CUNNINGHAM

And

SOMERVILLE

Amendments and Additions to Sam Mustafa's

WWII Naval Rules Nimitz and Halsey

The Battle of the North Cape by John Hamilton

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CUNNINGHAM

As simple as ABC

Amendments and Additions to Nimitz for those who love History

Introduction

Sam Mustafa's Nimitz rules offer, in my opinion, one of the best and most accessible sets of WWII Naval gaming rules available today. The rules were clearly designed to give a quick, simple, tidy, and evenly balanced game, that aims to hit a "sweet spot" of naval combat between 1941 and 1943. These are laudable characteristics, but World War Two naval combat was often complex and messy, and if it was evenly balanced then one of the commanders had already failed to do his job properly.

These amendments and additions serve to re-introduce some of the factors that I consider important in giving players a better taste of what the war at sea was like between 1939 and 1945. Most of the additions are "chrome", i.e. they embellish the existing systems without fundamentally changing them. Where there are completely new additions, such as for collisions, variable damage and damage control, sinking ships, rescuing survivors, submarines, and weather, it may look as though the additions add much length to the rules, and thus can be expected to slow things down a lot, but the individual rules are not used every turn, and when you do use them it is to add more nuance and historical narrative to the game, so the extra effort is worth it. The game is certainly not as fast as the Nimitz rules as written (RAW) but it remains much faster than practically any other set out there.

These amendments are just my two penn'orth. Please feel free to pick and choose any that you like and throw the rest over the side with the gash.

Page numbers in parenthesis refer to the RAW.

Space and Time

1” =1000 yards.

One turn = 6 minutes. (Actually, given the recommended ships’ speeds a turn is between 7.5 minutes and 5.66 minutes, with the average across all speed bands of 6.51 minutes. I have fudged it to 6 minutes in the interest of sanity, avoiding ½ inches of movement, and differentiating between practical top speeds.

Data Cards (p.7.)

Change as you see fit. Amend speeds as shown below. Tippex is your friend.

Give the very largest ships: Hood, Bismarck, Yamato, Iowa, Shinano, (and Vanguard and Midway if you want to go to 1946,) one extra floatation box. This repeats the lowest speed rating.

WWI destroyers such as the US Clemson and British S & T classes, German torpedo boats, destroyer escorts, and frigates have 3 hull boxes and 2 crippled boxes.

Smaller combatants such as corvettes and minesweepers have 2 hull boxes and 2 crippled boxes, and one floatation box.

Trawlers and coastal craft such as MTBs have 1 hull box and 1 crippled box, and one floatation box.

Ships’ Speeds

Move in Inches			**Notional Top Speed (kts)**	**Examples**
Full	2nd Flot	Last Flot		
10	5	3	37+	The very fastest ships such as many Italian, French or Soviet DDs, Shimakaze, Manxman; or MTBs dashing.
9	5	3	36 -33	Destroyers and the fastest cruisers.
8	4	3	32 -31	CVs; most cruisers; Iowa, Scharnhorst, Alaska; old destroyers.
7	4	3	30 -29	Bismarck, Hood, Renown, Wasp, Littorio, Kongo, Dunkerque, Richelieu; old cruisers.
6	4	2	28 - 26	KGV, Repulse, North Carolina, South Dakota, Yamato, Cavour, Graf Spee.

5	3	2	25 - 23	Nagato, Ise, Nelson, Warspite, and US Standard Battleships; fast escorts.
4	3	2	22-18	Old, slow BBs such as Texas, Royal Sovereign, Fuso, Bretagne, Courbet, etc; Béarn; slower escorts; CVEs; surfaced subs.
3	2	1	17 -10	Corvettes, fast merchantmen, assault transports.
2	1	1	9 and less.	Merchantmen; submerged subs; MTBs stalking.

Speed (p13.)

Ships moving at 3” or less are at low speed.

Ships moving at 7” or more are at high speed.

Weather effects on Speed

High seas in foul weather reduce destroyer top speeds to 6”.

Very rough seas in severe weather reduce cruiser top speeds to 6”, destroyers to 4”, other escorts, fast merchantmen, and transports to 2”, and merchantmen to 1”.

Special Features and Circumstances

Special Features to be specified for individual ships as part of their equipment, or circumstances imposed on the TF/squadron by the scenario, include:

Features

- **Handy Ships** are more manoeuvrable and are harder to hit by level bombers. They only receive the benefits of being handy if they are not presently crippled, have all their floatation boxes intact, are not towing, and are not presently suffering from a steering casualty. (q.v.) As a rule of thumb cruisers with 10 or less 6” guns, or 6 or less 8” guns, and smaller vessels are regarded as “Handy” ships, but feel free to designate according to your own assessments.

- **Effective Radar** means reliable surface search radar with range specified in the scenario, that will not go on the blink when you most need it, and has a crew, and more importantly an admiral, who know how to use it and appreciate its use and limitations. It can be used to track contacts and help with gunnery solutions and provide partially effective blind fire at short range.
- **Superior Radar** means reliable late war radar that could track shell splashes to over 22,000 yards, such as the US Mark 8, enabling it to be used for fully effective blind fire.
- **ASV Radar** means reliable aircraft mounted search sets, capable of picking up a surfaced submarine at 4-7 miles, and a large ship at 40-60 miles.
- **Talk Between Ships (TBS)** means short range, line of sight, radio that allows the quick transmission of information and orders in action. However, to be useful its use must be disciplined and controlled, otherwise the resulting confusion will degrade spatial awareness rather than enhance it.
- **Combat Information Centres (CIC), British "Plot,"** were introduced from mid-1943 to unify the processing of information on the location of friendly and enemy ships, in real time, to enhance the commander's spatial awareness.
- **Modern Fire Control** means fire control analogue computers installed in modern warships, such as the American Ford, the British AFCT Mk VII onwards, and modern Axis equivalents. By automatically inputting and updating their own ship's course and speed data into the firing solution, they greatly reduced the problems caused by these variables.
- **Fire Risks.** American carriers until after The Battle of the Coral Sea; Japanese carriers; tankers or oilers; and merchantmen, auxiliaries or warships loaded with supplies that include a significant amount of fuel or munitions, are "fire risks" and are in greater danger of damage by fires burning.
- **Multi-Crew Fighters.** Heavy fighters such as Fulmars, Fireflies, Defiants, Beaufighters, Me 110s, Ki 45 "Nick", etc; and night fighters or bomber/heavy fighters such as the Ju 88C, Mosquito, or P 61. These are perfectly good against other heavy fighters, strike and spotter aircraft, against whom they fight with a factor of +4, but are outclassed in dogfights with single seat fighters against whom they fight with a factor of +5.

- **Fragile Aircraft.** Aircraft that lack pilot armour and self-sealing tanks such as obsolete 1930s types, some Italian types, and most Japanese types. Also, those airplanes with known weaknesses such as Condors.
- **Rugged Aircraft.** Aircraft that had a, deserved, reputation for being able to take a lot of battle damage and still get their crews home, such as Wildcats, Hellcats, Thunderbolts, Avengers, Sunderlands and Fortresses.

Circumstances

- **ULTRA Superiority**, used in Halsey to designate an intelligence superiority derived from decryption, direction finding, traffic analysis and HUMINT that can provide usable intelligence product in a near contemporaneous time frame. Normally the Allies would have this advantage, although much depended on the time taken to decrypt messages. The advantage was not totally one sided, and for much of 1942 and into 1943 the German B-Dienst held the upper-hand in the Atlantic. In the Pacific the Americans would have ULTRA superiority for the Coral Sea and Midway, lose it after Midway, (which is not to say that the Japanese gained it,) and regained it towards the end of the Guadalcanal campaign.
- **Non-Japanese, Well Drilled at Night**. Subjective, I know. I am thinking of squadrons that have worked up well together, as opposed to ad hoc formations, and have developed protocols for night fighting, and practiced them. Such as Force K from Malta and Cunningham at Matapan.
- **Disadvantaged in Dogfight.** Used to designate fighters that have a major disadvantage at the beginning of a dogfight because of tactical factors such as the enemy catching them unawares, having a significant height advantage, or has very effective fighter direction. Examples of such a disadvantage would be the Americans at Pearl Harbor, the British at Colombo, the Cactus Airforce caught surprised on occasion, and the Japanese engaged by the long-distance CAP whilst forming up in the Mariannas Turkey Shoot. Strike aircraft do not count the -1 for disadvantaged - they always are.
- **Superior Fighter Pilots.** Subjective again, but pilots who, due to better training and extensive combat experience are significantly better than their opponents. Such as the original Kido Butai pilots, and most late war allied pilots. They are better at shooting down enemy aircraft of all types and are

harder to shoot down themselves. If using this amendment there is no need to use “The Two Zeroes” +3 categorization in the RAW.

- **Poor Pilots:** Still subjective, but pilots who lack adequate training and experience, such as many Japanese pilots towards the end of the war. They are worse at shooting down enemy aircraft of all types and are easier to shoot down themselves.
- **U Boat Aces**: Refers to the topflight of submarine commanders of all nations, who, because of their expertise, audacity and coolness scored considerably higher than their peers, and often made multiple kills in one attack. The designation should only be used where historically justified with men of the calibre of Kretschmer, Prien and Schepke in the Atlantic, Wanklyn in the Mediterranean, and Morton, O’Kane and Kinashi in the Pacific.
- **Mast Height Attacks**: The tactic of using light and medium level bombers to attack ships at very low level. This was much more accurate than high level bombing but, since it involved directly overflying the target at very low level, it also rendered the attacking aircraft much more vulnerable. Use of the tactic should be restricted to bomber formations that historically used it as doctrine, such as the US 5th AF in the South Pacific, RAF Blenheims out of Malta, Condors using the “Swedish turnip tactic,” “Jabos” using the “Liesendahl Process”, and similar.

The Sequence of Play (p.10.)

Phase A. Step 2, Marker Step is now used to determine the effect of temporary damage, and ships sinking.

Phase D, Torpedo Phase now comes after the Admin Phase A and before the Movement Phase B, re-letter all the other phases if it bothers you…. Make a mental note of the speed of any targets within 4” as any speed markers will have been removed.

The Advantage: Move First – Shoot First? (p.10.)

Adjust the advantage dice as follows:

- +2 Japanese at night.
- +1 Other well drilled at night.
- +1 Effective radar in squadron.
- +1 Disciplined TBS in squadron.
- +1 CICs in squadron.
- -1 Italians except MAS at night.
- -1 Flagship has 3 or more structural damage, or 1 floatation damage.
- -2 Flagship crippled or sunk.

Turning (p.14.)

Handy ships can turn up to 180^{o} at any point in the move.

Non - handy ships can **either** turn up to 180^{o} at the beginning of a move or turn up to 90^{o} at any point in the move.

Handy ships can “chase salvos.” This represents them sailing towards and away from incoming shell splashes. It is modelled by the ship deducting 2” from its straight-line speed.

All ships can “zigzag” to make torpedo aiming at them more difficult. This involves less frequent turns than chasing salvoes and is modelled by deducting 1” from straight line-speed.

Ships that turn more than 45^{o} in a move, or that chase salvos, are “radically manoeuvring.”

Ships zigzagging receive a benefit if torpedoes are launched at them beyond 4”. They do count as “radically manoeuvring” for their own gunfire and collisions, but not for enemy gunfire.

Collisions (p.14.)

"…I broke into a group of hardened mariners who were busy thrashing out the previous night's activities (the question of who had rammed who was obscure, but it didn't sound like the enemy) …."

Whilst the "Nimitz" world is collision free, the real world is less forgiving. The possibility of collision was a reality that all captains had to face, especially in limited visibility, and in the confusion of combat. If a ship interpenetrates the base of another ship a collision may occur. Because even the largest ships do not occupy their full base lengths, collisions are not certain, and the system assumes that handy ships, at a moderate speed, in good conditions, will avoid each other. But as speed increases, manoeuvrability decreases, and conditions deteriorate the chance of interpenetrating ships colliding increases.

Because movement is sequential the ship doing the interpenetration is called the "moving ship" and the ship being interpenetrated is called the "non-moving ship." Note that "non-moving" should not be confused with "stationary." In the sequential movement system the non-moving ship may already have moved, or may move later in the sequence.

If a group of ships in line ahead interpenetrates the base of the same non-moving ship, test for each moving ship separately.

As Sub Lieutenant Phillips would attest most collisions were accidental. Deliberate ramming did take place, but, except in the case of ramming surfaced submarines, this was very rare, few ships have HMS Glowworm's captain. To deliberately ram, the moving ship must pass a determination test at the beginning of its movement. State the intended target and throw a dice. On a 2,3,4,5 or 6 any ship can ram a submarine. A 5 or 6 is required for a smaller ship to ram a larger ship. A 6 is required to ram a ship of the same size or smaller.

If the determination test is successful, move the ship, interpenetrate, and test using the Oh Lumme! Procedure for collision using the attempting to ram factors.

If the determination test is unsuccessful either move the ship so that it does not interpenetrate, or, if interpretation is unavoidable, interpenetrate and test using the Oh Lumme! Procedure for collision, using the normal factors attempting to avoid a collision.

If a ship fails a determination test it may not test to ram any ship again in the same battle. If a ship passes a determination test it may test again to ram the same target in later moves counting a +1 to its score.

ICS Delta: "Keep clear of me; I am manoeuvring with difficulty."

A ship is a hazard to navigation if:

- It is crippled.
- It is suffering from a steering casualty.
- In the previous gunnery or torpedo phases it suffered from a floatation hit or an engineering casualty that caused it to reduce its speed. This does not apply if the ship was originally travelling at a slower speed than the new top speed – it is the sudden reduction in speed that creates the hazard.

Oh Lumme!

When a ship interpenetrates another's base throw **two** dice and adjust as follows:

- -1 Each ship at high speed.
- +1 Each ship at low speed.
- +2 Non-moving ship is stationary and moving ship is attempting to avoid collision.
- -2 Non-moving ship is stationary and moving ship is attempting to ram.
- -1 Each ship that is a hazard to navigation.
- -1 Each ship that is radically manoeuvring.
- -2 Handy ship attempting to ram.
- +1 Each handy ship attempting to avoid collision.
- -2 It is night, and the non-moving ship was neither fully illuminated nor in minimum visibility of the moving ship at the start of the moving ship's move.
- -2 Visibility is reduced by fog, smokescreen, or foul weather.
- -2 In severe weather.
- -? Equal to the number of each ship after the first of a group interpenetrating the same non-mover. So, the first ship in the group deducts nothing, the second ship -2, the third -3, and so on.
- +1 The angle of interpenetration is "small aspect."

If the final score is **3** or more collision is avoided. If it is a **2** the moving ship strikes a glancing blow. If it is a **1** or less the moving ship strikes a full blow.

If the collision is a **glancing blow**:

- Both ships slow to a speed of 3” if they were travelling faster.
- Both ships suffer one structural damage, or if the mover is at high speed both ships suffer one two structural damage.
- The smaller ship suffers one additional structural damage. (No effect if both ships are roughly the same size.)
- The non-mover tests for a non-penetrating torpedo hit critical damage.*

If the collision is a **full blow:**

- Both ships stop.
- Both ships take one structural damage.
- The non-mover takes one floatation damage.
- If the mover is at high speed the non-mover takes another floatation damage and the mover takes another structural damage.
- If the mover is larger than the non-mover the non-mover takes another floatation damage.
- The non-mover tests for a penetrating torpedo hit critical damage.*

*When testing for critical damage ignore power and fire results and treat catastrophic explosions as another flotation damage.

Formations (p.16.)

Any pre-planned formation can move together, the ships do not have to be touching, but they must all execute the same manoeuvres at the same time and can only use different speeds when wheeling to maintain the same formation. Such formations can include the ubiquitous American circular Fleet Cruising Disposition Number Two and its later task force derivatives, the Japanese defensive box, the British defensive diamond, a convoy and escort, a line-abreast with all ships advancing on the same line of bearing (to widen a search front or as a result of all ships simultaneously turning out of a line ahead,), or a destroyer arrowhead.

Naval Gunnery (p.20.)

Use the proper term please. No one says “artillery.”

Range Bands (p.22.)

Add a new range band “Extreme.”

- For large guns of 11” and over mounted in modern ships capable of higher gun elevation, or in older ships rebuilt in the 1930s with higher gun elevations, such as the Queen Elizabeth, Renown, Kongos and Cavours; extreme range is 24” to 32”.
- For small guns of 5.25” to 6.1” extreme range is 16” to 20.”

Guns firing at extreme range use their long range penetration -2 (the shells have a lower velocity and are not falling as steeply – deck penetration continues to increase but vertical armour penetration decreases significantly.)

Determine the Target’s Difficulty (p.24.) Additional Factors:

- +1 additional range band for extreme range.
- +1 for ranging, if firing at long or extreme range at a target that the ship did not fire at in the previous turn, unless the firer has its own spotter plane in line of sight and 10” of the target.
- +1 if firing large guns at a target that is radically manoeuvring.
- +1 if firing large guns from a ship that is radically manoeuvring.
- +1 if firing from a ship that is disadvantaged by weather.
- +1 if firing at long or extreme range at target that has the advantage of bad light at dawn (the target is to the west), or dusk (to the east).
- +1 firing at a target at night except when fully illuminated.
- +1 if blind firing with effective radar at short range.
- +1 if firing from a ship that has a raging fire.

The modifiers for firing **from** ships moving fast or radically manoeuvring does not apply to ships with modern fire control.

The modifiers for ranging, or for firing at a ship in bad light or at night, does not apply to ships with superior radar.

Ships with superior radar can blind fire out to long range.

Ships are disadvantaged by weather if:

- They are firing to windward in rain, or in strong winds raising spray, unless they have superior radar.
- They are ships that have taken a speed reduction in heavy weather and so become poor gun platforms.

Using the To-Hit Table (p.26)

Point Blank Range – "The range at which even a gunnery officer cannot miss."

If the target is at 4" range or less, re-roll a 1. If you roll another 1 retire to your cabin with a loaded revolver and a bottle of whisky. Do not re-roll twice.

It is still possible to miss a target at point blank range because the "To-Hit" roll was too low.

The re-roll for point blank range represents the short time necessary to correct gunfire fall of shot when the flight time is minimal, which also allows bursts of fire at maximum ROF. Since torpedoes cannot be corrected after launch the rule does not apply to them.

Torpedoes (p.27.)

Torpedoes are now launched after the advantage has been decided but before any ships move. Having established who is shooting first, both sides then alternate torpedo launches by ship or group. Launches are marked by Blu-Tacking a numbered datum reference counter to the playing surface, next to the bow, broadside of the firing ship. The launcher will secretly note the reference number, the target ship, and the number of mounts used. Not launching any torpedoes to generate a dummy attack is a legitimate tactic, but this subterfuge will not work unless the target is more than 4" away.

If the range to the target is 4” or less the torpedo launch will be adjudicated immediately in firing order, so there is no need to plot them. This is sequential so it is possible for a launcher to hit an adversary before it launches its own torpedoes.

If the range to the target is more than 4” and less than 12” the torpedoes are adjudicated at the beginning of the next torpedo phase, before any new torpedoes are launched. If the range to the target is more than 12, up to the 24” range of “Long Lance” torpedoes, the torpedoes are adjudicated at the beginning of the next plus one torpedo phase, before any new torpedoes are launched.

Target Movement

If the target moves within 4” of the torpedo launch datum at any point in the first move after launch, the launcher declares that he has targeted it and the torpedoes are adjudicated before movement continues. Note that this does **not apply** to a ship that has not been targeted.

If the target moves out 12” range, or 24” for Long Lance, the torpedoes miss.

When a target has moved the resulting range and aspect are used to determine hits.

Torpedo Difficulty (p.29.) Additional Factors:

- +1 target is between 4” and 8” range.
- +2 target is between 8” and 12” range.
- +1 browning.
- +1 target was more than 4” away and zigzagging.
- -1 target is within 4”, is not in a bow small aspect, and the launch datum is ahead of its bow, so it has gained the optimum torpedo firing angle.
- +1 if firing from a ship that has a raging fire.

Browning

If torpedoes miss at 4” range and over, determine if they have hit another target by “firing into the brown.” A ship within 1” of the missed target, or directly on the torpedo track, (determined from the launch datum through the centre of the target,) out to the torpedoes’ maximum range, is a possible target. If there are more

than one possible target, determine who gets the short straw by a dice throw. The new target can be a friendly ship. Now test for hits on the new target counting the +1 for browning. A miss on the new target ends the attack and does not generate a new browning opportunity.

If the original score for torpedoes to hit was a 6, either on the To-Hit Table or for Long Lance torpedoes that miss at long range, the torpedo will hit a browning target with a score of 6, followed by a 3,4,5,6.

Torpedo Reloads (pp.29 & 110.)

Japanese ships with torpedo reloads, may reload their mounts, one time each, and be ready to fire again in 4 turns. Make a hash mark on the DC next to the mount in each Marker Step following the turn in which the mount launched. When four marks have been made the mount is ready to fire again in that turn's Torpedo Phase.

Ships that have been crippled or have had any of their torpedo mounts destroyed cannot reload. (The damage is deemed to have knocked out their reloading machinery too.)

Torpedo Damage (p.32.)

The value of Japanese 24" torpedoes is **4** not 5. (The British torpedo rated at 3 had a 750 lb to 805 lb warhead compared to the Long Lance's 1080 lb.)

The value of Italian torpedoes is **3** not 4. (Their warhead was lighter than the British torpedo, although they were a little faster.) Likewise French torpedoes are **3** not 4.

If a destroyer or smaller escort ship is hit by a German GNAT the strike value is **4,** not 3. This addition is not applied to non-escort warships or merchant ships – it was widely believed that the GNAT, homing on the stern of an escort, would set off the escort's depth charge magazine. GNATs have no effect on ships travelling at 1", or at 5" and more. Ships streaming "Foxer" render GNATs poor quality weapons.

Critical Damage (p.33.)

On any critical damage throw of 3, 7 or 11, in addition to the damage indicated on the table, consult the special effects table below to determine if any temporary, possibly permanent, damage occurs.

A result of 1*, +1 or +2 also indicates that a fire has broken out for damage and illumination purposes.

A hit on flak or directors also disables radar.

Torpedo Critical Damage

When a torpedo hits and does not break the back of its target consult the Torpedo Critical Damage Table below:

2	3	4	5	6	7	8	9	10	11	12
Maj Steer	Major Steer	Power Fire	Minor Engine	Pen Major Engine	Pen Flot Fire	Minor Engine	Power Fire	Minor Steer		Pen ! Boom
Types of Damage are explained in the Special Effects Table										

Critical Damage on Merchant Ships and Auxiliaries

Throw for critical damage using the non-aircraft carrier table or torpedo damage table, plus fires as appropriate. In addition, if the ship is a fire risk treat a critical damage or torpedo damage result of 11 as a catastrophic explosion. (This catastrophic explosion on 11 does not apply to carriers or combatants carrying supplies.)

Floundering, Sinking, and Save Our Souls (p.35.)

“Loose lips sink ships….”

Ships do not often sink immediately, (or in game terms within even one six-minute turn,) leaving nothing but a tidy seascape behind them.

Ships are only removed immediately if:

- They suffer a catastrophic explosion.
- They suffer a “broken back” torpedo hit.
- They suffer three floatation damage in one turn.

In these cases remove the model from the and replace it with an oil slick marker to show where the survivors are in the water.

In other cases the ship is foundering. It remains stationary on the table, marked with an oil slick marker, and tests in subsequent marker steps for floundering to see if it sinks, or if the bulkheads hold and it remains afloat.

Towing

A ship which is dead in the water because it is floundering; or because it has suffered an engineering casualty, may be towed by friendly vessels.

To pass a tow, the towing ship must be at a speed of 1 or stopped, and in base side-to-side; or towing base stern - to tow base bow contact with the stopped ship in the marker step. The towing ship cannot attempt any damage control on itself during the same marker step. No can either ship have been the target (successful or not), of any attack in the previous turn.

The tow is passed on a throw of 5 or 6. Deduct 1 in foul or severe weather. In the next turn the tower and tow may proceed at one base speed. Turns may be made in the normal manner, but the tow must follow the towing ship exactly through the turns.

Rescuing Survivors

Even in the height of combat it was common for ships of all nations to stand by their fellows that had been crippled or rescue survivors from those sunk. To do so the friendly ship must either stop, or pass at a speed of 1, in base-to-base contact with the stopped, floundering or sunken ship.

Players should do this as a matter of course. During the marker step of the turn after a friendly ship starts floundering or sinks, they should nominate at least one other ship to aid it. If players do not nominate a ship to assist their opponent may make them do so by throwing a 5 or 6 if the damaged ship is a destroyer or smaller

or 3, 4, 5 or 6 if the damaged ship is a merchantman or a cruiser or larger. The opponent can then choose the rescuing ship which can be a designated merchant rescue ship or a destroyer or smaller in all cases, or, if the damaged ship is a cruiser or larger, a cruiser. This opposition-imposed nomination can only be avoided by the player conceding the game and declaring that he is in full retreat. Nominated ships move to their target by the shortest reasonably practical route at the best practical speed.

Great credit should also be given for rescuing enemy survivors, although this duty cannot be imposed by the opposition dice throw.

Friendly ships may not "finish off" another friendly ship by torpedo or gunfire unless survivors have first been rescued.

…, - - -, … for points.

If you are using the points system, rescuing survivors is rewarded as follows:

- If the casualty was a cargo ship, or destroyer or smaller, a successful rescue is rewarded with half its points, or merchant ship value in campaign terms, round down.
- If the casualty was a cruiser or larger, or a troopship or transport, each successful turn of rescue is rewarded with one-sixth of its points, or merchant ship value in campaign terms, round down. This may be repeated for up to three turns, (or additional rescuers may be allocated to the rescue, each rescuing one-sixth of the value a turn,) until half, round down, of the value has been saved.
- An attempt to save enemy survivors is rewarded with one-sixth of the enemy value, round up.

Special Effects

Dice	Effect	Consequences
1	Steering Casualty	Dice again: 1,2, ship turns 90^{o} to port; 3,4, 90^{o} to starboard; 5,6, 180^{o}. If the ship has not yet moved it now moves its slowest speed in this direction.

		Dice in the next marker step: On a 1,2,3,4 the casualty is minor and can be repaired on a throw of 4,5,6 in this or later marker steps. On a throw of 5,6 the casualty is major and can be repaired on throw of 6 but becomes permanent on a throw of 1. Until repaired the ship maintains present course, may only move at slow speed, or may stop.
2	Power Casualty	Dice again: On a 1,2,3, the ship loses electrical power to radar, searchlights, and TBS. On a 4,5 it loses electrical power to main and secondary armaments. On a 6 it loses all electrical power. Dice in the next marker step: On a 4,5,6 power is restored, but the loss becomes permanent on a throw of 1. Until restored the ship cannot use the affected equipment.
3	Minor Engineering Casualty	The ship slows to low speed. Dice in the next marker step. Speed is restored on 4,5,6, but damage becomes permanent on a 1.
4	PEN Only Minor Engineering Casualty	
5	PEN Only Major Engineering Casualty	The ship slows to low speed and comes to a stop. Dice in the next marker step. Some speed is restored on 5,6, but damage becomes permanent on a 1.

		If some speed is restored treat as a minor engineering casualty and dice accordingly in subsequent marker steps.
6	PEN Only Floatation	Ship suffers an additional floatation hit.

Damage Control

Damage Control is conducted in the Marker Step of the Admin Phase, as summarized in the damage control table below:

Damage Type	**Score To Control or Restore**
Floundering	6 – bulkheads hold. Remove the oil slick marker and do not dice again for sinking unless ship takes another floatation or structural hit, or the sea conditions deteriorate, in which cases replace the oil slick marker and re-start throwing for floundering. 1 – ship sinks.
Fire	5,6 Destroys one Structure Box and becomes a Raging Fire on a 1. Fire risks destroy one structure box and become a Raging Fire on a 1,2.
Raging Fire	6 Destroys one Structure Box on a 1,2. Fire risks destroy one structure box on a 1,2,3 and throw again if they roll a 1. A second 1 means the ship explodes.
Minor Steering Casualty	4,5,6
Major Steering Casualty	6 Becomes permanent on a 1.
Power Casualty	4,5,6 Becomes permanent on a 1.

Minor Engineering Casualty	4,5,6 Becomes permanent on a 1.
Major Engineering Casualty	5,6, restores some speed. If some speed is restored treat as a minor engineering casualty and dice accordingly in subsequent marker steps. Becomes permanent on a 1.

Night Actions (p.40.)

"Good Lord! We've hit her!"

At night there are four levels of visibility, determined by the scenario as follows:

- Maximum Visibility – This is the distance out to which it would be possible to see in the same weather conditions, if it were not nighttime.
- Moonlight Visibility – On a clear night with a half-moon or brighter, "a hunter's moon," designate one table edge to be the position of the Moon. Moonlight Visibility is the distance out to which a target that is between the observer and the moon edge can be seen. For a variant of this, just as ships can be silhouetted against the Moon they can be silhouetted against an un-blacked out coastal city, as happened on the East Coast USA in early 1942.
- Minimum Visibility – This is the distance out to which a ship can be seen and consistently targeted without other means of illumination.
- Coastal Visibility – This is the decrease in minimum visibility when the target ship is in the shadow of a dark coastline. If the target is moving at high speed its bow wave and wake render it visible at minimum visibility.

Reduce all visibility distances, including searchlights, by 1/3rd if the target is very small, like a MTB or submarine on the surface.

On a clear night increase sighting distances by Japanese naval ships, (not marus,) by 1/3rd.

At night a target is fully illuminated if:

- It is within minimum or coastal visibility range.
- It is illuminated by star shell.
- It is illuminated by snowflake or is within 1” of a ship illuminated by snowflake.
- It is illuminated by a searchlight, as seen from the ship shining the light, and any other ships in the same group as the ship shining the light.
- It is a ship illuminating a target with a searchlight, as seen from the target of the searchlight and any other ships in the same group as the target.
- It is burning because it is crippled or on fire.

Other targets are partially illuminated, and can be fired at with an accuracy deduction, if:

- They are within maximum visibility, and have fired already this turn, (“flashed.”)
- They are within maximum visibility, and are either shining a searchlight, unless the viewer is on the dark side of that ship; or are directly illuminated by a searchlight.
- They are in moonlight visibility.
- They are silhouetted against air-dropped flares, or a burning ship, or a ship illuminated by snowflake, whilst within moonlight visibility of those flares or ships.

Star Shell (“…hanging over her like a chandelier.”)

Star shell can be fired by small guns out to long range, (not extreme range,) to fully illuminate a target. Place a star shell marker on the target. There is no need to test to hit, but it counts as the ship’s small gun fire for that turn, and for flashing(!) A ship can fire star shell from its secondaries and fire its main armament with live ammunition at the now illuminated target later in the same turn, even if the main guns are also small guns.

To fire star shell, ships must either have an effective or superior radar track of the target or must have fully or partially illuminated sight of the target.

Searchlights

Searchlights are illuminated just before the ship fires, (they were kept shuttered until the last moment so could cast their beam instantaneously.) They are marked with a beam marker pointing at the target.

Searchlights have the following, (rule of thumb,) illumination ranges:

- 24” and 36” on destroyers and cruisers: 4”
- 44” on some destroyers, cruisers and battleships: 6”
- 60” Seacoast: 8”

Flares

Aircraft dropping flares create a line of light 6” long, (mark with star shell markers at the beginning and end.) Ships within moonlight distance of the flares, on a direct line between the observer and the flares, are partially illuminated. Note that, unlike the moon, flares project their light in all directions.

Light bombers like the Swordfish, or Aichi E13A "Jake" can carry one turn’s worth of flares and still bomb at -1 to their hit dice, or two turns’ worth of flares in lieu of bombs.

Larger bombers such as the G4M Betty or FW 200 Condor can carry two turns’ worth of flares and still bomb at -1 to their hit dice, or three turns’ worth of flares in lieu of bombs.

Burning Ships

Ships within moonlight distance of a burning ship, on a direct line between the observer and the burning ship, are partially illuminated. Again, burning ships project their light in all directions.

Snowflake

Snowflake rockets can be fired in addition to, and before guns in the gunnery phase. It fully illuminates the firing ship and any other ship within 1”, and partially

illuminates any ships within moonlight distance of the firing ship, on a direct line between the observer and the firing ship. Thus, snowflakes were loved by merchant ships, who could see enemy attacking at close range, and loathed by escort commanders because the rockets silhouetted the convoy.

Friendly Fire (Isn't)

From POPE: 'Am firing to port at destroyer.'

From PARROT: 'Believe you are firing at us….'

If a ship firing at a target that is not in minimum range misses because it throws a 1, (or two 1s if the target is at point blank range,) it may have missed because it was really firing at a friend by accident. If there is a friendly ship within the same firing arc, and range band from the firer, that is at least partially illuminated or is tracked by effective radar, the firer now fires at it, using the Target Difficulty of the new target. (If there are more than one possible target decide the victim of the fratricide by a dice throw.)

Marker Step

After conducting damage control to determine if fires are still burning, remove all flash, star shell, searchlight, flare and snowflake markers.

Smoke Screens

A ship laying a smoke screen declares that it is doing so at the beginning of its movement. The screen can, but does not have to be, the length of the ship's move, including any turns made.

A smoke screen blocks line of sight through it, but it does not block others firing against the ship laying the screen unless the line of fire to that ship's funnel is also

blocked by the screen, i.e. because of the angle of the line of fire relative to the screen, or because the laying ship has turned inside the screen.

A ship or group belonging to the same side as a ship that laid a screen (including the ship that laid it,) can opt to move last if all the enemy's ships cannot not see it because of the screen, unless those ships have effective radar or have spotting aircraft with line of sight. When the hidden ship's option to move because of its speed and choice of first or second move comes up, simply state that it is delaying its movement until the end of the fast speed step. If, in the meantime, an enemy ship breaches the screen the delaying ship must move immediately next if it is at a slower speed than the present step. If it is at the same speed as the present step, it moves when desired in the normal alternation.

Smoke screens dissipate in the Marker Step as follows:

- In high winds the whole screen, except the first 2" after the layer's funnel, is removed.
- In normal airs dice for each 2" segment of the screen starting furthest away from the layer. On a score of 1,2,3 that segment is removed. Do not dice for the 2" segment after the layer's funnel. In subsequent Marker Steps if a segment of the screen is not now in a contiguous screen from the layer it is automatically removed.

SOMERVILLE

Amendments and Additions to Halsey

"Fancy. Twice a Knight at your age!"

ABC to James Somerville, KCB and KBE

Introduction

These amendments are derived from common sense and are intended to improve the narrative of Halsey, but they have not been play-tested. So, like the Pirates' Code, they should be considered as "…more what you'd call guidelines than actual rules."

Do You Need Two Gaming Surfaces? (p.50.)

Of course not silly, use a map and counters for Halsey.

The Night Period (p.51.)

Reconnaissance missions, especially with ASV equipped aircraft, and airstrikes by multi engine aircraft and night-trained single engined aircraft, can still be launched at night.

Submarines (p.55.)

The revised submarine op introduces multiple submarines that now operate in a less abstract manner.

If using points values, boats cost:

- **Germans:** 2 points each. Maximum 9 boats in Atlantic, 6 in Arctic, 4 in Mediterranean.
- **Japanese:** 4 points each. Maximum of 4 boats.
- **All other nations:** 4 points each. Maximum of 4 boats each.

Maximums can be ignored for historical campaigns.

Submarines can be attached to surface Task Forces (TF), (it was unusual, but not unknown, for example the British occasionally attached submarines to Arctic convoy escorts,) or sail in their own TF of single or multiple boats, the latter making a “wolfpack.”

The more boats there are in a wolfpack the better they are at spotting, but the more difficult it becomes to concentrate for an attack.

Submarines are still not represented on the table and have no data cards. It is only necessary to record the boat’s identification, the quality of its skipper and the number of torpedo attacks it has made.

“One torpedo, one ship”

Otto Kretchmer’s mantra notwithstanding, it was normal doctrine to fire full spreads at high-value targets; and it was torpedo expenditure that often determined the duration of a patrol.

In a campaign game normal sized boats can make three submarine op attacks, (aborted attacks do not count, and an attack with two or three targets only counts as one attack.) After the third and each subsequent attack is made throw a dice, and add **+1** if the skipper is an **ace**: on a score of **1,2 or 3** all torpedoes have been **expended** and the submarine returns to base for replenishment. On a score of **4,5 or 6** torpedoes **remain** and the boat can make further submarine op attacks.

Airplanes (p.57.)

Airplanes can be damaged. See "Comin' In on a Wing and a Prayer" (q.v.)

Flying Boats (p.62. and p.66.)

“Please fly in the other direction, you are making us dizzy.”

Flying boats can conduct searches in their own right rather than just adding to surface or air strike searches. Test for the flying boat search before all other

searches. If the flying boat is successful, it becomes “Charlie” - a shadower - and all other searches count for proximity.

If the shadowed force contains a carrier, it is protected by at least one aircraft from a distant CAP (p.112,) or if the weather is not foul or severe a CAM ship or warships with high performance catapult launched aircraft such as German and Japanese capital ships, throw for interception. Add **+1** if the force has **air search radar and a fighter direction ship**. On a score of **5 or 6** Charlie is **shot down**, on a **2,3,4** he is **driven off** and returns to base. The target TF remains revealed but other searches no longer count proximity. On a **1** Charlie cleverly uses cloud cover to **continue shadowing**.

If Charlie successfully shadows a TF for a turn, in the next turn a new flying boat may be plotted to shadow the same TF. This will automatically find and shadow the TF but it will have to test again for interception if applicable.

If a flying boat is shot down reduce the number of flying boats that the base can plot in the next turn by one. (The loss is not permanent after one turn as one flying boat represents several aircraft.)

Flying boats with ASV radar may be plotted at night.

If a flying boat is plotted for a mission of more than four zones it may not be plotted for another mission in the following turn.

Flying Porcupines and Sticklebacks

Instead of spotting in their own right, flying boats can be plotted to escort a TF, (usually a convoy.) This adds to the escorted TF’s own spotting ability and ASW defence. Other friendly TFs in the same zone do not benefit from the flying boat’s search or count proximity.

If a “Charlie” flying boat spots a TF with an escort flying boat the two behemoths of the air duke it out. Each throws a dice and the **lowest abandons** its mission. On a score of **5 or 6** the enemy flying boat is **shot down**, (both can be shot down simultaneously representing mutual damage.) If both throw the same score on a 1,2,3 or 4 both abandon their mission.

Merchant and Crippled Ships Movement (p.64.)

Since you have to plot movement anyway it is easy to determine when a TF is moving, so the requirement that merchants and cripples can only move at night is waived. TFs can move whenever they like but can take several turns to transit a zone. They move into the new zone at the beginning of a turn, but are then required to continue plotting moves for the same zone as follows:

- Normal TFs transit one zone each turn. They do not have to make a continuation plot.
- TFs with assault transports, fast convoys, or surfaced submarines transit a zone in two turns. After the first plot make one continuation plot for the same zone, marked “C2.”
- TFs with slow convoys, crippled ships, and submerged submarines transit a zone in three turns. After the first plot make one continuation plot for the same zone, marked “C2,” and “C3” respectively.
- A TF cannot be plotted to anchor or move to another zone until they have completed the required number of continuation turns.

Spotting (p.70.)

Modifications to spotting dice:

- +1 Air search, including searches by Flying Boats.
- +1 Add to air search with ASV radar.
- +1 Surface search with effective radar of greater range than visibility.
- +1 ULTRA superiority.
- +1 Surface search by three or more submarines in wolfpack.
- -1 Nighttime.
- -1 Air search in overcast; or air and surface search in foul.
- -2 Air and surface search in severe or fog.

If a concealed enemy TF is spotted and it turns out to be submarines the spotter is only informed that he has spotted a submarine and is not given the full number of boats in the pack. If the pack has not already moved in that turn it may only move

at submerged speed and must plot a continuation move accordingly. This represents the spotters meeting part of a wolfpack patrol line, and the boats diving.

Spotting Fog of War

Initial spotting was rarely 100% accurate, so instead of placing the ship models in plain view the commander of the spotted TF gives a verbal summary of the TF's contents, reporting them in terms of the numbers of:

- Aircraft carriers, of all sizes.
- Capital ships – battleships, battle cruisers and heavy cruisers.
- Merchant ships and assault transports, of all sizes.
- Escorts, of all types.
- Light cruisers – which are not reported separately but are added to the totals of capital ships or escorts, but not to both.

The number of ships reported in each type may be exaggerated or diminished by one except that:

- If there is only one of a type it may not be reported as none.
- If there are none of a type it cannot be reported as one.

This vague report is not corrected with an accurate report until:

- The spotted TF is revealed by a flying boat that is not exposed to air interception – the shadower having all the time necessary to refine its initial sighting.
- The spotted TF is revealed by an incoming air strike that does not voluntarily abort; or by a submarine op that is attacking.
- The spotted TF is revealed by a surface TF and the "Seeking Battle/Comparing Speed" process has generated a surface action. (p.71.) **Alternatively,** if you have the models available to deploy as per the vague report, the vague report can be maintained until after both sides have fully deployed, at which point remove any exaggerated ships, swap out any light cruisers, and add any diminished ships which must be placed in a valid formation with other friendly ships.

The Submarine Op (p.77.)

The submarine op has undergone a radical revision to improve the narrative and increase the historical feel, rather than being a simplistic dice-throwing exercise. It is not as quick as the RAW but is intended for the sort of wargamer who savours the director's cut of Das Boot.

Each submarine TF that has not moved, or plotted a continuation move this turn, can perform a submarine op to spot and engage enemy surface TFs.

The submarine op is now similar to the air op as it models the penetration of the defensive screen and the attack separately, as follows:

- **Contact!** – Unlike surface TFs which usually consist of ships in a relatively close formation, submarines are usually strung out on a patrol line to increase the chance of spotting the enemy. The downside of this is that some boats may not be able to concentrate on the target in time. This is largely dependent upon the speed of the target and strategic intelligence. The more boats that there are in a pack the more difficult it is to concentrate them all for the attack.
- **The Golden Horseshoe** – Having determined how many boats are attacking determine how, and in what state, they penetrate the ASW screen. This is dependent on the size of the screen, and its tactical and technological ability; and on the number of boats attacking and their expertise. If there are no ASW capable ships in the target TF use the "0" line on the Golden Horseshoe table.
- **Torpedo...Los!** - The boats fire at their targets and attempt to make good their escape from possible counterattack. Lucky or ace submarine commanders can possibly make multiple attacks.
- **Das Boot** – If the boat is engaged by the escorts on its approach or withdrawal, listen nervously to the sounds of approaching screws and pinging ASDIC, look apprehensively at the bulkheads, wait for the crash of the depth charges, and consult the Das Boot table to see what happens.

Contact!

Throw a dice for each boat in the wolfpack to determine if it can reach an attacking position on the target TF. Add **+1** if the wolfpack has **ULTRA superiority,** and **+1** if

the wolfpack has **effective radar.** Deduct **-1** if the target TF has **HUFF DUFF**, **-1** if the **enemy** has **ULTRA** superiority, and **-1** when testing for the **5th and each subsequent boat** in the pack.

Boats contact a **high-speed TF** with a score of **6**, a **normal-speed TF** (including high-speed ships at cruising speed,) with a score of **4,5 or 6**; on a TF with **assault transports** or a **fast convoy** on a **3,4,5, or 6**; and on a TF with a **slow convoy** or **cripples** on a **2,3,4,5 or 6.**

The Golden Horseshoe

The boats that make contact with the enemy TF perform their attacks sequentially. Perform the Golden Horseshoe, Torpedo Los, and, if applicable, Das Boot, sequences for each boat in turn, completing all three sequences for one boat before proceeding to the next.

Determine the ASW defence value of the target TF by adding the ASW strength values of all its escorts and dividing by 2 or by the total number of boats in contact whichever is greater, (round up.) Escort ASW strength values are:

- **3** for each fleet destroyer, old destroyer rebuilt as dedicated ASW escort, or Destroyer Escorts/Frigates.
- **2** for each old or diminutive destroyer, sloop, corvette, coastguard cutter, or torpedo boat.
- **1** for each trawler, subchaser, minesweeper, R Boat, VAS, MASB, and similar.

Throw a dice for each attacking boat and consult the table below. Add **+1** if the boat commander is an **ace**. Deduct **-1 in day turns** or at **nighttime and the TF has effective radar**; **-1** if the TF **target has ASW air support**; **-1** if the TF **target is Allied from mid-1943** onwards, (representing better training and technology;) and **-1** if there is a **“flaming datum.”**

Target ASW Def	SCORE							
	7+	6	5	4	3	2	1	0 -
0	IS +2	IS +2	IS +1	IS +1	IS	IS	IS	OS
1-3	IS +2	IS +1	IS +1	IS	IS	OS	OSDA	ENG
4-6	IS +2	IS +1	IS +1	IS	OS	OS	OSDA	ENG -1
7-10	IS +2	IS +1	IS	IS	OS	OSDA	ENG	ENG -1
11-14	IS +1	IS	IS	OS	OSDA	ENG	ENG -1	ENG -2
15+	IS	IS	OS	OSDA	ENG	ENG -1	ENG -2	ENG -2

Key:

- IS = Boat attacks from inside the screen.
- IS +? = Boat attacks from inside the screen and makes this number of additional attacks on new targets. This either represents separate discrete attacks, or one spread of torpedoes fired at overlapping targets. If there are not enough different targets the boat may make multiple attacks on one or two targets.
- OS = Boat attacks from outside the screen. If there is no screen this represents the boat firing at long range for some reason.
- OSDA = Boat attacks from outside the screen, but defender allocates target.
- ENG = Boat is engaged by screen. Consult Das Boot table.
- ENG +? = Boat is engaged by screen. Consult Das Boot table counting this minus to dice score.

Torpedo Los!

Normally the boat chooses its target in the enemy TF except:

- On a IS +1 or +2 result, the boat chooses the first target, the defender chooses the second target, which may be an escort, and the boat chooses the third target.
- On an OSDA result, the defender chooses the target, which may be an escort.

Throw for each attack. Add **+1** for an **ace**, **+1** if the target is **not normally zig-zagging,** +**1** for Germans with **GNAT** except against high-speed targets, and +**1** for attacking

inside the screen. Deduct **-1** for ***Poor Quality*** weapon, and **-1** if the target is **handy**. The scores required to hit are:

- High speed targets: 6
- Normal speed targets, including high speed targets at cruising speed: 5,6.
- Fast merchantmen, assault transports, corvettes: 4,5,6.
- Slow merchantmen, cripples, trawlers: 3,4,5,6.
- Stopped targets: 2,3,4,5,6.

If a hit is achieved calculate damage in the normal manner.

After a boat has made an attack, test on the Golden Horseshoe table again to determine if it is counterattacked by the escorts as it attempts to withdraw. Any result but an engage means that the boat has successfully evaded the counterattack and withdrawn safely. If the boat has hit a target count the -1 for a flaming datum when testing for counterattack.

Das Boot

If a boat is engaged either whilst making its initial attack, or if counterattacked whilst withdrawing, throw, counting any "ENG +?" minus, with the following results:

- 5, 6: Evades – The boat aborts an initial attack but suffers no further harm. It evades a counterattack and withdraws successfully. In both cases normal activity can be plotted for the next turn.
- 3, 4: Shaken - The boat is kept down and shaken by a prolonged depth charging. An initial attack is aborted. It evades a counterattack and withdraws successfully. In both cases the boat must plot a submerged continuation move for the next turn, so it cannot attack gain in that turn.
- 2: Damaged – The boat is badly damaged by a prolonged and accurate depth charging. An initial attack is aborted. The boat must return to base for repairs and is removed from the campaign.
- 1: Sunk – The boat is sunk. Throw again, on a score of 6 the boat was forced to the surface and sunk by ramming. Choose one escort at random, it takes one structural damage and has its ASDIC/SONAR/Hydrophones damaged so takes a -1 on its ASW strength value for the rest of the campaign.

Air Operations (p.78.)

The most significant change to air operations is that aircraft that are “lost” in a dogfight, “killed” by flak, or “shot down” by AA fire are not necessarily destroyed. Take a “Comin’ In on a Wing and a Prayer” test to determine what happens to the unfortunate aircraft.

Scrambling Interceptors (p.82)

Backdate the “1944 Scrambling Interceptors” rule (p.112) to apply to any carrier with effective radar.

Long-Distance CAP

By 1944 British and American Fleet and Light carriers, and escort carriers in company with them, or escort carriers in company with "Action Information Office" equipped fighter direction ships such as HMS Royalist and the Boxer class, could detect raids at greater distances, and more efficiently manage CAPs, so that interceptions could be made at much longer ranges, (between 50 and 70 miles out at the Battle of the Philippines Sea.) In these cases, dogfights are determined over two rounds. In the first round the CAP scrambles as per the RAW. In the second round any remaining ready fighters are added to the CAP.

Dogfights (p.83.)

Determine the number of aircraft in the dogfight in the same manner as described on p.83 of the RAW, except that now the aircraft are paired off against each other. Normally the airstrike will deploy first and the interceptor will decide which enemy aircraft to pair with. However, if the CAP is “disadvantaged in a dogfight” the CAP deploys first and the airstrike will decide which enemy aircraft to pair with.

If one side has more fighters than the other side’s total number of aircraft, the excess fighters may attack an enemy already paired with in a “multiple attack.” No aircraft of the smaller side can be attacked by three enemy until all have been attacked by two, and so on for even higher numbers.

In the second round of a long-distance CAP dogfight pairs of aircraft that remain from the first round continue to fight as a pair. All other remaining aircraft from the first round, and newly arriving CAP, are now paired up in the usual manner.

Now throw simultaneously for each aircraft in each pair in the dogfight. If one side is making a multiple attack treat the additional aircraft as new pairs, with the

defender throwing separately against each attacker. Adjust the “success” dice as follows:

- -1 if disadvantaged in dogfight.
- -1 if the victim of a multiple attack.
- +1 if superior fighter pilots.
- -1 if poor fighter pilots.
- -1 if fighting superior fighter pilots.
- +1 if fighting poor fighter pilots.

It is possible for both sides to score a success, this is because one model represents 4 to 6 real aircraft, so consider mutual successes to reflect several hits on both sides.

It is also possible for outmatched pilots to be incapable of scoring hits on an enemy, because their dogfight value becomes more than 6.

Flak (p.85.)

VT Fuses

From its first combat use in January 1943, the proximity or variable time fuse dramatically increased the lethality of Allied heavy flak. By the end of that year 50% of the Japanese aircraft shot down by USN gunfire fell to VT fused ammunition even though only 25% of the rounds fired were VT. Your scenario should specify whether an Allied TF has VT ammunition. (Remember for airbases or airstrips that, initially, VT ammunition was not used over land if rounds could fall into enemy hands.) If it does, use the following VT Flak table:

	6	5	4	3	2	1
0-3	DA	DIST	NE	NE	NE	NE
4-7 or airstrip	DA	ABT	DIST	NE	NE	NE
8-11 or airbase	DA	KILL	ABT	DIST	NE	NE
12+	DA	KILL	KILL	ABT	DIST	NE

NIGHT AIR OPERATIONS

The prohibition on airstrikes and spotting at night at p.51 of the RAW notwithstanding, night air operations were common, and became more so with the introduction and refinement of ground control, ASV and Airborne Intercept (AI) radars. Almost all nations were capable of land-based night attacks. The British took the lead with training for night carrier operations and the development of radars. The Japanese, facing tougher American air defences, resorted to increasing land based nighttime attacks. This, in turn, spurred the Americans to hone their own night capabilities. By April 1944 the USN could launch devastating carrier-borne night attacks, and by July, had specific carriers dedicated to night attack and defence, eventually fielding four carriers with Night Air Groups.

Night Flying

Night flying from land or seaplane bases by trained squadrons is conducted in the normal manner.

Night flying from land or seaplane bases by untrained squadrons, or by trained squadrons from carriers, is hazardous.

Untrained carrier squadrons cannot fly at night, but if the scenario allows them to take off during daylight, but they are obliged to land after dusk, (as happened in the Battle of the Philippines Sea,) this is hazardous.

Night Interceptions and Dogfights

Night fighters are scrambled in the normal manner, but they have to be guided to the target to intercept as follows:

- If their ground or ship control has effective radar, they intercept on a dice throw of 5 or 6.
- If their ground or ship control has superior radar, they intercept on a dice throw of 4, 5 or 6.
- If the night fighters have their own AI radar, (or are in company with an aircraft with AI radar (the USN practice with Corsair-Avenger combos,) add +2 to the intercept dice.

If the intercept is successful, the dogfight is conducted in the usual manner except it is not simultaneous. The interceptor shoots first, and only if the target is not hit does it shoot back.

Night Visibility and Flares

Establish the orientation of the target TF to the moon, if any, in the normal manner.

Night airstrikes count a minus unless:

- The strike plane has ASV radar.
- The target ship is in moonlight visibility.
- The target ship is on fire; or is silhouetted against air-dropped flares, or a burning ship, whilst within moonlight visibility of those flares or ships.

Flare carrying planes should be designated when the strike is prepared. Flares are dropped before attack runs commence. The flare dropper tests for TF flak in the normal manner. If the result is NE the flares are dropped where the dropper wishes. If the result is DA the flares are dropped on the same line of bearing, but the defender may place them on a line up to 4" port or starboard of the intended line, or starting 4" before or after the intended line. If the result is Kill, Abort or Distract the flare drop is ineffective.

Flare dropping aircraft are not subjected to individual ships' AA fire.

If a plane is carrying multiple flare loads it may make that number of flare drops, testing for TF flak each time.

If a plane is carrying both flares and bombs it may make flare drops, followed by an attack run testing for TF flak each time. Count a -1 on the to hit dice to reflect fewer bombs dropped.

Flak and AA at Night

A TF defending itself from a night airstrike uses the appropriate Flak table. If a 6 is thrown the DA is conducted. If any other number is thrown, re-roll the dice and use the lower of the two scores to determine the results.

The AA fire of individual ships on aircraft making attack runs at night remains the same.

Attack Runs (p.87.)

Attack Runs are conducted with various profiles, and the following restrictions:

- **High-Level Bombing –** From about 10,000 feet or higher**.** Usually conducted by multiple-engined bombers, it is the most inaccurate form of attack, but also the safest since it is not subject to individual ship or base light AA. Cannot be used in overcast.
- **Dive Bombing –** The dive starts at high level, with bomb release and exit at a few thousand feet. Cannot be used in overcast.
- **Level Bombing –** Conducted at a lower level than high-level bombing, so the aircraft fly under overcast and can bomb. Dedicated dive or torpedo bombers being used for level bombing have an attack factor of 5+.
- **Torpedo Bombing –** Conducted at low level with torpedo release at about 1,000 yards.
- **Mast Height Attacks –** Conducted at low level, it is an accurate form of attack, because it offers little chance for the target to evade since the aircraft directly overfly the target releasing their bombs at the last moment, but this renders them more vulnerable to the target's light AA. If they hit, the bombers use their GP value not their AP value, so this form of attack is best directed at lightly armoured targets.

Adjust Attack Values as follows:

- **High-level** bombing vs moving ships **-1**
- High-level, dive, level, and torpedo bombing against **handy ships -1**
- **Night** attacks without radar or illumination **-1**
- **Scissors or Golden Comb +1**
- Target is a **stopped** ship **+1**

Important Note: None of these modifications affect the target's individual AA fire. An unmodified natural roll of a 1 or 2 is always considered for AA fire.

Scissors Tactics

Well-trained and well-coordinated dive and torpedo bomber squadrons could reduce a target's ability to evade their attacks by using "scissors" tactics - simultaneously attacking from several directions, so that if the enemy turned to evade one attack they would turn into another attack.

To conduct scissors attacks the aircraft must be well-trained; from the same carrier or wing, (so that they can communicate with a known leader coordinating them;) be of the same type, (i.e. all torpedo bombers or all dive bombers, not a mixture of both, although groups of two or more different types can both conduct scissors attacks on the same or different targets;) and not have engaged in a dogfight or be DA or distracted by TF flak, (it takes a cool head and a free hand to coordinate these tactics.) If these conditions are met every second aircraft allocated to the attack on the same target ship adds +1 to its attack value, (i.e. the second, fourth and sixth aircraft, and so on.)

The Golden Comb

For a brief period in late 1942 the Luftwaffe assembled enough torpedo bombers in Norway and coordinated them to conduct "Golden Comb" attacks. This entailed formatting a continuous line of torpedo bombers flying almost wingtip-to-wingtip off the bow of a convoy and launching all their torpedoes simultaneously. This excessively wide attack front meant that ships trying to evade one "tooth" of the "comb" would run into other "teeth." In the first, biggest and most successful attack, 26 HE111s and 17 JU88s dropped 80 torpedoes and sank eight ships.

A Golden Comb can be made up of a minimum of three, and a maximum of 10 German torpedo bombers from the same Gruppe. Place them off the bow or beam of the target convoy, or column of warships in a formation. The bombers may not have engaged in a dogfight or be DA or distracted by TF flak. If these conditions are met start the attack, by testing for the end-most torpedo bomber nearest the front end of the target column and then move down the line of bombers testing for the attack of each in turn. Each ship must be attacked by at least one torpedo bomber, but no more than two torpedo bombers may attack any one ship. Additional torpedo bombers can attack the next ship in the column, or a ship in the next parallel column if there is one. If an aircraft hits its target the next aircraft tests normally. If an aircraft misses its target the next aircraft will count +1 to its attack value.

Since the Golden Comb is a low level and congested formation, the attackers have difficulty evading after torpedo drop, so are vulnerable to individual ship's AA in the same manner as mast height attacks.

Defending AA (p.87)

The effectiveness of individual ship's AA is not "one size fits all." It would vary dramatically depending upon the number of light AA guns of 40mm and less that the ship is equipped with. The following system uses the ship's flak value as an analogue for its AA value, but feel free to vary these to reflect different amounts of light AA. Compare the strike aircraft's **natural** dice roll as follows:

- If target has a flak factor of 0, throw a 1 again and hit on a 5,6. (5.6% chance.)
- If target has a flak factor of 1, or it is an airstrip, throw a 1 again and hit on 3,4,5,6. (11.1% chance.)
- If target has a flak factor of 2, or it is an airbase, a 1 is a hit. (16.6% chance.)
- If target has a flak factor of 3, a 1 is a hit, or throw a 2 again and hit on a 5,6. (22.2% chance.)

Aircraft attacking at mast height throw an additional dice of a different colour. This dice is only used for AA fire with its natural result if a score of 1 or 2 compared against the ship's AA value, re-throwing if applicable. This effectively doubles the effect of light AA on very low-level attacks. Ignore any bombing result for the second dice.

"The Shape of Things To Come": - Fritz X, HS 293, Bat and Okha

The introduction of stand-off, guided weapons did not have a decisive effect on the naval war, but they did sink or damage a significant number of ships. The characteristics of the four more commonly used anti-shipping weapons are given below.

Dropping aircraft cannot have been engaged in a dogfight. The drop ranges are maxima, and if limited by visibility to less than 8" the delivery aircraft can be engaged by TF flak. Okhas do not need guidance from delivery aircraft, other weapons do, and this cannot be provided if the aircraft suffers a DA or DIST result. Delivery aircraft cannot combine a conventional attack with a stand-off attack.

Delivery aircraft, Fritz X, HS 293, and Bat are not affected by a ship's light AA.

Characteristics:

- **Fritz X** – Operational from July 1943. Drops from high level so cannot be used in overcast. Range 5”, so the delivery plane faces TF flak. Accuracy 3+. AP value = 7.
- **HS293** - Operational from August 1943. Range 20” if drops from high level so cannot be used in overcast, but delivery plane does not face TF flak. Range 5” with level bombing, so the delivery plane faces TF flak. Accuracy 2+. HE value = 3.
- **Allied Countermeasures** – From October 1943 deduct -1 from the accuracy against handy ships for HS293. From December 1943 deduct -1 for allied ECM against Fritz X and HS293; or from April 1944 deduct -3 for ECM.
- **Okha** - Operational from April 1945, (but could have been used from December 1944 in the Philippines had not the two ships transporting 80 Okhas there been sunk.) Drops from high level so cannot be used in overcast. Accuracy 4+. HE value = 6. Okhas are subjected to TF flak on their approach but because they are small and fast the flak they count a -1. Because they are Kamikazes they treat an abort result as DIST in accordance with p.110 of the RAW.
- **Bat** - Operational from April 1945. Drops from high level so cannot be used in overcast. Accuracy 3+. AP value = 3. The Japanese had no ECM, but because the Bats radar was easily confused by ground clutter so count -2 to accuracy if target is within 5” of land.

Concluding Attack Runs (p.90.)

"Comin' In on a Wing and a Prayer"

Observant readers will have noted that the revised dogfight system increases the number of aircraft hit and inflicts attrition on both sides; and that the RAW simply destroys all aircraft hit and takes no account of aircraft survivability, or how far a

damaged aircraft can be “nursed” home “on a Wing and a Prayer.” This procedure addresses these points. This procedure is **not** used **for flying boats**.

After landing all undamaged and aborted aircraft in a strike, throw to see what has happened to each aircraft “hit” in dogfights, by flak or by AA. Add **+1** if the aircraft is **rugged**. Deduct **-1** if it is **fragile**, and **-1** if the aircraft has to fly **more zones** to its platform **than** it has **engines.** (Remember that the first zone counts for flight distance, so single-engined aircraft must be in the same zone as their platform to be safe, twin-engined aircraft in the adjacent zone, trimotors not more than two zones away, and four-engined planes not more than three.) The results are:

- **5 or more** – The aircraft escaped its antagonist, aborted the mission, and lands safely with minimal damage. It can be tasked to further sorties in this or later turns.
- **3 or 4** – The aircraft was **damaged** in the combat. Mark it accordingly, (or invert its counter.) It cannot be tasked for further sorties until it is repaired.
- **2 or less** – **Lost.** The aircraft does not make it back and a loyal dog pines at dispersal. Remove from play.

Hazardous Landings

If a strike is conducted in hazardous conditions, either en-route or on landing, dice for each aircraft returning, whether it was undamaged, aborted, or damaged. On a score of **1** it is **damaged**, or, if it was damaged in combat, it is now lost.

Weather (p.92.)

“But the men are the stars of this story. The only heroines are the ships: and the only villain is the cruel sea itself.”

Weather Conditions

Visibility conditions will vary with the scenario, time of day and weather.

For Nimitz game purposes the day is divided between full daylight, dusk or dawn, and nighttime. For Halsey game purposes the three daily turns can vary with latitude and time of year.

The weather conditions may be:

- **Clear**: Most of the battle area is clear, good weather with scattered clouds and relatively gentle seas. This condition may be accompanied by squalls, haze, overcast or fog bank.
- **Foul**: Most of the battle area is covered by rain, snow or wind driven spray that restricts visibility. Seas can be rough enough to affect the movement of destroyers and smaller craft. Gunnery may be disadvantaged. Foul weather is always overcast. Carrier operations become hazardous.
- **Severe**: Wind speeds of Force 6 to 7 and above. All but the largest ships will have their movement and gunnery affected. Carrier operations are prohibited. Land based air operations are prohibited for single-engined aircraft and become hazardous for other aircraft. Severe conditions will usually be foul, but in some circumstances, e.g. the edge of a Pacific typhoon, may be clear. If clear squalls and overcast may also occur, but not haze or fog.
- **Squalls**: Limited rainstorms that count as foul for vessels in them and for observers looking into or through them.
- **Overcast**: Heavy cloud cover at 8,000 feet or below. This affects air search; and prevents high-level bombing, dive-bombing, and high-level stand-off weapon launch.
- **Haze**: Atmospheric obstruction that limits long-range visibility.
- **Fog**: Low-level atmospheric obstruction that limits visibility. The density of the fog, and thus how far you can see into or through it, should be determined by the scenario or by agreement before the game starts. Carrier air operations are prohibited. Land air operations become hazardous.

Given wind, time and geographic effects it is possible for conditions to co-exist. Thus, for example, a high wind that does not amount to severe conditions may still be enough to render ships sailing into it have their gunnery and movement affected,

and thus count “foul”, whilst ships with the same wind behind them count “clear”. Similarly, a haze may only affect one or more quadrants of the horizon, giving a disadvantage only when shooting or searching in that particular direction.

Squalls and fog banks may move in a tactical battle depending upon the strength and direction of the prevailing wind. Fog zones do not move in Halsey.

Weather Changes (p.93.)

Storms

When placing storms in a Halsey campaign, use reversable counters, (or other markers,) to represent severe weather, foul weather, and overcast. When throwing for the initial placement of a storm, (either at the start of the campaign or as “new weather,”) throw again. On a score of **1 or 2** place **severe** weather, **3 or 4** place **foul** weather, **5 or 6** place **overcast**. If severe weather is thrown place a foul weather next to it in the weather direction, (known as “down weather.”) If foul weather is thrown place an overcast down weather. These combinations are known as “fronts.”

When throwing for storms each turn, only throw for the zone containing the worse type of weather in a front. If it moves do so as in the RAW with the other type of weather in the front moving ahead of it down weather. If it dissipates:

- If it is severe weather replace it with foul weather and replace the front’s foul weather with overcast.
- If it is foul weather replace it with overcast.
- If it is overcast remove it.

Fog

Oceanic fog is common where warm and cold currents mix, such as the Grand Banks, the North Atlantic Drift in the Arctic, or the North Pacific. Coastal fogs can often be dense and persistent in temperate and cold zones, with lighter and less persistent sea mists in the tropics.

Your Halsey scenario should specify the prevalence and persistence of fog. Place fog using the same method as storms in the RAW. As a rule of thumb fog will dissipate on a **6** in **night** turns, on a **4,5,6** in the **first day** turn, and on a **3,4,5,6** in the **second day** turn.

Fog zones do not move. If a severe or foul zone moves adjacent to a fog zone, (including diagonally adjacent,) or forms on it, the fog zone dissipates.

Repairs (p.94.)

Repairing Damaged Aircraft

Damaged aircraft cannot be readied until they have been repaired. Repairs take place during night turns. Carriers first try to repair their aircraft in situ. If this fails they may cannibalise them, if wished; or relace them, if possible; or wait until the following night and attempt to repair them again. These options are conducted as follows:

- **Hangar Queens - Repairs in situ:** Throw a dice for each damaged aircraft. A result equal to or greater than the repair score successfully repairs it. It starts the next day turn readied.
- **Cannibalisation:** If there are two damaged aircraft of the same type destroy the first one and repair the second. The repaired aircraft starts the next day turn readied. Several groups of two aircraft can be cannibalised in the same turn.
- **Replacements - Support Carriers**: If there is a support carrier, such as the British Unicorn, the Japanese Shinano, or the plethora of American escort carriers in their Fleet Train, in the same or an adjacent sea zone, and flying weather conditions permit; then the support carrier may replace a damaged aircraft by exchanging it with one of its own aircraft of the same type. The support carrier may send replacements to several carriers up to its own traffic limit. The replaced aircraft remains on the support carrier in a damaged state and can attempt repairs in later night turns. The replacement aircraft starts the next day turn unready, (it would have flown on in the early morning.)

Repairs at land airstrips and bases follow the same procedure. Feel free to specify that some rudimentary airstrips have a lower than usual repair score. Replacement aircraft brought up from the rear must be from a base that is in the same or an adjacent zone.

Aircraft which are damaged in a night operation cannot be repaired, cannibalised, or replaced in the same night turn.

Crippled platforms cannot repair aircraft.

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