

FLAT TOP

THE AVALON HILL GAME COMPANY'S TRADEMARK FOR ITS GAME OF WWII CARRIER BATTLES IN THE PACIFIC

Rules

INDEX

- | | |
|-----------------------------------|---------------------------|
| 1. Introduction | 14. Plane Movement |
| 2. Unit Counters | 15. Combat |
| 3. Prepare For Play | 16. Air-to-Air Combat |
| 4. Operations Charts Setup | 17. Anti-Aircraft Combat |
| 5. Sequence Of Play | 18. Air Attack Combat |
| 6. Weather | 19. Surface Attack Combat |
| 7. Observation | 20. Combat Resolution |
| 8. Air Operations | 21. Damage |
| 9. Stacking | 22. Replacements |
| 10. Task Force Movement Plotting | 23. Repair |
| 11. Shadowing | 24. Time Record |
| 12. Task Force Movement Execution | 25. Victory Conditions |
| 13. Initiative | 26. Scenarios |

1. INTRODUCTION

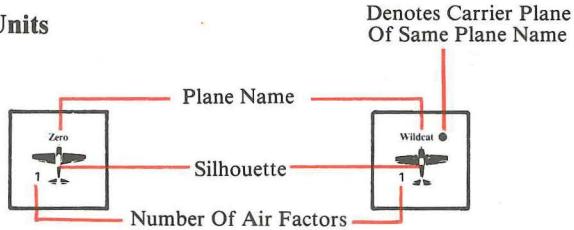
In 1942, the Solomon Islands, New Guinea, and the surrounding waters hosted many of the hardest fought and most critical battles in the Pacific Theatre. It was at the Battle of the Coral Sea that the Japanese expansion was first slowed. Later, Guadalcanal became the site of the first, major Allied offensive. Indeed, nearly one half of the carrier battles of the whole war were fought in this area. Because many of these battles were between fairly equal, well matched forces, they present the ideal situation for a highly competitive, balanced game while at the same time recreating the history of the period.

FLAT TOP recreates the major Battles of the Solomon Seas. Each hex on the mapboard is approximately equivalent to twenty miles. Each ship unit represents one ship. Each Air Factor represents approximately three planes. Each turn represents one hour of time.

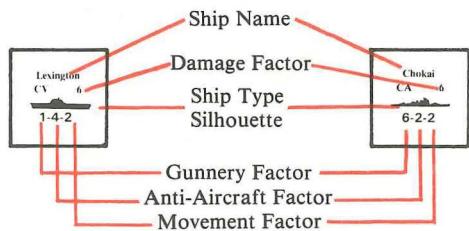
2. UNIT COUNTERS

2.1 The die-cut counters (hereafter referred to as units, unit counters, or counters) represent the various planes and ships actually involved in the battles. Japanese unit counters are red. Allied unit counters are yellow. Informational counters, colored blue, are used by both sides. The following diagrams illustrate the symbolization found on the counters:

Plane Units



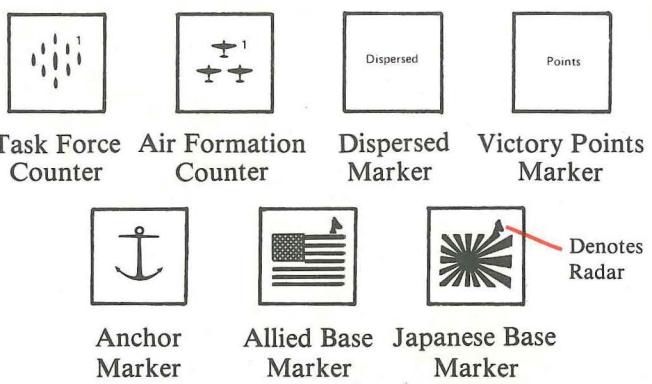
Ship Units



Ship Types

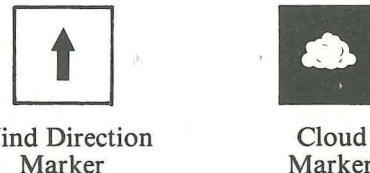
CV	—Carrier
CVL	—Light Carrier
AV	—Seaplane Tender
CAV	—Cruiser Seaplane Tender
BB	—Battleship
CA	—Cruiser
CL	—Light Cruiser
DD	—Destroyer
AP	—Transport
APD	—Fast Transport
AO	—Oiler
PG	—Gunboat
SS	—Submarine

Allied & Japanese Markers

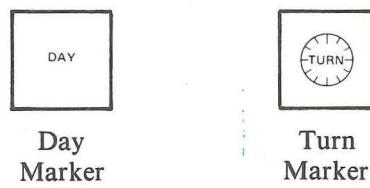


Informational Counters

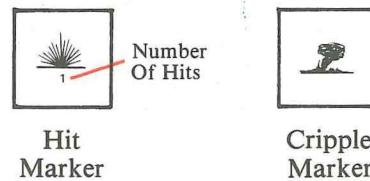
Weather Units:



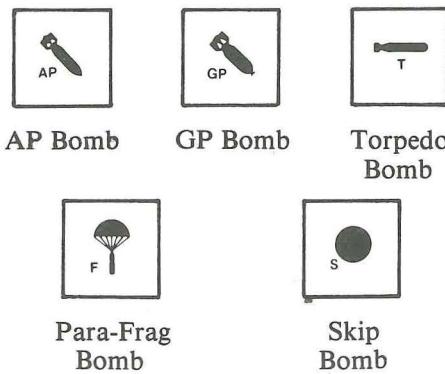
Time Record Units:



Damage Markers:



Weapon Markers:



2.2 Air Factor counters of the same plane name are treated like change (they are interchangeable).

Example: A Val 5 Air Factor counter could be replaced with five Val 1 Air Factor counters, two Val 2 Air Factor counters and one Val 1 Air Factor counter, or one Val 2 Air Factor counter and three Val 1 Air Factor counters.

2.3 The counter mix contains some counters that are not used in any of the scenarios included in the game. These counters are for players who wish to make their own scenarios.

3. PREPARE FOR PLAY

3.1 Unfold the mapboard and place it between the players with the Japanese player at the North edge and the Allied player at the South edge. Note the hexagonal grid, superimposed on the map, which is used to determine movement. In addition, note how the splits and folds in the mapboard create eight map sectors labelled I-VIII.

3.2 Punch out the unit counters and place the Time Record Units on the appropriate day and time squares on the Time Record Chart.

3.3 Players should select the plane and ship counters listed in their respective Order Of Battle sections (hereafter referred to as OBs) of the scenario to be played, and place them in their appropriate places on their respective Operations Charts.

3.3.1 Air Formation counters (numbered 1-35) are placed in the Air Formation boxes on the A Air Operation Charts with the corresponding numbers.

3.3.2 Task Force counters (numbered 1-14) are placed in the Task Force boxes on the B Air Operations Charts with the corresponding numbers.

3.3.3 Ship counters are placed in the Task Force boxes in any manner within the dictates of rule 4.1 and the scenario OB.

3.3.4 Plane counters are placed in the Task Force boxes and base boxes in any manner within the dictates of rule 4.2 and the scenario OB.

3.4 Informational counters are placed in any convenient location off-board for use when necessary.

4. OPERATIONS CHARTS SETUP

4.1 Ships are placed in Task Forces (hereafter referred to as TFs) in any manner within the following rules.

4.1.1 Allied TFs can contain fifteen or less ships. Japanese TFs can contain ten or less ships. Even one ship is considered, and must be, a TF. Any ship types may be combined in any TF with the exception of the special restrictions imposed on the number of plane carrying ships (*See 4.1.3—4.1.6*). In addition, all plane carrying ships must be placed in TFs 1-9. TFs 10-14 are used for TFs that do not contain plane carrying ships.

4.1.2 If a player has more than fourteen TFs, he can create others by drawing TF boxes on a separate piece of paper, labelling them as TFs fifteen and up, and placing ships in them. Players will need to make up counters for these TFs.

4.1.3 No more than one CV (or CVL) can be placed in any one TF box. If a TF has more than one CV in it, the second CV is placed in a second TF box and the second TF counter is placed in the first TF box to show that the second CV is actually part of the first TF (and is not a TF by itself).

Example: Allied TF1 contains CVs Lexington and Yorktown and 13DD. CV Lexington and 13DD are placed in TF1. CV Yorktown is placed in TF2, and the TF2 counter is placed in TF1.

4.1.4 No more than one AV (or CAV) can be placed in any one TF box. If a TF has more than one AV in it, use the same procedure as in 4.1.3.

4.1.5 A TF box can have one CV (or CVL) and one AV (or CAV) in it, since the plane types they handle are different and it will be obvious which planes are on which ship.

4.1.6 Japanese BBs can each carry one Air Factor. They may be in any TF box, regardless of whether there is also a CV (or CVL), AV (or CAV), or combination of these ships in the same TF box. The Japanese player should keep track of an Air Factor on a BB in the Notes Section of the Air Record Sheet.

4.2 Air Factors are placed in TFs and at bases in any manner within the following rules.

4.2.1 The number of Air Factors placed on any one ship or at any one base cannot exceed the Maximum Capacity of that ship or base. (*See 8.2*)

4.2.2 Sea based planes (carrier planes and float planes) must begin the game on plane carrying ships within the Plane Handling restrictions. Land based planes (land planes and sea planes) must begin the game at bases within the Plane Handling restrictions. (*See 8.9*)

4.2.3 Planes can begin the game in any state of readiness (in any box within the TF or base box they are in). Planes placed in Ready boxes may begin the game armed. (*See 8.6 and 8.7*)

5. SEQUENCE OF PLAY

There are ten phases within each turn. Phases may not be skipped or performed out of sequence. Players perform all phases simultaneously except the Plane Movement Phase.

5.1 Weather Phase—Wind direction changes are made and Cloud markers are moved.

5.2 Air Operations Phase—Planes are readied and placed in Air Formations.

5.3 Task Force Movement Plotting Phase—Movement for all TFs is logged on the Plot Map.

5.4 Shadowing Phase—TFs and Air Formations that are

shadowing and TFs that are being shadowed are moved on the mapboard.

5.5 Task Force Movement Execution Phase—TFs which did not move in the Shadowing Phase are moved on the mapboard or on the Plot Map according to their plotted move.

5.6 Initiative Phase—Players determine which player has the initiative.

5.7 Plane Movement Phase—The player with the initiative moves all his Air Formations on the mapboard and on the Plot Map, then the player without the initiative does the same.

5.8 Combat Phase—All combat is resolved, one battle at a time, following the Combat sequence for each battle.

5.9 Repair Phase—Damaged bases are repaired.

5.10 Time Record Phase—The passage of one turn is marked on the Time Record Chart.

6. WEATHER

6.1 The Weather Phase is the first Phase of each turn, except that there is no Weather Phase on the first turn of any game.

6.2 Wind Direction.

6.2.1 At the beginning of the game, one Wind Direction marker is placed in each Directional hex on the mapboard; one in each of the eight map sectors. The Wind Direction marker should point in the same direction as the black arrow in the Directional hex.

6.2.2 Every sixth turn (0600, 1200, 1800, 2400—noted by a * on the Time Record Chart), players check to see if there is a change in the wind direction in any or all sectors. A die is rolled once for each sector and the Wind Direction Change Table is consulted. If the result is a change of direction, the Wind Direction marker is moved accordingly.

6.3 Cloud Markers. Cloud markers are setup at the beginning of the game in one of two ways, as listed in the scenario.

6.3.1 Scattered Clouds. Place four Cloud markers in each Directional hex. Then, one sector at a time, locate each Cloud marker by rolling one die and moving it a number of hexes equal to the die roll in the direction that equals the die roll; the direction numbers are in the hexes adjacent to the Directional hex.

Example: Four Cloud markers are placed in the Sector I Directional hex (J12). The players locate these four Cloud markers by throwing a die for each cloud. The first roll is a '4' so one Cloud marker is placed in hex J16. The second roll is a '1' so one Cloud marker is placed in hex J11. The third roll is a '3' so one Cloud marker is placed in hex M14. The fourth roll is a '5' so one Cloud marker is placed in hex E15.

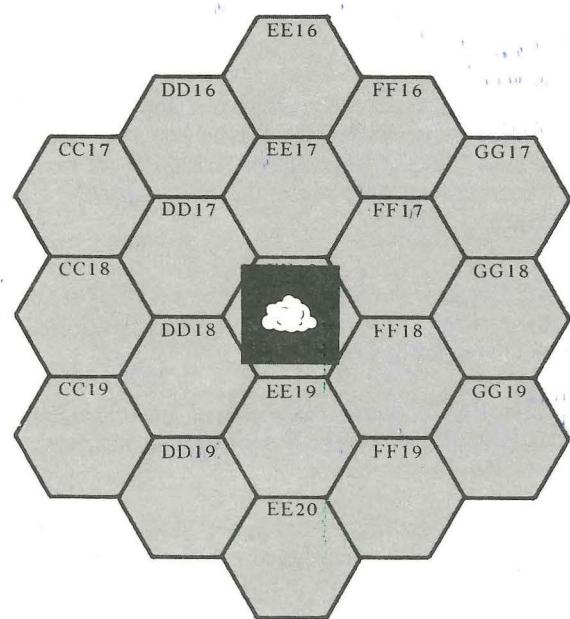
6.3.2 Cloud Front. Place three Cloud markers in a row in each sector, running from NE to SW (directions 2 and 5),

one in the Directional hex and one on each side of it five hexes from it. Then, one sector at a time, locate the three Cloud markers (as one) by rolling one die and moving all three a number of hexes equal to the die roll in the direction that equals the die roll.

Example: In Sector I, the three Cloud markers would be placed in hexes O10, J12, and E15. The die roll is a '3' so the three Cloud markers are placed in hexes R11, M14, and H16.

6.4 Cloud Movement. During the game, Cloud markers are moved *every even numbered turn*, one hex per turn in the current direction of the wind. Cloud markers that enter a hex that is part of two sectors are relocated. Roll one die and consult the Cloud Movement Table to find which sector the Cloud marker moves to. Place the Cloud marker in the Directional hex of that sector and locate it by using the Scattered Clouds procedure (even if the game began with Cloud Front). (*See 6.3.1*)

6.5 Cloud Size. A Cloud marker occupies the hex it is in plus two hexes in all directions from it. Any hex where two Cloud markers overlap is a Storm hex.



Example: Clouds exist in the hex the Cloud marker occupies and all grey hexes.

6.6 Movement Effects. Planes may not enter a Storm hex. If, after the Weather Phase of a turn, an Air Formation is in a newly created Storm hex, it must move out of the Storm hex/es by the most expedient route before being able to move in another direction. Planes landing in a Storm hex use the Night Landing Chart (if it is a night turn, there is a +1 modifier). (*See 14.10*) If a TF begins a turn in a Storm hex, its MF is 0 for that turn. If a TF enters a Storm hex during movement, it must stop and move no further that turn. Non-Storm Cloud markers do not affect movement in any way.

6.7 Observation Effects. The Observation Tables contain separate rows for different types of weather. If a unit is in a hex with a Cloud marker, one is added to the Search Table die roll. A unit may not observe anything in a Storm hex under any circumstances. A unit that begins a turn in a Storm hex may not observe anything that turn. (*See 7.3*)

6.8 Shadowing Effects. If a TF being shadowed moves into a hex with a Cloud marker, one is added to the Shadow Table die roll. Shadowing is automatically unsuccessful if the TF being shadowed moves into a Storm hex. (See 11.3)

6.9 Combat Effects. There are additional modifiers for most types of combat in a hex with a Cloud marker. No combat of any kind is allowed in a Storm hex.

6.10 Effects On Take Offs From Plane Carrying Ships. CVs and CVLs must move one hex into the wind (towards the Wind Direction marker) during movement in any turn in which the total number of Air Factors that land and/or take off exceeds the ship's Minimum Launch Factor. (See 14.8)

6.11 Shaded boxes on the Time Record Chart are night turns.

7. OBSERVATION

7.1 Players keep track of the positions of hidden units (units that can not currently be observed) on the Plot Map. Units must be observed by the opponent before they are required to be placed on the mapboard. A player may, at his discretion, place unobserved units on the mapboard at any time.

7.2 Observed units *must* immediately be placed on the mapboard.

7.3 During the Plane Movement Phase, before a player moves each Air Formation that is on the mapboard, he must state whether the Air Formation will attempt to observe or not. If an Air Formation will attempt to observe, the player rolls one die and consults the Search Table. Each turn, a player must consult the Search Table once for each Air Formation that attempts to observe.

7.3.1 If the result is a 'S', the Air Formation may observe during that turn.

7.3.2 If the result is a '—', the Air Formation may not observe during that turn, though it may move normally.

7.3.3 If an Air Formation begins the turn in a hex with a Cloud marker, one is added to the Search Table die roll.

7.3.4 If a unit begins the turn in a Storm hex, it may not consult the Search Table or observe anything this turn.

7.4 A player is never required to use an Air Formation to observe. If he does not wish to consult the Search Table, the Air Formation may not observe that turn but may still move normally. Whether a unit can observe or not has nothing to do with whether it may be observed or not.

7.5 TFs may always observe. A player is never required to consult the Search Table for a TF.

7.6 One unit (a TF or an Air Formation that can observe) can observe all enemy units within range in the hex it begins its movement in, each hex it moves into, and the hex it ends its movement in. All units (including bases and coastwatchers) can observe all enemy units that move

within their range at any point during either player's portion of the turn.

7.7 Units on the mapboard at the end of the turn that can no longer be observed may be removed from the mapboard.

7.8 As a unit (that can observe) enters each hex during its movement, the non-moving player must state if any of his units can be observed. At the same time, units of the non-moving player which are on the mapboard can observe the moving unit as it enters a hex.

Example: The Japanese player states that Air Formation 5 (in hex BB14) will attempt to observe. He rolls a '1' so the attempt is successful. The weather in the area is clear. Japanese Air Formation 5 (10 Betty Air Factors with GP Bombs and 5 Zero Air Factors) at low altitude moves into hex BB15. Allied TF3 (CV Enterprise, BB South Dakota, CA San Francisco, and 10DD) is in hex BB17 but is not on the mapboard because it has been unobserved (hidden) until now. The Allied player must tell the Japanese player that he has observed TFs (the Condition Number being 1), and then place a TF counter on the mapboard in the hex BB17. The Allied player places TF6 in hex BB17. Since Allied TF3 (as shown by the TF6 counter) is now on the mapboard, it may be used for observation. The Japanese player must tell the Allied player that he has observed Air Formations (the Condition Number being 1), even though it may seem obvious since Air Formation 5 is already on the mapboard and is itself searching. The Japanese player then continues the movement of Air Formation 5 by moving it into hex BB16. The Allied player must tell the Japanese player that he has observed one TF with from 7-20 ships (even though the maximum he could have is 15 due to the TF limit) including carriers, capital ships, and small ships (the Condition Number being 2). At the same time the Japanese player must tell the Allied player that he has observed one Air Formation with from 8-22 planes, some armed and some unarmed. The Japanese player then continues the movement of Air Formation 5 by moving it into hex BB17. The Allied player must tell the Japanese player that he has observed one TF with 13 ships including one carrier, two capital ships, and ten small ships (the Condition Number being 3). At the same time the Japanese player must tell the Allied player that he has observed one Air Formation with 15 planes, 10 armed and 5 unarmed.

7.9 Only units that themselves are on the mapboard can be used to observe other units. Bases and coastwatchers are always considered to be on the mapboard, and thus can always be used for observation. Coastwatchers can observe planes over any all-land or partial-land hex of the island their symbol appears in and all-sea hexes adjacent to partial-land hexes of the island. However, Coastwatchers cannot observe planes in a hex with an enemy base. *EXCEPTION: The Japanese Coastwatcher symbol on New Guinea only affects hexes inside the Japanese Coastwatcher Perimeter Line shown on the mapboard by a dotted line. The Allied Coastwatcher symbol on New Guinea affects all hexes on the island.*

7.10 Some units (ships and bases) carry radar which in some cases improves observation (in both day and night turns). Radar is unaffected by Cloud markers. However, radar can only observe air units at high altitude; it cannot observe planes at low altitude or ships. In addition, all bases and ships with radar may observe enemy air units at high altitude at a distance of three hexes (in both day and night turns); the Condition Number is 1. (See 7.13)

7.11 To use the Observation Tables, players should find the type of observing unit, the type of unit being observed, and the weather condition of the hex being observed, and cross index this with the distance between the observing

unit and the unit being observed. The distance between the two is measured by counting the hex occupied by the unit being observed but not the hex the observing unit occupies. A distance of 0 means both the observing unit and the unit being observed are in the same hex. Note that there is one table for day turns and one for night turns.

7.12 The Condition Numbers.

7.12.1 Condition One—The observing player is told only that something is there, and whether it is an Air Formation or TF. He is not told how many Air Formations or TFs are present.

7.12.2 Condition Two—The observing player is told how many Air Formations or TFs are present, every class of plane or ship present, and the total number of ships or Air Factors present. However, the player with the units being observed may lie about the total number of ships or Air Factors by inflating or deflating the number by 50%. One Air Formation or TF may be reported as one or two. He does not give any specifics about how many of each ship or plane class are there or how many of each ship or plane class are in each TF or Air Formation.

7.12.3 Condition Three—The observing player is told the exact number of Air Formations and TFs present, and the exact number and classes of planes and ships in them, including how many of each class. He does not disclose ship or plane names.

Important Note: for observation purposes ship and plane classes are as follows:

CVs, CVLs = Carriers

AVs, CAVs, BBs, CAs, CLs = Capital Ships

DDs, PGs, AOs, APs, APDs = Small Ships

SSs = Submarines

Armed planes—Bombers

Unarmed planes—Interceptors

7.13 When the observing unit does not have radar, planes' altitudes are revealed only when the Condition Number is 3, or at the beginning of any type of Air Combat. When the observing unit has radar, the Condition is 1 or 2, and the observed units include planes at high altitude, the observing player is told only that there are planes at high altitude (he is not told whether there are planes at low altitude as well or how many planes are at each altitude). When the Condition Number is 3, the observing player is told the exact number and class of each plane at each altitude.

7.14 Planes in TF boxes and base boxes may only be observed if the Condition Number is 3. Only planes in Just Landed boxes or Ready boxes can be observed (planes in Readyng boxes can never be observed) and the player doing the observation is then only told that planes are present on the ship.

7.15 Exact ship and plane names are never revealed during movement. Ship names and types are only revealed if planes attack them, and then only if at least one plane survives the Air-to-Air Combat Step. If one plane survives, the names of all ships in the hex must be disclosed. Exact

plane names are revealed at the beginning of the Air-to-Air Combat Step.

7.15.1 Exact locations of planes and exact numbers of planes in plane carrying ship and base boxes are never revealed, unless necessary during combat resolution. Likewise, the fact that planes are dispersed is never revealed unless necessary during combat resolution. (See 21.7)

7.15.2 The fact that ships are anchored is not revealed until the beginning of the AA Combat Step. If ships are anchored, the opponent must be told which specific ships are anchored at the beginning of the AA Combat Step.

7.16 A player does not have to put the correct TF counter or Air Formation counter on the mapboard when units are observed. He can use any *one* TF or Air Formation counter to represent all the observed units in one hex. The only restriction is that if the unit observed is an Air Formation, an Air Formation counter must be placed on the mapboard and if the unit is a TF, a TF counter must be placed on the mapboard; TF counters and Air Formation counters cannot be used to represent the other. Keep track of the actual TF and Air Formation counters on the Plot Map. If a player has both Air Formations and TFs in a hex, he must put one Air Formation and one TF counter on the map. If during the Shadowing Phase, the Task Force Movement Phase, or the Plane Movement Phase, ships or planes (that were observed at the beginning of the turn and can still be observed) reorganize, the opponent must be told of such changes within the bounds of the appropriate Condition Number.

7.17 The non-moving player cannot place Air Formations or TFs on the mapboard during the other player's Plane Movment Phase to observe units or initiate combat with units as he sees them move within range of his hidden units. Of course, if these units are observed by the moving units, they must be placed on the mapboard, and can then themselves observe enemy units.

7.18 Observation does not cost any additional movement points.

8. AIR OPERATIONS

8.1 Information pertaining to Air Operations for ships and bases for each side is printed on their respective A Air Operations Charts. Information pertaining to Air Operations for planes for each side is printed on the Air Record Sheet (on the reverse side of the Plot Map).

8.2 Maximum Capacity (hereafter referred to as MC). This number is the maximum number of Air Factors that may be present on a particular plane carrying ship or base at any one time. The infinity symbol indicates that there is no limit on the number of Air Factors that may be present at one time.

8.3 Launch Factor (hereafter referred to as LF). These numbers are the number of planes that can take off and land from a particular plane carrying ship or base on any one turn. Note: LFs can be reduced by damage. (See 14.8)

8.3.1 Normal Launch Factor. This is the number to the left of the slash mark. It includes any launch that exceeds the Minimum Launch Factor up to the Normal Launch Factor.

8.3.2 Minimum Launch Factor. This is the number to the right of the slash mark. It includes any launch less than the Minimum Launch Factor.

8.3.3 Maximum Launch Factor. This is equal to twice the Normal Launch Factor. It includes any launch that exceeds the Normal Launch Factor up to the Maximum Launch Factor.

Example: CV Yorktown has an LF of 11/3. A minimum launch would be from one to three planes. A normal launch would be from four to eleven. A maximum launch would be from twelve to twenty-two.

8.4 Combination of Launch Factors. A player may use a combination of LFs when launching planes. If some planes use a minimum launch and move their full movement allowance while others use a normal or maximum launch, they must be placed in more than one Air Formation. However, since the planes are all taking off from the same hex, in a hex where planes can reorganize (*See 8.11*), they could form several Air Formations during movement, and are not restricted to the original Air Formation organization setup in the Air Operations Phase. Planes that take off from more than one plane carrying ship and/or base within the same hex can combine into one Air Formation, within the restrictions of the launch factors for these plane carrying ships or bases. Their movement on the turn of take off would be restricted by the type of launch the planes used. Plane carrying ships and bases cannot transfer part or all of their LF or Readyng Factor to another plane carrying ship or base under any circumstances. The LF of a plane carrying ship or base is numerically the same as its Maximum Launch Factor. (*See 14.8 and 14.9*)

Example: CV Yorktown has launched Air Formations 2, 3, and 4. Air Formation 2 (1 Avenger Air Factor) uses a minimum launch and moves its full movement factor. Air Formation 3 (10 Dauntless Air Factors) uses a normal launch and moves half its movement factor. Air Formation 4 (5 Wildcat Air Factors) (uses a maximum launch and remains in the take off hex; it cannot move. Note that all these launches are legal because neither the total LF nor any of the individual launch factors (minimum, normal, and maximum) are exceeded.

8.5 Air Record Sheet.

8.5.1 The Air Record Sheet must be filled out for each Air Formation that is formed during the Air Operations Phase. Once logged on the Air Record Sheet, this Air Formation must take off that turn during the Plane Movement Phase.

8.5.2 Air Factors are placed in any Air Formation box that does not currently have any other Air Factors in it.

8.5.3 The player notes where the Air Formation takes off from by putting the number of the TF or the notation of the base at the top of the numbered column on the Air Record Sheet that corresponds to the Air Formation box the Air Factors are in.

8.5.4 The player puts an X next to the time of the turn of

take off in the column opposite the time of the current turn on the Air Record Sheet.

8.5.5 The player then checks the Plane Data Chart to find the correct notation of the planes' names and the Range Factors (hereafter referred to as RFs) of the planes within the Air Formation. He then counts a number of turns equal to the RF of each plane name in the Air Formation down from the turn of take off (including the turn of take off), and writes in the notation for each plane next to the time of the turn that plane name must land.

	16	17	18	19	20
TIME			PM		
0100					
0200					
0300					
0400					
0500					
0600					
0700					
0800			X		
0900					
1000					
1100					
1200			40		
1300			BF		
1400					
1500					
1600					
1700					
1800					
1900					
2000					
2100					
2200					
2300					
2400					

Example: Air Formation 18 contains 8 P-40 Air Factors and 2 Beaufighter Air Factors. The Log Sheet shows that Air Formation 18 took off from Port Moresby at 0800. The 8 P-40s have an RF of 5 and must land by 1200. the 2 Beaufighters have an RF of 6 and must land by 1300.

8.5.6 If a situation occurs where some Air Factors of the same plane name in the same Air Formation land while others remain in flight, some use an RF while others don't,

or some join the Air Formation after others have been in flight for one turn or more, players should be careful to keep track of which Air Factors must land at which times. The Notes Section can be used to take notes of this kind. Alternately, in these cases, players may keep Air Factors in more than one Air Formation box, using a similar system to that described in rule 4.1.3.

Example: Allied Air Formation 5 contains 10 Wildcat Air Factors. Five of the Wildcat Air Factors took off at 0900 and are due to land at 1400; they are kept in Air Formation 5. Seven of the Wildcat Air Factors took off at 1000 and are due to land at 1500; they are kept in Air Formation 6. The Air Formation 6 counter is placed in the Air Formation 5 box to show that the Wildcat Air Factors in Air Formation 6 are actually part of Air Formation 5 (and not an Air Formation by themselves).

8.6 Readying Factor. This is the maximum number of Air Factors that may be moved from one box to another box on a plane carrying ship or at a base. A move would be from the Just Landed box to the Readyng box, from the Readyng box to the Ready box, or from the Ready box to the Readyng box. All three type moves may be combined in one turn in any manner as long as the total number of moves does not exceed the Readying Factor. No Air Factor may make more than one move in any one turn. No Air Factor may be in more than one state of readiness at any one time (in more than one box at any one time).

Example: At Port Moresby, the Allied player has ten P-39 Air Factors in the Just Landed box and five B-17 Air Fctors in the Readyng box. The Port Moresby Readying Factor is 8. The Allied player moves three P-39 Air Factors from the Just Landed box to the Readyng box and five B-17 Air Factors from the Readyng box to the Ready box. This is a total of eight Readying moves. No more Air Factors may be readied this turn at Port Moresby.

8.7 Arming. Arming an Air Factor is done when the Air Factor moves from the Readyng box to the Ready box. Simply place the type of bomb desired on the Air Factor as it is moved into the Ready box. The possible ways an Air Factor can be armed are shown on the Air Hit Tables. If a number appears under the appropriate column (AP, GP, or Torpedo) on the Air Hit Table, the Air Factor can be armed with this type of bomb. An Air Factor may only be armed with one type of bomb at any one time. A plane unit does not have to be armed to be moved into the Ready box. However, if it is unarmed and already in the Ready box, to be armed before it takes off, it must first be moved back into the Readyng box and then on a subsequent turn moved back into the Ready box, arming it as it once again advances into the Ready box. The same procedure would have to be followed for an armed Air Factor in the Ready box which requires a change of armament.

8.8 Dispersal. Units at *bases* in Readyng boxes may be dispersed by using one Readying Factor for each Air Factor to be dispersed. Likewise, units that are dispersed may be undispersed by using one Readying Factor for each Air Factor to be undispersed. Units that begin the game in a Readyng base box may begin the game dispersed. Dispersal counts as a move so an Air Factor must begin the turn in the Readyng box to be dispersed that turn, and an Air Factor that is undispersed cannot move to the Ready box that turn. Dispersal reduces plane losses. (See 21.3.2)

8.9 Plane Handling (hereafter referred to as PH). An Air Factor can only take off and land on a plane carrying ship or at a base if that ship or base can handle that type of

plane. CVs and CVLs may only handle carrier planes. (Carrier planes are distinguished from land planes of the same plane name by the black dot in the upper right hand corner of the counter.) AVs, CAVs, and Japanese BBs may only handle float planes. Bases listed as LP may handle all carrier planes plus all land planes. Bases listed as SP may handle all sea planes plus all float planes. *EXCEPTION: 12.7.3.*

8.9.1 Carrier planes: Avenger, Dauntless, Devastator, Wildcat, Judy, Kate, Val, and Zero.

8.9.2 Float planes: Dave, Jake, Pete, and Rufe.

8.9.3 Land planes: B-17, A-20, B-25, B-26, P-38, P-39, P-40, Beaufighter, Beaufort, Hudson, Avenger, Dauntless, Wildcat, Betty, Nell, Kate, Val, and Zero.

8.9.4 Sea planes: Catalina, Emily, Mavis.

8.10 Sequence Of Air Operations. Players should perform air operations in the following order:

8.10.1 Move Air Factors from Readying boxes to Ready boxes, arming them where desired. Undisperse Air Factors.

8.10.2 Form Air Formations by moving Air Factors in Ready boxes into Air Formation boxes (including Air Factors that moved from Readying boxes to Ready boxes this turn).

8.10.3 Move Air Factors from Just Landed boxes to Readying boxes.

8.10.4 Move Air Factors from Ready boxes to Readying boxes. Disperse Air Factors.

8.11 Air Formation Reorganization. Air Formations may only be reorganized in hexes with a friendly base or plane carrying ship. This reorganization can only take place during the Plane Movement Phase. Reorganization does not cost any movement points. If two or more (or just one) Air Formations are in a hex where reorganization can take place at the same time at any time during movement, they can reorganize in any manner. This includes combining two or more Air Formations into one Air Formation, separating one Air Formation into two or more Air Formations, or any combination of these two acts.

Example: Allied Air Formations 18 (10 Wildcat Air Factors), 26 (10 P-40 Air Factors), and 30 (8 B-17 Air Factors) are all in the Port Moresby hex at the beginning of a turn. The Allied player decides to reorganize these Air Formations. The 10 Wildcat Air Factors from Air Formation 18 join Air Formation 30 so Air Formation 18 no longer exists. 5 P-40 Air Factors from Air Formation 26 form another Air Formation; Air Formation 27. The Allied player now has Air Formations 26 (5 P-30 Air Factors), 27 (5 P-40 Air Factors), and 30 (8 B-17 Air Factors and 10 Wildcat Air Factors) in the Port Moresby hex.

8.12 Only certain planes can perform certain missions.

8.12.1 The following planes can always serve as interceptors, escorts, or bombers: Zero, P-38, P-39, P-40, Beaufighter, Wildcat. The following planes can serve as interceptors and escorts, but not as bombers: Dave, Jake, and Pete. The following planes can serve as interceptors

(but only at low altitude) and bombers, but not as escorts; Avenger, Dauntless, Judy, and Val.

8.12.2 If an Air Factor that can serve as an interceptor or escort is in an Air Formation with bombers, it is an escort. If the Air Formation does not have bombers, it is an interceptor.

8.12.3 All other planes can only serve as bombers.

8.12.4 If an Air Factor is armed when it takes off, it is considered to be a bomber until it lands, even after it has performed its bombing mission or jettisoned its bomb. Each armed Air Factor may only make one attack; to make another attack it must land and then rearm again before taking off.

8.12.5 Planes which cannot serve as interceptors or escorts may be inflight unarmed. They can not initiate combat of any kind.

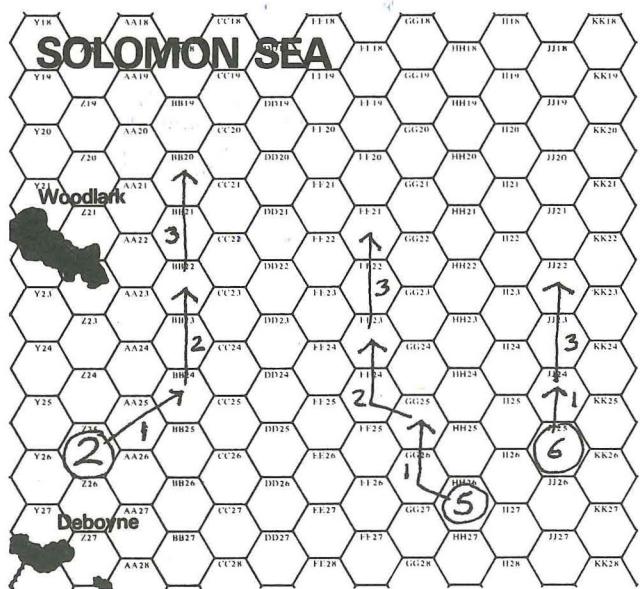
9. STACKING

There is no limit to the number of counters that may be in any one hex on the mapboard, except those imposed by TF and base box capacities for planes (See 8.2) and TF capacities for ships (See 4.1.1).

10. TASK FORCE MOVEMENT PLOTTING

10.1 Movement for each TF is marked on the Plot Map each turn, regardless of whether the TF can be observed or not.

10.2 Movement on the Plot Map is shown by writing the number of the TF in the hex it occupies at the start of the scenario. Each turn thereafter, movement is shown by drawing an arrow from the hex the TF begins the turn in to the hex the TF ends the turn in and *marking this arrow with the turn number*. A player writes nothing on the Plot Map for TFs that do not move.



Example: Allied TFs 2, 5, and 6 were setup and moved for turns one-three as shown.

11. SHADOWING

11.1 Both planes and ships can shadow TFs. Only TFs can be shadowed. Air Formations can never be shadowed.

11.2 A unit can only shadow a TF if it can observe the TF at the beginning of the Shadowing Phase, and the Condition Number is 2 or 3.

11.3 At the beginning of the Shadowing Phase both players announce any TFs they are attempting to shadow.

11.3.1 The shadowing player announces which unit will attempt to shadow which TF. He then rolls one die and consults the Shadowing Table to see if the unit can shadow. If the result is 'S' the unit can shadow the TF. If the result is '—', the unit cannot shadow the TF.

11.3.2 If the TF being shadowed has moved into a hex with a Cloud marker, one is added to the Shadow Table die roll. After the die is rolled, the player with the TF simply states whether the attempt has been successful or not; he does not have to state that the TF moved into a hex with a Cloud marker if the attempt is unsuccessful (as this would give away helpful information).

11.3.3 If the TF being shadowed has moved into a hex with a Storm, the shadowing attempt is automatically unsuccessful. After the Shadow Table die is rolled, the player with the TF simply states that the attempt is unsuccessful; he does not have to state that the TF moved into a Storm hex (as this would give away helpful information).

11.4 Only *one* unit (one Air Formation or one TF) may attempt to shadow each TF each turn.

11.5 Any units that are successfully shadowed must move on the mapboard during the Shadowing Phase as plotted during the Task Force Movement Plotting Phase. Then the unit that has successfully shadowed moves.

11.6 A shadowing unit may move closer to the TF being shadowed, move further away, or even attack, as long as the TF remains observed throughout the unit's movement. If the TF moves out of observation range, then the shadowing unit must move directly towards it until it can observe it again, before making any other type movement.

11.7 Units that move in the Shadowing Phase may not move in the Task Force Movement Phase or Plane Movement Phase. A unit attempting to shadow a TF that receives a '—' result, cannot move or observe that turn.

11.8 Movement for a TF that will attempt to shadow an enemy TF must be plotted during the Task Force Movement Plotting Phase. However, the plotted movement is ignored and changed to reflect the actual movement the TF makes during the Shadowing Phase (if the two are different).

11.9 If two (or more) TFs wish to shadow each other, the player who does not have the initiative moves his TF first.

Example: Japanese TF6 and Allied TF4 attempt to shadow each other. The attempt is automatically successful. The Allied player has the initiative, so the Japanese player must move TF6 as shown

on his Log Sheet. The Allied player now moves TF4 and erases the move shown on his Log Sheet for this turn (if the two are different).

11.10 If a player announces that he wishes to shadow a TF and that TF has been plotted to split up into two or more TFS this turn, the observing player must be given any revised information within the limits of rule 7.12 at the beginning of the Shadowing Phase.

12. TASK FORCE MOVEMENT EXECUTION

12.1 TFS that did not move in the Shadowing Phase now execute their move as plotted. Observed TFS must move on the mapboard. Unobserved TFS can move on the mapboard or on the Log Sheet. They can be placed on the mapboard at the beginning, in the middle, or at the end of their movement if the player so desires. TFS that remain hidden are now assumed to be in their new positions shown on the Log Sheet.

12.2 Each ship has a Movement Factor (hereafter referred to as MF). Each ship expends one point of its MF for each hex it enters. A unit may move into as many hexes as its MF allows, or may move any number of hexes less than its MF (including none). A unit may never move into more hexes than its MF allows. MFs may be reduced due to damage (See 21.2.1).

12.3 Two or more TFS can combine at any time during the Task Force Movement Phase if in the same hex; there is no movement point cost. Likewise, one or more TFS can break down into two or more TFS, or perform any combination of combining or breaking down as long as all the involved TFS are in the same hex at the same time during the Task Force Movement Phase.

12.4 The MF of a TF is always the MF of the slowest ship in the TF. Unused MFs are lost; they may not be carried over or accumulated from turn to turn, or transferred to another TF.

12.5 Movement may be in any direction or combination of directions. Movement must be from hex to hex; TFS may not skip hexes. TFS may not enter an all-land hex, cross an all-land hexside, or cross a reef hexside. Players should use common sense when moving TFS near land areas. It should be obvious when a TF can move from one hex to another and when such movement is blocked by a land mass.

12.6 TFS may exit the mapboard along any edge, but are then permanently out of the game and may not return. They are not considered sunk, but Victory Points for any damage they have received are scored at the end of the game.

12.7 Anchoring.

12.7.1 Ships can (only) anchor in any partial land hex. They may not move in the turn they anchor. Place an Anchor marker on ships that are anchored. Anchored ships that wish to up anchor do so by simply removing the Anchor marker; they may not move in the turn they up anchor.

12.7.2 Some ships in a TF can be anchored while others are not. If all ships in a TF are anchored, place an Anchor marker on the TF counter.

12.7.3 AVs and CAVs must anchor to establish a temporary sea plane base (it remains a temporary sea plane base as long as it is anchored). If an AV or CAV does anchor, the temporary sea plane base is established that same turn. A ship that has established a temporary sea plane base has its MC and Maximum LF doubled (its Minimum LF and Normal LF remain the same), and can handle all sea planes as well as float planes.

12.7.4 Transports (APs and APDs) must anchor to unload. Unloading may begin the turn after the transport is anchored. Transports may only unload in hexes specified in each scenario (these are all partial-land hexes). A transport unloads each turn for eight turns (the turns do not have to be consecutive), and the owning player receives Victory Points each turn the transport unloads. The value of the transport, if sunk, is proportionately reduced each turn it unloads as well, as shown on the Victory Points Table.

12.8 TFS of both sides can exist in the same hex without combat occurring, if neither side observes the other. Surface combat can only occur if it is known that both players have TFS in the same hex.

12.9 A player may choose to scuttle a ship during the Task Force Movement Phase. He simply announces that he is scuttling the ship and removes it from the game. Scuttled ships are considered sunk and the opponent does receive Victory Points for them.

13. INITIATIVE

During the Initiative Phase in the Sequence Of Play, both players roll one die and the player with the high roll gains the initiative for that turn. If the die roll is a tie, the player who did not have the initiative last turn has the initiative this turn. The player with the initiative will go first during the Plane Movement Phase.

14. PLANE MOVEMENT

14.1 The Plane Movement Phase is the only phase that is not performed simultaneously. The player with the initiative moves all his Air Formations first, and then the player without the initiative moves all his Air Formations.

14.2 Sequence. Players should perform plane movements in the following order.

14.2.1 Land all Air Formations and remove the Air Formation counters from the mapboard, Air Record Sheet, or Operations Charts. Remove the Air Factors from the Air Formation boxes and place them in the Just Landed boxes of the plane carrying ships or bases they have landed at.

14.2.2 Move all Air Formations currently on the mapboard that will remain on the mapboard at the end of the turn.

14.2.3 Plot movement on the Log Sheet for all Air Formations that are currently on the mapboard but will not be at the end of the turn, for all Air Formations that are not currently on the mapboard and will not be on the mapboard at the end of the turn, for all Air Formations that will take off this turn and will not be on the mapboard at the end of the turn, and for all Air Formations that will enter an entry hex from an off-board base this turn but will not be on the mapboard at the end of the turn.

14.2.4 Take off all new Air Formations that will be on the mapboard at the end of the turn and move them on the mapboard. Place or move all Air Formations on the mapboard that were not on the mapboard at the beginning of the turn, but will be at the end of the turn.

14.2.5 Remove all Air Formations that are currently on the mapboard that will not be at the end of the turn and all Air Formations which have left an entry hex on their way to an off-board base. All Air Formations are now considered to have moved, either on the mapboard or on the Log Sheet.

14.3 Each Air Factor has a Movement Factor (hereafter referred to as MF). Each Air Factor expends one point of its MF for each hex it enters. A unit may move into as many hexes as its MF allows, or may move any number of hexes less than its MF (including none). A unit may never move into more hexes than its MF allows.

14.4 The MF of an Air Formation is always the MF of the slowest Air Factor in the Air Formation. Unused MFs are lost; they may not be carried over or accumulated from turn to turn, or transferred to another Air Formation.

14.5 Movement may be in any direction or combination of directions. Movement must be from hex to hex; Air Formations may not skip hexes.

14.6 A player may move all, none, or just some of his Air Formations. *EXCEPTION: Air Factors that were put into an Air Formation box during the Air Operations Phase must take off that turn, though they do not have to move out of the take off hex.*

14.7 An Air Formation may be moved on the mapboard or on the Log Sheet. If moving on the Log Sheet, use the same procedure used for TFs moving on the Log Sheet. An Air Formation moving on the Log Sheet is kept in the appropriate column of the Air Record Sheet, or in the In Flight part of the TF or base box from which it took off.

14.8 On the turn of take off or landing, Air Formations may have their MFs reduced, depending on what type of launch is performed.

14.8.1 If using a Minimum Launch, the Air Formation may move its full MF. All Air Factors in an Air Formation must use a minimum launch take off or landing to use this full movement capability.

14.8.2 If using a Normal Launch, the Air Formation may move half its MF (rounded up). All Air Factors in an Air Formation must use a normal launch take off or landing to use this half movement capability.

14.8.3 If using a Maximum Launch, the Air Formation may not move that turn; it must remain in the hex if it takes off or must begin in the hex if it lands.

14.9 The total number of Air Factors that take off and land at a ship or base cannot exceed the LF of that plane carrying ship or base. Note: LFs can be reduced by damage.

Example: CV Yorktown has an LF of 11/3. Air Formations 20 (10 Dauntless Air Factors) using a maximum launch and 21 (8 Avenger Air Factors) using a normal launch have landed this turn. The maximum number of Air Factors that could take off this turn without exceeding either the total LF or the individual launch factors of the CV Yorktown would be four, three by minimum launch and one by maximum launch.

14.10 Night Landings. for each Air Factor that lands during a night turn, a player must roll one die and consult the Night Landing Chart. If the result is 'OK', the Air Factor lands safely. If the result is 'Elim', the Air Factor is eliminated. Note: there are two columns on the chart, one for landings on plane carrying ships and one for landings at bases.

14.11 Entering the Mapboard. The Allied bases New Caledonia and Australia and the Japanese bases Truk and Kavieng are located off-board. An Air Formation that takes off from one of these bases is not placed on the mapboard immediately; it remains in the In Flight box of that base. The Air Formation is placed on the mapboard (or noted on the Log Sheet) in the appropriate Entry Hex after being in flight the indicated number of turns after take off. On the turn it is placed in the Entry Hex, it may not move. On the turn after being placed in the Entry Hex, it may move normally.

Example: Allied Air Formation 2 (1 Catalina Air Factor) takes off from New Caledonia at 0500; it is placed in the New Caledonia In Flight box. At 1000 it is placed in the 5N Entry Hex; it may not move. At 1100, it may move on the mapboard.

14.12 Exiting the Mapboard. Landing at off-board bases is accomplished by reversing the procedure in rule 14.11. An Air Formation must move to an Entry Hex and stop. The next turn it is placed in the In Flight part of the base box where it will land. A number of turns later equal to the Entry Hex number, the unit lands. Planes may not leave the mapboard at any other locations.

Example: Allied Air Formation 8 (5 B-17 Air Factors) reaches the 1A Entry Hex at 1400 and ends its movement. At 1500 it is placed in the Australia In Flight box. At 1600, it may land.

14.13 Special Interception (Air-to-Air) Combat During Movement. There are two instances where combat is allowed during movement.

14.13.1 If at the beginning of the Plane Movement Phase, a hex (where combat can occur) contains observed Air Formations of both sides, combat can occur before either player moves. Only a player with interceptors can attempt to initiate this combat as per the Air-to-Air Combat rules (See 16.). If both players have interceptors, either player can attempt to initiate this type of combat and the other may not avoid it if the attempt is successful. If both players have interceptors and agree to have combat, combat is automatically commenced. Otherwise, the player attempting to initiate the combat consults the Interception

Table to resolve the interception attempt. This combat is resolved as a normal Air-to-Air Combat, including interceptor to escort and interceptor to bomber attacks where applicable.

14.13.2 If at any time during movement, Air Formations which are on the mapboard move through enemy Air Formations which are on the mapboard (which are in a hex where combat can occur), and the enemy Air Formations contain interceptors, the enemy Air Formations may attempt to initiate combat. The player must consult the Interception Table to see if the attempt is successful. If successful, combat is resolved as a normal Air-to-Air Combat, including interceptor to escort and interceptor to bomber attacks where applicable. Note that the opposite of this rule is not true; the moving player may not attempt to initiate interception combat.

14.13.3 In both 14.13.1 and 14.13.2, only opposing planes at the same altitude may intercept or be intercepted. When there is doubt about whether opposing planes are at the same altitude or not, the player attempting the interception states what altitude his planes are at, and the opposing player tells him if interception is possible. Note that it is possible to have two separate interception attempts in the same hex, or have some planes in an Air Formation involved and some not. Planes at one altitude have no effect on planes at the other altitude.

14.13.4 Special Interception Combat may also take place during the Shadowing Phase.

14.13.5 A player may only make one interception attempt in a hex in a turn. An Air Formation receives no penalty for an unsuccessful interception attempt.

14.13.6 If the Air Formation attempting the interception attempt and the Air Formation being intercepted were in Air-to-Air Combat last turn *with each other*, one is added to the Interception Table die roll.

14.14 Jettisoning Bombs. Planes armed with bombs may jettison their bombs at any time during the Plane Movement Phase. This does not constitute an attack and no hits can be scored on anything. Planes that land while still armed use the Night Landing Chart (if it is a night turn, there is a +1 modifier). (*See 14.10*)

14.15 Air Formations may be at either high or low altitude. Air Formations at low altitude are placed in the Low section of the Air Formation box and planes at high altitude are placed in the High section of the Air Formation box.

14.15.1 Air Factors in an Air Formation may be at different altitudes; some at high and some at low.

14.15.2 Planes may change altitude in each hex they move into after entering the new hex. An Air Factor that remains in the same hex during a turn may change altitude.

14.15.3 Planes may only land if they enter the hex they will land in at low altitude.

14.15.4 On the turn of take-off, armed planes may not go to high altitude; unarmed planes may.

14.15.5 Planes must be at high altitude to fly over mountain hexsides.

14.15.6 Planes at low altitude may only attack or be attacked by enemy planes at low altitude. Planes at high altitude may only attack or be attacked by enemy planes at high altitude.

14.15.7 Planes at low altitude may not be observed by radar.

14.16 Escorts must be at the same altitude as the bombers they are in an Air Formation with. If some bombers are at low altitude and some are at high altitude, the escorts with them can all be at either altitude or some at low and some at high.

14.17 When a player has Air Formations with interceptors and Air Formations with bombers (with or without escorts) in the same hex, the interceptors can become (be treated like) escorts for those bombers, though they remain in a separate Air Formation. They are added to and combined with the other escorts for combat purposes.

14.18 If both players have Air Formations with interceptors and Air Formations with bombers (with or without escorts) as in rule 14.17, both players simultaneously and secretly state (by writing on a piece of paper) whether their interceptors will be used to attack the enemy escorts/bombers or act as escorts for escorts themselves. Once written and revealed, players cannot change their allocations; their decisions are irreversible and their interceptors are committed to the written function. Interceptors can only be split up, some to perform one function and some to perform the other, if they are in more than one Air Formation. All interceptors in one Air Formation must perform the same function; they may not be split up, some to perform one function and some to perform the other. In such cases, two separate Air-to-Air Combats could be necessary in one hex, one involving each player as the attacker. Planes in one Air-to-Air Combat have no effect on planes in the other Air-to-Air Combat. Note that there could even be two Anti-Aircraft Combat Steps and two Air Attack Combat Steps if TFs of both sides were also present in the same hex.

14.19 An Air Formation that is in an In Flight box of a plane carrying ship is considered to move with the TF the ship is a part of during the Task Force Movement Phase. Should the Air Formation decide to leave the hex the TF occupies, it would have its MF reduced by the number of hexes the TF moved that turn. An Air Formation in the same hex as a TF that is not in the In Flight box of a plane carrying ship may not move with the TF during the Task Force Movement Phase.

14.20 Off-board movement between off-board bases is not allowed.

14.21 A player may destroy any of his own Air Factors that are on the ground at a base or on a plane carrying ship at any time during his Plane Movement Phase. A player may not destroy planes that are in flight. Destroyed planes are considered eliminated and the opponent does receive Victory Points for them.

15. COMBAT

15.1 Units must occupy the same hex in order to have combat. All combat that occurs in one hex is considered part of the same battle. Observation Condition Numbers are not considered once combat begins. (See 7.15.)

15.2 Air-to-Air Combat can only occur within two hexes of a plane carrying ship or base or in any hex with any ship, and only between observed units. Anti-Aircraft Combat and Air Attack Combat can only occur in a hex with a ship or base, and only between observed units. Surface Attack Combat can occur in any sea or partial-land hex on the mapboard, but only between observed units. Note that combat in general is not mandatory, although certain Combat Steps are once the combat procedure has been initiated.

15.3 A unit has a Basic Hit Table (hereafter referred to as BHT) for all types of combat it may participate in. In all Combat Steps players must always announce which enemy units their units are attacking before rolling the die to resolve the combat.

15.4 Combat in different hexes can be resolved in any order. All combat in one hex (one battle) should be resolved before combat in another hex is begun. Note that one battle may actually contain more than one sequence of Combat Steps in cases such as 14.18, 16.8, and 16.9. Players should skip Combat Steps in battles that do not apply to that battle.

15.5 Sequence. Players should perform combat in the following order for each battle.

15.5.1 Air-to-Air Combat Step.

15.5.2 Anti-Aircraft Combat Step.

15.5.3 Air Attack Combat Step.

15.5.4 Surface Attack Combat Step.

15.6 Effect of Combat on RFs. Planes expend RFs during certain types of combat. When a plane expends an RF due to combat, the Air Record Sheet is adjusted. The number of turns the plane expending the RF can remain in flight is reduced by one by crossing out the notation for that plane in the turn it was formerly supposed to land and putting the notation in the turn before this. This is done each turn an RF is expended due to combat.

15.6.1 One RF is expended by interceptors and escorts for every turn in which they engage in Air-to-Air Combat. Only one RF is expended each turn, even if an Air Factor engages in more than one Air-to-Air Combat. Interceptors and escorts may choose not to expend an RF in Air-to-Air Combat, but if they do, their BHT for Air-to-Air Combat is reduced by six tables (-6). To avoid expending the RF for the whole turn, Air Factors would have to suffer this six table reduction for every Air-to-Air Combat in the turn.

15.6.2 Bombers do not expend RFs in Air-to-Air Combat.

15.6.3 One RF is expended by bombers if they make a dive bombing attack, a torpedo bombing attack, or a

level bombing attack from low altitude. Bombers that make a level bombing attack from high altitude do not expend RFs.

15.7 Only one round of all types of combat is allowed in one turn. After one round of Surface Attack Combat has been fought, no more combat can take place in that hex for the rest of the turn. If combatants are still present next turn, the procedure could start over again. In other words, there are no second or subsequent rounds of combat in any turn.

16. AIR-TO-AIR COMBAT

16.1 Air-to-Air Combat involves only plane units. Only interceptors can initiate Air-to-Air Combat and the other side may not avoid it; escorts and bombers cannot initiate Air-to-Air Combat. If both sides have interceptors, combat can be initiated by either side and the other side may not avoid it. Otherwise, interceptors may always choose to avoid combat. The Interception Table is never used during the Combat Phase. If one side can, and wishes to, initiate Air-to-Air Combat, it is initiated automatically.

EXCEPTION: 14.13. The player with the interceptors can choose not to use all of his interceptors in a hex (even if they are all in one Air Formation) except when both players have interceptors and one wishes to initiate combat; then both players must use all interceptors in the hex.

16.2 Planes can be involved in more than one Air-to-Air Combat in one turn, if involved in Special Air-to-Air Combat during the Plane Movement Phase. However, planes can only be involved in one Air-to-Air Combat Step in a battle during the Combat Phase.

16.3 Air-to-Air Combat is resolved in two parts, in the following sequence.

16.3.1 Interceptor to Escort Combat.

16.3.2 Interceptor to Bomber Combat.

16.4 The player with the interceptors has the option to divide his interceptors into two groups, one designated to attack the escorts and one designated to attack the bombers. The interceptor to escort combat is resolved first; with the interceptors designated to attack the bombers taking no part in this combat. A player may assign all his interceptors to attack the escorts if he so chooses.

16.5 Interceptor to Escort Combat.

16.5.1 Interceptors must be at the same altitude as the enemy escorts to attack.

16.5.2 The attacker totals the number of interceptors he has in the hex designated to attack the escorts even if they are in more than one Air Formation. The defender totals the number of escorts he has in the hex, even if they are in more than one Air Formation.

16.5.3 Combat is simultaneous. Each player rolls one die for each attacking plane name, using that plane name's BHT. All hits are removed only after all planes (interceptors and escorts) have attacked.

16.5.4 Each plane name can attack one other plane name or Air Factors of one plane name can be split up to attack two or more enemy plane names.

16.5.5 After each plane name of both sides has attacked, all Air Factors that were eliminated are removed and the appropriate amount of Victory Points are recorded.

16.6 Interceptor to Bomber Combat.

16.6.1 Interceptors must be at the same altitude as enemy bombers to attack them.

16.6.2 After interceptor to escort combat, if the ratio of surviving interceptors (designated to attack the escorts) to escorts is 2-1 or better, the surviving interceptors designated to attack the escorts may join (combine with) the interceptors that were designated to attack the bombers. Follow the procedure detailed in 16.5.2-16.5.5, except that the combat is between all the interceptors and the bombers; the escorts take no part.

16.6.3 After interceptor to escort combat, if the ratio of surviving escorts to the interceptors (designated to attack the escorts) is 2-1 or better, no interceptor to bomber combat is allowed. Air-to-Air Combat is over for all the planes.

16.6.4 If neither the surviving interceptors (designated to attack the escorts) or escorts have a 2-1 advantage, only the interceptors that were designated to attack the bombers may attack the bombers. Follow the procedure detailed in 16.5.2-16.5.5, except that the combat is between the interceptors designated to attack the bombers and the bombers; the escorts and interceptors designated to attack the escorts take no part.

16.6.5 The player with the interceptors is never required to attack the bombers after interceptor to interceptor combat just because he is able to do so.

16.7 Interceptor to interceptor combat is like interceptor to escort combat, except there is no interceptor to bomber combat, and both sides must use all their Air Factors in the hex in combat. If one player has just interceptors while the other has interceptors and bombers, and the player with just the interceptors wishes to attack the bombers, the player with the bombers can require (and initiate) Air-to-Air Combat between his interceptors and the other player's interceptors first. Interceptor to bomber combat would then follow this. (*See 14.17 and 14.18*)

16.8 If some interceptors, escorts, or bombers in the same hex are at high altitude and some are at low altitude, two separate Air-to-Air combat sequences are fought in the one hex, one involving the planes at each altitude. Planes cannot switch altitude during combat and planes at one altitude have no effect on planes at the other altitude during combat.

16.9 When a battle contains both the situation shown in 14.18 and the situation shown in 16.8, it is possible to have four separate Air-to-Air Combats in the same hex in one turn; two at each altitude, one with each player as the attacker at each altitude.

16.10 Modifiers.

16.10.1 If interceptors or escorts do not expend an RF, their BHT is reduced by six tables (-6). Bombers never expend RFs in Air-to-Air Combat.

16.10.2 If the combat is taking place in a hex with clouds, the BHT is reduced by one table (-1).

16.10.3 If the combat is taking place at night, the BHT is reduced by two tables (-2).

16.10.4 If any of following planes are armed, they have their BHT reduced by six tables (-6): Wildcat, P-38, P-39, P-40, Beaufighter, Zero and Rufe.

Example of Air-to-Air Combat:

In the hex, the Japanese player has two Air Formations. Air Formation 5 contains 15 unarmed Zero Air Factors, 5 at high altitude and 10 at low altitude. Air Formation 17 contains 4 unarmed Val Air Factors at low altitude.

The Allied player has three Air Formations in the hex. Air Formation 1 has 10 armed B-17 Air Factors at high altitude. Air Formation 2 has 9 Wildcats, 3 at high altitude and 6 at low altitude. Air Formation 4 has 2 armed Hudson Air Factors, 2 armed A-20 Air Factors, 10 armed B-26 Air Factors, and 2 unarmed Beaufighter Air Factors at low altitude.

The Japanese player initiates Air-to-Air Combat.

The players decide to resolve the combat at high altitude first. The Japanese player designates all his interceptors (5 Zeros) to attack the escorts (3 Wildcats). The BHT for Zeros is 9. The Japanese player rolls a '4'. Two hits are scored. The BHT for Wildcats is 9. The Allied player rolls a '3'. One hit is scored. Two Wildcats and one Zero Air Factor are eliminated.

The ratio of interceptors to escorts is now 4-1, more than the required 2-1, so the interceptors designated to attack the escorts can attack the bombers, and the Japanese player decides to make the attack.

The Japanese player rolls a '6'. Three hits are scored. The BHT for B-17s is 8. The Allied player rolls a '2'. One hit is scored. Three B-17s and one Zero are eliminated.

All combat at high altitude is finished, so the players now must resolve combat at low altitude.

The Japanese player designates some of his interceptors (4 Vals and 4 Zeros) to attack the escorts and some of his interceptors (6 Zeros) to attack the bombers.

The BHT for Vals is 2. The Japanese player states that the Vals will attack the Wildcats. He rolls a '3'. No hits are scored. The Japanese player states that the Zeros will attack the Wildcats. He rolls a '5'. Two hits are scored.

The BHT for Beaufighters is 6. The Allied player states that the Beaufighters will attack the Zeros. He rolls a '4'. No hits are scored. The Allied player states that the Wildcats will attack the Zeros. He rolls a '5'. Three hits are scored.

Two Wildcats and three Zeros are eliminated.

The ratio of interceptors to escorts is now 5-6, less than 2-1 for either side, so only the interceptors designated to attack the bombers (6 Zeros) may attack the bombers (2 Hudsons, 2 A-20s, and 10 B-26s). The interceptors designated to attack the escorts and the escorts take no part.

The Japanese player states that the Zeros will attack the B-26s. He rolls a '2'. One hit is scored.

The BHT for Hudsons is 3. The Allied player rolls a '3'. No hits

are scored. The BHT for A-20s is 3. The Allied players rolls a '5'. One hit is scored. The BHT for B-26s is 4. The Allied player rolls a '1'. No hits are scored.

One B-26 and one Zero are eliminated.

All combat at low altitude is finished, and all Air-to-Air Combat in the hex is now over.

17. ANTI-AIRCRAFT COMBAT

17.1 Anti-aircraft fire (hereafter referred to as AA fire) effects only bombers and only bombers that a player announces are attacking a TF or base. If the bombers decide not to attack, there is no AA fire. Interceptors and escorts are never subject to AA fire.

17.2 Before AA fire is resolved, the attacker must state which targets all his bombers are attacking. He may attack any enemy units in the hex. He may divide his bombers in any manner to attack enemy units. Once he has stated his attacks, he is committed to those attacks and his decision is irreversible.

17.3 After the attacker has announced his attacks, the defender resolves all AA fire. The BHT used to resolve AA fire is 4 for all ships and bases.

17.3.1 All ships in a TF in which any ship is being attacked may use their Anti-Aircraft Factor (hereafter referred to as AAF) against each Air Formation that is attacking that TF.

17.3.2 Any base that is being attacked may use its AAF against each Air Formation that is attacking it.

17.3.3 Any ships anchored in a hex with a base may use their AAF against each attacking Air Formation attacking the base, if they (or the TF they are in) are not themselves being attacked. This includes combining such ship's AAF with the base's AAF.

17.3.4 Any base in a hex with ships that are anchored may use its AAF against each attacking Air Formation which is attacking any anchored ships, if the base is not itself being attacked. This includes combining such a base's AAF with the ship's AAF.

17.4 If Air Factors from several different Air Formations are attacking the same TF or base, the TF or base may use its AAF against each Air Formation.

17.5 A single ship or base may not use its AAF against more than one plane name in each attacking Air Formation, though ships within a TF may divide their fire in any manner against attacking plane names within an Air Formation. No attacking plane name in one Air Formation can be attacked by more than one AA fire attack; all ships' AAFs used against one attacking plane name must be combined.

17.6 In rare instances where Air Factors of the same plane name in the same Air Formation are making different types of bombing attacks (from the same or different altitudes), each group making a separate type of bombing attack is treated as one plane name for the purposes of resolving AA fire.

17.7 Modifiers.

17.7.1 If the target planes are at high altitude, the BHT is minus two tables (-2).

17.7.2 If the combat is taking place in a hex with clouds, the BHT is reduced by one table (-1).

17.7.3 If the combat is taking place at night, the BHT is reduced by two tables (-2).

Example of Anti-Aircraft Combat:

Allied Air Formations 20 and 21 are in the same hex as Japanese TFS 7 and 8. The Allied player announces he will attack.

Allied Air Formation 20 contains 10 Dauntless Air Factors all at high altitude armed with AP bombs. Allied Air Formation 21 contains 5 unarmed Wildcat Air Factors and 10 Avenger Air Factors armed with torpedoes all at low altitude.

The Japanese player states that TF 7 contains CV Shokaku, BB Kongo, CA Atago CA Takao, and 6DD and that TF 8 contains CL Isuzu, 5DD and 4AP. The Japanese player also states that planes can be seen on CV Shokaku.

The Allied player states that the 10 Dauntless and 10 Avengers will all attack CV Shokaku. The 5 unarmed Wildcats as escorts can take no part in the attack, nor can TF 8 which is not being attacked.

The Japanese player has a total of 18 AAFs which may be fired twice, once at each Air Formation. The BHT for AA fire is 4.

The Japanese player fires at the 10 Dauntless. Since the Dauntless attack from and take AA fire at low altitude, there is no modification. The Japanese player rolls a '4'. Two hits are scored. Two Dauntless are eliminated.

The Japanese player fires at the 10 Avengers and rolls a '6'. Four hits are scored. Four Avengers are eliminated. Anti-Aircraft Combat is over.

18. AIR ATTACK COMBAT

18.1 The attacker must now execute the attacks he stated he would make before AA fire was resolved. He may have less planes than he stated he would attack with though, because of losses from AA fire. He may not change the way his planes are allocated, and he may not call off any attacks.

18.2 Each attack by each plane name is resolved as a separate attack and die roll. *EXCEPTION: SEE 17.6* No planes can be lost during Air Attack Combat.

18.3 Types of Bombing Attacks.

18.3.1 Dive Bombing. Dive bombers must begin the Combat Phase at high altitude and are at high altitude for Air-to-Air Combat. However, dive bombers are assumed to dive to low altitude during the Anti-Aircraft Combat Step and make their bombing attack from low altitude. Dive bombers are considered to be at low altitude during the Anti-Aircraft Combat Step. Dive bombers should thus be moved from the high altitude part of the Air Formation box to the low altitude part of the box at the beginning of Anti-Aircraft Combat Step. Dive bombers may attack with GP or AP bombs. Each Air Factor that makes a dive bombing attack expends one RF.

18.3.2 Torpedo Bombing. Torpedo attacks must be made from low altitude. Torpedo bombing may only be made by planes that can carry, and are carrying, torpedoes. Each Air Factor that makes a torpedo bombing attack expends one RF.

18.3.3 Level Bombing. Level bombing can be made from high or low altitude. Level bombers may attack with GP or AP bombs. Each Air Factor that makes a level bombing attack from low altitude expends one RF. Air Factors that make a level bombing attack from high altitude do not expend any RFs.

18.4 Off-board bases can never be attacked.

18.5. Modifiers.

18.5.1 If the target ship is crippled, the BHT is increased by two tables (+2).

18.5.2 If the target ship is anchored, the BHT is increased by two tables (+2).

18.5.3 If the combat is taking place in a hex with clouds, the BHT is reduced by two tables (-2).

18.5.4 If the combat is taking place at night, the BHT is reduced by four tables (-4).

Example of Air Attack Combat:

Continuing the example from Anti-Aircraft Combat, the Allied planes (8 Dauntless and 7 Avenger) now attack the CV Shokaku.

The 8 Dauntless are making a dive bombing attack with AP bombs. The BHT is 7. The Allied player rolls a '3'. Two hits are scored, but these are doubled because the Japanese player states that there are planes in the Ready box. Four hits are scored.

The 6 Avengers are making a torpedo attack. The BHT is 6. The Allied player rolls a '1'. No hits are scored.

The Shokaku has taken four hits. In addition, the Japanese player must eliminate four Air Factors from those on the Shokaku. Air Attack Combat is now over.

19. SURFACE ATTACK COMBAT

19.1 Surface Attack Combat involves only ship units. Surface Attack Combat is never mandatory. However, if one player initiates it, the other player may not avoid it. All ships present in the hex (even if in more than one TF) where the Surface Attack Combat is taking place must take part in the combat.

19.2 Both players take all ships in the hex out of their TF boxes and place them in an open area on or to the side of the mapboard. After looking at the exact makeup of each other's force, players then secretly arrange their ships.

19.3 A ship can be placed in any one of three positions during the initial setup, and is then committed to this position for combat.

19.3.1 Gunnery Attack. Ships placed in the Gunnery Attack position must use their Gunnery Factor in combat. They may not use their Torpedo Factor. They may be attacked by enemy ships.

19.3.2 Torpedo Attack. Ships placed in the Torpedo Attack position must use their Torpedo Factor in combat. They may not use their Gunnery Factor. They may be attacked by enemy ships. Place a Torpedo marker on these ships to show they are making Torpedo Attacks.

19.3.3 Screen. Ships placed in the Screen position may not attack or be attacked in any manner. Place these ships behind the other two groups of ships to show they are being screened. All crippled ships and all anchored ships must be placed in the Screen position.

19.4 After all ships have been setup, but before their positions are revealed, both players take one die and secretly place it with their ships. The die may have any number showing (any number UP). The total of the two dice will be the BHT for that round of combat. Ship positions and die numbers are then revealed.

19.5 Gunnery Combat. Both players total the Gunnery Factors of all ships in the Gunnery Attack position and then announce how many Gunnery Factors will be used against which enemy ships.

19.5.1 The total Gunnery Factor may be split in any manner; against only one ship, against every ship, or against only several ships. *EXCEPTION: Only that part of the total Gunnery Factor which is comprised of BB, CA, and CAV Gunnery Factors may be used against enemy BBs.*

19.5.2 Attacks are then resolved using the BHT of the dice total. Combat is simultaneous, so both players use their total Gunnery Factor before any damage takes effect.

19.5.3 After both players have attacked, all ships that were sunk are removed and all ships that were damaged have a Damage marker placed on them equal to the number of hits they have received.

19.6 Torpedo Combat. After all Gunnery Combat has been resolved, ships that were placed in the Torpedo Attack position and have survived Gunnery Combat may make Torpedo attacks. Ships sunk during the Gunnery Combat are eliminated before Torpedo Combat; they do not get to make a Torpedo attack.

19.6.1 Torpedo Attacks may only be made if the BHT for that round of combat was 10 or more (if a day turn), or 7 or more (if a night turn). If the BHT is not high enough to allow Torpedo Attacks, no hits may be scored, but torpedoes are still considered to have been fired and expended.

19.6.2 Japanese Torpedo Attacks use a BHT of 15. Allied Torpedo Attacks use a BHT of 10. Combat is simultaneous, so both players use their total Torpedo Factor before any damage takes effect.

19.6.3 Both players total the Torpedo Factors of all ships in the Torpedo Attack position and then announce how many Torpedo Factors will be used against which enemy ships. The total Torpedo Factor may be split in any manner; against only one ship, against every ship, or against only several ships.

19.7 After all Gunnery and Torpedo Combat has been

resolved, both players count their surviving Gunnery Factors of ships that were in the Gunnery Attack position or Torpedo Attack position. If one side has a ratio of 3-1 over the other, the player with the advantage may announce and execute Breakthrough Combat. If neither side has a 3-1 advantage, no Breakthrough Combat can occur.

19.7.1 In a Breakthrough Combat round, the attacker may use the total Gunnery Factor of all his surviving ships in the Gunnery Attack and Torpedo Attack positions. The defender may only use the total Gunnery Factor of all ships he placed in his Screen.

19.7.2 Breakthrough Combat is resolved like Gunnery Combat using the same BHT that was used in the preceding Gunnery Combat.

19.7.3 The attacker may choose not to use some of his ships that are eligible to attack and these ships would take no part in the Breakthrough Combat (they cannot attack or be attacked). The defender must use all his ships placed in the Screen position in Breakthrough Combat.

19.7.4 No Torpedo Attacks can be made in Breakthrough Combat.

19.8 Ammunition Record Sheet.

19.8.1 Each ship with a Gunnery Factor has an Ammunition Factor. Each ship's beginning Ammunition Factor is listed on the Ammunition Record Sheet (on the reverse side of the Plot Map). It can be kept hidden from the opponent. In each *turn* of Surface Attack Combat in which a ship uses its Gunnery Factor, a number of Ammunition Factors equal to the BHT in that round of combat are expended. Mark off Ammunition Factors that are expended by crossing out the current Ammunition Factor and writing in the new Ammunition Factor to the right of it on the Ammunition Record Sheet. When a ship has an Ammunition Factor of zero, it may no longer participate in Gunnery Combat. If a ship has Ammunition Factors remaining but the BHT to be used in a round of combat is more than the Ammunition Factor it has remaining, its Gunnery Factor is halved (rounded up) for that round, and its Ammunition Factor is reduced to zero.

19.8.2 Ship's Torpedo Factors are shown on the Ammunition Record Sheet. Each ship with a Torpedo Factor that makes a Torpedo Attack expends its whole supply of torpedoes in this one round of combat. Cross out the Torpedo Factor on the Ammunition Record Sheet. It may not make Torpedo Attacks for the remainder of the game.

19.8.3 DDs and APDs are not listed on the Ammunition Record Sheet. They may use their Gunnery Factor in one turn regardless of the BHT. After being used this once, the DD counter is flipped over to show it has expended its complete Ammunition Factor. DDs also have a Torpedo Factor of 1. Place a Torpedo marker on a DD that has expended its supply of torpedoes.

19.9 Bombardment Attacks. Bombardment Attacks can be made by ships in the same hex as an enemy base. Any ships used in any other type of Surface Attack Combat may not make Bombardment Attacks. If other Surface Attack Combat occurs in a hex where a player wishes to

make Bombardment Attacks, ships wishing to participate in the Bombardment Attack must have been placed in the Screen position (and cannot have been involved in Breakthrough Combat). Bombardment Attacks are never mandatory and only the player with the ships can initiate it; the player with the base cannot. If the player with the ships initiates it, the other player may not avoid it.

19.9.1 The BHT used in Bombardment Combat is 8 for all ships and bases. Only BBs, CAVs, CAs, and CLs may participate in Bombardment Combat.

19.9.2 In a Bombardment Attack, all participating ships' Gunnery Factors are totalled. No more than one Bombardment Attack can be made per turn. A ship that makes a Bombardment Attack uses eight Ammunition Factors.

19.9.3 A base that has a Surface Factor (hereafter referred to as SF) may attack any ships making a Bombardment Attack against it. It may divide its SF in any manner against the Bombarding ships. A base with a SF may also attack ships anchored in its hex, even if they do not, or cannot, make Bombardment Attacks. However, a base cannot use its SF against non-Bombarding anchored ships if other ships are making Bombardment Attacks, unless the ships making the Bombardment Attacks are also anchored.

19.10 Modifiers.

19.10.1 If the target ship is crippled, the BHT is increased by one table (+1).

19.10.2 If the target ship is anchored, the BHT is increased by one table (+1).

Example of Surface Attack Combat:

It is a night turn. Allied TF 12 and Japanese TF 14 are in the same hex. The Allied player initiates Surface Attack Combat.

Allied TF 12 contains BB South Dakota, BB Washington, CA Pensacola, and 12DD. Japanese TF 14 contains BB Haruna, BB Hiei, BB Kirishima, BB Kongo, CA Kumano, and 5DD.

Both players secretly arrange their ships and setup their die. Both players then reveal their arrangement. The Allied player has placed all his ships in the Gunnery Attack position and has a '1' on his die. The Japanese player has placed his 5DD in the Torpedo Attack position, all the rest of his ships in the Gunnery Attack position, and has a '6' on his die.

Gunnery Combat is resolved first. The Allied player has a total Gunnery Factor of 67. However, only 55 Gunnery Factors may be used against the Japanese BBs (the 12 DD Gunnery Factors cannot be used against the Japanese BBs). The Japanese player has a total Gunnery Factor of 54; it may all be used against the Allied BBs.

The Gunnery Combat uses a BHT of 7 (because the dice total is 7: '1' + '6').

The Allied player allocates his Gunnery Factors. He allocates 41 against the Hiei, 11 against the Kongo, and 3 each against 4DD. Against the Hiei the Allied player rolls a '4'. Ten hits are scored and the Hiei sinks. Against the Kongo the Allied player rolls a '5'. Four hits are scored on the Kongo. Against the 4DD, the Allied player rolls '1', '6', '3', and '3'. One of DD takes three hits, two take one hit and one takes no hits. The DD that took three hits sinks.

Now the Japanese player allocates his Gunnery Factors (including the Gunnery Factors of the Hiei and DD that were sunk, as all

Gunnery Combat is considered to be simultaneous). He allocates 46 against the Washington, and 8 against the Pensacola. Against the Washington the Japanese player rolls a '6'. Thirteen hits are scored on the Washington. Against the Pensacola the Japanese player rolls a '2'. One hit is scored on the Pensacola.

All Gunnery Combat is now over so the ships that were sunk (BB Hiei and one Japanese DD) are removed. Ships that received hits and were not sunk (two Japanese DD, BB Washington, CA Pensacola) have Damage markers placed on them equal to the number of hits they took.

Torpedo Combat is resolved next, since the dice total of 7 is high enough to allow Torpedo Attacks at night. The Japanese player has three surviving DDs for a total Torpedo Factor of 3. The Japanese player allocates all 3 against the Washington. Japanese Torpedo Combat uses a BHT of 15. The Japanese player rolls a '4'. The Washington takes two hits, giving it a total of fifteen hits, so it sinks and is removed.

All Surface Attack Combat is now over.

20. COMBAT RESOLUTION

20.1 All combat is resolved using the Combat Results Table, by cross indexing the BHT with the number of attacking units. Planes have different BHTs for different types of bombing attacks and targets (bases or TFs).

20.2 All modifiers for each type of combat are listed on the Combat Modifiers Table. All modifiers that apply are cumulative. These modifiers are added to or subtracted from the BHT. The BHT in any type of combat can never be less than 1 no matter how many negative modifiers are applied. Attacks with a modified BHT of more than 15 are treated as 15.

20.3 The numbers in the boxes within the columns of the Combat Results Table are the Result Numbers. For each attack, roll one die. If the die number is '3' or '4', the Result Number is the number of hits scored. If the die number is a '1', the number of hits scored is equal to the Result Number minus two (-2). If the die number is a '2', the number of hits scored is equal to the Result Number minus one (-1). If the die number is a '5', the number of hits scored is equal to the Result Number plus one (+1). If the die number is a '6', the number of hits scored is equal to the Result Number plus two (+2). If the Result Number is a *, a roll of 6 equals one hit scored and rolls of 1-5 have no effect.

Example: If the BHT is 8 and the number of attacking factors is 14, the Result Number is 4. If a '1' is rolled, 2 hits are scored. If a '2' is rolled, 3 hits are scored. If a '3' or '4' is rolled, 4 hits are scored. If a '5' is rolled, 5 hits are scored. If a '6' is rolled, six hits are scored.

21. DAMAGE

21.1 Hits on plane units are recorded by eliminating Air Factors equal to the number of hits scored. If more hits are scored than there are Air Factors, excess hits are lost; they may not be transferred or accumulated.

21.2 Hits on ship units are recorded by placing Damage markers on them equal to the number of hits scored. If the number of hits scored equals the ship's Damage Factor, the ship is sunk and eliminated from the game. If the number of hits scored exceeds the ship's Damage Factor,

the excess hits are lost; they may not be transferred or accumulated. Damage affects ship's capabilities.

21.2.1 When any ship has a number of hits that equals or exceeds half its Damage Factor, its MF is halved. Ships with a MF of 2 are reduced to 1 and ships with a MF of 1 are reduced to moving 1 hex every other turn, beginning the turn after attaining this level of damage: note ships with this reduced MF in the Notes Section of the Air Record Sheet by listing if they can move on even or odd numbered turns. Ships (with a Damage Factor of 3 or more) with a number of hits equal to one less than their Damage Factor have a Cripple marker placed on them; they are dead in the water and cannot move for the rest of the game.

21.2.2 Each hit on a ship reduces the ship's Gunnery Factor by 1 and the ship's AA factor by 1. If a ship does not have one of these two Factors, the reduction is ignored. Torpedo Factors are never reduced.

21.2.3 Each hit on a CV reduces its LF by -3/-1. Each hit on a CVL reduces its LF by -2/-1. Each hit on an AV, CAV, or BB reduces its LF by -1/-1. Planes may not land or take off from a plane carrying ship with an LF of zero.

21.2.4 Each hit on any plane carrying ship eliminates one Air Factor on that ship (if any are present).

21.2.5 If a plane carrying ship is sunk, all Air Factors on the ship at the time are lost (eliminated). Victory Points are scored as usual. However, these Air Factors cannot be used as replacement. They are removed immediately and permanently from the game.

21.3 Hits on bases are recorded by keeping track of them in writing in the Notes Section of the Air Record Sheet or placing a Damage marker equal to the number of hits received in the Base box on the Operations Chart, whichever players find easier.

21.3.1 Each hit reduces the base's LF by -2/-1, the base's AA by 1, and the base's SF (if it has any) by 1. *EXCEPTION: Each hit on a base with solely SP PH reduces the base's LF by -1/-1, not -2/-1.*

21.3.2 Each hit on a base eliminates one Air Factor on that base (if any are present). *EXCEPTION: It takes two hits to eliminate each dispersed Air Factor.*

21.4 Ship's Gunnery Factors, AA Factors, and LFs can be reduced to zero by damage, but can never be negative numbers. This damage can never be repaired.

21.5 A base's SF AA Factors, AAF, and LFs can be reduced to zero by damage, and in effect, can even be reduced to negative numbers. When the number of hits scored on a base reduces the base's LF to zero, additional hits are still recorded. The base would have to repair these hits first, and then repair one more hit to regain a positive LF (AAFs and SFs would be similarly regained each turn the base is repaired beyond the point it was reduced to a negative LF). Victory Points are scored for each turn a base has an LF of zero or less. Planes may not land or take off from a base with an LF of zero or less.

Example: Gasmata has an LF of 8/4, an AAF of 5, and no SF. It receives five hits on the 1200 turn. Its LF is reduced to -2/-1, and its AAF to 0. It cannot repair on the 1200 turn. On the 1300 turn, it is not attacked and so repairs one hit. Its LF is 0/0 and its AAF is still 1. On the 1400 turn, it is not attacked and so repairs one hit. Its LF is 2/1 and its AAF is 2. Etc.

21.6 If a plane carrying ship or base has any plane units in the Ready box and/or Just Landed box when it receives one or more hits from dive bombing or level bombing attacks, these hits are all doubled. Similarly, if a plane carrying ship has any plane units in the Readying box when it receives one or more hits from torpedo bombing attacks, these hits are all doubled.

21.7 When plane carrying ships and bases take hits, Air Factors that are present are eliminated as follows.

21.7.1 If it is a day turn, and the hits are scored by dive bombing attacks or level bombing attacks from low altitude, the attacking player chooses which plane name Air Factors (if there is a choice) to eliminate on the ship or base.

21.7.2 If it is a night turn, or the hits are scored by torpedo bombing attack, level bombing attack from high altitude, or from surface combat, the defending player chooses which plane name Air Factors (if there is a choice) to eliminate on the ship or base.

21.7.3 Air Factors must be eliminated from TF or Base boxes in the following order: 1) from the Ready box, 2) from the Just Landed box, and 3) from the Readying box. Dispersed Air Factors are only eliminated after all other Air Factors have been eliminated, and they are eliminated at the rate of one Air Factor per every two hits scored.

21.7.4 The attacking player is never informed how many Air Factors of each plane name are present (*See 7.14 and 7.15*). The defender just tells him what his choices are when he has a choice; i.e., what plane names he can choose from.

22. REPLACEMENTS

22.1 All planes lost during a day should be kept in a pile off-board till the 0100 turn of the next day. Each side receives replacements on the 0100 turn of each day, at the beginning of the Air Operations Phase. These planes must be placed in the Just Landed sections of TF and Base boxes. Note that in the shorter versions of some scenarios no replacements will be taken.

22.2 The number of replacements received depends on the number lost during the previous day. For every three Air Factors of each plane name eliminated, one may be brought back into play as a replacement; all fractions are lost. Plane name replacements that contain both sea based and land based planes must be divided between the two as equally as possible.

Example: It is 0100. The Japanese player has lost 22 Zero Air Factors (16 land based and 6 sea based), 6 Betty Air Factors, 10 Val Air Factors (all 8 sea based and 2 land based), and 9 Kate (all sea based) Air Factors on the previous day. He may bring 7 Zero Air Factors (5 sea based and 2 land based), 2 Betty Air Factors, 3 Val Air Factors (2 sea based and 1 land based), and 3 Kate Air Fac-

tors (all sea based) back into the game as reinforcements. The rest of the Air Factors lost on the previous day are permanently removed from the game.

22.3 Once replacements have been taken, all other planes eliminated on the previous day are permanently removed from the game.

22.4 When a plane carrying ship is sunk, planes on the ship cannot be used as replacements. They are immediately and permanently removed from the game.

22.5 Ships may never be replaced.

23. REPAIR

23.1 Damaged bases may be repaired during the Repair Phase. Each base may repair one point of damage (one hit) per turn, unless otherwise specified in the scenario being played. Simply remove the Damage marker currently in the base box and replace it with a Damage marker worth one less damage point. Each repaired point of damage increases a base's LF by 2/1, its AA Factor by 2, and its SF (if it had any) by 1.

23.2 A base that was involved in any type of Air Attack Combat or Bombardment Combat may not repair that turn.

23.3 A base may never be repaired to more than its original specifications as per the scenario being played.

24. TIME RECORD

During the Time Record Phase, the completion of one turn is recorded on the Time Record Chart.

25. VICTORY CONDITIONS

25.1 Players gain points according to the Victory Points Table. Players should keep track of their points as they are scored, using the Point counters on the Point Record Chart on the mapboard.

25.2 Each scenario has an Automatic Victory Point Level. If at the end of the 2400 turn, the difference between the player's Victory Point totals is equal to or greater than the Automatic Victory Level, the game ends immediately and the player with the more points wins.

25.3 If neither player gains an automatic victory during the game, the winner is the player with the most Victory Points at the end of the game. However, in all scenarios, a player must have scored at least 50 points to win. If neither player has scored 50 points, the game is a draw.

25.4 Unnecessary Air Factor Loss. Usually, eliminated Air Factors are worth 2 Victory Points each. However, eliminated Air Factors lost unnecessarily are worth 10 Victory Points each, instead of (not in addition to) the normal 2 Victory Points. This only applies to Air Factors unable to land safely by the turn of landing due to player error or choice. This does not apply to Air Factors that can reach a hex where landing was possible, but is not when they arrive

because of hits scored on bases or plane carrying ships. This does apply to Air Factors in flight at the end of the game; all Air Factors in flight at the end of the game must be able to land safely, if the game were to continue.

25.5 Victory Points are scored each turn an AP unloads (to a maximum of eight turns). At the same time, in direct proportion, the value of the AP (if sunk) is reduced each turn it unloads.

Example: It is 2100. The Japanese player has 1 AP anchored at a Guadalcanal hex. It begins to unload. This turn it unloads 3 Victory Points (it would now be worth 21 Allied Victory Points if sunk). At 2200 it unloads another 3 Victory Points (it would now be worth 18 Allied Victory Points if sunk). At 2300 it unloads another 3 Japanese Victory Points (it would now be worth 15 Allied Victory Points if sunk). At 0400 having unloaded another 3 Japanese Victory Points, it has unloaded the maximum eight turns and cannot unload anymore. It would now be worth 2 Allied Victory Points if sunk.

26. SCENARIOS

26.1 It is suggested that players first play the ‘Rings Around Rabaul’ scenario twice, once as each side. This scenario has far less ships and planes than the other scenarios and will let players familiarize themselves with the game system before moving on to the bigger, more involved scenarios.

26.2 Some scenarios have shorter versions included. The OBs and Special Rules apply to all versions of a scenario and the shorter versions only differ in game length and ships’ starting positions.

26.3 Even though the scenario OBs list SSs for both sides, they are not used unless the Submarines Optional Rule is in effect. Likewise Special Rules listed as OPTIONAL RULES are only used if the players wish to use those optional rules.

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SCENARIO ONE

“Rings Around Rabaul”

Time: 0600 23 February—1800 23 February (13 Turns)

Weather: Scattered Clouds

Allied Order Of Battle

Ships: CV Lexington
CA Minneapolis
CA San Francisco
CA Indianapolis
CA Pensacola
10DD

Sea Based Air: 8 Wildcat, 12 Dauntless, 4 Devastator

Base: Port Moresby

Land Based Air: 12 P-40, 4 Catalina

Ships' Starting Positions: All ships must begin within one hex of the east edge (Sector II).

Special Rules

1. Only the western half of the mapboard is used.
2. CV Lexington and Port Moresby have radar.
3. Wildcat units have a BHT of 7 for Air-to-Air Combat.
4. The turn after an Allied ship is observed, the Japanese have the following planes available at Truk: 5 Zero, 5 Betty.
5. All fifteen Allied ships *must* begin the game in one TF and remain in one TF throughout the game.
6. Ignore the Japanese Coastwatcher symbol on New Guinea.
7. Japanese planes may not take off on turn one.

Japanese Order Of Battle

Bases: Rabaul, Gasmata, Kavieng, Truk

Land Based Air: 10 Zero, 8 Mavis, 1 Jake, 1 Rufe, 10 Kate, 12 Nell

8. The Catalinas that begin the game at Port Moresby may take off without restriction, but must remain in flight for the entire game.

Special Victory Conditions

1. There is no Automatic Victory Level. However, the Japanese player wins immediately if he sinks the CV Lexington. If the CV Lexington is not sunk and the Allied player has scored 4 or more hits on Rabaul and at least 20 total Points, he wins regardless of which side has scored the more points.
2. If neither side wins under the conditions of rule 1., the Allied player must score at least 2 hits on Rabaul and 20 total Points, in addition to having scored more points at game's end, or the Japanese player wins.

SCENARIO TWO

“Coral Sea”

Time: 0600 4 May—1800 8 May (109 Turns)

Weather: Cloud Front

Allied Order Of Battle

Ships: CV Lexington
CV Yorktown
CA Chester
CA New Orleans
CA Astoria
CA Portland
CA Minneapolis
CA Australia
CA Chicago
CL Hobart
14DD, 2AO, 5SS

Sea Based Air: 14 Wildcat, 25 Dauntless, 8 Devastator

Bases: New Caledonia, Australia, Port Moresby

Land Based Air:

At New Caledonia: 4 Catalina

At Australia or Port Moresby: 1 Catalina, 2 Hudson, 12 B-26, 5 B-25, 3 Dauntless, 12 P-39, 2 P-40, 5 B-17

Ships Starting Positions: CV Yorktown must begin in Sector VII, not over 16 hexes from the south edge of the mapboard. CV Lexington and 2AO must begin in Sector VII, not over 5 hexes from the south edge of the mapboard. All other ships must begin with either CV.

Japanese Order Of Battle

Ships: CV Shokaku
CV Zuikaku
CVL Shoho
AV Kamikawa
CA Myoko
CA Haguro
CA Aoba
CA Kako
CA Kinugasa
CA Furutaka
CL Yubari
CL Tenryu
CL Tatsuta
15DD, 4AO, 8PG, 13AP, 7SS

Sea Based Air: 16 Zero, 14 Val, 17 Kate, 3 Dave, 4 Pete

Bases: Tulagi, Rabaul, Kavieng, Lae, Shortland, Truk

Land Based Air: 21 Zero, 12 Betty, 16 Nell, 5 Mavis, 1 Rufe

Ships Starting Positions: 2AO, 12AP, and 4PG must begin at Rabaul. 1AP, 4PG, and 2DD must begin at Tulagi. CVL Shoho, and 1AO must begin within 5 hexes of Bougainville Island. CVs Shokaku and Zuikaku, and 1AO must begin within 8 hexes of Rabaul. All other ships must begin with any of these groups of ships.

SHORTER VERSIONS

“The Crucial Days”

Time: 0100 7 May—1800 8 May (42 Turns)

Allied Ships Starting Positions: All ships must begin in Sector VI or VII, not over 12 hexes from the south edge of the mapboard.

Japanese Ships Starting Positions: CVL Shoho must begin within ten hexes of Deboyne Island. CVs Shokaku and Zuikaku must begin within 6 hexes of Guadalcanal. 12AP, 4PG, and AV Kamikawa must begin within 6 hexes of Woodlark Island (AV Kamikawa may begin with a temporary seaplane base already established at Deboyne Island). All other ships must begin with any of these groups of ships.

“The Battle”

Time: 0100 8 May—1800 8 May (18 Turns)

Allied Ships’ Starting Positions: All ships must begin in Sector VI, not over 15 hexes from the south edge of the mapboard.

Japanese Ships Starting Positions: CVs Shokaku and Zuikaku must begin within 7 hexes of New Georgia Island. AV Kamikawa and 2PG may begin at Deboyne Island (AV Kamikawa may begin with a temporary seaplane base already established). 12 AP and 2 PG must begin within 15 hexes of Deboyne Island. All other ships must begin with any of these groups of ships.

Special Rules

1. Ships that begin at Rabaul must be anchored and may not up anchor until 1800 5 May.
2. Ships that begin at Tulagi must be anchored and may not up anchor until an Allied ship is observed or an attack is made against them.
3. Allied CVs and bases have radar.
4. The Japanese APs may unload only in the Port Moresby hex.
5. The Pete float planes on the Kamikawa may be used only if the AV Kamikawa has established a temporary seaplane base.
6. AV Kamikawa may begin the game at Deboyne Island with a temporary seaplane base already established. It may also have one or two PGs with it.
7. Wildcat units have a BHT of 7 for Air to Air Combat.
8. Shokaku and Zuikaku have only 5 Damage Factors.
9. Ignore the Japanese coastwatcher symbols on the following islands; Choiseul, Santa Isabel, Vella Lavella, New Georgia, and Guadalacanal.
10. OPTIONAL RULE. CVs Lexington, Shokaku, and Zuikaku, and CVL Shoho, and accompanying ships are fueling when the scenario begins. CV Yorktown and accompanying ships must begin fueling by 0100 5 May. This rule is only in effect if the Fueling Ships rule is in effect.
11. OPTIONAL RULE. Allied Additional Planes: 5 B-17, 6 P-39, 5 Wildcat. Japanese Additional Planes: 10 Zero, 5 Betty. These planes are only available if the Additional Planes rule is in effect.

Special Victory Conditions

1. Automatic Victory Level: 100 Points
2. The Allied player receives 50 Points if the Japanese player cannot unload 50 Points in the Port Moresby hex.
3. If the Japanese player unloads 150 Points in the Port Moresby hex, the game ends immediately and he wins.

THE GENERAL

Now that you know how to play the game, the next problem is probably who to play it with and how to win. We can help you with that problem, and many others, through your subscription to our bi-monthly gaming journal, **The GENERAL**. In **The GENERAL** you'll not only read all there is to know about this game, but will also learn about our dozens of other exciting simulation games of skill. Every full-color, issue is crammed full of the best articles on the strategy and tactics of the games from The Avalon Hill Game Company. Just look at what **The GENERAL** offers:

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SCENARIO THREE

“Eastern Solomons”

Time: 0100 24 August—1800 26 August (66 Turns)

Weather: Scattered Clouds

Allied Order Of Battle

Ships: CV Saratoga
CV Enterprise
CV Wasp
BB North Carolina
CA Minneapolis
CA New Orleans
CA Portland
CA San Francisco
CA Salt Lake City
CL San Juan
CL Atlanta
21DD, 3AO, 6SS

Sea Based Air: 34 Wildcat, 36 Dauntless, 15 Avenger

Bases: Henderson, New Caledonia, Ndeni, Espiritu Santo, Gili-Gili, Port Moresby, Australia

Land Based Air:

At Henderson, New Caledonia, Ndeni, or Espiritu Santo: 5 Catalina, 4 Wildcat, 3 Dauntless, 2 P-39, 3 B-17, 2 Hudson
At Gili-Gili, Port Moresby, or Australia: 8 B-17, 20 B-26, 10 B-25, 1 Hudson, 6 P-39, 1 Catalina, 3 A-20, 16 P-40, 3 Beaufort, 2 Beaufighter

Ships Starting Positions: 1DD must begin at Gili-Gili. CV Wasp, 3AO, CL San Juan, CA San Francisco, CA Salt Lake City, and 8DD must begin in Sector VIII, not over 10 hexes from the east edge of the mapboard. All other ships must begin in Sector IV.

Japanese Order Of Battle

Ships: CV Shokaku
CV Zuikaku
CVL Ryujo
AV Chitose
CAV Tone
CAV Chikuma
BB Mutsu
BB Kirishima
BB Hiei
CA Atago
CA Maya
CA Takao
CA Myoko
CA Haguro
CA Suzuya
CA Kumano
CA Aoba
CA Kinugasa
CA Furutaka
CL Nagara
CL Yura
CL Jintsu
CL Tenryu
CL Tatsuta
31DD, 4APD, 5AP, 1PG, 12SS

Sea Based Air: 25 Zero, 17 Val, 17 Kate, 1 Judy, 8 Pete, 4 Jake

Bases: Shortland, Gasmata, Buna, Rabaul, Lae, Truk, Kavieng

Land Based Air: 20 Zero, 8 Betty, 3 Nell, 2 Val, 2 Mavis, 1 Emily, 2 Rufe

Ships Starting Positions: 2AP, 1PG, CL Tenryu, and CL Tatsuta (and any number of DDs) must begin at Rabaul. 2AP (and any number of DDs) must begin within 2 hexes of Goodenough Island. CL Jintsu, 4APD, and 1AP (and any number of DDs) must begin within 4 hexes of Ontong Java Atoll. All other ships must begin in Sector III, within 3 hexes of the north edge of the mapboard, or at Rabaul.

SHORTER VERSION “The Battle”

Time: 0100 24 August—1800 24 August (18 Turns)

Allied Ships Starting Positions: All ships must begin in Sector IV.

Japanese Ships Starting Positions: CL Jintsu, 4APD, and 1AP (and any number of DDs) must begin within 4 hexes of Ontong Java Atoll. All other ships must begin in Sector II or III, but not within 7 hexes of Henderson or Gili-Gili.

Special Rules

1. Allied CVs, BBs, CAs, CLs, and bases have radar. Japanese bases Rabaul and Lae have radar.
2. The Japanese APs and APDs may only unload in the Gili-Gili hex or any Guadalcanal Island hex (except Henderson). If the Japanese unload 50 or more Points in the Gili-Gili hex, the base becomes a Japanese base for all purposes on the next turn. Any Allied planes remaining at the base are considered eliminated. The Japanese player will have to make the Gili-Gili Air Operations box on a separate piece of paper. Any damage is carried over. Only the following types of Japanese planes may land or take off from Gili-Gili: Zero, Val, and Kate.
3. CV Enterprise has an AAF of 5.
4. Only the following type planes may land or take off from the Gili-Gili base; P-39, P-40, Avenger, Dauntless, and Wildcat.
5. The following special rules apply to the CV Wasp.
 - a. All Dauntless and Avenger Air Factors that begin the scenario on the CV Wasp may add +2 to the night landing die roll when they land on the Wasp during night turns.
 - b. These same Air Factors are also only reduced two tables (-2) instead of the normal minus four when making Air Attacks (not Air-to-Air Combat) during night turns.
 - c. If this option is used, only 17 Dauntless and Avenger Air Factors may begin the game on the CV Wasp, and only these Air Factors are effected by these rules.
6. OPTIONAL RULE. CV Wasp and accompanying ships are fueling when the scenario begins. CVs Enterprise and Saratoga and accompanying ships must begin fueling by 1200 25 August. This rule is only in effect if the Fueling Ships rule is in effect.
7. OPTIONAL RULE. Allied Additional Planes: 5 B-17, 10 Wildcat, 7 Dauntless, 6 P-39, 2 B-26. Japanese Additional Planes: 20 Zero, 6 Betty. These planes are only available if the Additional Planes rule is in effect.

Special Victory Conditions

1. Automatic Victory Level: 200 Points
2. The Japanese player receives 50 points if he can unload at least 50 points in the Gili-Gili hex.

COMPONENTS

44" by 28" Mapboard
1300 Counters
Seven Playing Aid Cards—
Two Allied Operations Charts
Two Japanese Operations Charts
Three Game Tables & Charts
Air Record Sheet Pad
Ammunition Record Sheet Pad
One Rulebook

Not included, but necessary for play, are two pens or pencils and one six-sided die.

REPLACEMENT PARTS

For a current replacement parts list, send a stamped, self-addressed envelope to: The Avalon Hill Game Company, 4517 Harford Road, Baltimore, Maryland 21214. For an additional \$1.00 we will send you one of our three full-color catalogues describing our many exciting games available both by mail and in discriminating retail outlets where better games are sold. Specify Strategy Games, Leisure Time Games, or Sports Games.

RULES QUESTIONS

Questions on the play of this game will be gladly answered upon receipt, if they are accompanied by a stamped, self-addressed envelope. Questions on the actual design or history relating to the game itself cannot be answered. This type of information is available only in the pages of our bi-monthly magazine, *THE GENERAL*, advertised elsewhere in this rulebook. Sorry, but absolutely no game related questions can be answered by phone.

SCENARIO FOUR

“Santa Cruz”

Time: 0100 25 October—1800 27 October (66 Turns)

Weather: Scattered Clouds

Allied Order Of Battle

Ships: CV Enterprise
CV Hornet
BB South Dakota
BB Washington
CA Portland
CA Northampton
CA Penscola
CA San Francisco
CL San Juan
CL San Diego
CL Juneau
CL Helena
CL Atlanta
22DD, 2PG, 11SS

Sea Based Air: 23 Wildcat, 24 Dauntless, 9 Avenger

Bases: Henderson, New Caledonia, Espiritu Santo, Gili-Gili, Port Moresby, Australia

Land Based Air:

At Henderson, New Caledonia, or Espiritu Santo: 8 Wildcat, 3 P-39, 3 Hudson, 9 Catalina, 10 B-17, 6 Dauntless
At Gili-Gili, Port Moresby, or Australia: 9 B-17, 24 B-26, 16 B-25, 2 Hudson, 2 Catalina, 4 A-20, 4 P-39, 24 P-40, 4 Beaufort, 4 Beaufighter

Ships Starting Positions: CVs Hornet and Enterprise, and BB South Dakota must begin within 8 hexes of Ndeni Island. BB Washington must begin in Sector VII, within 6 hexes of Guadalcanal. 2DD and 2PG must begin within 1 hex of Henderson. All other ships must begin with any of these groups of ships.

SHORTER VERSION

“The Battle”

Time: 0100 26 October—1800 26 October (18 Turns)

Allied Ships Starting Positions: CVs Hornet and Enterprise, and BB South Dakota must begin within 5 hexes of Ndeni. BB Washington must begin in Sector VII, within 3 hexes of Guadalcanal Island. 2DD and 1PG must begin within 3 hexes of Henderson. All other ships must begin with any of these groups of ships.

Japanese Ships Starting Positions: 8DD must begin at Shortlands. All other ships must begin within 5 hexes of the Stewart Islands.

Japanese Order Of Battle

Ships: CV Shokaku
CV Zuikaku
CV Junyo
CVL Zuiho
CAV Tone
CAV Chikuma
BB Kongo
BB Haruna
BB Kirishima
BB Hiei
CA Atago
CA Takao
CA Myoko
CA Maya
CA Kumano
CA Suzuya
CA Chokai
CL Isuzu
CL Nagara
CL Yura
38DD, 12SS

Sea Based Air: 31 Zero, 21 Val, 17 Kate, 4 Pete, 2 Jake, 1 Judy

Bases: Shortland, Gasmata, Buna, Rabaul, Lae, Buin, Buka, Truk, Kavieng

Land Based Air: 2 Rufe, 1 Emily, 4 Mavis, 6 Kate, 15 Val, 30 Zero, 9 Nell, 11 Betty

Ships Starting Positions: CL Yura (and any number of DDs) must begin in Sector III, within 4 hexes of Guadalcanal Island. All other ships must begin in Sector III, not over 8 hexes from the north edge of the mapboard.

Special Rules

1. Allied ships and bases have radar. Japanese bases Rabaul, Lae, Shortlands, Gasmata, and Buna have radar.
2. During day turns, Henderson may repair two Hits per turn.
3. OPTIONAL RULE. Allied Additional Planes: 6 Wildcat, 8 P-39, 4 P-38, 4 B-26, 1 Hudson. Japanese Additional Planes: 15 Zero, 10 Betty. These planes are only available if the Additional Planes rule is in effect.

Special Victory Conditions

1. Automatic Victory Level: 250 Points
2. The player with the most points at the end of the game must have scored 200 Points to win, or the game is a draw.

SCENARIO FIVE

“Guadalcanal”

Time: 0600 12 November—1200 15 November (79 Turns)

Weather: Scattered Clouds

Allied Order Of Battle

Ships: CV Enterprise
BB Washington
BB South Dakota
CA San Francisco
CA Pensacola
CA Portland
CA Northampton
CL Helena
CL Juneau
CL Atlanta
CL San Diego
23DD, 1PG, 7AP, 12SS

Sea Based Air: 13 Wildcat, 10 Dauntless, 3 Avenger

Bases: Henderson, New Caledonia, Espiritu Santo, Gili-Gili, Port Moresby, Australia

Land Based Air:

At Henderson, New Caledonia, or Espiritu Santo: 9 Wildcat, 12 B-17, 2 Hudson, 8 Catalina, 1 P-39, 12 Dauntless, 3 Avenger

At Gili-Gili, Port Moresby, or Australia: 9 B-17, 20 B-26, 20 B-25, 2 Hudson, 2 Catalina, 4 A-20, 24 P-40, 4 Beaufort, 4 Beaufighter, 5 P-38

Ships Starting Positions: 7AP, CA Portland, CA San Francisco, CA Pensacola, CL Atlanta, CL Juneau, CL Helena, and 1PG (and any number of DDs) must begin at Henderson. All other ships do not begin the game on the mapboard. Instead they enter from the south edge of Sector VIII at 0100 13 November.

Special Rules

1. BBs Hiei and Kirishima are armed with special HE gunnery shells. In Gunnery Combat their Gunnery Factor is reduced to 8 and in Bombardment Combat their Gunnery Factor is increased to 16.

2. CV Enterprise has a Ready Factor of 6.

3. Allied APs may only unload in the Henderson hex. Japanese APs may only unload in a Guadalcanal Island hex (except Henderson).

4. Allied ships and bases have radar. Japanese bases Shortlands, Rabaul, Lae, and Gasmata have radar.

5. Japanese sea based planes have their BHT reduced by 1 for all types of combat.

Japanese Order Of Battle

Ships: CV Junyo
CV Hiyo
CAV Tone
BB Hiei
BB Kirishima
BB Kongo
BB Haruna
CA Atago
CA Takao
CA Chokai
CA Kinugasa
CA Suzuya
CA Maya
CL Nagara
CL Sendai
CL Isuzu
CL Tenryu
37DD, 11AP, 12SS

Sea Based Air: 14 Zero, 12 Val, 6 Kate, 2 Jake, 3 Pete

Bases: Shortland, Gasmata, Buna, Rabaul, Lae, Buin, Buka, Truk, Kavieng

Land Based Air: 2 Rufe, 2 Emily, 4 Mavis, 3 Kate, 9 Val, 30 Zero, 2 Nell, 20 Betty

Ships Starting Positions: CA Chokai, CA Kinugasa, CL Isuzu, CA Suzuya, CA Maya, CL Tenryu, 11AP, and 17DD must begin at Shortlands. All other ships must begin within 4 hexes of Ontong Java Atoll.

6. During day turns, Henderson may repair two Hits per turn.

7. OPTIONAL RULE. Allied Additional Planes: 4 Wildcat, 4 Avenger, 5 B-26, 8 P-39, 1 Hudson. Japanese Additional Planes: 20 Zero, 10 Betty. These planes are only available if the Additional Planes rule is in effect.

Special Victory Conditions

1. Automatic Victory Level: 100

2. The player who unloads the most Points receives 50 Points at the end of the game.

3. If the Japanese player unloads 100 Points, the game ends immediately and he wins.

OPTIONAL RULES

After extensive play, when both players feel comfortable with the game system, players may wish to add some of the following optional rules to the basic game system. It should be remembered though, that optional rules are just that. The game has been playtested and balanced without them for the most part. Their use may unbalance the game in some instances.

When used correctly (with a little common sense), optional rules do have a purpose. They can add a little variety to the game after players have mastered the basic game. They also give players desiring more realism the chance to recreate some of the more detailed and minute parts of the action. However, while increasing realism, optional rules decrease playability. Some players may, therefore, find the time and complexity cost of realism too high in game terms.

The optional rules are such that players can add them individually or in combination. In addition, even just a part of some of these rules can be added.

ADDITIONAL PLANES

Additional planes become available in a scenario (as listed in the Special Rules) when certain conditions exist.

1. Additional Allied Planes. These planes become available if any Japanese TF is observed in mapboard sectors V or VIII. When available, they may be placed in the Ready box of either the Espiritu Santo or Australia base boxes at the beginning of the Air Operations Phase of the turn following the turn the Japanese TF is observed. They may be armed when placed and may take off on the turn of appearance.
2. Additional Japanese Planes. These planes become available if any Allied TF is observed in mapboard sectors I or II. When available, they may be placed in the Ready box of the Truk base at the beginning of the Air Operations Phase of the turn following the turn the Allied TF is observed. They may be armed when placed and may take off on the turn of appearance.

CRITICAL HITS

1. During Combat Resolution for any type of combat, if a player rolls a '3' or '4' (the Result Number equals the number of hits), there is a possibility a Critical Hit has been inflicted.
2. When the possibility of a Critical Hit being inflicted exists, the attacking player rolls one die for each such possibility. If he rolls a '6', he has scored a Critical Hit and then consults the Critical Hit Tables.
3. To use the Critical Hit Tables, a player rolls one die and consults the table that corresponds to the target unit.

CRITICAL HIT TABLES

CV/CV/AV

- 1—Two more hits.
- 2—One more hit.
- 3—Roll a die and eliminate a number of Air Factors on the ship equal to the die roll.
- 4—Ship has no Readying Factor next turn.
- 5—Planes may not take off or land on the ship next turn.
- 6—Ship may not move next turn.

Other Ship

- 1— Three more hits.
- 2— Two more hits.
- 3-6—One more hit.

Base

- 1— Two more hits.
- 2— One more hit.
- 3-4—Roll a die and eliminate a number of Air Factors at the base equal to the die roll.
- 5— Base has no Readying Factor next turn.
- 6— Planes may not take off or land at the base next turn.

Air Formation

- 1-2—No effect.
- 3-6—Roll a die and eliminate a number of Air Factors equal to the die roll.

EXPANDED PLANE FUNCTIONS

1. Combining Air Factors. When two or less Air Factors of a plane name are involved in Air-to-Air Combat or Air Attack Combat, these Air Factors may combine with any other Air Factors of another plane name performing the same mission (either performing as escorts or interceptors in Air-to-Air Combat, or as bombers in Air Attack Combat).
2. Air Modifiers. Some planes have an Air Modifier to use in Air-to-Air Combat to represent their superior or inferior defensive abilities, as shown on the Air Modifier Chart. When involved in Air-to-Air Combat, the *attacking plane name* adds (or subtracts) the defending plane name's Air Modifier to its BHT.

AIR MODIFIER CHART

Avenger	-1	Dauntless	-1	Kate	+1
Beaufort	-1	Hudson	-1	Pete	+2
B-17	-2	P-38	-1	Rufe	+1
B-25	-1	Dave	+2	Val	+1
B-26	-1	Jake	+2	Zero	+1

3. Para-Frag Bombs. Para-Frag bombs may be used only in the Santa Cruz and Guadalcanal scenarios, and only by the following planes: A-20, B-25, B-26. Planes armed with Para-Frag bombs must make a Level Bombing Attack from low altitude against a base. Any other type of attack has no effect. The same BHT is used as would be used for that plane name armed with a GP bomb. Para-Frag bomb hits cause no damage to the base itself, but count as two hits for eliminating Air Factors.

4. Skip Bombing. Skip bombing may be used only in the Eastern Solomons, Santa Cruz, and Guadalcanal scenarios, and only by the following planes: A-20, B-25, and B-26. Planes armed with Para-Frag bombs must make a Level Bombing Attack from low altitude against a ship. Any other type of attack has no effect. The BHT used is 1. However, if any hits are scored on the ship, the ship also automatically receives a Critical Hit.

5. Strafing. Strafing attacks may only be made by the following planes: Zero, Wildcat, Beaufighter, P-38, P-39, P-40, A-20, and B-25. Planes making a strafing attack may not be armed when they take off. Planes that are used in Air-to-Air Combat may make strafing attacks in the same turn. Planes making strafing attacks are subject to AA fire.

a. **Strafing Bases.** Planes making a strafing attack must make a Level Bombing Attack from low altitude against a base. Any other type of attack has no effect. The same BHT is used as would be used for that plane name in Air-to-Air Combat. Strafing attack hits cause no damage to the base itself, but count as hits for eliminating Air Factors.

b. **Strafing Ships.** Planes making a strafing attack must make a Level Bombing Attack from low altitude against a ship. Any other type of attack has no effect. The same BHT is used as would be used for that plane name in Air-to-Air Combat. Strafing attack hits cause no damage to the ship itself, but count as hits for eliminating Air Factors.

6. Special Plane Handling.

a. Sea planes and float planes may land at bases listed as LP Plane Handling. However, each readying move for such planes (from box to box) at these bases takes 2 Readyng Factors instead of just one for each move.

b. The following plane names may move into or through more than one box at a base or on a plane carrying ship during one Air Operations Phase: Zero, Wildcat, P-39, P-40, and Beaufighter. This makes it possible for these plane names to take off on the turn after they land at a cost of two Readyng Factors; one to move to the 'Readyng' box and one to move to the 'Ready' box and then placing the Air Factor in an Air Formation.

c. The following planes take two Readyng Factors instead of just one to make each readying move at a base (from box to box): B-17, Hudson, A-20, B-25, B-26, and Betty.

d. A plane may land armed instead of jettisoning its bombs. For each armed Air Factor, a player must roll one die and consult the Night Landing Chart (if it is a night turn, there is a +1 modifier). An armed plane is placed in the Ready box on the turn it lands.

7. Landing At Damaged Bases. Planes may land at a damaged base in excess of the base's current LF, but each must use the Night Landing Chart (if it is a night turn, there is a +1 modifier). (See 14.10) Planes may not land at a base in excess of a base's undamaged Maximum LF.

8. Altitude Effects On Movement. Air Factors at low altitude expend two points of their MF for each hex they move into, instead of just one. This includes a hex where an Air Factor moves from low to high altitude. Only one point is expended to go from high to low altitude.

9. Land-Based Planes Victory Points. Land-based planes are worth only 1 Victory Point each instead of two.

10. Chance Combat. Players may attempt to initiate Air-to-Air Combat in any hex (and not just those listed in rule 14.2. All other rules still apply. (See 13.13, 14., and 15.) The attempted interception is resolved using the Interception Table.

11. Off-Board Base Movement. Planes may move off-board between off-board bases. Keep track of such movement in the Notes Section of the Air Record Sheet. The distances in hexes between off-board bases is as follows: Kavieng to Truk—36, Australia to New Caledonia—73. In addition, players may use distance in hexes between off-board bases and hexes on the mapboard as follows: Kavieng to S1 or U1—3, Truk to AA1—33, Australia to A40 or B40—7, New Caledonia to II44 or KK44—23.

EXPANDED SHIP FUNCTIONS

1. Fueling Ships. Ships may fuel on any and every turn in which the TF they are in contains an AO (oiler), no matter how many ships are in the TF. Each ship that is fueling that turn must stay in the TF with the AO for the whole turn. Once fueling has begun, a ship must stay with the AO till fueling is completed or have its MF reduced to 1 (ships with an MF of 1 are unaffected) until it completes fueling. The same is true for a TF that does not begin fueling by a required turn according to the Special Rules for a scenario. It takes ten turns to fuel, but the turns do not have to be consecutive and if fueling is interrupted the process does not have to be started again; the partial fueling already completed counts and fueling is continued from that point. The presence of more than one AO in a TF does not reduce the time it takes a TF to fuel. Ships cannot refuel in a Storm hex. Players should keep track of fueling in the Notes Section of the Air Record Sheet.

2. Towing. A ship that is crippled (dead in the water) may be towed by another ship. The towing ship must begin the turn in the hex with the ship to be towed and then may move with the towed ship that turn and each turn thereafter. The MF of the ships (towing and being towed), while they remain together, is 1 hex every two turns as in rule 20.2.1. The towing ship may cut loose the ship it is towing at anytime and resume normal movement; the crippled ship would then be dead in the water again. A ship may not tow another ship into or through a Storm hex. PGs and SSs may not tow other ships, but may be towed.

3. Rescuing Survivors. When a CV, CVL, AV, CAV, BB, CA, CL, AP, or APD is sunk, other ships may attempt to rescue the survivors (except PGs and SSs which cannot

rescue any survivors). A ship has 5 Survivor Factors. Ships may rescue friendly or enemy survivors. To rescue survivors, the rescuing ship must remain (must begin the turn in and not move that turn) in the hex where the ship was sunk, and it cannot be more than five turns after the turn the ship was sunk. Ships cannot pick up more Survivor Factors from one ship than that ship has. Each ship may only carry two rescued Survivor Factors at any one time. Survivor Factors count as 5 Victory Points each at the end of the game. If a ship with a Survivor Factor is sunk, the Survivor Factor is also lost. Players should keep track of ships that rescue survivors and the number of Survivor Factors rescued from a ship in the Notes Section of the Air Record Sheet.

4. TF Organization. Planes that attack on the edge of a TF are not subject to AA fire from all ships in the TF. Only CLs, DDs, and PGs in a TF can use their AA Factor against planes that make an Air Attack against a CL, DD, or PG. All CLs, DDs, and PGs in the TF of the CL, DD, or PG being attacked may total their AA Factors in such defenses. However, all other basic AA Combat and Air Attack Combat rules apply.

5. Long Range Bombardment. During Bombardment Combat, a player may use long range bombardment instead of normal bombardment. All ships in a TF must use the same type of bombardment. Only BBs may perform long range bombardment and the BHT used is 6. A base may not use its SF against ships making a long range bombardment attack.

6. Torpedo Reloads. Only Japanese DDs (and no other ships for either side) can reload torpedoes after expending torpedoes in Torpedo Combat. A Japanese DD can reload torpedoes in any turn it is not involved in combat (including a turn in which it is placed in the Screen position during a battle in which there is no Breakthrough Combat involving it). DDs that reload torpedoes should have their Torpedo marker removed. Torpedo reloads may be used in a normal Torpedo Combat.

7. Ammunition Reloads. A ship that remains in any of the following base hexes for six consecutive turns may regain its full Ammunition Factor and Torpedo Factor: Rabaul, Lae, Espiritu Santo, and Port Moresby.

ALTERNATE INITIATIVE

Players may use one of three alternate ways to decide which player has the initiative each turn.

1. Players alternate having the initiative each turn.
2. Players roll the die normally, but the player who did not have the initiative last turn adds one to his die roll.
3. Players roll the die normally, but the player who has more Air Formations on the board adds one to his die roll.

ALTERNATE PLANE MOVEMENT SEQUENCE

Players alternate moving one Air Formation at a time during the Plane Movement Phase, instead of one player moving all his Air Formations and then the other player moving all his. A player may state that he has moved an

Air Formation on his Log Sheet instead of actually moving one Air Formation on the mapboard. When one player has moved all his Air Formations (both on the mapboard and on the Log Sheet), the other player moves all his remaining Air Formations on the mapboard and on the Log Sheet. Players should flip over Air Formation counters on the mapboard that have moved, and mark Air Formations on the Log Sheet that have moved, so each Air Formation will only be moved once per turn.

SUBMARINES

1. Submarines may be setup anywhere at game's start, except within ten hexes of any enemy base. No more than six Submarines may be setup in any one mapboard Sector.

2. Submarines are moved at the end of the Task Force Movement Execution Phase, after all TFs have been moved on the mapboard and on the Log Sheet. Each player can move six or less submarines each turn (including none). A player can never move more than six submarines in any one turn. Submarines cannot move on a turn after a turn in which they were involved in any type of combat. Submarines always have an MF of 1.

3. Submarines can never be placed in a TF. They may move on the mapboard or on the Log Sheet like other ships. When moving on the Log Sheet, they are noted as S. Submarines on the mapboard are always considered to be observed units: the actual counter for each such unit must be placed on the mapboard. Submarines at periscope depth moving on the Log Sheet can be observed by planes at low altitude; Submarines at deep depth cannot be observed. Submarines at periscope depth may observe units only in the same hex; the Condition Number is 3. Submarines at deep depth cannot observe enemy units.

4. No more than six submarines of each side (a combined total of twelve submarines) can be in one hex at any time during the game. This is an exception to Rule 9. Submarines may not enter any all-land hex, partial-land hex, or cross a reef hexside.

5. Submarines can be used for shadowing, but only within the restrictions of their MF, and only when they are at periscope depth; submarines at deep depth cannot shadow. Submarines can be shadowed if at periscope depth, but only by planes at low altitude. Submarines at deep depth cannot be shadowed.

6. If a submarine went to deep depth during the Combat Phase, it is considered to be at deep depth for the entire next turn. Otherwise, it is considered to be at periscope depth at all times.

7. In any turn in which submarines are in a hex with any enemy units, an extra Combat Step is added to the Combat procedure after the Surface Combat Step: Submarine Combat. Submarines take no part in any other type of Combat; they may not combine with other ships or planes in any type of combat. Submarines in a hex with enemy units may announce they have gone to deep depth and there is then no combat. If submarines announce they have not gone to deep depth, Submarine Combat takes place. There are two types of Submarine Combat; Submarines versus Planes and Submarines versus Ships. If both types of Submarine Combat are possible in the same hex, the

combat involving Submarines versus Planes is always resolved first.

8. Submarines in a hex with enemy planes that wish to initiate an attack against them resolve their AA fire against the attacking planes as a normal AA Combat Step, and then are attacked by the planes as a normal Air Attack Combat Step.

a. The BHT used to resolve the submarine's AA fire is 4.

b. Only the following planes armed with GP bombs that make a level bombing attack from low altitude can score hits on submarines; all other types of attacks have no effect (the BHT used is in parentheses): A-20 (1), Avenger (1), Beaufighter (1), Beaufort (1), B-25 (1), B-26 (1), Catalina (2), Dauntless (1), Devastator (1), Hudson (1), Betty (1), Emily (2), Jake (+1), Judy (1), Kate (1), Mavis (2), Nell (1), Val (1).

c. All normal Anti-Aircraft Combat modifiers and Air Attack modifiers apply.

9. Submarines in a hex with enemy ships are first attacked by the enemy ships, and then any surviving submarines may attack those enemy ships.

a. Only CLs, DDs, and PGs may attack submarines. CLs and PGs have one attack factor each. DDs have two attack factors each. The BHT used is 2 for Allied ships and 1 for Japanese ships. One is subtracted if it is a night turn (-1).

b. The BHT used is 9 for Allied submarines and 11 for Japanese submarines. Submarines have four attack factors each. (Submarines are not limited by Rule 18.8.2; they can make an unlimited number of attacks per game.) One is added if it is a night turn (+1). Three is added if the submarine was not attacked by planes or ships this turn (+3). One is subtracted for each ship that attacked the submarine this turn (-1). All normal Surface Attack Combat modifiers apply.

10. Submarines are worth 8 Victory Points each.

LESS LUCK

Use one of the following two methods to reduce the amount of luck in combat resolution.

1. The number of hits scored is always equal to the Result Number in all types of combat. No die is rolled.

2. The number rolled on the die modifies the Result Number as follows: '1-2'—the number of hits scored equals the Result Number minus one (-1), '3-4'—the number of hits scored equals the Result Number, and '5-6'—the number of hits scored equals the Result Number plus one (+1).

Another way to reduce the luck in the game is to delete the use of the Search Table and the Shadow Table. All planes may observe each turn and shadowing attempts are automatically successful.

DESIGNER'S NOTES

FLAT TOP reflects some hard research, and the accumulation of data from all sorts of sources. This information had to be assembled, evaluated, and converted into the game format. Later, this format was expanded, simplified, polished, and modified through a period of extensive playtesting.

Air operations were far from perfected at this period in World War II. Some strange things could, and did, happen. The Initiative Roll for Plane Movement simulates many of the problems encountered in a simple and playable, yet realistic manner.

The restrictiveness of the rules for Air-to-Air Combat is based on historical fact. Combat is possible only in certain hexes, because only in those hexes would the planes converge into a small enough area to find each other and stage a battle. Although there were a few cases where fighters assigned as Escorts left their charges to attack enemy planes, these instances were few and far between. Normally, the commander of a fighter Escort would stay with his charges to ensure that they completed their mission. Otherwise, he would look pretty silly later at the court martial trying to explain why none of the bombers he had been ordered to protect had come back.

But why if all Allied ships have radar, is Air-to-Air Combat not permitted in the radar range of all Allied ships, instead of just the carriers? What bases and the American flattops had that the other Allied ships lacked was a fighter director team, with radio links to the fighters, who could vector Interceptors onto radar plots. The technique of placing these teams on other ships, such as in the case of the radar picket destroyers off Okinawa in 1945, had just not been developed yet (such a team was aboard the Chicago during the early stages of the Guadalcanal landings, but this was a temporary measure, and not repeated during this period). Why don't the Japanese ships have

radar? Well, some of them did, but they got absolutely no worthwhile service out of them. The American servicemen of 1942 were as "gadget-oriented" then as they are today, and there was no problem recruiting good personnel to operate and maintain complex radar gear. The Japanese of this period had a much different outlook on such equipment. The average Japanese officer or rating wanted to play a more active and traditional role in the fighting and running of their ships than sitting in a closed room twisting dials. As a result, Japanese radar technicians tended to be recruited from a pool of men that nobody else wanted. The radar equipment was poorly maintained, and indifferently operated.

As demonstrated by the game's mechanics, "wave attacks" were a function of range, as opposed to being a deliberate tactic. Air strikes would include every possible plane that could be launched and formed up, and still have the range to reach the target. The more distant the target, the less planes could be launched and formed in each group, and the more "waves" the attack force would have to be broken into.

Why didn't the Japanese commit their heavier battleships to the Solomons fighting, especially their super-battleship Yamato, which was available at Truk. Actually, for all their carrier expertise, the Japanese high command were still great believers in the battleship's big guns. All the best Japanese battleships were held in reserve to face the battleships of the Pacific Fleet in Jutland-like confrontation. And where were the American battleships? They were, as part of an elaborate cover plan, being used to neutralize large portions of the superior Japanese surface fleet. A Task Force of old, slow American battleships was busily steaming all over the Pacific (California, Oahu, the Fijis, Australia) to keep the Japanese guessing their intentions, and force them to hold back their own battlefleet.

S. Craig Taylor, Jr.

HISTORICAL COMMENTARY

Guadalcanal! One of the best known and least understood campaigns of the Second World War. In 1942, the Solomon Islands of which Guadalcanal is a part, New Guinea, the Bismarck Archipelago, and the surrounding waters hosted some of the hardest fought and most critical battles in the Pacific Theatre. The first real check to Japanese expansion (the Battle of the Coral Sea), and the first Allied offensive in the Pacific (Guadalcanal) took place here. Indeed, the Battles of the Coral Sea comprise one half of the carrier battles fought in history. These operations changed the course of the Pacific War, and saw the development of the weapons and tactics that would finally doom the Japanese Empire.

In World War II, the aircraft carrier was the newest advancement in naval weaponry and warfare. Of questionable effectiveness in its early development, proponents had seen its potential even during the First World War. Developments during the twenties and thirties saw the rapid evolution of seaborne airpower. By 1942, less than thirty-nine years after the Wright brothers' flight at Kittyhawk, even the critics were convinced and the aircraft carrier had become the prime capital ship of the world's navies.

Airpower dominated the Pacific Theatre, and an aircraft carrier (otherwise known as a FLAT TOP) represented airpower in its most mobile, flexible, and hard hitting form. Nothing more than a large, vulnerable, floating airfield, unable to stand up to a light cruiser in a conventional gunnery action, the carrier's strength lay in its planes and in its mobility that allowed it to strike hard and swiftly, then vanish into an endless expanse of ocean.

The Japanese were the first to realize the full potential of carrier borne airpower, as demonstrated by their surprise attack on Pearl Harbor by planes from six large fleet carriers. The Japanese then exploited their superiority, using their fast carriers as the spearhead in their early whirlwind victories and expansion across the Pacific. With their battleships sitting in the mud at Pearl Harbor, the United States Navy, in turn, were forced to rely on their carriers. And learning quickly, by 1942, had reached a rough parity with their Japanese counterparts in the techniques of carrier operations.

Tulagi was occupied on May 3rd. Japanese forces moved into position for the next step in the operations. The Japanese transports and their escorts were to pass through the Jomard Passage, and invade Port Moresby. Direct support was to be provided by the tender Kamikawa, which was to establish a seaplane base at Deboyne Island, and by the light carrier Shoho. Lurking at a greater distance, Rear Admiral Chuichi Hara's powerful Task Force containing the carriers Shokaku and Zuikaku would slip around the Eastern Solomons to cut off any Americans carriers that might try to interfere. No major opposition was expected by the Japanese. But, the Allies were reading the Japanese messages (having broken the Japanese Naval Code), and were fully aware of the Japanese plans. Two fleets carriers, the Lexington and Yorktown, under the command of Rear Admiral Frank J. Fletcher, were sent to turn back the invasion.

The battle opened with a devastating raid on Tulagi on the morning of May 4th by planes from the Yorktown. The first indication to the Japanese that an American flat top was in the area. The next few days passed with little action, as both sides fueled and the big Japanese carriers raced down the Solomons chain, around the eastern tip of San Cristobal. Now knowing that there were two American carriers present, the Japanese transports, which had finally left Rabaul, were circling slowly at sea to await the results of the carrier duel before sailing further.

On May 7th, sightings were made by both sides, and strikes were launched. The American strike, originally planned to attack the two big enemy carriers, found the Shoho instead, sinking her in a matter of minutes; an event commemorated with the phrase, "Scratch one flat top!". The Japanese strike was less impressive, finding and sinking one destroyer and one fleet tanker. Another Japanese strike, launched from Rabaul, attacked an Allied cruiser force that Fletcher had detached to block the Jomard Passage, and failed to score a hit. The last Japanese strike of the day, launched from the carriers, was a fiasco that failed to find any targets, ending with the loss of most of the planes which were forced to attempt night landings on the carriers (several pilots so lost they tried to land on the American carriers). At this point, the Allies were way ahead. Not only had the Japanese lost a light carrier and suffered severe plane losses, but their invasion fleet had finally turned back to Rabaul. The first Japanese invasion fleet of the war had been repulsed.

May 8th proved to be a day of decision. Sighting each other early in the day, both fleets rapidly launched strikes. The American strike bit into the Shokaku, severely damaging her. The Japanese strike, despite heavy plane losses, managed to inflict mortal wounds on the huge "Lady Lex" and damage the Yorktown.

That night the battered fleets pulled apart, ending the battle. For the first time in history, two fleets had fought a battle without any ship sighting an enemy ship. Both sides claimed a victory, the Allies because Port Moresby had been saved, and the Japanese because they had traded the 11,000 ton Shoho for the 36,000 ton "Queen of the flat tops", Lexington.

The defeat at Midway in June abruptly halted the Japanese expansion, handing the strategic initiative to the Allies. However, the Japanese continued a slow advance in the mapboard area, taking Buna in July, and entering the Eastern Solomons, with the start of construction of an air field on Guadalcanal. The Allied reaction was Operation WATCHTOWER (more accurately referred to as Operation SHOESTRING), an amphibious assault to capture the new airfield. The U.S. First Marine Division landed on August 7th, swiftly overcame light resistance, and renamed the airstrip Henderson Field, after a Midway hero. Thus began one of the most protracted and bitter struggles in military history.

Japanese reaction while swift and sharp was largely ineffective. A series of air raids from Rabaul failed to cause substantial damage to the Allied ships, while they crippled

Japanese land-based airpower. The disastrous Allied naval defeat at Savo Island failed to have lasting consequences, as the Japanese did not follow up. It was over two weeks before the Japanese were able to mount a serious full scale counterattack.

The Japanese reactions showed that they were more concerned with New Guinea and not yet overly concerned with the situation at Guadalcanal. Of three Japanese operations underway, the Guadalcanal operation was the smallest. Only 1500 troops were embarked to land on Guadalcanal, while two major operations were simultaneously underway in New Guinea. In the one operation, already begun a powerful Japanese column that had pushed from Buna across the Owen Stanley Mountains of New Guinea, was stalled by some Australian soldiers at the outskirts of Port Moresby. The other operation concerned two amphibious forces that were to land in Milne Bay to seize the new Australian fighter strip at Gili-Gili, gaining the flank of the Port Moresby position. To cover these diverse operations, the Japanese Combined Fleet, committed for the first time since Midway, was to sortie and destroy the American carrier forces. The Allied Intelligence system seemingly failed during this operation, and the American fleet, built around three fleet carriers, was caught while the Wasp Task Force was fueling. This left only the Enterprise and Saratoga and consorts under Fletcher (Vice Admiral by then), to face the whole Combined fleet under Vice Admiral Nagumo.

The Japanese plan was to bait the American carriers, then destroy them while their planes were away or in the midst of refueling and servicing. A force built around light carrier Ryujo steamed about sixty miles ahead of the main Japanese forces to serve as the lure for the trap. The Ryujo was to absorb a strike from the American carriers, while the Shokaku and Zuikaku launched their own strike, surprising and destroying the American flat tops. The trap failed to snap completely shut. A strike from the Enterprise and Saratoga duly sunk the Ryujo, but the Japanese strike, shot to pieces by a powerful American CAP and tremendous anti-aircraft fire, failed to hit the Saratoga, and only damaged the "Big E" (Enterprise). A late strike from the Saratoga damaged the tender Chitose before night ended the battle with a general Japanese retirement. The Japanese transports reached Guadalcanal during the night of August 24/25, and the 1500 troops were landed, while Henderson Field was bombarded by Japanese ship gunnery. The following morning planes from Henderson attacked these ships as they were retiring, sinking a destroyer and damaging the cruiser Jintsu. Later fighting saw the destruction of most of the 1500 Japanese reinforcements. In New Guinea, the Australian troops repelled the Japanese at Port Moresby, a defeat that eventually led to a Japanese rout all the way back to Buna. At Milne Bay, Australian P-40s armed with light bombs proceeded to sink or damage every Japanese transport and barge involved before they could complete landing operations. Ground fighting raged for over a week, but the operation had really been decided by the Japanese ship losses.

All through September and October the Guadalcanal campaign dragged on, generating crisis after crisis. By night the Japanese "Tokyo Express" would run supplies and reinforcements down The Slot, and by day the

"Cactus Air Force" at Henderson Field dominated the surrounding waters, allowing Allied ships to dock and unload. In the jungles of Guadalcanal itself there was fighting every day, and most nights the skies were lit by the fire of Japanese bombardment. At sea, Japanese submarines whittled down the American fleet, sinking the Wasp, and damaging both the Saratoga and BB North Carolina.

October saw the Japanese attempting to break the deadlock. The cruiser action off Cape Esperance on the night of October 11/12 saw the Toyko Express badly mauled for the first time. To remedy this, the Japanese sent battleships into action for the first time, with the Haruna and Kongo blasting Henderson on the night of October 13/14 and repeating the treatment with cruisers on the following night. Morning found the Cactus Air Force still strong enough to attack the Japanese transports though, so the Japanese countered again on the night of October 14/15 by pouring another eleven hundred shells into Henderson. Japanese troop strength on the island continued to climb, and the American situation was rapidly deteriorating.

On October 15, American Pacific naval commander Admiral Chester W. Nimitz gave his appreciation of the situation: "It now appears that we are unable to control the sea in the Guadalcanal area . . . supply of the position will only be done at great expense to us. The situation is not hopeless, but it is certainly critical." Stateside, steps were already being taken to prepare the American people for the loss of Guadalcanal. Every available ship and plane had already been sent to the theatre, and the best Nimitz could offer was to dispatch his most aggressive subordinate, Vice Admiral William F. Halsey to take command.

The Japanese hoped to soften up the Marine and Army troops on Guadalcanal for a week prior to "Y-Day" (October 22), when a Japanese assault would finally recapture Henderson Field. The uncooperative U.S. troops refused to be softened up, and Y-Day was postponed from day to day. Troop strengths on the island were now roughly equal, the Americans being somewhat more numerous, but the Japanese being fresher and healthier than their fatigued counterparts. The Combined Fleet had again sortied, and was nervously loitering near Ontong Java Atoll, waiting for word that Henderson had been recaptured. Determined to do something, Halsey, recently reinforced by the repaired veteran "Big E" and the new battleship South Dakota, both bristling with new 40mm anti-aircraft guns, directed Rear Admiral Thomas Kincaid to sortie from New Caledonia. The bold decision was made not to send the American carriers to their normal patrol positions in support of Henderson Field, but to sweep far to the east, passing Santa Cruz Island in an attempt to flank the Combined fleet. At 0126 hours on October 25th, the Japanese ground forces radioed (mistakenly) that Henderson Field had fallen. Supremely confident, Admiral Kondo set the Combined Fleet into action, believing he could brush aside any Allied Naval forces that might be encountered (the Japanese knew that the Wasp had been sunk, and that the Enterprise and Saratoga were damaged, but not that the Enterprise was back). Halsey was sending Kincaid the order to, "Attack—Repeat—Attack". The stage was set for the last

great carrier battle of 1942, and the last carrier action until the Battle of the Philippine Sea in June of 1944.

Santa Cruz proved to be a very confusing battle. The action opened when two Enterprise Dauntless Dive Bombers found the Zuiho, attacked, and knocked her out of the battle. Both sides had now spotted each other, and the main strikes followed. The Enterprise was able to disappear into a rain squall as the Japanese strike hit the Hornet with full fury, inflicting heavy damage, but suffering severe plane losses (twenty-five of twenty-seven planes). The American strike was less costly, but also less successful. Hits were scored on the Shokaku and Chikuma, but neither ship was sunk. Later Japanese strikes hit the Hornet again, and also damaged the South Dakota (which was throwing up a fantastic amount of anti-aircraft fire, claiming twenty-six Japanese planes shotdown by the end of the day), San Juan, and Enterprise. Forced to retire, the Americans attempted to scuttle the Hornet, but the big flat top was still burning as Japanese surface units arrived to deliver the final torpedoes that sent the ship to the bottom. The American fleet had been defeated, but the Japanese had lost one hundred planes, and the last irreplaceable survivors of their excellent prewar aircrews. The battle proved to be indecisive, as the Japanese had no way to exploit their victory. To the surprise of almost everyone except maybe themselves, the American Soldiers and Marines on Guadalcanal had totally defeated all the Japanese attacks, and the constant bone of contention, Henderson Field, remained securely in American hands. The Cactus Air Force still dominated the local waters in daylight, and even managed to sink the cruiser Yura on October 25th.

But Santa Cruz had settled nothing. Both sides again began to prepare for further operations. The Japanese continued the nightly Tokyo Express runs down The Slot, and, by November 12th for the first time, outnumbered the Americans forces on the island. Carrier strength for both sides had reached the nadir of the war to date. The Japanese could make up only two understrength carrier air groups. The Americans, with Saratoga not due to return until the end of the month, had only the partially repaired Enterprise available, with an incomplete air group and a jammed elevator. However, due to the weakness of the available airpower, both sides were for the first time prepared to commit major surface forces for gunnery action.

The morning of November 12th found American transports and their escorts unloading troops and supplies at Henderson Field. And by the afternoon, despite heavy Japanese air attacks the unloading was completed. That night, the Japanese sent a Task Force including the battleships Hiei and Kirishima to bombard the American

position. They were met in a confused melee by an American cruiser force, with heavy losses on both sides. The Americans lost the Atlanta, Juneau (sunk the following day by a Japanese submarine), and four destroyers, plus the San Francisco, Portland, and another destroyer heavily damaged. The Japanese lost two destroyers and the Hiei, which was hit by over eighty 8-inch shells and left too heavily damaged to escape being sunk by planes from Henderson Field and Enterprise the following day; the first Japanese battleship lost in action in World War II. The "Big E", leaving part of her air group at Henderson, retired southward during the night.

A Japanese cruiser force bombarded the field during the night of November 13/14, but was slow in clearing the island and was still in range when the sun came up. The morning of November 14 saw repeated air strikes from Henderson Field and the Enterprise on the retiring ships, ineffectively covered by a CAP from the Hiyo. The Kinugasa was sunk, and Isuzu, Chokai, Maya, and a destroyer damaged. During the afternoon, a fleet of Japanese transports moving down The Slot came under heavy attack. Fighter cover from the Japanese carriers again proved ineffective, and the Rabaul air forces were too tied down with heavy fighting in New Guinea to be much help. By nightfall, seven Japanese transports were sunk.

That night, yet another Japanese Task Force, including the battleship Kirishima, moved towards Guadalcanal. The Americans were waiting, this time with the Washington, South Dakota, and four destroyers. Another confused night melee followed, with the U.S. losing three destroyers and South Dakota suffering damage, but the Japanese lost a destroyer and the Kirishima.

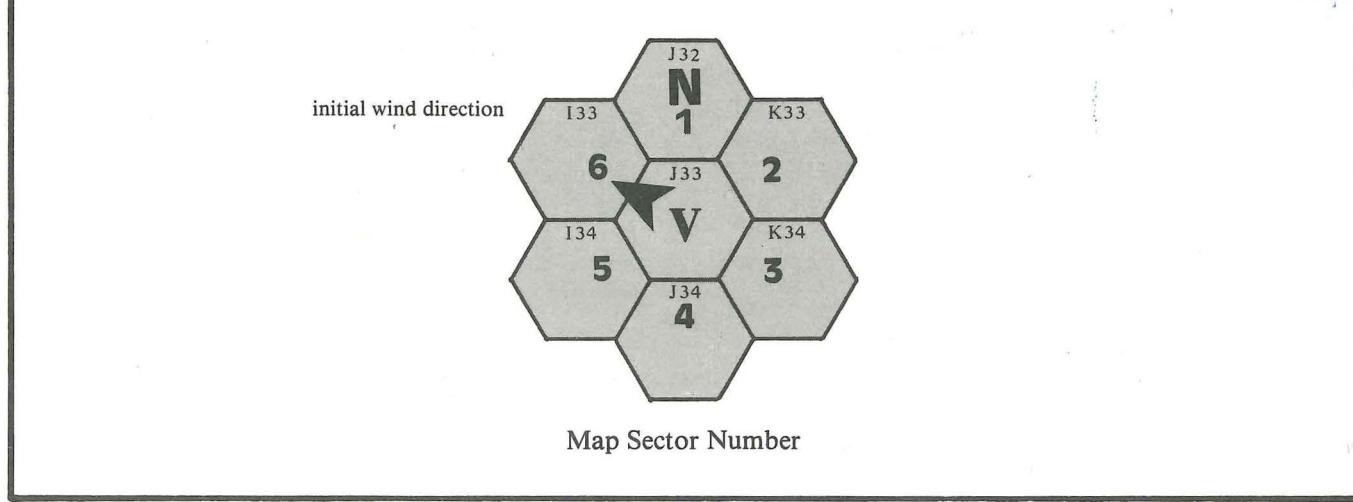
Morning found the surviving Japanese transports still unloading at Guadalcanal, and all four of these were promptly sunk by airstrikes and gunnery from a destroyer. The November battles were a total disaster for the Japanese. Their carriers retired with much reduced air groups, and, although they held on in Guadalcanal until February, 1943, the November effort proved to be the last Japanese attempt to retake the island. Facing the Allies on two fronts from Rabaul was proving to be too much for Japan, as November also saw the fall of Buna to Allied ground troops; the first Allied base on the north coast of New Guinea.

The battle for Guadalcanal continued for over two more years, but for all effective purposes, the Allies had won the island by the end of 1942. Around Guadalcanal, the Coral Sea was littered with the remains of some of the biggest carrier battles in history.

FLAT TOP TERRAIN CHART

All-Sea Hex blue	
All-Land Hex green	
Allied Coastwatcher Symbol	
Japanese Coastwatcher Perimeter Line black	
Base	

Partial-Land Hex	
Reef Hexside	
Japanese Coastwatcher Symbol	
Entry Hex	
Mountain Hexside brown	



Flat Top Playing Aid Card #1

ALLIED AIR HIT TABLES

Allied Plane Name	Air to Air	Air Attacks Vs. Bases						Air Attacks Vs. Ships					
		Level Bombing High Altitude		Level Bombing Low Altitude		Dive Bombing		Level Bombing High Altitude		Level Bombing Low Altitude		Dive Bombing	
		GP	AP	GP	AP	GP	AP	GP	AP	GP	AP	GP	AP
A-20	3	5	2	8	3	—	—	—	1	2	5	—	—
Avenger	3	4	2	6	2	—	—	—	1	2	5	—	—
Beaufighter	6	—	—	5	—	—	—	—	—	1	3	—	—
Beaufort	3	4	2	6	2	—	—	—	1	2	6	—	—
B-17	8	13	5	—	—	—	—	—	2	—	—	—	—
B-25	4	8	3	11	5	—	—	—	1	3	7	—	—
B-26	4	6	2	10	4	—	—	—	1	2	5	—	5
Catalina	4	6	2	9	3	—	—	—	1	2	7	—	10
Dauntless	3	3	1	5	1	6	2	—	—	2	5	2	7
Devastator	2	3	1	5	2	—	—	—	—	1	5	—	6
Hudson	3	3	1	6	2	—	—	—	1	1	4	—	—
P-38	7	—	—	5	—	—	—	—	—	1	—	—	—
P-39	6	—	—	5	—	—	—	—	—	1	—	—	—
P-40	7	—	—	4	—	—	—	—	—	1	—	—	—
Wildcat	9	—	—	4	—	—	—	—	—	1	—	—	—

JAPANESE AIR HIT TABLES

Japanese Plane Name	Air to Air	Air Attacks Vs. Bases						Air Attacks Vs. Ships					
		Level Bombing High Altitude		Level Bombing Low Altitude		Dive Bombing		Level Bombing High Altitude		Level Bombing Low Altitude		Dive Bombing	
		GP	AP	GP	AP	GP	AP	GP	AP	GP	AP	GP	AP
Betty	3	4	2	6	2	—	—	—	1	2	5	—	9
Dave	1	—	—	1	—	—	—	—	—	—	—	—	—
Emily	6	8	3	9	4	—	—	—	1	3	7	—	15
Jake	1	—	—	1	—	—	—	—	—	—	—	—	—
Judy	3	2	1	3	1	4	2	—	—	1	5	2	7
Kate	2	4	2	6	2	—	—	—	1	2	6	—	10
Mavis	5	6	2	7	3	—	—	—	1	2	6	—	15
Nell	3	4	2	6	2	—	—	—	1	2	4	—	9
Pete	1	—	—	1	—	—	—	—	—	—	—	—	—
Rufe	6	—	—	3	—	—	—	—	—	1	—	—	—
Val	2	2	1	3	1	4	2	—	—	1	5	2	7
Zero	9	—	—	3	—	—	—	—	—	1	—	—	—

COMBAT RESULTS TABLE

Hit Table	Number of Attacking Factors													
	1-2	3-4	5-6	7-8	9-10	11-12	13-15	16-20	21-23	26-30	31-35	36-40	41-45	46-50*
1	*	*	*	0	0	0	1	1	1	1	1	1	1	2
2	*	*	0	1	1	1	1	1	2	2	2	3	3	3
3	*	0	1	1	1	1	2	2	2	3	3	4	4	5
4	*	1	1	1	1	2	2	2	3	4	4	5	6	6
5	*	1	1	1	2	2	3	3	4	5	6	6	7	8
6	0	1	1	2	2	2	3	4	5	6	7	8	8	9
7	0	1	1	2	2	3	3	4	5	7	8	9	10	11
8	0	1	1	2	2	3	4	5	6	7	9	10	11	13
9	0	1	2	2	3	3	4	5	7	8	10	11	13	14
10	0	1	2	2	3	4	5	6	7	9	11	12	14	16
11	0	1	2	3	3	4	5	6	8	10	12	13	16	17
12	0	1	2	3	4	4	6	7	9	11	13	15	17	19
13	0	1	2	3	4	5	6	7	9	11	13	16	18	21
14	0	1	2	3	4	5	7	8	10	12	14	17	20	22
15	1	2	3	4	5	6	7	9	11	13	17	19	21	23

COMBAT MODIFIERS TABLE

Air-to-Air Combat:

- 6 if RF not expended (interceptors and escorts only)
- 2 at night
- 1 in clouds
- 6 if armed (Wildcat, P-38, P-39, P-40, Beaufighter, Zero, and Rufe only)

Anti-Aircraft Combat:

- 2 if planes at high altitude
- 2 at night
- 1 if planes in clouds

Air Attack Combat:

- +2 if ship crippled
- +2 if ship anchored
- 4 at night
- 2 in clouds

Surface Attack Combat:

- +1 if target ship anchored
- +1 if target ship crippled

Note: All modifiers are cumulative.

OBSERVATION TABLES

OBSERVING UNIT	UNIT BEING OBSERVED	WEATHER	DISTANCE BETWEEN OBSERVING UNIT & UNIT BEING OBSERVED			
			0	1	2	3
Day Turns						
Base/TF/Coastwatcher	Air Formation	Clear	3	2	1	—
		Clouds	2	1	—	—
Air Formation	Air Formation	Clear	3	2	1	—
		Clouds	2	1	—	—
TF/Base with Radar	Air Formation*	Clear	3	2	1	—
		Clouds	2	2	1	1
Night Turns	Air Formation	Clear	2	2	1	1
		Clouds	2	2	1	1
Base/TF/Coastwatcher	TF	Clear	—	—	—	—
		Clouds	—	—	—	—
Air Formation	Air Formation	Clear	2	—	—	—
		Clouds	1	—	—	—
TF/Base with Radar	Air Formation*	Clear	2	2	1	1
		Clouds	2	2	1	1
Air Formation	TF	Clear	1	—	—	—
		Clouds	—	—	—	—

*Only planes at high altitude.

Flat Top Playing Aid Card #2

INTERCEPTION TABLE

Number of Intercepting Air Factors/ Number of Enemy Air Factors	Number Needed On Roll Of One Die For Successful Interception
--	--

5 or less—5 or less	5-6
5 or less—6 or more	4-6
6 or more—5 or less	4-6
6 or more—6 or more	3-6

Note: Add one to the die roll if the Air Factors were involved in Air-to-Air Combat last turn.

SHADOWING TABLE

1-5	S
6	—

+1 at night
+1 if TF moved into clouds

Shadowing automatically unsuccessful if TF moved into storm

SEARCH TABLE

1-4	S
5-6	—

+1 at night

WIND DIRECTION TABLE

- 1-4—Remains in present direction
- 5 —Changes one hexside in a counter clockwise direction
- 6 —Changes one hexside in a clockwise direction

CLOUD MOVEMENT TABLE

- 1 —Same Sector
- 2-3—Sector the Cloud Marker was heading towards (or the same sector if the Cloud Marker was heading off a board edge)
- 4 —Sector I
- 5 —Sector II
- 6 —Sector V

VICTORY POINTS TABLE

Each Air Factor Eliminated	—2
Each Air Factor Lost Unnecessarily	—10
Each Hit On A Base	—1
Each Turn Henderson/Rabaul Has LF Of Zero Or Less	—10
Each Turn Other Base Has LF Of Zero Or Less	—5
Each Turn AP Unloads (maximum of eight turns)	—3

NIGHT LANDING TABLE

Landing On A Ship

1-4	Elim
5-6	OK

Landing At A Base

1-3	Elim
4-6	OK

All Americans CVs	—150/20
CVs Shokaku & Zuikaku	—140/20
CVs Junyo & Hiyo	—120/20
All CVLs	—100/20
All American BBs	—75/5
BB Mutsu	—65/5
All Other Japanese BBs	—60/5
All AVs & CAVs	—50/4
All CAs	—40/4
All CLs	—30/3
All APs	—24/3
All AOs	—20
All DDs	—8
All PGs	—4

TIME RECORD CHART

RABAUL	CORAL SEA					EAST. SOLOMONS			SANTA CRUZ			GUADALCANAL		
Feb 23	May 4	May 5	May 6	May 7	Aug 24	Aug 25	Aug 26	Oct 25	Oct 26	Oct 27	Nov 12	Nov 13	Nov 14	Nov 15

0100	0200	0300	0400	0500	*	0600	0700	0800	0900	1000	1100	*	1200
1300	1400	1500	1600	1700	*	1800	1900	2000	2100	2200	2300	*	2400

ALLIED AIR OPERATIONS CHART A

In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed																																			
TF1		TF2		TF3		TF4		TF5																																				
	Readying		Readying		Readying		Readying		Readying																																			
	-----		-----		-----		-----		-----																																			
	Ready		Ready		Ready		Ready		Ready																																			
In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	Allied Ship Air Operations																																				
TF6		TF7		TF8		TF9		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>SHIP NAMES</th><th>MAXIMUM CAPACITY</th><th>LAUNCH FACTOR</th><th>READY FACTOR</th><th>PLANE HANDLING</th></tr> </thead> <tbody> <tr> <td>Enterprise</td><td>33</td><td>11/3</td><td>9</td><td>CV</td></tr> <tr> <td>Hornet</td><td>33</td><td>11/3</td><td>9</td><td>CV</td></tr> <tr> <td>Lexington</td><td>30</td><td>12/3</td><td>8</td><td>CV</td></tr> <tr> <td>Saratoga</td><td>32</td><td>12/3</td><td>8</td><td>CV</td></tr> <tr> <td>Wasp</td><td>28</td><td>10/3</td><td>7</td><td>CV</td></tr> <tr> <td>Yorktown</td><td>30</td><td>11/3</td><td>9</td><td>CV</td></tr> </tbody> </table>		SHIP NAMES	MAXIMUM CAPACITY	LAUNCH FACTOR	READY FACTOR	PLANE HANDLING	Enterprise	33	11/3	9	CV	Hornet	33	11/3	9	CV	Lexington	30	12/3	8	CV	Saratoga	32	12/3	8	CV	Wasp	28	10/3	7	CV	Yorktown	30	11/3	9	CV
SHIP NAMES	MAXIMUM CAPACITY	LAUNCH FACTOR	READY FACTOR	PLANE HANDLING																																								
Enterprise	33	11/3	9	CV																																								
Hornet	33	11/3	9	CV																																								
Lexington	30	12/3	8	CV																																								
Saratoga	32	12/3	8	CV																																								
Wasp	28	10/3	7	CV																																								
Yorktown	30	11/3	9	CV																																								
	Readying		Readying		Readying		Readying																																					
	-----		-----		-----		-----																																					
	Ready		Ready		Ready		Ready																																					
TF10		TF11		TF12		TF13		TF14																																				

ALLIED AIR OPERATIONS CHART B

1 High	2 High	3 High	4 High	5 High	6 High	7 High
Low						
8 High	9 High	10 High	11 High	12 High	13 High	14 High
Low						
15 High	16 High	17 High	18 High	19 High	20 High	21 High
Low						
22 High	23 High	24 High	25 High	26 High	27 High	28 High
Low						
29 High	30 High	31 High	32 High	33 High	34 High	35 High
Low						

In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed
NEW CALEDONIA Coral Sea: MC: ∞ LF: 4/4 RF: 2 PH: SP E. Solomons/ S. Cruz/Guad: MC: ∞ LF: 20/20 RF: 12 PH: LP, SP (N)	Readyng	ESPIRITU SANTO E. Solomons: MC: ∞ LF: 5/3 RF: 2 PH: LP, SP AAF: 4 S. Cruz/Guad: MC: ∞ LF: 10/8 RF: 10 PH: LP, SP AAF: 12 SF: 3 (E)	Readyng	GILI-GILI E. Solomons: MC: 10 LF: 6/2 PH: LP AAF: 2 S. Cruz/Guad: MC: ∞ LF: 10/6 RF: 5 PH: LP AAF: 7 (G)	Readyng	NDENI MC: 6 LF: 6/4 RF: 2 PH: SP AAF: 2 (ND)	Readyng

In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed
AUSTRALIA MC: ∞ LF: ∞ RF: 25 PH: LP, SP (A)	Readyng	HENDERSON E. Solomons: MC: ∞ LC: 8/4 RF: 5 PH: LP AAF: 5 S. Cruz/Guad: MC: ∞ LF: 12/6 RF: 8 PH: LP AAF: 10 SF: 1 (H)	Readyng	PORT MORESBY MC: ∞ LF: 20/8 RF: 8 PH: LP AAF: 10 (M)	Readyng

JAPANESE AIR OPERATIONS CHART A

In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed			
TF1		TF2		TF3	<th>TF4</th> <td><th>TF5</th><td></td></td>	TF4	<th>TF5</th> <td></td>	TF5				
Readying		Readying		Readying		Readying		Readying				
Ready		Ready		Ready		Ready		Ready				
In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	Japanese Ship Air Operations				
TF6		TF7	<th>TF8</th> <td><th>TF9</th><td></td><th data-kind="parent" data-rs="12">SHIP NAMES</th><th>MAXIMUM CAPACITY</th><th>LAUNCH FACTOR</th><th>READY FACTOR</th><th>PLANE HANDLING</th></td>	TF8	<th>TF9</th> <td></td> <th data-kind="parent" data-rs="12">SHIP NAMES</th> <th>MAXIMUM CAPACITY</th> <th>LAUNCH FACTOR</th> <th>READY FACTOR</th> <th>PLANE HANDLING</th>	TF9		SHIP NAMES	MAXIMUM CAPACITY	LAUNCH FACTOR	READY FACTOR	PLANE HANDLING
Readying		Readying		Readying		Readying		BB	1	1/1	1	FP
Ready		Ready		Ready		Ready		CAV	2	1/1	1	FP
							Chitose	8	2/1	2	FP	
						Kamikawa	7	1/1	1	FP		
					Hiyo	18	7/3	6	CV			
				Junyo	18	7/3	6	CV				
			Ryujo	16	5/2	4	CV					
		Shoho	10	4/2	4	CV						
	Zuiho	28	10/3	8	CV							
	Zuikaku	28	10/3	8	CV							
TF10	TF11	TF12	TF13	TF14								

JAPANESE AIR OPERATIONS CHART B

1 High	2 High	3 High	4 High	5 High	6 High	7 High					
Low	Low	Low	Low	Low	Low	Low					
8 High	9 High	10 High	11 High	12 High	13 High	14 High					
Low	Low	Low	Low	Low	Low	Low					
15 High	16 High	17 High	18 High	19 High	20 High	21 High					
Low	Low	Low	Low	Low	Low	Low					
22 High	23 High	24 High	25 High	26 High	27 High	28 High					
Low	Low	Low	Low	Low	Low	Low					
29 High	30 High	31 High	32 High	33 High	34 High	35 High					
Low	Low	Low	Low	Low	Low	Low					
In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight					
TULAGI MC: 6 LF: 6/3 RF: 2 PH: SP AAF: 1 (T)	Readyng Ready	SHORTLAND MC: ∞ LF: 8/4 RF: 4 PH: SP AAF: 5 (S)	Readyng Ready	BUKA MC: 8 LF: 6/4 RF: 2 PH: LP AAF: 3 (BK)	Readyng Ready	BUIN MC: ∞ LF: 10/5 RF: 5 PH: LP AAF: 7 (BN)	Readyng Ready	TRUK MC: ∞ LF: 8 RF: 20 PH: LP, SP (TR)	Readyng Ready	KAVIENG MC: ∞ LF: 10/5 RF: 5 PH: LP (K)	Readyng Ready
In Flight	Just Landed	In Flight	Just Landed	In Flight	Just Landed	In Flight					
RABAUL Rabaul/Coral Sea: MC: ∞ LF: 12/4 RF: 7 PH: LP, SP AAF: 9 E. Solomons/ S. Cruz/Guad: MC: ∞ LF: 20/9 RF: 12 PH: LP, SP AAF: 15 AF: 8 (R)	Readyng Ready	LAE Coral Sea: MC: ∞ LF: 10/5 RF: 5 PH: LP AAF: 5 E. Solomons/ S. Cruz/Guad: MC: ∞ LF: 12/5 RF: 6 PH: LP AAF: 10 (L)	Readyng Ready	GASMATA MC: ∞ LF: 8/4 RF: 4 PH: LP AAF: 5 (G)	Readyng Ready	BUNA E. Solomons: MC: ∞ LF: 6/3 RF: 3 PH: LP AAF: 3 S. Cruz/Guad: MC: ∞ LF: 10/6 RF: 5 PH: LP AAF: 7 (BA)	Readyng Ready	Readyng Ready			

AMMUNITION RECORD SHEET

SHIP	AMMUNITION FACTOR	TF	SHIP	AMMUNITION FACTOR	TF
CV Enterprise	12		CA Minneapolis	15	
CV Hornet	12		CA New Orleans	15	
CV Lexington	12		CA Northampton	15	
CV Saratoga	12		CA Pensacola	15	
CV Wasp	12		CA Portland	15	
CV Yorktown	12		CA Salt Lake City	15	
BB N. Carolina	24		CA San Francisco	15	
BB S. Dakota	24		CL Atlanta	15	
BB Washington	24		CL Helena	15	
CA Astoria	15		CL Hobart	15	
CA Australia	15		CL Juneau	15	
CA Chester	15		CL San Diego	15	
CA Chicago	15		CL San Juan	15	

SHIP	AMMUNITION FACTOR	TF	SHIP	AMMUNITION FACTOR	TF
CV Shokaku	12		CA Chokai	12	1
CV Zuikaku	12		CA Furutaka	12	1
CV Hiyo	12		CA Haguro	12	1
CV Junyo	12		CA Kako	12	1
CVL Ryujo	14		CA Kinugasa	12	1
CVL Shoho	16		CA Kumano	12	1
CVL Zuiho	16		CA Maya	12	1
AV Chitose	12		CA Myoka	12	1
AV Kamikawa	12		CA Suzuya	12	1
CAV Chikuma	12	1	CA Takao	12	1
CAV Tone	12	1	CL Izusu	20	2
BB Haruna	24		CL Jintsu	20	2
BB Hiei	24		CL Nagara	20	2
BB Kirishima	24		CL Sendai	20	2
BB Kongo	24		CL Tatsuta	20	2
BB Mutsu	24		CL Tenryu	20	2
CA Aoba	12	1	CL Yubari	20	2
CA Atago	12	1	CL Yura	20	2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
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NOTES

PLANE DATA CHARTS

Name	N	MF	RF	Name	N	MF	RF	Name	N	MF	RF
A-20	20	9	6	B-25	25	9	7	Hudson	H	7	10
Avenger	A	7	8	B-26	26	10	6	P-38	38	12	5
Beaufighter	BF	9	6	Catalina	C	6	20	P-39	39	11	5
Beaufort	BT	7	8	Dauntless	DT	9	6	P-40	40	11	5
B-17	17	8	12	Devastator	DV	6	5	Wildcat	W	8	6

KEY: N-Notation, MF-Movement Factor, RF-Range Factor

Name	N	MF	RF	Name	N	MF	RF
Betty	B	9	10	Mavis	M	8	23
Dave	D	4	6	Nell	N	8	8
Emily	E	9	24	Pete	P	4	6
Judy	JD	11	6	Rufe	R	9	6
Jake	JK	5	9	Val	V	9	7
Kate	K	7	7	Zero	Z	10	8

AIR
RECORD
SHEET

