MIDWAY SOLITAIRE

DELUXE EDITION

INSTRUCTIONS

DECISION GAMES

These rules use the following color system: Red for critical points such as errata and exceptions, Blue for examples of play. Check for e-rules updates to this game @ **decisiongames.com/wpsite/e-rules/**

1.0 INTRODUCTION

Midway Solitaire is a wargame of the Campaign in the Pacific Theater of Operations (PTO) in April–June 1942. This period saw the Japanese take the offensive in two major campaigns which saw the battles of the Coral Sea and Midway, both of which were decided by aircraft carrier actions.
- The player takes command of United States Navy and Allied forces.
- The game system takes command of Imperial Japanese forces.
- As USN commander you must defeat multiple IJN naval offensives while your foe has superior numbers. At stake is the course of the war in the Pacific.

1.1 Rules Advisory

Midway Solitaire is unique in the annals of wargames because it ties two very disparate types of games together as one cohesive experience; a strategic game (covering a large portion of the Pacific Theater) and an operational game featuring distinct naval units, flotillas, and individual air groups all with unique operational capabilities.

To seamlessly accomplish this melding of different wargame approaches, **Midway Solitaire** is a complex game, procedurally speaking. However, do not be put off by that, because these rules have been very carefully arranged and organized to allow you to follow the procedures step by step. The Sequence of Play (6.0), if followed, will take you through all the steps of each game turn (GT), and you will do exactly what you are supposed to do. Follow each rule carefully, and you will discover that the game will quickly take on an interesting life of its own.

Your task as the player is to win the game by judging how to prevent a Japanese victory within the framework of the solitaire mechanics. From the US perspective, you are taking on the role of Admiral Nimitz in terms of what options you have available and what decisions you can make to repel the Imperial Japanese Navy's drive across the Pacific. In this regard, it is recommended that you play at least two games and consider the first as a sort of training exercise, and then see if you can beat the system during your next game(s). The key to winning is to balance your limited assets to meet the threats that present themselves over the course of the game.

1.2 Game Scale

The map is scaled at 700 miles to the inch. Each GT represents a period of activity (from one day to one week). CV and CVL units represent one aircraft carrier. BB units represent two battleships. CA units represent two to four ships. CL units represent two to four light cruisers plus destroyers. DD units represent four to twelve destroyers. Air units represent from one to three squadrons.

1.3 Game Turns & Game Length

Midway Solitaire is played in game turns. The number of game turns is determined by the number of IJN Operations Markers. To initiate a turn, pick one marker. The scenario's last turn is initiated when the last Operations Marker is picked, this initiates the scenario's last turn. The length of the game can vary since certain game events can place Operations Markers back in the pool.

Important Old Hands Note:
Midway Solitaire does not have a game turn record track. When all operations markers have been played the game comes to an end.

2.0 COMPONENTS

A complete game of **Midway Solitaire** includes:
- Rules Booklet
- One Player Aid Card (PAC)
- One hard mounted 22 × 34-Inch Map
- One Counter Sheet of 176 ⅝-Inch Counters
- One Partial Counter Sheet of 48 ⅝-Inch Counters
- One Six-Sided Die

2.1 Terms, Definitions, & Abbreviations

#d6: Roll the number of six-sided dice equal to the number (#), then total the results.

Activated Route: One of the four routes (AL, MI, SO, MO) that has been activated by an IJN Operations Marker.

BBR: Bomber.

Combat Air Patrol (CAP): Air units launched to intercept enemy air units attacking a TF or base. Air units flying CAP for bases should be placed on the airbase symbol near the corresponding base. Air units flying CAP over a TF should be placed on top of the TF marker on the map.

Carrier Air Group (CAG): The naval air units assigned to a specific carrier.

Counter: A generic term for the game pieces provided.

DR: Die Roll.

FTR: Fighter.

Game Turn (GT): A GT consists of the drawing of a Japanese operations marker and then conducting both a Japanese and USN Phase.

Imperial Japanese Navy (IJN): The term for game-controlled forces.

IJN Operations: There are four IJN operations that may occur during a game. They are known by their geographic objective code:

AL (Aleutians)	**MO** (Port Moresby)
MI (Midway)	**SO** (Solomons).

IJN Operations Pool: A wide-mouthed opaque container in which the IJN Operations Markers are kept until drawn and played.

LAC: Land Aircraft.

May: The player can choose to take or not take the action.

Must: The player is required to take the action.

NAC: Naval Aircraft.

Pick: Randomly draw a unit or marker.

Roll Against a Value: Roll one die and then compare it to a unit's combat factor. If the die roll is less than or equal to the factor, the die roll succeeds. If it is greater than the combat factor, it fails.

Example: A unit has an air combat value of 3. To hit an air unit the player would have to roll a 3 or less. A DR result of 4 or greater would be a miss.

Route Line: There are four route lines (AL, MI, SO, and MO) that will be activated by an IJN operations marker that is drawn each GT.

Select: Deliberately choose a unit or marker.

Spotted: A spotted TF has its "spotted" side showing, i.e., the counter has its unit side up (flag side down).

Task Force (TF): A naval formation that includes various ships. A task force also represents fleet logistics ships not otherwise shown in the game.

Important: Task Force Markers have no capabilities if there are no naval units assigned.

TEC: Terrain Effects Chart.

Unspotted: An un-spotted TF is displayed with its "unspotted" side showing, i.e., the counter has its flag side up (unit side down).

USN (United States Navy): General term for player-controlled forces: United States and British Commonwealth sea, air, and land forces.

VP: Victory Points.

You: The player. When a rule instructs "You" to do something, then that means you will be executing a procedure, acting, in effect, as the game's AI.

2.2 Game Map

The map shows the Pacific Theater of Operations (PTO). Various items on the map are described as follows:

Available, Reinforcement, Damaged, and Eliminated Displays: These are used to place and record the status of various unit counters.

Battle Display: Used by the player to lay out units when determining valid targets during combat (9.0).

IJN Defensive Perimeter: The line established by the Japanese Imperial Headquarters as area needed to provide a defense in depth to keep the Allied forces from being able to easily strike at the Japanese Home Islands and other strategic islands.

IJN Home Bases: There are four large displays representing major Japanese bases from which Japanese task forces begin their operations:

Honshu Japan: Operation AL
Kyushu Japan: Operation MI
Truk: Operation SO
Truk: Operation MO

Important: IJN air units cannot base at IJN Home Bases.

Important: USN forces (any type) cannot enter IJN Home Bases.

Note: Home Bases are printed with anchor symbols. These symbols have no tangible meaning during play other than to identify their respective locations as a Home Base.

IJN Island Bases: The red circles represent Japanese island airbases.
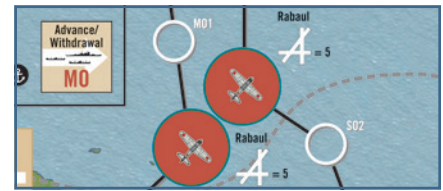
Important: Rabaul consists of two separate red circles, both representing the same location, but are separate for purposes of defining each of the two distinct route lines (MO and SO, respectively). The aircraft capacity of Rabaul is five air units on each route.

Plotting Spaces: The white circles on the map through which air and sea unit counters may move during a GT.

Important: IJN Island and USN Island Bases also function as Plotting Spaces for movement purposes.

Route Lines: The black lines that connect Plotting Spaces, Island Spaces, and Home Bases together. Game pieces may only be moved on the map to other spaces via these route lines.

USN Home Bases: There six large displays that represent major US Bases:

Alaska	Samoa
West Coast	New Caledonia
Pearl Harbor	Australia

Important: IJN units (any type) cannot enter USN Home Bases. See 3.2 and 6.1.3 for IJN Sudden Death Victory conditions.

Task Force and Carrier Air Group Displays: These are used to display and organize air and naval units.

USN Island Bases (IJN Objective Spaces): The four green squares (Aleutians, Midway, Solomons, and Port Moresby) represent Allied airbases. These are objectives of Japanese operations.

- IJN Objective Spaces start as USN-controlled spaces.
- An Objective becomes IJN-controlled due to a successful IJN amphibious assault. Once IJN-controlled, they remain so for the remainder of the game.
- Air units (either side) cannot base on IJN-controlled Objective Spaces.
- The USN cannot retake such islands (at least within the span of the game). See also End Game Victory Points (3.3).

Various Charts and Tables: These are used during the play of the game and are described in the pertinent rules.

2.3 Unit Counters

The various game pieces are defined as follows:

Task Force: When placed on the map, task force markers indicate the location of the naval units that are displayed in the same-named or numbered Task Force Displays on the map.

- Task Force Markers and Displays are printed with a capacity number (printed in brackets) that indicates the maximum number of naval units that the TF may comprise.
- Task Force Markers have two sides, a front side (unspotted side) and a back side (spotted side) to indicate its susceptibility to attack by enemy units.

Front (unspotted)   Back (spotted)

Task Force ID

Capacity

USN Leaders: USN leaders are assigned to task forces to enhance their capabilities (10.0).

Movement & SBD/TBD bonus

Leader Name

Coastal Defense Unit: Each Island Base has a coastal defense unit assigned to it. Coastal defense and base are both terms used to describe these units. They are used interchangeably within the rules.
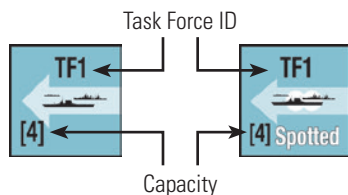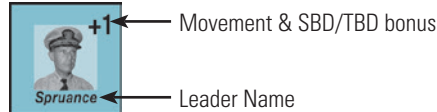
- They provide the island with an airbase capacity, air combat, naval combat, and ground combat factors.

Front (full strength)

Air Combat Factor   Airbase Capacity

Naval Combat Factor

Ground Combat Factor   Name
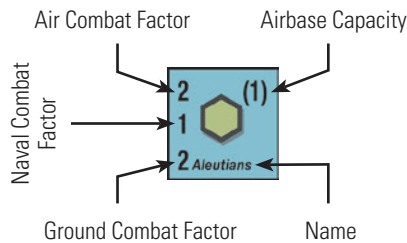
Back (reduced strength)
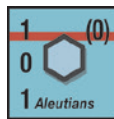
Important: If a coastal defense unit has an airbase capacity number of zero, aircraft units cannot be based on that Island Base.

Air Units: Air units are divided into two categories: Naval Aircraft (NAC) and Land Aircraft (LAC).

- NAC air units may be based on aircraft carriers or on land Bases.
- LAC air units may only be based on land Bases.
- Both NAC and LAC air units are designated as Fighters (FTR) or Bombers (BBR).
- Only FTR aircraft units may use their air combat factor offensively. BBR aircraft units may only use their air combat factor if fired upon by FTR aircraft units.
- Only BBR aircraft units can bomb land or naval targets.

 Exception: The Port Moresby LAC FTR unit can bomb land Bases.

Note: US BBR counters are printed as either scout bomber (SBD) or torpedo bomber (TBD). In game terms there is no functional difference. **Exception:** *Leaders (10.1).*

Front (full strength)

Air Combat Factor   Parent Aircraft Carrier

Naval Combat Factor

Ground Combat Factor   Movement Factor (Range)

Aircraft Type
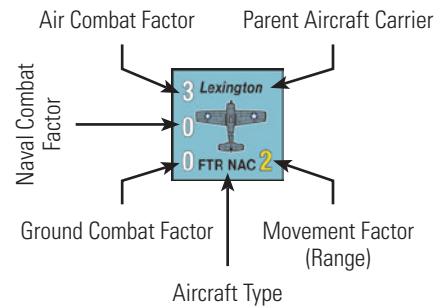
Back (reduced strength)

- See 2.3.2 for detailed explanation of combat factors.
- The movement factor (range) of an air unit is the maximum number of spaces that an air unit may fly to conduct an air strike and the maximum number of spaces the air unit may fly to a base or carrier after conducting its mission.

Example: An air unit with a range of two could fly two spaces to a target space and then fly two spaces back to a base or carrier.

Naval Units: There are four types of naval units:

CV & CVL: Aircraft Carriers.

BB, CA, CL, & DD: Surface Combatants.

TR: IJN Transport (TR) units represent naval transports and amphibious assault forces. IJN TR conduct amphibious assaults to take control of IJN Objective Spaces.

AVD: These represent seaplane tenders. They have a search range of three spaces. Otherwise, they are treated as naval units.

Designer's Note: *IJN seaplane tenders are factored into their search rules.*

- Naval units are one-step units. They are printed with a flag on the back of the counter to indicate they are unspotted.
- Naval units do not have a movement factor and are moved using the Movement Rules (8.1).
- Only aircraft carriers (all types) have a NAC capacity. The capacity number represents the number of NAC units that can base on that aircraft carrier.

Naval Unit front (full strength)

Unit Type

NAC Capacity
(Carrier Only)

Air Combat Factor

Naval Combat
Factor

Ground Combat Factor

Ship Name
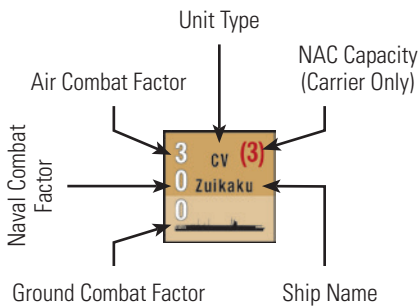
Naval Unit back

2.3.1 Unit Steps

Naval units are one-step units. If a naval unit is hit, it may be damaged or eliminated (9.4.3). Air units and coastal defense units may consist of two steps.

- The front of the counter is the unit's full-strength side, and the back is the unit's reduced-strength side.
- If an air unit or coastal defense unit receives a hit, the unit is flipped over so that its reduced side shows. If the unit receives a second hit it is eliminated.

2.3.2 Combat Factors

Units have three combat factors. Each factor is used as that unit's "to hit" (or hit) number when conducting that type of combat.

- When conducting a specific type of combat, the player rolls 1d6 and if the DR is less than or equal to the unit's combat factor for the target the unit is attacking, the enemy unit suffers one hit (9.4.3).

Example: The *Zuikaku* (shown above) is firing against an enemy air unit. The player must roll a three or less to achieve a hit on the air unit.

Important: If a unit's combat factor in any category is a 0, that unit cannot fire against that type of target.

- Each combat factor functions as follows:
  Air Combat Factor: Use this factor when attacking any air unit. A parenthesized air combat factor indicates a type of air unit that can only participate in air combat if it is attacked by an enemy FTR unit.
  Naval Combat Factor: Use this factor when attacking any naval unit.
  Ground Combat Factor: Use this factor when attacking any ground unit.

2.4 Markers

IJN Operations Markers: Operations Markers are drawn randomly at the beginning of each GT to dictate which route line will be activated.

- There are 14 Operations Markers noted with the geographic objective code (2.1).

MI Markers: 5 **MO Markers:** 3
AL Markers: 3 **SO Markers:** 3

Important: Play of each of the above markers represent one GT.

- There are eight **Special Operations Markers** (see Player Aid Card).

Important: The above markers represent special occurrences during play and may require the draw of an additional Operations Marker from the Operations Marker Pool.

Incident Markers: Incident Markers are used to denote when incidents occur because of TF movement (11.0).

Control Markers: Are used to show which side currently controls an island Base or IJN Objective.

Deception Markers: Are used to provide the player with limited intelligence information on the composition of IJN TFs.

Important: Counters marked with "**Opt**" are optional counters and only used with the optional rules (12.0 through 17.0).

3.0 HOW TO WIN

There are two ways to win the game: Sudden Death Victory or End Game Victory Points.

3.1 USN Sudden Death Victory

The USN wins if at any time all IJN CV and CVL units are sunk or damaged.

3.2 IJN Sudden Death Victory

The IJN wins a Sudden Death victory, if at any time:
  1) The IJN has captured all IJN Objectives (Port Moresby, Solomons, Midway, and Aleutians); **or,**
  2) All USN CVs are sunk or damaged; **or,**
  3) An IJN TF begins the IJN Phase adjacent to a USN Home Base (6.1.3).

Designer's Note: An IJN TF reaching a USN Home Base does not necessarily mean they have captured it, but that logistics and morale would be sufficiently disrupted to unhinge Allied Pacific strategy.

3.3 End Game Victory Points (VP)

The game comes to an end at the end of any GT that all IJN Operations Markers have been drawn. After completion of that GT, End Game Turn victory is determined by totaling the USN VPs gained or lost.

Important: Units which were damaged, then repaired (6.2.4, USN G-4 action) do not count against VP (unless subsequently damaged/eliminated).

a) The player gains the number of VPs below for each of the listed IJN units in the IJN Eliminated Units Display:
  6: CV
  3: CVL or BB
  1: CA, CL, TR, or DD
  2: Air unit (LAC or NAC)
b) The player gains the number of VP below for each of the IJN listed units in the IJN Damaged Units Display:
  2: CV
  1: CVL or BB
  ½: CA, CL, or DD

Important: The player does not gain VP for controlling IJN Objectives.

c) The player loses the number of VP below for each of the USN listed units in the USN Eliminated Units Display:
  –4: CV or BB
  –1: CA, CL, AVD, or DD
  –1: Air unit (LAC or NAC)
d) The player loses the number of VP below for each of the USN listed units in the USN Damaged Units Displays:
  –2: CV
  –1: BB
  –½: CA, CL, AVD, or DD
e) The player loses the number of VP below if the IJN controls an IJN Objective:
  –10: Port Moresby
  –3: Solomons
  –5: Midway
  –2: Aleutians

f) Determine the level of victory.

25 or More VP: USN Victory.

15 to 24 VP: The game is a Draw.

14 or Less VP: USN Defeat.

Designer's Note: In game terms, the original campaign was a draw. The USN sank four IJN CV and one CVL while losing two CV of its own (each side also had one CV damaged); the Japanese took the Aleutians and Tulagi in the Solomons—the latter leading to the Guadalcanal campaign later in 1942. You as the player must do better than Nimitz!

4.0 STACKING & BASING

There is no stacking limit in the game; any number of counters may occupy any space on the map.

- Aircraft carriers and bases are limited to specific quantities and types of air units that may be based on them (4.1 & 4.2).
- TFs are limited to specific quantities and types of naval units that may be assigned to them.
- Air units that remain on bases or carriers instead of flying missions are never affected by enemy anti-air fire (9.2(2)).

4.1 Aircraft Carrier Capacity

Aircraft carriers are limited to basing the below types and number of aircraft:

a) Only NAC aircraft; **and,**

b) The number of NAC air units equal to the aircraft carrier's capacity (2.3). An aircraft carrier's capacity is also printed on the map in the appropriate Carrier Air Groups Display.

Important: A damaged aircraft carrier retains its full basing capacity and retains whatever NAC air units it is carrying while it is being repaired.

- When the game begins, each NAC air unit is based aboard the aircraft carrier of the same name.
- If a carrier is eliminated, all NAC air units currently on the carrier (not flying missions) are also eliminated.
- NAC air units may be subsequently based aboard other friendly aircraft carriers if required.

Example: The *Enterprise* is sunk. All *Enterprise* NAC air units may be based on any other USN carrier or base with the remaining capacity to allow them to base on the new carrier.

- If at any time there are more NAC air units in a space than there is air unit capacity available (carrier and/or base) you must eliminate the number of NAC air units that exceed the total capacity available in that space. Units to be eliminated are chosen at random.

4.2 Base Capacity

$A = 2$
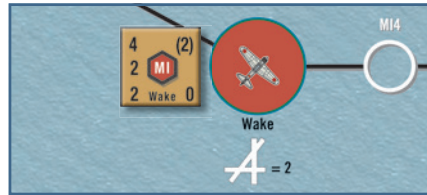
Each IJN Island Base and IJN Objective Space capacity is limited to the air unit capacity number printed on the coastal defense unit assigned to that space. Each IJN Objective or IJN Island Base also has its maximum airbase capacity printed near its airfield symbol.

Important: IJN Home Bases do not have an air unit capacity as IJN air units cannot be placed in those spaces.

- Both NAC and LAC air units may be based in spaces with an airbase icon and a coastal defense unit.
- Australia, West Coast, and Alaska Home Bases have an unlimited air unit capacity.

Important: NAC air units that are based on an aircraft carrier do not count against any base's capacity, nor do LAC/NAC air units on an airbase count against the aircraft carrier's capacity.

- If at any time there are more air units in a space than there is available air unit capacity (airbase only) you must eliminate the number of air units that exceed the total capacity available in that space. Units to be eliminated are chosen at random.

4.2.1 Decrease Airbase Capacity

An airbase's capacity is dependent on the status of the coastal defense unit for that space.

Important: If a space begins the game with a coastal defense unit, the capacity of that airbase is also equal to the air unit capacity printed on the coastal defense unit (upper right corner).

- If a coastal defense unit is damaged, the capacity of the airbase is reduced to the air unit capacity printed on the reduced side of the coastal defense unit.

- If air units are on a base and its coastal defense unit is reduced, and there is insufficient basing capacity in the space, then you must eliminate the number of air units to meet the lowered capacity rating of the base. Units to be eliminated are chosen at random.
- If the coastal defense unit is eliminated the air unit capacity of the associated base is zero.

4.2.2 Increase USN Airbase Capacity

If a USN AVD naval unit is present at any USN-controlled Objective Space or Home Base, the airbase capacity of that airbase is increased by one.

- This increase can improve an airbase that has a current capacity of zero (either printed, or due to elimination of the associated coastal defense unit).
- If the AVD naval unit is removed from the space for any reason, the capacity of that airbase immediately returns to its printed or coastal defense unit capacity.

4.3 TF Organization

USN and IJN naval units are organized into TFs. A TF consists of a TF marker and one or more naval units (plus any carrier air units assigned to carriers in that TF). Place the component naval units in the corresponding USN or IJN TF Display, and any NAC in the corresponding USN or IJN Carrier Air Groups Display.

- Task Force Markers have no capabilities other than to represent the map location of one or more friendly naval units that are organized on their side's TF Display.
- Each TF corresponds to a specific TF Display printed on its own side's TF Display.
- Naval units that have been eliminated or that are undergoing repairs do not count when considering a TF's composition capacity.
- Naval units in a TF Display occupy their designated TF's location on the map.
- The game's initial set-up for both sides will indicate which naval units are assigned to each TF.
- The player may reorganize the composition of USN TFs during his G-1 Organization Segment (6.2.1).
- If an admiral is also present with a TF, add one to that TF's composition capacity (10.0).

Important: A TF may never have more naval units than its composition capacity. This composition capacity is printed on each USN TF Marker and Task Force Display.

4.3.1 USN TF

USN naval units are initially assigned to TFs by scenario set up (5.0 or Optional Rules). You can change the composition of USN TFs via the G-1 Organization Action. You can also build new TF, or replace eliminated TF markers, via G-1 actions (6.2.1).

- If at any time there are no units in a USN TF, then the TF marker is removed from the map and placed in the USN Available TF Display. It can be reformed via a G-1 action.
- Individual USN ships can operate without a TF marker. Each such ship would count as a TF. However, they can move only from a Home Base to a Home Base per the G-3 Redeploy TF Action (6.2.3). They cannot enter Plotting Spaces or Island Bases.

Designer's Note: The above restriction on individual naval units is due to various command control and logistics reasons.

4.3.2 IJN TF

IJN naval units are initially assigned to TFs by scenario set up (5.0 or Optional Rules). You cannot change the composition of IJN TFs. See 4.3 for detailed information on the composition capacity of IJN TFs.

Exception: IJN reinforcements and repair rules (6.1.9).

- If at any time there are no units in an IJN TF, then that TF marker is permanently removed from play.
- Individual IJN naval units must be part of a TF. They cannot be on the map unless they are part of a TF.
- IJN ship units can be in the Damaged and Eliminated Displays without a TF Marker.

Important: The player may not voluntarily change the composition of IJN TFs; however, the composition (but not capacity) of an IJN TF may be altered by combat losses and/or scheduled reinforcements.

5.0 SET-UP

Conduct set-up in the order given below.

Important: When playing the standard game, do not use any optional or variant counters, unless using the associated rules for those units.

5.1 USN Set-up

All air and coastal defense units are at full strength. All naval units are undamaged (**Exception:** *Saratoga*). Set-up USN units as listed below:

Important: Place the naval units listed after each TF in the corresponding USN Task Force Display on the map.

Alaska Home Base:
  BBR LAC × 2 (11AF)
  FTR LAC (11AF)
  TF-8 (not spotted): CA-8.6, DD-8.4
Aleutians IJN Objective Space:
  Aleutians Control Marker (USN control showing)
  Aleutians Coastal Defense Unit
Australia Home Base
  BBR LAC (19 BG)
  BBR LAC (11+20)
  TF-44 (not spotted): CA-17.3
Midway IJN Objective Space:
  Midway Control Marker (USN control showing)
  Midway Coastal Defense Unit
  LAC FTR (VMF 221)
  LAC BBR (VMSB 241)
  LAC BBR (PW 2)
  LAC BBR (7 AF Det)
  LAC BBR (TBD)
New Caledonia Home Base
  TF-17 (not spotted): CV-2 (*Lexington*); CV-5 (Yorktown); CA-17.2; DD-17.4; Fletcher
Pearl Harbor Home Base:
  TF-16 (not spotted): CV-6 (*Enterprise*); CV-8 (*Hornet*); CA-16.2; DD-16.4; AVD-12; Spruance
Port Moresby IJN Objective Space
  Port Moresby Control Marker (USN control showing)
  Port Moresby Coastal Defense Unit
  FTR LAC (8 PG)

  BBR LAC (3 LBG)
Solomons IJN Objective Space
  Solomons Control Marker (USN control showing)
  Solomons Coastal Defense Unit
West Coast Home Base
  TF-11 (not spotted): DD-11.4
USN Carrier Air Groups Display
  CV2 *Lexington:* *Lexington* FTR NAC; SBD NAC; TBD NAC
  CV3 *Saratoga:* *Saratoga* FTR NAC; SBD NAC; TBD NAC

Important: The *Saratoga's* three NAC air units are not damaged; however, they must remain assigned to the *Saratoga* until the *Saratoga* is repaired.

  CV5 *Yorktown:* *Yorktown* FTR NAC; SBD NAC; TBD NAC
  CV6 *Enterprise:* *Enterprise* FTR NAC; SBD NAC; TBD NAC
  CV8 *Hornet:* *Hornet* FTR NAC; SBD NAC; TBD NAC
West Coast Damaged Repair Table
  CV3 *Saratoga:* USN Damaged Units Display
USN Reinforcements Display
  BB4; DD-1.4; AVD-17.9; FTR LAC (7 AF); BBR LAC (RAAF); BBR LAC (18 BW)
USN Available TF Display
  TF-1

5.2 IJN Set-up

All units are at full strength and are undamaged unless the listing specifically states otherwise. Set-up IJN units as listed below:

5.2.1 IJN Marker Placement

IJN Operations Markers: Place all 22 IJN Operations and Special Operations Markers (2.4) in a draw cup (Operations Marker Pool).
IJN Advance/Withdrawal Markers: Place all four markers in the Advance/Withdrawal Box of the IJN Home Base Displays, Advance side up corresponding to the route name on the marker.
Incident Markers: Place all ten Incident Markers in a large mouth container. The container is the Incident Marker Pool.

Important: All TFs are not spotted.

5.2.2 IJN Coastal Defense & Aircraft Unit Placement

Rabaul (SO Route)
SO Rabaul Coastal Defense Unit; BBR LAC (4 AG); BBR LAC (Genzan); FTR LAC (Tainan)

Rabaul (MO Route)
MO Rabaul Coastal Defense Unit; BBR LAC (4 AG); BBR LAC (Genzan); FTR LAC (Tainan); FTR LAC (Chitose)

**Truk MO Home Base**
Invasion MO TF
Covering TF

Truk SO Home Base
4th CSF TF
Invasion SO TF
Support TF

Wake IJN Island Base
Wake Coastal Defense Unit; BBR LAC (11 Det)

Important: Rabaul and Truk are two distinct locations on the map, but each of the two pairs of spaces represent the same historic location and the units available at each location during different months of 1942. For all game purposes treat each unit (even if identical to another unit) and space as a distinctly separate unit and space.
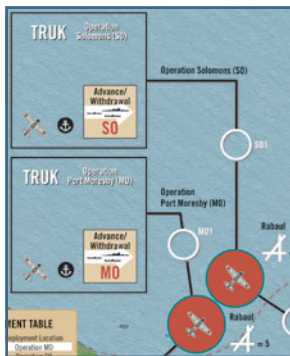
Example: The elimination of the Genzan G3M bomber from the MO Rabaul space has no effect on the Genzan G3M bomber at the SO Rabaul space, even though they represent the same historical unit.

5.2.3 IJN Home Base TF Assignment

Kyushu Japan Home Base
1st CSF TF
Invasion MI TF
Main Body A TF
Guard TF

Honshu Japan Home Base
2nd CSF TF
Invasion AL TF
Main Body B TF

5.2.4 IJN TF Composition

IJN Carrier Air Group Display
Shokaku: Shokaku FTR NAC; BBR NAC
Zuikaku: Zuikaku FTR NAC; BBR NAC
Akagi: Akagi FTR NAC; BBR NAC
Kaga: Kaga FTR NAC; BBR NAC
Hiryu: Hiryu FTR NAC; BBR NAC
Soryu: Soryu FTR NAC; BBR NAC
Ryujo: Ryujo FTR NAC; BBR NAC
Junyo: Junyo FTR NAC; BBR NAC
Shoho: Shoho FTR NAC; BBR NAC
Zuiho: Zuiho FTR NAC; BBR NAC
Hosho: Hosho BBR NAC

IJN CV and CVL Naval Units

Important: All naval units remain unspotted until revealed (spotted) during game play.

1) Place all five CVL naval units face down and then mix them up. Randomly pick three units and (without examining them) place one in each of the following IJN TF Displays (on the map):
Covering TF
Invasion MI TF
Main Body A

2) Add the six IJN CVs to the remaining two CVL units (all face down) and mix them up again. Then randomly pick the number of units below, placing them face down in the listed IJN Task Force Displays:
1st CSF TF: 4
2nd CSF TF: 2
4th CSF TF: 2

IJN Invasion Naval Units
Place the below types of naval units in the listed IJN Task Force Displays:
Invasion MO TF: TR-4; TR-5
Invasion SO TF: TR-6
Invasion MI TF: TR-1; TR-2
Invasion AL TF: TR-3

IJN BB, CA, CL, and DD Naval Units
Place all IJN BB, CA, CL, and DD naval units, and three Deception Markers, face down then mix them up. Then randomly pick the number of units below, placing them face down in the listed IJN TF Displays:
1st CSF TF: 3
2nd CSF TF: 1
4th CSF TF: 1
Main Body A TF: 2
Main Body B TF: 2
Support TF: 1
Guard Force TF: 2
Covering Force TF: 1
Invasion MO TF: 1
Invasion SO TF: 1
Invasion MI TF: 4
Invasion AL TF: 1

6.0 SEQUENCE OF PLAY

Each GT is comprised of three phases. Each phase may consist of multiple segments. Each segment may have multiple steps.

- The player should use the current Operations Marker as the game phase marker on the Sequence of Play Track (on the map) as a reminder of the current Phase and Segment. Once the game turn is complete the marker should be moved to the IJN Operations Marker (already played) Display.
- All phases, segments and steps must be performed in the order given below.
- When a GT is complete, continue to the next unless all IJN Operations Markers have been played at which time the game ends.

Designer's Note: *The sequence of play is asymmetrical for the IJN and USN parts of the GT. This is due to the solitaire mechanics plus the difference between each side's forces and goals. The sequence of play models operations at the start of the Pacific War, when command control, doctrine, and logistics were all in a primitive state. So, there are things which can be difficult to impossible to do. Bear in mind that each turn might represent just two to three days and at the time air units could not be easily switched around.*

6.1 IJN Phase

6.1.1 IJN Operations Determination Segment

Randomly pick one IJN Operations Marker from the IJN Operations Marker Pool and place it on the Sequence of Play Track to denote the current Phase/Segment currently being played.

- The marker will remain on that track until the Administration Phase of the current GT, at which time the marker is discarded (placed in the IJN Operations Marker (already played) Display.

Exception: Victory Spirit Special Operations Marker (Player Aid Card).

a) If one of the Operations Markers is drawn (AL, MI, SO, or MO), the route with the corresponding code will be the active route for this GT. IJN forces on that route are activated and will conduct the ensuing IJN segments this GT.

b) If one of the Special Operations Markers are drawn, follow the procedures on the Player Aid Card for the drawn Special Operations Marker. If there is more than one IJN TF on a route line, you must in each segment conduct actions starting with the space closest to the USN Home Base on that

route line, proceeding back along the route to the TFs closer to the IJN Home Base.

6.1.2 IJN Search Segment

If an IJN route has been activated (6.1.1), you must conduct a search using each IJN coastal defense unit and TF on that route:

1) Determine if there is a USN unspotted TF within the below search ranges of IJN TFs and bases:

IJN Base: Three spaces.
IJN CSF TF: Two spaces.
All Other IJN TFs: One space.

2) Roll 1d6 for each USN TF in range. Apply the result:

1–2: Search Succeeds, flip the USN TF to its spotted side.
3–6: No effect.

Designer's Note: No units are moved for these searches. The actual search is performed by aircraft not otherwise shown in the game.

- If a USN TF is in search range of more than one IJN coastal defense unit or TF, then make only one search for it. Within that restriction, each IJN unit and TF makes a search attempt against all USN TF within range.

Example: One IJN CSF TF is within two spaces of Midway. There are two USN TF on Midway. Roll for each USN TF. If a second IJN TF were within range, you would still roll a search only once for each USN TF.

6.1.3 IJN TF Movement Segment

You must move all IJN TFs on each active route line.

Important: See 11.0 to determine if you must pick one Incident Marker.

- All TFs on one route must complete movement prior to moving any TFs on a second route.
- For each activated route line, determine the movement for each IJN TF in the route order given in 6.1.1.
  1) Consult the IJN TF Movement Table and locate the type of TF along the top of the table.
  2) Roll 1d6 and cross reference the result with the column appropriate to the type of TF.
  3) The result is the number of spaces that TF must move.
- IJN TF must move as follows:
  1) Towards a USN-controlled IJN Objective Space; **or,**
  2) If the IJN Objective Space is IJN-controlled, the TF must move towards the USN Home Base on the current active route line.
- IJN TFs must end their move if they enter a USN-controlled IJN Objective Space or a space occupied by a USN TF.

- IJN TFs must cease movement in the last space before the USN Home Base on the active route (3.2).

Example: An IJN TF that moves into the MO3 Plotting Space must stop its movement.

- If at the beginning of a subsequent IJN TF Movement Segment an IJN TF is in a Plotting Space adjacent to a USN Home Base, the IJN TF automatically enters the USN Home Base and the game ends in an IJN Sudden Death Victory (3.2).

6.1.4 USN Reaction Segment

Important: If there are no activated routes, skip this segment.

On all activated routes, you may do any or all the following:

1) Launch any USN NAC BBR and FTR units assigned to a carrier (not LAC or NAC units currently assigned to a base) on each activated route up to their range against spotted IJN TF; and/or IJN Island Bases; **and/or,**
2) Launch USN NAC and LAC FTR units for CAP missions (6.1.5) in the same space as their carriers and/or Island Bases.

Important: Combat does not take place in this segment.

Example: The MI route is activated; you could launch NAC BBR units against a space containing a spotted IJN TF on the MI route. You could not launch a strike against a non-spotted IJN TF or a TF on the MO route (spotted or not spotted).

6.1.5 IJN Air Unit Launch Segment

For each active route (using the route order of priority in 6.1.1) determine the missions that all IJN air units that are within range of a spotted USN TF and/or USN base will fly.

- If there is a spotted USN TF and/or USN base within range of an unspotted IJN TF, the player may examine the IJN TF to determine the air units available.
- Resolve all mission assignments for each TF on the active route and then for any base on the route.
- For each base/TF resolve BBR missions first, then FTR missions.

Important: You cannot attack USN TFs that are not spotted. Ignore them when determining targets.

- For each in-range IJN air unit:
  1) Consult the IJN Air Mission Determination Table and locate the air unit type across the top of the table.

2) Roll 1d6 and cross reference the DR with the air unit type.
3) If a mission is indicated move the air unit to the target space.
4) Repeat the above process until you have determined the mission each aircraft will fly (if any) on all activated routes.

- Each air unit will be assigned one of the following missions, or will not launch:
  Attack (TF): LAC and NAC BBRs may launch attacks against spotted USN TFs or USN-controlled IJN Objective Spaces within range as follows:
    1) BBR units fly to the nearest space containing a spotted USN TF within range; **or,**
    2) If there is no spotted USN TF within the range of the BBR unit and there is a USN-controlled IJN Objective Space within range of the BBR, convert the result to the Attack Objective result.
    3) If neither of the above apply, treat the result as a No Launch result.
  Attack (Obj): LAC and NAC BBRs may launch attacks against USN-controlled IJN Objective Spaces or USN-spotted TFs within range as follows:
    1) BBR units fly to an in-range USN-controlled IJN Objective Space to conduct an attack against the USN base.
    2) If there is no USN-controlled Objective Space within range of the BBR, and there is a spotted USN TF within range of the BBR, convert the result to the Attack TF result.
    3) If neither of the above apply, treat the result as a No Launch result.
  CAP: LAC and NAC FTR units launch to provide CAP over their assigned base (LAC) or over the TF containing their assigned carrier (NAC). During the USN G-3 Segment, air units receiving an Escort result are considered a No Launch result.

Important: FTR units conducting CAP remain in the space where their assigned base/carrier is located. If a NAC FTR is currently assigned to a friendly base, that air unit will fly CAP over the base, not a carrier in the same space.

Designer's Note: Arrange air units flying CAP in such a way that you can remember which units are flying CAP over which TF or base.

Escort: LAC and NAC FTR units may provide fighter escort for attacking BBR units. Resolve escort results as follows:
    1) If any BBR units were launched from the same base or carrier, FTR units assigned to escort must fly to the same

space as the BBR, if the target space is within range of the FTR.

2) If no BBR units were launched from the FTR's base or carrier, treat the Escort result as a CAP result.

Intruder: FTR units assigned an intruder mission may:

1) If there is a USN-controlled IJN Objective Space within range of the FTR and there are USN FTR flying CAP missions assigned to the USN base, the FTR will fly to the space and conduct air-to-air combat (during the ensuing Mutual Combat Segment) against any USN CAP FTR units present. This does not require IJN BBRs to be assigned an Attack (Obj) mission in the space.

2) If the USN-controlled base is not in range, or if there are no USN FTR units flying CAP, treat this result as a No Launch.

No Launch: The air unit does not launch and cannot perform combat during the ensuing Mutual Combat Segment.

6.1.6 Mutual Combat Segment

For each space containing both IJN and USN units, execute and resolve the Combat Procedure (9.0).

- If there is more than one space on a route in which combat will occur, resolve them starting with the space closest to the USN Home Base on that route.

Important: All eliminated IJN CV, CVL, and BB should be set aside on each route as they are eliminated. Do not place them in the IJN Eliminated Units Display until after IJN Morale is determined (6.1.8).

6.1.7 Mutual Return Segment

You must conduct the following return steps:
1) All surviving mission air units of both sides must return to a friendly base or carrier.

a) USN LAC units may be returned to any friendly-controlled base within range that possesses sufficient capacity.
b) USN NAC units may be returned to any friendly carrier within range with sufficient capacity, or to any base within range possessing sufficient capacity.
c) You must land IJN air units within the following priorities:

1) NAC land on the carrier of their own air group.
2) If that carrier has been eliminated, then NAC land on any other carrier which has capacity remaining; if more than one is in range, then you must choose the closest one. This can be done only after that carrier's air units have landed.

3) LAC land on an Island Base (within capacity).

4) If there are no IJN carriers within range with sufficient capacity, NAC units may land on any friendly controlled IJN Island Base with sufficient capacity.

d) For both sides, if no carrier or base is in range, or no carrier or base has sufficient capacity, then the air units are eliminated and count as combat losses for VP.

2) If there are both USN and IJN TFs in the same space, then:

a) If the TFs are in an IJN-controlled Objective Space, the USN TF must withdraw one space towards the nearest USN Home Base.
b) If the TFs are in a USN-controlled Objective Space, the IJN force must withdraw one space towards the nearest IJN Home Base.
c) If the space is not an IJN Objective Space and is outside the IJN Defense Perimeter (to the east or southeast of the line), the IJN TF would withdraw one space towards their Home Base and the USN TF would remain in place.

6.1.8 IJN Morale Segment

For each activated route line in which an IJN CV, CVL, or BB was eliminated since the last IJN Morale Segment, you must make an IJN morale check.

Important: During the IJN Morale Segment of the first GT, count all eliminated IJN CV, CVL, or BB. You must then separate already counted losses, so that you can track the current losses that must be counted during any subsequent GT.

Resolve the morale check on each route that the above applies using the below procedure:
1) Total the number of IJN CV, CVL, and BB eliminated on a given route in the Mutual Combat Segment (6.1.6) this GT.
2) Roll 1d6 and apply the below result:

a) If the result is greater than or equal to the number of eliminated IJN CV, CVL and BB there is no effect.
b) If the result is less than the number of eliminated IJN CV, CVL, and BB:

1) Flip the advance/withdrawal marker for the given route so the withdrawal side is up.
2) All IJN TFs on the route must withdraw two spaces towards the IJN Home Base for that route. If the withdrawal causes an IJN TF to enter an IJN-controlled IJN Objective Space, the TF ends its withdrawal in that space.
3) If the route is activated in subsequent GTs, all IJN TFs must move towards the IJN Home Base associated with that route. All other actions by these TFs are conducted normally.

6.1.9 IJN Logistics Segment

You must check IJN damaged units to see if they have been repaired and returned to play.

- Repair is conducted for damaged IJN base units, reduced LAC air units, and CV/CVLs only.
- When conducting repair, consult the IJN Repair Table and locate the unit type attempting repair. Then roll 1d6 and cross reference the unit type with the DR result to determine if the unit is repaired.
- Repair for damaged or reduced units must be conducted using the procedures in the order given below:

IJN Base Repair: All reduced IJN base units located on an activated route line may attempt repair. Eliminated IJN base units or reduced IJN base units on non-activated routes cannot be repaired.

1) If the result of the DR is Repair, flip the IJN base unit so its full-strength side is up.
2) If the result of the DR is No Effect, the IJN base unit remains reduced.

Important: Eliminated base units may be returned to play if the Reinforcement marker is drawn (6.1.1).

IJN LAC Repair: All reduced LACs located on an activated route line may attempt repair. Eliminated IJN LACs or reduced IJN LACs on non-activated routes cannot be repaired.
1) If the result of the DR is Repair, flip the IJN LAC so its full-strength side is up.
2) If the result of the DR is No Effect, the IJN LAC remains reduced.

Important: NAC air units have landed on an IJN Island Base, they cannot be repaired.

IJN Carrier Repair: If there are any IJN CV or CVL units in the IJN Damaged Units Display, you must randomly pick one unit (only one unit per GT may be repaired) and attempt repair.
1) If the result of the DR is Repair, the CV or CVL is placed as follows:

a) If a CSF TF has composition capacity remaining, the unit is placed in that TF. If more than one CSF can receive the unit, randomly determine which CSF the unit will join.
b) If the CV or CVL was placed in the CSF TF, all eliminated NAC air units labeled with that carrier's name are also repaired and placed in the carrier's Carrier Air Groups Display with their reduced side showing.
c) If there are no CSF TFs that can accommodate the unit, set it aside and it cannot reenter play for the remainder of the game.

Important: CV/CVL that are set aside in this manner do not count as damaged or eliminated for VP purposes.

2) If the result of the DR is No Effect, the IJN CV or CVL is returned to the IJN Damaged Units Display.

6.2 USN Phase

Important: Segments must be performed in the order given. You may perform one action in each segment; however, you may choose not to conduct one or more segments.

Important: Actions are fully explained on the Player Aid Card.

6.2.1 USN G-1 Organization Segment

You may choose and conduct one of the six G-1 actions listed on the Player Aid Card. You use Organization actions to change your force composition and bring in reinforcements.

6.2.2 USN G-2 Intelligence Segment

You may choose and conduct one of the three G-2 actions listed on the Player Aid Card. You use Intelligence actions to attempt to determine the dispositions of IJN units or the next IJN Operations Marker.

6.2.3 USN G-3 Operations Segment

You may choose and conduct one of the four G-3 actions listed on the Player Aid Card. You can execute one action to move and/or engage in combat with USN units. See 11.0 to determine if you must pick one Incident Marker.

> *Designer's Note: This is owing to the lack of Allied joint operations at this stage of the war.*

6.2.4 USN G-4 USN Logistics Segment

You may choose and conduct one of the four G-4 actions listed on the Player Aid Card. You use Logistics actions to repair damaged USN units.

> *Designer's Note: There are no supply rules per se in the game. Naval logistics are built into the number of TF in play, their ship capacity, and the number of spaces units can move in a turn.*

6.3 Administration Phase

Conduct any action called for in the Administration Phase.
1) Move the Operations Marker that is currently in the IJN Sequence of Play Track to the IJN Operations Marker (already played) Display.
2) Flip all spotted IJN and USN TF markers to their not spotted sides.

7.0 FOG OF WAR & SPOTTING

You can examine enemy units only under certain circumstances as discussed in the search and combat rules.

- You can always examine the following:
  1) All USN units.
  2) When conducting the IJN Air Unit Launch Segment (6.1.5) and/or during the USN G-3 Operations Segment when required to determine air missions.
  3) All IJN ground and air units located on IJN Island Bases and IJN Objective Spaces.

Important: You cannot examine the IJN Operations Marker Pool or the IJN Operations Marker (already played) Display. When placing markers in the IJN Operations Marker (already played) Display, they must be placed face down.

7.1 TF & Spotting

TF have spotted and unspotted sides which will affect the launching of air units. The instant that a TF is spotted, flip the marker to the spotted side. A TF becomes spotted if:
1) The IJN conduct a successful Intelligence action using the Intelligence Special Operations Marker during the IJN Operations Determination Segment (6.1.1).
2) You conduct a USN Signals Intelligence action in the USN G-2 Intelligence Segment (6.2.2).
3) An enemy naval or air unit enters its space, or vice versa; **or,**
4) A successful search is conducted against a TF's current space during the IJN Search Segment (6.1.2).
5) The TF is in the same space as an enemy controlled IJN Objective Space.

> *Designer's Note: Spotting in the game represents not only finding an enemy task force, but also fixing its position such that air operations can be directed against it.*

7.2 Effects of Spotting

If an IJN TF has its TF marker spotted side up, you may examine all units in its corresponding display. That includes all naval and any NAC.

Important: For either side to launch an air attack against an enemy TF, the TF to be targeted must be spotted. This does not prohibit naval units from entering a space containing an un-spotted enemy TF (which would then spot it).

Example: A USN TF containing a CV, a BB, and a DD is one space away from an unspotted IJN TF; you cannot launch your carrier air units against that IJN TF. However, you could move

the TF into the IJN TF's space, thereby spotting it (at which point you could launch an air attack in the same space as well as engage in surface naval combat).

7.3 Duration of Spotting

A TF remains spotted until the Admin Phase, at which point it is flipped to its un-spotted side.

7.4 IJN Deception Units

These are placed as part of IJN TF to deceive the player about IJN strength. When revealed, permanently remove them from the game. They have no other effect on play.

8.0 MOVEMENT

Important: Coastal defense units may never move.

You move units across the map via route lines from one space to another space, up to their movement allowance. Units may also move via Home Bases.

- You move units one at a time. Complete the movement of one before moving the next one.

Important: A TF and all ships/NAC in it are one unit for movement.

8.1 Naval Movement

- Naval units move via Plotting Spaces, Island Bases, and Objectives. TFs move as complete formations, not as individual ships.
- Naval units must cease movement the instant they enter:
  1) A space containing an enemy naval unit; **or,**
  2) A space containing an IJN Objective Space with an enemy-controlled coastal defense unit; **or,**
  3) If the moving unit is a USN TF, the last space on a route prior to entering the Japanese Defense Perimeter; **or,**
  4) If the moving unit is an IJN TF or air unit the last space prior to entering a USN Home Base.

8.1.1 USN Movement

Movement of USN units is at your option. You move USN units by conducting a G-3 action. See Player Aid Card.

- USN TFs that contain a BB may only move one space in each GT.
- USN TFs that do not contain a BB may move two spaces each GT.
- USN TFs can enter a USN Home Base from Plotting Spaces. Movement from an adjacent Plotting Space to a USN Home base counts as moving one space. Naval units entering a USN Home Base must cease movement.

- Any or all USN naval units in a Home Base can move to an adjacent Home Base by expending all movement for the current segment (and then cease movement). This is regardless of the unit's movement factor.
- A USN TF starting its movement in a Home Base can move onto a route line. Movement from a Home Base into a Plotting Space counts as moving one space.

8.1.2 IJN TF Movement

See 6.1.3 for IJN naval movement.

8.2 Air Movement

Aircraft range is printed on the counters.
- Range is the number of spaces an air unit may move to conduct an attack.
- Each space entered on the way to the target counts as one point of range. Do not include the original base area; however, the target area is included.
- When returning from the target space, the air unit again counts out the space through which it is moving.
- Air units can only move and/or attack enemy units on the same route.

Important: IJN air units cannot transfer from one route to another.

Example: A USN air unit with a range of 2 starts in Midway and moves two spaces to attack an IJN carrier at sea. After the attack is completed, it returns to Midway.

- Air units move from their carrier or base to a Plotting Space, IJN Objective Space, or IJN Island Base within range.
- Air units may launch and move during any of the following segments:
  1) USN Reaction Segment (6.1.4).
  2) IJN Air Unit Launch Segment (6.1.5).
  3) USN G-3 Operations Segment (6.2.3).
- Launched air units will execute their mission during the Mutual Combat Segment (6.1.6) or during the combat step of the USN G-3 Operations Segment (6.2.3).
- Air units are not blocked by the presence of enemy units of any type.
- Air units may only fly missions on their own route line.
- Air units may not enter enemy Home Bases.
- USN air units may cross the IJN Defense Perimeter to conduct missions.
- Air units return to their base or carrier during the Mutual Return Segment (6.1.7) or during the Air Return Step of the USN G-3 Operations Segment.

9.0 COMBAT

Combat is when enemy units fight each other. Combat is mandatory when IJN and USN units are in the same space. Units engage in combat by firing at opposing enemy units. In each combat, a participating unit fires at one opposing unit.

9.1 Combat Procedure

Organization: Remove the units from the map and place them on the Battle Display (on the map) with their revealed sides up. Place the Battle marker in the space where the units were removed.

Important: If one or both sides have multiple TFs involved, position the naval units from each TF so that if they survive the battle, they are returned to their assigned TF during the Battle Conclusion Step.

Combat Steps: Combat in each space is conducted in the order given below:
1) Air-to-Air Step: Fire all air units' air combat factors at enemy air units.
   a) CAP FTRs may fire at attacking FTRs and BBRs.
   b) Attacking (escort/intruder) FTRs may only fire at CAP FTRs.
   c) BBRs may only fire at FTRs that fire on the BBRs.
2) Anti-Air Step: Fire all ground and naval units' air combat factors at enemy air units.
3) Air-Naval Step: Fire all air units' naval combat factors at enemy naval units.
4) Air Ground Step: Fire all units at eligible ground units.
5) Surface Engagement Step: Fire all naval units' Naval Combat Strength at enemy surface naval units.
6) Amphibious Assault Step: If the current battle is taking place in a USN-controlled IJN Objective Space and IJN TRs are present, you must conduct an amphibious assault using the following procedure (in order):
   IJN Naval Bombardment: All IJN non-carrier naval units in the space (if any) use their ground combat factor to conduct bombardment against the USN base and/or based USN air units in the Objective Space. Do not apply hits to the USN base.
   USN Defensive Fire: The USN base unit uses its ground combat factor to conduct fire against IJN TR. Apply all hits to both the USN base and IJN TR.
   IJN Amphibious Assault: If the USN base was eliminated and there is at least one IJN TR remaining, the amphibious assault succeeds. Flip the Objective Control Marker to show its IJN control side.

Important: There are no amphibious ground units, their presence is represented by the transports themselves.

   Designer's Note: *Since IJN units are automatically revealed by being in the same space as Objectives, you will always know the strength of an IJN amphibious force.*

   TR Removal:
      1) If the amphibious assault succeeded, remove all surviving TR units in the space from the game (removed TR do not count as eliminated).
      2) If the amphibious assault failed, all surviving TR remain in the TF.

Important: An IJN TF containing TR units cannot leave the Objective Space until the objective is taken, or all TR are eliminated.

   Designer's Note: *If more than one TR is assigned to a TF, there is no additional effect; this simply means there is a backup in case one TR is eliminated.*

7) Battle Conclusion Step: No matter the result of the first six combat steps, all battles are complete; multiple rounds of combat are not allowed. Return all surviving naval units to the space where the battle took place. Surviving ground units will remain in place. Determine if a side may have to retreat.

Important: Surviving air units will return to base during the ensuing Mutual Return Segment or during the Air Return Step of a USN G-3 action.

9.2 Combat Execution

You execute each step of a battle before moving to the next step. All steps of a battle must be completed prior to conducting any other required battles.
- Each unit can fire once per step (assuming it has a combat factor of one or more in that category).
- Combat is conducted simultaneously in each step. For convenience, you can execute one side's fires before the others, but do not apply results until the end of the step.
- A unit eliminated in one step cannot use its combat factor in a subsequent step.

Example: A BB unit could fire its air combat factor at an enemy air unit, then fire naval combat factor at an enemy cruiser. However, if the BB is sunk by enemy aircraft, it could not fire against that cruiser.

- Different types of units can participate in the same attack.
- More than one unit can attack a single enemy unit, but each unit must fire individually.

- Any combination of defending units may always fire back at units attacking them, regardless of their types.

Example: Two FTR units, each with a combat factor of 3, attack a single enemy air unit. They would each attack it with a strength of 3.

- A unit may use each of its separate combat factors in a single battle if there are suitable targets.

Example: An IJN CA could fire its air combat factor at USN air units, then fire naval combat factor at USN naval units, then fire ground combat factor at a USN base unit.

9.3 Combat Resolution

When firing a unit, you roll 1d6 and compare the result to the appropriate combat factor of the firing unit. If result is equal to or less than the firing unit's combat factor, the target unit is hit.

Example: A unit has a naval combat factor of 2 and is attacking an enemy surface naval unit. The enemy unit will be hit if the DR is 2 or less.

- A unit's air factor is used by that unit when it fires at an enemy aircraft unit.
- A unit's naval factor is used by that unit when it fires at an enemy surface ship unit.
- A unit's ground factor is used by that unit when it fires at an enemy ground unit.
- A unit must have a factor of one or more to engage in combat in a specific step.

Example: A FTR has an air factor of 4 but a naval factor of 0. Therefore, it could attack enemy aircraft, but not enemy ships.

- Certain events and leaders may cause a unit's various combat factors to be raised or lowered. If more than one such modification applies, use the cumulative total/difference. A unit with a printed combat factor of 0 may never have it raised to 1 or more nor may a unit with a combat factor of 1 or more be lowered to 0 (1 is the minimum).
- The defending unit's combat factors in no way reduce the combat factors of the attacking units.

Important: Submarine and anti-submarine warfare is managed by (11.0).

9.4 Hit Resolution

Hit resolution is conducted at the end of each combat step after all units (of both sides) have fired.

Important: Task Force markers have no combat factors. They may not fire. They cannot be targeted by enemy

units. They are removed from the map only if all naval units in them are eliminated.

9.4.1 USN Targeting Priority

You allocate USN attacks to IJN targets as you desire.

- During each step of combat, line up USN units parallel to the enemy units they will be attacking. You can change this order at the start of each step.
- If more than one USN unit is attacking a single IJN unit, and one attack eliminates that unit (or removes it via damage), the remaining hits are not allocated to other IJN units.

9.4.2 IJN Targeting Priority

You do not allocate individual IJN units to attacking USN units.

- In each step, after firing all IJN units, you consult the IJN Attack Priority Chart and locate the column corresponding to the type of unit firing and type target.
- The highest priority units (starting at the top of the chart) must be targeted first. Within the following priorities, you can select which USN units will be affected:

  1) IJN Air Unit Attacking USN Air Units: IJN air units firing on USN air units pick the highest priority air units in the Anti-Air versus Air column only if the target type is in the group being fired upon. See 9.1, Air to Air Step. Inflict results against the highest priority USN air units. Then move on to the next priority.

  2) IJN Air Units Attacking USN Naval Units: Inflict all hit results against the highest priority USN naval units. Then move on to the next priority.

  3) IJN Naval or Ground Units Attacking USN Air Units: Inflict all hit results against the highest priority USN air units. Then move on to the next priority.

  4) IJN Attacks on USN Ground Units: Apply all hits against the ground unit

Example: Three IJN NAC are attacking a USN TF with two CVs, one CA, and one DD. Two hits are inflicted. Make a hit check for each CV. If a third hit had been inflicted, then check the CA. If only one hit had been inflicted, then you could choose which USN CV was affected.

  5) Excess Hits: If IJN units inflict more hits than there are USN units:
      a) Allocate one hit per target, then,
      b) Allocate excess hits starting with the highest priority.

Example: Three IJN NAC attack a USN CV and DD. They inflict three hits. Roll twice for the CV and once for the DD.

9.4.3 Applying Hits

Air or Ground Unit: If at full-strength, flip it to its reduced side. If already reduced, eliminate it. If a unit has only one side, then it is eliminated by a single hit.

Naval Unit: If a naval unit is hit, then you consult the appropriate USN or IJN Attacking Hit Table to determine the outcome of the hit.

- Locate the type of unit (left column) and roll 1d6. Cross reference the DR result with the type of unit. Apply it immediately.
  Damaged: This result causes the unit to be removed from the battle and placed in the appropriate Damaged Units Display See 6.1.9 for IJN repair limitations. All USN units may be repaired.
  Sunk: This result causes the unit to be placed in the appropriate Eliminated Units Display.
  No Effect: The unit is not affected.
- If a naval unit takes more than one hit, then roll for each hit on the appropriate Attacking Hit Table. An elimination supersedes other results. Two or more damage results are still just a damage hit (they do not become an elimination).

10.0 USN LEADERS

The USN has two leaders (Spruance and Fletcher). USN leaders are assigned to a TF during set-up.

- Leaders are not an individual unit.
- Leaders move with their assigned TF.
- A leader is only eliminated if his assigned TF has all assigned naval units eliminated.
- Leaders do not count against the TF capacity.
- A leader can be reassigned as part of a G-1 Reorganization Action.
- A leader must always be with a TF and cannot operate independently.
- No more than one USN leader can be assigned to a TF at any one time.

10.1 Leader Effects

If a USN leader starts a USN Movement Segment assigned to a TF, that TF's movement is:
    1) Increased by one when conducting a G-3 Naval Operation Action.
    2) Increased by one Home Base when conducting a G-3 Redeploy TF Action.

Example: The TF may move from one USN Home Base, through another USN Home Base and then move into a second USN Home Base.

If a USN leader is assigned to a TF that includes USN carriers, you can, at the start of the battle, designate one USN NAC SBD or TBD from any one carrier. That air unit has its naval combat factor increased by one.

11.0 INCIDENTS

During the IJN TF Movement Segment (6.1.3) and during the USN G-3 Operations Segment in which you are conducting a Naval Operation, you must randomly pick one Incident Marker from the Incident Marker Pool. Pick the marker after all TFs (once during each of the above segments) on an active route have moved. Implement the result immediately and return the marker to the pool.

Calm Seas: No Effect, nothing happens.

Intelligence: If drawn during the IJN Movement Segment, all USN TFs on the current route are automatically spotted (this includes any USN Home Base on the current route). If drawn in the USN G-3 Operations Segment, all IJN TF on the current route are spotted.

Submarine (USN or IJN): If drawn during the IJN Movement Segment, an IJN TF may be subject to a submarine attack; if drawn during a USN G-3 Operations Segment a USN TF may be subject to a submarine attack. In both cases, follow the below procedures:

1) All friendly TFs in the space closest to the enemy Home Base on the active route are spotted; **and,**

2) One TF in that space is subject to a submarine attack. If more than one TF is in that space, then pick one at random.

3) Perform anti-submarine warfare (ASW): For each CVL, CL, and DD unit in the TF, roll 1d6 and apply the result.

> **1–2:** The submarine aborted, there is no effect.
>
> **3–6:** The submarine gets through the screen and may attack the TF.

4) The submarine attacks one naval unit. Roll 1d6. If the result is less than or equal to the number printed on the marker, that target receives one hit. Resolve the hit using the procedure in 9.4.3. Any other result is a no effect.

> **1)** If the attack was against an IJN TF, you may select the type of naval unit attacked.
>
> **2)** If the attack is against a USN TF, the submarine would conduct the attack in the following order of priority: CV, CVL, and BB. No other units may be attacked.

Example: A IJN submarine attack succeeds. If an USN CV is present you must attack that unit, if a CV is not present, you must then attack a CVL, and if a CVL is not present you must attack any present BB. If none of the above type of naval units are in the TF, ignore the attack.

Surprise Move: If drawn during the IJN Movement Segment conduct the following:

1) You must move all IJN TFs on the space nearest the US Home Base (on the current route) one space towards the US Home Base. If the nearest IJN force is next to the USN Home Base, no move is made.

2) Increase all IJN air unit combat factors on the active route by one for the current segment.

If drawn during the USN G-3 Operations Segment conduct the following:

1) You may move one TF on the active route one additional space.

2) Increase all USN air unit combat factors on the active route by one for the current segment.

Important: The above TF moves can be out of or into an enemy occupied space (as a special case to normal procedure).

Weather: Neither side may launch any air missions on the current route during this segment.

The following optional rules are provided to give the player replay opportunities for the game and/or additional realism. Players should feel free to mix and match the different sets of optional rules as they wish, with the understanding that play balance may be thrown one way or the other based on the optional rules used. Have fun!

12.0 AAA COORDINATION

Historical Note: USN ships massed their anti-aircraft guns against incoming attackers, while each IJN ship tended to defend itself. On the other hand, USN air attacks against ships tended to be poorly coordinated.

IJN ships firing AAA can fire only at the USN air units that are attacking them. They cannot fire at other USN air attackers.

- Each USN air unit that is attacking an IJN ship is fired upon individually by the full AA strength of attacked IJN naval unit. Follow the below procedures:

USN Air Units Versus IJN Naval Units:

1) Line up all USN air units that are targeting each IJN naval unit.

2) Each IJN naval unit then conducts an anti-air attack against each individual USN air unit attacking that naval unit.

3) Each surviving USN air unit then conducts an anti-surface attack against IJN naval unit it targeted.

Important: This is an exception to the general rule that a unit can fire only once per round.

IJN Air Units Against USN Naval Units:

USN naval units use the standard procedure for anti-air fire.

13.0 SCENARIO OPTIONS

You can use scenario options to examine different historical possibilities.

IJN Variable Operations

During initial deployment, place all the Operations Markers face down, mix them up, then pick two at random. Place those markers aside, face down (do not examine them). Place all remaining Operations Markers in the IJN Operations Marker Pool. When playing with this option, use the optional Fuchida Operations Marker in the same manner as Yamamoto.

Designer's Note: This will mean each game will have a different IJN operational tempo.

IJN Variable Deployment

Deploy IJN Task Force markers as follows:

1) Place all IJN Invasion TFs (4) in a wide mouth cup, then randomly pick one in each IJN Home Base. Place the first draw in Honshu, the next in Kyushu, then Truk (SO) and finally Truk (MO).

2) Place the IJN CSF TFs (3) and the Guard TF (1) in a wide mouth cup, then randomly pick markers, placing the first draw in Honshu, the next in Kyushu, then Truk (SO) and finally Truk (MO).

3) For the remaining TFs (4) use the IJN Random Deployment Table for their placement.

USN Variable Deployment: We Recommend using this deployment only when using the IJN Variable Deployment. Prior to deploying the IJN TFs, assign USN ships that start the standard scenario in a TF to any USN TF desired. Then assign the TFs to any USN Home Base desired.

USN Optional Battlefleet: There are two additional USN Battleship units (BB-1, BB-3) and one destroyer (DD-1.5). The player may at the beginning of the game place all three naval units in the USN Reinforcements Display. They can be brought into play via a G-1 Recruit Reinforcements Action. The units must be placed in the West Coast USN Home Base.

Important: If the player chooses to use this option, each USN BB eliminated costs 5 VP.

IJN 26th Fighter Group

The IJN 26 Fighter Group is deployed during any IJN Logistics Segment if:

1) Midway is IJN-controlled; **and,**

2) There is at least one IJN CSF TF within three spaces of Midway.

Place the 26th on Midway. It functions as a standard IJN LAC. Midway acts as if has an IJN air capacity of one.

14.0 TEAM PLAY

Two or more people may play **Midway Solitaire**. Each player takes command of different USN forces.

Example: One player could be supreme commander, and others command on various routes. Or one player could command naval forces and another land-based airpower.

15.0 ADDITIONAL OPTIONAL COUNTERS

This variant adds six Japanese land units, seven Allied land units and two Allied transports (TR). Japanese land units now must invade USN-held islands to gain control of them.

15.1 Additional Deployment

USN Initial Deployment: Remove the four starting US coastal defense units (Port Moresby, Solomons, Midway, Aleutians). Place the following units:

Ground units

Aleutians: AKDC Infantry.

Pearl Harbor: RCT Infantry, 1 MAR

Midway: USMC Prov Infantry, 6 USMC Coastal Defense

Port Moresby: 31 AUS Infantry, PM Coastal Defense

Australia: 21 AUS Infantry

Naval Units:

Pearl Harbor: TR-1. The player may start the game with the RCT Infantry unit embarked.

USN Reinforcement Display: TR-2. When entering play, TR reinforcements may be placed in the US West Coast, Pearl Harbor or Australia Home Bases.

IJN Initial Deployment

IJN Amphibious Forces: Prior to placing the IJN TRs in the TF display, randomly pick one IJN Infantry unit (Comb-1, Comb-2, Comb-3, Ichiki, SSD, and 301) with each TR. Place the first pick on TR-1, then TR-2 etc.

Important: Unlike the USN, retain the IJN base units on their starting islands.

15.2 Naval Transport of Ground Units

Ground units may only go to sea when carried by naval transport units (TR). Each TR can transport one friendly mobile ground. Mobile ground units are all infantry and Marine units. Coastal defense units are not mobile.

IJN TRs:

1) IJN TRs embark land units at the start of the IJN TF Movement Segment if there are no US naval surface units in the same space. The TRs may then move normally.

2) IJN TRs may only disembark land units by conducting an amphibious assault (15.3).

USN TRs:

1) US TRs may embark and disembark land units during the USN G-1 Organization Segment if the player conducts a Load or Unload Ground Units Action.

2) US land units may never debark in IJN-controlled spaces.

- To show a TR is transporting a ground unit place the ground unit beneath the TR counter.

- Once a ground unit is embarked, the ground unit is part of the TR conducting the transport. If a TR is sunk, the transported ground unit is also eliminated and placed in the USN Eliminated Units Display.

- Land units being transported may conduct no other actions nor do they apply their combat factors (until they disembark).

- Land units may remain on TR units at sea for any length of time.

15.3 IJN Amphibious Assault procedure

IJN TRs may only debark units during the IJN Amphibious Assault Step of the Mutual Combat Segment if attempting to disembark into a US occupied IJN Objective Space (9.1(6)).

- Modify the procedure for IJN Amphibious Assaults as follows:

1) IJN Naval Bombardment: All IJN non-carrier naval units in the space (if any) use their ground combat factor to conduct bombardment against the USN base and/or based USN air units in the Objective Space. Do not apply hits to the USN base.

2) IJN Land Unit Debarkation: All surviving IJN ground units loaded on TRs debark.

3) USN Defensive Fire: All surviving USN ground units fire at the IJN ground units using their surface combat factor.

4) IJN Amphibious Assault Fire: All surviving IJN ground units fire at the USN ground units on the island using their surface combat factor.

5) Continued Combat: Repeat steps 3) and 4) until only one side has land units in the space. That side wins the battle and has control of the Objective. Unlike in the standard game, IJN TR are not removed from play unless sunk.

Important: IJN mobile ground units will remain embarked until they make an amphibious assault. Once that occurs, any surviving IJN ground units remain on the island of disembarkation.

15.4 USN Embark and Debarkation

To embark or disembark land units the US player must conduct a G-1 Load or Unload Ground Unit Action during the USN G-1 Organization Segment.

- The embarkation or disembarkation space may not contain any type of IJN units.

16.0 JULY-DECEMBER 1942 SCENARIO

This optional scenario extends the game out through December 1942. It gives the Japanese one last chance to accomplish their objectives.

16.1 Procedures

This scenario simulates that the Japanese were going to attempt once again to expand their defensive perimeter. There are no changes to the standard scenario; however instead of ending the game after the last IJN Operations Marker has been played the player may continue the game.

- After the last operations marker has been played, the player places all IJN Operations Markers back in the Operations Marker Pool.

- All US and IJN units from standard scenario remain in place.

- If a route is in a withdraw status, flip the marker so that its advance side is up.

- The player then adds additional units as listed in 16.2.

16.2 Additional Units

IJN:

Hiyo **CVL:**

1) The player places two *Hiyo* NAC in the *Hiyo* box on the IJN Carrier Air Groups Display.

2) The player then places the CVL *Hiyo* and any Deception Markers not currently in use face down near the map, and then randomly picks one counter and places it face down in the Truk (SO) Home Base, and then picks one more counter in the Truk (MO) Home Base. The player continues placing units as above until all counters are placed. If there are no Deception Markers available, use a DR to determine which base the *Hiyo* is placed.

3) Randomly determine the IJN TF that the above placed counters are placed on each route. If a TF does not have the capacity for a counter ignore that TF.

4) All IJN LAC air units that are reduced are returned to full-strength.

5) Randomly determine if the Yokohama air unit is placed in the Truk (SO) Home Base or the Truk (MO) Home Base.

6) The player determines if any IJN carriers on the map have the capacity to carry a NAC air unit. If multiple carriers have the capacity randomly determine which carriers will receive the CV-A and CV-B NAC air units. If no capacity exists, one standard reduced NAC air unit may be returned to full-strength for each of the optional NAC air units not placed on a carrier.

7) The player then randomly determines on which route line the BB-Mus naval surface unit will appear. There must be at least one TF with the capacity for the BB. After the route line is picked, the player randomly chooses which IJN TF (from any TF with sufficient capacity) the BB will join.

USN: The US places the following units in the USN Reinforcement Display:

CA-24, AVD-14, Reinf (P-38) FTR LAC, RAAF Reinf (Wwy) FTR LAC, MAG Reinf FTR LAC, Halsey.

The above units are available during the first G-1 Organization Segment.

16.3 Victory Conditions

The victory conditions remain the same as for the standard game.

17.0 FIGHTER HEAVY CARRIER AIR WINGS

Prior to the war, there was a long debate over the correct composition of carrier air wings. One option was to increase the number of fighters thereby reducing the number of dive bombers and torpedo bombers. To explore this possibility, the player may replace one BBR NAC on each carrier and replace it with the corresponding optional FTR NAC.
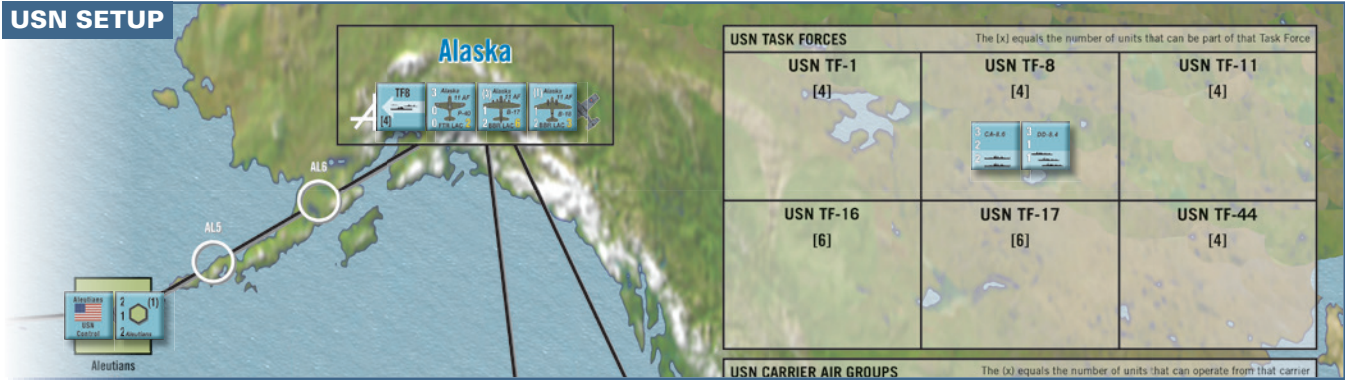
USN SETUP

IJN SETUP

STEPS 6.1.1–6.1.5
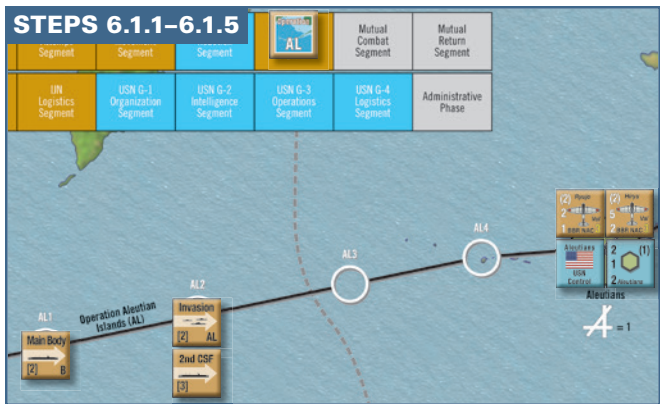
The above diagrams show the initial set-up for the IJN and USN forces. When playing the game, the IJN naval units would be placed face down with the flag side showing. They have been placed unit side up to facilitate the example of play.

IJN Forces: All TFs in Honshu Home Base.
 2nd CSF TF: CV *Hiryu* with two NAC, CVL *Ryujo* with two NAC, and DD-2.
 Main Body-B TF: CA-5 and DD-4.
 Invasion-AL TF: TR-3 and CA-8.

Important: Except for TR-3 naval unit, all IJN naval units were chosen randomly as per 5.2.4. At this point the player will not know the exact composition of each of the IJN TFs.

USN Forces:
 Aleutians USN Island Base (IJN Objective): Aleutians USN Control Marker and Aleutians coastal defense unit.
 Alaska Home Base: Two Alaska BBR LAC, one Alaska FTR LAC and TF8 consisting of CA-8.6 and DD-8.4.

IJN Operations Determination Segment (6.1.1): The Allied player picks an AL Operations Marker (first AL Marker picked).

IJN Search Segment (6.1.2): There are no Allied units within the IJN search distance (6.1.2).

IJN TF Movement Segment (6.1.3): The player must move all three TFs. He rolls 1d6 for each TF and consults the IJN TF Movement Table.
 2nd CSF TF: DR of 3, cross reference the DR with the appropriate type of TF, in this case use the CSF TF column, which gives a result of; Two Spaces. The player moves the TF from Honshu to AL1 and then to AL2.
 Main Body TF: DR of 1, cross referencing with the Support, Guard, Covering, Main Body TF column gives a result of One Space. The player moves the TF to the AL1 space.
 Invasion TF: DR of 6, cross referencing with the Invasion TF column gives a result of Two Spaces. The player moves the TF to the AL1 and then to the AL2 space.

After completing all TF movement, the player randomly picks on Incident Marker from the Incident Marker Pool (11.0). In this case the Calm Seas Marker is picked and there is no effect.

USN Reaction Segment (6.1.4): Since there are no USN NAC air units on the AL route and the only USN FTR LAC unit is in Alaska and can only fly CAP in the space it is based, the player has no actions to take.

IJN Air Unit Launch Segment (6.1.5): The player must attempt to launch all IJN air units within range of an IJN Objective Space or spotted USN TF. Since there are no USN TFs in range of the IJN air units aboard the carriers, the player attempts to launch all NAC air units and attack the Aleutian Islands Space.

1) The player consults the IJN Air Mission Determination Table and locates the column corresponding to type air unit being determined. In this case the player uses the NAC Bomber column and rolls 1d6 for each NAC BBR. The *Hiryu* BBR DR result is 6 and launches to attack (obj). The player moves the air unit three spaces to the Aleutians Island Space. The *Ryujo* BBR DR is a 2 which results in an Attack (TF) result. Since there is no USN spotted TF within range the result converts to an Attack (obj) and the air unit joins the other BBR in the Aleutians.

2) The player would then determine the missions for both NAC FTRs; however, in this case since there is no possibility of a CAP over the Aleutians (6.1.4), there is no need to make the DRs.

Mutual Combat Segment (6.1.6): Using the procedures in 9.0 the player resolves the air attack against the coastal defense unit in the Aleutian Island Space.

1) Since the only units in the space are the two IJN BBRs and the coastal defense unit, the only combat steps that will conducted are Step 2 (Anti-air) and Step 4 (Air Ground), the player ignores all other steps.

2) The coastal defense unit fires its Air Combat Factor (the **2** in the upper left corner of the counter). The result of the DR is 1, scoring one hit on one of the NAC BBRs. The player may allocate hits as desired (9.4.1) and wisely chooses to take the hit on the *Hiryu* BBR that has a Ground Combat Factor of 2. The counter is flipped over to its reduced side.

3) Each BBR then fires its Ground Combat Factor of **1** (*Ryujo* BBR) and One (reduced *Hiryu* BBR). Both attacks fail with DRs of two and three.

Mutual Return Segment (6.1.7): The player then returns the two BBRs to the IJN Carrier Air Groups Display.

IJN Morale Segment (6.1.8): Since no IJN CV, CVL, or BB have been eliminated on this route, this segment is skipped.

IJN Logistics Segment (6.1.9): Since IJN NAC air units cannot be repaired, any activity regarding repair takes place outside the scope of this example, this segment is skipped.

USN Phase

USN G-1 Organization Segment (6.2.1): The player chooses to conduct a Recruit Reinforcements Action. He selects the 18BW Reinf from the USN Reinforcement Display, placing it in the West Coast Home Base.

STEPS 6.2.2–6.2.3
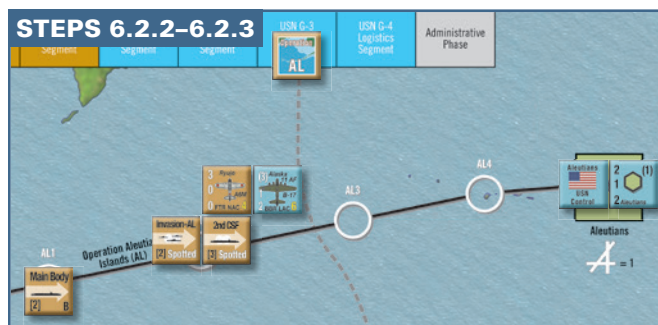
USN G-2 Intelligence Segment (6.2.2): Since the IJN 2nd CSF and Invasion TFs are within three hexes of the Aleutian Islands, the player chooses to conduct a Seaplane Search Action. He rolls 1d6 with a result of 4, which succeeds. The player then flips both TF Markers to their spotted side.

USN G-3 Operations Segment (6.2.3): Since the Alaska LAC BBR is within range of the now spotted IJN TFs the player conducts a Land-Based Air Operation Action. See Land-Based Air Operation on the player aid card.

1) The player moves the 18BW air unit to the AL2 (six spaces) and then must attempt to launch IJN FTR units as CAP (6.1.5). In this case the *Hiryu* FTR rolls a 5 resulting in a No Launch ((6.1.5) and the *Ryujo* FTR garners CAP result and is positioned over the 2nd CSF TF to show that the air units are flying CAP over that TF only.

2) The player then decides to brave the CAP over the CSF TF and attack the *Ryujo*.

3) The player resolves combat Step 1 (Air to Air) with the *Ryujo* FTR against the USN BBR with a DR result of 5 (a miss). The BBR returns fire and achieves a result of 3 scoring a hit on the FTR (flip the FTR to its reduced side).

4) Step 2 (Anti-Air) is then resolved with all three IJN ships firing and missing.

5) Step 3 (Air-Naval) is then resolved against the *Ryujo*, with the BBR scoring one hit against the *Ryujo*. The player then consults the USN Attacking IJN Naval Units Hit Table, rolls 1d6 and then cross references the CV, CVL line with the DR result of 3, resulting in the *Ryujo* being sunk. The player then removes the *Ryujo* and the *Ryujo* BBR unit and places the *Ryujo* and BBR in the IJN Eliminated Units Display.

6) The USN BBR returns to Alaska. Since the *Ryujo* has been sunk, the *Ryujo* FTR may land on the *Hiryu* as that carrier has an air unit capacity of three and only two NAC air units are currently based on it.

USN G-4 Logistics Segment (6.2.4): There are no actions the US player may take that would affect this example.

Administration Phase (6.3): The player removes the Operations Marker from the Sequence of Play Track and places it in the IJN Operations Marker (already played) Display and then flips all spotted TFs to their un-spotted sides. The below diagrams shows the placement of IJN units on the AL Route Line and TF Displays at the end of the Administration Phase. The USN units remain in the same positions that they started the operation.

STEP 6.3

Grand Strategy in the Pacific Coral Sea and Midway 1942

Imperial Japanese Navy destroyer Hamakaze, from Japanese film 88 Years of the Sun, by Shizuo Fukui.

By Joseph Miranda

THE PRE-WAR PLANS OF BOTH the Japanese and Allies for operations in the Pacific had been dislocated by the rapidity of the Japanese expansion in the first months of the conflict. Attempts to reorient those plans led to two major naval battles in mid-1942: Coral Sea and Midway. The outcome of the battles, in which for the first time the opposing fleets exchanged airstrikes rather than gunfire, fundamentally altered the strategic balance in the Pacific.

May 1942

The US surrender at Corregidor in the Philippines on 6 May 1942 brought to a close the massive Japanese offensive initiated at Pearl Harbor. That offensive had come about after a long and heated debate at the highest levels of Japanese military and political power.

The Japanese dilemma was a military divided into contending factions, the Imperial Japanese Navy (IJN) and Imperial Japanese Army (IJA). The IJA was oriented toward its ongoing war in China and the Soviet threat to the Japanese control of Manchukuo (Manchuria), while the IJN looked to the Pacific.

The Chinese war showed no sign of ending despite repeated Japanese victories. The US backed China diplomatically, culminating in an embargo on trade of certain commodities, chiefly oil, to Japan in mid-1941. The loss of those commodities would bring both the Japanese military and economy to their knees. Even the army had to concede an offensive was necessary, both to seize sources of those commodities and to cut off Allied military supplies being shipped to China.

The carefully planned offensive succeeded beyond expectations. In addition to the Philippines, Japanese forces conquered Malaya, Burma, the Dutch East Indies, and a string of Pacific islands from New Britain in the south to the Marianas and Wake in the north. They had crippled the US Navy's (USN) battle fleet at Pearl Harbor, destroyed nearly all major Allied surface vessels in the southern Pacific, raided deep into the Indian Ocean, and secured major economic resources, chiefly the oil of the East Indies.

The plan now called for consolidation of the new conquests into several lines of defense by turning them into strongholds defended by land-based airpower. The idea was that when the US launched its expected counteroffensive, Japanese aircraft and submarines would wear down American naval forces so the IJN, using carriers and battleships, could move up aggressively to fight and presumably win a decisive battle. Faced with the loss of major fleet units and the possibility of a long war, Washington DC would negotiate an end to the war, or so many Japanese expected.

There were a number of Japanese leaders who opposed this plan, among them Adm. Yamamoto Isoroku, the respected commander of the Combined Fleet (the major IJN mobile force). Yamamoto believed the United States would continue to fight until it prevailed and knew Japan could not win a prolonged war against American industrial might.

There were other reasons working against the defensive strategy. One was that in February and March 1942, USN carrier forces had conducted a series of raids
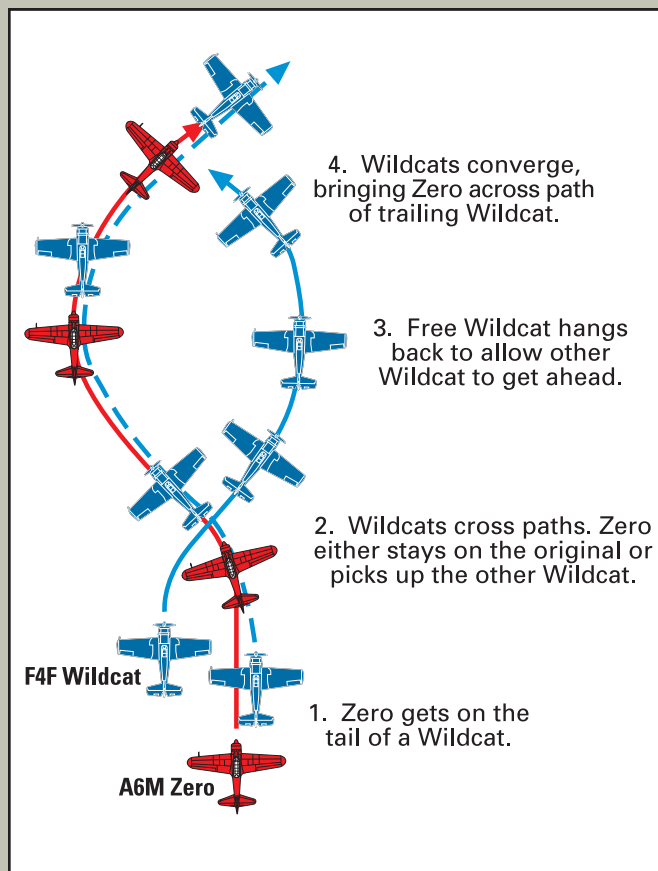
THE THACH WEAVE

★★★ John Thach was a young Navy fighter pilot in mid-1941 when the Japanese deployed the Mitsubishi A6M (Zero). The new fighter was faster and more-maneuverable than its US Navy counterpart, the Grumman F4F Wildcat. Thach, among others, set out to develop tactics to enable US pilots to engage the Zero with a reasonable chance of success. The result, after much experimentation, was a maneuver that acquired the name "Thach Weave."

The maneuver itself was simple, but required careful coordination between two fighters, ostensibly a flight leader and his wingman. When a Zero locked onto one US fighter, it and its consort would cross paths, then open the distance between them. The non-targeted fighter would swing wide or slow down as needed to let the pursuer and pursued get a little ahead. The US fighters would then converge, which would bring the Zero into the gunsights of the non-targeted fighter. The Japanese pilot would have to either break off or face the punishment of the American machineguns.

Thach and his wingman first used the technique in combat at Midway, where Thach actually went under his wingman while converging then came up to hit the pursuing Zero from below. The weave rapidly gained converts throughout the Navy and Marine Corps, who pushed development of new variations using four or more planes. It became a standard aerial tactic for the rest of the war and is still in use today. ★

4. Wildcats converge, bringing Zero across path of trailing Wildcat.

3. Free Wildcat hangs back to allow other Wildcat to get ahead.

2. Wildcats cross paths. Zero either stays on the original or picks up the other Wildcat.

1. Zero gets on the tail of a Wildcat.

F4F Wildcat

A6M Zero

Situation July 1942

Map labels: U.S.S.R., Alaska, Aleutian Is., MANCHUKUO (MANCHURIA), Kurile Is., Sinkiang, JAPAN, Korea, Tibet, CHINA, NEPAL, BHUTAN, BURMA, INDIA, Formosa, PACIFIC OCEAN, Midway, Hawaiian Is., Operation AL, Wake, SIAM, Corregidor, Philippine Sea, Marianas, Operation MI, PHILIPPINES, South China Sea, INDOCHINA, Mindanao, Marshall Is., Ceylon, Operation MO, Gilbert Is., Rabaul, SUMATRA, BORNEO, NEW GUINEA, Solomon Is., Indian Ocean Raid 31 Mar-10 Apr, JAVA, Port Moresby, Tulagi, Fiji, INDIAN OCEAN, Coral Sea, Operation FS, New Caledonia, AUSTRALIA, NEW ZEALAND, N, 1500 Miles

Map Key
— Existing Japanese Perimeter
-- Projected Japanese Perimeter

against Japanese bases on Wake, Marcus Island, and New Guinea. These raids caused Imperial General Headquarters (IGHQ) to realize its defensive perimeter was not as strong as anticipated as land-based aircraft proved unable to stop the intruders.

Another raid—a strike on Tokyo by American B-25 bombers—added humiliation to the reality check. While the Doolittle Raid inflicted little damage, it had a considerable shock effect among Japanese leaders who realized they had failed to defend the Home Islands. Yamamoto himself believed the raid reflected badly on his leadership. He and others consequently believed the defensive perimeter would have to be expanded and, just as critically, the USN carrier force would have to be brought to battle and defeated.

A new offensive appeared to be feasible. The initial expansion had come with lower losses than anticipated due to unexpectedly ineffective Allied resistance. The correct course of action appeared to lean toward maintaining the initiative. The great success also contributed to what is sometimes referred to as *Victory Fever*, the belief that Japanese forces could not lose.

Japanese Plans

The direction and scope of the new offensive was the subject of another prolonged debate. While theoretically Imperial General Headquarters (IGHQ) was to coordinate all operations, in practice it often took considerable diplomacy to put together a combined IJN-IJA operation.

There were many possibilities. One was a move into the Indian Ocean to seize the island of Ceylon and encourage an uprising against the British throughout India. Another called for an invasion of thinly-populated Australia. The IJA rejected both on the grounds of inadequate shipping and available forces. The Australian invasion, for example, would require twelve divisions, far more than could be spared. The IJN effectively was left to its own devices for the upcoming operation.

Adm. Nagano Osami, chief of the Naval General Headquarters (NGHQ), was in charge of all naval forces and operations and theoretically Yamamoto's superior. He wanted to take the offensive into the South Pacific, first seizing New Guinea and the Solomons (Operation MO) with support from the bases at Rabaul on

New Britain and Truk in the Carolines. The new conquests could be turned into airbases to support the ultimate stage of the operation, which was the capture of New Caledonia, Fiji, and Samoa (the latter two known as Operation FS).

From these islands, air-naval forces could interdict Allied communications between the US and Australia. Nagano was supported by Adm. Inoue Shigeyoshi, commander of Fourth Fleet at Truk and responsible for the South Pacific. The victim of some of the US raids, he was all too aware of the weakness of his current defenses. Inoue lacked the fleet units to push south on his own, though, so required assistance from the Combined Fleet.

Yamamoto had a different idea—one he believed had the potential to win the war in a single blow. His "Eastern Operation" called for an invasion of Midway Island (Operation MI) at the tip of the Hawaiian chain to draw the US fleet into battle. Given Japanese naval superiority, it would result in the decisive victory that had so far eluded the Japanese. Nagano opposed the operation because it would mean moving the fleet out of land-based air cover,

while holding Midway afterward would have been difficult for logistic reasons.

Yamamoto won the debate in the end, due in part to the stature he had gained for planning the Pearl Harbor operation. Some Japanese leaders also believed Midway had been the base for the Doolittle Raid, adding an opportunity for revenge to the possibility of a decisive victory.

Nagano did not go quietly, however. He directed Inoue to conduct Operation MO in April, a month before Operation MI was to begin. Fourth Fleet would carry out two amphibious landings: one on Tulagi in the Solomons for a seaplane base; and one on the southeast coast of New Guinea aimed at Port Moresby. After the Eastern Operation had been concluded, Operation FS would be launched from these new forward bases.

The most critical part of this decision was an order to Yamamoto to detach three of his ten carriers—six fleet and four light—to Inoue's support. The ships chosen were *Shokaku* and *Zuikaku*, the newest and best fleet carriers, and the light carrier *Shoho*, with their accompanying escorts. The carriers were to rejoin the fleet for the Midway operation.

A second division soon followed. Two more light carriers were to be used in support of yet another operation, AL, to take several islands in the Aleutian chain stretching west from Alaska. A common interpretation has been the Japanese intended AL as a deception maneuver, designed to draw US forces away from Midway, but IJN archives show it to be an operation in its own right.

The IJN had split its forces at a critical point in the war, but NGHQ genuinely believed it had sufficient strength to accomplish all the objectives simultaneously, as they had done five months earlier.

Allied Plans

The speed of the initial Japanese offensive had stunned the Allies and wrecked their defensive schemes. US planning had been built around the Rainbow series of plans formulated by a joint Army-Navy board, with each potential opponent designated by color. War Plan Orange, the Japanese contingency, correctly anticipated a Japanese offensive into the Pacific, with landings on the Philippines and some Pacific islands. The US response was to be begin with a concentration of the Pacific Fleet at Pearl Harbor, followed by an offensive across the Pacific, retaking islands and building airbases on them. The ultimate goal was to succor the Philippine garrison, which it was hoped would hold out long enough. A final attack would seize islands close to Japan to provide support for a naval-air siege. With raw

CARRIER AIRCRAFT

★★★ The aircraft pictured in the following pages were the primary combatants at both Coral Sea and Midway: fighters, dive bombers, and torpedo planes doubling as level bombers. Every fleet carrier on both sides carried some combination of all three, while the smallest Japanese light carriers had only fighters and one bomber type.

The specifications as usual tell only part of the story. The generally superior performance of the Japanese aircraft came at the cost of less firepower and the omission of virtually all armor, including self-sealing fuel tanks. US aircraft, therefore, could inflict and sustain more punishment. The latter ability not only made completion of a mission more likely, but gave the crew a better chance of survival. This may have had no impact on crew morale, given the Japanese spirit of self-sacrifice, but certainly told in the long run as experienced US crews were more likely to live to fight again.

That said, Japanese aircraft had two fundamental advantages over their adversaries. First was the more comparable cruising speeds of the different types. That made it easier for Japanese formations to stay together during the flight to the target, and therefore help in the coordination of attacks. US squadrons tended to fly independently. The Americans were perfectly aware of the problem and adopted a technique known as a "deferred launch," in which the long-range dive-bombers went off first to circle, then the torpedo bombers launched and headed to the target. The dive bombers followed while the fighters launched. In theory, the faster planes would catch up during the approach flight, but precise timing was nearly impossible.

The second Japanese advantage was generally longer range. The obvious manifestation of this was a longer reach during naval battles; it was possible for Japanese strikes to reach US carriers while the Japanese carriers stayed out of US air range. This could be exacerbated by a tactic used by the Japanese at Pearl Harbor and later in the Philippine Sea (June 1944), though not at either of the battles in this article. This called for carriers to close on a target before launching. After the strike group was airborne, the carriers would turn and run at flank speed, lengthening the return leg by a hundred miles or more. This ensured any US pursuit of the strike planes, or counterattacks against the

carriers, would have to fly the long leg in both directions, beyond the capability of US carrier aircraft.

Another effect of longer range was the ability of the Japanese to former larger and more coherent strike groups, not just off one carrier but from several simultaneously. Since only one plane could launch at a time, the first planes off the deck might have to loiter for a half-hour or more, burning precious fuel while the remainder took off. With a shorter combat radius, US strikes rarely had that luxury, each squadron or flight having to set off on its own.

The composition of a carrier air group had been the subject of much discussion in the years preceding the war. Japanese fleet carriers carried a roughly equal mix of all three types, precise numbers fluctuating with the availability of aircraft and pilots. All Japanese carriers in both battles were short of their nominal complement. Aircraft shortages were a particular problem for the bombers shown here as production had been curtailed or halted while that of new models was still pending. Pilots were another shortage; it was not yet a critical problem, but the Japanese training program was far too small to sustain full-scale war for long.

US groups were composed of four squadrons of nominally equal size: one fighter (VF, the "V" indicating an air unit, "F" for fighters, and the squadron number, usually the same as the carrier), one torpedo/level bomber (VT), one dive bomber (VB), and one scout-bomber (VS). The scout squadron was equipped with dive bombers, reflecting the Navy's intent that its scouts strike the first blow, so often the most telling in carrier battles.

US air groups were more flexible, planes commonly being traded among carriers, while the Japanese rigidly insisted on keeping a carrier's air group "pure" to ensure close cooperation and *esprit de corps*. The air groups of *Yorktown* and *Zuikaku*, for example, were both hit hard at Coral Sea. *Yorktown's* was brought up to strength for Midway by the addition of planes and crews from the late *Lexington* and the idle *Saratoga*. *Zuikaku*, on the other hand, missed the battle, though a full complement could have been had by combining its air group with that of the damaged *Shokaku*.

GRUMMAN F4F-4 WILDCAT

Crew	Dimensions	Weight	Powerplant	Wing Loading	P/M	Speed	Range	Armament
• Pilot	28 ft. 9 in. × 38 ft.	7,975 lbs.	1x 1,200 hp.	30.7 lbs/sq ft.	301 hp/ ton	320 mph / 160 mph	770 mi.	6x 0.50-cal MG in wings.

DOUGLAS SBD-3 DAUNTLESS

Crew	Dimensions	Weight	Powerplant	Wing Loading	P/M	Speed	Range	Armament
• Pilot, • Gunner/Radio Operator	33 ft. 1 in. × 41 ft. 6 in.	9,300 lbs.	1x 1,000 hp.	28.6 lbs/sq ft.	215 hp/ ton	250 mph / 145 mph	1,345 mi. (without bombs)	2x 0.50-cal MG fixed forward, 2x 0.30-cal MG (flexible) to rear. **Payload:** 1x 1,000 lb. bomb under fuselage (VB package) or 1x 500 lb. bomb under fuselage and 2x 100 lb. bombs under wings (VS package).
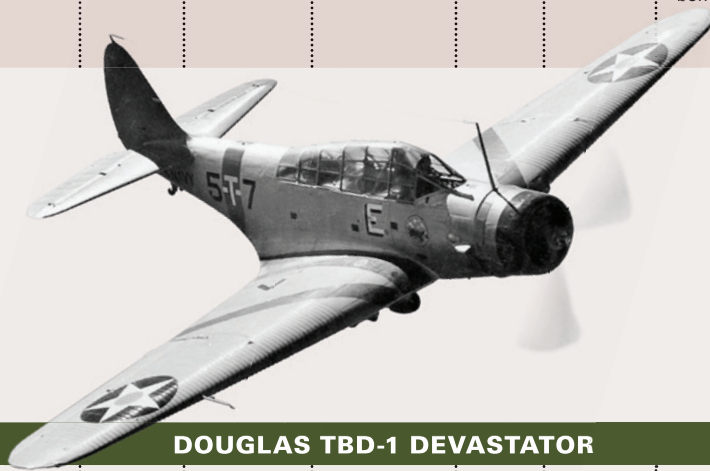
DOUGLAS TBD-1 DEVASTATOR

Crew	Dimensions	Weight	Powerplant	Wing Loading	P/M	Speed	Range	Armament
• Pilot, • Gunner/Radio Operator, • Bombardier/Navigator (optional)	30 ft. × 50 ft.	9,300 lbs.	1x 900 hp.	22 lbs/sq ft.	194 hp/ ton	206 mph / 128 mph	435 mi.	1x 0.50-cal MG fixed forward, 1x 0.30-cal MG (flexible) to rear. **Payload:** 1x 2,216 lb. torpedo or up to 1,000 lbs. of bombs.
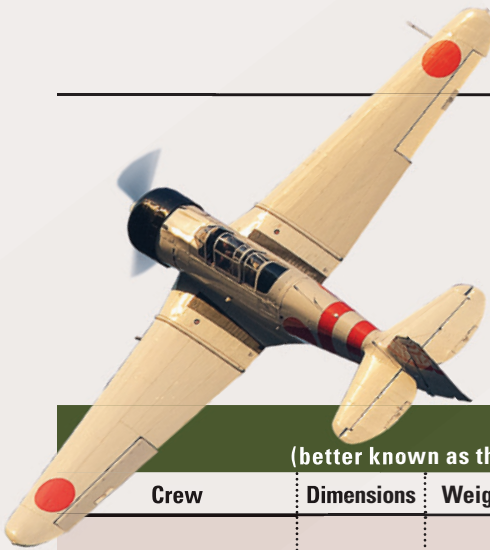
MITSUBISHI A6M "ZEKE"
(better known as the "Zero," the translation of its Japanese model name of *Reisen*)

Crew	Dimensions	Weight	Powerplant	Wing Loading	P/M	Speed	Range	Armament
• Pilot	29 ft. 8 in. × 39 ft. 4 in.	6,164 lbs.	1x 940 hp.	22 lbs/sq ft.	360 hp/ ton	332 mph / 207 mph	1,929 mi. (with drop tank)	2x 20mm cannon in fuselage, 2x 7.7mm MG in wings. **Payload:** 2 light bombs or 1 drop tank.

AICHI D3A-1 "VAL"

Crew	Dimensions	Weight	Powerplant	Wing Loading	P/M	Speed	Range	Armament
• Pilot, • Gunner/Radio Operator	33 ft. 5 in. × 47 ft. 2 in.	8,000 lbs.	1x 1,070 hp.	21.3 lbs/sq ft.	268 hp/ ton	242 mph / 184 mph	915 mi.	2x 7.7mm MG fixed forward, 1x 7.7mm MG (flexible) to rear. **Payload:** up to 551 lbs. of bombs.

NAKAJIMA B5N "KATE"

Crew	Dimensions	Weight	Powerplant	Wing Loading	P/M	Speed	Range	Armament
• Pilot, • Gunner/Radio Operator, • Bombardier or Group Commander (optional)	33 ft. 11 in. × 50 ft. 11 in.	9,040 lbs.	1x 1,000 hp.	22.3 lbs/sq ft.	221 hp/ ton	235 mph / 161 mph	608 mi. (1,240 with no payload)	1x 7.7mm MG (flexible) to rear. **Payload:** 1x 1,764 lb. torpedo or up to same weight of bombs.

Specification Notes

USN aircraft nomenclature consisted of four parts: a letter or letters indicating type (**F**=fighter, **SB**=scout/(dive)bomber, **TB**=torpedo/bomber), a number indicating the design number from the same firm ("1" being omitted for the first), a letter for the firm (**F**=Grumman, **D**=Douglas), and a number indicating the variant.
Dimensions: length in feet and inches × wingspan in feet and inches.

Weight: normal weight at takeoff.
Wing Loading: weight divided by wing area. Higher numbers indicate greater maneuverability, important in aerial combat and during and after an attack run.
P/M: power-to-mass ratio. Higher numbers indicating greater momentary acceleration, critical in aerial combat and useful for departing after an attack run.

Speed: maximum speed / cruise speed. As a practical matter, maximum speeds consumed fuel rapidly and were used only during aerial combat or after an attack run. Cruising speed was the most fuel-efficient for the aircraft.
Range: maximum range during a combat sortie. Actual distance was usually less than half the stated distance, accounting for the return flight plus a reserve for combat. ★

materials and food imports cut off, Tokyo presumably would be forced to capitulate.

The British had a similar concept for the defense of their Far Eastern holdings, India, and their Commonwealth allies in Australia and New Zealand. The latter two in particular had no choice but to rely on British help against the Japanese. In the event of war, naval and air units would assemble around the base of Singapore, then engage the Japanese fleet. The campaign was to end, as with War Plan Orange, with a blockade of Japan.

Both plans recognized the importance of airpower, with many military theoreticians believing it had rendered surface naval power, especially battleships, obsolete. The attack on Pearl Harbor and the Japanese Indian Ocean operation appeared to confirm the airplane's primacy in naval operations. With its battleships out of action, the USN had no choice but to turn to its carriers to lead the fight against Japan. They were also the bulwark of the entire Allied effort in the Pacific, as the overstretched British were tied up in the Mediterranean and Atlantic.

Adm. Chester Nimitz, commander in chief of the US Navy's Pacific Fleet, and as a practical matter the key figure in the entire Pacific, could not count on material parity with the Japanese until 1943, with outright superiority coming months or even years after that. The original US plan in ruins, he set only limited goals for 1942: building up the base at Pearl Harbor, defending the islands covering the route to Australia, and preventing further Japanese advances. Base building was undertaken all along the Hawaii-Australia axis, from Townsville in northern Australia through Espiritu Santo in the New Hebrides, to Samoa and other islands.

The entire Allied position relied on just four aircraft carriers: *Lexington*, *Yorktown*, *Enterprise*, and *Hornet*. A fifth, *Saratoga*, was still undergoing repairs from a Japanese submarine attack and would not be available until mid-June. Nimitz paired his carriers into two task forces and kept them moving along his defensive frontier with a goal of intercepting any Japanese advance as soon as it got started.

Nimitz had two major advantages for the upcoming campaign. First was unity of command, as he had direct authority over nearly every ship in the Pacific. Only the light vessels attached to Gen. Douglas MacArthur's newly created Southwest Pacific Area were outside his control. There was some inter-service rivalry in the US armed forces, but on the whole relations between the Navy and Army were good, and Australia and New Zealand were willing and cooperative allies. The second advantage was USN codebreakers in Honolulu, who routinely read Imperial messages, providing timely and valuable information on Japanese movements, strengths, and intentions. The combination meant the Japanese divided their strength in the face of a tightly-grouped and carefully controlled enemy.

Coral Sea

As April opened, US signals intercepts learned Inoue's Fourth Fleet was moving into the Coral Sea to seize Port Moresby on New Guinea. The threat to Australia forced Nimitz's hand and he slid Vice-Adm. Frank Jack Fletcher's Task Force 17 (built around *Lexington* and *Yorktown*) south to meet the thrust.

Inoue's plan, like most Japanese plans throughout the war, was overly complicated, his fleet divided into five parts. The two invasion forces made straight for their targets—Port Moresby and Tulagi—accompanied by light combatant vessels. The heavier covering group followed along a course between the two. The carrier (strike) force stayed well to the east. An attack by US carriers was expected. They were to be drawn in toward the invasion forces, then caught between the strike and covering groups. The last group, all submarines, was to scout and pick off Allied warships.

First blood went to the Americans when USN aircraft found and sank the light carrier *Shoho*. The main action took place the following day when the fleets traded air strikes. *Lexington* was sunk and *Yorktown* suffered major damage when a bomb penetrated the flight deck, exploding deep within the ship to cause major damage. US pilots managed only to damage *Shokaku*. Smaller vessels on both sides were sunk or damaged in this and subsequent action. Air losses on both sides were serious.

USN TASK FORCE 17 AT CORAL SEA						
	CA/CL	CV	DD	SS	Misc	Aircraft
TG 17.2 (Attack)	5	–	5	–	–	–
TG 17.3 (Support)	3	–	3	–	–	128
TG 17.5 (Carrier)	–	2	4	–	–	–
TG 17.6 (Fueling)	–	–	2	–	2x Oilers	–
TG 17.9 (Search)	–	–	–	–	1x Tender	12x PBY
Submarines	–	–	–	11	–	–
Lost	1	1	–	–	–	69
Damaged	–	1	–	–	–	–

IJN FOURTH FLEET AT CORAL SEA						
	CA/CL	CV	CVL	DD	SS	Aircraft
Strike Force	2	2	–	6	–	127
Support Group	2	–	–	–	–	–
Covering Group	4	–	1	1	–	18
Port Moresby Invasion Group	1	–	–	6	–	–
Tulagi Invasion Group	–	–	–	2	–	–
Submarine Force	–	–	–	–	7	–
Lost	–	–	1	1	–	92
Damaged	–	1	–	1	–	–

Also Lost: *3x light vessels.*

Also Damaged: *2x light vessels, 1x transport*

Map Key

- TF 17: 1 carrier, *Yorktown*
  3 cruisers, *Astoria, Chester, Portland*
  4 destroyers
- TF 11: 1 carrier, *Lexington*
  2 cruisers, *Minneapolis, New Orleans*
  5 destroyers
- TF 44: 3 cruisers, *Australia, Hobart, Chicago*
  2 destroyers
- Fuel Group: 2 tankers, 2 destroyers
- US Reconnaissance & bombers from Australia
- Port Moresby invasion force
- Carrier Striking force
- Tulagi invasion force
- Japanese Airstrikes
- US Airstrikes

Coral Sea

Map labels (upper map):
- Trobriand Is.
- Ganongga I.
- New Georgia
- Santa Isabel
- SOLOMON SEA
- Rendova
- Vangunu I.
- Tetipari I.
- SOLOMON IS.
- Tulagi
- Malaita
- Ferguson I.
- D'Entrecasteaux I.
- Woodlark I.
- Laughlin I.
- Pavuvu I.
- Florida I.
- 10:50am 7 May
- Shoho sunk 7 May
- 2:00am 9 May
- 7:30am 6 May
- Guadalcanal
- San Cristobal
- Normanby I.
- Milne Bay
- Misima I.
- 6:30am 4 May
- 1:30pm 4 May
- 11:30am 5 May
- Basilaki I.
- Louisiade Arch.
- 7:10am 8 May
- 12:00am 7 May
- 12:00am 6 May
- Rossel I.
- Shokaku damaged 8 May
- Rennell I.
- 2:00pm 7 May
- Tagula I.
- 12:10pm 5 May
- CORAL
- Indispensible Reefs
- Detached 6:30am 7 May
- SEA
- 7:30 pm 6 May
- 6:00am 7 May
- N
- 3:00am 4 May
- 7:30pm 5 May
- Yorktown damaged
- Lexington sunk 8 May
- Neosho sunk 11 May
- 7:30am 6 May
- 8:00am 3 May
- Sims sunk 7 May
- 8pm 4 May
- 7am 3 May
- 50 Miles

Map labels (lower map):
- Covering Group
- Strike Group
- Tarawa
- PACIFIC OCEAN
- New Ireland
- Bismarck Archipelago
- SOLOMON ISLANDS
- NEW GUINEA
- Rabaul
- Bougainville
- Tulagi Invasion Group
- Salamaua
- Lae
- New Britain
- Savo Is.
- Buna
- Guadalcanal
- Santa Cruz Island
- Port Moresby
- Port Moresby Invasion & Support Groups
- anticipated battle area
- Darwin
- New Hebrides
- CORAL SEA
- battle area shown above
- AUSTRALIA
- Townsville
- New Caledonia
- Noumea
- N
- Brisbane
- 180 Miles

YAMAMOTO

With his air groups shattered, Inoue no longer felt he had the strength to fend off further air or surface attacks, particularly as the New Guinea invasion force was within range of Allied land-based aircraft. Postponing the invasion (except for Tulagi, which fell on schedule), he ordered the transports back to Rabaul and began pulling his fleet units back into Japanese waters. Yamamoto reversed the order, but after a day's delay to refuel Inoue could not find Fletcher's ships. Except for light forces off Moresby, the Americans had retreated eastward, bound for Pearl Harbor.

Coral Sea has been described as a Japanese tactical victory—each side had one carrier sunk and one damaged, though the loss of little *Shoho* did not compensate for the loss of *Lexington*—but a strategic defeat because the invasion of Moresby had been forestalled. In reality the comparison of losses favored the US. All three surviving carriers were out of action: *Shokaku* and *Yorktown* from damage, *Zuikaku* due to heavy aircraft losses. *Yorktown*, however, would be repaired with astonishing speed and would fight again in June, while the Japanese carriers remained idle for months.

The Japanese failure to achieve more at Coral Sea can be attributed to several factors, some foreshadowing the larger Midway battle to come. Superior US intelligence and

air reconnaissance gave them an early advantage in launching the first strikes. Inoue's flotillas operated too far from one another for mutual support. Unlike Midway, the Japanese had no strength advantage in surface vessels at Coral Sea; Yamamoto had been forced to give up carriers, but he carefully hoarded his battle fleet for Operation MI. Despite the American lack of operational battleships, Fletcher had had the ability to go toe-to-toe with Inoue's cruisers, which in fact did put the invasion flotilla at risk.

Yamamoto Moves East

Operations MI and AL were put in motion barely two weeks after Inoue's carriers limped out of the Coral Sea. Like Inoue, Yamamoto divided his fleet. An invasion force and covering group were to approach Midway from the southwest. The landing was expected to be relatively easy as the defenders were believed to be weak. Once ashore, the troops would establish defenses, to include a fighter group being ferried aboard the main carrier group. Midway was a desirable base, but the real purpose of the invasion was to draw in the American carriers. The invasion force would then retreat, drawing the carriers into an ambush by the carrier strike force, which would approach from the northwest. The ambush would be supported by Yamamoto's battleships, which were to have followed the invasion force from the southwest.

The plan had substantial flaws. The separate Japanese forces were not within mutually supporting range, so, like Inoue, Yamamoto ran the risk of being defeated in detail. He also assumed Nimitz would act as expected. This did not happen for two reasons. First, as at Coral Sea, signals intercepts quickly apprised Nimitz of the Japanese departure, their intentions, and of the separation of the fleets and their individual courses. Second, and crucially, Nimitz was not looking for a decisive battle. He was only planning to use the battle as another opportunity to whittle away at the Japanese fleet. Midway, effectively used as bait by the Americans as well, was expendable.

Nimitz knew the Japanese were coming, again, from signals inter-

cepts and this would give him an opportunity to destroy the IJN's carriers if he remained agile enough. He accordingly deployed his carriers northeast of the island, avoiding detection by both Japanese submarines and flying boats. The task forces, combined under the command of Fletcher on *Yorktown*, were within mutually supporting distance of each other, but far enough apart so that a single enemy air strike would not risk all the carriers in one place.

The forces heading for the engagement were mismatched in every way except the ones that counted most. The four carriers in Adm. Nagumo Chuichi's First Air Fleet carried about 200 IJN combat aircraft, plus the 21 fighters to be transferred to Midway. The light carriers in Yamamoto's fleet were too far away to contribute.

The three US carriers had 232 planes, though *Yorktown's* air group had been hastily reformed with pilots from three different ships. Nimitz could call on another 90 USMC and US Army fighters and bombers on Midway.

Just as importantly, the Americans had a significant advantage in scout aircraft. In addition to 31 PBY Catalina flying boats on Midway, roughly half the 109 dive bombers on the carriers belonged to scout squadrons. Nagumo, on the other hand, could call on only a dozen floatplanes on his escorting cruisers—Yamamoto's hoarding of his surface fleet would have a significant impact on the scouting battle—though a few torpedo bombers from the carriers would also be put to the task.

One point of clear Japanese superiority was on the battle line, with Yamamoto fielding seven battleships. Nimitz actually considered deploying Task Force 1, his force of battleships. He decided against it for several reasons. The battleships, slower than the carriers, would either slow the entire fleet or would need a detachment of Fletcher's cruisers and destroyers as escorts. Expecting the coming battle would emphasize agility rather than strength, he left the battlewagons in harbor.

Midway

The battle opened early on 4 June, when Nagumo launched a strike at Midway to soften it up. The US squadrons rose to the island's defense, but the Japanese fighters proved more nimble. Many American planes were destroyed in the air and on the ground. A counterstrike by US bombers at Midway, including torpedo-carrying B-26 Marauders, did no damage to the Japanese carriers. A Japanese search plane had meanwhile spotted a USN carrier task force to the northeast. Nagumo turned to meet it, launching an air strike.
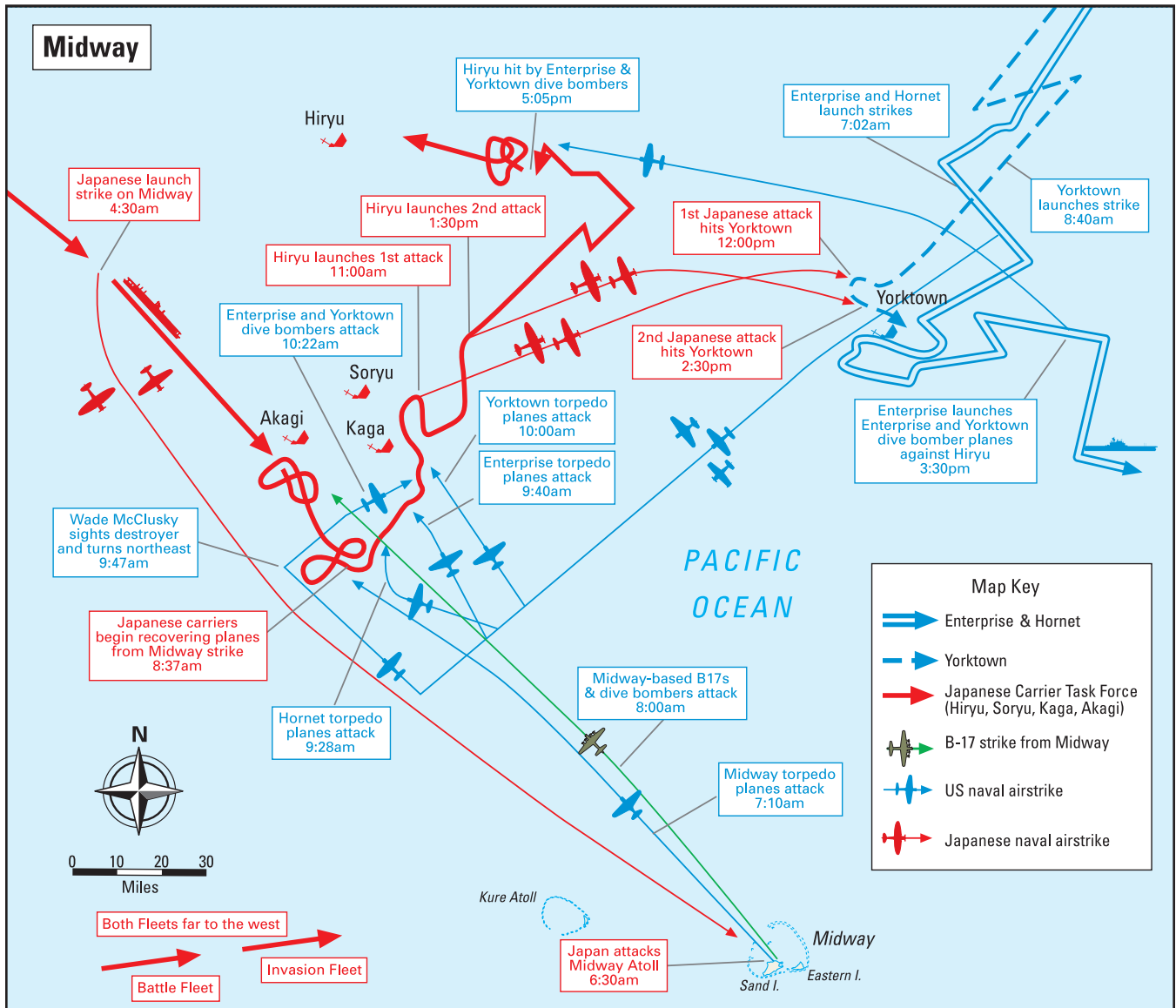
Fletcher's first strike was already on the way as Nagumo had been spotted early that morning by a Catalina. *Enterprise* and *Hornet* dispatched strike groups at 7:00 a.m., *Yorktown* a half hour later.
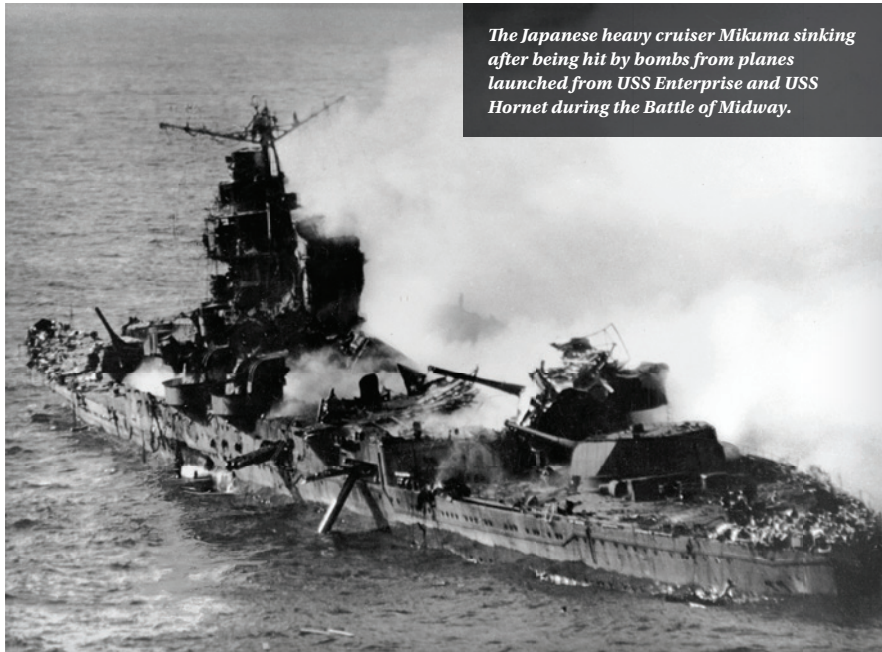
Launched from extreme range, the first groups headed directly for Nagumo's carriers without waiting to form up. The attack as a result was poorly coordinated. *Hornet's* fighters and dive bombers missed the Japanese fleet entirely, all ten fighters ditching when their fuel ran out. The *Enterprise* bombers also missed the fleet on the first pass. By the time they had doubled back, the torpedo planes had already attacked. On their own, they were shredded by Japanese fighters.

The fighters had been drawn low by the attacks, however, and were out of position when *Enterprise's* dive bombers reappeared simultaneously with *Yorktown's* entire strike group. The dive bombers scored hits on three Japanese carriers. All were put out of action and would later be scuttled.

The surviving Japanese carrier, *Hiryu*, sent off a quick strike to follow the US planes back to their ships. Finding *Yorktown*, they inflicted severe damage. Emergency repairs had the vessel underway when a second strike from *Hiryu* crippled her. She would later be finished off by a US destroyer, but not before a final American strike left *Hiryu* a wreck. By 5:00 p.m., Yamamoto's four fleet carriers were gone, while Spruance, to whom Fletcher had turned over command, still had two, though with diminished air groups.

Yamamoto's first reaction was to move up the rest of his fleet. There was a possibility to still win that great victory if a surface engagement could be forced. Spruance, however, having accomplished Nimitz's objective, broke off the engagement and withdrew eastward.

Midway

Hiryu hit by Enterprise & Yorktown dive bombers 5:05pm

Enterprise and Hornet launch strikes 7:02am

Hiryu

Yorktown launches strike 8:40am

Japanese launch strike on Midway 4:30am

Hiryu launches 2nd attack 1:30pm

1st Japanese attack hits Yorktown 12:00pm

Hiryu launches 1st attack 11:00am

Enterprise and Yorktown dive bombers attack 10:22am

Yorktown

Soryu

2nd Japanese attack hits Yorktown 2:30pm

Akagi   Kaga

Yorktown torpedo planes attack 10:00am

Enterprise launches Enterprise and Yorktown dive bomber planes against Hiryu 3:30pm

Enterprise torpedo planes attack 9:40am

Wade McClusky sights destroyer and turns northeast 9:47am

PACIFIC OCEAN

Japanese carriers begin recovering planes from Midway strike 8:37am

Map Key

Enterprise & Hornet

Yorktown

Japanese Carrier Task Force (Hiryu, Soryu, Kaga, Akagi)

B-17 strike from Midway

US naval airstrike

Japanese naval airstrike

Hornet torpedo planes attack 9:28am

Midway-based B17s & dive bombers attack 8:00am

N

Midway torpedo planes attack 7:10am

0 10 20 30
Miles

Both Fleets far to the west

Kure Atoll

Japan attacks Midway Atoll 6:30am

Midway

Battle Fleet   Invasion Fleet

Sand I.   Eastern I.

The Japanese heavy cruiser Mikuma sinking after being hit by bombs from planes launched from USS Enterprise and USS Hornet during the Battle of Midway.

After a few hours sailing, Yamamoto also decided to break off. He had no way of knowing what the remaining American strength was, whether Midway itself had been reinforced, or whether the US battleships might be committed. There was too much risk in operating without the cover of the carriers; as a reminder, a heavy cruiser fell to Spruance's planes, the last victim of the battle.

Yamamoto's plan had worked in a way as the Americans had been drawn into a fight at Midway. The outcome, of course, was not what had been anticipated. The US intelligence reports had proven critical, while Yamamoto operated largely in the dark. Nimitz's flexible concept for the battle did the rest.

After Midway

Midway has been called a turning point in the Pacific War, though there is some question whether that was inevitable. The Japanese battlefleet was still intact. The IJN still had two fleet carriers—its newest and best—and three light carriers, two of which were nearly as large as *Hiryu* and *Soryu*. There were enough pilots to man full air groups—most of the pilots from the carriers lost at Midway had been rescued by other ships in the fleet. Nimitz was down to just three carriers after *Saratoga* rejoined the fleet, all with attenuated air groups.

The Japanese nevertheless changed their grand strategy. The offensive toward New Caledonia, Fiji, and Samoa was canceled, never to be reconsidered. Nagumo's First Air Fleet, the instrument of Japanese victory for the first six months of the war, was broken up, its surviving units dispersing to refit.

The Japanese ebb left the US with the initiative. In August, just two months after Midway, US Marines landed on

IJN AT MIDWAY

	CA/CL	CV	CVL	BB	DD	SS	Misc	Aircraft
First Air Fleet	5	4	–	2	12	5	–	246*
First Fleet	1	–	1	3	18	1	2	8
Invasion Force	8	–	1	2	13	5	2	8
Submarines	–	–	–	–	–	–	10	–
Lost	1	4	–	–	–	–	–	246
Damaged	–	–	–	–	1	–	–	–

IJN Aircraft	Akagi	Kaga	Hiryu	Soryu	Haruna	Kirishima	Chikuma	Tone
Mitsubishi A6M2 "Zero"*	24	27	21	21	–	–	–	–
Aichi D3Y "Val"	18	18	18	18	–	–	–	–
Nakajima B5N "Kate"	27	27	18	18	–	–	–	–
Spares (types uncertain)	18	25	9	9	–	–	–	–
Nakajima E8N2 "Dave"	–	–	–	–	3	3	–	–
Aichi E13A1 "Jake"	–	–	–	–	–	–	3	3

Includes 21 fighters to be disembarked when Midway was captured. Each carrier also carried some dismantled spare planes.

USN AT MIDWAY

	CA/CL	CV	DD	SS	Aircraft
Task Force 17	2	1	6	–	77
Task Force 16	6	2	9	–	155
Submarines	–	–	–	19	–
Midway	–	–	–	–	120
Lost	–	1	1	–	150

Carrier Aircraft	F4F	SBD	SBD	TBD
CV-5 *Yorktown*	VF-3 (25)	VB-3 (17)	VS-5 (19)	VT-3 (15)
CV-6 *Enterprise*	VF-6 (27)	VB-6 (19)	VS-6 (18)	VT-6 (14)
CV-8 *Hornet*	VF-8 (27)	VB-8 (18)	VS-8 (17)	VT-8 (14)

USN Aircraft	Number
Consolidated PBY Catalina	31
Grumman TBF Avenger*	6
Martin B-26 Marauder	4
Boeing B-17 Flying Fortress	17
Douglas SDB-2 Dauntless	27
Vought SB2U-3 Vindicator	17
Brewster F2A Buffalo	21
Grumman F4F-3	7

Part of VT-8.

Guadalcanal and Tulagi, taking the Japanese airfields as their own. The landings grew into the Solomons campaign, which became a meat-grinder for Japanese surface ships and air strength.

The loss of carriers at Midway was felt here as the campaign included two great carrier battles: Eastern Solomons (22–25 August) and Santa Cruz (26–27 October). The USN never fielded more than three carriers, and for a time had only one operational. Had any Japanese carriers survived Midway they would have been available to provide overwhelming superiority in the Solomons. Of course, had that occurred there likely would have been no Allied offensive.

The ultimate Japanese defeat in the Solomons can also be chalked up to strategic decisions in early 1942. The first moves into the chain had been supported by just a few battalion-sized IJN special naval landing forces and some construction pioneers. These were insufficient to hold the islands in the face of the Marine landings.

The commitment of a single Japanese infantry division to Guadalcanal from the start would have made a major difference in the campaign as the US might not have captured the key installations. The same number of troops committed later to retake airfields and harbors were never enough in the face of US firepower.

A still greater what-if would had been full commitment to either Yamamoto's eastern or Nagano's southern strategy. That would have given the Japanese overwhelming strength at one point, though whether Nimitz could have been enticed to fight is open to question. The division of Japanese forces gave Nimitz the opportunity to fight with fairly equal strength, leading to battles the Japanese could not afford to win, much less lose.

US superiority in intelligence gathering was the final piece of the puzzle, giving Nimitz the ability to choose the exact time and place for battle. As illustrated by Coral Sea and Midway, it was an advantage that made all the difference in carrier battles. ✪

ANATOMY OF A STRIKE

★★★ Torpedo attacks, dive bombing, and level bombing each forced a targeted ship to adopt different defensive tactics, so careful coordination could enhance the effectiveness of each in a naval equivalent of rock-paper-scissors. Achieving that coordination was difficult, as the crews of *Enterprise's* air group (EAG) discovered on 4 June at Midway in their first large naval strike of the war.

Enterprise began launching at 7:00 a.m. after a Midway-based PBY Catalina spotted Nagumo's carriers. The deferred launch procedure was used, putting the torpedo planes in the lead. A long delay in launching the dive bombers, under EAG commander Wade McClusky, caused them to fall well behind. *Hornet's* squadrons also split up over a dispute on the proper heading, only the torpedo planes making contact. *Yorktown's* air group (YAG) stayed together, but were a half-hour behind the others.

EAG's squadrons flew on a heading of 240 degrees (southwest by west), the course calculated to get them into the general area of the Japanese. Visual contact would have to be made on the spot, no easy task due to patchy clouds. Both VT-8 and VT-6, flying at 2,500 feet, found the Japanese, while McClusky's group at over 10,000 feet missed the sighting and flew on.
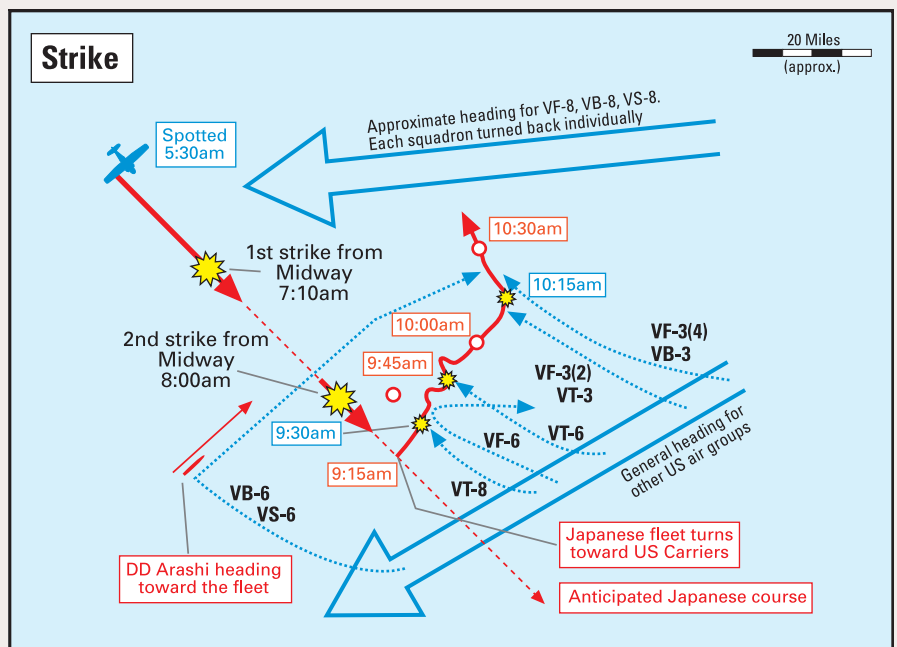
VT-6 made contact a few minutes after VT-8 had been annihilated, and like VT-8, was on its own. With no fuel reserve, the squadron pitched in immediately, aiming for the southwestern-most carrier, *Kaga*.

Torpedoes were deadly because their explosive power hit entirely below the waterline. They were temperamental, however, and had to be dropped at only 100 to 120 mph from 150 feet or less. US doctrine called for a drop at a range of 1,000 to 1,500 yards, but even that gave the target ship a minute or more to evade the torpedo.

The Japanese had seen the planes coming, and turned away, presenting only the narrow stern as a target. To counter the tactic, VT-6 split into two seven-plane divisions to try to catch the carrier from beam and bow simultaneously. *Kaga* continued making sharp turns. The lumbering TBD Devastators struggled to compensate, all the while taking fire from every anti-aircraft gun within range.

The greatest danger to the planes were the fighters of the Japanese combat air patrol (CAP), formed of six or more fighters from each carrier during daylight hours. A new set was launched every few hours while the previous group landed to refuel. US task forces appointed a single CAP controller, while the Japanese did not, a point soon to have momentous consequences.

The CAP had accounted for all fifteen planes in VT-8 a few minutes earlier and now tore at VT-6. They were bereft of cover as VF-6, fuel running low, had turned for home. By the time the attack ended, just a few minutes after it had started, only four planes remained in the air. All had dropped their torpedoes; none hit, or if they hit they did not explode, a problem with all US torpedoes early in the war.

Strike

20 Miles (approx.)

Spotted 5:30am

Approximate heading for VF-8, VB-8, VS-8. Each squadron turned back individually

1st strike from Midway 7:10am

2nd strike from Midway 8:00am

10:30am

10:15am

10:00am

9:45am

9:30am

9:15am

VF-3(4) VB-3

VF-3(2) VT-3

VF-6 VT-6

VT-8

General heading for other US air groups

VB-6 VS-6

DD Arashi heading toward the fleet

Japanese fleet turns toward US Carriers

Anticipated Japanese course

McClusky, meanwhile, had continued west until he spotted a Japanese destroyer. Surmising it to be moving toward the fleet, he turned onto its heading. VT-6 had long since departed, but his arrival fortuitously coincided with that of the YAG. While *Yorktown's* squadron headed for the front of the Japanese fleet, McClusky brought his squadrons up from behind.

The Japanese fleet and CAP were just getting themselves sorted back into formation after the previous attacks. Because there was no CAP controller, all the fighters had been drawn to the torpedo squadrons, leaving all at low altitude, and short of fuel and ammunition. When VT-3 started its attack on *Hiryu,* the Japanese converged on it. For the first time they faced opposition, as VT-3 was escorted by US fighters.

A carrier's fighter squadron was always divided in two parts, one to form a CAP and the other to escort a strike. The exact division was a matter of some guesswork. The lone carrier in its task force, *Yorktown* sent just six of its 25 fighters in the strike group, and only two of those protected VT-3. They did their best but were quickly overwhelmed. Another ten Devastators were shot down, again without scoring a hit.

Far above the CAP, three dive bomber squadrons were lining up for their attack, opposed only by anti-aircraft fire, ineffective as the ships had scattered to avoid torpedoes. VB-3 went after *Soryu*, while McClusky ordered one squadron each to hit *Kaga* and *Akagi*. This kind of control was essential in a large battle to avoid planes getting in one another's way or missing a potential target. The Japanese usually had the advantage in this regard. McClusky flew his own SBD Dauntless, so his command duties had to be integrated with flying the plane, navigating, and dropping his bomb. Japanese strikes generally were controlled from a Nakajima B5N "Kate," the air group commander taking the place of the bombardier so he could focus entirely on control. In this instance, VB-6 misunderstood the order and all 32 planes initially aimed for *Kaga*. One division realized the mistake in the nick of time and headed for *Akagi*.

A dive bomber began its attack anywhere from 12,000 to 20,000 over the target. Tipping forward to 70 degrees—any more and the plane would become unmanageable—it dropped toward the target. Air brakes—special flaps, slotted on the Dauntless—kept the plane's terminal velocity at around 350 miles per hour, or 500 feet per second. Like the dive angle, the limitation was essential, as too much speed might buckle the airframe or make pulling out of the dive impossible. The bomb was ideally released at 1,000 to 1,500 feet, giving the pilot just two seconds to pull out. Since the aircraft's speed was transmitted to the bomb, the ship had only the same two seconds before impact, so evasion was virtually impossible.

STRIKE COMPOSITION		
CV-5 *Yorktown**	**Planes**	**Lost**
VB-3	17	2
VF-3	6	2
VS-5	not committed	
VT-3	12	10
CV-6 *Enterprise*	**Planes**	**Lost**
VB-6	15	10
VF-6	10	1
VS-6	17	8
VT-6	14	10
CV-8 *Hornet*	**Planes**	**Lost**
VB-8	17	5
VF-8	10	10
VS-8	18	0
VT-8	15	15
*V #3 from *Saratoga*		

The US pilots were accurate on this morning. *Kaga*, not surprisingly, was pummeled, taking at least four and as many as six hits. *Akagi* appeared to get off easily with just one, but it was a mortal wound as it set off additional explosions that turned the ship into a pyre. *Soryu* succumbed to three hits. A number of bombers were caught by the CAP after their dives, but by then the damage had been done. ★

Attack of VT-6
(approximate, based on squadron commander's after-action report)

Attack of VB-6 & VS-6
(approximate, based on squadron commander's after-action report)