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**DESTROYER
TORPEDO ATTACK INSTRUCTIONS
(TENTATIVE)**

**DESTROYER TACTICAL BULLETIN
No. 4-43**

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Serial 01264

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24 October 1943

From: The Commander Destroyers, Pacific Fleet.
To: Destroyers, Pacific Fleet.

Subject: Destroyer Tactical Bulletin 4-43 (Tentative) - Destroyer Torpedo Attack Instructions.

1. Destroyer Tactical Bulletin 4-43, Destroyer Torpedo Attack Instructions, is issued by Commander Destroyers, Pacific Fleet, for instruction and guidance of destroyers and destroyer escorts, Pacific Fleet.

2. This bulletin is classified as CONFIDENTIAL and will be handled and safeguarded as classified correspondence. Routine reports of accountability of this bulletin are not required.

3. This publication is issued as a tentative bulletin to permit all commands to submit comments or recommendations. Destroyers, Destroyer Escorts, Pacific Fleet, and other commands are invited to make comments on this publication. All comments should be submitted to this command not later than April 1, 1944.

M. S. TISDALE.

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PART I

OBJECTS OF TORPEDO ATTACKS

100 DEFINITIONS

A strike is a torpedo attack to destroy or damage the physical objective.
A threat is a torpedo attack to influence the enemy's tactics.

101 STRIKES

A strike may be ordered for:

1. A primary blow against the enemy.
2. As an initial blow against the enemy to be followed by destruction by other weapons.
3. As a secondary blow to complete the destruction of vessels damaged by other weapons.

102 THREATS

A threat, if accepted by the enemy, may become a strike, but its original purpose remains unchanged. It is employed to:

1. Prevent the enemy from closing the range.
2. Force the enemy to open the range.
3. Dislodge the enemy from a position which is advantageous to him.
4. Force the enemy to break off the action and enable own forces to retire.

In a threat, complete concealment is not generally wanted, although advantage may be taken of concealment during the approach to reduce the effectiveness of enemy gunfire and thus reach a more effective firing position. Torpedoes may be expended more sparingly than in a strike, and torpedo fire may be withheld altogether if the enemy maneuvers as we desire.

103 MELEES

A melee is a close range encounter in which the combatants form a confused mass. Our object in provoking a melee will be to create such a situation for the destroyer torpedo attack possibilities which it offers, while the enemy is temporarily disorganized and unable to take coordinated action to repel or evade the attack. In a melee, the advantage often lies with the inferior force, and in all cases to the force which is on the offensive.

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PART II

OBJECTIVES IN TORPEDO ATTACKS

200 OBJECTIVES IN STRIKES

- (A) When the strike is made in order to deliver a major blow to the enemy, the attack should be concentrated upon the most important part or ships of the enemy force, in order to get enough hits on individual ships to sink them or put them out of action. Single torpedo hits do not generally do enough damage to large ships to put them out of action for some time.
- (B) When the strike is made in order to inflict initial damage to an enemy force, the attack should be distributed over as many of his heavy ships as can be covered.
- (C) When the strike is made in order to finish off crippled enemy ships, the attack should be pushed in to close range so that single shots are justified.

201 OBJECTIVE IN THREATS

When the threat attack is made the attack should be directed against those of the enemy heavy ships which are delivering, or are in position to deliver, the most effective fire against our own heavy ships.

202 OBJECTIVES IN MELEES AND IN SURPRISE ENCOUNTERS

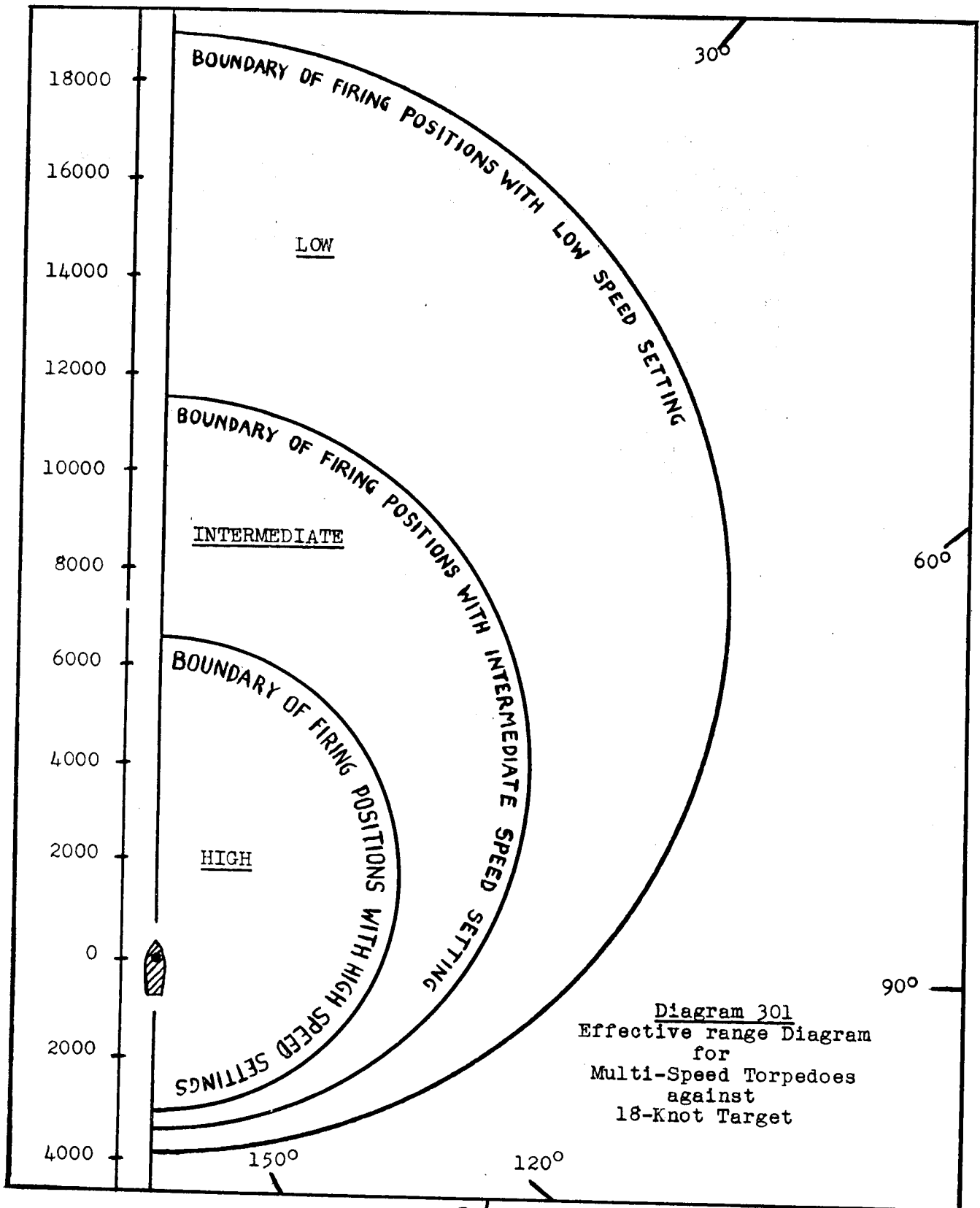
In a melee or surprise encounter, the objective for torpedo attack by destroyers is the nearest important enemy unit which can be attacked without unduly endangering friendly ships.

PART III

TORPEDO FIRING POSITIONS

300 POSSIBLE FIRING POSITIONS

- (A) Torpedo hits are possible from any positions from which the torpedo can reach the target by the time it has run to its maximum range. For each firing bearing, the maximum target range from which torpedoes can be fired to hit is called the "effective range". The effective range depends upon target angle, target speed, torpedo speed (setting), and torpedo range.
- (B) Diagram 301 shows curves of effective range for destroyer multi-speed torpedoes against an 18-knot target ship. If necessary, low speed setting can be used in the intermediate and high speed zones, and intermediate in the high speed zone, but the reverse of this does not hold good.
- (C) In deriving the curves of diagram 301, torpedo run was taken at 80% of the maximum torpedo range, in order that an over-run would result and thus make it difficult for the enemy to outrange the salvo by turning slightly away.

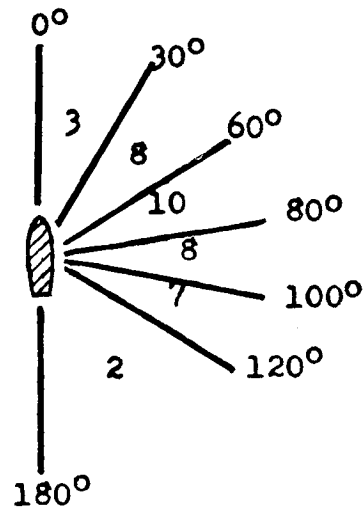


301 COMPARISON OF INDIVIDUAL FIRING POSITIONS

(A) DISCOUNTING EVASIVE ACTION

1. When the target takes no action to evade torpedoes, the probability of hitting with a single torpedo depends upon the size of the target, the target angle, and the firing range. When more than one torpedo is fired, as in a spread, the probability of getting a hit is increased in proportion to the number fired.
2. Diagram 302 shows the relative probabilities of torpedo hits for various target angles at equal ranges. This diagram is based upon the average for all normal speeds of target and torpedoes.

60°



90°

Diagram 302 Relative Hitting Probabilities

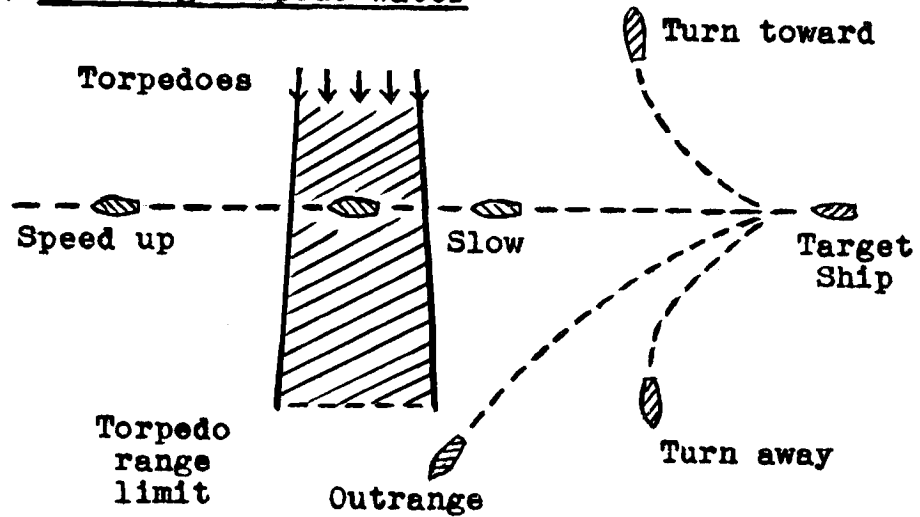
(B) ENEMY EVASIVE ACTION

1. Evasive action is that action taken by the enemy target ships to evade torpedoes which have been launched against them.

2. Forms of Evasive Action

The enemy may take any or all of the following forms of evasive action:

(a) Avoiding torpedo water



The shaded area shows "torpedo water"

Diagram 303

(b) Presenting minimum target

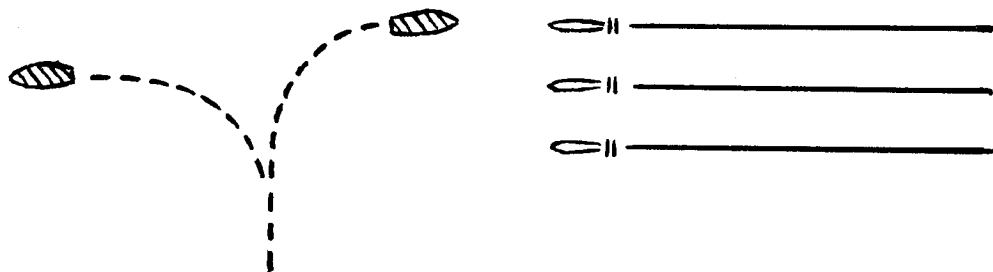


Diagram 304

(c) Evading Individual torpedoes

No diagram for this type of evasive can be drawn; it depends upon getting the ship on a non-collision course with the torpedo.

3. Evasive Action in Relation to Firing Position

(a) Evasive action is related to torpedo firing position, since the latter determines the direction from which the torpedoes approach the target ship and the time available for evasive action.

(b) Diagram 305 shows the evasive possibilities for an enemy ship against torpedoes coming from various firing positions.

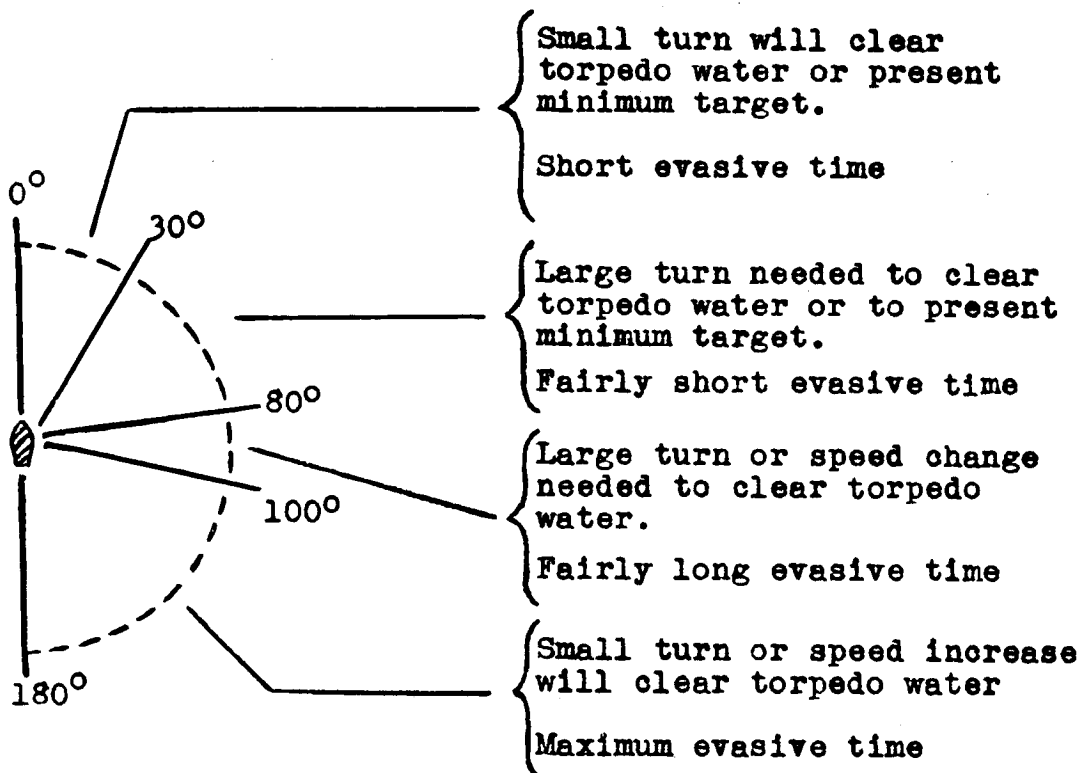


Diagram 305

4. Effectiveness of Evasive Action

The effectiveness of enemy evasive action depends on:

(a) Forms of Evasive Action Open to the Enemy

- (1) Avoiding torpedo water is the most effective.
- (2) Presenting minimum target is fairly effective and facilitates—
- (3) Evading individual torpedoes by individual movement.

(b) Information on Which Evasive Action Is Based

- (1) Detection of the attack, visually or by radar.
- (2) Determination of the instant of torpedo firing - by seeing torpedoes launched, by seeing impulse charge flashes, or by deduction from movements of the attacking destroyer.
- (3) Sighting torpedo wakes.
- (4) Hearing torpedo wakes in underwater listening gear - Japanese ships are reported to have very efficient underwater listening gear.

(c) Time Available for Evasive Action

- (1) The shorter the time available for evasive action, the less effective is it likely to be.
- (2) Short torpedo runs and high torpedo speeds give less time for evasive action.

(C) CONSIDERING ENEMY EVASIVE ACTION

1. The overall probability of torpedo hits from a given firing position must be based upon:
 - (a) The "no evasion" probability.
 - (b) The effectiveness of evasive action for that firing position.
2. Diagram 306 indicates the general merits of various firing positions on the above basis.

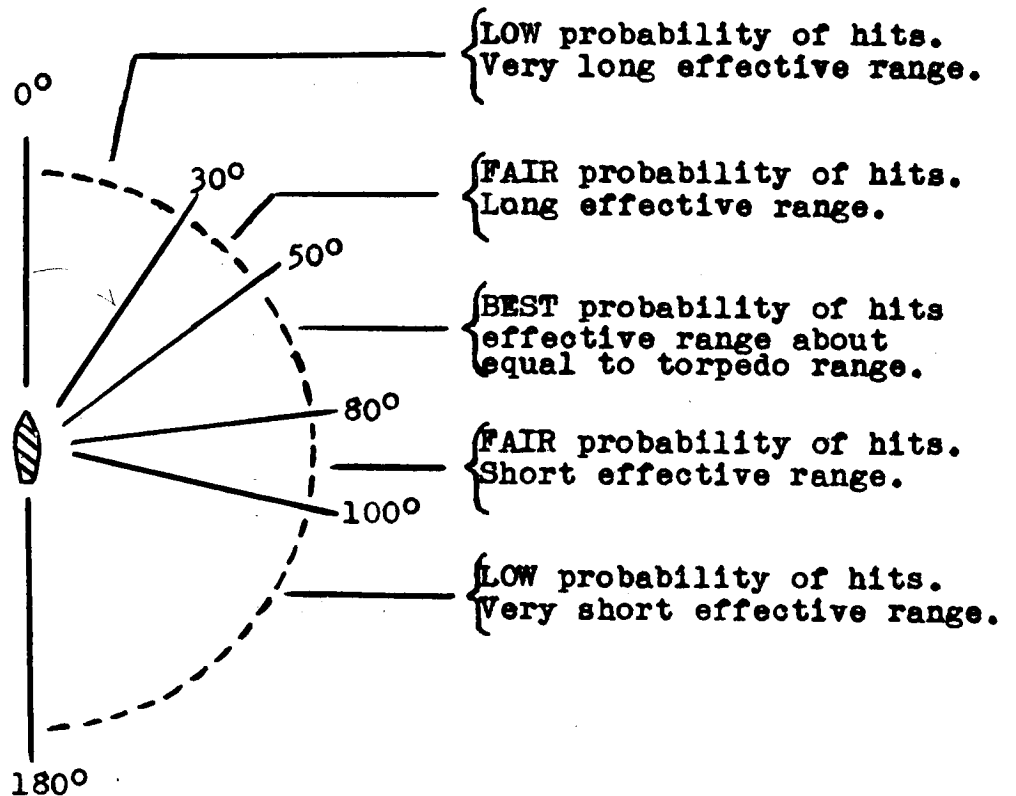


Diagram 306

302 MULTIPLE FIRING POSITIONS

(A) DEVELOPING CROSS TORPEDO FIRE

The enemy can, if he detects the attack in time, take reasonably effective evasive action against any normal torpedo salvo fired from a single firing point. However, if several attack units fire torpedoes at about the same time from firing positions on different bearings from the enemy, the problem of evasion is made far more difficult, since what is correct evasive action for torpedoes coming from one firing position may increase the chances of hitting by the other torpedo salvo.

The general result of firing torpedoes at about the same time from multiple firing positions is to produce cross torpedo fire; the maximum effectiveness of this type of fire will develop when the separate salvos arrive nearly simultaneously at the target.

(B) COORDINATION OF TORPEDO FIRE

Torpedo fire from multiple firing positions must be coordinated in time for maximum effectiveness. When surprise and concealment are not possible, coordination can be effected by voice, radio, or flag hoist. When the attack is a surprise strike, however, a lower degree of coordination must be accepted in return for radio and signal silence. In a surprise attack this lower degree of coordination is generally acceptable, since if the attack is a surprise the enemy may be expected to take no evasive action. Some degree of coordination is still possible without signalling, so long as the radar is working, because the progress of other attack units can be noted and the rate of approach adjusted accordingly.

(C) FURTHER ADVANTAGES

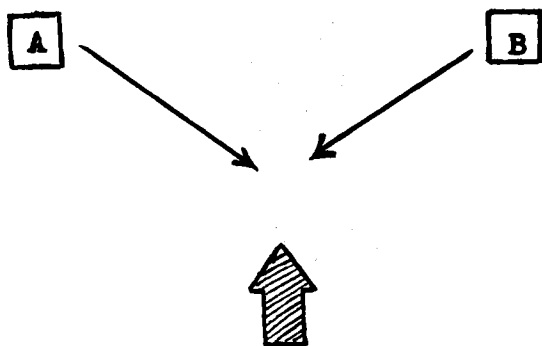
Further advantages accruing from the use of multiple firing positions are:

1. Attacking units are spread out, making defense more difficult.
2. More attack units can fire at the same time than could if single firing points were used.
3. Retirement is facilitated by the greater separation of units.

(D) The following diagrams show the principal characteristics of various combinations of firing positions. These diagrams are drawn for two firing units only, but the same principles apply when more firing positions are used.

Diagram 307

MULTIPLE FIRING POSITIONS

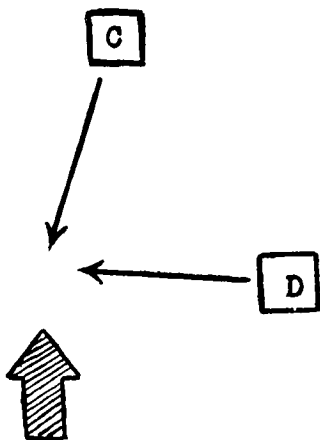


ON EACH BOW

This is the most effective combination of firing positions, since the only effective action to evade torpedoes is to reverse course.

Diagram 308

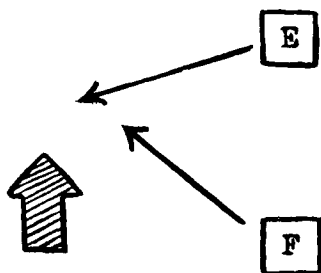
AHEAD AND ON THE BOW



Torpedoes coming from position C are not in themselves effective if the enemy continues on his present course, accepting the menace of those coming from D, but they will become effective if the enemy takes evasive action for the salvo from D.

Diagram 309

BOW AND BEAM



This combination of firing positions would probably be used in a surprise attack or threat from the beam, since it is most effective only if the enemy continues his present course. As a threat, it leaves a turn-away the only effective evasive action.

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PART IV

METHODS OF ATTACK

400 ATTACK SECTORS

- (A) For a planned torpedo attack, destroyers are ordered to attack from specified sectors radial to the center of the objective, and without regard to range. Attack is pushed home unless in the meantime the ship is receiving damage in such degree as to indicate the probability that the destroyer cannot reach the optimum firing position while still capable of firing torpedoes. In this case the torpedoes are fired as soon as effective torpedo range is reached.
- (B) Each attack unit proceeds to its assigned sector by the shortest route, and then approaches the objective on an approximate collision course to remain within its sector.

401 DESIGNATION SYSTEM FOR ATTACK SECTORS

Forty-five degree (45°) attack sectors are spaced radially about the approximate center of the objective, and are numbered from 1 to 8 clockwise from true North.

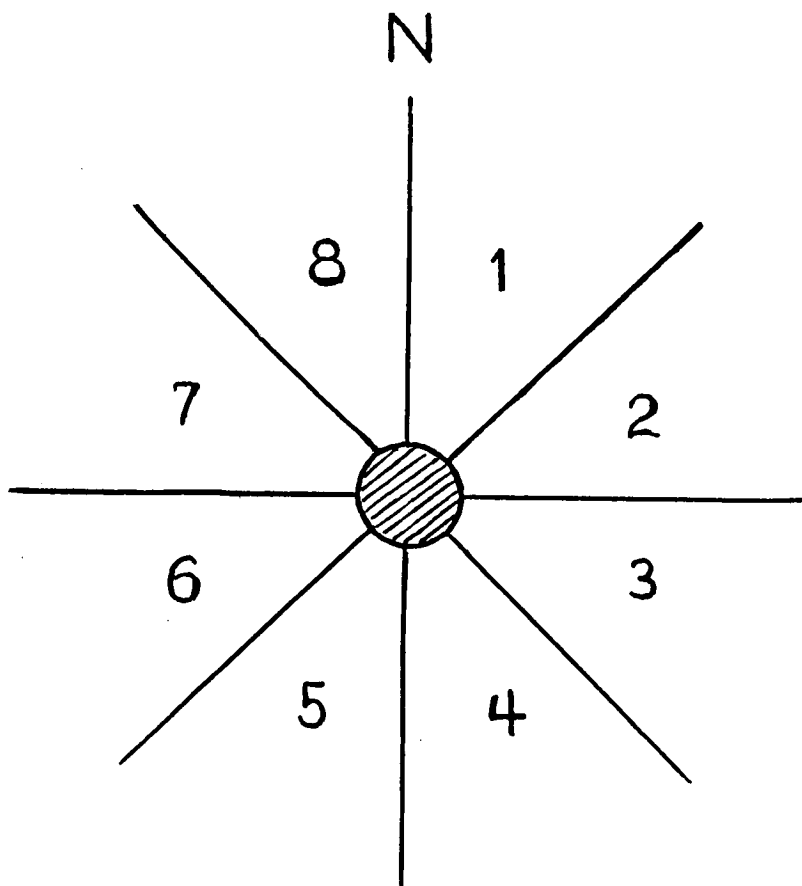


Diagram 401

402 SECTOR ATTACK PLANS

- (A) The use of attack sectors provides a simple method for developing and designating torpedo attack plans. In developing a torpedo attack plan, selection of attack sectors will depend upon the following:
1. Enemy's course.
 2. Purpose of the attack.
 3. Initial positions of the attacking destroyers.
 4. Destroyer strength available for the attack.
 5. Enemy disposition.

- (B) When the attack is a strike, attack sectors should be chosen to develop a maximum of cross torpedo fire if the attack is not a complete surprise to the enemy. For a surprise strike, attack sectors giving favorable firing positions should be chosen, since there is less need to cover enemy evasive maneuvers when the strike is a complete surprise.

When the attack is a threat, attack sectors should be chosen to develop the greatest volume of torpedo fire in the area or direction we seek to deny to the enemy.

- (C) The initial positions of the attacking destroyers determine to a large extent not only the general direction of the attack as a whole but also which attack sectors can be reached and used profitably. Destroyers initially positioned ahead of the enemy are in the most favorable position for choosing attack sectors, since they can generally reach any combination of sectors forward of the enemy's beam. When the attacking destroyers are initially positioned near the enemy's beam, it will be found that attack sectors on the opposite bow of the enemy can not be reached in time to be used effectively, and that maximum speed will be required to reach any extreme forward sector.

When destroyers have been ordered to attack from a cruising disposition in which they form the screen, it may be found that separation between them will unduly delay a concentrated attack. In this case, destroyers on the side toward the enemy (if ordered to attack) should form into attack group(s) as rapidly as possible and at once attack from a favorable sector. If the destroyers on the engaged side can form two attack groups, then the attack should be conducted as described in paragraph (B) above.

When in company with larger ships which are in contact with the enemy, destroyers, unless otherwise ordered, should seek initial positions well forward of the enemy, so that they will be favorably placed for a torpedo attack if one is ordered.

If the number of destroyers present is insufficient to form separate offensive and defensive groups, the initial position should be well forward of the enemy as indicated above, but not so far forward that the destroyers cannot break up an enemy light force attack on our own heavy ships.

- (D) The destroyer strength available for the attack governs to some extent the selection of attack sectors, since it determines in general how many attack sectors should be used.

While no definite rules for division of destroyer strength into attack sectors can be laid down, the following table indicates in general how many attack sectors can profitably be utilized under normal circumstances:

Number (Not designating No.) of Attack Sectors		
No. of Destroyers	Deliberate Attack	Planned Surprise
1 - 5	1	1
6 - 8	2	2
9 - 14	2 - 3	2

When destroyer strength is to be unequally divided between attack sectors, preference should be given to sectors giving favorable firing positions for the expected course of the enemy when the torpedoes reach him.

- (E) Where the enemy formation is not compact, or where his forces are divided into separate groups in tactical support of each other, selection of attack sectors for a particular part of the enemy force will be governed to a large extent by the opposition which other enemy groups are in positions to offer. Thus, the presence of enemy cruisers ahead of the objective group will very probably deny forward sectors to attacking destroyers.

Where the enemy disposition is such that attacking destroyers cannot reach effective firing positions owing to interposition of defending cruisers or other light craft, either an initial destroyer attack must be directed against such ships, or the destroyer attack must be supported by gunfire, bombing, or plane torpedo attacks to open a way for the attack group.

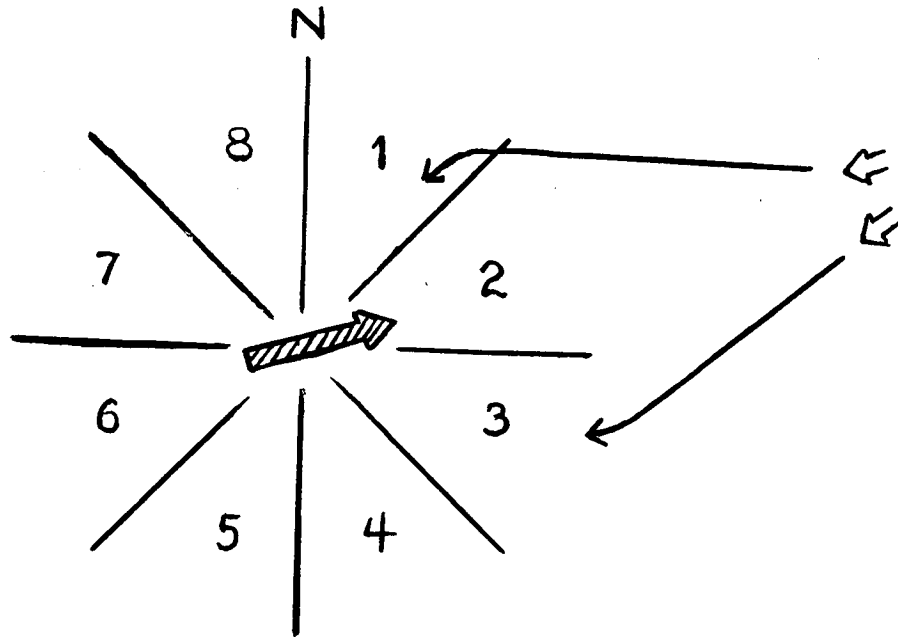


Diagram 402

DUPLEX STRIKE FROM DEAD AHEAD OF ENEMY

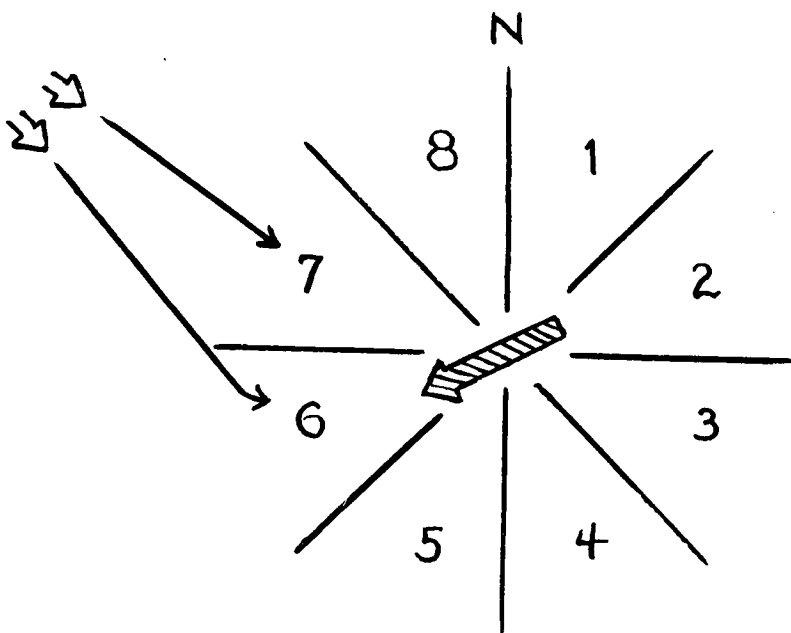


Diagram 403

DUPLEX STRIKE FROM STARBOARD BOW

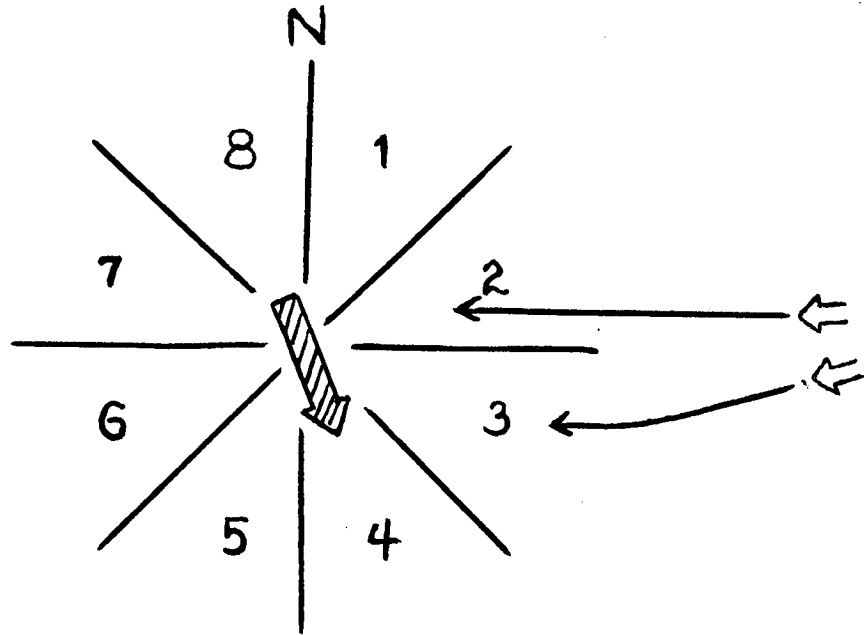


Diagram 404

DUPLEX STRIKE FROM POSITION FORWARD OF ENEMY'S PORT BEAM

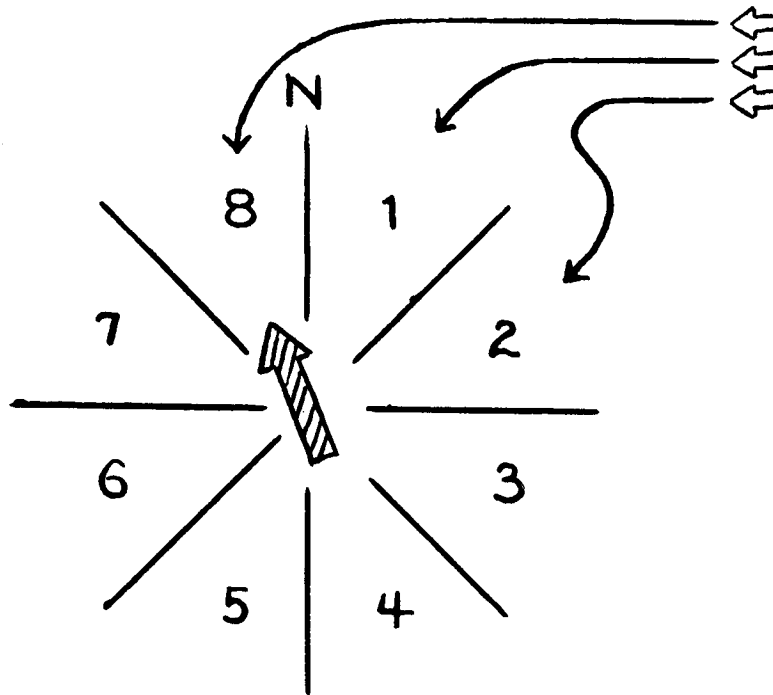


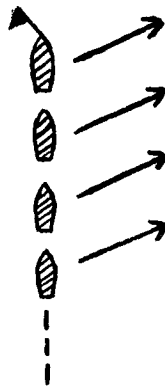
Diagram 405

TRIPLEX STRIKE FROM ENEMY'S STARBOARD BOW

PART V

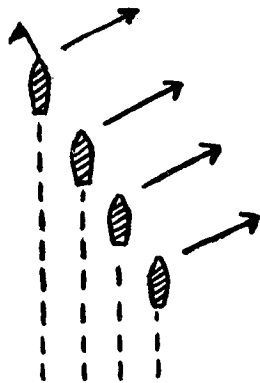
FIRING FORMATIONS AND FIRING MANEUVERS

500 A Firing Formation is a formation from which all destroyers can fire at the same target at the same time. It may be simple or compound. Diagram 501 illustrates various division firing formations and gives the limitations and advantages of each. Diagram 504 illustrates a squadron firing formation.



(A) Column

Column, or approximate column, is the best all-round firing formation for a division. Torpedoes may be fired on torpedo course angles from 010° to 170° without endangering other ships. Well suited for night.



(B) Line of Bearing

Torpedoes endanger ships following if the line of bearing is more than 15° from the course. If kept within this limit, may help rear ships to see the target. Useable torpedo course angles from 040° to about 100° .

NOTE: If influence type of exploders are used torpedoes should not be fired through wakes of ships of own formation.

Diagram 501

DIVISION FIRING FORMATIONS

501 A Firing Maneuver is a maneuver in which the firing units (ships, sections, or divisions) pass through a firing point or points in succession as the maneuver progresses. Diagram 502 illustrates representative firing maneuvers for a division. Many other division firing maneuvers can be devised, but all firing maneuvers are of limited utility and should be avoided if it is possible to place the division into a firing formation in time. Diagram 505 illustrates a squadron firing maneuver.

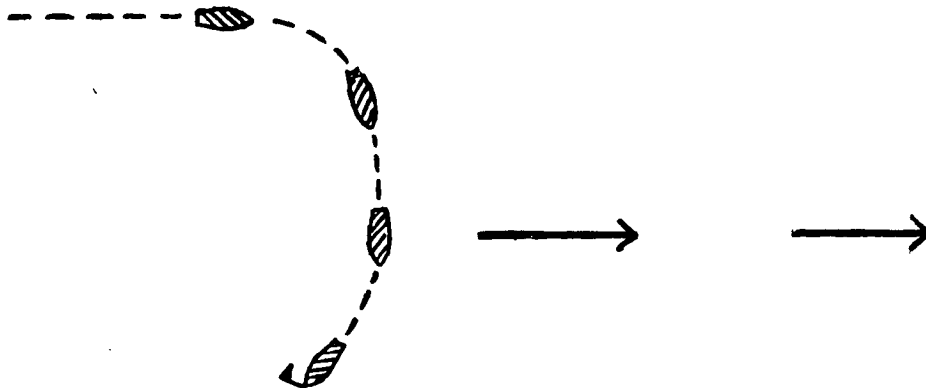


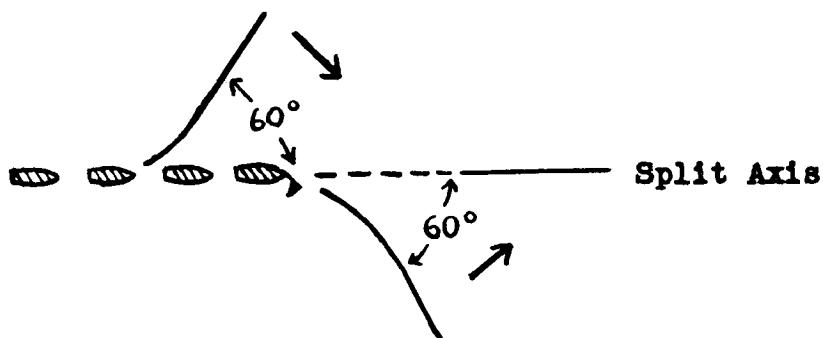
Diagram 502

DIVISION FIRING MANEUVERS

Approach in column. Follow-the-leader to firing course, and, after firing torpedoes, follow-the-leader in retirement.

This maneuver is simply a variation of the column firing formation, with firing started as soon as the first ship comes to the firing course, and a turn-away by each ship as soon as she has fired.

502 Emergency Split Deployment for a division is illustrated in diagram 503, in which the two sections go in different directions to obtain torpedo cross-fire.



Case 1. Split Axis along course; first section turns 60° right; second section turns 60° left.

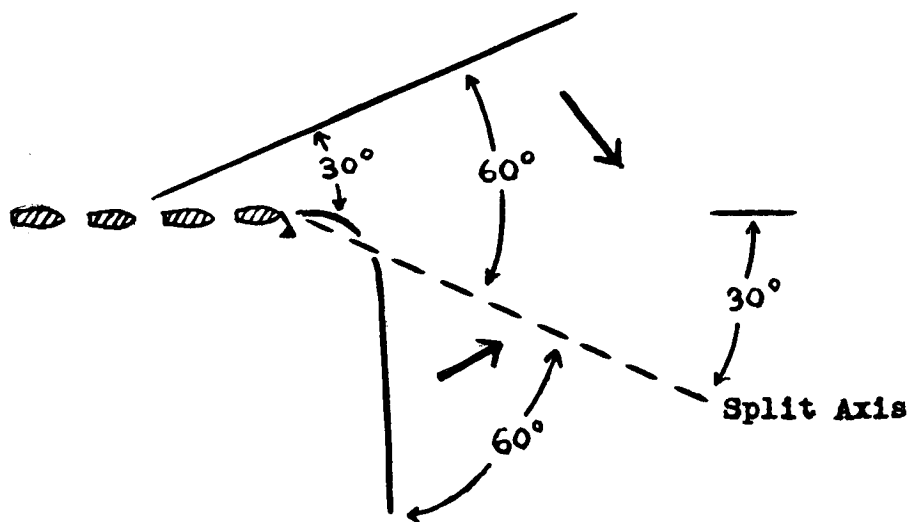


Diagram 503

DIVISION EMERGENCY SPLIT DEPLOYMENT

Case 2. Split Axis not along course. First section turns 60° right of split axis; second section turns 60° left of split axis.

The purpose of the above deployment is to obtain cross-torpedo fire by securing multiple firing positions relative to an enemy sighted at close range.

NOTE: If split deployments are finally adopted, provision will be made to include necessary signals in General Signal Book.

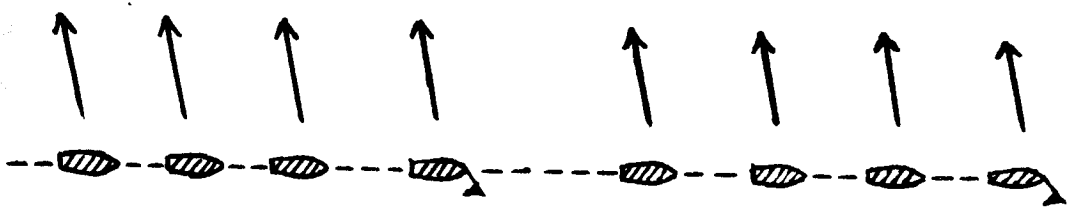


Diagram 504

SQUADRON FIRING FORMATIONS

Column of Division Columns

This is an excellent all-around firing formation, but may take some time to form and is not easy to maintain in battle.

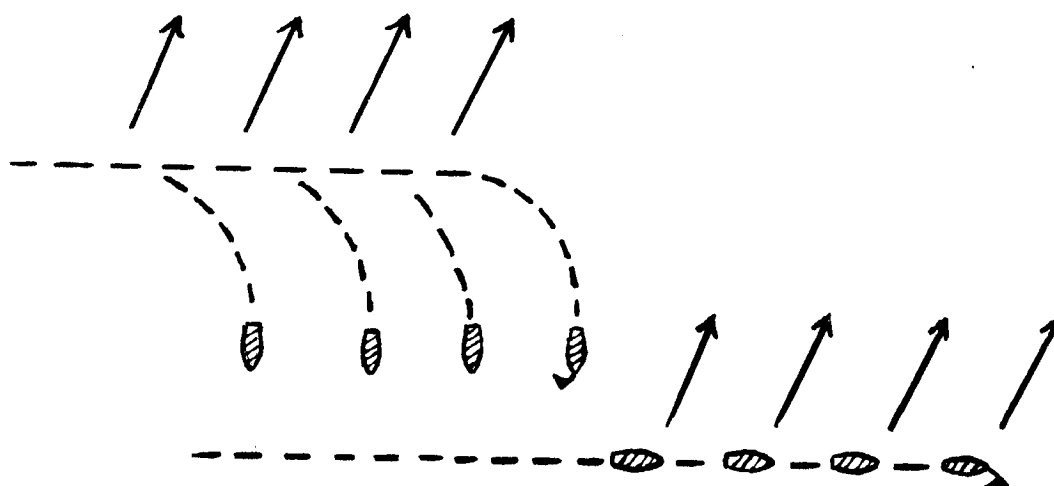


Diagram 505

SQUADRON FIRING MANEUVERS

Approach in Line of Bearing of Division Columns, and Firing Forward of Line of Bearing of Division Guide by "Fire and Turn by Ripple From the Rear"

The rear division turns away together as soon as they have fired torpedoes; the leading division stands on until their rear is clear of the van of the rear division and then fires torpedoes. The line of bearing should be kept between 30° to 90° from the direction of torpedo fire.

NOTE: If influence type of exploders are used torpedoes should not be fired through wakes of ships of own formation.

PART VI

ATTACK FORMATIONS AND MANEUVERS

600 ATTACK FORMATIONS

(A) The formation taken by a unit of destroyers standing in for a deliberate or planned surprise attack should be based upon such of the following considerations as apply in the circumstances:

1. Desired firing formation or firing maneuver.
2. Division attack plan (Base Torpedo Course, Mutual Target, or Individual Target Plan).
3. Optical (or radar) visibility of target to individual attacking destroyers.
4. Station-keeping within the attack unit.
5. Intra-unit communications.
6. Development of gunfire by attacking destroyers.
7. Presentation of minimum or most difficult target to enemy gunfire or torpedo fire.
8. Use of smoke-screen concealment.

601 INTENDED FIRING FORMATION OR FIRING MANEUVER

The attacking destroyers should be able to take a firing formation or perform a firing maneuver readily from the formation used for approach on the attack. If the formation used for standing in on the attack is dictated by other considerations (as detailed in following paragraphs), then the firing formation or firing maneuver must be based on the attack formation. If, on the other hand, a firing formation or firing maneuver has been decided upon, then the attack formation must be chosen so that it will facilitate the former.

The following figures illustrate typical cases of interdependence between attack formation and firing maneuvers or firing formations.

Case in which attack formation required governs selection of maneuver to fire or to form firing formation.

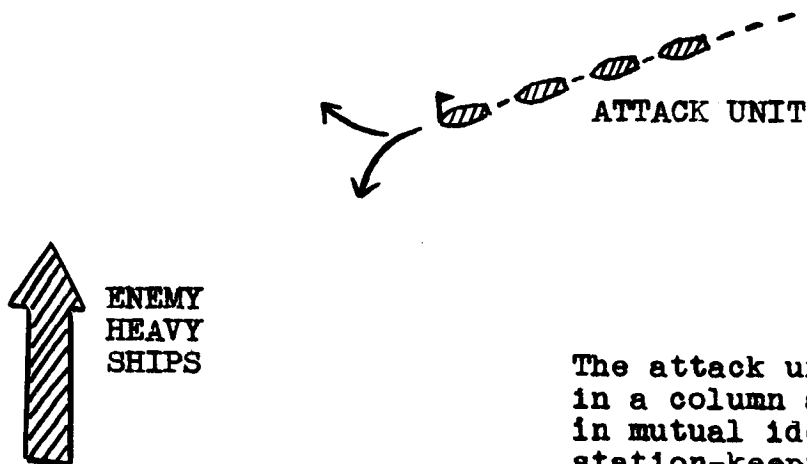


Diagram 601

The attack unit is standing in in a column at night, for ease in mutual identification, station-keeping and intra-unit communication. To fire torpedoes, the division will have to perform a column movement, because the torpedo course is within 10° of the attack unit course and risk of collision with own torpedoes is involved in firing from the present column.

Case in which attack formation required governs selection of firing maneuver or firing formation.

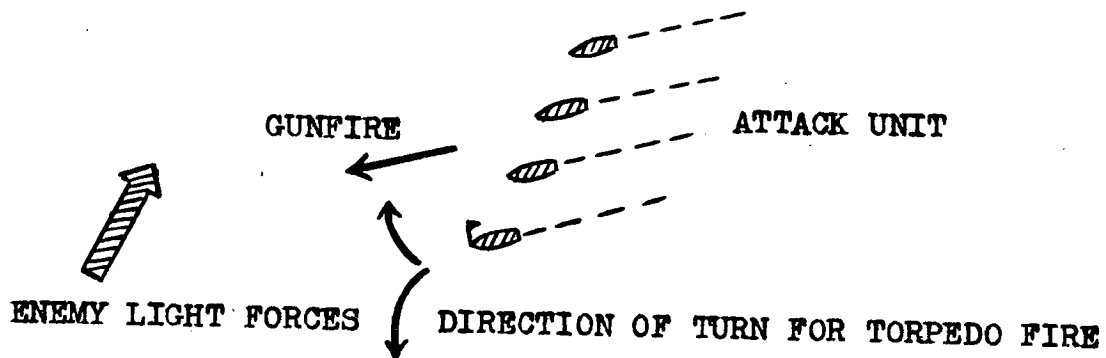


DIAGRAM 602

The attack unit is required to develop gunfire against the defending light forces of the enemy, and hence takes up a line of bearing formation as shown. This line of bearing formation will require a turn as shown in order to perform a torpedo firing maneuver or form a torpedo firing formation.

Case in which firing formation governs selection of attack formation.

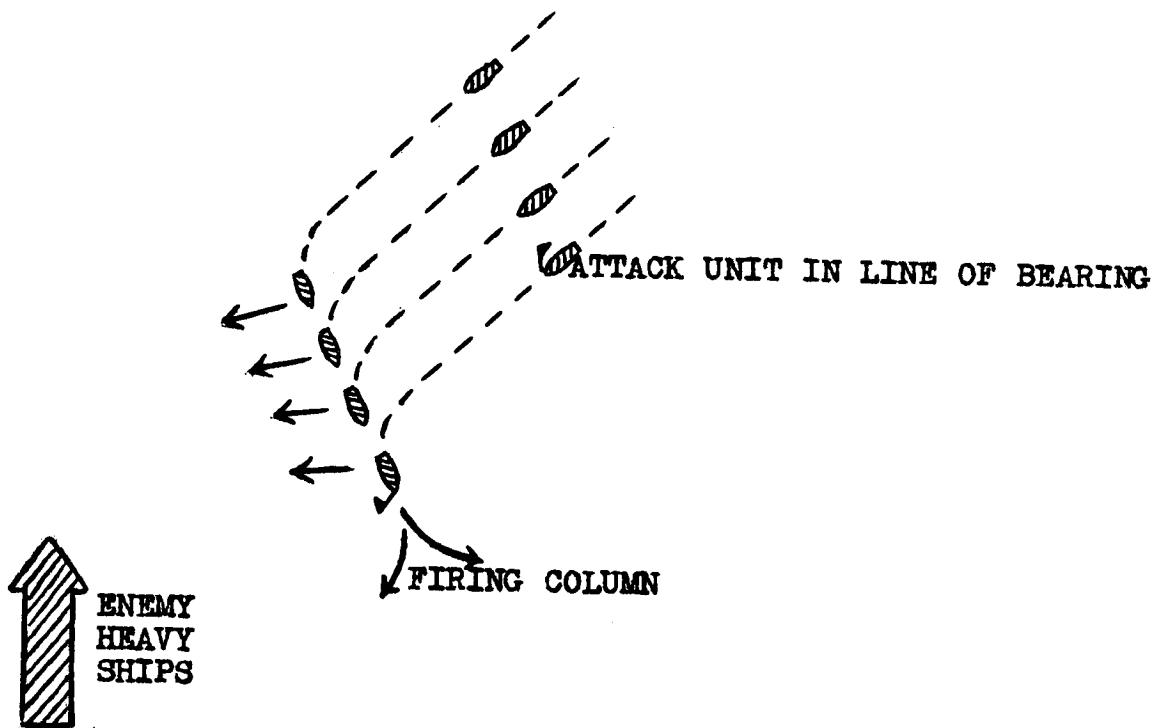


Diagram 603

It has been decided to form a firing column for torpedo fire, so that all ships of the attack unit will fire simultaneously. Accordingly, the attack unit is formed in line of bearing parallel to the desired firing column.

602 DIVISION ATTACK PLANS

(A) BASE TORPEDO COURSE PLAN

1. The Base Torpedo Course Plan is intended to produce a division salvo having approximately the same frontal width at any range. This width depends primarily upon the separation of the attacking destroyers at right angles to the base torpedo course, since only a one degree (1°) unit of spread is used when firing in this plan.
2. The Base Torpedo Course Plan is best used with a firing formation whose line of bearing is approximately at right angles to the base torpedo course, and this formation should be one that can be taken as rapidly as possible from the attack formation, so that the target bearing will change as little as possible from the start of the maneuver until firing, otherwise the base torpedo course signalled may become seriously in error.
3. In using the Base Torpedo Course Plan, the attack formation should be such as to cause all destroyers of the attack unit to enter each effective range zone together, so that the same torpedo speed setting can be applied in each destroyer. The reason for this is that the base torpedo course signalled is based on one definite torpedo speed setting and is not correct for another. However, since it will not be possible always to be in the exact positions upon which the Base Torpedo Course is computed, each commanding officer will compute the Base Torpedo Course and use his own, provided it differs from signalled Base Torpedo Course by more than 5° , or in the event the Base Torpedo Course is not received from higher authority.

(B) MUTUAL TARGET PLAN

1. The Mutual Target Plan requires an attack formation such that each destroyer of the attack unit can see (optically or by radar) the designated target throughout the approach, or at least long enough to obtain a proper torpedo control set-up.
2. Any firing formation or firing maneuver which will enable each destroyer to see the target can be used in this division attack plan.

(C) INDIVIDUAL TARGET PLAN

1. The Individual Target Plan requires an attack formation such that each destroyer can, during the approach, see (optically or by radar) her objective for torpedo fire.
2. The attack formation should not, if possible, require such a firing formation or firing maneuver that targets have to be shifted at the instant before firing, otherwise confusion and poor aim will result. Figure 604, below, illustrates this point.

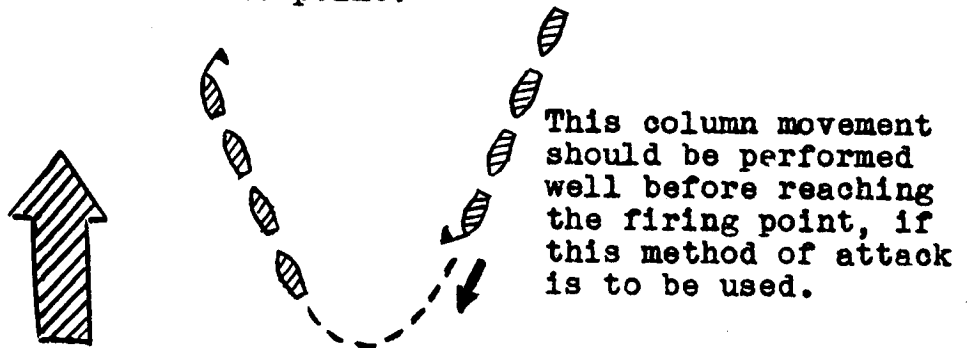


Diagram 604

During the approach, the leading destroyer aims for the rear of the enemy group, and the rear destroyer for the enemy van, but after the column movement to get into firing formation, the leading destroyer has to shift targets to the enemy van and the rear destroyer to the enemy rear.

603 OPTICAL (OR RADAR) VISIBILITY OF TARGET TO ATTACKING DESTROYERS

- (A) Whether or not the Base Torpedo Course Plan is used by the attacking unit, it is necessary that each destroyer be able to maintain contact with the enemy optically and/or by radar throughout the approach in order to facilitate tracking and insure a more nearly correct torpedo control set-up.
- (B) Unless other considerations demand it, the line of bearing of the attack unit should not lie within 10° of the bearing of the enemy unit being attacked.

604 STATION-KEEPING WITHIN THE ATTACK UNIT

- (A) At night or in reduced visibility, column or approximate column (such as column open order) will greatly facilitate station-keeping and correspondingly reduce risk of collision.
- (B) In daytime, division line or line of bearing may be used, but fairly accurate station-keeping will be needed if the turn into firing column is to be done expeditiously.
- (C) At night or in reduced visibility, squadron (or larger) formations should not be used. Where a squadron or larger group is to attack from one firing position, each division composing the attack group should be formed separately with ample interval between divisions, otherwise extremely accurate station-keeping is demanded. Each attack unit will maintain a track of other attack units at all times for identification purposes.
- (D) In daytime, simple squadron formations may be taken by attacking units, with ample interval between divisions. But it will always be found simpler to attack by division units so that divisions do not have to keep station on one another but can concentrate upon attaining their position with respect to the enemy.

605 INTER-UNIT COMMUNICATIONS

- (A) In daytime, almost any simple division formation will enable rapid communication by flag hoist, and there is less restriction of the use of voice-radio.
- (B) At night, communications will probably be by voice-radio or blinker gun. If voice-radio can be justifiably used, the formation does not matter; but if radio silence must be maintained, then column open order is the best attack formation to use since it facilitates blinker-tube communication with ships astern (who need not answer).

606 DEVELOPMENT OF GUNFIRE BY ATTACKING DESTROYERS

When the attacking destroyers must develop gunfire against enemy units (including the torpedo target) as they stand in on the attack, it will be desirable for them to form with their line of bearing about normal to the gunfire target. This situation was illustrated in Diagram 602. Such orientation of the line of bearing should not, however, be carried to the point of necessitating complicated maneuvers just prior to reaching the torpedo firing point.

607 PRESENTATION OF MINIMUM OR MOST DIFFICULT TARGET TO ENEMY GUNFIRE OR TORPEDOES

- (A) If possible, the formation chosen should not permit enfilade by enemy gunfire.
- (B) As the attacking destroyers approach, the enemy may fire torpedoes at them. In this situation, it is improbable that anything more than individual evasive action can be undertaken. In order to detect such torpedoes, attacking destroyers should keep their underwater listening gear trained on the bearing of the enemy throughout the approach.

608 USE OF SMOKE SCREEN CONCEALMENT

- (A) The attacking unit needs to take no particular formation in order to gain concealment from a smoke screen laid by another unit.
- (B) When the smoke screen is laid by the attack unit itself, the degree of concealment depends to a great extent upon the formation taken. Provided the initial position and formation permit, a proper smoke screen will cover all but the leading destroyer of the attack unit. The line of bearing of the formation should be close to the axis of the smoke screen. This is illustrated in Diagram 605.

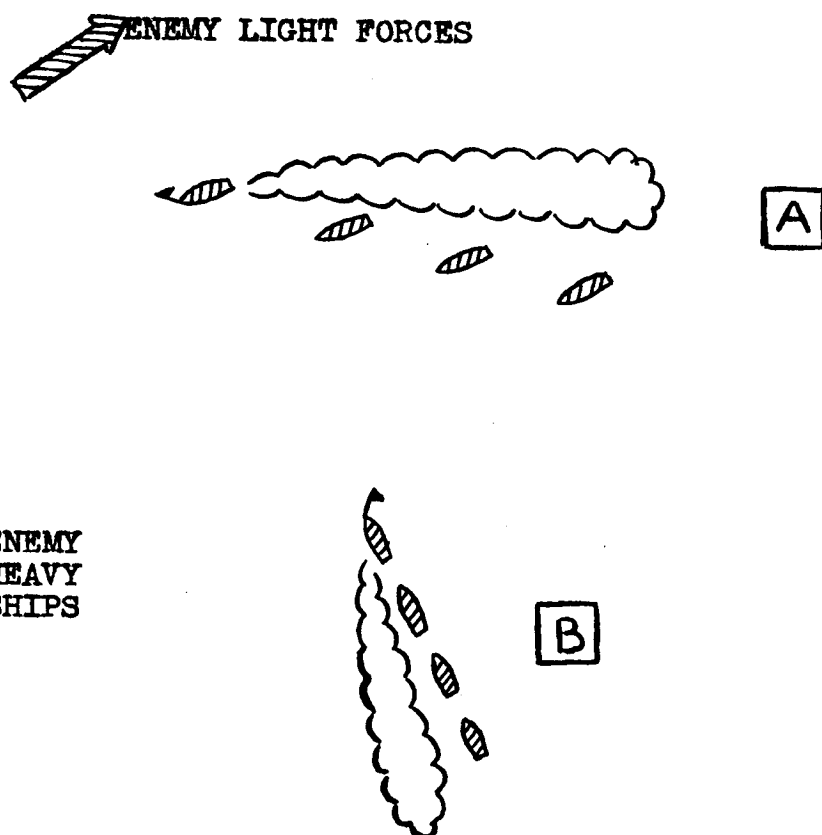


Diagram 605 USE OF SMOKE SCREENS IN TORPEDO ATTACKS

- (1) Attack unit A forms line of bearing as shown to gain concealment from the enemy light forces.
- (2) Attack unit B forms column to gain concealment from the attack objective group (heavy ships).

609 ATTACK MANEUVERS

- (A) The maneuvers in a deliberate attack or in a planned surprise attack should be based upon such of the following considerations as apply in the circumstances:
1. The attack plan.
 2. The enemy disposition.
 3. Coordination between various attack units.
 4. Support by other units of own force.
 5. Use of concealment.
 6. Deception.
 7. Minimum exposure to enemy counter-fire.

610 THE ATTACK PLAN

- (A) The attack plan designates firing positions for the various attack units, but it is not mandatory that the entire approach be conducted within the assigned sector, so long as the proper firing position is reached without interfering with other attack units.
- (B) When the attack is made by three or more attack units, maneuvers should be such as to place each unit within its attack sector by the time the effective range circle for intermediate speed has been crossed.
- (C) Attack units have complete freedom of maneuver within their assigned sectors, but should, in general, remain near the middle bearing of the sector until it is seen what, if any, avoiding action the enemy is going to take.

611 ENEMY DISPOSITION

- (A) When the enemy force is not in a compact formation, the maneuvers to gain firing positions against the objective must take into account the location of other enemy units in position to interpose or to break up the attack, and should provide for giving those enemy units as wide a berth as the attack plan will allow.
- (B) The enemy disposition, if it can be determined, is often a clue to what avoiding action he will take against the impending torpedo attack, and consideration of this fact may indicate which part of the assigned attack sector will be the more desirable.

612 COORDINATION BETWEEN VARIOUS ATTACK UNITS

- (A) In a deliberate attack, coordination in time of torpedo crossings is highly desirable, so that the enemy cannot evade each spread in succession. However, when ordered to attack, destroyers should attack without delay with highest speed setting possible. Perfect coordination is nearly impossible and if destroyers delay, enemy has more time to avoid threat and inflict damage on attacking units.

613 SUPPORT BY OTHER UNITS OF OWN FORCES

- (A) Where the torpedo attack is opposed by enemy light forces, maneuvers of the attack units should take full advantage of any support which our own forces can furnish, but without prejudicing the attack in any way.

- (B) In this connection, it should be remembered that destroyers which have already fired their torpedoes can well be used to furnish gun-fire support for later torpedo attack units.

614 USE OF CONCEALMENT

- (A) Where smoke has already been laid, full advantage should be taken of the cover which it can afford, and the approach course altered accordingly.
- (B) Within the limitations of the attack plan ordered, the course and speed of the attack unit can be adjusted to give the most effective direction to a smoke screen which they themselves lay.
- (C) Initial attack units can often lay smoke screens (either in their own attack or during retirement) which will afford cover for later attack units.
- (D) With certain camouflage patterns, courses in relation to the bearing of the sun can be taken which will reduce the visibility of the attack units; this should be done when other considerations do not over-ride it in importance.
- (E) Near land, some advantage can be had by maintaining a "land background", in that it makes detection by radar more difficult.

615 DECEPTION

- (A) Our attack maneuvers should be such as to conceal our intentions (that is, our attack plan) from the enemy for as long as possible. By so doing, the effectiveness of his avoiding action will be much reduced, because he has less time for decision and for avoiding action.
- (B) Besides giving our attack units a wider choice of action, an approach from ahead of the enemy offers the maximum deceptive possibilities, since the attack plan is not disclosed until the last minute and relative speeds are high.
- (C) With certain camouflage patterns, "type deception" is possible, and this may be used by small attack units in certain visibility conditions.

616 MINIMUM EXPOSURE TO ENEMY COUNTER-FIRE

(A) COUNTER-FIRE FROM SHIPS IN THE TORPEDO ATTACK
OBJECTIVE GROUP

The gun battery arrangements of most ships prevent bringing the whole battery to bear at angles forward of 40° (or 320°), hence an approach in sectors forward of these bearings will limit the volume of defensive gunfire that can be directed at the attack units.

If the enemy is in such a formation that all of his ships cannot fire within certain sectors, advantage should be taken of this fact in making the approach. This point is illustrated in Diagram 606.

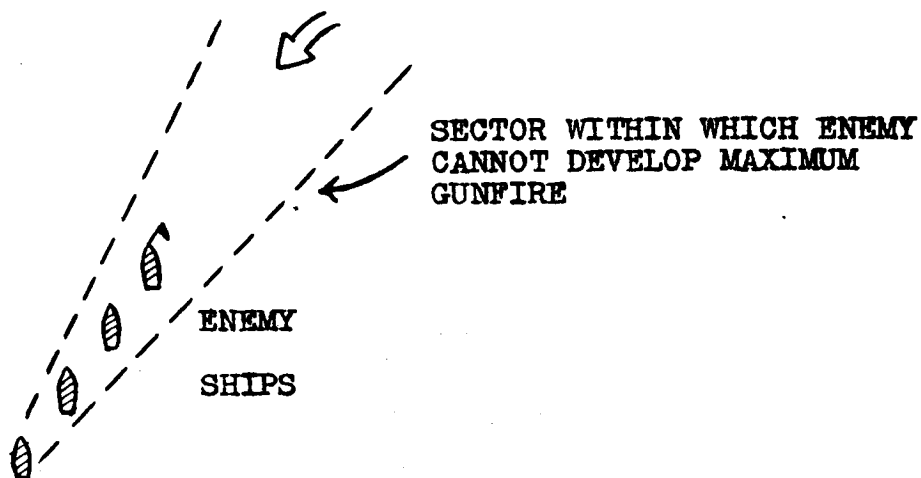


Diagram 606

- (B) Enemy light forces defending their heavier ships will undoubtedly have full freedom of maneuver to interpose and develop their maximum volume of gunfire against our attack units. Without prejudice to the torpedo attack, maneuvers by the attack units should seek, where possible, to draw the enemy defensive units into gun range of our own supports; and if this cannot be done, should seek to keep the range to the enemy defenders at a maximum until the attack can be completed.

PART VII

RETIREMENT

700 GENERAL

- (A) The primary consideration in retirement after a torpedo attack is that of minimum interference with other attack units.
- (B) Additional considerations in retirement are:
 - 1. Escaping with minimum damage.
 - 2. Identification of retiring unit to own forces.
 - 3. Station to take following the attack.

701 MINIMUM INTERFERENCE WITH OTHER ATTACK UNITS

- (A) Wherever possible, retiring units should avoid crossing ahead of units standing in on attacks.
- (B) The decision to lay smoke to cover retirement should take into account how much this smoke will hinder other units of the fleet.
- (C) When there are more than four attack units, retirement should take place in the rear half of the same sector in which the attack was made. As soon as the retiring unit has passed other attack units, it can take course direct to its new station.

702 ESCAPING WITH MINIMUM DAMAGE

- (A) Escaping with minimum damage becomes increasingly important with small numbers of attack units. When the number of attack units is large, the enemy will very probably shift fire to units standing in on attacks and pay less attention to units retiring.
- (B) The best methods of escaping damage are to open the range as rapidly as possible and to take full advantage of concealment by smoke screens.

703 IDENTIFICATION OF RETIRING UNITS TO OWN FORCES

This is of minor importance in high visibility when no recognition problem exists, but at night or in low visibility, destroyers should avoid retirement courses which can be mistaken for enemy destroyer attacks. In particular, destroyers should avoid closing our own heavy ships on collision courses on their engaged bows. In retirement, the burden of identification to own forces rests upon the retiring destroyers.

704 STATION TO TAKE FOLLOWING RETIREMENT

- (A) When a large number of destroyers are present, those which have expended torpedoes will probably be directed to relieve others in a sound screen or smoker group with own heavy ships. This point will usually be covered in instructions issued by the Task Force Commander.
- (B) In the absence of instructions as to stations after retirement from a torpedo attack, destroyers should take station to repel enemy destroyer attacks.

A7-3

DESTROYERS, PACIFIC FLEET

Serial 01353

CONFIDENTIAL

PRINT

8 November 1943

From: Commander Destroyers, Pacific Fleet.

To: Destroyers, Pacific Fleet.

Subject: Night Destroyer Attack Plan (Appendix A to D.T.B. 4-43).

Enclosure: (A) Subject Plan.

870-1(11)
Re

111843 40200

1. Enclosure (A) is a Night Destroyer Attack Plan which has been formulated from actual battle experience in the South Pacific. It involves the separation of the available destroyers into two groups; one, the attack group, and two, the support group, groups being interchangeable depending upon the decision of the destroyer commander as to which logically is the attack or support group.

2. Its basic concepts which conform to D.T.B. 4-43 take into consideration:

- (a) Freedom of action under the Destroyer Commander.
- (b) Using two groups in close support and in known relative positions to facilitate identification. The first group will fire torpedoes, then retire momentarily to avoid enemy counter-torpedo fire while the second group is prepared to use gunfire to confuse the enemy as to direction of the torpedo approach and to follow up with torpedoes when and if opportunity offers. But no gun is to be fired until torpedoes of first group have had time to reach the target unless enemy movement or action demonstrates that surprise has been lost.
- (c) To exploit our radar advantages by not closing to see the whites of their eyes (as we were taught for years) but closing enough to give a reasonable percentage of torpedo hits while retaining element of surprise.

3. In the execution of this plan consideration must be given to the capabilities of the Japanese torpedo which as best known now is as follows:

His 27 knot torpedo runs 27,000 yards.
His 31 knot torpedo runs 16,000 yards.
His 38 knot torpedo runs 10,500 yards.
His 45 knot torpedo runs 6,500 yards.

Obviously our destroyers cannot fight outside his effective torpedo range, nor should they. The attack must be carried to the enemy, accepting inevitable and incidental hazards. Our best defense is offense plus rapid and unpredictable movement on our part. Furthermore, we cannot expect the enemy to continue complacently on his course or at a steady speed once he suspects our presence. We must close enough to fire high-speed shots but ordinarily no more than that, else we deemphasize our radar advantage.

4. Attach this letter and enclosure (A) to D.T.B. 4-43.

M. S. TISDALE.

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C. M. SUGARMAN,
Flag Secretary.

CONFIDENTIAL

NIGHT DESTROYER ATTACK PLAN

ASSUMPTION:

The use of this plan is predicated on the fact that our own force has knowledge of the approximate location of an enemy force. It is presumed, knowing the approximate location at which the enemy will be encountered, that the enemy will be detected by radar at approximately 20,000 to 25,000 yards.

GENERAL:

The plan requires that there be sufficient ships (five or more) to have two attack groups, one hereinafter called Division ABLE and the other, Division SUGAR. Division ABLE is the group actually making the first torpedo attack. Division SUGAR is the support group.

Normally the interval between the two divisions should be from 4,000 to 5,000 yards, the distance between ships, 500 yards. This interval can and should be varied as necessary depending upon the tactical situation.

The bearing of division guides is normal to the bearing of the enemy or normal to the course being steered unless otherwise signalled by senior destroyer officer. There may be occasions when it will be advisable for the destroyer commander to vary the line of bearing of division guides by retiring or advancing one flank.

ATTACK PLAN:

- (1) When contact is made, the senior destroyer officer will, when sufficient data have been obtained to develop the contact, designate as Division ABLE that division which can most easily reach firing position, and will release it.
- (2) Each division commander will inform all ships of his division of his solution of the enemy's course and speed. Any ship of his division obtaining radically different information of enemy course and speed will inform the division commander. Division ABLE will head for an optimum position about 30° on the enemy's bow, at a distance to give about a 6,000-yard torpedo run.
- (3) When the firing position is reached, Division ABLE take reverse of enemy course and fire torpedoes, as previously directed. When torpedoes are fired, immediately retire on course from 70° to 90° away from enemy course to clear enemy's most probable torpedo water. As the range opens to about 9,000 yards, come to enemy course and be prepared to cover torpedo attack of other division or to fire a second torpedo broadside. If a ship is disabled, and if practicable, she will immediately fire all remaining torpedoes at the enemy, clear of own ships, selecting a speed setting which will insure torpedoes reaching the enemy.
- (4) If, during approach of Division ABLE while Division ABLE is still outside our high-speed torpedo range, there is cause to believe that the enemy has fired torpedoes and he does not open with gunfire, Division ABLE will change course away briefly to avoid enemy torpedoes and will then resume the attack. If enemy opens effective gunfire on Division ABLE before Division ABLE fires torpedoes, the Division will take up evasive maneuvers and fight its way to the torpedo firing position. Commanders of Divisions ABLE and SUGAR will keep careful plot of each other to avoid taking each other under fire.
- (5) Division SUGAR shall take position to support Division ABLE with gunfire and shall be alert to prevent surprise by other enemy units. After Division ABLE has fired its torpedoes, Division SUGAR will make a similar torpedo attack covered by Division ABLE. If enemy retires and pursuit action follows, ABLE and SUGAR keep each other fully informed of own movements. If enemy movement places Division SUGAR in a better position, Division SUGAR may be ordered to make the first torpedo attack in which case Division Able will assume the supporting role.

111843 40200

ENCLOSURE (A) to
ComDesPac serial 01353
dated 8 November 1943.