EXTAC 1000
MARITIME MANEUVERING
AND TACTICAL
PROCEDURES

MULTI-NATIONAL MARITIME MANUAL

ORIGINATOR: NAVY WARFARE DEVELOPMENT COMMAND

AUGUST 1996
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M. L. BOWMAN
Rear Admiral, U.S. Navy
Commander, Naval Doctrine Command
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Maritime Maneuvering and Tactical Procedures

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FOREWORD

1. EXTAC 1000, Maritime Maneuvering and Tactical Procedures, provides naval maneuvering concepts and signaling instructions for units of different navies that have not historically operated together and do not have any other agreed-on procedures. This EXTAC only supports basic tactical exercises and operations. It is not intended to support sophisticated or warfare-specific coordinated operations.

2. This document is unclassified and does not require security protection. It may be released to non-NATO nations independently by member nations and NATO commands and agencies as required.

3. Comments and recommended changes to this document should be sent directly to the address listed below:

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   NAVY WARFARE DEVELOPMENT COMMAND
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   NEWPORT RI 02841-1207 USA

4. References:
   a. EXTAC 1001, International HOSTAC.
   c. MTP 2, Replenishment at Sea.
   d. EXTAC 1004, Voice Procedures and Brevity Codewords.
   e. EXTAC 1005, Exercise Manual.
   f. EXTAC 1006, Structured Messages.
   g. EXTAC 1007, Mine Countermeasures.
   h. EXTAC 1009, Diving Safety.
   i. EXTAC 1010, Noncombatant Evacuation Operations.
   j. EXTAC 1011, Naval Humanitarian Assistance Missions.
   k. EXTAC 1013, Regional Naval Control of Shipping.
   l. EXTAC 1014, Meteorological Support.
PART I — TACTICAL MANEUVERING
CHAPTER 1

Task Organization and Command and Control

0101 Task Organization

Whenever two or more ships are operating together a task organization is needed to delineate responsibility and establish a well defined tactical chain of command. Each task organization will consist of a task group (TG). TGs may be subdivided into smaller, subordinate task units (TUs). TUs, in turn, may be divided into smaller, subordinate task elements (TEs). TUs and TEs are normally formed for specific purposes or to meet specific missions (e.g., communication exercises, search and rescue, etc.). Figure 1-1 shows a sample task organization containing the TG, TU, and TE levels. Figure 1-2 shows how the task organization in Figure 1-1 would be promulgated in a tasking message (see Chapter 45).

a. **Task Group (TG).** During all exercises and operations participants will be organized into a TG. The tasking message establishing the exercise or operation will assign a number to the TG (e.g., TG 12.1) and a TG commander (CTG).

b. **Task Unit (TU).** Each TG may include two or more smaller, subordinate TUs. The tasking message establishing the exercise or operation will assign units to TUs, TU numbers (e.g., TG 12.1.1), and TU commanders (CTUs).

c. **Task Element (TE).** Each TG with TUs may also contain smaller, subordinate TEs. The tasking message establishing the exercise or operation will assign units to TEs, TE numbers (e.g., TE 12.1.1.1), and TE commanders (CTEs).

d. **Chain of Command.** The task organization defines the chain of command and control for the exercise or operation. The chain of command establishes the relative authority of each commander and ship in the task organization. In the task organization described in Figure 1-1, all participants are subordinate to the CTG. TU and TE ships are subordinate to their respective CTU and CTE.

0102 Command and Control

1. **Command.** Command is the authority vested in an individual to direct, coordinate, and control forces. The aim of command is to provide a single authority responsible for operational efficiency. Some functions arising from direction, coordination, or control may be delegated to subordinates. However, this is normally only done in large or widely dispersed task organizations.

a. **Direction.** The process of planning, establishing priorities, formulating policies, and imposing decisions.

b. **Coordination.** The establishment of planned actions to achieve the best overall result. In the maritime environment, the term coordination may include certain specified control functions.

c. **Control.** The authority exercised by a commander over part of the activities of subordinates. Control includes the responsibility for implementing orders or directives. All or part of this authority may be transferred or delegated.

2. **Levels of Command.** Various levels of command exist: operational command and control, tactical command, and tactical control. The following paragraphs define each of these levels.

a. **Operational Command and Control (OPCON).** OPCON is the authority to assign ships as participants in an exercise or operation, to deploy ships to meet exercise or operation commitments, and to authorize ships to detach from an exercise or operation. OPCON is always retained by national authority.
b. Tactical Command (TACOM). TACOM is the authority to assign ships to specific tasks within an exercise or operation. It involves issuing detailed orders and ensuring their correct execution. It also involves responsibility for the general safety of assigned units, although ultimate responsibility for safety remains with the commanding officer of each unit. TACOM does not include the authority to assign tasks inconsistent with the exercise or operation. TACOM is assigned to the CTG of a specific exercise or operation.

c. Tactical Control (TACON). TACON is the authority to direct and control the movements or maneuvers of ships to accomplish the exercise or operation. TACON is assigned to the CTG and may be delegated to subordinate CTUs or CTEs.

3. Change of Operational Control (CHOP). CHOP occurs when responsibility for TACOM and/or TACON shifts from one task organization commander to another or between national and task organization authority. Scheduled CHOPs, including time of CHOP, should be established in the tasking message that establishes the exercise or operation.

0103 Tasking and Reporting

Tasking to subordinates and reports to seniors in the task organization will be by message, such as the tasking message described in Chapter 45, or by signal using the standard signals contained in Part 2. Frequencies for radio communications will be assigned in the tasking message.

0104 Readiness

Upon commencement of operations, the CTG will assume all participants are ready to carry out the assigned exercise or operation. Any participant less than fully ready (e.g., reduced speed, maneuverability, or communication capability) should advise senior commanders of their limitations and the time a return to full readiness
is expected. When full readiness is restored, commanders should be advised. Commanders need to be informed only of limitations that affect a unit’s ability to carry out the assigned exercise or operation.

0105 Position, Movement, and Maneuvering

Chapter 2 describes position reference systems, standard positions within a formation, and procedures for reporting and exchanging position information. It also provides standard maneuvering concepts and rules.

0106 Disposition of Forces

Chapter 3 discusses standard formations and formation maneuvers.

0107 Communications

Chapter 4 provides standard procedures for visual, radioteletype, and voice radio communications. Part 2 contains a series of tactical signals for use during exercises and operations covered by this manual. These signals supplement the International Code of Signals adopted by the Fourth Assembly of the Inter-Government Maritime Consultative Organization. Part 2 also provides an index of signals that can be used to encode signals.

0108 Tasking Message

Chapter 45 describes the tasking message that will be promulgated for each exercise or operation conducted in accordance with this manual. The tasking message will be developed by the command or country hosting the exercise or operation, or by the commander designated as the CTG. The tasking message will be distributed to all participants sufficiently in advance of the exercise or operation to ensure all have time to incorporate the message’s contents into their planning and preparation.

0109 Glossary of Terms, Acronyms, and Abbreviations

Annex A provides a glossary of terms and a list of acronyms and abbreviations used in this manual.
CHAPTER 2

Position, Movement, and Maneuvering

0201 Position Reference Systems

1. Latitude and Longitude. Position may be expressed in degrees of latitude and longitude. When expressing position by latitude and longitude, latitude will be stated first and will include an N for North or an S for South. Longitude will follow latitude and will include an E for East or a W for West.

2. Bearing and Distance. Position may be expressed as a bearing and distance (sometimes referred to as range) from a reference position (RP), whose location is known to all participants. This RP may be a fixed geographic location, a specific TG ship (such as the Guide), or any other point promulgated to or known by all TG ships. The order of reporting position by bearing and distance will be: bearing in degrees true (° T) from the RP, identification of the RP, and distance from the RP in nautical miles (nm) or yards (yd). Example: 073 Cape May Light 25 nm. The nautical mile is 2,000 yards. Figure 2-1 shows some sample positions reported using bearing and distance.

3. Designated Stations. Position may be expressed by reference to a designated station. A designated station is an area or point that has been established either in the tasking message or by communication during the exercise or operation. A designated station will normally be defined by either latitude and longitude or bearing and distance from an RP, and may be either stationary or moving. Figure 2-2 provides examples of stationary designated stations. Figure 2-3 provides examples of moving designated stations.

4. Standard Positions. Table 2-1 defines standard positions that may be used during exercises or operations. Other positions may be established in the tasking message.

0202 Position Reporting

1. Navigational Dangers. Ships are to report immediately if the formation may be approaching a navigational danger or if the location of a danger differs materially from previous information.

2. Own-Ship Position. All ships shall report own-ship position in accordance with the tasking message. The method by which the position was determined should be indicated in the report. All own-ship position reports will be in latitude and longitude. If unable to determine own-ship position or if uncertain of position, ships should advise the CTG.

3. Contact Positions. All ships shall report contact positions in accordance with the tasking message. Contacts should normally be reported as a bearing and distance from an RP.

0203 Standard Maneuvering Concepts

1. Course and Speed. Ship movements will be ordered using a signaled course and speed. Signaled course is steered by using the ship’s gyro compass heading adjusted for any gyro error. Signaled speed is maintained by using the appropriate number of propeller revolutions. Signaled speed should always allow ships sufficient reserve speed to enable station keeping and timely change of station. When maintaining station, ships shall make minor adjustments in the course steered and speed maintained to remain on station relative to the Guide.

a. Course Changes. When changing course, a standard rudder angle of 15° shall be used by the Guide. For precision in maneuvers, the amount of rudder used by other ships must be adjusted so they turn as nearly as possible with the Guide.

b. Speed Changes. Ships operating together should employ uniform acceleration and deceleration rates. This is necessary for smoothness of maneuvers and to facilitate station keeping. The CTG may provide standard acceleration and deceleration rates in the tasking message. If no standard acceleration and deceleration rates are promulgated, ships should increase and decrease speed consistent with the Guide.
c. Speed Flags. The speed at which a ship is proceeding may be indicated by numeral flags displayed from the navigation bridge or at the dip from an outboard signal halyard. It should be understood, however, that speed flags provide information only and are not to be used for ordering changes in speed. See Table 2-2.

2. Position and Intended Movement (PIM). A PIM defines the general track along which the TG will proceed. At any time the center of the TG should be within 10 nm of its promulgated PIM. The CTG should promulgate a PIM to assist the return of aircraft, to aid outlying surface ships in maintaining station, to keep adjacent commands informed of TG intentions, and to facilitate other units joining the TG. The CTG shall signal PIM as follows: position, time of position, course, speed, and time in hours (if required) for which course and speed are in force. The CTG should issue a new PIM when the position of the center of the TG varies by more than 10 nm from the promulgated PIM.

3. Distance and Interval. Distance denotes the distance between ships in a line. Distance is measured in nautical miles (nm) or yards (1 nm = 2,000 yd). The distance between ships is measured between foremasts or between navigation bridges of ships without foremasts. The tasking message will define the standard distance (D) to be used in each exercise or operation. The term interval is used to denote the distance between lines of ships in multiple line formations. Standard interval (I) will be defined in the tasking message. Figure 2-4 depicts the distance and interval concept.
4. **Station.** To station a unit is to order it to proceed to a position within the formation defined by one of the position reference systems outlined in paragraph 0201, designated in the tasking message, or defined by the type of formation (see Chapter 3).

5. **Guide.** The ship on which other ships take station is the Guide. The ship in which the CTG is embarked is normally the Guide unless another ship is specifically designated the Guide, or unless the Guide is automatically shifted as a result of a formation maneuver (see Chapter 3). The Guide is to hoist the Guide (Golf) flag and keep it flying until the Guide is changed.

6. **Sequence Numbers.** The tasking message will assign each ship in the TG a number to facilitate close maneuvering and stationing. This number is known as a sequence number. When ordering a formation, ships may be assigned stations in accordance with their sequence numbers.

### 0204 Arrival and Departure

When a port visit is scheduled during or immediately before or after an exercise or operation, ships will request berths and proceed to and from port under national guidelines. The tasking message should establish the location and time ships revert to national control prior to entering port and/or the time ships join the TG upon departing port.

### 0205 Joining and Detaching

1. **Scheduled Detachments.** Ships detaching the TG in accordance with an approved schedule should advise the CTG they are proceeding as previously directed (see Chapter 4).
2. **Unscheduled Detachments.** Unscheduled detachments should be approved by the senior national commander participating in the exercise or operation and he shall inform the CTG of the action being taken.

3. **Scheduled Joinings.** Ships scheduled to join the TG should signal the CTG when within 15 nm. The signal should provide the joining ship’s present location and the fact that it is reporting for duty (see Chapter 4). Upon receipt of the signal the CTG should provide the joining ship pertinent TG information (PIM, formation, Guide, etc.) and assign a station to the joining ship.

4. **Unscheduled Joinings.** Unscheduled joinings should not normally occur.

**NOTE**

Ships joining or detaching shall maneuver to avoid and not embarrass or hamper other TG ships.

---

**0206 Special Maneuvering Rules**

1. **Avoiding Danger.** Ships in formation are authorized to leave station as necessary to avoid dangers such as collision or navigational hazards. When such action is necessary, the ship should advise all TG units of the action being taken and the reason it is being taken. Once clear of danger, ships should return to station as quickly as possible.

2. **Rules of the Road.** International Regulations for Preventing Collisions at Sea shall be observed by TG ships. However, in cases where one ship is directed to avoid another, the ship required to keep clear of the other is to leave no doubt whatsoever as to its intentions. The ship should also indicate its intentions by signal. If any doubt exists, the International Regulations for Preventing Collisions at Sea are to apply.

3. **Man Overboard.** Whenever a man is discovered missing and assumed overboard, the
ship shall immediately inform the CTG. The CTG shall detach the ship reporting the lost man and offer the assistance of remaining TG ships as needed. The commanding officer of the ship losing the man shall determine the search procedures and shall inform appropriate national authorities. The ship from which a man falls overboard shall:

a. Maneuver as appropriate to avoid the man.

b. Drop a lifebuoy and a day or night pyrotechnic marker as appropriate.

c. Plot the location.

d. Sound at least six short blasts on the whistle.

e. Secure active sonar.

f. Inform the TG:

(1) By day, hoist the man overboard (Oscar) flag where it can best be seen.

(2) By night, display two pulsating red lights arranged vertically or fire one white rocket or Very light.

g. Use searchlights as necessary.

h. Use national procedures to recover the man. If in formation follow the procedures outlined in Chapter 3.

4. Breakdown. Should a breakdown occur, such as loss of steering control or failure of main engines, the first requirement is to avoid endangering other ships. Other ships should maneuver as necessary to remain clear of the disabled ship. If no danger exists ships should remain on station; if maneuvers are necessary to avoid the disabled ship, other ships should resume station as soon as possible. The following steps must be taken by a disabled ship as rapidly as possible.

<table>
<thead>
<tr>
<th>Flag</th>
<th>Indication</th>
<th>Normally Displayed</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td>Ship is stopped.</td>
</tr>
<tr>
<td>01, 02, etc., thru 09</td>
<td>SHIP SPEED IN KNOTS</td>
<td>AT DIP, on signal halyard</td>
<td>Ship is proceeding at 1, 2, etc., to 9 knots as indicated.</td>
</tr>
<tr>
<td>10, 11, etc.</td>
<td></td>
<td></td>
<td>Ship is proceeding at 10, 11, etc., knots as indicated.</td>
</tr>
</tbody>
</table>
a. Sound at least six short blasts on the whistle.

b. By day, hoist two black balls; by night, show two red lights in accordance with Rule 27 of the International Regulations for Preventing Collisions at Sea.

c. If turning, indicate the direction of turn by sounding one short blast if the turn is to starboard and two if the turn is to port.

d. Inform the CTG of the nature of the breakdown, giving estimated times of repair and return to station.

5. **Fog and Restricted Visibility.** Fog signals by ships in formation are to be sounded in the manner ordered by the CTG, who will take into consideration the confusion that may be caused if all ships in the TG sound fog signals. However, the following signals from the International Regulations for Preventing Collisions at Sea shall be used by all ships when changing stations or joining or departing the TG in fog or restricted visibility:

   a. One short blast — I am altering my course to starboard.

   b. Two short blasts — I am altering my course to port.

   c. Three short blasts — My engines are going astern.

   d. Five or more blasts — To be used in accordance with International Regulations.

**Figure 2-4. Distance and Interval Concept**

KEY:
- d = Distance between ships in a line.
- I = Interval between lines of ships.
0301 Basic Formations

1. **Line Formations.** There are several basic line formations:

   a. **Column.** In a column formation ships are formed in a line, bow-to-stern, with station 1 the lead ship in the line. Subsequent stations in the line are directly astern station 1 and are numbered sequentially (stations 2, 3, 4, etc.). The bearing between stations in the line is the same as the course of the column formation. The distance (d) between stations is the standard distance (D) promulgated in the tasking message and described in Chapter 1 unless specified otherwise. The Guide can be assigned to any station. Figure 3-1 shows a typical column formation.

   b. **Line Abreast.** In a line abreast formation ships are formed in a line, beam to beam, with station 1 at one end of the line. If subsequent stations (stations 2, 3, 4, etc.) are to starboard of station 1 the formation is a line abreast to starboard. If subsequent stations are to port of station 1 the formation is a line abreast to port. The bearing between stations in the line is perpendicular to the course of the line abreast formation. The distance (d) between stations is the standard distance (D) unless specified otherwise. The Guide can be assigned to any station. Figure 3-2 shows the two possible line abreast formations: line abreast to starboard and line abreast to port.

   c. **Line of Bearing.** In a line of bearing formation ships are formed in a line with station 1 at one end of the line. Subsequent stations (stations 2, 3, 4, etc.) are aligned along the designated line of bearing. The bearing is designated either as the true bearing from station 1 using the signal FORM (see Chapter 11) and the true bearing (e.g., FORM 120, FORM 235) or as the relative bearing between the course of the formation and the desired line of bearing using the signal FORM followed by PORT or STARBOARD and a number of tens of degrees (e.g., FORM PORT 15, FORM STARBOARD 13.5). The distance (d) between stations is the standard distance (D) unless specified otherwise. The Guide can be assigned to any station. Figure 3-3 shows sample line of bearing formations.
Figure 3-2. Line Abreast Formations

Figure 3-3. Line of Bearing Formations
**d. Column Open Order.** A column open order formation is a column formation modified as shown in Figure 3-4. In a column open order formation the Guide is always in station 1. Subsequent stations (stations 2, 3, 4, 5, 6, etc.) are displaced on each side of the stern of the Guide, even numbered stations to port of the Guide, odd numbered stations to starboard of the Guide. The ship in station 2 forms 4 on the port quarter of the Guide. The ship in station 3 forms 2 on the starboard quarter of the Guide. Remaining ships form astern of station 2 or 3 as appropriate. The distance (d) between stations is the standard distance (D) unless specified otherwise.

**e. Diamond.** A diamond formation can only be formed when ships are in a column. When the diamond formation is ordered, the ship in station 1 of the column automatically becomes the Guide in station 1 of the diamond formation. The ship in station 2 of the column takes station broad on the port quarter (225°R) of the Guide at twice the distance (2d) of the column formation. The ship in station 3 of the column takes station broad on the starboard quarter (135°R) of the Guide at a distance of 2d. The fourth ship in the column remains directly astern the Guide at a distance of 3d. If there are more than four ships, additional ships form a second diamond on the fourth ship, station 5 forming to starboard and station 6 to port. Figure 3-5 shows a sample diamond formation formed from a column formation.

**f. Multiple Line Formations.** Multiple line formations can be ordered that consist of multiple columns, lines abreast, or lines of bearing. In a multiple line formation, the formation Guide is also the guide of its line. Ships in other lines occupying the station corresponding to the formation Guide become line guides. Line guides maintain station on the formation Guide. All other ships maintain station on the guide of their line. Figure 3-6 illustrates this principle.
2. Circular Formations. In a circular formation, ships are assigned stations around the center of the formation (ZZ). Stations are designated as a specified bearing or range of bearings in degrees true (° T) from ZZ and a specified distance or range of distances from ZZ. Figure 3-7 shows some sample circular formation stations. The tasking message may be used to establish one or more standard circular formations for the exercise or operation. The establishment of standard circular formations reduces the need for lengthy signals during conduct of the exercise or operation. Figure 3-8 provides a sample tasking message designating two standard circular formations. Figure 3-9 depicts the circular formations described in Figure 3-8.
Figure 3-7. Sample Circular Formation Stations
• Standard Circular Formations

— FORM 15
Station 1 ZZ
Station 2 020° to 030° ZZ 1,000 to 1,500 yd
Station 3 080° to 090° ZZ 1,500 to 2,000 yd
Station 4 175° to 185° ZZ 1,500 to 2,000 yd
Station 5 250° to 290° ZZ 1,000 to 1,500 yd

— FORM 16
Station 1 ZZ
Station 2 025° ZZ 1,000 yd
Station 3 155° ZZ 1,000 yd
Station 4 205° ZZ 1,000 yd
Station 5 335° ZZ 1,000 yd

Figure 3-8. Sample Tasking Message Designated Circular Formations

Figure 3-9. Sample Designated Circular Formations (Sheet 1 of 2)
Figure 3-9. Sample Designated Circular Formations (Sheet 2 of 2)
0302 Altering Formation Course

1. **Turn.** A turn is a maneuver used by line and circular formations in which all ships alter course simultaneously and maintain true bearing to the Guide.

   a. Figure 3-10 shows a two-ship column formation initially on course 000° T. Prior to a signaled turn to course 090° T, the Guide (station 1) bears 000° T and 2,000 yards from the ship in station 2. Upon completion of the turn the Guide still bears 000° T and 2,000 yards from the ship in station 2. Upon completion of the turn in this example the column formation has become a line abreast to starboard formation.

   b. At night or in low visibility, formation turns in excess of 90° should be ordered in two or more increments, each of 90° or less. The second increment should not be ordered until all ships in the formation are steady on the course ordered by the first increment. It is also advisable to execute turns of greater than 90° in increments when the formation consists of ships of different sizes and/or turning diameters.
2. **Corpen.** A corpen is a line formation maneuver in which ships alter course so that the relative bearing to the Guide is the same at the completion of the maneuver as it was at the start of the maneuver.

   a. Circular formations do not alter course by corpen maneuvers.

   b. Upon execution of a corpen maneuver, ships in a column open order are to form a column, follow in the wake of the Guide, and reform in a column open order when all ships in the formation have completed the corpen maneuver.

   c. Figure 3-11 shows a two-ship column formation initially on course 000° T. Prior to a signaled corpen to course 090° T, the Guide (station 1) bears 000° R (000° T) and 2,000 yards from the ship in station 2. Upon completion of the corpen maneuver, the Guide bears 000° R (090° T) and 2,000 yards from the ship in station 2. Upon completion of the corpen maneuver in this example the ships remain in a column formation.

   d. The amount of course change that should be executed by a single corpen maneuver varies with the type of formation. Recommended maximum corpen maneuvers for the various types of formation are:

   (1) Column — 180°.

   (2) Line abreast — 90°.

   (3) Line of Bearing — Corpen not used.

   (4) Column Open Order — 180°.


   (6) Circular — Corpen not used.

---

**Figure 3-11. Corpen**
0303 Changing Formation

When ships in formation are ordered to a new formation, each ship will assume the same station number in the new formation as it held in the original formation unless directed otherwise. Similarly, the Guide ship and the distance (d) between ships will remain the same unless directed otherwise. Figure 3-12 shows how ships in a column formation with the Guide in station 2 would maneuver to a line abreast to starboard formation unless directed otherwise.

0304 Automatic Guide Changes

1. Column Formation. When altering course by a corpen maneuver in a column formation, the lead ship in the column automatically becomes the Guide. Remaining ships follow in the wake of the lead ship (see Figure 3-13). In a multiple column formation, the lead ship of the column on the side toward which the formation is altering course becomes the formation Guide and line guide of its column. Leading ships of the remaining columns become line guides and alter course and speed as necessary to resume their relative bearing and distance to the formation Guide. Remaining ships in each column follow the movements of their line guide (see Figure 3-14).

1. Column formation ordered to Line Abreast to Starboard.
2. New station assignments, Guide, and distance between ships not ordered.
4. Ship in station 1 of Column proceeds to station 1 of Line Abreast to Starboard, ship in station 3 of Column proceeds to station 3 of the Line Abreast to Starboard, etc.
5. Distance between ships in the Line Abreast to Starboard is the same as the distance between ships in the Column.

Figure 3-12. Formation Change
Figure 3-13. Automatic Guide Change (Column Formation)
Figure 3-14. Automatic Guide Change (Multiple Column Formation)
2. **Line Abreast Formation.** When altering course by a corpen maneuver in a line abreast formation, the ship on the end of the line toward which the formation is altering course automatically becomes the Guide (see Figure 3-15). In a multiple line abreast formation, the new guide in the lead line becomes the formation Guide. The end ship in remaining lines become line guides and adjust course and speed as needed to resume relative bearing and distance to the Guide. Remaining ships maneuver to maintain relative bearing and distance to their line guide.

3. **Line of Bearing Formation.** Automatic Guide changes do not occur in a line of bearing formation because a corpen maneuver should not be executed by ships in a line of bearing.

4. **Column Open Order Formation.** When altering course by a corpen maneuver, ships in a column open order formation first form a column on the lead ship as Guide and follow the procedures for a column formation. Upon completion of the maneuver by all ships, ships reform in a column open order.

---

**Figure 3-15. Automatic Guide Change (Line Abreast)**
5. **Diamond Formation.** When altering course by a corpen maneuver, the lead ship in the Diamond becomes the Guide and alters its heading to the new course. Remaining ships maneuver to maintain relative bearing and distance to the Guide.

6. **Circular Formation.** Automatic Guide changes do not occur in a circular formation because a corpen maneuver should not be executed by ships in a circular formation.

**NOTE**

If a breakdown, man overboard, or any other emergency prevents the Guide of any formation from maintaining ordered course and speed, the ship in the next higher numbered station shall become Guide until a new Guide is ordered.

**0305 Individual Ship Maneuvers**

Ships joining the formation, proceeding to station, changing station, or departing the formation shall maneuver to avoid and not embarrass other ships. When two or more ships are proceeding to or changing station, ships en route to higher numbered stations shall maneuver to avoid and not embarrass ships proceeding to lower numbered stations. When two or more ships are departing the formation, ships departing from higher numbered stations shall maneuver to avoid and not embarrass ships departing from lower numbered stations.

**0306 Formation Recovery Procedures**

When in formation and a man falls overboard, the following procedures should be followed. These procedures supplement and amplify the basic procedures contained in Chapter 2.

**a. Column.**

1. Ships ahead of the one losing the man, continue at the prescribed speed and hold course.

2. Ships astern of the one losing the man, maneuver as necessary to keep clear by hauling out of line — odd-numbered ships, counting from the leading ship of the column, turning to starboard and even-numbered ships turning to port.

3. The rear ship should always prepare to recover the man overboard; however, any ship in position to safely recover the man should do so as soon as possible, informing other ships of her intentions.

**b. Line Abreast or Line of Bearing.**

1. The ship from which the man falls overboard is to maneuver as required to recover the man, avoiding a turn toward other ships unless they can safely be cleared.

2. Other ships are to maintain course and speed.

**NOTE**

In other formations the ship losing the man should maneuver to recover the man, taking care not to risk a collision with another ship in the formation.

**0307 Summary**

Table 3-1 summarizes information presented in this chapter.
<table>
<thead>
<tr>
<th>Alter Course Method</th>
<th>Formation</th>
<th>Rules</th>
<th>Course Change Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn</td>
<td>All</td>
<td>All ships alter course together and maintain true bearing and distance to Guide.</td>
<td>None</td>
</tr>
</tbody>
</table>
| Corpen              | Single Column   | 1. Lead ship automatically becomes Guide.  
2. Guide alters heading to new course.  
3. Remaining ships follow in the wake of the Guide. | 180°                 |
|                     | Multiple Column | 1. Lead ship in column toward new course becomes formation Guide and line guide.  
2. Lead ship in other columns become line guides.  
3. Formation Guide alters heading to new course.  
4. Line guides maneuver to maintain relative bearing to formation Guide.  
5. Remaining ships follow in the wake of their line guides. | 180°                 |
|                     | Single Line Abreast | 1. Ship on end toward new course becomes Guide.  
2. Guide alters heading to new course.  
3. Remaining ships maneuver to maintain relative bearing to Guide. | 90°                  |
|                     | Multiple Line Abreast | 1. Ship on end of lead line toward new course becomes formation Guide and line guide.  
2. End ship in other lines becomes line guides.  
3. Formation Guide alters heading to new course.  
4. Line guides follow in the wake of the formation Guide.  
5. Remaining ships maneuver to maintain relative bearing to line guides. | 90°                  |
|                     | Column Open Order | 1. Lead ship automatically becomes Guide.  
2. Remaining ships form column astern the Guide.  
3. Follow rules for column formations. | 180°                 |
CHAPTER 4

Communications

0401 Visual Communications

Although voice radio is the preferred method of communication, visual communications may be used on occasion. Visual communication methods that may be used include flag and flashing light communications. All visual communications will be in accordance with the International Code of Signals. Visual communications will not be used for tactical maneuvering.

0402 Radioteletype Communications

One or more radioteletype circuits will be assigned for each exercise or operation. Radioteletype will be used for planning and coordinating exercise or operation matters. Unless otherwise agreed, English will be used in all radioteletype communications. The exercise or operation tasking message will specify each radioteletype circuit’s name, radio frequency, backup (secondary) frequency, intended use, the command assigned control of the circuit, and participants on the circuit. Figure 4-1 is an example of the radioteletype circuit assignment section of a tasking message.

0403 Voice Radio Communications

1. Voice radio will be the primary method of communication during exercises and operations covered by this manual. Circuits and call signs for voice radio communications will be promulgated in the tasking message. Each circuit assigned will specify the circuit’s name, radio frequency, intended use, the command assigned control of the circuit, and participants on the circuit. Backup, or secondary, frequencies will be assigned when feasible. Part 2 contains a list of signals to be used during exercises or operations covered by this manual and an index to encode signals. Figure 4-2 is an example of the voice radio circuit assignment section of a tasking message.

2. Voice Call Signs. Voice call signs promulgated in the tasking message will be used for all voice radio communications. Individual ship call signs will normally be either the ship’s name, four-letter international radio call sign, or a code name assigned for the exercise or operation. Task organization commanders will normally be assigned a code name. Figure 4-3 is an example of the voice call sign assignment section of a tasking message.

3. Voice Procedures. All voice messages will be in English unless otherwise agreed on and will include:

   a. **Addressee.** The command or commands for whom the message is intended.

   b. **This is.** Standard terminology that will follow identification of the addressee(s). It indicates that the message originator’s identity follows.

   c. **Originator.** Command sending the message.

   d. **Text.** The actual message being sent (signals from Part 2 will be used when feasible).

   e. **Over or Out.** Indicates the end of the message.

      (1) “Over” means all addressees should acknowledge receipt of the message. When acknowledging, commands should respond in order of station assignment; i.e., station 1 ship acknowledges first, station 2 ship acknowledges next, etc. If a ship does not acknowledge within a reasonable amount of time (about 5 seconds), the next scheduled ship should acknowledge without waiting any longer.

      (a) If the originator desires only selected addressees to acknowledge, the term “Over” will be preceded by an indication of the command(s) that should acknowledge. For example, “Alfa Bravo Charlie, over.” This indicates only ship ABC should acknowledge. It does not mean the
signal is not intended for others. It only means the others are not required to respond.

(b) The proper response by an addressee is “This is (call sign). Roger out.” This means, “I have received your message.” If the message was not clearly received by an addressee, the proper response is “This is (call sign). Please repeat, out.”

(c) If one or more commands requested to acknowledge a voice message fail to do so, or request the message be repeated, the originator should repeat the message. Only the commands(s) that failed to respond, or requested the original message be repeated, should be included as addressees on the repeat message.

(2) “Out” indicates addressees are not required to acknowledge.

4. Tactical Signals. If the text being sent is a tactical maneuvering signal (Part 2) the message shall be sent twice. The first time it is sent the text will begin with the phrase, “Execute to follow.” This phrase indicates the text is a tactical maneuvering signal that will be executed shortly. Additionally, the tactical maneuvering signal should be repeated within the text. For example: “Execute to follow. TURN PORT/STBD 090. I say again, TURN PORT/STBD 090.” The second time the message is sent the text need only be stated once and should end with the phrase, “Standby, execute.” Upon hearing the word, “Execute,” the addressees commence the tactical maneuver that has been signaled. Figure 4-4 provides a sample tactical signal voice radio sequence. Figure 4-5 provides the approved prowords and pronunciation for letters and numbers used in voice radio communications.
NOTE

The originator of a tactical maneuvering signal must allow sufficient time between the first transmission of the message and the second transmission to ensure all addressees have time to decode and understand what action is required of them.

5. Action Signals. A signal from this manual ordering an action to be carried out is to be read as a directive when originated by a senior to a subordinate. If a subordinate originates the signal it should be read as a request for action to be carried out.

-Example-

AV16 . . . Carry out flight operations (when from a senior to a subordinate).

AV16 . . . Request permission to carry out flight operations (when from a subordinate to a senior).

6. Signal Modifiers. The following words are used to modify signals in this manual. The words modify all signals that follow.

a. PREP . . . Prepare to ____.

b. INTERROGATIVE (INT)... Questions the signal.

c. NEGAT . . . Cease, or do not ____.

-Example-

AV16 . . . Carry out flight operations.

PREP AV16 . . . Prepare to carry out flight operations.

INT AV16 . . . Are you carrying out flight operations?

NEGAT AV16 . . . Cease (or do not) carry out flight operations.
<table>
<thead>
<tr>
<th>Code Word</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Alfa</td>
</tr>
<tr>
<td>B</td>
<td>Bravo</td>
</tr>
<tr>
<td>C</td>
<td>Charlie</td>
</tr>
<tr>
<td>D</td>
<td>Delta</td>
</tr>
<tr>
<td>E</td>
<td>Echo</td>
</tr>
<tr>
<td>F</td>
<td>Foxtrot</td>
</tr>
<tr>
<td>G</td>
<td>Golf</td>
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<td>M</td>
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</tr>
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</tr>
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<td>Quebec</td>
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<tr>
<td>S</td>
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<tr>
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</tr>
<tr>
<td>Z</td>
<td>Zulu</td>
</tr>
</tbody>
</table>

Note: The **Boldfaced** syllables are emphasized.

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>ZERO</td>
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<tr>
<td>1</td>
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</tr>
<tr>
<td>9</td>
<td>NINE</td>
</tr>
<tr>
<td>DECIMAL POINT</td>
<td>DECIMAL</td>
</tr>
<tr>
<td>INT</td>
<td>INTEROGATIVE</td>
</tr>
</tbody>
</table>

Note: Each syllable should be equally emphasized.

Figure 4-5. Letters, Numbers, and Special Prowords and Pronunciations
7. **Two-Letter Modifiers.** A series of two-letter groups are used to modify signals in this manual. A two-letter modifier is followed by a tackline (see paragraph 4.9) and modifies only the signal that immediately follows. The two-letter modifiers are contained in Chapter 13.

8. **Completing a Signal.** Where a “____” or “as indicated” appears in the meaning of a signal, it is always to be completed with a suffix or supplementing data unless an interrogative sense (INT) is used. Where a “(____)”, an “(as indicated)”, or an instruction in parentheses appears, the addition of suffixes or supplementing data is optional.

-Example-

G CORPEN... Guide’s course is ___° T.

G CORPEN 000... Guide’s course is 000° T.

INT G CORPEN... What is the Guide’s course?

9. **Tackline.** The tackline is transmitted and spoken TACK and written as a dash (—). It is used:

a. To avoid ambiguity, by separating signals or groups of numbers which, if not separated, could convey a meaning different from that intended.

b. When, for the needs of a particular signal, the instructions order that a tackline be used.

-Example-

G CORPEN 000—10 instead of G CORPEN 000 10 (without TACK (—) could be read 00010).

10. **Suffixes.** Many signals in Part 2 contain a list of number and/or letter suffixes in the meaning of the signal. These lists are provided so the basic meaning can be varied by the use of appropriate suffix(es). When a suffix is used, it must follow the last figure of the signal and be separated from the signal by a TACK. The TACK may be omitted if omission will not cause ambiguity.

-Example-

H SPEED... My engines are turning (List A) at (List B).

H SPEED—1—A... My engines are turning ahead at full power.

11. **Designation (DESIG) Signal.** The DESIG signal is used to describe own or other forces or to indicate that the information that follows is not a signal but is to be interpreted as spoken.

-Example-

NA37... Use time zone indicated.

NA37 DESIG S... Use time zone +6S.

RE2—3... This unit or unit indicated has personnel casualties.

RE2—3—7 DESIG ABC... Ship ABC has 7 personnel casualties.

12. **Times and Dates.** In a signal, times are expressed as four numbers; the first two numbers denote the hour from 00 through 23 and the last two numbers denote the minutes. When it is desired to signal an exact hour, the minutes may be omitted, but the hours must always be expressed as two numbers. Date-time groups in signals are expressed as six numbers plus the time zone indicator. The first two numbers denote the date, the second two numbers the hour, and the third two numbers the minutes. The letter T is used to indicate time in a signal and is positioned as follows:

a. T preceding numbers signifies that action is to (or will) commence at that time.

b. T following numbers signifies that action is to (or will) be completed by that time.

c. Number groups preceding and following T indicate time by which action is to be completed and time at which action is to commence, respectively.

d. If the signal consists only of T plus two or four numbers, it signifies a time check.
Table 4-1. Standard Time Zones

<table>
<thead>
<tr>
<th>EAST LONGITUDES</th>
<th>WEST LONGITUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone</td>
<td>Number</td>
</tr>
<tr>
<td>7.5 W to 7.5 E</td>
<td>0</td>
</tr>
<tr>
<td>7.5 E to 22.5 E</td>
<td>-1</td>
</tr>
<tr>
<td>22.5 E to 37.5 E</td>
<td>-2</td>
</tr>
<tr>
<td>37.5 E to 52.5 E</td>
<td>-3</td>
</tr>
<tr>
<td>52.5 E to 67.5 E</td>
<td>-4</td>
</tr>
<tr>
<td>67.5 E to 82.5 E</td>
<td>-5</td>
</tr>
<tr>
<td>82.5 E to 97.5 E</td>
<td>-6</td>
</tr>
<tr>
<td>97.5 E to 112.5 E</td>
<td>-7</td>
</tr>
<tr>
<td>112.5 E to 127.5 E</td>
<td>-8</td>
</tr>
<tr>
<td>127.5 E to 142.5 E</td>
<td>-9</td>
</tr>
<tr>
<td>142.5 E to 157.5 E</td>
<td>-10</td>
</tr>
<tr>
<td>157.5 E to 172.5 E</td>
<td>-11</td>
</tr>
<tr>
<td>172.5 E to 180</td>
<td>-12</td>
</tr>
</tbody>
</table>

e. When time is referred to in the meaning of a signal, T may be omitted if the omission cannot cause any ambiguity.

f. T applies only to the signal immediately preceding it. When it is required to apply to two or more signals preceding it, “BT” (see Chapter 13) is inserted before the first group to which the time signal is to apply. All time signals are for Greenwich Mean Time (GMT) (Zone 0) (Z), unless otherwise indicated; suffixes, therefore, are not required except to indicate the exception. Table 4-1 shows standard time zones.

-Example-

AV16—T18 . . . Carry out flight operations commencing at 1800Z.

AV16—19T . . . Carry out flight operations. Complete operations by 1900Z.

13. International Signals. Signals from the International Code of Signals may be used alone or in conjunction with signals from this manual. Whenever international signals are used alone, INTERCO followed by TACK shall be used as the first group to indicate that all signals following are taken from the International Code of Signals. When the signal consists of only one group, TACK may be omitted. Whenever signals from this manual are supplemented by signals from the International Code of Signals, INTERCO shall immediately precede the international signal to indicate that only that group is taken from the International Code of Signals.
14. Signals With No Meaning. The CTG may assign meanings for signals which presently have no meaning listed in this manual. Meanings for such signals will be promulgated in the tasking message.

15. Execution of Non-Executive Method Messages. Tactical messages that do not employ the Delayed Executive Method should have a time group included in the message ending. The use of a time group on a tactical message ordering action indicates that action is to be taken on receipt unless otherwise indicated in the text of the message.

a. Action to be Taken on Receipt.

(1) Z34D transmits:

Seven Eight—THIS IS—Four Delta—Station Bravo Three—TIME One Six Four Two Zulu—OVER.

(2) F178 transmits:

(THIS IS) Seven Eight—(ROGER)—OUT.

b. Action to be Taken At Time Indicated.

(1) Z34D transmits:

Six Nine—THIS IS Four Delta—Yankee Mike Four—TACK—Tango One Eight Answer—BREAK—TIME One Seven One Four Zulu—OVER.

(2) E969 transmits:

(THIS IS) Six Nine—(ROGER)—OUT.

16. Single Alphabetical Flags, Single Numerical Flags, and Special Flags and Pennants. Single flag and pennant signals may be flown for information. They have the meanings defined in Tables 4-2, 4-3, and 4-4.
<table>
<thead>
<tr>
<th>FLAG</th>
<th>INDICATION</th>
<th>NORMALLY DISPLAYED</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>DIVERS OR FRIENDLY EXPLOSIVE ORDNANCE DISPOSAL PERSONNEL DOWN</td>
<td>Where best seen.</td>
<td>WHILE FLYING: Divers or friendly explosive ordnance disposal personnel down. A numeral group following will indicate the radius in hundreds of yards inside which personnel are operating. No other MCM operations are to take place within this area and all other vessels are to remain clear.</td>
</tr>
<tr>
<td>B</td>
<td>WEAPON PRACTICES (Use largest available flag)</td>
<td>BY FIRING SHIP: Where best seen or on appropriate side.</td>
<td>AT DIP: On the range or between phases. CLOSE UP: Firing has commenced. HAULED DOWN: Firing is completed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CLOSE UP: Target ready: range is clear. HAULED DOWN: Firing is completed or range is foul.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BY DELIVERING SHIP: Where best seen.</td>
<td>AT DIP: Have temporarily stopped supplying. CLOSE UP: Fuel, explosives, or inflammable materials are being transferred. HAULED DOWN: Delivery is completed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BY RECEIVING SHIP: Where best seen.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TRANSPORTING EXPLOSIVES, FUEL, OR INFLAMMABLE MATERIALS BY BOATS: In bow or where best seen.</td>
</tr>
</tbody>
</table>
Table 4-2. Single Alphabetical Flag Table (Sheet 2 of 5)

<table>
<thead>
<tr>
<th>FLAG</th>
<th>INDICATION</th>
<th>NORMALLY DISPLAYED</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>AFFIRMATIVE</td>
<td>Where best seen.</td>
<td>In reply to a signal: YES or PERMISSION GRANTED.</td>
</tr>
<tr>
<td>D</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>FLIGHT OPERATIONS</td>
<td>Where best seen.</td>
<td>AT DIP: I am ready to operate fixed-wing aircraft when wind conditions are suitable. DIPPED after being close up: My flight operations have been delayed temporarily (about 10 minutes). CLOSE UP: I am operating fixed-wing aircraft. HAULED DOWN: I have completed operating fixed-wing aircraft. NOTE: When operating both fixed-wing aircraft and helicopters concurrently, Flag H need not be used.</td>
</tr>
<tr>
<td>G</td>
<td>GUIDE FLAG</td>
<td>Where best seen.</td>
<td>WHILE FLYING: This ship is GUIDE. G TACK Call Sign: Ship indicated is to be GUIDE (repeated by addressees).</td>
</tr>
<tr>
<td>H</td>
<td>HELICOPTER OPERATIONS</td>
<td>Where best seen.</td>
<td>AT DIP: I am ready to operate helicopters when wind conditions are suitable. DIPPED after being close up: My helicopter operations have been delayed temporarily (about 10 minutes). CLOSE UP: I am operating helicopters. HAULED DOWN: I have completed operating helicopters.</td>
</tr>
<tr>
<td>FLAG</td>
<td>INDICATION</td>
<td>NORMALLY DISPLAYED</td>
<td>MEANING</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
<td>-------------------</td>
<td>---------</td>
</tr>
</tbody>
</table>
| I    | GOING ALONG-SIDE (in port or at anchor) | BY RECEIVING SHIP: At yardarm on side rigged. | AT DIP: I am preparing to receive you alongside.  
CLOSE UP: I am ready to receive you alongside.  
HAULED DOWN: First line is secured. |
|      |            | BY SHIP GOING ALONGSIDE: At yardarm on side rigged. | AT DIP: I am preparing to come alongside you.  
CLOSE UP: I am ready to come alongside you.  
HAULED DOWN: First line is secured. |
| J    | RESERVED   |                   |         |
| K    | PERSONNEL WORKING ALOFT AND/OR OVER SIDE | Where best seen. | WHILE FLYING: Personnel are working aloft and/or over the side. |
| L    | RADHAZ/HERO WARNING | Where best seen. | WHILE FLYING: Do not approach within ____ yards of this unit or unit indicated without obtaining positive clearance to do so.  
1. 200  
2. 500  
3. 3,000 |
| M    | MEDICAL DUTY SHIP | Where best seen (not underway). | WHILE FLYING: I have medical and dental guard duty.  
M1 . . . I have medical guard duty.  
M2 . . . I have dental guard duty. |
|      | MOVEMENTS  | Where best seen (underway). | WHILE FLYING: Disregard my movements. |
| N    | YOUR MOVEMENTS NOT UNDERSTOOD | Where best seen. Repeated by addressees. | Your movements are not understood. |
|      | VISUAL WATCH | Where best seen (not underway). | Ship not keeping visual watch. |
### Table 4-2. Single Alphabetical Flag Table (Sheet 4 of 5)

<table>
<thead>
<tr>
<th>FLAG</th>
<th>INDICATION</th>
<th>NORMALLY DISPLAYED</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>MAN OVERBOARD</td>
<td>Where best seen.</td>
<td>WHILE FLYING: Man overboard.</td>
</tr>
<tr>
<td>P</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>BOAT RECALL</td>
<td>Where best seen.</td>
<td>WHILE FLYING: All boats belonging to this ship or boat(s) addressed return to this ship immediately.</td>
</tr>
<tr>
<td>R</td>
<td>REPLENISHING OR TRANSFERRING BY ABEAM METHOD</td>
<td>BY DELIVERING SHIP: On side rigged.</td>
<td>AT DIP: I am steady on course and speed and am preparing to receive you on side on which this flag is hoisted. CLOSE UP: I am ready for your approach. HAULED DOWN: When messenger is in hand.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BY RECEIVING SHIP: On side rigged.</td>
<td>AT DIP: I am ready to come alongside. CLOSE UP: I am commencing approach. HAULED DOWN: When messenger is in hand.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>DRILL SIGNAL</td>
<td>Where best seen.</td>
<td>WHILE FLYING: Signal flying is for flaghoist drill only.</td>
</tr>
</tbody>
</table>
Table 4-2. Single Alphabetical Flag Table (Sheet 5 of 5)

<table>
<thead>
<tr>
<th>FLAG</th>
<th>INDICATION</th>
<th>NORMALLY DISPLAYED</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>ANCHORING</td>
<td>On appropriate side or where best seen.</td>
<td>AT DIP: Anchor let go. PORT or STBD may be used to indicate anchor. CLOSE UP: Chain cable veered to required length. HAULED DOWN: Chain cable secured.</td>
</tr>
<tr>
<td></td>
<td>MOORING</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WEIGHING</td>
<td></td>
<td>AT DIP: Anchor let go. PORT or STBD may be used to indicate side. CLOSE UP: Chain cable modified. HAULED DOWN: Chain cable secured.</td>
</tr>
<tr>
<td>V</td>
<td>STREAMING/RECOVERING TOWED ACOUSTIC DEVICES NOT INCLUDING MINESWEEPING EQUIPMENT</td>
<td>Where best seen.</td>
<td>CLOSE UP: Streaming/recovering. HAULED DOWN: Streamed/recovered.</td>
</tr>
<tr>
<td>W</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4-3. Single Numerical Flag Table

<table>
<thead>
<tr>
<th>FLAG</th>
<th>INDICATION</th>
<th>NORMALLY DISPLAYED</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>BREAKDOWN</td>
<td>Where best seen.</td>
<td>WHILE FLYING: I have a breakdown or I am not under control.</td>
</tr>
<tr>
<td>7</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>BOAT SIGNAL</td>
<td>Where best seen.</td>
<td>WHILE FLYING: Steer straight away from ship.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8 PORT: Steer left (or to PORT). When hauled down, cease turn and steady on present course.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8 STBD: Steer right (or to STBD). When hauled down, cease turn and steady on present course.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8 SCREEN: Steer straight toward ship.</td>
</tr>
<tr>
<td>9</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>GUARD MAIL BY BOATS</td>
<td>In bow.</td>
<td>WHILE FLYING: I am guard mail duty boat.</td>
</tr>
<tr>
<td></td>
<td>MILITARY GUARD</td>
<td>Where best seen (not underway).</td>
<td>WHILE FLYING: I have military guard duty.</td>
</tr>
<tr>
<td>FLAG OR PENNANT</td>
<td>INDICATION</td>
<td>NORMALLY DISPLAYED</td>
<td>MEANING</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ANS</td>
<td>ACKNOWLEDGEMENT</td>
<td>At yardarm. By OTC or small ship.</td>
<td>AT DIP: Answers signal. CLOSE UP: Acknowledges signal.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At yardarm. By OTC.</td>
<td>AT DIP: All ships make appropriate routine reports. CLOSE UP: Receipt for a routine report. HAULED DOWN: All routine reports have been received.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NOTE: DIV ANS, SQUAD ANS, etc., may be used by the appropriate commanders to obtain routine reports.</td>
</tr>
<tr>
<td>FRACTIONS</td>
<td></td>
<td>In text of signals. Decimal point or one-half.</td>
<td></td>
</tr>
<tr>
<td>CODE</td>
<td>USE INTERNATIONAL CODE OF SIGNALS</td>
<td>At yardarm. Repeated by addressees.</td>
<td>Signal group following is taken from International Code of Signals.</td>
</tr>
<tr>
<td>CORPEN</td>
<td>STOP THE TURN</td>
<td>Where best seen.</td>
<td>Ships are to steady on a course 20° beyond the direction the ship is heading at the moment the signal is understood.</td>
</tr>
<tr>
<td>DESIG</td>
<td>PLAIN TEXT</td>
<td></td>
<td>For use, see paragraph 0403.11.</td>
</tr>
<tr>
<td>EMERG</td>
<td>SIGNAL(S) FLYING ARE TO BE OBEYED AS SOON AS UNDERSTOOD</td>
<td></td>
<td>See Chapter 18.</td>
</tr>
<tr>
<td>FORM</td>
<td>REFUSE BOAT IS REQUIRED</td>
<td>At yardarm or where best understood (not underway).</td>
<td>WHILE FLYING: Refuse boat is required.</td>
</tr>
</tbody>
</table>
Table 4-4. Single Special Flag/Pennant Table (Sheet 2 of 3)

<table>
<thead>
<tr>
<th>FLAG OR PENNANT</th>
<th>INDICATION</th>
<th>NORMALLY DISPLAYED</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT</td>
<td>SIGNAL NOT UNDERSTOOD</td>
<td>Where best seen. Repeated by addressees.</td>
<td>Signal now flying is not understood. INT preceding a signal, see paragraph 0403.6.</td>
</tr>
</tbody>
</table>
| NEGAT               | NEGATIVE                | Where best seen. Repeated by addressees.     | All signals flying without a call are canceled. a. ______ call NEGAT: All signals under this call are canceled.  
 |                     |                         |                                             | b. In reply to a signal: NO or PERMISSION NOT GRANTED.  
 |                     |                         |                                             | c. NEGAT preceding a signal, see paragraph 0403.6. |
| PREP                | REPLENISHING            | At outboard yardarm or where best seen.     | AT DIP: I expect to disengage in 15 minutes.  
 |                     | (Receiving ship only)   |                                             | CLOSE UP: Replenishing completed; I am disengaging at final station.  
 |                     |                         |                                             | HAULED DOWN: All lines are clear. |
|                     | MORNING AND EVENING CEREMONIES/ COLORS (AS APPROPRIATE) | At yardarm (not underway). Repeated by addressees. | CLOSE UP: Five minutes until ceremony/colors.  
 |                     |                         |                                             | AT DIP: Commence ceremony/colors.  
 |                     |                         |                                             | HAULED DOWN: Ceremony/colors completed. |
|                     | PREPARTIVE              | At yardarm.                                 | PREP preceding a signal, see paragraph 0403.6. |
| PORT                | INDEFINITE TURN TO PORT | At yardarm (underway). Repeated by addressees. | Turn of unspecified amount. See paragraph 1303. |
|                     | OUT OF ROUTINE          | At yardarm (not underway).                  | Ship out of routine. No honors should be expected. |
| SCREEN              | RESERV ED              |                                             |                                                                          |
Table 4-4. Single Special Flag/Pennant Table (Sheet 3 of 3)

<table>
<thead>
<tr>
<th>FLAG OR PENNANT</th>
<th>INDICATION</th>
<th>NORMALLY DISPLAYED</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPEED</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STBD</td>
<td>INDEFINITE TURN TO STARBOARD</td>
<td>At yardarm (underway). Repeated by addressees.</td>
<td>Turn of unspecified amount. See paragraph 1303.</td>
</tr>
<tr>
<td></td>
<td>NATIONAL SOPA</td>
<td>Where best seen (not underway).</td>
<td>Senior officer present afloat.</td>
</tr>
<tr>
<td>STATION</td>
<td>TAKE PROPER OR ASSIGNED STATION</td>
<td>At yardarm. Repeated by addressees.</td>
<td>Take proper or assigned station.</td>
</tr>
<tr>
<td>TURN</td>
<td>RESERVED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>ABSENCE OF OFFICIAL from this ship for a period of 72 hours or less. Use in port only.</td>
<td>Starboard main yardarm outboard.</td>
<td>Absence of flag officer or unit commander whose personal flag or command pennant is flying on this ship.</td>
</tr>
<tr>
<td>2nd</td>
<td>Same as 1st substitute</td>
<td>Port main yardarm inboard.</td>
<td>Absence of chief of staff.</td>
</tr>
<tr>
<td>3rd</td>
<td>Same as 1st substitute</td>
<td>Port main yardarm outboard.</td>
<td>Absence of captain.</td>
</tr>
<tr>
<td>4th</td>
<td>Same as 1st substitute</td>
<td>Starboard main yardarm inboard.</td>
<td>Absence of civil or military official whose flag is flying on this ship.</td>
</tr>
</tbody>
</table>
PART II — TACTICAL SIGNALS
CHAPTER 11

FORM (Formation) Signals

1101 Formation Signals

Note: All formation signals contain the term FORM within the signal.

1. **Column and Line Abreast.** When forming a column or a line abreast, ships take station in the order of sequence numbers or as directed by the signal. The distance between ships is the standard distance (D) or the distance indicated by the signal. The Guide is designated in the signal. If the Guide is not designated, the Guide is the ship that was the Guide of the previous formation or the CTG if no previous formation existed.

- **FORM 1** . . . . Form a column.
- **FORM 2** . . . . Form a column in reverse order of sequence numbers.
- **FORM 3** . . . . Form a line abreast to starboard.
- **FORM 4** . . . . Form a line abreast to port.
- **FORM 5** . . . . Form a second column to starboard of the first, line guides bearing abeam.
- **FORM 6** . . . . Form a second column to port of the first, line guides bearing abeam.
- **FORM 9** . . . . Form a second line abreast to starboard, line guides bearing astern.
- **FORM 10** . . . Form a second line abreast to port, line guides bearing astern.

    Examples: FORM 1 . . . Form a column in order of sequence numbers.
    FORM 1—STATION 1 DESIG ABC—STATION 2 DESIG DEF— G FORM DESIG ABC . . . Form a column. Ship ABC in station 1, ship DEF in station 2. Formation Guide is ship ABC.

2. **Circular Formation.** When forming a circular formation, ships take station in the order of sequence numbers or as indicated in the tasking message or signal.

- **FORM 14** . . . Form a circular formation with stations as indicated.

    Examples: FORM 14—STATION 1 DESIG ZZ—STATION 2 DESIG 030—050 ZZ 1 ANS 5—2 . . . Form circular formation with station 1 at ZZ and station 2 bearing 30° to 50° from ZZ at a distance of 1.5 to 2 nm. Ships take station in order of sequence numbers.
    FORM 15—STATION 1 DESIG ABC—STATION 2 DESIG DEF . . . Form circular formation 15 designated in the tasking message. Ship ABC is assigned station 1 and ship DEF is assigned station 2.
3. **Line of Bearing.** Ships form on the Guide on the bearing signaled or its reciprocal. Ships form in the quickest sequence, in the order of sequence numbers, or as indicated.

**FORM (PORT or STBD) (0 to 18) . . .** Form a line of bearing formation on a *relative* bearing in tens of degrees (0 to 18) from the Guide or ship indicated on the present course or course indicated.

**FORM (000 to 359) . . .** Form a line of bearing formation on a *true* bearing from the Guide or ship indicated on the present course or course indicated.

*Examples:* **FORM 120 . . .** Form a line of bearing on a bearing of 120° T from the Guide on the present course.

**FORM PORT 15—STATION 1 DESIG ABC—STATION 2 DESIG DEF—G FORM DESIG ABC—B CORPEN 00 0 . . .** Form a line of bearing formation on a relative bearing of 210° R from ship ABC, which is assigned station 1; ship DEF is assigned station 2. Formation Guide is ship ABC. Base course is 000° T.

4. **Forming in the Quickest Sequence.** The quickest sequence is based on each ship’s position relative to the Guide or ship indicated at the time the signal is executed. It does not mean to form in order of sequence numbers.

**FORM A . . .** Form a column formation in the quickest sequence on the most advanced ship or ship indicated, at present distance if already formed, or at standard distance or distance indicated.

*Unless a particular ship has been indicated, the ship to be formed on is the most advanced ship on the present course. Remaining ships are to form astern of that ship in the quickest sequence, according to their positions relative to that ship. If the ship to be formed on is indicated, ships are to form ahead or astern in the quickest sequence.*

*Example:* **FORM A . . .** Form a column formation in the quickest sequence on the most advanced ship at the present distance.

**FORM B . . .** Form a line abreast formation in the quickest sequence on the Guide or ship indicated, on the present course or course indicated, at present distance if already formed, or at standard distance or distance indicated.

*Ships are to form on the nearest beam of the Guide or ship indicated, relative to that ship’s course or the course indicated, in the quickest sequence according to their positions relative to the Guide.*

*Example:* **FORM B—G FORM DESIG ABC—B CORPEN 000—TA12—3 . . .** Form a line abreast formation in the quickest sequence on ship ABC as formation Guide. Base course is 000° T. Take double standard distance (2D).

**FORM D . . .** Form a diamond formation.

*A diamond formation can only be formed when ships are in a column formation. The leading ship automatically becomes the Guide. The second ship in the column is to form on the port quarter of the Guide, the third ship on the starboard quarter of the Guide, and the fourth ship in the wake of the Guide. If there are more than four ships, additional ships are to form a second diamond on the fourth ship, odd numbers (counting from the leading ship) forming to starboard, even numbers forming to port. Unless otherwise ordered ships are to use their present ordered distance (d). See paragraph 0304 for Guide changes.*
FORM E . . . . Form a column open order formation.

In forming a column open order formation, ships are displaced on both sides of the course, even numbered ships (counting from the leading ship) forming to port and odd-numbered ships to starboard. The leading ship automatically becomes the Guide. The second ship forms 4° on the port quarter of the Guide and the third ship 2° on the starboard quarter of the Guide; remaining ships form alternately astern of the second or third ship on the appropriate side. Ships are to form at the same distance from the Guide as if they were in column. If the column is already formed, ships are to remain at their present ordered distance unless otherwise directed.

FORM F PORT or STBD . . . . . . Reverse the order of ships in column in succession from the rear. Ships are to sheer out on the side indicated. One or two numerals may be added to indicate speed of all ships except the rear ship.

The rear ship automatically becomes the Guide and increases speed to one knot less than stationing speed, passing the ships ahead of her on the side indicated. Other ships reduce speed to 7 knots or as indicated. At the appropriate time, each ship in succession from the rear is to increase speed and take station in the wake of the ship that was previously next astern to her. All ships will maintain speed after taking station in the new column until the CTG reduces speed by a speed signal. If the maneuver is ordered when ships have no way on, the new Guide’s speed will be signaled; each ship will subsequently get underway in succession from the rear in time to complete the maneuver.

1102 Miscellaneous Signals

FORM U . . . . Ships resume previous relative bearings and distances from their line guides. Ships move independently.

FORM V . . . . Line guides resume previous relative bearings and distances from the Guide. Line commanders move their lines by signal to take up new stations.

FORM W . . . . Resume previous formation. Line guides resume previous relative bearings and distances from the Guide. Ships in line resume previous bearings and distances from their line guides. Line commanders direct movements.

FORM Z . . . . Remain in present formation (until ____ ).

Example: FORM Z—19T . . . Remain in present formation until 1900Z.

1103 Information Signals

B FORM . . . . Force is in formation number ____ (this unit or unit(s) indicated are in station(s) indicated).

G FORM . . . . Formation Guide is ____ (in station ____ or bearing ____° T from this unit or unit indicated at a distance of ____ hundred yards).

Example: G FORM DESIG ABC—STATION 1 . . . Formation Guide is ship ABC in station 1.
K FORM . . . . Formation center bears ____ ° T from the Guide or ship indicated at a distance of ____ hundred yards.

Example: K FORM 000 DESIG ABC 25 . . . Formation center bears 000° T, distance 2,500 yards from ship ABC.

S FORM . . . . Sequence numbers are in order of call signs following.
CHAPTER 12

Station Signals

1201 Instructions

1. Requirements. To station a unit is to order it to proceed to a position with reference to the Guide, a geographic position, or an indicated unit. When ordered, a ship hoists DESIG followed by her station letter(s) and/or numeral(s) by day to confirm to the CTG that she has correctly interpreted his stationing instructions and to indicate to adjacent ships the position to which she is proceeding. By hauling down, she indicates that she is in station.

2. Maintaining True Bearing.
   a. On arrival in station, a unit is to maintain the true bearing from its guide or indicated unit, even though its station may have been ordered by means of a relative bearing or area.
   b. When main body alters course without signal to all ships present, stationed units are to maintain true bearings and distances from the units on which stationed.
   c. Unit stationed by bearing from a unit of a circular formation, rather than by the circular method, is to maintain true bearing from the unit on which stationed when the formation axis is rotated, unless otherwise ordered.

3. Maneuvering Requirements.
   a. When the Guide alters course, the alter course signal addressed to all ships present will instruct stationed units whether they are to maintain true bearings or regain relative bearings.
   b. Units automatically form part of unit on which stationed, for maneuvering purposes, when stationed on the unit at or inside the maneuvering interval or within one nm of a single ship unit.

1202 Action Signals

STATION. . . . Take assigned station.

INT STATION . . . . . . What is your station (or that of ____ )?

STATION (PORT or STBD) (0 to 18). . Take station on relative bearing indicated in tens of degrees (0 to 18) from the Guide or unit indicated at standard distance (or at a distance of ____ nm).

STATION (000 to 359). . . Take station on true bearing indicated from the Guide or unit indicated at standard distance (or at a distance of ____ nm).

Example: STATION 020 DESIG ABC 1 DECIMAL 2 . . Take station on a true bearing of 20° from ship ABC at a distance of 1.2 nm.
STATION 1, 2, 3, etc. Take station indicated.

STATION A . Take station ahead of the Guide or unit indicated at standard distance (or at a distance of ____ nm).

STATION B . Take station astern of the Guide or unit indicated at standard distance (or at a distance of ____ nm).

STATION E . Resume station.

STATION F . Assume sequence number ____.

Example: STATION F 3 . Addressed is to assume sequence number 3.

STATION G . Ship indicated is to take station ____ and when in station is to become Guide.

STATION J. Ships indicated exchange stations.

Rules for Exchanging Station

1. Both Ships in Same Column Formation. The advanced ship is to haul out to port, the ship in the rear to starboard. Both ships are then to proceed to their new stations.

2. Both Ships in Same Line Abreast or Line of Bearing Formation. When in line abreast formation, the ship to port, or when in line of bearing formation, the after of the two ships, is to move over to a position astern of the other ship. Both ships are then to proceed to their new stations.

3. Each Ship in Different Line. If the lines are formed with line guides bearing abeam, the ship in the port line is to pass astern of the ship in the starboard line; if line guides are bearing astern or are in a line of bearing formation, the ship in the rear line is to leave the other on the port hand. If the ship in the rear line is to port of the ship with which she is exchanging stations, she is to pass astern of the ship in the leading line.

4. Ships Not in a Line. With respect to each other, both ships are to act in accordance with the International Regulations for Preventing Collisions at Sea.

5. Ships in Diamond Formation. Ships exchanging stations use rule for both ships in same column, line abreast or line of bearing, whichever is applicable.

STATION L . Take ____ station on ship assigned or indicated for replenishment or transfer.

PORT or STBD may follow.

1. Abeam
2. Alongside
3. Astern
4. Lifeguard (1,000 yards astern unless otherwise indicated)

1. Quarter
2. Standby (300 to 500 yards astern)
3. Standby (400 yards abeam)
4. VERTREP

STATION P . Ships maintain station within ____ tens of degrees of ordered bearing and within ____ hundred yards of ordered distance from the Guide.

Example: STATION P 1—5 . Ships maintain station within 10° of ordered bearing and within 500 yards of ordered distance from the Guide.

STATION R . Report when you (or ____ ) are in station.
STATION S . . In formation number ____, station(s) ____ is (are) to be taken by unit(s) indicated. Each station number is immediately followed by the call sign of the ship to which it is assigned. When lettered stations are being assigned, TACK must follow the station letter.

Example:  
STATION S 40—S1—c/s 4AH—A—c/s 2PT—B—c/s 3ZH . . In formation number 40, station S1 is to be taken by ship whose call sign is 4AH, station A by 2PT, and station B by 3ZH.

STATION U . . Remain in your present station.

STATION V . . Hoist your sequence number (or ____ ).
  1. Hoist your station number

1203 Information Signals

A STATION . . This unit or unit indicated is in station.

B STATION . . This unit or unit indicated is unable to keep station or carry out movements directed (due to ____ ).
  1. Breakdown
  2. Engineering restrictions
  3. Weather
  4. Other following DESIG

Example:  B STATION 3 . . . This unit is unable to keep station due to weather.

M STATION . . My station or station of unit indicated is ____ .
CHAPTER 13

Turn Signals

1301 Turn of a Specified Amount

1. The direction of the turn must always be indicated. The side to which the turn is to be made is indicated by using PORT or STBD immediately after TURN. The amount of the turn is indicated in one of two ways:

   a. By three numbers, giving the true course to which the ships are to turn.

   b. By one or two numbers, giving in tens of degrees the turn amount relative to the present course.

2. Consecutive turns by the second method should not be made; after one such turn the next turn should be ordered for a specified direction, using three numbers. DECIMAL may be used to indicate a turn to within 5°.

   TURN (PORT or STBD) [(1 to 36) or (000 to 359)]. . . . Turn together in the direction indicated, the number of tens of degrees indicated, or to the course indicated.

   Examples: TURN STBD 120 . . . Ships are to turn together to starboard to new course 120° T.
   TURN PORT 10 DECIMAL 5 . . . Ships are to turn together to port to a new course 105° from the present course.

1302 Stopping an Ordered Turn

CORPEN C . . Stop the turn. Steady on course ___ .

   Example: CORPEN C 100 . . . Stop the turn. Steady on course 100° T.

1303 Turn of Unspecified Amount

TURN STBD . . . . . . . Turn together to starboard.

TURN PORT . . . . . . . Turn together to port.

   NOTE: A turn of an unspecified amount must be followed by a CORPEN C signal to stop the turn and signal the course to be steered.

1304 Information Signals

J TURN. . . . . Formation course and speed for joining is as indicated.

   (a) Base course
   (b) Speed
   (c) Zigzag plan in force
   (d) Zero time of zigzag
   (e) Next alteration of base course is likely to be to ___ at ____ .

   Example: J TURN 000—10 . . . Formation course and speed for joining is 000° T and 10 knots.

X TURN (PORT or STBD) . . . . . . My rudder is right or left as indicated.
CHAPTER 14
CORPEN (Course) Signals

1401 Ordering Corpen

1. The direction of the Corpen must always be indicated. The direction toward which the Corpen is to be made is indicated with the use of PORT or STBD immediately after CORPEN. The amount of the Corpen is indicated in one of two ways:

   a. By three numbers, giving the true course to which the Corpen is to be made.
   
   b. By one or two numbers, giving the number of tens of degrees ships are to Corpen relative to the present course.

2. DECIMAL may be used to indicate a Corpen within 5°.

   CORPEN (PORT or STBD) [(1 to 18) or (000 to 359)] . . Alter course by Corpen in the direction indicated, the number of tens of degrees (1 to 18) indicated, or to the course (000 to 359) indicated.

   Examples: CORPEN PORT 9 . . Ships alter course by Corpen 90° to port.
   CORPEN STBD 130 . . Ships alter course by Corpen to starboard to course 130°.

1402 Action Signals

INT CORPEN. . . . . . . . What is your course (and speed)?

CORPEN A. . . Steer course ____ .

CORPEN B. . . Adjust base course to ____ .

   Do not use this signal for an adjustment over 10°.

   Example: CORPEN B 345 . . Adjust base course to 345° T.

CORPEN C . . Stop the turn. Steady on course ____ .

CORPEN E. . . Steer safety course ( ____ ).
CORPEN N . . Replenishment units alter course when ordered by the OTC or control ship(s)
to ____ degrees PORT/STBD as indicated in ____ steps. Use ANSWER for 5°
steps and ONE for 10° steps.

Ships not in replenishment units are to alter course similarly, preserving true bearings and distances from the formation Guide. Ships in replenishment units alter course as directed by their control ships so as to preserve relative bearings and distances from unit guides. Replenishment units will effect course alterations so as to maintain true bearings and distances from the formation Guide.

Procedure

1. On receipt of CORPEN N from the CTG (see Note), ships replenishing report BF to the control ship of their unit when ready to commence the alteration.

2. Control ships report BF to the CTG when their units are ready for the alteration.

3. On receipt of the executive signal from the CTG, follow procedures for Method A, B, or C as ordered. (See signal RS9.)

4. On reaching the new course, control ships report BB to the CTG.

NOTE

CORPEN N is normally to be made with “Execute to follow … .”

Example: CORPEN N 230 PORT ANSWER . . Alter course to PORT to a course of 230° T in 5° steps.

CORPEN P . . Guide steer course ____ .

CORPEN S . . Search turn — Alter the direction of the search to course ____ (at ____).

The wing ship on the side away from the direction of the new course is to turn to the course indicated and become the Guide. The remaining ships are to continue their course, each one turning in sequence, so that on completion of her turn she will be on the beam of the Guide on the new course. For large alterations when in loose line abreast, the CTG should consider ordering ships to reform in line abreast before executing the search turn. Ships in line abreast must be at least 1,000 yards apart; those in loose line abreast must be at least 1,500 yards apart. Ships of ocean minesweeper size and smaller may conduct search turns when the distance between ships is 500 yards. The alteration must be not less than 45° nor more than 135°.

CORPEN U . . Maintain present course (or course ____ ) (until ____).

CORPEN U 225—20T . . Maintain course 225° T until 2000Z.

1403 Information Signals

B CORPEN . . Base course is ____ .

E CORPEN . . Safety course is ____ .
G CORPEN . . Guide’s course is ____ (or is altering to ____ ), (Guide’s speed is ____ ).

H CORPEN . . Intend altering course to ____ (at ____ ).

J CORPEN . . Base course will be ____ (when the Guide passes the point indicated).

K CORPEN . . Course is ____ .

L CORPEN . . Contact’s course is ____ .

M CORPEN . . My (or unit indicated) course is ____ (my speed is ____ ).

P CORPEN . . I am adjusting my course to ____ (speed to ____ ).

R CORPEN . . Replenishment course is ____ (speed is ____ ).

X CORPEN (PORT or STBD) . . . . I am about to alter course to port or starboard as indicated ( ____ tens of degrees) (or to course ____ ).

Examples: X CORPEN PORT 15 . . I am about to alter course 150° to port.

X CORPEN STBD 060 . . I am about to alter course to starboard to course 060°.
CHAPTER 15
Speed Signals

1501 Action Signals

INT SPEED . . What is your speed?

SPEED 0 . . . Guide is to stop engines; other ships proceed as necessary to maintain station.

SPEED 1, 2, 3, etc. . . . Guide proceed at speed ____; other ships proceed as necessary to maintain station.

SPEED A . . . Stop ship be reversing engines.

SPEED B . . . Proceed at best speed for current circumstances or conditions.

Speed is at the discretion of the commanding officer of addressed unit.

SPEED C . . . Proceed at (or ____ ) cavitation speed.

1. Above
2. Below

SPEED D . . . Decrease speed by ____ knots.

Example: SPEED D 4 . . . Decrease speed by 4 knots.

SPEED G . . . Guide proceed at speed ____ upon passing point indicated.

SPEED H . . . Proceed at speed ____.

SPEED I . . . Increase speed by ____ knots.

SPEED K . . . Show speed flags.
SPEED L . . . . Replenishment units alter speed when ordered by control ships to ____ knots. Ships not in replenishment units are to alter speed similarly, preserving true bearings and distances from the formation Guide. Ships in replenishment units preserve relative bearings and distances from unit guides.

Procedure

1. SPEED L should be made using the delayed executive method, and will not normally be executed by the CTG until control ships have reported that their units are ready to commence the alteration. The executive signal, “SPEED L,” is not the executive signal for ships to change their revolutions.

2. On receipt of SPEED L from the CTG, ships replenishing report BF to the control ship of their unit when ready to commence the alteration.

3. Control ships report BF to the CTG when their units are ready for the alteration.

4. On receipt of the executive signal from the CTG, control ships alter the speed of their units in 1/2 or 1 knot steps as required, using METHOD A, B, or C as ordered. (See signal RS9.)

5. When proceeding at the new formation speed, the formation guide reports to the CTG (M SPEED).

6. When proceeding at the new formation speed, control ships report BB to the CTG.

SPEED M . . . . Proceed at maximum speed with present engineering configuration.

SPEED O . . . . Proceed at economical speed for your unit.

SPEED P . . . . Proceed at ____ sonar speed.
   1. Maximum
   2. Optimum

SPEED R . . . . Reduce speed to ____ knots.
   Example: SPEED R 4 . . . Reduce speed to 4 knots.

SPEED S . . . . Stop engines.

SPEED U . . . . Follow at safe speed.

SPEED V . . . . Proceed at steerageway speed.

1502 Information Signals

B SPEED . . . . Base speed is ____ .

C SPEED . . . . Maximum speed that can be maintained by this unit or unit indicated is ____ .

D SPEED . . . . I am ____ speed (to ____ knots).
   1. Decreasing
   2. Increasing
   Example: D SPEED 2—15 . . . I am increasing speed to 15 knots.
F SPEED . . . Speed for impending launching or recovery of aircraft is ____.

G SPEED . . . Guide’s speed is ____.

H SPEED . . . My engines are turning ____ (List A) at (_____ (List B)).

   1. Ahead
   2. Astern

   List A
   List B

   A. Full power
   B. Half power
   C. Quarter power

   Example: H SPEED 1A . . . My engines are turning ahead at full power.

M SPEED . . . My (or unit indicated) speed is ____.

P SPEED . . . My ____ (List A) ____ (List B) sonar speed is ____.

   1. Maximum
   2. Optimum

   List A
   List B

   A. Active (hull-mounted)
   B. Active (towed)
   C. Passive (hull-mounted)
   D. Passive (towed)

R SPEED . . . Replenishment speed is ____.

S SPEED . . . Stationing speed is ____.

U SPEED . . . Speed in excess of ____ will not be required during the night (or until time indicated).

V SPEED . . . Maximum speed of this or indicated ship is ____.

W SPEED . . . Maximum speed that can be maintained with present engineering configuration is ____.
CHAPTER 15A

Screen Signals

SCREEN K . . . Form sector screen — Screen center is ____. Ship or helicopter indicated take sector indicated.

BOUNDARIES — Sector boundaries are ordered by a group of four numerals. First two numerals indicate true bearing of left and second two numerals indicate true bearing of right boundary of the sector in tens of degrees. ANSWER may be used to indicate an increment of 5°.

DEPTH — Sector depth is ordered by a group of four numerals. First two numerals indicate the inner and the second two numerals indicate the outer limits of the sector in thousands of yards from screen center. ANSWER may be used to indicate increments of 500 yards.

Example: SCREEN K—QQ—20 ANS 33 ANS—02 ANS 07 DESIGN H . . . Form sector screen — Screen center is the center of the front of the main body. Helicopter take sector between 205° and 335° true and between 2,500 and 7,000 yards from screen center.
CHAPTER 16

Special Tactical Signals

1601 Bearing and Distance

TA11 . . . . Bearings and distances. _____.
1. Relative bearings and distances are to be preserved
2. Relative bearings and distances are to be resumed
3. True bearings and distances are to be preserved
4. True bearings and distance are to be resumed

TA12 . . . . Maintain present distance (or take ___).
1. Distance of ____ hundred yards 4. Standard distance
2. Distance of ____ nm 5. Proper distance
3. Double standard distance 6. One-half standard distance

TA14 . . . . Distance (or ___) is ____ hundred yards.
1. Reserved 5. Reserved
2. Distance between guides of units 6. Reserved
3. Distance between units 7. Reserved
4. Reserved 8. Standard distance

Example: TA14—8—20 . . Standard distance is 2,000 yards.

TA15 . . . . Take ____.
1. Reserved 5. Interval of ____ thousand yards
2. Interval of ____ hundred yards 6. Reserved
3. Reserved 7. Proper interval
4. Interval of ____ hundred yards
5. Interval of ____ hundred yards between lines

TA16 . . . . Reserved.

TA17 . . . . You bear ____° T from this unit or unit indicated or position indicated ( ____ nm).
Example: TA17—140—DESIG ABC—10 . . You bear 140° T, distance 10 nm from ship ABC.

TA18 . . . . Your distance (or that of unit indicated) is ____ hundred yards from this or unit indicated.

1602 Special Information Signals

TA26 . . . . Friendly force or unit indicated is ____.
1. Joining up (from direction indicated) (at time ____)
2. May be encountered (at about ____ ) (in position ____)
3. Operating in vicinity (or position ____)
4. Sighted
5. Temporarily detached

TA28 . . . . Objective’s last known position (or point of origin of search) is ____° T (at ____).

TA29 . . . . Ships in company are ____.
TA30 . . . . Sighted object indicated following DESIG.
   Example: TA30 DESIG ICEBERG . . . Sighted iceberg.

TA32 . . . . Unit indicated bears ____ ° T from this or unit indicated (distance ____ nm).
   Example: TA32 DESIG CONTACT 200—8 . . . Contact bears 200° T, 8 nm from this unit.

1603  Light Signals

TA36 . . . . Show no light (or only lights indicated following DESIG).

TA37 . . . . You or unit indicated have a light showing ____ (PORT or STBD to indicate side).
   1. Aft
   2. Aloft
   3. Amidships
   4. Forward
   5. Superstructure

TA38 . . . . Turn on ____ lights.
   1. In-contact flasher
   2. Navigation
   3. Search
   4. Submarine identification
   5. Task

1604  Miscellaneous Signals

TA42 . . . . Attention is called to bearing ____ ° T.

TA43 . . . . Blow tubes ( ____ ).
   1. Maneuver as necessary to blow tubes

TA44 . . . . Expedite ( ____ ).
   1. Action
   2. Answer to signal
   3. Maneuver
   4. Operation

TA46 . . . . Man overboard has been ____.
   1. Given up for lost
   2. Picked up
   3. Sighted bearing ____ ° T (range ____ )
   Example: TA46—3—000—50 . . . Man overboard has been sighted bearing 000° T, range 50 yards.

TA47 . . . . Object of search is as indicated following DESIG.____.
   1. Disabled ship
   2. Downed aircraft
   3. Man overboard
   4. Raft
   5. Small boat
   6. Submarine
   7. Survivors
   8. Raft
   9. Wreckage

TA52 . . . . Assist this unit or unit indicated.

TA53 . . . . Assist damaged ship or ship(s) indicated.
TA54 . . . . Assume duty indicated following DESIG.

TA60 . . . . Duty completed.

TA62 . . . . Investigate object indicated following DESIG.

TA63 . . . . Rescue crew of ship or aircraft indicated, which has sunk (or is sinking).

1605 Movement Signals

TA68 . . . . Be in position (or position ____ ) at ____ . NEGAT following means, “Unable to arrive in position (or position ____ ) at prescribed time. Can arrive at ____ .”

TA70 . . . . Conform to general movements of this unit or unit indicated.

TA72 . . . . Keep ____ on to sea.
   1. Beam
   2. Head
   3. Port bow
   4. Starboard bow
   5. Stern

TA73 . . . . Keep within ____ range of this unit or unit indicated.
   1. Radar
   2. UHF radio
   3. Underwater telephone
   4. VHF radio
   5. Visual signaling
   6. ____ nm

TA75 . . . . I will be near your position at ____ .

TA76 . . . . Purpose or reason for present movement of this unit or unit indicated (or movement previously reported) is ____ .
   1. To join formation
   2. To be in formation when orders have been carried out

TA77 . . . . Regain position ( ____ ).
   1. In formation
   2. In formation when orders have been carried out

TA78 . . . . Remain in your present position or station (or ____ ).
   1. With this unit or unit indicated
   2. Wait for further orders

TA79 . . . . Rendezvous (in position ____ ) (at ____ ) (with ____ ).

TA85 . . . . Clear the formation or unit indicated (on course ____ ° T or in general direction ____ ).

TA86 . . . . Join or rejoin ( ____ ).
   1. This unit or unit indicated (station may be indicated)
   2. As leading ship of this unit or unit indicated and conform to movements of this unit
   3. As rear ship of this unit or unit indicated and conform to movements of this unit
   4. Formation or formation indicated when practicable, falling in astern or taking any station open
   5. When conditions exist as indicated
   6. When present orders have been carried out
   7. Your own senior officer
TA87 . . . Leave formation.

TA88 . . . Proceed ( ____ ).

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<td>1. And report for duty to (designated commander)</td>
<td>11. To _____</td>
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<td>2. As necessary to pass through formation or to reach position indicated (at ____ )</td>
<td>12. To anchorage</td>
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<tr>
<td>3. As previously directed</td>
<td>13. Reserved</td>
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<td>4. In accordance with operation order or serial number indicated</td>
<td>14. Reserved</td>
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<td>5. In company (with ____ )</td>
<td>15. Reserved</td>
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<td>6. Independently</td>
<td>16. Reserved</td>
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<td>7. Independently into port and take berth assigned</td>
<td>17. To foul-weather anchorage</td>
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<td>8. Independently to assigned station</td>
<td>18. To port</td>
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<td>9. On duty assigned</td>
<td>19. To position ____</td>
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<td>10. Out of port</td>
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<td>25. Reserved</td>
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<tr>
<td>26. As directed by national authority</td>
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TA89 . . . You are detached.

TA92 . . . Act independently ( ____ ).

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<tbody>
<tr>
<td>1. For meteorological tasks</td>
<td></td>
</tr>
<tr>
<td>2. To conduct helicopter operations</td>
<td></td>
</tr>
<tr>
<td>3. To launch/recover variable depth sonar/towed array</td>
<td></td>
</tr>
<tr>
<td>4. To pass clear of ship(ing)(s) or unit indicated and resume station when clear</td>
<td></td>
</tr>
<tr>
<td>5. To proceed through IMCO separation zone in accordance with regulations</td>
<td></td>
</tr>
<tr>
<td>6. To repair damage or defects</td>
<td></td>
</tr>
<tr>
<td>7. To take bathythermograph readings</td>
<td></td>
</tr>
</tbody>
</table>

Example: TA92—4 . . . Act independently to pass clear of shipping and resume station when clear.

TA93 . . . Maneuver independently to avoid attack.

TA94 . . . Close me or unit indicated (to ____ hundred yards).

TA95 . . . Close up ( ____ ).

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leaving places vacant for ships temporarily out of formation</td>
<td></td>
</tr>
<tr>
<td>2. Without regard for ships out of formation</td>
<td></td>
</tr>
</tbody>
</table>

TA97 . . . Disengage ( ____ ) (on course ____ ).

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ahead</td>
<td></td>
</tr>
<tr>
<td>2. Astern</td>
<td></td>
</tr>
<tr>
<td>3. To port</td>
<td></td>
</tr>
<tr>
<td>4. To starboard</td>
<td></td>
</tr>
</tbody>
</table>

TA98 . . . Follow this or unit indicated (or ____ ).

TA99 . . . Form part of this unit or unit indicated for maneuvering purposes.
TA100. . . Keep ____ .
  1. Ahead
  2. Astern
  3. Between this unit or unit indicated and contact indicated
  4. Clear during maneuvers
  5. In wake of this unit or unit indicated
  6. Just clear of the wake of next ahead
  7. Out of the way
  8. To port of this unit or unit indicated
  9. To starboard of this unit or unit indicated

TA101. . . Maneuver to avoid shipping.

TA102. . . Circumstances connected with the maneuver just carried out are to be noted with a view to subsequent discussion.

TA103. . . Pass ____ .
  1. Ahead of this unit or unit indicated
  2. Astern of this unit or unit indicated
  3. Between lines
  4. Ships unable to keep station
  5. Through formation
  6. Through lines
  7. To port of this unit or unit indicated
  8. To starboard of this unit or unit indicated

TA104. . . Use ____ rudder.
  1. Degrees indicated for standard tactical rudder until further orders
  2. Emergency
  3. Full (5° less than maximum)
  4. Less
  5. Maximum (hard rudder or hard over)
  6. More
  7. Proper
  8. Rudder as necessary to give a tactical diameter of ____ hundred yards

TA105. . . Sheer out ( ____ ).
  1. Odd-numbered ships to starboard, even-numbered ships to port
  2. Odd-numbered ships to port, even-numbered ships to starboard
  3. To starboard
  4. To port

1606 Operations and Intentions Signals

TA109. . . Intentions are to remain ____ during the night (or until ____ ).
  1. At present speed
  2. In assigned area or area indicated
  3. In present formation
  4. In present formation, on present course, and at present speed
  5. Reserved
  6. On present base course

Example: TA—109—4 . . . Intend to remain in present formation, on present course, and at present speed during the night.
TA110 . . . Commence operations (or ____ ).
1. Cease operations
2. Delay operations until further orders (or until ____ ).
3. Expedite operations
4. Operations completed

TA111 . . . Unable to carry out operations or operation indicated due to ____.
1. Damage
3. Lack of services
4. Prior commitments
5. Weather

1607 Identification Signals

TA115 . . . Identify unit (bearing ____° T). Level of identification may be indicated following DESIG.

TA116 . . . Character of contact reported by radar is ____. Raid designation may be added.
1. Believed enemy
2. False
3. Friendly
4. Land
5. Lost
6. Unimportant objects (rain squall, birds, etc.)
7. Without confirmation

TA117 . . . Identity of unit is as indicated following DESIG.
Example: TA117 DESIG ABC . . . Identity of unit is ship ABC.

TA118 . . . Use ____ means of recognition.
1. ESM
2. IFF
3. Reserved
4. Radar
5. Sonar
6. Visual

1608 Weather Signals

TA153 . . . Wait for visibility conditions to improve.

TA154 . . . Weather is suitable for ____ as indicated following DESIG.
Example: TA154 DESIG SWIMMING . . . Weather is suitable for swimming.
CHAPTER 17
Two-Letter Modifiers

BA . . . . Action is being carried out (or I am).
BB . . . . Action completed (or I have).
BC . . . . I recommend.
BD . . . . Report time you will be ready (to ____ ).
BE . . . . Report when ready (to ____ ).
BF . . . . Ready (to ____ ) (at ____ ).
BG . . . . My present intention is to ____.
BH . . . . Request permission to ____.
BI . . . . Action is not being carried out (or I am not).
BJ . . . . If you desire.
BK . . . . When you desire.
BL . . . . When ready.
BT . . . . (See paragraph 0403.12 for use.)
BU . . . . Unable to ____.
BX . . . . Indicates end of series of signal groups modified by a two-letter modifier.\(^*\)
BZ . . . . Well done.

\(^*\) When the two-letter modifier applies to two or more signals following it, BX is inserted after the last of the signals to which the two-letter modifier applies.
CHAPTER 18

Emergency Signals

1801 Instructions for Use of EMERG

1. Any signal preceded by EMERG (emergency) is to be acted upon as soon as understood. If the emergency poses an immediate threat requiring visual or aural attention, the originator is to make six short blasts on the whistle.

2. When EMERG is used with several groups, it governs all groups when separated from the groups by TACK. If EMERG governs only one of the several groups, it must immediately precede the group to be governed and not be separated from it by a TACK.

1802 Emergency Alarm Signals

EMERG (000 to 359) . . . Attention is called to danger or emergency on true bearing indicated from this ship or ship indicated.

EMERG (PORT or STBD) (0 to 18) . . . Attention is called to danger or emergency on relative bearing indicated in tens of degrees (0 to 18) from this ship or ship indicated.

EMERG A . . . Aircraft to be presumed enemy sighted or detected bearing ____ °T (distance ____ nm).

EMERG B . . . Unidentified aircraft detected or sighted bearing ____ °T (distance ____ nm).

EMERG C . . . You are on collision course with me. Keep clear.

EMERG D . . . This ship or ship indicated has been in a collision.

EMERG E . . . Enemy (or ____ ) surface craft sighted bearing ____ °T from this ship (or unit or position indicated) (distance ____ nm).

1. Unidentified

EMERG F . . . I have aircraft landing in an emergency,

EMERG G . . . Enemy missile detected or sighted bearing ____ °T (distance ____ nm).

Example: EMERG G 020—2 0 . . . Enemy missile detected bearing 020 T°, distance 20 nm.

EMERG H . . . I have a helicopter landing in an emergency.

EMERG I . . . Reserved.

EMERG J . . . Surface craft detected bearing ____ °T (distance ____ nm).
EMERG K . . . Reserved.

EMERG L . . . Reserved.

EMERG M . . . Mine sighted or detected ahead (or bearing ____ °T from this ship or unit indicated) (distance ____ hundred yards) (or in position indicated).

EMERG N . . . Reserved.

EMERG O . . . Reserved.

EMERG P . . . This ship or ship indicated has a fire on board (of type ____).
    1. Ordinary combustible materials
    2. Oil substance
    3. Electrical
    4. Hazardous materials (e.g., magnesium, flares)

EMERG Q . . . I am investigating an unknown contact bearing ____ ° T (distance ____ hundred yards).

EMERG R . . . I have submarine contact bearing ____ ° T (distance ____ hundred yards.)
    1. Reserved
    2. Reserved
    3. Reserved

EMERG S . . . Submarine (or periscope) sighted bearing ____ ° T (distance ____ hundred yards).

EMERG T . . . Torpedo detected or sighted bearing ____ ° T (distance ____ hundred yards).

EMERG U . . . You are standing into danger.

EMERG V (PORT or STBD) . . . . . . Friendly aircraft crashed (close aboard to port or starboard as indicated) (or bearing ____ ° T (distance ____ nm)).

Example: EMERG V PORT . . Friendly aircraft crashed close aboard my port side.

EMERG W . . . Disappearing radar contact detected bearing ____ ° T (distance ____ nm).

EMERG X . . . Reserved.

EMERG Y . . . Reserved.

EMERG Z . . . Friendly submarine bearing ____ ° T (distance ____ nm).
1803 Emergency Action Signals

EMERG 0 . . . All ships scatter and move out at maximum speed on their present bearings from the Guide to a distance approximately 6,000 yards from the nearest ship.

EMERG 1 . . . Take individual avoiding action.

EMERG 2 . . . Cease all acoustic emissions.

EMERG 3 . . . Cease all electromagnetic emissions.

EMERG 4 . . . Cease fire. Do not fire.

EMERG 5 . . . Reserved.

EMERG 6 . . . Clear all sides using emergency breakaway procedure. (For use in an emergency during replenishment or other abeam operations.)
AA1 . . . . I am engaging (with ___) (track identity following DESIG).
   1. Fighter-launched weapons
   2. Long-range SAMs
   3. Medium-range SAMs
   4. Short-range SAMs
   5. Guns

AA2 . . . . Friendly aircraft detected bearing ____° T (distance ____ nm).

AA3 . . . . Identification safety range (ISR) is standard (or ____ nm).

AA4 . . . . Safety sector(s) for friendly aircraft is (are) as indicated:
   (a) Number designator
   (b) Origin
   (c) Limiting range in nm
   (d) Center bearing
   (d) Width of sector in nm (2 digits) or degrees (3 digits)
   (f) Limiting altitude
   (g) Time

*Example:* AA4—1 DESIG ZZ—60—120—020—50—20T08 . . . Safety sector for friendly aircraft is number 1, origin in the center of the force, limiting range 60 nm, center bearing 120° T, width 20°, limiting altitude 5,000 feet, and is activated from 0800 to 2000.

AA5 . . . . The threat assessed is ____.

AA6 . . . . Threat is (____) from sector ____.
   1. High
   2. Medium
   3. Low
   4. Very low

*Example:* AA6—1—2529 . . . Threat is high from sector between 260° and 290° true.

AA7 . . . . Weapon coordination method in force is ____ coordination.
   1. Area
   2. Zone

AA8 . . . . Reserved.

AA9 . . . . Reserved.

AA10 . . . . Reserved.
CHAPTER 20
Antiair Warfare Action Table

7A. . . . . . Reserved.

7B. . . . . . Reserved.

7C. . . . . . Cease fire.

7D. . . . . . Reserved.

7E. . . . . . Engage ( _____ List A) (with _____ List B).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Center missile/aircraft</td>
<td>A. Fighter-launched weapons</td>
</tr>
<tr>
<td>2. Left-hand missile/aircraft</td>
<td>B. Long-range SAMs</td>
</tr>
<tr>
<td>3. Missile/aircraft bearing ____</td>
<td>C. Medium-range SAMs</td>
</tr>
<tr>
<td>4. Right-hand missile/aircraft</td>
<td>D. Short-range SAMs</td>
</tr>
<tr>
<td>5. Track number following DESIG</td>
<td>E. Guns</td>
</tr>
</tbody>
</table>

7F. . . . . . Weapons may open fire on any target not identified as friend (on/in ____).

1. Bearing _____° T

2. Sector ______

3. Track number or position ______

4. Until time ______

7G. . . . . . Reserved.

7H. . . . . . Hold fire (on/in ____).

1. Bearing _____° T

2. Sector ______

3. Track number or position ______

4. Until time ______

7I. . . . . . Reserved.

7J. . . . . . Reserved.

7K. . . . . . Reserved.

7L. . . . . . Reserved.

7M. . . . . . Reserved.

7N. . . . . . Reserved.

7O. . . . . . Open fire (on bearing _____° T or in sector ____).

7P. . . . . . Reserved.

7Q. . . . . . Reserved.
7R. . . . . . Reserved.

7S. . . . . . Missile/aircraft splashed (shot down).

7T. . . . . . Weapons are not to open fire unless target is identified as enemy (on/in ____).
   1. Bearing _____°T
   2. Sector ______
   3. Track number or position ______
   4. Until time ______

7U. . . . . . Reserved.

7V. . . . . . Reserved.

7W. . . . . . Reserved.

7X. . . . . . Reserved.

7Y. . . . . . Reserved.

7Z. . . . . . Reserved.
CHAPTER 21

Administration Signals

AD1 . . . . Assist boat apparently in trouble on bearing ____° T from this ship, or unit or reference point indicated (range ____ hundred yards).

AD2 . . . . Boat capsized or in danger bearing ____ from this ship, or unit or reference point indicated (range ____ hundred yards).

AD3 . . . . Reserved.

AD4 . . . . ____ (List A) is (are) to be ____ (List B).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All boats</td>
<td>A. Turned out</td>
</tr>
<tr>
<td>2. All power boats</td>
<td>B. Lowered to the waterline</td>
</tr>
<tr>
<td>3. All pulling boats</td>
<td>C. Slipped</td>
</tr>
<tr>
<td>4. All sailing boats</td>
<td></td>
</tr>
</tbody>
</table>
| 5. ____ boat(s) indicated by DESIG following signal | |}

AD5 . . . . Send ____ (List A) (for ____ (List B)) to this unit or unit(s) indicated (sequence in order of call signs).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Admin boat</td>
<td>A. Admiral</td>
</tr>
<tr>
<td>2. Admiral's barge</td>
<td>B. Commanding officer</td>
</tr>
<tr>
<td>3. Armed boat</td>
<td>C. Commodore/senior officer</td>
</tr>
<tr>
<td>4. Captain's boat</td>
<td>D. Liberty party</td>
</tr>
<tr>
<td>5. Commodore's boat</td>
<td>E. Mail</td>
</tr>
<tr>
<td>6. Diving boat</td>
<td>F. Mail ( Classified )</td>
</tr>
<tr>
<td>7. Guard boat</td>
<td>G. Mail (Officer Courier)</td>
</tr>
<tr>
<td>8. Helicopter</td>
<td>H. Mail (Registered)</td>
</tr>
<tr>
<td>9. Hospital boat</td>
<td>I. Material requested</td>
</tr>
<tr>
<td>10. Liberty launch</td>
<td>J. Men</td>
</tr>
<tr>
<td>11. Motor boat</td>
<td>K. Movies</td>
</tr>
<tr>
<td>12. Vehicle</td>
<td>L. Officers</td>
</tr>
<tr>
<td></td>
<td>M. Shore patrol</td>
</tr>
<tr>
<td></td>
<td>N. Stores</td>
</tr>
</tbody>
</table>

AD6 . . . . Suspend all boating (or hoist all ____).

1. Boats
2. Boats hoisted by cranes or booms
3. Power boats
4. Pulling boats
5. Small boats

AD7 . . . . Reserved.

AD8 . . . . Reserved.

AD9 . . . . Routine (or ____ ) calls of flag and commanding officers may be dispensed with (considered paid and returned).

1. Official
AD10 . . . . \( \text{_____} \) ceremonially.
1. Anchor
2. Cheer ship
3. Fire a salute (number of guns following DESIG)
4. Illuminate ship
5. Man ship
6. Parade band
7. Parade band for entering (leaving) harbor
8. Parade guard
9. Parade guard and band
10. Parade guard and band for entering (leaving) harbor
11. Parade guard for entering (leaving) harbor

AD11 . . . . \( \text{_____} \) colors (at \( \text{_____} \)).
1. Clear
2. Dip
3. Half mast
4. Haul down
5. Haul down Jack (or do not hoist)
6. Hoist
7. Hoist Jack
8. Rehoist
9. Shift ensign to harbor position
10. Shift ensign to sea position

AD12 . . . . Size of colours (or \( \text{_____} \) \( \text{(List A)} \)) is to be \( \text{_____} \) \( \text{(List B)} \).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Admiral’s flags</td>
<td>A. Daily</td>
</tr>
<tr>
<td>2. Ensign</td>
<td>B. Sunday/holiday</td>
</tr>
<tr>
<td>3. Jack</td>
<td>C. Dress ship</td>
</tr>
<tr>
<td>4. Masthead flags</td>
<td>D. Steaming</td>
</tr>
<tr>
<td>5. Masthead pennant</td>
<td>E. Storm</td>
</tr>
<tr>
<td></td>
<td>F. Size ( \text{_____} ) (number)</td>
</tr>
</tbody>
</table>

AD13 . . . . Full dress ship (or \( \text{_____} \)).
1. Dress ships with ensigns at the masthead.
2. Haul taut dressing lines.

AD14 . . . . Reserved.

AD15 . . . . Reserved.

AD16 . . . . Reserved.

AD17 . . . . Dispatching casualty to you (type of injury \( \text{_____} \) \( \text{(List A)} \)) (degree of injury \( \text{_____} \) (List B)).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No injury</td>
<td>A. Critical</td>
</tr>
<tr>
<td>2. Cranial/neck</td>
<td>B. Serious</td>
</tr>
<tr>
<td>3. Thoracic nonpenetrating</td>
<td>C. Stretcher</td>
</tr>
<tr>
<td>4. Thoracic penetrating</td>
<td>D. Ambulatory</td>
</tr>
<tr>
<td>5. Abdominal</td>
<td>E. Neuropsychiatric</td>
</tr>
<tr>
<td>6. Pelvic</td>
<td></td>
</tr>
<tr>
<td>7. Soft tissue wounds</td>
<td></td>
</tr>
<tr>
<td>8. Fracture, simple (closed)</td>
<td></td>
</tr>
<tr>
<td>9. Fracture, compound (open)</td>
<td></td>
</tr>
<tr>
<td>10. Electrical shock</td>
<td></td>
</tr>
<tr>
<td>11. Burns (type preceded by DESIG)</td>
<td></td>
</tr>
<tr>
<td>12. Scalp</td>
<td></td>
</tr>
</tbody>
</table>
AD18 . . . . Send medical officer as soon as possible (or at ____ ) (to ____ ).

AD19 . . . . Reserved.

AD20 . . . . Reserved.

AD21 . . . . Air ____.

1. Bedding
2. Bunting

AD22 . . . . Spread all awnings (or awnings indicated). Inferior to NEGAT:
"Furl awnings or do not spread awnings (or awnings indicated)."

1. Forecastle
2. Waist
3. Quarterdeck
4. Side screen

AD23 . . . . Usual leave and liberty may be granted (or from ____ to ____ ).

AD24 . . . . Flag and commanding officers will have time for the next meal.

AD25 . . . . Name of ____ is ____.

AD26 . . . . Disposal of refuse is at your discretion (or ____ ).

1. Dispose of refuse during hours of darkness.
2. Dispose of refuse prior to entry into harbor.
3. Dispose of refuse when clear of harbor.
4. Dispose of refuse when well clear of formation (or convoy).
5. Dump sinkable trash and garbage only.
6. Dump trash and garbage.
7. Pump bilges.
8. Use lighter and/or sludge ring for disposal of waste.

AD27 . . . . Recall ____ personnel (List A) due to ____ (List B).

List A       List B
1. All         A. Civil disturbance/disaster
2. Beach guard B. Emergency sortie
3. Beach liaison officer C. Heavy weather
4. Motor pool D. Other (preceded by DESIG)
5. Naval
6. Officers
7. Other following DESIG

AD28 . . . . Splice the mainbrace.

AD29 . . . . Uniform is ____ (List A) (for ____ (List B)). DESIG with national uniform numbers may be used instead of the suffixes.

List A       List B
1. Battle     A. Dress
2. Blue       B. Inspection
3. Dungarees  C. Shore leave and liberty
4. Khaki      D. Undress
5. Mess       E. Uniform of the day
6. Overcoats  F. Working
7. Raincoats
8. White
AD30 . . . . Reserved.

AD31 . . . . Reserved.

AD32 . . . . Attention is called to publication, plan or operation order indicated by short title following DESIG. Paragraph number may be added.

AD33 . . . . Orders, envelopes, or hand messages (lettered or numbered as indicated) are being distributed. Report by signal if not received by time or date indicated (or ____ ).
   1. Receipts will be called for by radio at ____ .
   2. Receipts will be called for by V/S at ____ .

Example: AD33–1–18 DESIG BN135 . . . . . . . Envelopes lettered BN135 are being distributed. Receipts will be called for by radio at 1800.

AD34 . . . . Orders, envelopes, or hand messages (lettered or numbered as indicated) have been received.

AD35 . . . . Reserved.

AD36 . . . . Reserved.

AD37 . . . . Reserved.

AD38 . . . . Number of absentees is ____ (at ____ ).

AD39 . . . . Make ____ report.
   1. SITREP
   2. Progress of berthing/anchoring
   3. Progress of replenishment
   4. Progress of exercise/event presently being carried out
   5. Type in plain language following DESIG

AD40 . . . . Officer indicated following DESIG or his representative is requested to report on board this ship or unit indicated.

AD41 . . . . Reporting for duty.

AD42 . . . . Reserved.

AD43 . . . . Reserved.
CHAPTER 22

Antisubmarine Warfare Signals

AS1 . . . . Make ____ attack (with ASW weapon indicated following DESIG).
  1. Deliberate
  2. Urgent
  3. Vector aircraft

AS2 . . . . Use attack method* ____ indicated following DESIG.
  *The suffix H to the attack method designator indicates that helicopters are taking part.

AS3 . . . . Reserved.

AS4 . . . . Reserved.

AS5 . . . . Reserved.

AS6 . . . . Reserved.

AS7 . . . . Set torpedoes to ____ (feet) floor, ____ (feet) ceiling, ____ (feet) initial search depth.

AS8 . . . . Set ____ (ASW weapon indicated following DESIG) to a depth of ____ feet.

AS9 . . . . ASW weapons are not to open fire unless target is identified as enemy in all sectors (or ____). (ASW weapon indicated following DESIG.)
  1. Between bearings ____° T and ____° T from formation center
  2. In sector(s) indicated

AS10 . . . . ASW weapon safety range is ____ .

AS11 . . . . ASW weapons may open fire on any target not identified as friend in all sectors (or ____). (ASW weapon indicated following DESIG.)
  1. Between bearings ____° T and ____° T from formation center
  2. In sector(s) indicated

AS12 . . . . Reserved.

AS13 . . . . Reserved.

AS14 . . . . Designate and dispatch ____ search attack unit (SAU) (consisting of ____ number of units, figure followed by H indicates number of helicopters) to investigate contact or datum designation indicated following DESIG (bearing ____° T, distance ____ nm, from this unit or unit indicated). (Maximum speed is ____ .)
  1. Active
  2. Active/passive at SAU commander's discretion
  3. Passive

Example: AS14—3—1—1H DESIG 1232—300—10—15 . . . Designate and dispatch passive SAU consisting of one ship and one helicopter to investigate contact or datum 1232, bearing 300° T, distance 10 nm from this unit. Maximum speed is 15 knots.
AS15 . . . . Leave present assignment to investigate ____ (bearing ____° T), (range ____).
   1. Active sonar contact
   2. Passive sonar contact
   3. Periscope/snort
   4. Submerged object (following DESIG)

AS16 . . . . Leave present assignment to investigate datum designation or track number indicated following DESIG in position ____ (position established at time ____).

AS17 . . . . Terminate SAU (List A) (List B).
   1. If not in contact A. After ____ minutes
      B. After a search to ____ nm from ZZ

AS18 . . . . Assume command as SAU commander (or).
   1. SAU commander is ____

AS19 . . . . Form SAU and investigate ____ (bearing ____° T from this unit or unit indicated, distance ____).
   1. Bottomed contact (in position ____ ) of unit indicated
   2. Contact
   3. Datum (following DESIG)
   4. Enemy (following DESIG)
   5. Submerged object (following DESIG)

AS20 . . . . Assume command as scene-of-action commander (SAC) (or).
   1. SAC is ____

AS21 . . . . Detach and take position, no closer than ____ thousand yards to this unit or unit indicated, in a sector so as to intercept contact presently bearing ____° T, distance ____ , from this unit or unit indicated. Avoid cavitation and maintain passive search.

AS22 . . . . Cease passive search and commence active search. (Search bearings ____° T to ____° T), (range from ____ to ____ thousand yards).

AS23 . . . . Predicted submarine intercept range of ____ is ____ hundred yards.
   1. Self-radiated noise
   2. Short-range sonar
   3. Medium-range sonar
   4. Long-range sonar

AS24 . . . . Bathythermograph. ____.
   1. Assume bathythermograph guard duty (and report readings every ____ hour(s))
   2. Bathythermograph drop completed
   3. I am making bathythermograph drop
   4. Make bathythermograph drop and report reading
   5. Report bathythermograph reading
AS25 . . . . Bathythermograph readings are ____.* Complete signal with as many five-digit groups as are needed to report significant points in the vertical gradient of sea water in multiples of ten feet/meters at which this temperature occurs. The last three digits of each group indicate water temperature to the nearest tenth of a degree of Fahrenheit/Celsius. For depths of less than 100 feet/meters, the first of the five digits of each group will be zero. To report depths greater than 990 feet/meters, separation groups of 99901, 99902, and so on shall be used to indicate that the depths following are between 1,000 to 1,990 feet/meters, 2,000 to 2,990 feet/meters, and so on, respectively. To report negative degrees Celsius, 50 is added to the absolute value of each negative reading (e.g., \(-1.3 = 50 + | -1.3 | = 50 + 1.3 = 513\)). The final group of the signal indicates the time of the bathythermograph reading.

*DESIG C indicates depths are in meters and temperatures are in degrees Celsius.

Example: AS25—00602—09602—45565—99901@15100543—99902—35501—1245 . . . The sea is 60.2 °F at the surface; 60.2 °F at 90 feet; 56.5 °F at 450 feet; 54.3 °F at 1,000 feet; and 50.1 °F at 2,350 feet. The reading was taken at 1245.

AS25—00513—03509—13038—32078—2145 DESIG C . . . The sea is negative 1.3 °C at the surface; negative 0.9 °C at 30 meters; 3.8 °C at 130 meters; and 7.8 °C at 320 meters. The reading was taken at 2145.

AS26 . . . . Convergence zone ____ annulus range is (inner) ____ thousand yards (outer) ____ thousand yards.

1. First
2. Second
3. Third
4. Bottom bounce

AS27 . . . . Predicted sonar ranges for all sonars of this unit or for unit(s) indicated are as indicated in hundred yards. (Sonar range predictions are for the speed in knots indicated following DESIG).

1. Minimum and maximum above the layer depth
2. In the layer
3. Minimum for a maximum target depth of ____ feet and maximum for a minimum target depth of ____ feet
4. Minimum and maximum below the layer depth for a hull-mounted sonar or below the VDS sonar sound channel
5. Inner and outer edges of convergence zone
6. Horizontal range to first bottom bounce zone

Minimum ranges are related to the least favorable aspect of the submarine, maximum ranges to the most favorable aspect.

Example: AS27—1—70—160—2—3015 13—120—600—30—100—4—60—90—5—260—300 DESIG 10 . . . Predicted sonar ranges for all the sonars of this unit are: between 7,000 and 16,000 yards above the layer depth; 3,000 yards in the layer; greater than 12,000 yards on a submarine at a depth of 600 feet and no more than 3,000 yards on a submarine at a depth of 100 feet; between 6,000 and 9,000 yards below the VDS sonar sound channel; and the convergence zone spreads from 26,000 to 30,000 yards. Sonar range predictions are for a speed of 10 knots.
AS28 . . . . Tactical sonar range for this unit or unit(s) indicated (or ____ ) is ____ hundred yards.

1. Helicopters
2. Ships

AS29 . . . . Unit(s) indicated is (are) to make sonar range predictions for speed(s) of ____ knots.

AS30 . . . . Layer depth is ____ feet.

AS31 . . . . Aircraft has indicated by ____ contact with a submarine (bearing ____° T from this unit or unit indicated, distance ____ nm) (or in position ____ ) at time ____ .

1. Behavior
2. IFF
3. Radio
4. Visual

AS32 . . . . Contact is as indicated.

(a) Designation
(b) Position
(c) Time of latest report
(d) Source of information is ____ contact (List A) ( ____ (List B))

List A List B
1. Disappearing radar A. Active
3. MAD B. Passive (broadband)
4. Radar C. Passive (narrowband)
5. Sonar
6. Sonobuoy
7. Towed array
8. Visual
9. Other (type following DESIG)

(e) Classification

AS33 . . . . Depth of submarine is ____ feet.

AS34 . . . . Aircraft holds contact on ____ (bearing ____° T from this unit or unit indicated, range ____ thousand yards).

1. Active sonobuoys 6. Passive sonar
2. Active sonar 7. Radar
4. Infrared detection system 8. Visual
5. MAD gear 9. Other (type following DESIG)
AS35 . . . . Submarine indications are ____ (in position ____).

TOWED ARRAYS, HYDROPHONES, or SONOBUOYS

1. Fast propeller noise
2. Slow propeller noise
3. Can hear submerged signals
4. Can hear echo sounder signals
5. Receipt of submarine attack signals or underwater telephone
6. Discreet frequencies associated with nonfriendly submarine
7. Discreet frequencies associated with friendly submarine

SONAR (Cont.)

22. Plot and/or recorders indicate likely movement
23. Recorder trace is satisfactory
24. Echo sounds good
25. Extent of target is satisfactory
26. Bottomed target appears to be shaped like a submarine
27. . . .
28. . . .
29. . . .
30. . . .

RADAR

8. Periscope (or snort) radar echo
9. Disappearing radar echo
10. . . .
11. . . .
12. . . .
13. . . .

SEARCH RECEIVERS and DIRECTION FINDERS

31. Characteristics were those of submarine radar
32. Characteristics were those of submarine VHF voice
33. Characteristics were those of submarine VHF radiotelegraph
34. Interception classified definite ground wave and bearing was accurate
35. Procedure used was probably that of a submarine
36. Preliminary call (or dying out signal) was heard
37. . . .
38. . . .
39. . . .
40. . . .

SIGHTING

14. Conning tower (or wake) was seen
15. Snort (or periscope) was seen
16. Diving swirl was seen
17. Oil (or flotsam) was seen
18. . . .
19. . . .
20. . . .

SONAR

21. Doppler effect is present

AS36 . . . . Movement of submarine is ____.

1. Accelerating
2. Ascending
3. Backing down
4. Closing this unit or unit indicated
5. Diving
6. In hard turn (direction indicated by PORT/STBD)
7. Opening this unit or unit indicated
8. Slowing
9. Stopping
10. Surfacing

AS37 . . . . Submarine’s position was obtained by ____ (List A) (of ____ (List B)) (and is accurate within ____ nm).

List A

1. Bistatics
2. Cross-fixing, passive directional
3. Direction finding directional
4. MAD
5. Radar
6. Sighting
7. Sonar, active following DESIG
8. Sonar, passive

List B

A. Helicopter
B. Patrol aircraft
C. Shore
D. Surface ship
E. Submarine
F. Unknown
G. Other (type following DESIG)
AS38 . . . Screw count is ____ rpm (on ____ shaft(s)).

AS39 . . . Sonobuoy is ____ ( ____ designation of sonobuoy).
   1. In contact
   2. Not in contact
   3. Operating efficiently
   4. Not operating efficiently

AS40 . . . Reserved.

AS41 . . . Reserved.

AS42 . . . Stream/launch protective devices (or/at ____ ). NEGAT means: “Recover device already streamed.”
   1. Noisemakers
   2. Torpedo decoys
   3. Long stay
   4. Short stay
   5. ____ feet

AS43 . . . Take torpedo defensive measures indicated.
   1. According to intentions (or plan ____ )
   2. For closing to attack with short-range weapons
   3. On entering the torpedo danger area
   4. Operate torpedo decoys
   5. Operate torpedo detection equipment
   6. When submarine is detected within torpedo danger zone

AS44 . . . Suspect that submarine has fired torpedo (in position ____ ). Keep clear of this area for 15 minutes and take appropriate defensive measures. Three numerals may be added to indicate estimated initial course of torpedo.


AS46 . . . Reserved.

AS47 . . . Reserved.

AS48 . . . Condition of ____ (List A) is ____ (List B) (until ____).

   List A  List B
   1. Helicopter sonar   A. Fully operational
   2. Hull sonar        B. Capable of omnidirectional transmissions only
   3. Onboard ASW processor C. Capable of passive operation only
   4. Towed array       D. Capable of reduced power operation
   5. VDS              E. Incapable of being operated

AS49 . . . Domes/VDS transducers. ____.
   1. Lower domes
   2. Raise domes
   3. Lower VDS transducer to depth desired (or to a depth of ____ feet)
   4. Lower VDS transducer to a maximum depth of ____ feet
   5. Recover VDS transducer

AS50 . . . Frequency of sonar equipment is ____ kiloHertz.
AS51 . . . . Ambient noise at ____ decaHertz is ____ decibels. Complete signal with as many six-digit groups as are needed to report significant ambient noise levels at various frequencies. The first three digits of each group indicate frequency in decaHertz (10 Hertz) at which the measurements were taken. The last three digits of each group indicate the noise level in decibels (dB) with reference to 1 microPascal. For frequencies less than 1,000 Hertz, the first digit shall be zero and for frequencies less than 100 Hertz, the first two digits shall be zero. For noise levels less than 100 dB, the first digit shall be zero. The last group in the signal indicates the time of the ambient noise measurement.

Example:  AS51—005101—020070—100 062—1315 . . . The ambient noise level at 50 Hertz is 101 dB, at 100 Hertz it is 81 dB, at 200 Hertz it is 70 dB, and at 1,000 Hertz it is 62 dB. The time the measurement was taken is 1315.

AS52 . . . . Use ASW lights (or ____ ).
1. Use all around red masthead lights
2. Use special ASW lights

AS53 . . . . Stop main and auxiliary machinery for 2 minutes (or ____ minutes) in order to make passive search.

AS54 . . . . Transmit on VDS transducer at depth desired (or at a depth of ____ feet).

AS55 . . . . Sonar operation is as indicated:
1. Operate sonar emission equipment in accordance with standard instructions.
2. Operate sonar emission equipment for tuning, maintenance, and calibration.
3. Sonar emission equipment may be used for navigation.
4. Silence all sonar emission equipment.
5. Energize VDS transducer.
7. Operation of fathometer is authorized.
8. Operation of noisemaker is authorized.
9. Operation of underwater telephone is authorized.

AS56 . . . . Set sonar watch (or ____ ). Numerals following indicate frequency in kiloHertz.
1. Combined listening/echo watch
2. Echo sweep
3. For communication purposes with ship in company or with ship(s) or unit(s) indicated
4. For communication purposes with submarine(s)
5. Listening watch
6. To assist in navigation

AS57 . . . . Unable to operate sonar equipment effectively (due to ____ ). (Equipment type may be indicated following DESIG.)
1. Excessive self-noise
2. High speed
3. Interference caused by you or unit indicated
4. Marine life
5. Shallow water
6. Shipping density
7. Station in the formation
8. Weather conditions

AS58 . . . . Unable to use ASW weapon(s) (until ____ ).

AS59 . . . . ____ towed acoustic arrays or other devices.
1. Stream
2. Recover
AS60 . . . . Sonar mode of operation is ____ .
   1. Convergence zone
   2. Bottom bounce

AS61 . . . . Reserved.

AS62 . . . . Carry out ASW practice number ____ (for ____ minutes).

AS63 . . . . Fire ____ explosive signal charges.

AS64 . . . . Order submarine to ____ (List A) by any means (or by ____ (List B)).

List A List B
   1. Close this unit or unit indicated  A. Explosive signal
      to facilitate communications B. Radio
   2. Come to communications depth C. Sonar signaling (SST)
   3. Indicate her position D. Underwater telephone (UWT)
   4. Remain at safe depth
   5. Steer safety course
   6. Surface

AS65 . . . . Proceed clear of submarine (and ____ ).
   1. Maintain cavitation speed
   2. Maintain speed of at least 12 knots
   3. Operate at a speed avoiding cavitation
   4. Stop engines and tap hull

AS66 . . . . For submarine safety reasons, length of VDS cable is not to exceed ____ feet.

AS67 . . . . Submarine safety course is ____ .

AS68 . . . . Have sighted ____ .
   1. Recognition flare, red 6. Submarine markers
   2. Submarine grenade, black 7. Torpedo tracks
   3. Submarine grenade, green 8. Water shot
   4. Submarine grenade, red 9. White smoke candle
   5. Submarine grenade, yellow 10. Yellow smoke candle

AS69 . . . . Submerge (or submerge to ____ depth).
   1. Communication
   2. Exercise
   3. Periscope
   4. Snort
   5. ____ feet

AS70 . . . . Surface (or come to ____ depth).
   1. Communication
   2. Exercise
   3. Periscope
   4. Snort
   5. ____ feet

AS71 . . . . Take submarine diving station.

AS72 . . . . Take submarine surfacing station.

AS73 . . . . My diving course or submarine diving course is ____ .
AS74 . . . . Unit responsible for surfacing submarine is ____.

AS75 . . . . Dive for serial ____ . Report when ready to start the exercise.

AS76 . . . . COMEX time is ____.

AS77 . . . . Reserved.

AS78 . . . . Reserved.

AS79 . . . . Reserved.

Flag Signals for Submarine and Antisubmarine Exercises


<table>
<thead>
<tr>
<th>SIGNAL</th>
<th>USED BY</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>CODE NE2</td>
<td>Any ship</td>
<td>You should proceed with great caution; submarines are exercising in this area.</td>
</tr>
</tbody>
</table>

b. Tactical and Informative Signals (not concerned with safety precautions).

<table>
<thead>
<tr>
<th>SIGNAL</th>
<th>USED BY</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flag FOUR over Flag SEVEN</td>
<td>Target ship for submarine attack.</td>
<td>Open to attack by submarine. Torpedoes may be fired in accordance with exercise order.</td>
</tr>
<tr>
<td>Flag FOUR over Flag FOUR</td>
<td>Target ship for submarine attack.</td>
<td>Open to attack by submarines. Torpedoes must not be fired.</td>
</tr>
<tr>
<td>(displayed on both sides)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flag QUEBEC</td>
<td>Submarine</td>
<td>Disregard me. I am not open to attack. I am not to be reported.</td>
</tr>
</tbody>
</table>

c. Submarine Pyrotechnic Signals.

<table>
<thead>
<tr>
<th>SIGNAL</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RED Grenade or Emergency Identification Signal</td>
<td>EMERGENCY. Submarine in serious trouble and will surface immediately if possible. Ships are to clear area immediately and stand by to render assistance.</td>
<td></td>
</tr>
<tr>
<td>YELLOW or WHITE Smoke or Flare</td>
<td>Submarine coming to surface or periscope depth. Ships are to clear the immediate vicinity and maintain cavitation speed.</td>
<td></td>
</tr>
<tr>
<td>GREEN Flare</td>
<td>Submarine attack signal.</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: If an unexpected signal, other than a GREEN signal, is sighted by ASW units, they are to anticipate an emergency surfacing.
AS80 . . . . Reserved.

AS81 . . . . Reserved.

AS82 . . . . Intend ____ approach to datum.
1. Direct
2. Intercept
3. Offset

AS83 . . . . Approach to datum/contact information. ____ .
1. Datum identity ____
2. SAC is ____
3. ETA at datum/contact is ____
4. ETA at torpedo danger area is ____

AS84 . . . . Continue the search.

AS85 . . . . Datum (or ____ ) bears ____ ° T from this unit or unit indicated distance ____ nm at ____ .
1. Contact

AS86 . . . . Datum is as indicated.
(a) Designation
(b) Position
(c) Datum error
(d) Last known course and speed
(e) Datum time
(f) Source of information is ____ contact (List A) ( ____ (List B))

\[
\begin{array}{ll}
\text{List A} & \text{List B} \\
1. Disappearing radar & A. Active \\
3. MAD & B. Passive (broadband) \\
4. Radar & C. Passive (narrowband) \\
5. Sonar & \\
6. Sonobuoy & \\
7. Towed array & \\
8. Visual & \\
9. Other (type following DESIG) & \\
\end{array}
\]

(g) Classification of contact

AS87 . . . . Helicopters (indicated) are to random dip ____ .
1. In sector between bearings ____ ° T and ____ ° T and between distances ____ nm and ____ nm from unit or position indicated.
2. Within areas

AS88 . . . . SAU commander’s or SAC’s intentions are as indicated.
1. Attack method, carry out plan ____ , (support method, carry out plan ____ )
2. Lost contact action, carry out plan(s) ____ 

AS89 . . . . Drop marker ( ____ ).
1. At datum
2. In position indicated

AS90 . . . . A sonobuoy pattern (consisting of ____ type buoys) bears ____ ° T from this unit or unit indicated at range ____ .
1. Active
2. Passive
AS91 . . . . Sonobuoy number(s) ____ is (are) located bearing ____° T from this or unit indicated range ____ thousand yards.

AS92 . . . . Search for submarine at datum ____ datum time ____ .

AS93 . . . . Conduct ____ sonar search (between bearings ____° T and ____° T) (on bearing ____° T).

  1. Active
  2. Passive

AS94 . . . . Submarine’s limiting courses and speeds are as indicated.

  1. Limiting courses are ____° T to ____° T
  2. Limiting speeds are ____ to ____

Example: AS94—1—270—300—2—12—18 . . . Submarine’s limiting courses and speeds are 270° T to 300° T and 12 to 18 knots.

AS95 . . . . Reserved.

AS96 . . . . Carry out air plan* ____ indicated following DESIG. Give details of plan by numeral and/or letter groups following in the order given in the plan. Substitute NEGAT for groups omitted.

*The suffix H to the plan designator indicates that helicopters are taking part.

AS97 . . . . Reserved.

AS98 . . . . Reserved.

AS99 . . . . Carry out intercepting search (from ____ ).

  1. Ahead
  2. Astern
  3. PORT or STBD flank as indicated and away from reported target position
  4. PORT or STBD flank as indicated and towards expected target position

AS100 . . . . For ____ search, carry out ASW search plan indicated following DESIG.

  1. Area
  2. Bottom
  3. Intercept
  4. Lost contact

AS101 . . . . Repeat search using previously assigned search center(s) (or use search center bearing ____° T distance ____ hundred yards from datum).

AS102 . . . . Search center is ____ at zero time ____ ( ____ ). Search center must be located by a specific reference point.

  1. And is marked with a smoke marker

AS103 . . . . Carry out ASW search plan* ____ indicated following DESIG. Give details of plan by numeral and/or letter groups following in the order given in the plan. Substitute NEGAT for groups omitted.

*The suffix H to the plan designator indicates that helicopters are taking part.

AS104 . . . . Reserved.
AS105. . . . Carry out support method* ____ indicated following DESIG. Give details of plan by numeral and/or letter groups following in the order given in the plan. Substitute NEGAT for groups omitted.

*The suffix H to the method designator indicates that helicopters are taking part.

AS106. . . . Reserved.

AS107. . . . Reserved.

AS108. . . . Reserved.

AS109. . . . Reserved.

AS110. . . . Reserved.

AS111. . . . Reserved.

AS112. . . . Reserved.
CHAPTER 23
Antisubmarine Warfare Action Table

1A...... I am the ____ (geographic sector preceded by DESIG).
   1. Attacking ship
   2. Assisting ship
   3. Directing ship

*Example: 1A1 DESIG NW . . I am the attacking ship in the northwest sector.*

1B...... Assume duties of ____ (geographic sector preceded by DESIG).
   1. Attacking ship
   2. Assisting ship
   3. Directing ship

1C...... In event of lost contact, units are to carry out search plan ___ indicated following DESIG.

1D...... Attack. ____ (PORT/STBD).
   1. I am ready to attack (with ASW weapon following DESIG)
   2. I am commencing attack (with ASW weapon following DESIG) (safety range is ____).
   3. Stand by for weapon firing (with ASW weapon following DESIG) (bearing ____° T),
      (range ____).
   4. Attack completed (firing bearing ____° T), (firing range ____).
   5. Attack aborted

1E...... Conduct attack (with ASW weapon following DESIG).

1F...... I am holding sonobuoy contact bearing ____° T from this unit or position indicated
       (range ____ thousand yards).

1G...... I am maneuvering to maintain ( ____ ) contact.
   1. Convergence zone
   2. Bottom bounce

1H...... I am holding radar contact bearing ____° T from this unit or position indicated at
       range ____ hundred yards (believed to be ____).
   1. Snorkel or periscope
   2. Submarine

1I...... I am experiencing acoustic interference. Request unit or units indicated to ____.
   1. Go passive
   2. Open range from this unit
   3. Change sonar frequency

1J...... Passive sonar contact ( ____ evaluation ) ( ____ bearing from this or unit indicated).
   1. Torpedo
   2. Possible submarine
   4. Surface vessel low speed
   5. Surface vessel high speed
   6. Undetermined
1K. . . . . . Submarine aspect is ____ (PORT/STBD).
   1. Bow
   2. Beam
   3. Quarter
   4. Stern

1L. . . . . . I am holding an active sonar contact (bearing ____°) from this unit (range ____
hundred yards) (or in position indicated).

1M. . . . . . Reserved.

1N. . . . . . I have ____ (List A) ( ____ type (List B)) underwater communications with
submarine.
   List A          List B
   1. Good         A. Voice
   2. Weak         B. CW
   3. Fading       C. RATT
   4. Garbled      D. IACS
   5. Intermittent
   6. No

1O. . . . . . Keep clear of this unit or unit indicated or position indicated (or ____).
   1. Contact (bearing ____° T from me, range ____ hundred yards)
   2. Operational stand-off range
   3. Emergency stand-off range
   4. Sonobuoy field (bearing ____° T from me, range ____ hundred yards)

1P. . . . . . Submarine’s bearing, range, depth, course, and speed are as indicated from this
unit or unit indicated.
   (a) Bearing
   (b) Range in hundreds of yards
   (c) Depth in tens of feet
   (d) Course
   (e) Speed
   (f) Time

1Q. . . . . . Operate sonar as desired (or in ____).
   1. Passive mode
   2. Active mode

1R. . . . . . I have a ____ (List A) sonar contact (on ____ (List B)).
   List A          List B
   1. Reserved     9. Mine-like        A. Active
   2. Reserved     10. Sea bottom      B. Passive (broadband)
   4. Reserved     12. Surface vessel
   5. Nonsubmarine 13. Torpedo
   7. Decoy        15. Wreck
   8. Marine life

1S. . . . . . Consider your present contact is a submarine (or ____).
   1. Reserved     9. Mine-like
   2. Reserved     10. Sea bottom
   3. Reserved     11. Sonar jammer
   4. Reserved     12. Surface vessel
   5. Nonsubmarine 13. Torpedo
   7. Decoy        15. Wreck
   8. Marine life
1T . . . . . Take station ____.
   1. (Bearing ____° T) from this or unit indicated, (range ____ thousand yards)
   2. From this unit on circle, radius ____ thousand yards
   3. From contact on circle, radius ____ thousand yards
   4. In sector(s) indicated

1U . . . . . Sonar contact is firm (or ____).
   1. Strong
   2. Medium
   3. Weak
   4. Fading
   5. Intermittent

1V . . . . . Doppler effect is estimated as ____ (____ knots).
   1. Away/down
   2. Toward/up
   3. None

1W . . . . . Submarine has released (or is releasing) decoy of ____ target type.
   1. Hydrophone
   2. Noisemaker
   3. Radar
   4. Sonar echo

1X . . . . . Submarine is under me or ship indicated (or ____).
   1. Close to my PORT or STBD side as indicated
   2. Close astern

1Y . . . . . I have lost contact (contact last held bearing ____° T, range ____ hundred yards).

1Z . . . . . Break off. The operation is to be discontinued and ships are to maneuver to avoid collision, resuming the action as soon as practicable.
CHAPTER 24

Aircraft Signals

AV7 . . . . Aircraft in distress (is/has ____ ). DESIG followed by numeral(s) indicates number of personnel in aircraft.
1. Ditched
2. Forced down
3. Engine failure
4. Flying control failure
5. On fire
6. Overdue
7. Showing IFF distress

Example: AV7—1 DESIG 4 . . . Aircraft in distress has ditched. Four personnel on board.

AV10 . . . . Number of occupants rescued from crashed aircraft is ____ . State of health is ____ .
A. Unhurt
B. Slightly injured
C. Seriously injured
D. Dead

Example: AV10—4A . . . Four persons rescued from crashed aircraft are unhurt.

AV16 . . . . Carry out flight operations.

AV17 . . . . Intend to conduct helicopter operations. Time signal should be used to indicate commencement of operations.

AV26 . . . . Progress of aircraft (fixed-wing or helicopter) operations is as indicated:
1. I am ready to operate fixed-wing aircraft when wind conditions are suitable.
2. I am ready to operate helicopters when wind conditions are suitable.
3. I am operating fixed-wing aircraft.
4. I am operating helicopters.
5. I have ____ fixed-wing aircraft to launch (and ____ to recover).
6. I have ____ helicopter to launch (and ____ to recover).
7. I have ____ fixed-wing aircraft to launch (and ____ to recover) on out-of-wind course.
8. My flight operations have been delayed (about 10 minutes).
9. My flight operations have been suspended (a time signal indicates estimated time of resumption).
10. I have completed operating fixed-wing aircraft.
11. I have completed operating helicopters.
12. I have extended fixed-wing operations until ____ .
13. I have extended helicopter flight operations until ____ .
14. I am ready to operate helicopter on ____ minutes notice (type following DESIG).
15. I am carrying out a helicopter test flight.

Examples: AV26–5–6–2 . . . . I have 6 fixed-wing aircraft to launch and 2 to recover.

<table>
<thead>
<tr>
<th>EMERGENCY LANDING SIGNALS FROM AIRCRAFT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signal</strong></td>
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<tr>
<td>-----------------------------------------</td>
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<tr>
<td>Series of SHORT flashes . . . . . . .</td>
</tr>
<tr>
<td>Series of LONG flashes . . . . . . .</td>
</tr>
</tbody>
</table>
AV27 . . . . Helicopter status is ____ .
   1. Alert ( ____ minutes)
   2. Airborne
   3. Down for routine maintenance
   4. Down for repair

AV28 . . . . Take action as indicated.

AV29 . . . . Time required into the wind will be ____ minutes.

AV30 . . . . I am unable to operate aircraft due to ____ . A time signal indicates expected time of operation. Numeral(s) following DESIG indicates number of aircraft waiting to land or take off.
   1. Damage
   2. Reserved
   3. Foul deck
   4. Lack of wind
   5. Maintenance
   6. Motion of ship
   7. Weather
CHAPTER 25

Communication Signals

CM1 . . . . Close down radio watch (on ____ MegaHertz or circuit indicated following DESIG).

CM2 . . . . I am not in radio communication (or difficulties exist) with you or unit indicated (on ____ MegaHertz or circuit indicated following DESIG) (action to be taken ____).

   1. Check your transmitter
   2. Check your receiver
   3. Check for steady key

Example: CM2 DESIG 253 DECIMAL 4—1 . . . I am not in radio communication with you on 253.4 MegaHertz. Check your transmitter.

CM3 . . . . Visual watch. ____.

   1. Maintain continuous visual watch
   2. Maintain visual watch as ordered
   3. Secure visual watch from sunset to sunrise
   4. Secure visual watch (from ____ to ____)
   5. Set visual watch

CM4 . . . . Establish communications with me or unit indicated by ____ (from CM6 list).

CM5 . . . . Establish radio communications with me or unit indicated (on ____ MegaHertz).

CM6 . . . . Use ____ method.

   1. Facsimile
   2. Flaghoist
   3. Flashing light
   4. Reserved
   5. Reserved
   6. Reserved
   7. Loudhailer
   8. Reserved
   9. Reserved
   10. Reserved
   11. Voice radio
   12. Radioteletype
   13. Semaphore
   14. Reserved
   15. Sonar
   16. Underwater telephone
   17. VHF bridge-to-bridge (channel ____)
   18. Reserved

Example: CM6—12—CM12—1—525 . . . Use radioteletype frequency 525 kiloHertz.

CM7 . . . . Maintain radio watch (on ____ MegaHertz or circuit indicated following DESIG).

CM8 . . . . Shift frequency on this or circuit indicated (to ____).

   1. Primary frequency
   2. Secondary frequency
   3. Line number (following DESIG)
   4. Frequency ____ MegaHertz (following DESIG)
   5. Channel (following DESIG)

Example: CM8—245 DECIMAL 8—CM12—2 . . . Shift frequency on this circuit to 245.8 MegaHertz.
Communication plan in force (at ____ ) is as indicated following DESIG. Frequency column letter/identifier of communication plan is ____ (specified if necessary).

Shift to frequencies from column ____ (following DESIG) in present communication plan.

Expedite signals by ____.

Frequency in ____ Hertz is ____.

Groups from International Code of Signals (indicated following INTERCO) have been used for the following (number of groups).
CHAPTER 26

Command Signals

CO1 . . . . You are assigned to this unit or unit indicated.

CO2 . . . . Assume command (as ____).
   1. Reserved
   2. Reserved
   3. Reserved
   4. Reserved
   5. Helicopter attack group commander (HAGC)
   6. Officer conducting exercise (OCE)
   7. Officer conducting the serial (OCS)
   8. Task group commander (CTG)
   9. Scene of action commander (SAC)
  10. Reserved
  11. Search attack unit commander (SAUC)
  12. Surface action group commander (SAGC)

CO3 . . . . Command as ____ (from CO2 list) is held in this unit or unit indicated.

CO4 . . . . Comply with my message (or message ____).

CO10 . . . Assume ____ organization (number ____ , or as indicated by call sign following DESIG).
   1. Task
   2. Type

CO14 . . . Assume (or ____ ) tactical command of this unit or unit indicated.
   1. I am assuming
   2. I have resumed

   Example: CO14—1 DESIG ABC . . I am assuming tactical command of ship ABC.

CO15 . . . Assume (or ____ ) tactical control of this unit or unit indicated.
   1. I am assuming
   2. I have resumed

CO16 . . . Take charge ( ____ ).
   1. And conduct the exercise
   2. And proceed as previously directed
   3. And proceed to port
   4. And proceed out of port
   5. Of force (or ____ ) and maneuver as necessary for flying operations
   6. Of force (or ____ ) for maneuvers
   7. Of operations

   Example: CO16—2 . . Take charge and proceed as previously directed.
CHAPTER 27

Entry and Departure

ED1 . . . . . Anchor is ____ . PORT or STBD (or DESIG ____ ) may be added to indicate which anchor is to be used.
1. At short stay 5. Lost
2. Clear 6. Recovered
3. Dragging 7. Secured
4. Foul 8. Slipped

ED2 . . . . . Anchor ( ____ ). PORT or STBD (or DESIG ____ ) may be added to indicate which anchor is to be used.
1. At your discretion 9. In present sequence
2. In accordance with previous instructions 10. In succession from the rear
3. In any unoccupied berth 11. Let go another anchor
4. In berth ____ 12. On account of fog
5. In berths previously assigned 13. On bearing ____° T from ship indicated (distance ____ nm)
6. In berths previously occupied 14. On line of bearing ____ (range between ships ____ hundred yards)
7. In formation (number ____ )
8. In present position (or in position indicated)

ED3 . . . . . Anchor bears ____ range ____ hundred yards from my foremast. PORT or STBD (or DESIG ____ ) may be added to indicate which anchor is referred to.

ED4 . . . . . Set anchor watch.

ED5 . . . . . Bottom is ____ .
2. Coral 7. Rock, rocky
3. Covered in weed 8. Sand
5. Mud 10. Soft

ED6 . . . . . Cast or point ship (to PORT or STBD) (or ____ ).
1. As required
2. To course

ED7 . . . . . SHIP is at anchor/moored (using ____ anchor) (anchor position/berth following DESIG).
1. Bow
2. Port
3. Starboard
4. Stern

ED8 . . . . . Have foul hawse. A time signal indicates time at which it is expected hawse will be cleared.

ED9 . . . . . I am unable to kedge off (or ____ ).
1. Kedge is clear
2. Kedge is foul
ED10 . . . . Moor, with anchors, (____). PORT or STBD may be used to indicate which anchor is to be let go first.
   1. At your discretion
   2. In accordance with previous instructions
   3. In any unoccupied berth
   4. In berth _____
   5. In berths previously assigned
   6. In berths previously occupied
   7. In present position (or position indicated)

ED11 . . . . Reserved.

ED12 . . . . Ship’s head (or ____ ) is ____ .
   1. Line of direction between anchors

ED13 . . . . Shorten in to short stay (or ____ ).
   1. To ____ fathoms
   2. To ____ shackles

ED14 . . . . Unmoor (at ____ ).

ED15 . . . . Reserved.

   1. To ____ fathoms
   2. To ____ shackles

ED17 . . . . Reserved.

ED18 . . . . Weigh anchor (or ____ ). PORT or STBD may be used to indicate which anchor.
   1. Weigh second anchor
   2. Secure anchors

ED19 . . . . Reserved.

ED20 . . . . Reserved.

ED21 . . . . Reserved.

ED22 . . . . Berth assignment of this ship or unit indicated is ____ .

ED23 . . . . Hoist your berth assignment.

ED24 . . . . Berth assigned me is occupied.

ED25 . . . . Reserved.

ED26 . . . . Clear berth for this unit or unit indicated.

ED27 . . . . Reserved.

ED28 . . . . Secure alongside ( ____ (List A)) (as specified ____ (List B)).
   1. This unit
   2. Unit indicated
   3. Berth indicated
   A. At my port side
   B. At my starboard side
   C. With your port side
   D. With your starboard side
   E. At station number
ED29 . . . Secure to buoy(s) ( ____ ).
   1. Bow and stern
   2. In accordance with previous instructions
   3. Previously assigned
   4. Previously occupied
   5. To any unoccupied buoy
   6. To buoy ____

ED30 . . . Reserved.

ED31 . . . Shift berth to ____ indicated. PORT or STBD may be added to indicate which side
of the ship is to be next to pier.
   1. Berth
   2. Buoy

ED48 . . . Delay getting underway ( ____ ).
   1. And remain at ____ hours notice
   2. And remain at ____ minutes notice
   3. Until ______
   4. Until further orders

ED49 . . . Get underway (and ____ ). (Order of units or types may be indicated by call signs
   following.)
   1. Comply with previous instructions
   2. Form column in order of sequence numbers
   3. Form column in quickest sequence
   4. Proceed at ____ minute intervals
   5. Proceed out of port

ED50 . . . Reserved.

ED51 . . . Reserved.

ED52 . . . Reserved.

ED53 . . . Enter harbor (at ____ ).
   1. Zero time (zero time may be indicated)
   2. Zero time minus ____ minutes
   3. Zero time plus ____ minutes

ED54 . . . Leave harbor (at ____ ). Departure plan may be indicated.
   1. Zero time (zero time may be indicated)
   2. Zero time minus ____ minutes
   3. Zero time plus ____ minutes

ED55 . . . Reserved.

ED56 . . . ____ is open (or will open at ____ ). NEGAT preceding means “ ____ is closed
   (or will close at ____ ).”
   1. Bay
   2. Channel
   3. Entrance
   4. Gate
   5. Harbor
   6. Port
   7. River

ED57 . . . Reserved.

ED58 . . . Reserved.

ED59 . . . Reserved.
CHAPTER 28

Exercise Signals

EX1 . . . Commence run ( ____ ) (exercise event from message following DESIG).

1. From ahead
2. From astern
3. From port
4. From starboard
5. Overhead
6. To port
7. To starboard

EX2 . . . Exercise to be conducted indicated following DESIG (officer to conduct exercise).

EX3 . . . Exercise or event is ____ (event from tasking message following DESIG).

1. Abandoned
2. Being conducted
3. Canceled
4. Completed
5. Postponed (until ____)
6. To be repeated now (or at ____)
7. To be resumed now (or at ____)
8. To cease now (or at ____)
9. To commence now (or at ____)

Example: EX3—3 DESIG 0410 . . Exercise event 0410 is canceled.

EX4 . . . Exercise independently, (remain within ____ range of this unit or unit indicated).

1. Radar
2. VHF
3. Visual signaling
4. UHF
5. ____ nm

EX5 . . . Fire ____ explosive signal charges.

EX6 . . . Operate in area ____ (exercise to be conducted indicated following DESIG).

EX7 . . . Reserved.

EX8 . . . Run is ____.

1. Completed
2. To be carried out as a dummy run
3. To be repeated
4. To cease now (or at ____)
5. To commence now (or at ____)

EX9 . . . Tactical maneuvers by flaghoist are to commence now (or at ____).

EX10 . . . Take target in tow (or ____ ) (distance ____ hundred yards target is to be taken astern).

1. Abandon target
2. Pick up target
3. Stream target sled
4. Transfer target to this unit or unit indicated
5. Veer target

EX11 . . . Reserved.

EX12 . . . Reserved.
CHAPTER 29

Gunnery and Missiles

GM1 . . . . Reserved.

GM2 . . . . Reserved.

GM3 . . . . Find the ballistic wind at height of ____ thousand feet.

GM4 . . . . Ballistic wind (or ____ ) is from ____ at ____ knots (at height of ____ thousand feet).
   1. Surface wind

GM5 . . . . Reserved.

GM6 . . . . Reserved.

GM7 . . . . Range fouled.

GM8 . . . . Clear the range (or ____ ) from this unit or unit indicated (on bearing ____ ).
   1. Line of fire

GM9 . . . . Firing limit bearing(s) is ____ (or are from ____ to ____ ).

GM10 . . . . Range clear.

GM11 . . . . Malfunctions: I have a ____ .
   1. Hangfire
   2. Loaded gun
   3. Misfire
   4. Missile hangfire on launcher
   5. Missile misfire


GM13 . . . . RAKE CODE. Code groups following this signal are from the Rake Code on page 29-2. Each shot is raked unless the mean point of impact of the salvo is requested. Numeral preceding the letters indicates the salvo number.

   Example: GM13—1—A—AM—M—N . . . The four shots of salvo 1 landed: over 50 yards, hit, short 50 yards, and short 100 yards.
| RAKE CODE          | AM     | S      | O      | A      | B      | C      | D      | E      | F      | G      | H      | I      | J      | K      | L      |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                    | . . . . | . .    | . .    | . .    | . .    | . .    | . .    | . .    | . .    | . .    | . .    | . .    | . .    | . .    | . .    |
| Hit                | Hit    |        | More   | More   | Over   | Over   | Over   | Over   | Over   | Over   | Over   | Over   | Over   | Over   | Over   |
| More than 1,000    | yards short of target | yards beyond target | yards | yards | yards | yards | yards | yards | yards | yards | yards | yards | yards | yards | yards |
| over 50 yards      |        |        |        | M      | N      | P      | Q      | R      | S      | T      | U      | V      | W      | X      | Y      |
| over 100           |        |        |        | Short 50 yards | Short 100 | Short 150 | Short 200 | Short 300 | Short 400 | Short 500 | Short 600 | Short 700 | Short 800 | Short 900 | Short 1,000 |
| over 150           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 200           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 300           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 400           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 500           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 600           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 700           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 800           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 900           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| over 1,000         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

GM14 . . . . Target ____.
1. Range is ____ thousand yards
2. Identified — Ready to observe
3. Identified — I am able to spot for you and will pass reports on circuit or frequency indicated
4. Obscured
5. Destroyed

GM15 . . . . Reserved.

GM16 . . . . Reserved.

GM17 . . . . Ammunition: ____ (List A) ____ (List B) fuzes.

List A List B
1. Change to A. Impact/time
2. Reload with B. Proximity
3. Select

GM18 . . . . Reserved.

GM19 . . . . Reserved.

GM20 . . . . Reserved.

GM21 . . . . Reserved.

GM22 . . . . Reserved.

GM23 . . . . Reserved.

GM24 . . . . Reserved.

GM25 . . . . Reserved.

GM26 . . . . Reserved.
CHAPTER 30
Interdiction and Embargo Operations

IN1 . . . . Contact ____ (name/track number) is a ( ____ ) (from List A) ( ____ ) (from List B).

List A
1. Critical contact of interest
2. Contact of interest
3. Potential violator vessel
4. Assumed cleared vessel
5. Cleared vessel
6. Military vessel
7. Civil vessel
8. Friendly vessel

List B
A. Tanker
B. Cargo
C. Tug
D. Fishing vessel
E. Ferry
F. Pleasure craft
G. Other ____

IN2 . . . . You are directed to ____ (track number/vessel name) for ____.

1. Query
2. Board
3. Escort
4. Divert

IN3 . . . . My query/challenge is ____.

1. In progress
2. Completed
3. Via VHF
4. Via flashing light

IN4 . . . . My boarding party is ____.

1. On board my vessel
2. En route to conduct boarding
3. On board potential violator
4. Returning from potential violator
5. In distress

IN5 . . . . Vessel ____ (name/track number) is ____ my boarding party.

1. Cooperating (with)
2. Not cooperating (with)
3. Resisting
4. Not resisting

IN6 . . . . Boarding is ____ percent completed.

IN7 . . . . Vessel's ____ (name/track number) cargo is ____.

1. Arms/weapons
2. Chemicals
3. Crude oil
4. Foodstuffs
5. General cargo
6. In ballast
7. Liquefied gas
8. Livestock
9. Medical supplies
10. Petroleum
11. Vehicles
12. Other ____

IN8 . . . . Request ____ (name/call sign) assume tracking/boarding responsibility for contact (name/track number).

IN9 . . . . I have tracking/boarding responsibility for (name/track number).

IN10 . . . . In my area I hold ____ (number) unknown vessels.
CHAPTER 31

Meteorology Signals

ME1 . . . . . Ceiling is ____ hundred feet.

ME2 . . . . . Cloud cover is ____ eighths (at ____ hundred feet).

ME3 . . . . . Fog, ____ from the CTG (or from ____).
   1. Fog in sight on bearing ____° T (or between bearings ____° T and ____° T ) distance ___ nm
   2. Depth of fog in direction ____° T (or between bearings ____° T and ____° T ) is ____ nm

   Example: ME3—1—000—030—4 . . . Fog in sight between 000° T and 030° T, distance 4 nm from the CTG.

ME4 . . . . . Sea state is ____.
   1. Calm 4. Heavy swell
   2. Choppy 5. Rough

ME6 . . . . . Storm or line squall of ____ severity may be expected within ____ hours.
   1. Intense
   2. Moderate
   3. Violent

   Example: ME6—1—2 . . . Intense storm or squall line may be expected within 2 hours.

ME7 . . . . . Visibility is ____ nm.

ME8 . . . . . Visibility is ____ (on bearing ____° T ) from CTG or unit indicated.
   1. Deteriorating
   2. Improving
   3. Not changing

ME9 . . . . . Make weather report.

ME10 . . . . Wind speed is ____ knots from direction ____° T.
CHAPTER 32

Navigation Signals

NA1 . . . . Reserved.

NA2 . . . . Reserved.

NA3 . . . . Check compasses with me or unit indicated by reciprocal bearing.

When this signal is executed observation is to be made and each ship is to signal a bearing to indicate result of observation.

NA4 . . . . Reserved.

NA5 . . . . Reserved.

NA6 . . . . Direction of current is from ____° T, speed ____ knots.

NA7 . . . . Reserved.

NA8 . . . . Depth of water is ____ fathoms.

Depth may be reported in meters. This must be specified by adding DESIG METERS.

NA9 . . . . Reserved.

NA10 . . . . Sound fog signals.

NA11 . . . . Reserved.

NA12 . . . . Reserved.

NA13 . . . . Your ( ____ ) light(s) (List A) is (are) ____ (List B).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
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<td>1. Anchor aft</td>
<td>A. Correct</td>
</tr>
<tr>
<td>2. Anchor forward</td>
<td>B. Not showing/cannot be seen</td>
</tr>
<tr>
<td>3. Man overboard</td>
<td>C. To be dimmed</td>
</tr>
<tr>
<td>4. Masthead</td>
<td>D. To be taken at full brilliance</td>
</tr>
<tr>
<td>5. Minesweeping</td>
<td>E. To be turned on</td>
</tr>
<tr>
<td>6. Reserved</td>
<td>F. To be turned out</td>
</tr>
<tr>
<td>7. Navigation/running</td>
<td>G. Too bright</td>
</tr>
<tr>
<td>8. Out-of-command/breakdown</td>
<td>H. Too dim</td>
</tr>
<tr>
<td>9. Range</td>
<td></td>
</tr>
<tr>
<td>10. Red mast/obstruction/red truck</td>
<td></td>
</tr>
<tr>
<td>11. Reserved</td>
<td></td>
</tr>
<tr>
<td>12. Side (PORT or STBD may be added)</td>
<td></td>
</tr>
<tr>
<td>13. Towing</td>
<td></td>
</tr>
<tr>
<td>14. Other (following DESIG)</td>
<td></td>
</tr>
</tbody>
</table>
NA14  Turn on navigation lights (or _____ lights (List A)) (_____ (List B)).

List A  List B
1. Anchor    A. At full brilliance
2. Minesweeping  B. Using dimming feature
3. Reserved  C. Shaded/blue
4. Overtaking/stern
5. Red mast/obstruction
6. Side
7. Other (following DESIG)

NA15  . . . . Reserved.

NA16  . . . . My (or unit indicated) _____ is _____ meters above waterline.

Height may be reported in feet. This must be specified by adding DESIG FEET.

1. Mainmast 6. Upper masthead steaming light
2. Foremast 7. Lower steaming light
3. Funnel (forward funnel if more than one) 8. Side light
4. Antenna platform (largest if more than one) 9. Red masthead obstruction light
5. Stern/quarterdeck 10. Horizon bar
11. Other following DESIG

Example: NA16—1—75 DESIG FEET . . . My mainmast is 75 feet above the waterline.

NA17  . . . . Reserved.

NA18  . . . . Reserved.

NA19  . . . . Reserved.

NA20  . . . . Reserved.

NA21  . . . . Initial position for scheduled exercise or exercise event indicated following DESIG is latitude _____ longitude _____ (or bearing _____ ° T, distance _____ yards from unit indicated).

NA22  . . . . Reserved.

NA23  . . . . Reserved.

NA24  . . . . Position and intended movement (PIM) is as indicated.

(a) Position
(b) Time of position in whole hours
(c) Course
(d) Speed
(e) Period in hours for which preceding course and speed are in force

If the period covered by the PIM includes several changes of course and speed, (c), (d), and (e) may be repeated as necessary.

NA25  . . . . Extend duration of course and speed now steaming until _____.

NA26  . . . . Geographic position is _____ (X coordinate) _____ (Y coordinate).
NA27 . . . . Position was obtained by method indicated following DESIG.

Example: NA27 DESIG CELESTIAL . . . Position was obtained by celestial fix.

NA28 . . . . Reserved.

NA29 . . . . Reserved.

NA30 . . . . Reserved.

NA31 . . . . This unit or unit indicated will pass through reference point identified by letter and/or numeral following DESIG at ____ (course ____° T and speed ____).

NA32 . . . . Reserved.

NA33 . . . . Reserved.

NA34 . . . . Estimated time of ____ is ____.

1. Arrival
2. Commencement of flight operations
3. Commencement of serial or event (number ____)
4. Completion of flight operations
5. Completion of serial or event (number ____)
6. Departure
7. Rejoining

NA35 . . . . Synchronize watches.

NA36 . . . . Zero time will be indicated by the execution of this signal or by numerals following.

NA37 . . . . Use zone time indicated by letter following DESIG (at ____).

NA38 . . . . Reserved.

NA39 . . . . Reserved.
CHAPTER 33

Radar Signals

RA1 . . . . Assume (____) radar guard duty.
   1. Air search (between ____ and ____ nm)
   2. Air search (between ____ and ____° T)
   3. Surface search (between ____ and ____ nm)
   4. Surface search (between ____ and ____° T)
   5. Scan in elevation (between ____ and ____ degrees)

RA2 . . . . Reserved.

RA3 . . . . Reserved.

RA4 . . . . Have radar contact (believed to be ____ indicated following DESIG).
   Example: RA4 DESIG SUBMARINE . . Have radar contact believed to be a submarine.

RA5 . . . . Reserved.

   1. Airborne
   2. At discretion
   3. Shipborne
   4. To challenge and identify target
   5. Using MODE ____

RA7 . . . . Reserved.

RA8 . . . . Reserved.

RA9 . . . . Reserved.
CHAPTER 34

Readiness Signals

RE1 . . . . Officer ____ is disabled (following DESIG).

RE2 . . . . Personnel casualties. ____ . Numeral(s) following TACK may be added to indicate number of casualties.
1. Prepare to receive personnel casualties
2. Hoist flag M at yardarm when ready to receive personnel casualties
3. This unit or unit indicated has ____ personnel casualties

RE3 . . . . Personnel remaining available for duty is ____ percent of original complement.

RE4 . . . . Reserved.

RE5 . . . . Reserved.

RE6 . . . . This unit (or unit indicated) has sustained ____ (List A) category damage, including ( ____ (List B)); assessment of damage to indicated unit (DESIG ____ number of percentage damaged)).

List A
A. Sunk
B. Imminent loss
C. Inoperable
D. Mission aborted
E. Immobilized
F. Major damage
G. Medium damage
H. Minor damage
I. Reserved
J. No damage

List B
1. Reserved
2. Reserved
3. Reserved
4. Reserved
5. Communications and navigation impaired
6. Flight operations capability
7. Loss of sensors
8. Major fire
9. Major flooding
10. Major propulsion damage
11. Reserved
12. Minor fire
13. Minor flooding
14. Onboard repairs
15. Personnel injuries
16. Speed reduced
17. Underwater penetration

RE7 . . . . Require ( ____ ) assistance.
1. Decontamination party
2. Explosive ordnance disposal team (EOD)
3. Fire and rescue party
4. Fire tug
5. Firefighting equipment (type indicated following DESIG)
6. Medical
7. Medical/casualty evacuation (MEDEVAC/CASEVAC)
8. No
9. Salvage party
10. Towing

RE8 . . . . Reserved.
RE9 . . . . Reserved.

RE10 . . . . This unit or unit indicated is able to continue on assigned mission.

RE11 . . . . This ship or ship(s) indicated has/have been damaged by ____ (List A) resulting in ____ (List B). (A time signal indicates time at which damage will be repaired.)

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Bombs</td>
<td>1. No restriction</td>
</tr>
<tr>
<td>B. Collision</td>
<td>2. Reduced antiair warfare (AAW) capability</td>
</tr>
<tr>
<td>C. Fire</td>
<td>3. Reduced antisurface warfare (ASUW) capability</td>
</tr>
<tr>
<td>D. Grounding</td>
<td>4. Reduced antisubmarine warfare (ASW) capability</td>
</tr>
<tr>
<td>E. Guns</td>
<td>5. Reduced mobility</td>
</tr>
<tr>
<td>F. Heavy leakage</td>
<td>6. Sinking</td>
</tr>
<tr>
<td>G. Mines</td>
<td>7. Withdrawal</td>
</tr>
<tr>
<td>H. Missiles</td>
<td></td>
</tr>
<tr>
<td>I. Storm</td>
<td></td>
</tr>
<tr>
<td>J. Torpedo (PORT or STBD may be indicated)</td>
<td></td>
</tr>
<tr>
<td>K. Underwater explosion</td>
<td></td>
</tr>
</tbody>
</table>

Example: RE11—C—5 DESIG ABC . . . Ship ABC has been damaged by fire and has reduced mobility.

RE12 . . . . Ship indicated has a fire on board.

RE13 . . . . Fire is (flames are) ____ .
1. Extinguished
2. Increasing
3. Serious
4. Under control


RE15 . . . . Flight deck has been damaged.

RE16 . . . . Report damage or what is wrong with you.

RE17 . . . . Send rescue and assistance detail/team to this unit or unit indicated.

RE18 . . . . Ship or unit indicated is flooding. (Flooding is ____ .)
1. At the rate of ____ gallons per minute
2. Being dewatered
3. Beyond the capacity of ship’s pumps
4. Reserved
5. Reserved
6. Reserved
7. Out of control
8. Under control

RE19 . . . . Reserved.

RE20 . . . . Reserved.

RE20 . . . . Reserved.

RE21 . . . . Reserved.
RE22 . . . . Weapon(s) indicated following DESIG ____ .
   1. Can be brought into action in ____ minutes
   2. Is (are) ready

RE23 . . . . Prepare for heavy weather (about ____ ).

RE24 . . . . Reserved.

RE25 . . . . Reserved.

RE26 . . . . Reserved.

RE27 . . . . Reserved.

RE28 . . . . Reserved.

RE29 . . . . Ammunition ____ .
   1. Amount of ____ ammunition remaining is ____ percent
   2. Conserve ( ____ )
   3. Have ( ____ ) ammunition ready for use
   4. Number of rounds or units of ____ ammunition remaining on board is ____

RE30 . . . . Equipment indicated following DESIG is operating at reduced efficiency.

RE31 . . . . Equipment indicated following DESIG is inoperative. (A time signal indicates estimated time at which repairs will be completed.)

RE32 . . . . Operate ____ equipment indicated.
   1. Continuously
   2. Intermittently

RE33 . . . . Repairs can be effected ( ____ ). (A time signal indicates time at which repairs will be completed.)
   1. But must stop for repairs
   2. By ship’s crew
   3. Only by dry docking
   4. With shipyard help

RE34 . . . . Repairs have been completed on equipment indicated following DESIG.

RE35 . . . . Reserved.

RE36 . . . . Equipment indicated following DESIG is unreliable.

RE37 . . . . Total number of running hours on equipment indicated is ____ . (Estimated life remaining is ____ hours.)

RE38 . . . . Reserved.

RE39 . . . . Reserved.
RE40 . . . Percentage of ____ remaining on board is ____ percent at noon (or ____ ).

1. AVCAT ______ 7. JP-5
2. Aviation gasoline 8. Lubricating oil
4. Diesel oil 10. Potable water
5. Distillate fuel/DFM 11. DESIG ____ type of liquid
6. Gasoline

Example: RE40—4—75 . . . 75 percent of diesel oil remains on board at noon.

RE41 . . . Reserved.

RE42 . . . Readiness (or condition) of this ship or unit indicated is ____ .

(a) Antiaircraft guns usable
(b) List in degrees (PORT or STBD may be added)
(c) Main battery guns usable
(d) Missile battery usable
(e) Maximum draft in feet
(f) Maximum speed possible

RE43 . . . Tow. ____ .

1. Require tug to tow this ship or unit indicated
2. Take this ship or unit indicated in tow
3. This ship or unit indicated will take you in tow
4. Tow has parted
5. Tow this ship or unit indicated into shallow water
6. Transfer tow to this ship or unit indicated

RE44 . . . Reserved.

RE45 . . . Reserved.

RE46 . . . Reserved.

RE47 . . . Have shaft power available for ____ (at ____ hours notice).

1. Ensuring safety
2. Flying operations
3. Maximum fuel economy (single boiler/trail shaft operation permitted)
4. Maximum speed
5. Speed in knots indicated by numeral group following TACK
6. Working anchors/cables

RE48 . . . Delay getting underway (____ ).

1. Remain at ____ hours notice
2. Remain at ____ minutes notice
3. Until
4. Until further notice

RE49 . . . Come to or revert to ____ hours notice for getting underway (at ____ knots).

RE50 . . . Estimated time of ____ is ____ .

1. Readiness for sea
2. Steam (being at new notice for)

RE51 . . . Reserved.

RE52 . . . Reserved.
CHAPTER 35

Replenishment Signals

RS1 . . . . Close me or unit indicated for transfer (of ____ (List A)) (at ____ transfer station (List B)) (ship to provide gear or boat is ____ (List C)). (PORT or STBD may be added to indicate side of ship being closed.)

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
<th>List C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fuel</td>
<td>A. FWD</td>
<td>21. Closing ship(s)</td>
</tr>
<tr>
<td>2. Guard mail</td>
<td>B. AMID</td>
<td>22. Ship being closed</td>
</tr>
<tr>
<td>4. Movies</td>
<td>D. Boat</td>
<td></td>
</tr>
<tr>
<td>5. Officer courier mail</td>
<td>E. Light line</td>
<td></td>
</tr>
<tr>
<td>6. Personnel</td>
<td>F. Highline rig*</td>
<td></td>
</tr>
<tr>
<td>7. Stores</td>
<td>G. Light jackstay rig**</td>
<td></td>
</tr>
</tbody>
</table>

*Support line with pelican hook

**Support line without pelican hook

RS2 . . . . Fuel to capacity (or ____ percent).

RS3 . . . . I have mail/light material for ____ transfer.

1. Light line, my STBD side
2. Light line, my PORT side
3. Manila highline rig*, my STBD side
4. Manila highline rig*, my PORT side
5. Light jackstay rig**, my STBD side
6. Light jackstay rig**, my PORT side

*Support line with pelican hook

**Support line without pelican hook

RS4 . . . . I require ____ (List A), quantity ____ units ____ (List B) by ____ (List C).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
<th>List C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AVCAT</td>
<td>A. Tons</td>
<td>21. Probe coupling</td>
</tr>
<tr>
<td>2. Aviation gasoline</td>
<td>B. Liters</td>
<td></td>
</tr>
<tr>
<td>3. Burnable oil</td>
<td>C. Cubic meters</td>
<td></td>
</tr>
<tr>
<td>4. Diesel oil</td>
<td>D. US gallons</td>
<td></td>
</tr>
<tr>
<td>5. Distillate fuel</td>
<td>E. Imperial gallons</td>
<td></td>
</tr>
<tr>
<td>6. Gasoline</td>
<td>F. US barrels</td>
<td></td>
</tr>
<tr>
<td>7. JP-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Lubricating oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Feed water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Potable water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. DESIG type of liquid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RS5 . . . . I received/supplied ____ (List A), quantity ____ units ____ (List B).

1. AVCAT A. Tons
2. Aviation gasoline B. Liters
3. Burnable oil C. Cubic meters
4. Diesel oil D. US gallons
5. Distillate fuel E. Imperial gallons
6. Gasoline F. US barrels
7. JP-5
8. Lubricating oil
9. Feed water
10. Potable water
11. DESIG type of liquid

RS6 . . . . _____ rig for transfer.

1. I will provide
2. You provide

RS7 . . . . Replenish (____) (____ call sign of receiving ship) (____ time ZULU).

1. Fuel
2. Stores
3. Ammunition
4. Potable water

RS8 . . . . Replenish/transfer (____ (List A)) (by ____ rig or means (List B)) (at ____ transfer station (List C)) (from PORT or STBD side of supplying ship or ship indicated).

Example: RS8—15—S—31 . . . Transfer potable water by probe coupling at forward station.

RS9 . . . . Control of alterations of course and speed by replenishment unit is to be by Method ALFA, BRAVO, or CHARLIE (Flag A, B, or C following DESIG) (in ____ steps, using ANSWER for 5° steps and ONE for 10° steps). See CORPEN N in Chapter 14 for control method procedures.

METHOD: ALFA. Telephone/loudhailer
BRAVO. Voice radio
CHARLIE. Visual flags be day, light by night.
RS10 . . . . Sequence of replenishment (from ship ____ ) is to be ____ .
   1. STBD side (in order of call signs)
   2. PORT side (in order of call signs)
   3. ASTERN (in order of call signs)

RS11 . . . . ____ astern fueling rig.
   1. Stream (PORT or STBD may be indicated)
   2. Recover

RS12 . . . . Estimated time of replenishment is ____ .
   1. Duration of RAS is ____ minutes
   2. Time of commencement of RAS is ____
   3. Time of completion of RAS is ____

RS13 . . . . Reserved.

RS14 . . . . Reserved.

RS15 . . . . Reserved.
CHAPTER 36

Antisurface Warfare Signals

SU1 . . . . Reserved.

SU2 . . . . Reserved.

SU3 . . . . Attack. ______ .
   1. Attack from direction _____ is being carried out by unit indicated
   2. Break off the attack
   3. Delay attack (until _____ )
   4. Carry out feint attack from bearing ____° T (bearing is taken from center of enemy)
   5. Close and attack
   6. Attack completed

SU4 . . . . Close range ( _____ ).
   1. As rapidly as possible
   2. Consistent with keeping all guns bearing
   3. To effective missile range
   4. To effective torpedo range
   5. To maximum effective gun range
   6. To maximum gun range
   7. To maximum missile range
   8. To maximum torpedo range
   9. To _____ thousand yards

SU5 . . . . Attack is to be coordinated at time indicated.

SU6 . . . . Reserved.

SU7 . . . . Open range ( _____ ).
   1. As rapidly as possible
   2. Beyond effective gun range of enemy
   3. Beyond maximum gun range of enemy
   4. Beyond maximum missile range of enemy
   5. Consistent with keeping all guns bearing
   6. To maximum gun range
   7. To maximum missile range
   8. To maximum torpedo range
   9. To _____ thousand yards

SU8 . . . . Reserved.

SU9 . . . . I am maneuvering to unmask ( _____ ).
   1. Guns
   2. Missile launcher
   3. Rocket-assisted ASW weapon
   4. Torpedo tubes

SU10 . . . . Assume command as SAG commander (or)
   1. SAG commander is ____ .
SU11 . . . . Form surface action group (SAG) and clear the force in direction ____ (List A) (or on bearing ____° T) to investigate _____ (List B).

List A List B
1. North A. Skunk indicated
2. East B. Racket indicated
3. South C. Visual sighting
4. West

SU12 . . . . Investigate track identity _____, be prepared to illuminate and engage.

SU13 . . . . Form helicopter action group (HAG) and clear the force in direction ____ (List A) (or on bearing ____° T) to investigate ____ (List B).

List A List B
1. North A. Skunk indicated
2. East B. Racket indicated
3. South C. Visual sighting
4. West

SU14 . . . . Clear line of fire from this unit or unit indicated (on bearing ____° T).

SU15 . . . . Reserved.

SU16 . . . . Target range is ____ thousand yards.

SU17 . . . . Reserved.

SU18 . . . . Reserved.

SU19 . . . . Fight a ____ action.

1. Delaying 5. Surface, detaching SAG
2. Harassing 6. Surface, using all forces
3. Pursuit 7. Withdrawing
4. Retiring

SU20 . . . . Reserved.

SU21 . . . . Reserved.

SU22 . . . . Reserved.

SU23 . . . . Surface action plan is based on keeping our force in position ____.

1. Between the enemy and his base
2. Between the enemy and our base
3. Between the enemy and our convoy
4. Between the enemy and our high value unit(s)
5. To leeward of enemy
6. To windward of enemy

SU24 . . . . Reserved.

SU25 . . . . Reserved.

SU26 . . . . Reserved.
SU27 . . . . Your sector of attack will be (from the ____ of the enemy) with the enemy as the reference point. A group of three numerals following the basic group, separated by TACK, indicates true bearing from which to attack. DECIMAL may be used for 5°.
   1. Northward
   2. Southward
   3. Eastward
   4. Westward

   Examples: SU27—3 . . . Your sector of attack will be from the eastward of the enemy with the enemy as the reference point.
   SU27—0508 DECIMAL . . . Your sector of attack will be between 050° and 085° true with the enemy as the reference point.
   SU27—170 . . . Attack enemy from bearing 170° true.

SU28 . . . . Reserved.

SU29 . . . . Torpedoes have just been fired (or were fired at time indicated) by ships of my unit (on torpedo course ____).

SU30 . . . . Proceed to most advantageous position for torpedo attack and ____.
   1. Attack with torpedoes
   2. Do not attack until ordered

SU31 . . . . Proceed to your sector(s) (or to sector(s) ____ with the enemy as reference point). A group of three numerals indicates true bearing from which to attack.

SU32 . . . . Reserved.

SU33 . . . . All torpedoes (or ____ number) have been recovered. Ships to whom they belong may be indicated.

SU34 . . . . Reserved.

SU35 . . . . Chase and recover torpedoes (or torpedoes ____).
   1. Are in sight
   2. Are to be recovered
   3. Have sunk

SU36 . . . . Reserved.

SU37 . . . . Reserved.
CHAPTER 37

Torpedo Action Table

9A. Fire torpedoes (____) (to PORT or STBD as indicated). Number to be fired may be indicated by numerals following DESIG.
   1. Using base torpedo course plan
   2. Using coordinated attack plan
   3. Using individual target plan
   4. Using mutual target plan
   5. As soon as enemy is sighted
   6. At maximum torpedo range
   7. At range of ____ hundred yards
   8. For exercise
   9. From as close as possible
   10. Outside visibility range; firing by radar

9B. Reserved.

9C. Attack with torpedoes (in sector ____).

9D. Time of firing will be as indicated.

9E. Use torpedo attack plan indicated.

9F. Proceed to attack sectors (or sector ____). (Remain outside ____ thousand yards from nearest enemy unit.)

9G. Attack with torpedoes in sector ____.

9H. Method of attack will be ____.
   1. Formation attack in close formation
   2. Formation attack in open formation
   3. Independent
   4. Sector
   5. Spread

9I. Continue to close enemy after the attack to disguise moment of firing torpedoes.

9J. Enemy ship to be used as point of aim for torpedo firing bears ____° T from this unit or unit indicated, range ____ thousand yards.

9K. Reserved.

9L. Base torpedo course is as indicated (torpedo speed is as indicated by suffix below following TACK).
   1. High
   2. Intermediate
   3. Low

9M. Mean torpedo course for this unit or unit indicated is ____° T.

9N. Use ____ shot angle to PORT or STBD as indicated.
   1. Bow
   2. Beam
   3. Quarter

9O. Set torpedoes to run at depth of ____ feet.

9P. Set torpedo for ____ speed (____ knots).
   1. High
   2. Intermediate
   3. Low
9Q. Target speed across to be used for firing is ____ knots.

9R. Deflection angle to be used for firing is ____ degrees.

9S. Use individual settings for target speed across or deflection angle.

9T. Time of hitting is to be synchronized so that all torpedoes will hit at ____.

9U. Torpedoes will strike target at ____.

9V. Turn as required (to PORT or STBD) and fire torpedoes, returning to original course (or course ____° T) after firing.

9W. Turn in succession (to PORT or STBD) and fire torpedoes, returning to original course (or course ____° T) after firing.

9X. Turn together (to PORT or STBD) and fire torpedoes, returning to original course (or course ____° T) after firing.

9Y. Retire on approximate course ____ after firing.

9Z. Close target by steady bearings (present bearings).

**Special Night Torpedo Firing Signals**

*NOTE: These signals may be used independently or in conjunction with torpedo action signals. The CTG will endeavor to lead on to a course suitable for firing before making the “turn and fire” signal.*

<table>
<thead>
<tr>
<th>Signal Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long RED flashes</td>
<td>Contact has been made on the PORT side.</td>
</tr>
<tr>
<td>Long GREEN flashes</td>
<td>Contact has been made on the STBD side.</td>
</tr>
<tr>
<td>Steady RED light</td>
<td>Stand by to fire torpedoes — PORT side.</td>
</tr>
<tr>
<td>Steady GREEN light</td>
<td>Stand by to fire torpedoes — STBD side.</td>
</tr>
<tr>
<td>Short RED flashes</td>
<td>Turn as required and fire torpedoes to port. OTC intends to steady on a course which is the reciprocal of the bearing of the target on firing, unless otherwise ordered.</td>
</tr>
<tr>
<td>Short GREEN flashes</td>
<td>Turn as required and fire torpedoes to starboard. OTC intends to steady on a course which is the reciprocal of the bearing of the target on firing, unless otherwise ordered.</td>
</tr>
<tr>
<td>GREEN Very Star</td>
<td>Exercise signal to indicate that torpedoes have been fired.</td>
</tr>
</tbody>
</table>

**Special Day Torpedo Firing Signal**

<table>
<thead>
<tr>
<th>Signal Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN or BLACK Smoke Grenade</td>
<td>Exercise signal to indicate that torpedoes have been fired.</td>
</tr>
</tbody>
</table>
CHAPTER 38

Surface Action Table — General

2A. ... The reference point for all contacts reported by this unit or unit indicated is ____.
   1. TT
   2. XX
   3. YY
   4. ZZ
   5. SIM (submarine position and intended movement)
   6. Reserved
   7. Other following DESIG

2B. ... The position of reference point ____ (from List A) is ____ (from List B) and is effective at ____ (time).

   List A
   1. TT
   2. XX
   3. YY
   4. ZZ
   5. SIM (submarine position and intended movement)
   6. Reserved
   7. Other following DESIG

   List B
   A. ____ (latitude) ____ (longitude)
   B. ____ (bearing) ____ (distance)
   C. Reference point ____ previously issued
   D. Reserved

2C. ... Designations for contacts held by this unit is ____.

2D. ... Redesignate your contact or contact indicated as ____.

2E. ... All contact data following this signal pertains to ____.

2F. ... Designated contact is unknown or ____ (and is identified as ____ following DESIG).
   1. Certain
   2. Probable
   3. Possible

2G. ... Contact ____ (designation) is located on bearing ____° T from this unit or unit/reference point indicated, distance ____ nm, at ____ (time). Position is estimated to be accurate within a distance of ____ nm.

2H. ... Have lost ____ contact with target or target indicated (last bearing ____° T) (last distance ____ yards) (time ____).
   1. Visual
   2. Sonar
   3. Radar
   4. FLIR
   5. All sensors
   6. Other (following DESIG)
2I. Bearing of designated contact from this unit or unit indicated is ____° T by ____ (List A) with accuracy within ____° T based on ____ (from List B).

List A
1. Visual
2. Sonar
3. Radar
4. FLIR
5. RDF
6. Other (following DESIG)

List B
A. Measured system error
B. Estimated system error
C. Target motion analysis (TMA)

2J. Contact course is ____° T and speed is ____ knots.

If course and speed cannot be determined accurately, a cardinal or inter-cardinal heading and descriptive speed preceded by DESIG may be given.

Example: 2J 000—10... Contact course is 000° T and speed is 10 knots.

2K. Contact ____ (designation) is held by this unit or unit indicated on ____.

1. Visual
2. Active sonar
3. Passive sonar
4. Radar (airborne)
5. Radar (air search)
6. Radar (surface search)
7. RDF
8. Intelligence
9. Infrared/electro-optics
10. Other (following DESIG)

Example: 2K DESIG A23—6...I hold contact A23 on surface search radar.

2L. Investigate contact ____ (designation) using ____ (from List A) to determine ____ (from List B). Permitted degree of risk to investigating unit is ____ (from List C).

List A
1. Helicopter
2. Patrol aircraft
3. Tactical aircraft
4. Submarine
5. Surface ship

List B
A. Type of ship
B. Class of ship
C. Nationality
D. Hull number

List C
1. Low
2. Medium
3. High

Example: 2L—1 DESIG A2 3...I investigate contact A23 using Surface ship to determine Type of ship.

2M. Your contact or contact indicated is ____.

1. Correctly identified
2. Incorrectly identified

Example: 2M—1 DESIG A2 3...Your contact A23 is correctly identified.

2N. Engage target (bearing ____° T) or target indicated ____.

1. As soon as possible
2. When weapons bear
3. When ready
4. At maximum weapon range
5. At maximum effective range
6. When range closes to ____ thousand yards
7. When target is visible
8. If target is identified as hostile
9. If target commits a hostile act
10. If target demonstrates hostile intent
11. For harassment

2O. Reserved.

2P. Target is within my maximum ____ range.

1. Gun
2. Missile
3. Torpedo

2Q. Target indicated has opened fire with ____.

1. Guns
2. Missiles
3. Torpedoes
2R. . . . . . Reserved.

2S. . . . . . Reserved.

2T. . . . . . Reserved.

2U. . . . . . Reserved.

2V. . . . . . Reserved.

2W. . . . . . This unit or unit indicated has suffered damage and is ____ .
   1. Continuing action
   2. Withdrawing
   3. Neutralized

2X. . . . . . Reserved.

2Y. . . . . . Reserved.

2Z. . . . . . Reserved.
CHAPTER 39

Surface Action Table — Over-the-Horizon Engagement

3A. Prepare to engage with OTH ASSM on target or target indicated using ____ (from List A) (in accordance with surface action plan ____ (from List B)).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Designated missile firing unit(s) and target reporting unit(s)</td>
<td>A. Reserved</td>
</tr>
<tr>
<td>2. Designated missile firing unit(s) using own sensors only</td>
<td>B. DESIG ____</td>
</tr>
<tr>
<td>3. Designated missile firing unit(s) and forward observer(s) to control flight of missile</td>
<td>C. ____</td>
</tr>
</tbody>
</table>

Example: 3A—2134—1—DESIG ABC—DESIG DEF—DESIG A . . . Prepare to engage with OTH ASSM track 2134 with ship ABC as firing unit and ship DEF as target reporting unit in accordance with surface action plan A.

3B. Conduct OTH attack ____ (from List A) against target or target indicated (using surface action plan ____ (from List B) (as coordinated by ____ (from List C)).

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
<th>List C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Immediately</td>
<td>A. Reserved</td>
<td></td>
</tr>
<tr>
<td>2. Launch time ____</td>
<td>B. DESIG ____</td>
<td></td>
</tr>
<tr>
<td>3. When ready</td>
<td>C. ____</td>
<td></td>
</tr>
<tr>
<td>4. To achieve time on target of ____</td>
<td>31. CTG</td>
<td></td>
</tr>
<tr>
<td>5. As previously directed</td>
<td>32. Reserved</td>
<td></td>
</tr>
<tr>
<td>6. As directed by attack coordinator</td>
<td>33. SAGC</td>
<td></td>
</tr>
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Example: 3B3—2134—B DESIG A—37—DESIG GHI . . . Conduct OTH attack when ready against track 2134 using surface action plan A as coordinated by ship GHI.

3C. I am conducting OTH attack using surface action plan ____ (from List A) against target or target indicated using ____ (from List B) as follows ____ (from List C).

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Example: 3C2 DESIG A—2134—B14 . . . I am conducting OTH attack using surface action plan A against track 2134 using own sensors only as previously directed.
3D. . . . . Fire. ____ fire on target or target indicated.
   1. Commence (commence previously directed fire mission or an urgent attack)
   2. Hold (stop launch and destroy all missiles in flight)
   3. Cease (stop launch, do not destroy missiles in flight)
   4. Check (stop launch, stand by to resume)
   5. Resume (launch remainder missiles allocated for this fire mission)
   6. Repeat (repeat fire mission with same number of missiles at the same target)

3E. . . . . I have ____ fire on target or target indicated.
   1. Commenced ( ____ launched ASSM)
   2. Held (stopped launch and destroyed all missiles in flight)
   3. Ceased (fired ordered number of missiles)
   4. Checked (stopped launch, standing by to resume)
   5. Resumed (launching remaining allocated missiles)
   6. Repeated (launching same number of allocated missiles)

3F. . . . . When ordered to engage, unit(s) indicated attack target or target indicated with
   type of missile indicated following DESIG (number may be indicated by numerals
   following TACK).

3G. . . . . Designated firing unit’s position is ____ .

3H. . . . . Target reporting unit is to take station for reporting data on target or target indic-
   ated as required, reporting own position in ____ (from List A).
   List A List B
   1. ____ (latitude) ____ (longitude) A. Reference position
   2. ____ (x coordinate) ____ (y coordinate) B. Firing unit
   3. Bearing ____° T and range ____ C. Indicated unit
      (thousand yards) from ____ (from List B)

3I . . . . . I am reporting data on target or target indicated from position ____ (from List A).
   List A List B
   1. ____ (latitude) ____ (longitude) A. Reference position
   2. ____ (x coordinate) ____ (y coordinate) B. Firing unit
   3. Bearing ____° T and range ____ C. Indicated unit
      (thousand yards) from ____ (from List B)

3J. . . . . Intended long-range ASSM line of fire is ____ ° T.

3K. . . . . Request intended long-range ASSM line of fire (° T).

3L. . . . . Reserved.

3M. . . . . Reserved.

3N. . . . . Reserved.

3O. . . . . Reserved.

3P. . . . . Unit designated is to report attack results.

3Q. . . . . Estimate of results of attack on target by designated firing unit(s) is ____ .
   1. Sunk 6. Dead in the water
   2. Sinking 7. Underway but hit
   3. Heavily damaged 8. Miss
   4. Lightly damaged 9. Missile unobserved
   5. Undamaged 10. Unable to assess
3R. . . . . . Use ____ (from List A) terminal guidance with ____ (from List B) search pattern.

List A
1. Active
2. Passive
3. Active/passive
4. Passive/active
5. ____

List B
A. Small
B. Medium
C. Large
D. BOL unmodified
E. BOL with minimum attack range of ____ thousand yards
F. BOL with maximum attack range of ____ thousand yards
G. Mode ____

3S. . . . . . I am using ____ (from List A) terminal guidance and ____ (from List B) search pattern.

List A
1. Active
2. Passive
3. Active/passive
4. Passive/active
5. ____

List B
A. Small
B. Medium
C. Large
D. BOL unmodified
E. BOL with minimum attack range of ____ thousand yards
F. BOL with maximum attack range of ____ thousand yards
G. Mode ____

3T. . . . . . The area of probability for target or target indicated is as follows:
(a) Bearing, latitude, or x coordinate
(b) Reference point
(c) Distance, longitude, or y coordinate
(d) Semi-major axis
(e) Semi-minor axis
(f) Orientation of ellipse
(g) Time ellipse is valid
(h) Target course
(i) Target speed
(j) Probability of containment

Example: 3T—125—A—45—15—3015 10 45—1215—NEGAT—NEGAT—90—DESIG 2164 . . .
The area of probability for track 2164 is 125° T from reference point A, distance 45 nm. The ellipse is 30 nm X 60 nm, oriented 045° T, at time 1215 ZULU. Target course and speed are unknown. Probability that the target is within the ellipse is 90 percent.

3U. . . . . . Range within 10° of the line of fire is ____ (from List A) and within a 20 nm radius of the target is ____ (from List B).

List A
1. Clear
2. Foul by ____ (number of ships or radar contacts)
3. Unable to assess

List B
A. Clear
B. Foul by ____ (number of ships or radar contacts)
C. Unable to assess

3V. . . . . . Prepare to observe. ____ (number) of ASSM fired by designated firing unit(s) will be at target in ____ (seconds).

3W. . . . . . Long-range ASSMs are to be fired on target or target indicated to achieve a time on target of ____.
3X . . . . . Reserved.

3Y . . . . . Unit designated is to take station on bearing ____° T from firing unit or unit indicated, distance ____ nm, (and/or in position ____ ) to act as forward observer for controlling missile flight against target indicated.

3Z . . . . . Reserved.
## Surface Action Table — To-the-Horizon Range Engagement

### 4A. . . . . . Carry out action plan ____ against target or target indicated.
1. Reserved
2. Reserved
3. DESIG ____
4. ____

### 4B. . . . . . Engage (with ____ ) on target indicated (or target bearing ____° T from this unit or unit indicated) (range ____ thousand yards).
1. Short-range SSMs
2. Long-range SAMs
3. Medium-range SAMs
4. Short-range SAMs
5. Main gun battery
6. Secondary gun battery
7. Rockets
8. Close-range guns
9. Machineguns
10. Torpedoes
11. All weapons

### 4C. . . . . . Cease fire (with ____ ) on target indicated (or target bearing ____ from this unit or unit indicated) (range ____ thousand yards).
1. Short-range SSMs
2. Long-range SAMs
3. Medium-range SAMs
4. Short-range SAMs
5. Main gun battery
6. Secondary gun battery
7. Rockets
8. Close-range guns
9. Machineguns
10. Torpedoes
11. All weapons

### 4D. . . . . . I am engaging target or target indicated with ____.
1. Short-range SSMs
2. Long-range SAMs
3. Medium-range SAMs
4. Short-range SAMs
5. Main gun battery
6. Secondary gun battery
7. Rockets
8. Close-range guns
9. Machineguns
10. Torpedoes
11. All weapons

### 4E. . . . . . I have ceased firing on target or target indicated with ____.
1. Short-range SSMs
2. Long-range SAMs
3. Medium-range SAMs
4. Short-range SAMs
5. Main gun battery
6. Secondary gun battery
7. Rockets
8. Close-range guns
9. Machineguns
10. Torpedoes
11. All weapons

### 4F. . . . . . Illuminate target or sector ____ (with ____ ) (bearing ____° T) (range ____ thousand yards).
1. Starshells
2. Rockets
3. Searchlights
4. Flares

### 4G. . . . . . I am illuminating (with ____).
1. Starshells
2. Rockets
3. Searchlights
4. Flares
4H. . . . . . Fire starshell search spread to ____ , and upon attaining satisfactory adjustment, maintain continuous illumination of target. Suspected target’s bearing and range may be added.
   1. Illuminate suspected target
   2. Locate suspected target

4I. . . . . . Follow movements of this unit or unit indicated in opening fire.

4J. . . . . . Fire distribution is ____ .
   1. Normal fire distribution
   2. Concentrate fire on target indicated
   3. Split fire distribution

   Example: 4J2 DESIG 1234 . . . Concentrate fire on track 1234.

4K. . . . . . Fire independently ( ____ ).
   1. At targets of opportunity
   2. At nearest enemy
   3. At fast patrol boat targets

4L. . . . . . Shift fire ____ .
   1. To target bearing ____ ° T from this unit or unit indicated
   2. To right of target being engaged
   3. To left of target being engaged

4M. . . . . . Fire on ____ .
   1. Center of formation
   2. Leading ship of formation
   3. Left of formation
   4. Right of formation
   5. Ship number ____ in line counting from left to right
   6. Ship number ____ in line counting from right to left
   7. Nearest ship
   8. On track number ____
   9. On target bearing ____ from reference point ____ at ____ thousand yards

4N. . . . . . Track target or target indicated and be prepared to engage.

4O. . . . . . Fire pre-action calibration (bearing ____ ° T) (range ____ thousand yards).

4P. . . . . . Use ammunition with ____ fuzes.
   1. Airburst
   2. Impact
   3. Mixed impact and airburst
   4. Proximity
   5. Proximity/time

4Q. . . . . . Reserved

4R. . . . . . Verify fall of shot using standard procedure.

4S. . . . . . Fall of shot is ____ .
   1. Over ( ____ hundred yards)       6. Far short
   2. Short ( ____ hundred yards)      7. Far right
   3. Right ( ____ tens of yards)      8. Far left
   4. Left ( ____ tens of yards)       9. Unobserved
   5. Far over                         10. Straddle
4T . . . . . . Short-range SSMs are to be fired on target or target indicated to achieve a time on
target of ____ .

4U . . . . . . Reserved.

4V . . . . . . Reserved.

4W . . . . . . Reserved.

4X . . . . . . Reserved.

4Y . . . . . . Reserved.

4Z . . . . . . Reserved.
CHAPTER 41

Towing Signal Table

6A. . . . . . Tow me (or unit indicated). (Gear provided by _____.)
1. Ship being towed
2. Ship towed

6B. . . . . . Reserved.

6C. . . . . . Ship’s head is _____. (PORT or STBD may be added to indicate direction paying off.)

6D. . . . . . Wind speed and direction is ____ knots from ____° T.

6E. . . . . . Will take you under tow with my stern to your bow (or ____ ).
1. With my stern to your stern
2. With my (or designated unit’s) bow to your stern to act as rudder

6F. . . . . . Will close your (or close my) (PORT or STBD) side (or ____ ).
1. Bow
2. Stern

6G. . . . . . I am ready (or ____ ).
1. Not ready (until ____ )
2. Do not agree

6H. . . . . . I am commencing (or commence) approach (or ____ ).
1. I am making (or make) another approach

6I . . . . . . Stop your engines.

6J . . . . . . My engines are _____.
1. Stopped
2. Turning ahead
3. Turning astern

6K . . . . . . Distance. _____.
1. Move out (or I am moving out) ( ____ feet)
2. Move closer (or I am moving closer) ( ____ feet)
3. Move ahead (or I am moving ahead) ( ____ feet)
4. Move astern (or I am moving astern) ( ____ feet)
5. You are (or I am) in position

Example: 6K1—70 . . . Move out 70 feet.

6L . . . . . . Stop. The way is off my ship.

6M. . . . . . Reserved.

6N. . . . . . Pass bolo/gunline (or ____ ).
1. I will pass bolo/gunline
2. Bolo/gunline parted/missed; try again

6O. . . . . . Light messenger (is ____ (List A)). ( ____ (List B)).

List A
1. Outboard
2. Inboard
3. Foul
4. Parted

List B
A. Avast
B. Heave around
C. Slack off
D. Let go
6P . . . . . Heavy messenger (is ____ (List A)). ( ____ (List B)).

1. Outboard
2. Inboard
3. Foul
4. Parted

6Q. . . . . Towing hawser (is ____ (List A)). ( ____ (List B)).

1. Outboard
2. Inboard
3. Foul
4. Parted
5. Secure
6. Connected
7. Disconnected
8. Riding well
9. In need of freshening

Example: 6Q4F . . . Towing hawser is parted. Cast off.

6R. . . . . Chain (is ____ (List A)). ( ____ (List B)).

1. Outboard
2. Inboard
3. Foul
4. Parted
5. Secure
6. Connected
7. Disconnected
8. Riding well
9. In need of freshening

6S. . . . . I am ____.

1. Ready to commence tow
2. Commencing tow

6T. . . . . Reserved.

6U. . . . . Speed through the water is ____ knots (or ____).

1. I am increasing (or increase) speed (to ____)
2. I am decreasing (or decrease) speed (to ____)
3. My engines have (or make) turns for ____ knots
4. My speed is ____ (or make your speed ____)

6V. . . . . I am adjusting (or adjust) course PORT/STBD (to ____° T).

6W. . . . . Conditions. ____.

1. Conditions are fine
2. All gear is recovered and inboard
3. I am encountering difficulties

6X. . . . . Reserved.

6Y. . . . . Affirmative.

6Z. . . . . Negative.
Note: This chapter provides an index that can be used to encode signals. It is provided to assist the user in locating signals. It does not provide detailed procedures for using or executing the signals. For that information the user must refer to other sections of the manual.

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<td>target</td>
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### VHF

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PART III — REPORTS AND MESSAGES
CHAPTER 45

Tasking Message

4501 Introduction

A tasking message will be promulgated for each exercise or operation conducted in accordance with this manual. The tasking message will be developed by the command or country hosting the exercise or operation, or by the commander designated as the CTG. The tasking message will be distributed to all participants sufficiently in advance of the exercise or operation to ensure all have time to incorporate the message’s contents into their planning and preparation.

4502 Tasking Message Format

1. Exercise or Operation Name. States the name of the exercise or operation the participants have agreed to conduct. All information in the tasking message is valid only for the identified exercise or operation.

2. Exercise or Operation Date. Provides the inclusive dates for the exercise or operation.

3. Schedule of Events. Provides a detailed schedule of events for the planned exercise or operation. The schedule of events should be as detailed as necessary to ensure a smooth and orderly execution of the exercise or operation.

4. Task Organization. Provides a detailed task organization for the exercise or operation. It shall identify task organization commanders and assigned units, scheduled changes of operational control (CHOPs), and joinings and detachments.

5. Formations. Provides formation information for the exercise or operation, and includes:
   a. Cruise and speed requirements.
   b. Standard distance.
   c. Standard interval.
   d. Sequence numbers.
   e. Standard circular formations.

6. Reports. Outlines routine reports required during the exercise or operation, including:
   a. Unit readiness reports.
   b. Own-ship position reports.
   c. Contact reports.

7. Communications. Provides communication information needed to support the exercise or operation, including information on:
   a. Radioteletype circuits.
   b. Voice radio circuits.
   c. Voice call signs.
   d. Special tactical signals.

8. Additional Comments. Provides any additional comments, guidance, or direction, as needed.

4503 Sample Tasking Message

Figure 45-1 provides a sample tasking message.
From: Nation A Commander Destroyer Squadron XYZ

To: Nation A Ship DEF
      Nation A Ship GHI
      Nation A Ship JKL
      Nation B Ship ABC

Info: Nation A National Authorities (as appropriate)
      Nation B National Authorities (as appropriate)

Subj: Exercise Tasking Message

The following information is provided in accordance with EXTAC 1000, Maritime Maneuvering and Tactical Procedures:

1. Exercise Name: Joining Hands 94

2. Exercise Dates: 11 April 1994 to 12 April 1994

3. Schedule of Events:
   a. Event 11A - 111200Z April Participants report for duty to CTG 12.1 in vicinity of 55°N, 20°W. Take station in order of sequence numbers in FORM 18 on Guide Ship DEF. Ship DEF on course 040°T, speed 10 knots.
   b. Event 11B - 111300Z to 111800Z April TG12.1 conduct tactical maneuvering exercises as ordered by CTG 12.1.
   c. Event 11C - 111800Z April CTG 12.1 CHOP TG12.1 ships to CTUs for night steaming. CHOP to occur in vicinity of 56°N, 20°W. During night steaming CTUs remain within voice radio communication distance of CTG 12.1. CTUs issue intentions for night steaming to TU ships and CTG 12.1.
   d. Event 12A - 120700Z April CTUs CHOP ships to CTG 12.1 in vicinity 57°N, 18°W. Ships take station in order of sequence numbers in a column formation on Guide Ship ABC. Ship ABC on course 090°T, speed 10 knots.
   e. Event 12B - 120700Z to 121500Z April TG 12.1 conduct tactical maneuvering exercises as ordered by CTG 12.1.
   f. Event 12C - 121200Z April CTG 12.1 detach Ship JKL to national authority. Ship JKL proceed in accordance with national directions.
   g. Event 12D - 121500Z April CTG 12.1 detach TG 12.1 ships to national authorities. CTG 12.1 ships proceed in accordance with national directions.

Figure 45-1. Sample Tasking Message (Sheet 1 of 3)
4. Task Organization:

a. Task Group Designation: TG 12.1
   
   | CTG 12.1 | COMDESRON XYZ (embarked ship DEF) |
   | TG 12.1  | COMDESRON XYZ                      |
   |          | Ship ABC                           |
   |          | Ship DEF                           |
   |          | Ship GHI                           |
   |          | Ship JKL (120700Z to 121200Z only) |
   
   | CTU 12.1.1 | COMDESRON XYZ |
   | TU 12.1.1  | COMDESRON XYZ |
   |            | Ship DEF     |
   |            | Ship GHI     |
   |            | Ship JKL (120700Z to 121200Z only) |
   
   | CTU 12.1.2 | CO SHIP ABC |
   | TU 12.1.2  | Ship ABC    |

b. CHOPs/Joinings and Detachments:

1. CTG 12.1 activated at 111200Z Apr 94. All participants (less Ship JKL) CHOP to TG 12.1 at that time.

2. TG 12.1 terminated at 121500Z Apr 94. All participants (less Ship JKL) CHOP to national authority at that time.

3. Ship JKL join exercise and CHOP to TG 12.1 at 120700Z Apr 94.

4. Ship JKL detached at 121200Z Apr 94.

5. Formations:

a. Maximum speed required for tactical maneuvers is 18 knots. Normal formation speed will be 8 to 15 knots. Speed and course changes should conform to movements of Guide.

b. Standard distance (D) is 1,000 yards.

c. Standard interval (I) is 2,000 yards.

d. Sequence numbers as follows:
   
   | Sequence #1 | Ship DEF |
   | Sequence #2 | Ship GHI |
   | Sequence #3 | Ship ABC |
   | Sequence #4 | Ship JKL |

e. Formations to be employed are as follows:

Figure 45-1. Sample Tasking Message (Sheet 2 of 3)
6. Reports:

a. Unit Readiness Reports. Upon reporting for duty all units submit readiness reports to CTG. Units report changes in readiness as occurring. Fully ready to participate in exercise requires:

   (1) Ability to make speeds up to 18 knots.

   (2) Steering system fully operable.

   (3) Small boat operable, able to be launched, and qualified boat crew available.

   (4) Surface and air search radars operable.

   (5) Two UHF and one VHF voice radio circuits available to meet communication requirements.

   (6) One UHF radio teletype circuit available to meet communication requirements.

   (7) All navigation lights operable.

   (8) Capable of flashing light and flaghoist communications.

b. Own-Position Reports. All participants report own-position to CTG 12.1 at 111500Z and 120800Z; report position to appropriate CTU at 120000Z. CTUs report TU position to CTG 12.1 at 120100Z.

c. Contact Reports. All participants report surface and air contacts to CTG 12.1 upon detection. Contact reports to be submitted in format provided in EXTAC 1000, Maritime Maneuvering and Tactical Procedures.

d. Danger Reports. All participants report any navigation dangers to CTG 12.1, appropriate CTU, and/or ships standing into danger.
7. Communications:

a. Radio Teletype Circuits:

- Circuit Name: RATT 1
  Frequency: 527 kHz
  Back-up Frequency: 617 kHz
  Intended Use: All radioteletype traffic
  Control: COMDESRON XYZ
  Participants: All TG 12.1

b. Voice Radio Circuits

- Circuit Name: TAC 1 (111100Z to 111800Z and 120700Z to 121600Z only)
  Frequency: 373.7 MHz
  Back-up Frequency: 412.0 MHz
  Intended Use: All TG 12.1 tactical signals
  Control: COMDESRON XYZ
  Participants: All TG 12.1

- Circuit Name: TAC 2 (111800Z to 120700Z only)
  Frequency: 515 MHz
  Back-up Frequency: 770 MHz
  Intended Use: TU 12.1.1 tactical and admin traffic
  Control: COMDESRON XYZ
  Participants: All TU 12.1.2

- Circuit Name: TAC 3 (111800Z to 120700Z only)
  Frequency: 612 MHz
  Back-up Frequency: 917 MHz
  Intended Use: TU 12.1.2 tactical and admin traffic
  Control: CO Ship ABC
  Participants: All TU 12.1.1

- Circuit Name: ADMIN 1 (Note)
  Frequency: 400 MHz
  Back-up Frequency: 450 MHz
  Intended Use: All TG 12.1 admin traffic
  Control: COMDESRON XYZ
  Participants: All TG 12.1

Note: COMDESRON XYZ and Ship ABC guard ADMIN 1 throughout exercise. All others guard ADMIN 1 from 111100Z to 111800Z and 120700Z to 121600Z only.
c. Voice Call Signs:

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<td>Juliett Kilo Lima</td>
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d. Special Tactical Signals. In addition to signals listed in EXTAC 1000, Maritime Maneuvering and Tactical Procedures, and paragraph 5e of this message, the following are effective for Joining Hands 94:

- C017...CHOP to TU 12.1.1. Rejoin TG 12.1 at 120700Z.
- CO18...CHOP to TU 12.1.2. Rejoin TG 12.1 at 120700Z.
- CO 19...CHOP to TU 12.1 at this time.
- CM13...Shift to TAC 2. Resume guard on TAC 1 at 120700Z.
- CM14...Shift to TAC 3. Resume guard on TAC 1 at 120700Z.
- CM15...Shift to TAC 1 at this time.

8. Additional Comments. Post exercise critique will be held during port visit of COMDESRON XYZ and Ships ABC and DEF to Portsmouth, England, 22 to 24 April 94. If representatives of Ships GHI and JKL cannot attend, comments should be forwarded to COMDESRON XYZ prior to 22 April. Details on meeting time and place will be forwarded when known.
ANNEX A

Glossary of Terms, Acronyms, and Abbreviations

0A01 Introduction

This annex provides a glossary of terms, with reference paragraphs in parentheses, and a list of acronyms and abbreviations used in this manual.

0A02 Glossary of Terms

chain of command. The succession of authority of commanders within a task organization. (0101.d)

change of operational control (CHOP). The shift of responsibility for command and/or control from one commander to another. (0102.3)

circular formation. A formation in which ships are assigned stations around a central location. (0301.2)

column formation. A line formation in which ships are aligned bow to stern. (0301.1a)

column open order. A modification of a line formation in which ships are displaced on each side of the stern of the lead ship. (0301.1d)

command. The authority vested in an individual to direct, coordinate, and control forces. (0102.1)

commander task element. The commander assigned command and control authority over forces assigned to a task element. (0101.c)

commander task group. The commander assigned command and control authority over forces assigned to a task group. (0101.a)

commander task unit. The commander assigned command and control authority over forces assigned to a task unit. (0101.b)

control. The authority exercised by a commander over part of the activities of subordinates. (0102.1c)

coordination. The establishment of planned actions to achieve the best overall results. (0102.1b)

corpen. A line formation maneuver in which ships alter course so that the relative bearing to the Guide is the same at the completion of the maneuver as it was at the start of the maneuver. (0302.2)

designated station. An area or point established in advance for assigning ships within a formation. Designated stations apply only to the exercise or operation for which they are developed. (0201.3)

diamond formation. A formation of ships that resembles a diamond. A diamond formation can be formed only from a column formation. (0301.1e)

direction. The process of planning, establishing priorities, formulating policies, and imposing decisions. (0102.1a)

distance. The distance between ships in a line. (0203.3)

formation. The orderly grouping of ships for the purpose of safely and efficiently completing an exercise or operation objective. (0301)

Guide. The ship in a formation on which other ships take station. (0203.5)

INTERCO. A code word that indicates signals are from the International Code of Signals. (0403.13)

INTERROGATIVE. A signal modifier that denotes a question. (0403.6)
**interval.** The distance between lines of ships in a multiple line formation. (0203.3)

**line abreast formation.** A line formation in which ships are aligned beam to beam. (0301.1b)

**line formation.** One of several basic formations in which ships are stationed along a line. (0301.1)

**line of bearing formation.** A line formation in which ships are aligned along a designated bearing. (0301.1c)

**NEGAT.** A signal modifier that denotes “cease or do not.” (0403.6)

**operational command and control.** The authority to assign ships as participants in an exercise or operation, to deploy ships to meet exercise or operation commitments, and to authorize ships to detach from an exercise or operation. (0102.2a)

**position and intended movement (PIM).** The general track along which a task group will proceed. A PIM consists of a position, time of position, course, speed, and time in hours for which the course and speed is in force. (0203.2)

**PREP.** A signal modifier that denotes “prepare to.” (0403.6)

**readiness.** The ability of a command to carry out an assigned exercise or operation. (0104)

**sequence number.** A number assigned to a ship in a task group to facilitate close maneuvering and stationing. (0203.6)

**standard position.** One of a series of positions that are valid during all exercises or operations. (0201.4)

**station.** The position within a formation assigned to a ship. (0203.4)

**tactical control.** The authority to direct and control the movements or maneuvers of ships to accomplish an exercise or operation. (0102.2c)

**task element.** A command and control grouping of forces subordinate to a task unit. (0101.c)

**task group.** The largest command and control grouping of forces involved in an exercise or operation. (0101.a)

**task organization.** The structure that delineates command and control responsibility of forces involved in an exercise or operation. (0101)

**task unit.** A command and control grouping of forces subordinate to a task group. (0101.b)

**turn.** A formation maneuver in which all ships alter course simultaneously and maintain true bearing to the Guide. (0302.1)

### 0A03 List of Acronyms and Abbreviations

**CHOP.** Change of operational command

**CTE.** Commander task element

**CTG.** Commander task group

**CTU.** Commander task unit

**D.** Standard distance

**d.** Distance

**DESIG.** Designation

**EMERG.** Emergency

**FORM.** Formation

**GMT.** Greenwich Mean Time (Zone 0, Z)

**I.** Standard interval

**INT.** Interrogative
INTERCO. Signals are from the International Code of Signals

kt. Knot(s)

NEGAT. Cease or do not

nm. Nautical mile(s)

PIM. Position and intended movement

POL. Petroleum, oil, and lubricants

PREP. Prepare to

QQ. Center of the front of a formation

R. Relative

RAS. Replenishment at sea

RP. Reference point

STBD. Starboard

T. True or time

TACK. Tackline (—)

TE. Task element

TG. Task group

TT. Originator’s position

TU. Task unit

VERTREP. Vertical replenishment

XX. Position upon which an evolution is based

yd. Yard(s)

YY. Addressee’s position

ZZ. Formation center

°. Degree(s)
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