engineer, supply, ordnance, and construction and repair. Engineer and supply made by officers of department, not at mast. At the mast there should be the boatswain, the gunner, the carpenter and the sailmaker (or their mates) and the chief police petty officer and the captain of the fresh water hold.

Reports, officer of the deck, to commanding officer. If commanding officer is below, make by his orderly. If commanding officer is on quarterdeck when at anchor or on bridge underway, make all reports to him in person, if at all possible to do so.

Request at mast. Notify executive.

Salute, gun, to be fired. . . Call saluting guns' crews to quarters. Notify gunner of number of guns to be fired and whether on arrival or departure, or both. See scrubbed clothes piped down before saluting. If flag is required, see rounded up to truck in stops *before-hand*, broken with first gun, and hauled down with last, if proper to do so.

Scupper lip to be put on or removed. Send to boatswain or petty officer in charge of side cleaners.

Ship drags her anchor. . . Report to captain and executive. Notify boatswain.

Get steam on anchor engine and man to operate it. Veer chain. Stand by the other anchor and let go if necessary, veering chain on the anchor already down.

In extreme cases ship will get up steam.

INCIDENT.	WHAT DO.
<i>Ship dips to you before 8 a. m.</i>	Hoist colors. Answer dip and then lower colors. No ceremonies.
<i>Ship in danger of dragging her anchor.</i>	Put over drift lead with a seaman to attend it. Get range on shore. Get good compass bearings of objects on shore. Get two marks on opposite sides of the ship in line with an object on shore. Feel chain for tremors. Keep alert for jarring of ship when starting to drag. Stand by to veer chain and let go another anchor.
<i>Ship freshly painted.</i>	Do not wash down. Under certain circumstances do not sweep down the decks.
<i>Ship in dry dock.</i>	See fire hose connected to yard fire main. Have engineer officer, gunnery officer, first lieutenant, and carpenter report all outboard sea valves closed for the night. Report to captain. See all fires used by navy yard workmen on board extinguished. Have chief police petty officer inspect for this.
<i>Ship underway before 8 a. m. or after sun-down during daylight.</i>	If man-of-war, hoist colors. Do not wait for senior officer present to hoist colors.
<i>Showers, no water in, or in fresh water tanks.</i>	Send to first lieutenant for permission to fill tanks. Notify captain of fresh water hold.
<i>Signal lights fail.</i>	Send for electrical gunner and electrician of that circuit. Notify electrical officer of ship.
<i>Signal, official, received. . .</i>	Send to commanding officer. See all signals recorded as soon as received. Remember that "a signal and its meaning shall never be entered in the ship's log or other record."
<i>Signal, official, sent.</i>	Must be by authority of commanding officer, unless emergency. Not signed. Send to bridge for transmission. Report to captain when sent and acknowledged.
<i>Signals, uniform.</i>	Notify captain and executive, marine officer, chief police petty officer, first sergeant, and stewards of officers' messes. Have word passed by boat-swain's mate of watch.

INCIDENT.	WHAT DO.
<i>Signal, unofficial, received.</i>	Deliver to officer to whom addressed.
<i>Signal, unofficial, sent.</i>	May be sent by your authority. Must be signed by an officer. Send to bridge for transmission. No signal may be sent direct by or to any enlisted man.
<i>Siren sounded by accident.</i>	If by accident a blast of siren is sounded, when whistle should have been used, sound three blasts of siren at once to open water-tight doors, unless this will confuse a steamer in sight.
<i>Sleeping near side, hatches, etc., forbidden.</i>	Allow no men to sleep near open hatches, or near side, where they may roll off and be injured.
<i>Stations for petty officers of watch.</i>	See in uniform at all times. Be especially careful that they remain at all times on station within hearing distance, unless their duty calls them away. This applies particularly to boatswain's mate and quartermaster of watch.
<i>Steam heat is wanted.</i>	Send to engineer officer on duty. In some cases request comes from senior medical officer.
<i>Steam launch or power boat breaks down.</i>	Notify executive, engineer officer, and engineer officer of watch. Find out how long she will be laid up. If accident to hull notify first lieutenant and carpenter.
<i>Steamer wants coal.</i>	Have boatswain's mate of watch pass word to coal the steamer. Notify engine room to send up coal.
<i>Steamer wants water.</i>	Send word to captain of fresh water hold to turn on the water.
<i>Steering engine to be tested before getting underway.</i>	Send to chief quartermaster (navigation) and machinist's mate in charge of steering engine. Have steam turned on by sending word to engineer officer on duty.
<i>Stores, canteen, come aboard.</i>	Notify supply officer, canteen yeoman, and chief police petty officer. See means taken to prevent looting. Have junior officer or relief inspect. Log contractor and number of packages of various articles and by whom inspected.

INCIDENT.

WHAT DO.

- Stores, general or small, come aboard.* Report to executive. Notify supply officer and heads of departments concerned.
Furnish supply officer with working party to stow.
- Stores, commissary, come aboard.* Notify executive, commissary officer and steward.
If fresh provisions, notify medical officer, who inspects for quality. Inspect for quantity or have relief or junior officer of watch do so.
Log fully, including amount, kind, from whom received, and name of inspecting officer.
- Stores, officers' messes...* Send for stewards and mess attendants of mess concerned to handle stores.
- Straggler from another ship comes aboard.* Report to captain and executive.
Send for chief police petty officer.
Log fully.
- Sunday* Guard and band are not paraded for United States ships or officers and no salutes are fired. Other honors are rendered. Work is reduced to a minimum. No extra duty performed.
- Swimming, crew requests.* Request permission from executive, reporting temperature of water. If granted, sound "Swimming" call; call away pulling boat; see it supplied with life belts. See life-buoys and belts handy on ship. Lower booms.
Close all ash chutes and head discharges on that side.
Sound "Overboard" call when all is ready.
Do not permit men to hang on to boat nor to go far out from ship.
- Taps, extension requested.* Have request come from chief police petty officer or other chief petty officer.
Ask permission from executive and from captain.
- Target to be rigged between stacks.* Inform ordnance gunner.
- Target, towing, to be put over..* Have ordnance gunner rig completely.
Have boatswain put over and hoist aboard.
- Tight, enlisted man comes aboard.* Send for police petty officer or corporal of guard.
Report to captain and get permission to place man under sentry's charge to sober up.
Log.

INCIDENT.

WHAT DO.

Time and uniform signal at 7 a. m.

Report to executive and captain when done. If late at night, confine him and report in the morning.

Inform captain and executive.

Send change to officer's messes (servants).

Notify marine officer, chief police petty officer, and marine sergeant.

Pass word by boatswain's mate of watch at breakfast to shift into uniform of the day during breakfast hour.

Torpedo is lost at practice.

Report to captain.

Log methods and periods of search, names of divers and lengths of time they were down.

Transferred, enlisted man is to be.

See all work preliminary to transfer completed. This includes signing pay accounts, examination by medical officer, no debts on board, that custody record is clear, and bag and hammock ready.

Get transfer orders and ticket if necessary from captain's or executive's office.

The man's service record and health record are forwarded by mail, or by petty officer of ship in case one goes with the transferred man.

Transfer—sick man...

Notify the medical officer when transportation is ready.

See his effects and papers go with him, by hospital apprentice. These include health record, conduct report, and hospital ticket usually. If sent in ship's boat, see line on stretcher as man goes over the side,

Log.

Underway at hour indicated.

Make all preparations for getting underway: Scupper lips off; steering engine tested and ready; all communications between bridge and engine room, central station and steering engine room tested; gangways rigged in or triced up; lower booms rigged in and boats hoisted. See executive before hoisting last boat. See steam on anchor engine and engine tested and ready. Test whistle, siren, signal gear, and life-buoys. Have anchor gear ready. Get permission from captain to turn over main engines when engineer officer reports ready. Be ready to heave short

INCIDENT.

WHAT DO.

when ordered. Ten (10) minutes before time set, have sea details at stations, men in chains, chain tierers below and sound "Officer's call" if "All hands" are to be called. Five (5) minutes before time set, report "Ready to get underway" to captain and executive officer, sound "Assembly" and call "All hands up anchor" or call "Watch up anchor" without the "Assembly" if "All hands" are not to be called.

Veer chain in an emergency.

Send for boatswain.

If the captain orders you to "Veer to . . . fathoms" when riding to single anchor and a gale is blowing, station petty officer (carpenter's gang) by friction brake, set up on it, cast off stoppers. See all clear in chain locker, slack brake and veer to scope desired slowly. Set taut brake, put on stoppers, slack brake until strain comes on stoppers, then set up again.

Report to captain ". . . fathoms at water's edge, chain secure."

Report to executive and first lieutenant.

Log.

In a sudden emergency, when time is precious, do above first and then report to captain, etc.

Visiting party comes aboard from another ship.

Man in charge comes aboard and asks permission for party to visit aboard.

Send to executive; if permission is granted, allow party to come aboard. Man in charge has muster list which you retain.

When time of visit expires, call aft by boatswain's mate and muster, return list to man in charge, and have party embark in their boat.

Visitors want to come aboard.

Obtain permission from executive; if permitted, allow to come aboard. Instruct them to keep clear of officers' quarters, not to go below second deck, nor in turrets nor conning tower. No cameras allowed. If they come aboard in shore boat, have boatman return for them.

Inform chief police petty officer.

Usually customary to detail men to show visitors about the ship.

INCIDENT.	WHAT DO.
<i>Water-closets choked up.</i>	Notify first lieutenant and carpenter. Send for plumber and fitter.
<i>Weather, heavy, coming on.</i>	Have everything about decks well secured and extra lashings put on boats and anchors if necessary. Run life lines along the gangways. Keep men clear of places where they are liable to be washed overboard. Have forecastle and weather hatches battened down and ventilator openings secured. Get oil bags ready.
<i>Working party to be sent for stores before reveille.</i>	See power boats ready beforehand. Such working party should be detailed the previous evening, uniform prescribed, and all details worked out then, such as petty officers in charge, coffee, etc. Require to sleep in one compartment; call in plenty of time. See mustered in boat.

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