

Operation Merkur

"The Invasion of Crete, 1941"



Game Rules

TSWW GAME V

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The Second World War

Global Rules (Abridged)

Merkur

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I. Introduction

- A. The Second World War-online system covers the entire war in all theatres, from 1939-1945. The European Theatre Series allows for the play of the entire war in the European and Mediterranean theatres, and also connects with Pacific Theatre series, covering the Pacific, China, Burma, and India utilising 15 mile ground hexes, 75 mile sea zones, and half monthly game turns.
- B. The rules and charts contained in the Global Rules can be used to play the game, and will constitute a standardised rules set covering all Theatres and Commands.
- C. The highest player position in this series is the theatre commander, while the lowest is army or fleet command. Political decisions taken by higher levels are represented by requirements and limitations on the players within the rules for each nation, but players have limited control over national production policies, reflecting changes in requirements and the demands of his forces.

2. Concepts and Definitions

A. Fractions.

Unless stated otherwise, fractions are always retained.

B. Cumulative Effects.

Unless stated otherwise, all effects to unit strengths and die roll modifications (DRM) are cumulative.

C. Die rolls.

1. Dice. The Second World War series in paper requires two decimal (ten-sided) dice (provided with the game). When a die roll is called for, the following abbreviations will designate what dice and how many are to be rolled:
 - a. 1D10 - 1 ten sided die
 - b. 2D10 - 2 ten sided dice
 - c. Percentile roll = 2D10 one for 10's and one for 1's.
 - d. When rolling 1D10, a result of 'zero' (0) is considered to be a ten (10).
 - e. When rolling percentile dice (2D10), a result of 'double zero' (00) is considered to be one hundred (100). This general rule may be modified by specific rules or charts. Whenever 1D10 is called for, use the 'ones' D10.
2. Rounding. Where rounding of results is required, it is specified within the rules.

D. Sides.

1. The game is designed to be played by one or two people. There are two 'sides' in the game: Axis (Germany and Italy) and Allied (Britain and the Commonwealth and their Greek allies). The players control the forces of the side on which they are playing.
 - a. Friendly: These are all Nations, Hexes and Forces on the same side.
 - b. Enemy: These are all Nations, Hexes and Forces on the opposing side.

E. Geography.

1. *The Map*: The map is a representation of the area in which the two sides will do battle and is sub-divided into hexes that are 15 miles in width and, for naval movement, sea zones that are 75 miles in width.
2. *Ownership of Hexes*: Each nation owns territory as specified in the Module and Political & Economic Rules. Ownership affects the ability to make use of facilities and extended movement types. Ownership of Hexes will change during the game as the Forces of one side take territory from the other side. See Change of Ownership Rule in the Movement Section (Rule 7.H) for more detail.
3. *Control of Hexes*: This occurs when a ground unit (or stack of ground units) that is too small to take ownership of a hex moves through a hex. They are deemed to control but do not own the hex they are currently in but once they leave the hex, ownership reverts to the previous owner. This distinction is important for ownership of some facilities (see Rule 4).
4. *Front Line*: Friendly territory consists of all friendly owned hexes at any given time. Enemy territory consists of all enemy owned hexes at any given time. The Frontline is any hex side at which enemy and friendly territory meet. Hexes along the ocean coasts are also considered to be the 'front line', even if no opposing force exists in the ocean.
5. *Lines of Supply*:
 - a. Line of Supply (LOS). An unlimited length overland route from a supply source or supply terminal to a unit, used to determine Isolation (see Rule 14.G).
6. *Isolation*: Isolation is defined as not being able to trace a Line of Supply. Forces eliminated while isolated do not generate Stacking Replacement Points, and may have other penalties imposed upon them per Rule 14.G on page 44.

F. Naval System Concepts.

Due to the dramatic difference in both scale and pace of naval operations, the Operational Naval System (ONS) utilises a number of special game concepts. The ONS introduces in-phase reaction movement, large scale sea zones, fog of war, and a time based mission system. There are four primary naval phases (two friendly and two enemy per player turn) and a number of secondary elements to the system. Refer to the Turn Sequence for further details.

1. *Sea Zones*: Sea Zones are areas on the maps which are five hexes (or approximately 75 miles) across. Sea zones represent the general area in which ships may be located during a period of time within the game turn. Every all sea and partial sea hex is part of a sea zone.

These sea zones are marked on the maps and most have a unit locator hex (the hex nearest the centre of each sea zone) which is used to display the sea zone that a Naval Task Group (NTG) is in during movement. For sea zones where the unit locator hex is an all-land hex, any hex in the sea zone may be used to locate units for all purposes including ranges for aircraft undertaking naval cooperation missions. During the combat resolution phase all ships within each NTG must be placed in the appropriate boxes on the Naval Combat Range Display.

2. *Supply*: Ships have three supply states that they may be in. Ships are either in supply, on an extended mission, or are depleted. See Rule 14.Q for more details.

G. Logistics.

Logistics is the military science of delivering those resources (men, equipment, supplies and services) to the point of need in a timely fashion. They are covered in depth in Rule 14.

H. The 5 Day Game Variant.

In effect the 5 Day rules use the main rules set to make the game work at a different time (5 days per turn instead of half a month) and unit scale. In short, they are designed to adapt the main rules with minimal changes so once you know how to play the main game you can play the 5 Day variant without major relearning. The 5 Day variant uses the same naval and air units but ground units with modified movement and combat ratings. In the 5 Day game the following amendments are made to the main rules:

1. *Order of Play*. With the exception of assigning air units to the Naval Cooperation mission, which occurs every turn, all other activities in the Initial Phase (see Rule 6.3.a on page 14) takes place on the first and fourth game turn of each month with the effects of being in or out of supply lasting for three consecutive game turns.
2. *Ground Rules*. There is no Reaction movement – Rule 7.C.1.g on page 16.
3. *Air Rules*. Bombing factors for CAS (ONLY) are multiplied by 10 – Rule 8.E.1.f on page 20.
4. *Naval Rules*:
 - a. Naval gunnery is multiplied by 1.25 for AGS and CGS (ONLY) – Rule 13.P on page 40.
 - b. SMA rates are multiplied by 0.33 rounding up – Rule 9.A on page 23.
5. All other rules remain in place.

3. Geography and Climate

A. Weather.

1. *Climate*: Crete is entirely within the North African Wet Zone. The weather in the game is mandated as “Good” and as such has no in game effects.

4. Facilities

A. Fortifications.

1. *Field Fortifications*: There are no fortifications in the context of the game.

B. Airbases.

1. *Definition*: The term airbase is used generically to describe facilities that Air Units operate from unless a specific rule requires separating their capabilities.
2. *Types*: Air units operate from facilities defined as follows:
 - a. *Airport*: A printed city, place, or facility which has a capacity for air units.
 - b. *Airfield*: A facility built by engineers in the course of the game.
3. *Capacity and Operational Status*:
 - a. The capacity of an airbase is the number of friendly air units, each player turn that may begin air missions from the airbase. There is no limit to the number of units that may land, or remain at, an operational airbase. The Airbase Capacity Chart shows the capacities for the airbases. See Scenario or Political & Economic Rules for any modification to this.
 - b. An airbase is considered to be operational if it has a capacity greater than zero. An airbase with no capacity (due to damage) can have aircraft land at it, but no aircraft units can take off until it has been made operational.
4. *Airbase Capture*:
 - a. *Capture of Airbases*. Enemy airbases are considered captured when the hex they are in becomes friendly controlled or owned.
 - b. When captured, the airbase is available for use by the new owner during the air return phase of the current player turn. For airborne assault purposes only, airbases may be used to crash land transport aircraft on to the airbase the moment friendly forces gain control of the airbase. Transport aircraft used in this manner are eliminated over enemy territory and immediately enter the air replacement system. See air rules for more details on the air system.
 - c. *Air Units on Captured Airbases*.
 - i. When a hex containing a friendly airfield or airport becomes enemy controlled, all air units that are based in the hex are eliminated.
5. *Airbase Damage and Repair*:
 - a. Airbases can be damaged by being bombed (Rule 8.E.1.b), or shelled (Rule 13.P.1.a). Each hit of damage on an airbase reduces its capacity by one, with no more hits of damage allowed than the capacity of the base plus one.
 - b. If multiple airbases are in a single hex, it is not required to allocate a specific hit to a specific base. The total capacity of the hex is used to determine the maximum number of hits allowed.
 - c. Air units at an airbase that is damaged lose 1 Air Replacement Point (per hit on the base), chosen randomly by the player for each hit the airbase suffers. Damage is repaired at the rate of 1 hit per game turn per airbase until all bases are repaired. In the 5 Day game variant the repair rate is one hit per airbase every third game turn of uninterrupted control by the owning player.
6. *Airbase Removal*:
 - a. Airports cannot be removed from the map.
 - b. Phasing player owned airfields that do not have any air units on them can be removed from the map during the phasing player initial, or pursuit phases (only) to prevent their use by enemy forces. There is no cost to do so.

C. Ports.

1. *Definition*: Ports are marked on the map (see the map legend for details on port markings). Ports are only cargo handling facilities (no repair capability).
2. *Cargo Clearing*: This is the maximum number of SPs that can be handled in that port during a single player turn.
3. *Port Capture*: Ports are considered captured when the hex they are in becomes enemy owned territory (not just controlled).
 - a. *Use of a Captured Port*: A captured port becomes available to the capturing player during that player's next initial phase. The capacity of the port is not altered by the change in ownership however any damage to the port is inherited by the capturing player.

5. Units

A. Ground Units.

1. *Definition:* Ground units are differentiated by colour, size and type, as shown in detail on the Unit Identification Table (UIT). For general information see below, for specific information, and the movement and combat rules for the unit types, refer to those rules sections.
2. *Ratings:* Ground units typically have a combat rating and a movement rating, e.g. 8-6. The first figure is the combat rating and the last figure is the movement rating. Where a unit has three values such as 5-6-6, the first figure is the attack rating, the middle figure the defence rating, and the last figure is movement. A unit with a combat rating of one in parenthesis, (1)-6 for instance, is zero rated in combat against all but partisans and Special Forces against which they can attack and defend with a rating of 1.
3. *Types:*
 - a. *Motorised Units.* Any unit that includes the motorised symbol, motorcycle, or armour icon as part of its unit icon. All units that are motorised may move their full movement point rating during the pursuit phase unless specified otherwise.
 - b. *Other.* Any unit other than cavalry that is not motorised. These units may move half their movement point rating during the pursuit phase unless specified otherwise.
 - c. *Support Units.* Although not a specific unit type, it is important to note that any artillery, railroad, quartermaster or construction engineer unit is a support unit. Support units on their own may not negate Zones of Influence or gain permanent Ownership of hexes.
4. *Heavy Equipment.* Many ground units have heavy equipment such as artillery, trucks and tanks. Units with heavy equipment have restrictions placed on them for Air Transport and Naval Transport over beaches. All support, motorized (except for motorcycle units), semi-motorised, artillery and heavy anti-aircraft units have heavy equipment as do all divisional sized units and HQs unless noted in the OB or P&E rules as being air transportable.
5. *Size:*
 - a. *Division:* A unit with the division size symbol.
 - b. *Non-divisional Unit:* A unit smaller than a division.
 - c. Unit sizes in parenthesis are "groupings" equivalent in size to the symbol within the parenthesis.
For Example: [X] would mean a unit with the same size as Brigade, but which was historically designated as some other unit type.
 - d. Some units may have a reduced side. The reduced side is half the SP size of the full strength unit. For Combat Replacement calculations a unit that is reduced counts as half its full strength in SP and a reduced unit that is eliminated also counts half its full strength in SP.
For Example: A player reduces and then eliminates a Division during combat. The total loss is the full SP value of the unit.
6. *Stacking Points (SPs):*
Ground forces are described in terms of their relative size by the amount of stacking points they are assigned. Unless modified by their specific Political & Economic Rules, units are the following sizes in SPs (NOTE: Reduced strength units are always half the original SP in size):

a. Division	XX	= 4 SPs
b. Brigade	X	= 2 SPs
c. Regiment	III	= 1 SP
d. Battalion	II	= ½ (0.5) SP
7. *Stacking:* The placing of more than one ground unit in a hex is called "stacking". The 'stacking limit' limits the size of the ground forces that can be in a hex at the end of a phase. A player may move more units through a hex than may remain there, but no unit may end a phase in violation of the appropriate stacking limit. If, as a result of combat, a unit is forced to retreat into a hex where it would exceed the stacking limit, it must continue to retreat until it no longer exceeds the limit. Units that cannot retreat (Rule 10.G) are eliminated. Attacks can be made from multiple hexes into any hex type, regardless of the limits of stacking in the attacked hex. Attacking forces may only advance after combat (see Rule 1.A.3) up to the stacking limit of the attacked hex.
For Example: Two regular stacking hexes are attacking an enemy force in a mountain hex. All the forces in each of the attacking hexes can participate, but if the attack succeeds in taking the hex, only mountain stacking level of SP can advance into the hex from the attacking forces.
8. *Stacking Restrictions:* The types of stacking are based on the type of terrain or weather zone the hex is in. They are:
 - a. *Regular.* 22 SP of Normal Units, 6 SP of Artillery (or two Artillery Divisions). *For Example:* four divisions, 6 SP non-divisional units, 6 SP of artillery, or any viable combination of such.
 - b. *Mountain.* 11 SP of Normal Units, 4 SP of Artillery (or one Artillery Division). *For Example:* two Divisions, 3 SP of non-divisional units, 4 SP of artillery, or any viable combination of such.
 - c. *Limited Land Mass.* This represents the very limited space of small islands. (Islands smaller than one quarter (¼) of the hex they occupy in size). Four SP of Normal Units. Two SP of Artillery. *For Example:* one Division, 2 SP Artillery or any viable combination of such.
9. *Zones of Influence:* Large ground units have a Zone of Influence into hexes that surround them (Rule 7.B). This represents use of patrols and artillery fire to hamper the movement of Enemy Ground Units in close proximity.

10. *Combat Efficiency Variable (CEV)*: This is a measure of the relative efficiency of Nations at an overall level, bringing into play the 'soft' factors such as leadership, training, doctrine, communications, morale, etc. All Nations are affected and have a CEV (see the Combat Efficiency Charts for specifics).

a. *The Effect of the CEV*. The CEV is used as a modifier of the combat factors a unit has. The printed factors are multiplied by this value which may increase or decrease the combat power of the unit in question.

For Example: A German force of 20 points attacking a Soviet force of 10 points in August of 1941 would receive a CEV multiplication of its combat factors of 1.5, so the final combat odds would be 30:10 (or 3:1) instead of the original 20:10 (or 2:1) assuming the Soviet CEV is 1.

b. *Modifiers of the CEV*.

i. When attacking if a unit is not in Offensive Supply it has a base CEV of 0.75. When defending the base CEV is always the national value according to the Combat Efficiency Charts irrespective of supply status.

ii. Some P&E Rules may modify CEV.

iii. *Interdiction*. Two types of interdiction can cause a reduction of a unit's CEV: interdiction (Rule 8.E.1.e) and railroad network interdiction (see the Rail Marshalling Yard bombing missions). Air, Close Air Support (CAS) and Partisan Interdiction can accumulate to no more than a 40% reduction in the CEV. Railroad network interdiction can contribute an added 10% reduction to the CEV.

I Maximum Reduction. Thus the maximum possible impact on the CEV by all Interdiction is a reduction of 50%.

c. *National Variations*. The CEV Chart shows the CEVs of all nations, and the dates on which they change throughout the game.

d. *Applying the CEV*.

i. Determine the basic CEV of all the forces in the combat. Each nation's forces have their own CEV.

ii. Determine the effect of interdiction and CAS. Apply to the CEV of the affected forces in the combat.

iii. All phasing player interdiction modifies non-phasing player CEV.

iv. All non-phasing player interdiction modifies phasing player CEV.

v. Multiply each nation's combat strength in the combat by the final CEV (determined by i-iv above).

For Example: A phasing player force is attacking a non-phasing force with 20 printed strength points. The non-phasing force (only) has its supply line interdicted by a combination of partisans and air units causing a level 2 interdiction on the line. If the phasing player has a base CEV of 2.0 at this time, the effect of interdiction is to multiply this CEV by the accumulated impact of the interdiction (10%) $2.0 \times 0.9 = 1.8$ the final CEV adjusted strength of the unit is then $20 \times 1.8 = 36$. Without any interdiction it would be $20 \times 2.0 = 40$

11. *Special Unit Capabilities*: Many Ground Units have special capabilities as detailed in other parts of the Rules.

For Example: combat capabilities such as Combined Arms Effects and Engineer Effects; Engineer Construction capabilities; Commando and Airdrop movement capabilities; Artillery HQ units; and Partisans. The appropriate Political and Economic Rules may also contain information concerning special unit capabilities.

B. Air Units.

1. *Definition*: Air units are identified as shown on the Unit Identification Chart. Air units may either be shown in the game as Squadrons (approximately 20 aircraft – half counters) or as Wings (about 40 aircraft). In the air combat (see 11.C) and air administration (see 15.B) rules the basic measure of losses and replacements is the Air Replacement Point (ARP). These represent around 20 aircraft of the model to be replaced or lost. ARPs are produced at aircraft factories, and appear via the production system and/or the OB/OA.

2. *Air Unit Ratings*:

a. *Attack Factor*. This represents the lethality of the aircraft when attacking other aircraft.

b. *Defence Factor*. This represents the effectiveness of the aircraft in evading or preventing enemy air attack.

c. *Operational Bombing Factor*. The ability of the unit to attack "point" targets.

d. *Strategic Bombing Factor*. The ability of the unit to attack "strategic" or "economic" targets.

e. *Range Factor*. This represents the distance the air unit may fly whilst using its optimum combat factors (normal range).

3. *Air Unit Types and Descriptors*:

a. *Types*

i. **F** Fighter air units. Designed to combat other aircraft. Day fighters may not fly at night.

ii. **A** Attack air units. Light Bombers specially designed to operate at low to medium altitudes.

iii. **B** Bomber air units. Deliver bombs in a horizontal mission profile. -2 DRM on the naval to hit die roll, they are Code V or S. See section 4 below for information on unit codes.

iv. **D** Dive bomber air units. Type A air unit that uses a steep dive to deliver bombs. Gains a +2 DRM for naval attacks on the to hit die roll.

v. **T** Transport air units. Cargo carrying aircraft.

vi. **G** Gliders. Unpowered transports, which must be towed from point to point.

vii. **R** Reconnaissance. Reconnaissance units are specially modified and/or equipped to provide intelligence on enemy forces.

b. Descriptors

- i. H Heavy variants of Types. -2 DRM on the naval to hit die roll unless using skip bombing. See also 4.e below.
- ii. N Night capable variants of Types. Type NF air units that are not also Code R have their air combat attack factor reduced by 50%, but never below one.

4. *Air Unit Codes*: Air units may have one or more codes as listed below. Codes define certain specific or special capabilities of air units. These capabilities may modify bombing or AA resolution, or the unit's air combat or bombing strengths, as noted on the appropriate tables. In addition, air units with codes have the following abilities:

- a. T: CAS Specialists. Code T air units are equipped with special close air support weaponry. When operating in the interdiction role, their capability is enhanced by five operational bombing points. When operating in the CAS role, their CAS factor is not reduced by a quarter, unlike other air units flying this mission.
For Example: A Ju87B-I has an operational bombing factor of 5, and is Code T. During a CAS mission, it adds 5 to the ground strength of friendly ground forces; during a battlefield air interdiction mission it adds 5 points from its operational strength, and 5 points as a result of being Code T to the interdiction calculation, thus it adds a total of 10 CAS points to the zone.
- b. C: Carrier Capable. Code C air units are equipped and trained to operate from aircraft carriers. Code C air units (only) may base at and fly missions from aircraft carriers (Aircraft carriers are covered in the Naval rules). A code C air unit is not required to base on a carrier group; it may use any airbase.
- c. F: Floatplane/Flying Boat. Code F air units are composed of floatplanes or flying boats. A code F type B, T, or A air unit must base at an airbase in a partial sea or partial lake hex; it may not use any other airbase. A Type F Code F air unit may operate from CAV and BBV naval units, or from partial sea or partial lake hexes. Code F air units may not undertake any air missions from an eligible airbase if the weather is such that the water in the hex is frozen. A code F air unit flying a regular transport mission may land its cargo in any unfrozen, friendly owned partial sea or partial lake hex.
- d. S: Anti Shipping Capable. Code S air units are trained and equipped to attack naval surface units. Code S air units roll on the naval success table to determine whether they hit their targets. For each operational bombing point, Roll 1D10, apply all applicable modifiers from the Naval Charts to see if it has succeeded. Code S air units have a +1 on their to-hit die rolls. On a roll of 10, the hit is automatically a critical hit.
- e. V: Anti Shipping Torpedoes. Code V air units are trained and equipped to attack naval units with air dropped torpedoes or bombs. When a code V air unit flies the naval patrol mission it may carry a standard bomb load and operate as a code S unit or carry torpedoes.
- f. H: High Altitude Fast Bombers and Reconnaissance Units.
 - i. Code H units are fast, unarmed night attack bombers. They are treated as if they were code R night bombers for all missions. If intercepted by enemy NF units, enemy NF units receive a -2 DRM for all air attack rolls.
 - ii. Code H reconnaissance units are fast, unarmed recce planes. If intercepted by enemy F units the F units receive a -2 DRM for all air attack rolls.
 - iii. Code H air units receive a +2 DRM for all AA die rolls. This reflects the fact that code H units had the lowest operational losses to enemy air defences during WW2.
- g. A: Antisubmarine Warfare (ASW). Code A air units have specific ASW training and equipment. Code A units have their bombing factor converted at the rate shown on the ASW/Air ASW Conversion chart when attacking enemy submarines.

5. *Air Superiority*: Air superiority generates benefits for ground combat operations. The maximum possible modification for this effect is a 3 DRM (+/-). Air superiority is determined by a three stage process:

- a. Theatre Fighter Superiority. Each side's active group allowance is compared to the other. If one side has a 2:1 or greater ratio of active FIGHTER (F) class Squadrons it has theatre superiority. Having this level of superiority grants a DRM to the side with it in attack (+1) and defence (-1) in all combats in the theatre or command.
- b. Fighter Superiority. In each hex where a ground combat is occurring, the number of fighter Squadrons committed by both players is evaluated. In the hex with combat, the side with the majority of type (F) air units in the hex receives a DRM (+1 if attacking, -1 if defending). If one side has a single fighter in the hex for a mission, and the other has none, the side with the single fighter receives the DRM. NF types are excluded from this calculation. This DRM is only applied to combat in that hex.
- c. Ground Attack Superiority. In each hex where a ground combat is occurring, the number of Squadrons committed by both players to the Close Air Support (CAS) mission is totalled and compared. The side with the majority of aircraft delivering CAS points to the hex receives a DRM (+1 if attacking, -1 if defending). This DRM is applied to the specific combat in that hex only.

6. *Air Combat Efficiency Variable (ACEV)*: This is a factor applied during air combat resolution to show the differences between nations regarding training, technology, and other 'soft' factors in combat. See the Combat Efficiency Charts for details.

NOTE: Naval air units belonging to independent naval air arms such as the FAA, USMCA and IJNAS, use their naval NEM as a modifier rather than ACEV.

C. Naval Units.

1. *Definition:* Naval units are identified as shown on the Unit Identification Chart. Naval units represent capital ships and very large merchantmen, and escort vessels individually, and smaller vessels in flotillas or groups as defined in the Naval Rules (Rule 5.C.10). To track fuel states etc. (not currently implemented in the game), it is recommended that players utilise the Generic Ship Chart to note each ships capabilities.
2. *Ship Types and Special Rules:* Naval units are split into a number of different types:
 - a. Capital Ships.
 - i. CV Fleet Aircraft Carrier.
 - ii. BB Battleship.
 - b. Major Combatants.
 - i. CL Light Cruiser, 6" guns or above.
 - ii. CLA Light Cruiser, Anti-Aircraft, 4" guns or above.
 - c. Escorts.
 - i. DD Fleet Destroyer
 - ii. DE/TB Destroyer Escorts (Corvettes, Frigates or Sloops) and Torpedo Boats are generally shown as flotilla counters in the game, and have their type followed by "F".
For Example: DEF is a Destroyer Escort Flotilla.
 - d. Other Ship Types.
 - i. NSP Naval Shipping Point
 - ii. LC Landing Craft.
 - iii. LB Landing Barge.
 - iv. XXF Where XX is a ship type, F relates to a flotilla of such.
 - v. SSF Submarine Flotilla.
 - e. Submarine Flotilla (SSFs). All submarines are shown as 12 boat flotillas. Each SSF flotilla counter has a reduced side. The game system represents the formation and maintenance of multi boat patrol lines.
 - f. SSF Dummies. Player may be given SSF Dummies. These operate in all ways like SSFs, but may not attack, and cannot be attacked in turn. See Rule 13.O.1.a.
 - g. Naval Shipping Points (NSPs). Each NSP represents a variable number of ships, with a cargo capacity of approximately 40,000 tonnes. 2 NSPs may carry one LC to a friendly owned hex or an assault zone.
 - h. Landing Craft (LC). A landing craft counter consists of a variable number of specialised craft specifically designed and trained to conduct and support amphibious assaults and operations.
 - i. Landing Barge (LB). An ad hoc miscellany of inadequate vessels pressed into service to conduct amphibious assaults and operations.
 - j. All type NSP, LC, and LB naval units are cargo units. Some naval vessels may have a transport capacity on their counter as well.
For Example: RN CL Manxman has a transport capacity of 1 on the counter.
3. *Class:* All Naval units belong to a ship class. The ship class determines their Strategic Movement Allowance (SMA). The number of sea zones that they may move through in each Naval Movement segment is determined by their SMA. See the Strategic Movement Chart for more details.
4. *Counters:* Each counter has a number of combat values and ratings printed on its face. Some naval units are back printed with reduced strengths or their ratings after a refit. Each naval unit (with the exception of SSF and FAS units) has a tactical movement rating to determine range changes during combat.
5. *Naval Unit Codes:* If present, these are located in the centre of the bottom row of unit ratings.
 - a. R: Radar
 - b. M: Mines
6. *Other Unit Details:*
 - a. Gunnery Values: Each combatant has two gunnery strengths, representing Long and Short Range weapons. Only types CL, MN and BB have long range gunnery strengths and this equates to 70% (round fractions down) of the gunnery rating of the unit, except for type MN where 80% are Long Ranged.
 - b. AA Values: Each ship has an Anti-Aircraft strength (doubled for type CLA). DDs with a * for their AA rating have a half point of AA that may combine with any other DD with an * AA rating to provide 1 AA point.
 - c. Torpedo Rating: Submarines and some ships have a torpedo attack rating for use against surface targets.
 - d. Protection Rating: All ships have a protection rating which equates to their armour value and, with the exception of NSPs, also determines hit points. See the Ship Protection Chart for more details.
 - e. ASW Capability: Types DD are ASW capable units. See the naval charts for further details
 - f. Air Unit Capacity: Type CV have an air unit basing capacity (in squadrons).
7. *Submarine Flotillas (SSF).* SSFs have a limited gunnery value (which may only be used against types LC and NSP), a torpedo attack rating and a protection rating. The movement rating on an SSF represent the maximum number of sea zones distant from their home port that they can set up patrol in.

8. *Naval Shipping Points (NSPs)*. NSPs are variable groups of merchant ships with a standard capacity of 1 SP of cargo (including heavy equipment, logistics and supply items, and crated air groups). NSPs with a speed rating of 4 or higher are high value high speed transports.
9. *Landing Craft (LCs)*. Groups of assault craft with a normal cargo capacity of 1 SP for transport, and 0.5 SPs for amphibious assaults. LC's may carry units with Heavy Equipment at any time.
10. *Naval Task Groups (NTG)*: All surface ships must move as part of a naval task group. Naval units that are part of a Naval Task Group must be placed in the appropriate Task Force Box on the Task Group Chart. The units are placed on the display, and the marker is placed on the map in the same port or sea zone from which the units were removed.
 - a. Task groups can combine and recombine at any time during a player turn, as long as they are in the same sea zone.
 - b. Ships at sea must be allocated to a task group at all times.
 - c. All naval task groups have two components; the escort and the main body. The escort may consist of any non-cargo or capital units. The main body may include any type of ship, excepting Escorts and FAS which are always part of the escort.
 - d. Naval Task Groups have three types:
 - i. *Carrier Battle Group (CGB)*. Any naval task group with one or more type CV/CVL, or five or more type CVE naval units, and not containing any type SL, NSP or LC naval units is a Carrier Battle Group.
 - ii. *Naval Task Force (NTF)*. Any naval task group that does not include types CV, CVL, or SLs, NSPs, LBs or LCs, and has four or less CVE's is a Naval Task Force.
 - iii. *Convoy*. Any naval task group including type SL, NSP and or LC/LB is a convoy. Convoys may include up to four CVEs, in addition to other surface escorts or one or more Escort/Support Groups. If an Escort/Support Group includes a CVE, it is in addition to those attached directly to the convoy and does not mean that the Convoy becomes a CGB (the CVE would leave with the Escort/Support Group).

6. Order of Play

1. *Turns*: The game is played in a series of game turns, which represent approximately half a month (5 Days in the Five Day variant). Each game turn is divided into two player turns with the Axis player going first and the Allied player second. Within each player turn the Turn Sequence below is repeated.
2. *Phasing and Non-Phasing Players*: In these rules, the phasing player is the player moving his units and the non-phasing player is the player reacting to those actions. The designations are solely for ease of rules understanding.
3. *Turn Sequence*: EVERY player turn follows these steps, in this order:
 - a. Initial Phase.
 - i. Both players determine the general supply & isolation status of their units and assign air units to the Naval Cooperation mission. Phasing player spends LPs/GSPs as necessary. Any special events required by scenario rules may occur.
 - ii. The Phasing Player conducts administration activities including by National Intelligence Means (Rule 9.G.8), and distributes attack supply to HQs or directly to units using GSPs.
 - b. Movement Phase
 - i. The non-phasing player flies airbase attack/operational/strategic/naval cooperation and transfer missions. If an airbase bombing mission is flown by either player it must be resolved prior to the owner of the target airbase launching any missions from that base other than interception of the incoming bombers.
 - ii. The phasing player moves naval task forces and the non-phasing player then moves naval task forces.
 - iii. The phasing player moves ground units and air units (including interception of non-phasing player's air missions).
 - iv. The non-phasing player flies interception missions (but cannot intercept the phasing player's interception missions).
 - c. Combat Phase
 - i. Non-Phasing Player Air Combat
 - 1 Resolves all air interception combats against missions about to be executed.
 - 2 Non-phasing player resolves all remaining / strategic / operational missions.
 - ii. Phasing Player Air Combat
 - 1 Resolves all air interception combats against missions about to be executed.
 - 2 Phasing player resolves all remaining strategic / operational missions.
 - iii. The phasing player declares attacks including the allocation of offensive CAS. These are declared individually and once declared MUST be resolved.
 - iv. The non-phasing player flies defensive CAS and interception of phasing player's offensive CAS - at this time to the declared hex, or none can be allocated.
 - v. When all the phasing player attacks are declared, the phasing player can intercept non-phasing defensive CAS. Offensive and defensive CAS are intercepted and resolved separately from each other.
 - vi. Both players determine the isolation status of their units and hexes for special replacement purposes.
 - vii. Resolve all NGS and ground combats, hex order determined by the phasing player. Air units involved in ground and naval battles have their combat (air to air and AA) resolved first in each hex.
 - viii. The results of combat are applied in the following order:
 - 1 The phasing player loses factors as required.
 - 2 The non-phasing player loses factors as required.
 - 3 Surviving non-phasing units execute retreats if required (or chosen) as possible.
 - 4 Units that are required to retreat which cannot be eliminated.
 - 5 The attacking player executes any movement after combat allowed or possible.
 - d. Reaction Movement Phase. Non-phasing units allowed reaction (Rule 7.C.1.g) can move up to ½ their movement allowance.
 - e. Pursuit Phase. All NTGs may be moved: the phasing player first followed by the non-phasing player. The phasing player may move all ground units again using the tactical movement rate and rounding down any fractions.
 - i. Units in offensive supply: all motorized class units may use their full movement allowance; all other units may move up to ½ of their allowance.
 - ii. Units in general supply: all motorized class units may move up to ½ of their movement allowance; all other units may move up to ¼ of their allowance.
 - iii. Units out of supply at EI: all motorized class units may move up to ¼ of their movement allowance; all other units may move one hex.
 - f. Air Return Phase. All air units still flying missions return to friendly airbases. Units unable to land at a friendly owned airbase are considered eliminated over friendly territory.

7. Ground Unit Movement

A. Definition.

Units generally must be moved one unit at a time. However, units that start a movement or pursuit phase stacked together can be selected and moved as a stack. A player may 'interrupt' the movement of one unit or stack to allow units to move into/out of the hex and participate in overruns, engineer operations, or to load onto NSP's. No individual unit may move further than its movement point allowance permits. All the phasing player's ground units may move during both the movement and pursuit phases of the player turn, at the owning player's option. Those non-phasing player's units that meet the requirements of the Reaction Rule (Rule 7.C.I.g) may move within the limits imposed by the Reaction Rule.

B. Zones of Influence.

I. The zone of influence (ZOI) represents the influence a large enough ground force can exert into all adjacent hexes. 'Friendly' ZOI (FZOI) means one exerted by forces friendly to your side, "Enemy" ZOI (EZOI) means those exerted by enemy forces.

a. Force Size and ZOI.

- i. A sufficiently large force exerts a ZOI in all areas of the map, into those hexes immediately adjacent to it. A force cannot exert a ZOI across either prohibited hexes, hex sides, or into terrain it cannot enter.
- ii. Units either have a Full ZOI, Reduced ZOI, or no ZOI. Divisional sized units exert a Full ZOI, brigades and regiments exert a Reduced ZOI, smaller sized units have no ZOI. In addition, support units such as artillery along with air and naval forces never exert a ZOI.
- iii. Supply conditions can result in a reduction by one level in the ZOI exerted by a unit: a Full ZOI becomes Reduced and Reduced becomes none.

For Example: A regiment normally exerts a Reduced ZOI. If that force was out of supply it would have no ZOI.

- iv. A unit flipped to its reduced side, as a result of combat for example, also loses one level from its ZOI.
- v. If two friendly forces in separate hexes exert Reduced zones of influence into the same hex, the net effect is the same as if that hex were in a Full ZOI.
- vi. If units of opposing sides exert a ZOI into a hex, the level of control exerted is determined as follows:
 - 1 If the ZOIs are equal, the hex remains owned by the side that owned it at the start of that turn, and is treated as being in a reduced ZOI by both sides.
 - 2 If the ZOIs are unequal, the hex is dominated by the side with the greater ZOI and is treated as being within the greater ZOI for all game purposes.

b. Effects of the ZOI.

- i. Movement of Enemy Forces. A Full EZOI adds 1 MP to the cost of moving into a hex. A Reduced EZOI has no effect on movement.
- ii. Tracing of Overland Supply Lines.
 - 1 Full EZOI: An overland supply line can be traced through a Full EZOI, but each hex costs double the regular cost of the hex's terrain when counting for supply line length. Railroad supply lines cannot be traced through an uncontested Full ZOI.
 - 2 Reduced EZOI. An overland supply line being traced through a Reduced EZOI costs one and a half (1.5) times the regular cost for the terrain when being counted for supply line length. The Railroad portion of a supply line can be traced through Reduced EZOI if any size of non-support unit is in the hex through which it is traced.
- iii. Retreats. A force cannot retreat through a Full or Reduced EZOI unless allowed to do so by any special rules.

C. General Movement.

I. Movement is calculated with movement points (MPs) spent to enter a hex. Movement point costs reflect the time element of the combat equation, as the combat rating represents the force element, and may also be used to perform activities. A unit's movement rating gives the number of MPs the unit may normally spend in a movement phase. Units move voluntarily, with each unit spending MPs as it moves from hex to hex. Each unit spends the number of MPs per hexside and per hex as shown on the Terrain Effects Chart (TEC) for the terrain type. The costs are shown on that chart and are paid as the hex side is crossed or entered.

- a. Limits. Units with a movement rating can always move one hex into or across permitted terrain. A unit with a movement allowance can always move one hex in both the movement and pursuit phases, (excluding into or across prohibited terrain), even if it lacks the movement points to do so. The unit expends all of its movement points and enters the adjacent hex. When making use of this provision, the unit cannot conduct an overrun (see 7.E). Units with no movement point rating, may not be moved in the context of the game.
- b. Pursuit Phase Movement. Motorised and cavalry units in Offensive supply can spend their full tactical movement allowance during the pursuit phase. All other units in Offensive supply may move up to ½ their tactical rating (rounded down). Units in General supply have these allowances halved. A unit may move up to these limits as modified by terrain, EZOIs, and its own supply status (Rule 14.H page 45). Units moving in the pursuit phase may use their movement points for movement and or overruns. They may not use their MPs for any other purpose.
- c. Entering an Enemy Occupied Hex. In general, a unit may not enter a hex occupied by an enemy unit. Exceptions to this rule are found in the Overrun (see 7.E below), Airborne Assault (see 10.N below), and Amphibious Operations (see 9.H.I.a) rules. Overruns occur during the movement, advance after combat, and pursuit phases.

- d. Air, and Naval Transport. Air, and naval transportation are special forms of movement and are covered in separate rules (see Rules 8.I (Air Transport), and 9.H (Naval Transport)).
- e. Units with a zero ('0') movement rating. A unit with a movement rating of zero ('0') cannot move at all. If forced to retreat by combat it is eliminated.
- f. Impact of Zones of Influence.
 - i. When a unit leaves a hex that is in an EZOI, or moves from a hex in an EZOI directly to another such hex, it must spend additional MPs per the Zone of Influence Movement Cost Chart.
 - ii. If all the EZOI exerted are reduced EZOI, then the cost for movement is calculated using the reduced EZOI line on the Zone of Influence Movement Cost Chart.
- g. Reaction Movement. Immediately after the combat phase, and prior to the phasing player pursuit movement, the non-phasing player can execute reaction movement. During reaction movement the non-phasing player can move qualifying units up to one-half their movement allowance (rounded down – at the tactical movement rate) towards enemy operations. The qualifications for this are that the units are:
 - i. Un-isolated and in supply.
 - ii. At least three hexes away from any enemy ground units. (Two hexes minimum between the unit and enemy forces.) At least three and no more than seven hexes from a hex that has been attacked, resulting in the defender losing the hex, or the hex being left with no defending units if the attacker does not advance into it. This includes hexes overrun during the previous movement phase.
 - iii. Units moving in the reaction phase may enter an EZOI, but cannot attack or overrun.

D. Ground Movement Types.

- I. Only Tactical movement is used in Operation Merkur. This is movement as described in the General Movement above of this rule (Rule 7.C) and may be combined with air or naval movement. This rate is used when calculating all MP expenditures for construction, destruction, or any other MP cost activity

E. Overruns.

- I. When a moving force encounters a much weaker one, the impact is more a delay than a battle. This is described as an 'overrun'. Overruns only occur at the instigation of the phasing player. The non-phasing player has no input into the ability of a moving force to conduct an overrun, or in the calculation of the overrun calculated as per Rule 10 Combat (although he may insist on a check of the calculation). Overruns can take place at 10:1 odds and cost 4 movement points plus any terrain costs. In the 5 Day game version an Overrun expends all the movement points of a unit. The Overrunning forces suffer a loss equal to ½ the SP value of the defending force rounded down, but never below ½ an SP.
 - a. Overruns can happen during the movement and pursuit phases of a player turn. The units making the overrun must enter from a single hex, be capable of spending the MPs required for both the overrun (see the Overrun Costs table) and entry into the target hex and may not violate stacking limits. Airborne units may overrun on the turn of landing, but may not move for the rest of the player turn if they do so.
 - b. Effects of Overruns.
 - i. A unit being overrun immediately loses its ZOI. Moving from a hex in the ZOI of the target unit into the hex occupied by the target unit, is not considered a move from an EZOI to another EZOI. The presence of other enemy units with ZOIs extending into the target hex, however, is not ignored for this purpose.
 - ii. Overrun units are eliminated. Units with a reduced side available are not reduced, but are completely eliminated; however Combat Replacements are received if the unit would generate them in normal combat.
 - iii. Overrunning units that enter a hex along a road may use double the MP cost for following the road instead of the actual terrain costs to enter the hex.
 - c. All units making an overrun must enter the hex being overrun and must pay all required MP costs to do so.

F. Transportation Lines.

- I. There are two types of transportation lines on the map; roads and tracks. See the Terrain Key and the Transpiration Lines chart for details.
 - a. Roads. These are designated on the map per the Terrain Key Chart.
 - i. A unit moving along a road pays the MP cost for clear terrain for every hex entered or hex side crossed.
 - ii. Roads may be used in the movement, reaction, and pursuit phases.
 - b. Tracks. These are designated on the map per the Terrain Key Chart. They reduce movement costs by 1 MP (never below 1MP) in all terrain types except salt marsh and marsh.

G. Abilities of Special Unit Types.

- 1. *Mountain Troops Effects.* Mountain Troops are specially trained and equipped to operate in difficult terrain. Movement rating is modified per the TEC when moving in rough, wooded rough and mountain terrain.
- 2. *Motorised Unit Effects.* Motorised units have movement advantages in Good Going and disadvantages in Poor Going. Their movement rating is modified as a result of terrain type. See the TEC for details.
- 3. *Airborne & Air Transportable Units.* See the Political rules on page 50 for details about which of a nation's units are air transportable:
 - a. Transport Element: Some types of divisions can have the bulk of their force air transported, but still have heavy equipment that cannot be so transported. To show this, the breakdown for air transport for these divisions includes a 'transport element'. This

cannot be transported by air under any circumstances. The division cannot be assembled until this element is also in the hex with all the other elements of the divisional breakdown.

- b. Air Droppable Units: Parachute and Glider units may be dropped by transport aircraft, and may have special advantages as a result (See Airborne Assault on Page 30).
- c. Air Portable Units: Some units (for example elements of the German 22 Air Landing Division) are air portable. Air portable units breakdown either into a transport element and non-divisional elements, or are specially equipped so that they are fully air portable. Type T units transporting the breakdowns of air portable units may land at an airbase that has just been occupied by air dropped forces.
- d. Air Droppable Combat Engineers: These units may be delivered by Glider during the air movement step. If they land successfully the owning player may immediately create an airstrip in the hex as long as it is not in mountainous terrain or an EZOI. Air portable units may immediately land at such an air strip. See 'Disruption' on Page 30 for more details and penalties relating to air drops.

H. Change of Ownership.

- I. Each nation on the map owns territory as described in the Module and Political and Economic Rules.
 - a. Territory may exchange hands within the game following the rules noted below:
 - i. 1 SP or more of non-artillery combat units occupy the hex. By itself, a force smaller than 1 SP of non-artillery combat units may not gain permanent ownership of a hex.
 - ii. A ½ SP unit gains control of the hex only for as long as it remains there. The hex reverts to enemy ownership when vacated.
 - iii. A force exerts an uncontested, full zone of influence into the hex. A hex is uncontested if both the following criteria are met:
 - 1 The hex is not occupied by ANY enemy ground unit (regardless of size), and
 - 2 The hex is not in an enemy ZOI.
 - 3 Zones of influence alone cannot gain ownership of a hex containing a city (of any size), or an airbase.
 - iv. A line of communication can be traced to a friendly owned hex, in regular supply. This does not apply if neither side can trace this line to an appropriate hex.
 - b. A change of hex ownership is effective immediately upon satisfying any of the conditions above.

8. Air Unit Movement

A. Definition.

Air units move by spending one movement point of their range for each hex entered. They pay no added costs for any type of terrain, nor does any type of terrain block their movement to a target hex. From the target hex, the unit may expend up to its range returning to a friendly airbase. Note that a unit's range and that its time during the player turn when it must return to a friendly base may be changed by specific mission rules below. Unless otherwise noted in the mission profile below, all air units must end a turn on a friendly airbase.

For Example: A Ju-87B has a range of 10 hexes; it can fly from its base 10 hexes to a target, then during the air return phase fly 10 hexes to a friendly owned airbase.

NOTE: Air units may fly in both player turns of a game turn unless prohibited by the specific mission profile.

B. Air Missions.

1. Whenever air units take off from an airbase, they are performing a mission. Air missions can be flown in the owner's turn, the enemy turn, or even in both player turns, and are described in detail below.
2. On completion of the mission the air unit returns to its airbase and any air units still assigned to missions at the end of each player turn return in the Air Return Phase.
 - a. Air Mission Range Options: An air unit's printed range represents the normal number of hexes the unit can fly to a target hex to execute a mission, however, this may be modified by the range bands below. Air units pay one movement point per hex entered. There are four range bands all missions can be flown at (unless otherwise noted in a specific mission rule):
 - i. Long Range. Units flying any mission at this range have double the printed range on their counter available for use. When flying at long range all bomb factors and cargo capacity are reduced to one quarter ($\frac{1}{4}$) of the printed bomb load. All fighters flying long range escort missions have their attack strengths reduced by 50% but never below one.
For Example: An aircraft with bombing factor of 4 has its bombing factors reduced to 1.
 - ii. Normal Range. This range band is applied to all missions flown at ranges exceeding $\frac{1}{4}$ printed range, but not exceeding the printed range of an air unit. Unless changed by specific missions, aircraft flying at this range have their normal bombing or cargo carrying capabilities. Aircraft ratings are as printed.
For Example: An aircraft with a printed range of 9 may operate at "normal" range if it flies between 3 and 9 hexes (inclusive) to its target.
 - iii. Short Range. This range band is applied to all missions flown at ranges up to $\frac{1}{4}$ of the printed range of an air unit. Units flying missions at this range increase their bombing factors by 50% (1.5x), and double (2x) their cargo carrying capacity unless noted in the specific mission. All Fighters with access to GCI flying short range interceptions have their air attack strengths doubled. See Rule 11.B.1.b.i on page 32 for short range interception procedures.
 - iv. Extended Range. The capability to do this is shown on the counter and noted in the appropriate Political & Economic Rules. The use of these tanks extends the printed range of the counter by 1.5 times. A counter with a printed range of 10 is considered to have a base range of 15. Long and normal range considerations are based on this extended range. Fighters have their Air to Air combat rating reduced by 25% at this range, but never below 1.

C. Transfer.

This mission can be flown in either player turn. When executing this mission air units may not conduct any other mission. An air unit flying this mission can fly six times its printed range. This is the maximum allowed for transfer missions at all times. The mission can only be flown from a friendly owned base to another friendly owned base. No cargo can be carried on a transfer mission, although any type 'T' unit can tow a glider (also with no cargo aboard) while transferring. Type T units towing gliders during a transfer mission may only move their normal movement rating plus 50%.

D. Fighter Missions.

1. All Fighter (F) units can act as fighters optimised for air to air combat. Some can engage in ground attack missions carrying bombs. When assigned to any mission other than interception or escort, a fighter may carry bombs, and can 'jettison' them and engage in air to air combat without penalty. When they choose to do so, they are no longer part of the bombing mission, but are reassigned to the escort mission. Fighters fly four different missions which are:
 - a. Interception. This is a mission that any fighter can perform to intercept enemy air units that are conducting missions within the interception range of the fighter. During the player turn, after enemy missions have been flown to their targets, but prior to resolving their attacks, they can be intercepted. Air units flying this mission may fly to any friendly owned or controlled hex targeted by the enemy within:
 - i. The full range of the interceptor for Western Allied, Italian and German Nations.
 - ii. Half the range of the interceptor for all other nations.
Only fighters with the 'night' designation can intercept night missions. Once all interception missions have been flown, air to air combat takes place where air units of both sides are in the same hex - per the sequence of play. Intercepting air units return to their base during the current player air return phase.
 - b. Escort. Units assigned to this mission accompany other types of aircraft and will engage the enemy only if the force they are with is attacked by enemy interceptors. This mission can be flown at any range. Any mission can be 'escorted', and the escort flies to the target when the mission is flown in the sequence of play. If a player wishes to provide an escort for bombers

operating as naval cooperation units, the escorting fighters must also be assigned to naval cooperation in the player's initial phase.

- c. Operational Bombing. Fighter type aircraft with a bombing factor can use it for operational bombing missions (See Rule I.I.B.I.b.iv). Fighters assigned to this mission can jettison their bomb load and engage in air to air combat without penalty. They may not complete their bombing mission if they jettison their bomb load.
- d. Airbase Attack. This mission is an attack against an enemy airbase. Fighters without a bombing factor have a bombing factor of one point when executing this mission (only).

E. Operational Bombing Missions.

- I. This is the use of air units with operational bombing factors to attack bridges, airbases, and other targets that have direct impact on the combat forces of the opposing side. Hits are determined by the number of bombing factors delivered (after all air to air and AA combat has been resolved) to the target. When flying any operational bombing mission, factors delivered by type 'D' aircraft are increased by 1.5 times. If bombing factors delivered to a target are insufficient to register a hit (not applicable in BAI missions) role percentile dice to see if a hit is achieved.

For Example: A Blenheim successfully drops two bombing points on an enemy port. Four bombing points are required to score a hit on a port so the player roles percentile dice and on a result of 50% or less will score a hit. Had the Blenheim delivered three points to the target then a hit would be achieved on a roll of 75% or less.

- a. Ports. Every four bombing points delivered against a port causes one hit. Each hit reduces the port's capacity by 2 SPs until repaired. A port can have no more hits on it than 1.5 times its cargo capacity. Ignore hits above that amount.
- b. Airbases. For every three bombing factors delivered to the hex (after air to air, and antiaircraft combat have been resolved) one hit is inflicted. Each hit achieved against the airbase reduces the capacity of the base by one. Additionally, if there are air units at the damaged airbase they lose 1 ARP per hit, allocated randomly.

For Example: There are 3 P-51 groups at a base that receives 1 hit. 1 ARP of P-51's is lost as a result of the hit. If there is a mix of air units on the base, then the lost ARP is chosen at random.

- c. Naval Forces at Sea (Rule 8.G.3 & 8.H.3).
- d. Naval Forces in Port. Air bombing factors are calculated in exactly the same way as for naval units at sea.
- e. Battlefield Air Interdiction (BAI). This is the use of aviation to interfere with the movement of supplies and reserves in the rear of a combat zone. This mission can be flown by any aircraft with an operational bombing factor (OBF) rating. It takes the delivery (after air to air and AA combat) of a number of OBF factors to a hex to create an interdiction zone. An interdiction zone consists of the centre hex (where the mission is flown to) and the six adjacent hexes to that central hex. Interdiction does not have any effect on naval supply elements.

i. Interdiction Targets:

- 1 Any hex up to a maximum of five from the Frontline (including the enemy owned hex immediately adjacent to friendly units).
- 2 Any hex containing a Corps HQ. Any units supplied via the HQ counter suffer the impact of the interdiction mission.
- 3 Any hex containing an Army HQ. Any Corps supplied via the HQ counter suffer the impact of the interdiction mission.
- 4 Any hex containing a Supply Terminal. Any Army HQ (and its subordinate units) supplied via the Supply Terminal suffers the impact of the interdiction mission.

ii. Cumulative and General BAI effects:

- 1 12 OBF points delivered create a level 1 interdiction zone. Ground unit and river flotilla movement cost is increased by one movement point for each hex in the zone it enters. The CEV of units tracing their supply line through this level zone is reduced by 5%. Rail movement costs two added rail points per rail hex entered.
- 2 18 OBF points delivered create a level 2 interdiction zone. Ground unit and river flotilla movement cost is increased by one and a half (1.5) movement points for each hex in the zone it enters. The CEV of units tracing their supply line through this level zone is reduced by 10%. Rail movement costs three added rail points per hex entered.
- 3 24 OBF points delivered create a level 3 interdiction zone. Ground unit and river flotilla movement cost is increased by two movement points for each hex it enters. The CEV of units tracing their supply line through this level zone is reduced by 15%. Rail movement costs five added rail points per hex entered.
- 4 Zones that overlap can create higher levels in the overlapped hexes, however, the maximum level in any area or hex is level 3, no matter the sum of all the overlaps covering a specific hex.

iii. Effects on the CEV can be cumulative from separate zones.

For Example: Passing the overland supply line through two level 1 interdiction zones would yield a -10% to the CEV. The maximum effect on the CEV is a 40% reduction from interdiction missions.

- iv. AA fire on interdiction missions. When the air units are placed in the target hex of the mission, the defender totals his AA value within the projected zone, calculates the average AA per hex, rounding fractions up, and uses that AA rating to engage the enemy air units. If the projected Zone includes sea hexes only the AA within the zone on land would be counted toward the average AA rating.

For Example: An air mission is flown to a hex that has no AA in it. Of the surrounding six hexes, three have three points each, one has five and the other two have none. The player controlling the AA can engage with a maximum of 14 AA factors divided by the Zone Hex total (7) giving them an AA rating of 2.

- f. Close Air Support (CAS). This is the use of aircraft to directly attack enemy front line forces during ground combat. Units assigned to this mission that remain after air to air and AA combat have their operational bombing factors totalled. One combat factor is added to the owner's ground combat strength for every four operational bombing factors delivered, retaining fractions. The factors delivered are not modified by CEV or ACEV. Where fractions are left roll 1D10. If the result equals or is less than the number after the decimal place, the combat strength is rounded up. If it is greater than the number after the decimal place, the CAS strength is rounded down.

For Example: A US force is attacking a German force in 1944. The US player has 25 OBFs assigned to the CAS mission in the hex. If nothing is lost during air to air or AA combat, the US player adds 6.25 (rounded up or down) CAS (combat strength) factors to its force prior to terrain modifications. NOTE 'T' Code units, Rule 5.B.4.a.

F. Strategic Bombing Missions.

1. Strategic bombing can be conducted against ports and coastal defence unit. Hits are determined by the number of bombing factors delivered to the target after all Air to Air and AA combat has been resolved. Only air units with a strategic bombing factor can fly this type of mission. If bombing factors delivered to a target are insufficient to register a hit roll percentile dice to see if a hit is achieved as in Operational Bombing Missions above.
 - a. Ports. Every eight bombing points delivered against a port cause one hit. Each hit reduces the ports capacity by 2 SPs until repaired. A port can have no more hits on it than 1.5 times its cargo capacity. Hits above that amount are ignored.

G. Naval Air Rules.

1. Naval Air Units:
 - a. Naval Air Capacities on Aircraft Carriers is based upon the number of half strength air units carried.

For Example: HMS Glorious has a capacity of two air units. Two half or one full strength air unit may be carried on board the carrier, and may operate per the air and naval air rules.
 - b. Naval air units are either full or half strength per the OB/OA
 - c. Resolve all air missions normally.
2. Sea Zone Air Range. Compare the total number of hexes that an air unit can fly to the number of hexes to the centre point of a sea zone. It needs to have a range 2 hexes greater than the distance to the centre of the sea zone.

For Example: An RAF Spitfire V has a range of 12. It is based at an airbase in a hex adjacent to a sea zone. At normal range it could fly to any sea zone adjacent to the one it is based beside. (i.e. 10 hexes to the centre point of the sea zone).
3. Naval Air Missions.
 - a. ASW. May be flown by Code A air units only. Move the air unit through sea zones. In each entered sea zone check on the Spotting Table. If the result is S any SSF in the zone may be attacked. Resolve per the SSF Air Attack rules. Note that air units may also attempt to spot any enemy NTGs in the sea zones they pass over. See 'Spotting by Land Based Air Units' on page 24 for an alternative method of conducting ASW/spotting missions.
 - b. ASW Escort. May be flown by Code A air units only. Move the air unit with a Convoy (only) as the convoy moves. If the air unit reaches its maximum range, it must return to base from that sea zone. Resolve per the SSF Air Attack rules. Note that air units may also attempt to spot any enemy NTGs in the sea zones they pass over
 - c. Naval Spotting. May be flown by any air unit. The air unit is committed to this mission in the Naval Cooperation Phase. It remains at its home base, but may attempt to spot any enemy TG within its sea zone range. Roll 1die on the naval Success Table, modifying for any DRMs and adding a +1 if the searching air unit is a wing rather than a squadron. On a result of S the TG is spotted and remains so until it leaves the air unit's sea zone range. See 'Spotting by Land Based Air Units' on page 24 for an alternative method of conducting naval spotting missions.
 - d. Naval Unit Bombing. Once an enemy TG is spotted, any Naval Cooperation tasked air unit within range may attempt to bomb the target. Roll 1D10:
 - i. On a result between 6 and 10 the air unit locates the target, and resolves the attack normally.
 - ii. On a roll of 1, if any friendly TG is in the same sea zone as the target TG, resolve the attack against the friendly TG instead, but reduce bombing or torpedo factors by 50%. Damage in this instance is inflicted normally.
 - iii. On any other roll, the attack misses all targets and returns home.
 - iv. DBA (Rule 11.B.1.c) May only be flown by naval air coded units (S, V, M, A).
 - e. Air Cover. May only be flown by Land based type F air units. If within sea zone range, a TG may be "covered" by land based air units. Roll one die per air unit committed. On a Roll between 4 and 10 the whole air wing finds the TG to be escorted. On any other roll the air unit does not find the TG, but may attempt to cover another TG in the same naval movement segment. An air unit can only provide cover for one TG per movement segment. The air unit is treated as a naval air squadron for air to air purposes. It remains "over" the TG being escorted until it is either shot down, the naval air return step, or the TG moves out of sea zone range.
 - f. Also see Rule 9.D on Carrier Air Power.

H. Resolving Naval Cooperation Missions.

1. Only air units assigned to naval cooperation may fly against enemy naval forces at sea, or intercept enemy naval air cooperation missions (unless otherwise noted in mission rules). Units are assigned to this mission during the Initial Phase of each player turn although the missions, if any, are flown later. Naval cooperation is considered an operational bombing mission.
 - a. Air units with any special naval capabilities (see the Unit Identification Table and Rule 5.B.4) are automatically on the naval cooperation mission, they may not be assigned to other air missions except carrier based air units, Rule 9.D on page 23.
 - b. All other air units are assigned to naval cooperation in the initial phase of a player turn. When non-naval units are assigned to this mission, a “naval coop” marker is placed on or over all such units assigned at an airbase.
 - c. Air units assigned to naval cooperation remain assigned to that mission until the Air Return Phase.
2. Spotting. Naval cooperation units may have to search to find their targets (Rule 9.G). Naval cooperation units fly to the centre hex of a sea zone to complete their mission. The air units must have 2 additional MPs over and above the MPs required to reach the centre hex of the sea zone, however air units operating against River Flotillas in a Coastal Sea Zone may fly directly to the hex in which the flotilla is spotted, without paying the additional MP cost.
3. Naval Bombing Resolution. In all cases convert the modified operational bombing factor into to-hit attempts on the Naval Success Table. Roll 1D10 for each attempt, using all applicable DRMs. A “S” result means a hit. If the player Rolls 10, then the hit may be a critical hit. Critical hits are resolved per Naval Gunnery resolution.
 - a. Dive Bombing. Type D air units attack by dive bombing and have a +2 DRM on the Naval Success Table. If the naval targets are in port they gain an additional +1 DRM on the to-hit die roll.
 - b. Torpedo Bombing. Use the Torpedo Combat resolution system in the naval rules on page 38. The air unit’s torpedo factor is as follows:

i. Type B, Code V	:	Torpedo Factor 4 (for every 2 ARP of units)
ii. Type B, Code CV	:	Torpedo Factor 3 (for each ARP)
iii. Type A or F, Code V	:	Torpedo Factor 2 (for every 2 ARPs of units)
iv. Type A or F, Code CV	:	Torpedo Factor 3 (for each ARP)

NOTE: Despite port defences (such as anti-torpedo nets) a code V air unit flying the naval units in port bombing mission has a +3 DRM when carrying torpedoes. Any hits inflicted by a Code V bomber on shipping in a port are doubled, and in addition the enemy ship must automatically roll on the critical hit table.
 - c. Level Bombing. May be flown by Type A, B or HB air units. They have a negative DRM (see Rule 5.B.3.a) on the ‘to hit’ die roll.

I. Air Transport.

1. This mission is the transport of cargo from one friendly owned airbase to another or a drop zone within range with the air unit returning home after delivering or dropping the cargo. Air units types “T”, “G”, or “B”, can carry cargo. Cargo includes LPs, GSPs, Infantry SRPs and ground units which do not have heavy equipment.
2. There are two types of air transport mission; air lift and air assault:
 - a. Air Lift. This mission is flown by types “T” and “B” only, from a friendly airbase to a friendly airbase. There are three types of airlift operations that can be used:
 - i. Normal Range Operations. Ground units pay a two movement point cost when transported by air at this range. Both type “T” and type “B” units carry their normal cargo capacity at this range.
 - ii. Short Range Operations. Both type “T” and type “B” units can carry double their normal cargo capacity at this range. Ground units pay a one movement point cost when transported by air at this range.
 - iii. Long Range Operations. Type “T” units have their cargo capacity halved (rounding down) at this range. Ground units pay a three movement point cost when transported at this range.
 - b. Air Assault. This mission is flown during the owning player’s movement phase and includes the dropping of GSPs but not LPs.. See the Airborne Assault rule on page 30 for details on conducting this mission.
3. Air transport missions have the following restrictions:
 - a. Air transport capacities are reduced by 50% if the temperature is “Freezing” at the destination. There is no other modification as both the start and destination are friendly controlled, and have weather reporting capability.
 - b. Type “T” air units carry cargo up to the SP size indicated on the aircraft counter. Type “B” units can only transport supplies (no units), suffering no combat penalty for doing so. They are also more restricted to their loading than type “T” in that they can only carry 0.1 SP for each bombing factor they have at their printed range, 0.2 points at short range and 0.05 points at long range (Rule 8.B.2.a).
 - c. A ground unit may move to an airbase and be transported by air. Cargo in the form of supplies must either begin the turn in the hex with the base or be moved there by rail or QM.
 - d. The capacity of the base where the cargo is unloaded is not used. This mission is flown to the unloading base during the air movement step and flown back to a friendly airbase during the air return phase. It may be intercepted only at the unloading base. If intercepted, the units undergo air-to-air combat prior to landing to unload cargo.
4. Gliders and Glider Operations:
 - a. The cargo capacity of gliders is printed on their counter.
 - b. Gliders (type “G”) may not fly by themselves, but must be ‘towed’ to the target hex. Each glider must be towed by one type “T” or type “HB” unit.

- c. There is a 25% (round fractions down) range penalty for towing a glider. Type "T" towing units can carry cargo at half their normal capacity, whilst type "HB" units may not carry any cargo and may not conduct a bombing mission whilst acting as a tug.
- d. Gliders have full capacity at all ranges.
- e. Gliders do not use the capacity of an airbase.
- f. Nothing can be parachuted from type "G" units but towing type "T" aircraft may parachute GSPs.
- g. When a unit towing a glider is eliminated, the glider it is towing is also eliminated.
- h. Recovery of gliders when used. Gliders cannot be recovered in the context of the game.

J. Night Air Operations.

- I. Air operations at night can be flown with reduced or no penalties by units with the "N" (for night) capability designation. These units can fly day missions at the owner's option. These units are presumed to be flying at night unless otherwise decided by the owner. Air units without the "N" designation may fly night missions; see the P&E Rules for details. The procedures for flying night missions are identical to day missions except as follows:
 - a. All Air to Air, anti-aircraft and mission resolutions involving night missions are resolved separately from any day mission in the hex. Any AA in the hex can fire at BOTH the day and night mission (fire twice in effect).
 - b. Range Restrictions. Due to the changes in the number of hours of darkness, night missions are restricted to maximum ranges during the year. See the Night Air Operation Range Limit table.

9. Naval Movement

A. Phases.

1. There are four main naval movement phases in each player turn, making 8 in a game turn:
 - a. Movement Segment. Before moving ground units, the phasing player moves all eligible naval units in his movement phase, utilising their SMA allowance. A naval unit may spend some or all of its strategic movement rating to accomplish specific tasks including naval combat (e.g., replenishing, loading or unloading cargo.) A naval unit is not required to move in a naval movement step.
 - b. Reaction Movement Segment. After the phasing player has moved his naval units, but before he moves his ground units, the non-phasing player may move any at sea or fully supplied naval units up to their SMA counted in sea zones. These units may attempt to intercept enemy naval forces, or may move to support friendly ground forces with Naval Gunfire (Rule 13.P).
 - c. Phasing player Pursuit Movement Segment: Phasing ships may move up to their SMA again.
 - d. Non-phasing player Reaction Pursuit Movement Segment: Non-phasing ships may move up to their SMA again.

B. Sea Time Limits.

Naval ships may remain at sea for 4 consecutive friendly movement segments unless it is operating at extended range or replenishes at sea. If it does not return to a friendly owned port or naval base by the end of the fourth segment, it is depleted and is at sea. See Rule 14.Q for naval logistics. Use a convenient marker to show the passage of time for each TG at sea.

For Example: An Allied TG sails on the April I 40 turn during the reaction movement segment to intercept an Axis TG. The Allied TG must return to base on the reaction movement segment of the April II 40 turn, or it is depleted and at sea.

C. Transit Combat.

Naval combat is seen as happening during a sea zone "transit" and may be resolved at any time.

D. Carrier Air Power.

1. Phasing player carrier air power may launch air strikes at any time. Naval cooperation missions and airbase bombing missions are resolved immediately. Missions against Ground Targets are resolved during the main Air Mission or Ground Combat resolution steps.
2. Non-Phasing player carrier air power may launch air strikes at any time.
3. Interception missions from carriers may be launched against any mission targeting task groups and forces in the same Sea Zone as the carrier.
4. Carrier fighter units may fly as many interception missions during a player phase as required by incoming enemy air attacks until the fighter unit suffers a negative air result. This represents the carrier air group's generally higher availability rate and sortie on demand strategy, thus enabling the carriers to provide on-going air protection to its charges.

E. General Limits.

1. Returning to Base.
 - a. Naval units returning to base during their 4th movement segment at sea may expend their SMA only for movement, ASW if spotted by an SSF, or replenishment. They may not operate in any other way.
 - b. Transit Combat may be resolved at any time.

F. Fuel.

Every Ship has a fuel point rating. Each ship expends $\frac{1}{4}$ of its fuel level per movement segment at sea. If due to combat a ship expends more than its current movement segment SMA, deduct that SMA from its next movement segment allowance. Ships may expend more than their total (4 times the Strategic Movement Allowance Table value) SMA during their 4 segments at sea – however, if they do (for whatever reason), they are fuel depleted.

For Example: A Fleet DD costs 1 FP to refuel. It expends $\frac{1}{4}$ of a FP per movement segment at sea. If it does not replenish prior to the end of the fourth movement segment at sea, it is fuel depleted.

G. Spotting.

1. Naval units in a task group cannot be attacked by enemy air or naval units unless the Task Group that they are part of has been spotted. Naval Units may be spotted by other Naval Units, Aircraft, National Intelligence Means or Coastal Watchers. A Task Force that engages in transit combat is spotted by the opposing side for the remainder of the player turn, unless all enemy vessels are sunk in the resulting combat. Spotting attempts can be modified by a number of factors, including naval efficiency, surface search radar/HF DF, Sea Effects Chart (weather). See the Spotting Modifiers table for full details.
 - a. Spotting and Shadowing Rolls:
 - i. Spotting. Roll 1 D10 on the Naval Success Chart and modify the die roll by the applicable modifiers. See below for results.
 - ii. Shadowing. Roll 1 D10 on the Shadowing Table and modify the die roll by the applicable modifiers. See below for results.
2. Carrier Battle Groups (CBGs):
 - a. They may attempt to spot enemy naval task groups in their own sea zone. A result of F* or S spots the enemy TG for the remainder of the phasing player turn. They may also attempt to spot SSFs – see 3.d below
 - b. CBGs that sacrifice $\frac{1}{6}$ of their SMA may also launch a squadron of aircraft to search all adjacent sea zones to the ones that they are moving through during each naval movement segment. This simulates the use of Carrier based aircraft and the time taken to launch/recover aircraft. One type A or D air squadron must be allocated to this mission for the duration of the player turn. A result of S spots the enemy TG for the remainder of the phasing player turn.
 - i. The CBG, if it has replenishment ships with it, may elect to try and shadow the enemy force.

- ii. To attempt this it must replenish prior to rolling to spot. If it spots successfully, it rolls again on the Shadowing Table. If successful, it “follows” the enemy force one sea zone away from the shadowed units, moving when they do, until the end of the reaction phase in the following friendly player turn.

3. Naval Task Forces (NTFs).

- a. NTFs that spend $\frac{1}{4}$ of their sea zone movement allowance may attempt to spot enemy naval task groups in sea zones that they are in or transit. The ability of naval task forces to successfully spot enemy Naval Task Groups depends on their size and the type of ships that are assigned. This represents the fact that lookouts on the top of a Battleship or Battle Cruiser can see further than lookouts on top of a Destroyer.
- b. The number of ships is also crucial – at the owning player’s option, a Task Force with ten or more surface combatants may conduct Extended Searches and attempt to spot enemy forces in any 1 sea zone adjacent to those which the owning Player’s task force moves through. However, an NTF that uses this Extended Search formation is more vulnerable to enemy attack, as noted in the relevant combat rules. See Rule 13.F for more details.
- c. On a result of S, the enemy naval task group is spotted for the remainder of the phasing player’s turn only. Flip the enemy Task Force counter to its spotted side to illustrate this. Friendly Naval Task Forces that are used to spot enemy Naval Units may be spotted by the enemy naval force. The enemy player rolls one die, and applies the appropriate DRMs (Weather, NEM, and Spotting Modifiers Table). On a result of F* or S the task force attempting to spot is also spotted for the remainder of the phasing player’s turn.
- d. Any naval task group may also attempt to spot SSFs. In each sea zone entered, TFs may attempt to detect suspected enemy submarines during movement. Total the ASW rating in the naval task force (see the ASW/Air ASW Conversion Chart for the ship types and their individual ratings). For every 4 ASW additional points after the first 4 ASW points in the naval force, the naval forces receive a +1 DRM on the to-spot die roll against the SSF. Roll 1D10 on the Naval Success and Spotting table to determine the result applying appropriate modifiers. On an S result the TF has detected an enemy submarine force (if present in the sea zone) and can either evade the enemy submarine force or attack it if it has an ASW capability. As an option, any NTF that is attempting to spot SSFs and is not already spending a $\frac{1}{4}$ of its SMA as in (a) above expends one SMA per naval movement segment.

- 4. Convoys: These may not attempt to spot enemy Naval Task Groups in the context of the game. They may attempt to detect an enemy submarine force in the same manner as in 3.d above and engage it with ASW. See the SSF rule immediately below for more details.

5. Submarine Flotillas (SSFs):

- a. SSFs may attempt to spot enemy naval task groups in their sea zone that fail to spot them for whatever reason. On a result of S on the Naval Success Chart, the enemy NTG is spotted while it is in the sea zone occupied by the submarine flotilla.
- b. The submarine flotilla may then either attack the enemy Task Group or may, if the enemy Task Group is a convoy, attempt to shadow the detected convoy by rolling on the Shadowing Table. If successfully shadowed the convoy is spotted for the remainder of the phasing player’s turn, although the SSF does not leave the sea zone it is patrolling.
- c. If the submarine attacks, follow the submarine attack rules 13.O.
- d. An SSF may be detected by enemy NTGs that have an ASW rating, if the naval forces are in the same sea zone as the SSF. If the SSF tries to attack the NTG, the naval forces must attempt to spot the SSF prior to SSF combat resolution provided the NTG had not already failed to spot this SSF during the phase.
- e. A SSF that has been spotted may continue to shadow if already doing so, but cannot make an attempt to shadow an enemy convoy.
- f. Mark a spotted SSF with spotted markers or with a convenient marker to show spotting, or use a dummy counter to indicate when an SSF is not spotted.

- 6. Coastal Watchers: If the phasing player moves a task group into a sea zone, which includes enemy owned land or islands, it may be spotted. Roll 1 D10, modify with applicable DRMs and consult the Naval Success Table. On a result of F* or S the task group is spotted. If spotted, the NTG remains spotted until it moves into another sea zone.

- a. Enemy air units on the naval co-operation mission may, prior to further NTG movement, opt to attack the NTG if they are within range. If they do attack, resolve the mission prior to further movement.

- 7. Spotting by Land Based Air Units: Air units assigned to the Naval Spotting mission (see Rule 8.G.3.c above) may fly to a sea zone that is within range. They may attempt to spot enemy naval forces in that sea zone, and those adjacent to it that pass through those sea zones. A sea zone is within range if an air unit can fly to the sea zone locator hex and retain four movement points.

- a. Spotting Surface Ships: On a result of F* or S the enemy task group is spotted in that sea zone and all adjacent sea zones. The spotted task force may be attacked by air units flying the Naval Bombing mission.
- b. Spotting Submarines: On a result of S the SSF marker is spotted, the SSF is revealed to the spotting player (or removed if a dummy). If the SSF is an active SSF it may be attacked by the spotting aircraft (if it is Code A). Naval surface forces passing through a sea zone containing a spotted SSF receives combat modifiers per the ASW Attack DRMs table.

- 8. Spotting by National Intelligence Means (NIM): Carried out in the Initial Phase and if successful the NTGs remain spotted until the player’s next Initial Phase. All major naval powers developed sophisticated naval intelligence resources during the war, such as Allied Ultra and Magic Crypto-analytical units, and Axis B-Dienst Naval Intelligence and SIS (Servicio de Inteligencia Naval). The NIM Spotting Table provides the results for search attempts and the time element reflects changing national abilities in this area over the course of

the game. Roll one die on the Naval Success & Spotting table, apply any modifiers from the National Intelligence Means (Sea) table and if successful cross reference the result on the NIM Spotting Table:

- a. Surface Forces. The player may spot the number of NTGs noted on his NIM Spotting Table.
- b. Submarine Forces. The phasing player may attempt to reveal the contents of enemy SSF counters. If the NIM Table indicates an SSF then an enemy SSF is marked as spotted or removed if a dummy. Spotted SSFs can be attacked as noted in the Naval rules.
- c. If there are no suitable targets to spot then the player may place the 'spot' on a port. If a NTG leaves that port before the player's next Initial Phase the player may at that point assign the spot. Unassigned 'spots' cannot be carried over into the player's next Player Turn.

H. Naval Transport.

- I. This is the transportation of ground units by sea and involves loading and offloading the ground unit(s) being transported by NSPs or certain other naval vessels. CLs that have a cargo capacity may not carry units with heavy equipment. Embarkation may only take place in the Phasing Player's turn.
 - a. Naval Transport Capacity: This is the SP size of the unit except:
 - i. Motorized including QMs count as triple their normal SP size for the purposes of naval transport.
 - ii. Cavalry and semi-motorised units count as double their normal SP size for the purposes of naval transport.
 - b. NSP Capacity. Each NSP may carry 1 SP of ground units. When collocated they may freely be combined into larger capacity counters or split into smaller capacity ones. *For Example:* The Axis player has two 1 capacity, one 5 capacity, and one 3 capacity NSPs at the same location. These can combine/divide into any combination of NSP counters with a total capacity of 10 from a 9 and a 1 capacity NSP (there are no 10 capacity counters) to ten 1 capacity NSPs
 - c. Naval Combatant Capacity. Naval ships have a limited capability to transport units with no heavy equipment. Capital Ships (see 5.C.2.a) and Major Combatants (see 5.C.2.b) may transport ½ SP of ground units while Escorts (see 5.C.2.c) may carry ¼ SP of ground units.
 - d. Multiple NSPs and Ship counters can, where necessary, combine to carry units or resources larger than their individual capacity.
 - e. Loading and Offloading. Normally, units present in the hex during the phasing player's naval movement phase are loaded onto or off an NSP at a port. Units without heavy equipment may also load and offload over a beach.
 - f. Landing Craft. Units or counters with heavy equipment may load or offload from a beach using LCs. The units then tranship to or from NSPs for onward transportation.
 - g. It costs 1 MP to load or offload at a port. It costs 4MP to load or offload at a beach.
 - i. Ports. Port capacity determines the maximum number of units that may load or offload at a port. Port capacity is limited, and is set out in the Port Capacity Chart. Once the total port capacity has been used, the player may opt to load or offload ships using beaches.
 - ii. Beaches. As noted above, units may load or offload at a beach. Beach hexes with coastal cliffs cost an additional 3MPs per unit to load or offload at.
 - h. Movement of NSPs carrying ground units. NSPs move normally per the naval movement rules, but pay costs for transshipping, loading, and offloading.
 - i. Loading and Offloading:
 - 1 Ports. It costs the NSP 1 SMA to load or offload cargo. However, SLs only go through one load, move, and offload cycle per game turn.
 - 2 Beaches. It costs the NSP 2 SMA to load or offload cargo at a beach.
 - 3 Transshipping. See 9.I.1.a.iii below.

I. Amphibious Shipping Operations.

- I. Amphibious Operations are a naval mission designed to transport ground units to an enemy beach hex so that the ground units may attempt to land in the hex. Units unable to land in the initial wave of an operation form the Floating Reserve and these may be landed in the Pursuit Phase.
 - a. Amphibious Shipping Limitations.
 - i. Ground Units may be transported to a sea zone (the Assault Zone) adjacent to the target hex(es) of an amphibious assault by type NSP or LC only, but may only assault the target hex if transported there on (or transhipped from an NSP into) a LC. Loading costs for units participating in any amphibious operations are doubled (representing the time cost of "combat loading" the units.) Units participating in an amphibious assault must be in offensive supply on their embarkation turn, and may not be used for any purpose during the planning period (see Rule 9.I.2 below for planning times of the various operations). Where MP costs are greater than the unit has available the unit may land but not conduct overruns or move in the Pursuit Phase.
 - ii. LCs participating in an amphibious assault may not be used for any other purpose during the planning period (Rule 9.I.2.a.iii) and may only travel 1/3 their SMA to the assault zone under their own power, but may be carried to an assault zone by NSPs. An LC may be carried by a 2 capacity NSP as cargo.
 - iii. Transshipping units from NSPs to LCs costs 2 MPs of the Ground Unit's movement rating, and two sea zones worth of both the NSP and the LC's modified SMA.

- iv. LCs may carry 1 SP of amphibious units (including units with heavy equipment) or 0.5 SP of non-amphibious units (including units with heavy equipment) during an assault landing.
 - v. NSPs and surviving LCs must return to base after the operation. However, the units allocated to the floating reserve may land immediately prior to the departure of their NSPs and or LCs.
 - b. LC Damage. LCs may be damaged during an assault landing or in naval combat.
 - i. Assault Landings.
 - 1 Roll 1 Die adding all relevant DRM's on the Landing Craft Damage Chart for details of damage to the LC's.
 - 2 Damaged LCs are repaired if the owning player spends one Naval Repair Point per counter, and they spend one complete turn in a friendly owned standard, major or great port.
 - ii. Sunk in Transit. Sunk LCs are returned to play four player turns after the turn on which they were sunk at any friendly owned standard, major or great port within the theatre in which it was lost, that is a linked to a source of general supply or by a sea LOC to the national source of supply, if the owning player expends one Naval Repair Point per counter (lost) on the turn that it is lost.
2. There are three types of amphibious operation in Operation Murkur, and see also Tactical Surprise, Rule 10.M on page 30:
- a. Assaults:
 - i. Assaults are considered to be any landing operation:
 - 1 Onto hostile shore that consist of 3 SP or more of ground forces, with the intention of establishing a beachhead to occupying territory as a base for future operations.
 - 2 Into a Neutral Owned port. Roll 1D10 per unit landing the forces. On a roll of 10 the assaulting force suffers a critical hit on the unit affected. Resolve per the naval gunnery critical hit procedure. On any other roll the force lands into the port using the port capacity unaffected by naval defences. Landed forces then operate per the remainder of the amphibious assault rules below.
 - ii. Amphibious assaults occur only during the first naval movement phase of the owning player's turn. Ground Combat is resolved during the Ground Combat resolution element of the game turn.
 - iii. Planning time required. An amphibious assault must be planned six game turns in advance. At that point the NSPs, LCs, and the general number and type of the ground units to be involved are designated. No naval or ground unit may have more than one amphibious assault planned for it at a time. When the planned execution date is four turns away, the LCs and NSPs that will carry the force to land must remain in the designated embarkation port(s) until the turn of execution. They may not be used for any other purpose unless the assault is cancelled. Specific ground units are scheduled for the operation. These units must be kept out of contact with enemy ground forces and within movement distance of the designated embarkation ports (This distance to be adjusted to include the loading and unloading costs {4 MP total} for the unit.) If the designated ground units are involved in any ground combat during this time they are not available for the assault and it is cancelled. If the NSPs used use "extended" supply rules as part of their movement, they are held out of use five not four turns prior to the execution date.
 - iv. Cancelling or delay of execution. Assaults may be cancelled at any time and a player is not obliged to follow through on a plan. The owning player may "delay" the landing for one turn, keeping the plan in effect and binding all involved units to the plan for one additional turn. The ground units need not load if the operation is delayed.
 - v. Combat. Units landed at an enemy occupied coastal hex attack the defending units. All attacking units have their normal attack factors, except for marine and commando units, which are doubled. All attacking ground units are destroyed at the end of the turn if they fail to gain control of the hex where they landed.
 - b. Landing on Friendly Shores: This is the use of LCs to transfer units to areas where port capacity is limited or restricted to unloading other cargo. There is no planning time required for this type of operation. Transhipment Costs are charged.
 - c. Evacuations: An evacuation is the lifting of forces off a beach (no port capability used) due to a calamitous military situation. Evacuations are declared events (by the player desiring to execute them). Once declared, the units to be evacuated are removed from the map as they load onto the NSPs, with only the Infantry replacement points needed to rebuild them available to be 'taken off the beach'. All other points (armour and artillery) are lost and do not go into any of the owner's replacement pools.
 - i. If a player has a sufficient number of LCs, a proportion of the heavy equipment is rescued:

1 One LC per SP evacuated:	25% of the Arm or Arty SRPs in the unit.
2 Two to three LCs per SP evacuated:	50% of the Arm or Arty SRPs in the unit.
 - ii. LCs used for an evacuation may be permanently lost:
 - 1 Roll 1D10 per LC and consult the naval success table
 - a. On an S result the LC survives, but is in refit as soon as it enters a friendly owned port for 4 game turns.
 - b. On an F* result, the LC is critically damaged in game terms. The LC must be rebuilt expending 1 NRP, and then refitting the LC in a friendly port for 6 game turns.
 - c. On an F result, the LC is destroyed, and cannot be rebuilt in the context of the game.
 - 2 Fractions. In all cases above, retain SRP fractions.

J. Submarine Movement.

See Rule 13.O.1

10. Ground Combat

A. Definition.

During the combat phase, a player's units may attack adjacent enemy units. Attacks are voluntary and at the option of the phasing player. However, initiating air combat in the hex forces the attack on the ground to be completed. No unit may attack into or across prohibited terrain. The Ground Combat Results Table is used to resolve ground combats.

B. Procedure.

1. The attack (combat) strengths of all the forces attacking are modified for terrain, supply, national contingent (see C.5 below), and CEV (including BAI), then totalled.
2. The defence (combat) strengths of all the forces defending are modified for supply, national contingent, weather and CEV (including BAI), then totalled.
3. The two totals are compared in the following manner; divide the attacker total by the defender total to arrive at a combat ratio (always expressed as attacker : defender). If the ratio is not exact, round it to the nearest hundredth and use a percentile roll to determine the initial odds column used on the Combat Results Table. If the result of the 2D10 roll is equal to or lower than the ratio the higher odds column is used, if higher than the ratio the lower odds column is used.

Example 1: 34 factors attacking 9 factors $34/9 = 3.77:1$

- a. 2D10 result greater than 77 means that the attack is a 3:1.
- b. 2D10 result equal to or less than 77 means that the attack is a 4:1.
- c. 1D10 is rolled and the result is modified by any terrain or other special effects to the die roll from any source, such as Air Superiority (Rule 5.B.6), weather and use of armour or other specialist units.
- d. The adjusted die roll result is then cross indexed with the odds column under the ratio determined above.
- e. This final result is then applied to all forces involved in the combat.
- f. Results are applied to both sides immediately after the die roll for each individual combat.

Example 2: A German Cavalry unit with an attack strength of 5 attacking into a Wood hex. Weather is good and it is in Offensive Supply.

- a. German CEV is 1.5 and the terrain combat modifier is 1.25. The unit has a modified attack strength of $9.38 - 5 \times 1.5 \times 1.25$.
- b. If it were attacking across a Fortified Hexside into the Woods its modified attack strength would be $2.34 - 5 \times 1.5 \times 1.25 \times 0.25$.
- c. If you are using the optional 'Going' rule then its modified attack strength would be 2.81 across the Fortified Hexside or 11.25 straight into Woods as it would be on a modified CEV of 1.8.

C. General Modifications and Restrictions.

1. No unit may attack, or be attacked, more than once per combat phase. If a unit retreats to a hex that is then attacked, it takes no part in the defence and suffers the result of the combat with the defending force.
2. Each attack must be directed against a single enemy hex. Two or more enemy held hexes cannot be attacked by the same units as a single attack.
3. Units in the same hex may attack different hexes, but each hex attacked is resolved independently. A single unit may not split its attack strength to attack into multiple hexes.
4. The order in which individual combats are resolved is determined by the attacker.
5. National contingents. When units from more than one nation combine in an attack, there is a modification to the attack strength. The majority contingent (in terms of SPs) remains at full strength, while the other national contingents are halved. If there is no minority, the owning player designates the minority. The minority contingents retain any special capabilities they bring to the attack (Armour heavy, engineer benefit, etc.). When defending a minority contingent is reduced by a quarter, retaining fractions.
6. Attacks at greater than 9:1 are treated as 9:1.
7. Attacks at less than 1:4 are treated as 1:4
8. Die roll results higher than 15 are treated as being 15, those lower than -4 are treated as -4.

D. Combat Results.

1. *AH: Attacker Halved.* The attacker must lose $\frac{1}{2}$ the stacking points of the DEFENDING force total. The defender retains the hex.
2. *DH: Defender Halved.* The defending force must lose $\frac{1}{2}$ its total stacking points and must retreat.
3. *AQ: Attacker Quartered.* The attacking force must lose $\frac{1}{4}$ of the stacking point total of the defending force. The defending force retains the hex.
4. *DQ: Defender Quartered.* The defending force must lose $\frac{1}{4}$ of its total stacking points. The defending force must retreat.
5. *AE: Attacker Eliminated.* The defending forces take no losses. The Attacking force is eliminated. Any remaining attacking units must retreat.
6. *HQ: Attacker Halved, Defender Quartered.* The attacking force must lose $\frac{1}{2}$ of the total stacking point size of the defending force; the defending force must lose $\frac{1}{4}$ of its stacking point total. The DEFENDER has the choice to retreat or not. If the defender chooses NOT to retreat, the loss required goes up to $\frac{1}{2}$ its total stacking points, but remains in the hex. If the defender does retreat, the attacker may advance into the hex after combat.
7. *HR: Halved Retreat.* The attacking forces lose $\frac{1}{2}$ of the total stacking point size of the defending force; the defending force must retreat.

- 8. *DA: Defender Annihilated.* The defending force is completely destroyed. If units in it have reduced sides, these are not received. The defending force does not receive combat replacements. The attacker may advance into the hex after combat.
- 9. *QR: Quarter Retreat.* The attacker must lose $\frac{1}{4}$ of the defending force total of stacking points. The defender must retreat.
- 10. *HX: Half Exchange.* The smaller force is eliminated, the larger force suffers losses equal to half the SP size of the smaller force. If the attacker is eliminated (including all reduced units) the defender may elect to retain the hex. If both sides are equal then the defender is regarded as the smaller force and loses the hex.
- 11. *DR: Defender Retreat.* Neither the attacker nor defender takes losses. The defending force must retreat.
- 12. *QH: Attacker Quartered, Defender Halved.* The attacking force must lose $\frac{1}{4}$ of defending forces total stacking points; the defending force must lose $\frac{1}{2}$ of its total stacking points. The defending force must retreat.
- 13. *DE: Defender Eliminated.* The attacking force takes no losses, the defending force is eliminated. Any remaining units must retreat.
- 14. *EX: Exchange.* The smaller force (fewer SPs) is eliminated. The larger force suffers losses equal to the SP size of the smaller force. Then the smaller force retreats or returns to its starting hex if it was the attacker. If both sides are equal the defender retains the hex and any unit(s) reduced as a result of the combat does not need to retreat.

E. Losses.

- 1. In general, all combat losses are calculated in terms of stacking points involved in the action (attacker and defender), and are rounded down to the nearest half stacking point.
- 2. The number of stacking points required to be lost is defined in the results (above). Required Losses' (Rule J below) may also apply. This specifies the types of stacking points that must be lost as a proportion of the total losses resulting from the combat, if any.
- 3. As naval and air units have no 'stacking point size', they are never included in ground loss calculation.
- 4. A unit with a reduced side, typically a division, can satisfy combat losses by flipping to its reduced side. In this event if the combat result also required the other side to take losses proportionately those losses are based on SPs actually lost. *For Example:* If an attacker scores a HX result against a 4SP sized division, the defender can flip the division to its reduced side and retreat, and the attacker loses 1SP of units, not 2SP. Note that only actual losses are taken account of in the combat replacement system
- 5. If the side suffering losses cannot precisely match the losses called for as a result of combat, the side must take losses that exceed those called for. *For Example:* A force attacking with 8 SPs takes 5 SPs of losses. The attacking force consists of two divisions, worth 4SP each The attacking player may reduce and eliminate one division for 4 SP, then he must reduce the other division for 2 SP losses, and then records his total SP losses (6 SP) for the combat replacement system.

F. Reduced Strength Capable Units.

- 1. Most divisions and some other ground units can be absorb losses in combat and retain unit cohesion. These units have a reduced strength printed on the reverse of their counter. Such units can flip to their reduced side to satisfy combat losses rather than be eliminated. If the unit is already reduced, then it would be eliminated. Its reduced side represents a size equal to $\frac{1}{2}$ its initial SRP size. For divisions 2 SRPs of its unit type are set aside for use in the 'Combat Replacement' system, for Brigades or other sized units $\frac{1}{2}$ of its SRPs are set aside for use in the Combat Replacement system. *NOTE: there is no combat replacement system in Merkur.*
- 2. It is possible for a unit to be reduced and then eliminated. The unit counts as half its SP strength if reduced, and as half its SP strength if its reduced side is later eliminated.

G. Movement after Combat.

- 1. There are two types of movement possible after combat; Retreat and Advance. Attacking forces are never required to retreat (unless the result is EX), while defending forces cannot advance after combat. Units in a hex can retreat individually, in separate groups, or as a single stack at the owner's option.
- 2. Retreats. When a unit is required to retreat, the owning player must move it one hex away from the hex it occupied during the combat. All units in a hex retreat in an order determined by the owning player.
 - a. Retreat Restrictions and Requirements.
 - i. A unit which must retreat into an EZOI is eliminated, unless it has a reduced side.
 - 1 A unit which has a reduced size and is at full strength prior to the required retreat is reduced.
 - 2 If it must continue to retreat (due to stacking) and again must enter an EZOI it is eliminated. Note: Units eliminated in this manner are also put into the combat replacement system.
 - ii. A unit must retreat according to the following priorities:
 - 1 To a hex not in an EZOI and not over stacked.
 - 2 To a hex not in an EZOI but over stacked.
 - 3 To a hex in an EZOI and not over stacked.
 - 4 To a hex in an EZOI but over stacked.
 - iii. Stacking. When a unit violates stacking by retreating into a hex, it must continue to retreat until it no longer violates stacking. Units that are capable of being reduced may be reduced at the owner's option to avoid being forced to further retreat if such a reduction would satisfy the hex stacking limit. Stacking points lost in doing this are added directly to the appropriate combat replacement pool. Any units that cannot retreat to avoid exceeding stacking are totally eliminated (not reduced). Their points go into the appropriate replacement pool.
 - iv. Retreated Units and the Defence. When units are forced to retreat into a hex that is subsequently attacked in the same combat phase, they contribute nothing to the defence. They are subject to the results of the combat in the hex. They are

included in the total for the defender losses but only the contributing defending force SPs in the target hex are used to determine the loss for the attacker.

3. **Advances after Combat.** If the attacked hex is cleared of all enemy units, the attacking player may occupy the hex with units that participated in the attack. The hex can be occupied only up to its stacking limit, but the units can come from any hex that it was attacked from. If there are units still in the attacked hex, the attacking force can overrun them (Rule 7.E) if sufficient factors can be moved into the defending hex from any of the attacking hexes. This advance is voluntary on the part of the attacker, but must be completed prior to resolution of the next combat.

H. Zero Strength and Limited Strength Units.

1. Any regular (non-partisan) ground unit with a printed attack strength of zero may not attack by itself but:
 - a. It may be included in an attack to either provide a special benefit, or to be permitted to advance after combat.
 - b. These units are eliminated when attacked alone by any unit with a combat strength of one or more.
 - c. Their stacking point size is used both for losses and required losses.
2. Any unit with an attack factor of (1), i.e. a combat factor in parenthesis, is treated as a zero strength unit in all respects except against partisan units when it has a combat strength of 1.

I. Terrain Effects.

The terrain of the defender's hex and the hex sides being attacked across may modify the strength of attacking units. The effects columns on the Terrain Effects Chart (TEC) show the effects on combat for each terrain type. Any DRMs are cumulative for the combat, with the final adjusted total applied to the basic ID10 roll for that combat.

J. Required Losses.

Ground units with special capabilities are required to take losses when their benefits are used to influence the outcome of ground combat. This represents the increased risk they suffer by influencing the combat. In any combat where a side uses the benefits a +2 DRM from any proportion of effects or specialist units, at least half of the SP losses by that side must be taken from units who are ½ or greater capable in that category.

For Example: An armour heavy force attacking field works with 2 armoured divisions (8xSP) giving +2 DRM, an infantry division (4xSP), and two assault engineer battalions (1xSP {4xSP for combat effects}) giving another +2 DRM, would be required to take 50% of any losses from the armour and engineer units. Against this force if the defender had 5 AT points giving a +1 DRM then there would be no required losses from ATE capable units. The owning player decides the order in which units are lost. One unit per type contributing special capabilities is taken (or reduced) at a time, with a second loss from each type only allowed to be taken when all unit types contributing have taken losses. In the above example if the attacker suffered losses of 6xSP then he could reduce an armoured division (2xSP), eliminate an assault engineer battalion (½xSP) and then either eliminate the other assault engineer battalion or take another 2xSP of armour losses before taking any infantry losses.

K. Concentric Attacks.

1. Forces attacked from multiple sides may suffer a combat penalty. If the attacker meets any or all of the following requirements, the attacker gains a +1 DRM on their combat die roll:
 - a. The attackers attack across multiple hex sides, separated by at least one other hex side.
 - b. The attackers attack across at least 3 hex sides.
 - c. The attackers attack across diametrically opposite hex sides.

L. Abilities of Special Unit Types.

1. **Combined Arms Effects:** Specialised units may have a dramatic impact on a battle above and beyond their basic Combat Strength. Combining these arms will dramatically increase the combat power of forces, especially when proper use of terrain is considered.
 - a. **Armour Shock Effects (ASE):** To reflect the 'shock' impact of armoured fighting vehicles in combat, the presence of a British Armoured unit or a German Light Armoured unit will give the owner a +1 DRM in combat (-1 DRM if defending).
2. **Mountain Troops Effects.** Mountain Troops are specially trained and equipped to operate in difficult terrain. Attack Strength is doubled against mountain hexes. Their Defence strength is NOT modified in any way. In addition, a stack with greater than ½ its SPs consisting of Mountain units gains a +2 DRM when attacking hills, woods, jungle, wooded hills, or karst terrain.
3. **Motorised Effects.** On the TEC Motorised Artillery units may choose to use the Combat Modifiers for either 'Motorised' or 'Other' units. In general motorised units have no additional modifiers except where noted in the ASE rule above.
4. **Artillery Effects:** Artillery class units not stacked with at least 1 SP of non-artillery, non-support units attack and defend with their combat values halved.
 - a. **Types of Artillery.** Artillery is divided into two groupings for Operation Merkur. They receive any benefits described below:
 - i. **Field Artillery.** All artillery or rocket units not designated as being Siege, Heavy, or Coastal.
 - ii. **Coastal Defences (CD).** This is artillery dedicated to engaging ships at sea.
NOTE: No artillery can fire more than one hex in the game.
 - b. **Effects of Artillery.**
 - i. **Field Artillery.** There is no benefit for field artillery other than those described in the TEC.
 - c. **Field Artillery as CD.** Combat factor is multiplied by 4 for use in the naval system. Field Artillery may only engage enemy naval forces conducting or supporting an amphibious landing.
5. **Commandos:**
 - a. Commandos are not counted when determining the number of SPs for special capabilities in an attack.

- b. Commandos may attempt to gain tactical surprise (see 'Tactical Surprise' below).
- c. Commando units may always retreat into an unoccupied hex, even if it is in an EZOI.
- d. When a stack of units containing a commando unit is forced to retreat as a result of combat, the commandos can allow the units to retreat through or into a hex that they would normally not be able to retreat through. To do this, the hex being entered must be unoccupied by enemy units, and the hex must not be prohibited terrain. The units must not exceed the stacking limit in the hex that they are attempting to enter.

M. Tactical Surprise.

- I. Surprise is a major force multiplier in military operations. Tactical surprise is a matter of die roll chances for success. Tactical surprise is possible in the following situations:
 - a. Forces conducting airdrops (the turn they land), forces conducting amphibious landings (assault, raid, or tactical) and forces conducting regular ground operations, if accompanied by commando type forces (at least ½ SP in size). These attempts suffer no penalty for failure.
 - b. Any ground combat force can also attempt surprise. The attacking player can state that surprise is being attempted, and rolls for success. This type of attempt may suffer a penalty for failure.
 - c. To determine if surprise is achieved in all the above conditions, consult the Success Table, roll 1D10, and modify that roll as described there. Success means surprise is achieved, failure means it is not.
 - i. Success gives the attack a +2 DRM on the attack roll in addition to any other DRMs in the combat.
 - ii. Failure for all attempts described in 13.a (above) has no further impact on the combat.
 - iii. Failure in cases described by 13.b (above) imposes a -4 DRM penalty on the attack in addition to any other DRMs in the combat.

N. Airborne Assault.

- I. This rule explains how combat units and supply can be parachuted or glider landed into enemy or friendly territory. Parachute, airborne, parachute commando and partisan HQs are capable of being parachuted. NOTE: While some units have the term 'parachute' in their name, it is strictly an honorific title, not a functional one. Only those units with the parachute gull wings within the unit symbol or only have the parachute symbol within the unit icon are air droppable.
 - a. Glider Units can only be landed in gliders (type "G").
 - b. Division sized units must always be broken down for transportation and dropping.
 - c. Planning. Air assaults into enemy owned territory must be planned in advance of the turn they are conducted by following these steps:
 - i. Planning consists of noting both the target hex and the units to be dropped during the executing player's initial phase the turn prior to the drop being executed.
 - ii. A single air droppable unit may only have one drop planned at a time. However divisional breakdowns may have up to three drops planned at any given time, but the player must drop all the divisional breakdowns from each division either in the same hex, or in adjacent hexes. Furthermore drops in more widely spaced operations are subject to the "single unit" limitation.
 - iii. Planned operations can be cancelled at the owning player's option.
 - iv. Drops are automatically cancelled if the planned drop unit begins the turn the plan is set for in an EZOI, or is attacked by enemy ground forces.
 - v. An air drop can be planned for unit(s) scheduled to arrive as reinforcements.
 - d. Air Drop Mission. This mission is flown during the owning player's air phase. Its purpose is to drop units or supplies by parachute or glider. This mission may be intercepted in the hex targeted for the drop of units or supplies, and must undergo air to air and antiaircraft combat before dropping the cargo. The air units that drop the ground units or release the gliders may not land in the target hex of an air drop, even if there is an airbase in the hex, until the next friendly initial phase – assuming the airbase remains friendly owned. Air drops are treated the same as airlift, with the target hex for the drop replacing the 'unloading' airbase, with these differences:
 - i. Regular Range. All cargo capacity is halved.
 - ii. Short Range. All have normal cargo capacity.
 - iii. Extended Range. All cargo capacity is quartered.
 - e. Glider Operations. (Rule 8.I.4).
 - f. Disruption. In an airdrop (parachute and/or glider landing), units may become disrupted, or supplies may be lost. 1D10 is rolled on the Success Table for each unit and for every three (or portion of thereof) supply points being dropped. Apply the following modifiers to the roll with all modifiers being cumulative:
 - i. +2 if the entire unit is delivered in gliders.
 - ii. +2 if dropping into friendly owned or occupied hexes.
 - iii. -2 for dropping into a major or large city hex.
 - iv. -1 if dropping at night.
 - v. -1 for dropping onto enemy units or EZOI.
 - vi. -1 for dropping into any hex other than clear terrain hex.
 - vii. -1 for dropping in Mountain, Forest, Jungle, or Swamp hex.

- viii. -1 for dropping in heavy storm activity.
- ix. -1 for every 8 hexes or part of 8 flown to the drop hex.
- x. Any modifiers from the ACEV Chart.

For Example: A British unit drops into a rough hex, in an EZOI, in heavy storm weather, after flying 12 hexes. The total modifier is -5.

g. Effects of Disruption:

- i. If the adjusted total is 1 or zero, the unit is disrupted. Its combat strength is halved the turn it is dropped (from the time dropped until the next owner's initial phase).
- ii. If the adjusted total is -1, or - 2, the unit or supplies are eliminated if landing in an enemy occupied hex. If not it may not attack at all until after the next owner's initial phase and its combat strength is halved for a turn.
- iii. If the adjusted total is -3 or less the unit or supply cargo is eliminated regardless of hex or enemy forces.
- iv. A disrupted unit does not gain control or ownership of the hex it occupies. A supply line may be traced through the unit as if it were not there; units may move through or past it as if it were not present.
- v. The effect of disruption on units ends at the start of the next friendly initial phase. Surviving units then operate normally as per their supply status.

h. Ground Operations. Airborne units can drop into hexes that are either enemy occupied or vacant. The procedure for attacks is slightly different in each case. The following rules apply to units in the turn they land:

- i. Into Enemy Occupied Hexes. Airborne units which land in hexes occupied by enemy forces must attack the enemy forces in the hex during the combat phase. If the attack does not force the enemy to leave the hex, the force(s) that landed there are eliminated.
- ii. Adjacent to Enemy Units. Airborne units dropped adjacent to an enemy unit may attack during the combat phase.
- iii. Zones of Influence. Airborne forces do not exert a ZOI during the turn they are dropped. They commence having a ZOI during the initial phase of the next friendly player turn.
- iv. Movement. Airborne units may not move after landing in the movement phase, but can move in the pursuit phase of that turn.
- v. Tactical Surprise. The Success Table should be consulted to see if 'surprise' is gained by any force attacking on the turn of the drop. All airdrops receive a DRM of + 5 on the Success Table, on the turn dropped. Air droppable units receive a +2 DRM on the Success Table on all other turns.

II. Air Combat

A. Definitions.

- I. Air combat occurs when air units of one side intercept air units of the opposing side. Air to air combat is resolved as designated in the turn sequence (for the various missions possible).
 - a. The Phasing Player and the Non-Phasing Player. Used to show the interaction between the players when engaging, and being engaged by, enemy forces.
 - b. Air Combat Efficiency Variable: This is a die roll modifier for combat based on the training, experience and other soft factors (C3I, doctrine, etc.) that an air force has. It is abbreviated ACEV for use in the rules. The national ACEVs are in the ACEV chart.
- NOTE: Naval air units (such as FAA and USMCA) use their naval NEM rather than ACEV.

B. General Air Combat Conditions.

- I. Players cannot avoid air combat by cancelling a mission once launched. The phasing player may choose to cancel air missions in the hex, but they remain subject to interception (but not AA) before returning to base. Cancelled air missions return to base during the air return segment. Units can only participate in one air to air combat per player turn.
 - a. A hex may contain several separate combats:
 - i. Day Missions: As there can be multiple missions flown into a hex, they and their escorts are intercepted and engaged by AA on a mission by mission basis. If there are multiple missions in a hex, the Phasing Player must specify which aircraft belong to each individual mission force, and which escorts are assigned to which mission force. The non-phasing player must specify which mission each interceptor is attacking.
For Example: A phasing player force is attempting to daytime bomb a Strategic Target in the hex, and is also attacking a bridge in the same hex. Each mission force is intercepted separately by non-phasing player in the hex and each combat is resolved separately.
 - ii. Night Missions: Night missions are completely separate from day missions, even when flown to the same hex. Night air combat is resolved separately from day missions.
For Example: A phasing player force is attempting to daytime and night-time bomb an economic target in the hex, and also attacking an operational target (a bridge) in the same hex. Each mission force is intercepted separately by non-phasing player in the hex, and each combat is resolved separately.
 - b. Type "F" units. There are four conditions that directly apply to effect the combat strength of type "F" air units. These units, when part of a mission force and carrying bombs, can choose to jettison their bombs (the jettisoned factors are not delivered to any target) and fight with no penalty.
 - i. All fighters with Ground Controlled Intercept (GCI) capability flying short range interceptions have their air attack strengths doubled. See the GCI table for more details.
 - ii. Fighters have their Air to Air combat rating reduced by 25% at extended range, but never below 1.
 - iii. All fighters flying long range escort missions have their attack strengths halved, but never below 1.
 - iv. Fighter type units who retain their bombs during the air to air combat have their attack factor halved (rounding up).
 - c. Determined Bombing Attacks (DBA): Aircrew during the war were, on occasion, exceptionally determined to complete their mission, and thus pressed home their attacks despite extreme risk. Players may nominate a mission as flying a DBA prior to flying the mission. All ATAC is resolved normally. AA in a hex is doubled for loss calculation but dispersion is ignored against land targets, quartered against naval targets.
 - d. Determined Transport Missions (DTM): Aircrew during the war were, on occasion, exceptionally determined to complete their mission, and thus pressed home their runs despite extreme risk. All ATAC is resolved normally. AA in a hex is doubled for loss calculation however the transport mission is completed prior to losses being applied to the transports.

C. Air Combat Resolution.

- I. Air combat happens simultaneously and both players follow the procedure below before any results are applied to their forces.
 - a. Air to Air Combat (ATAC). Each bombing mission to a hex must be dealt with in turn, and each mission has its own assigned Escorts (if available). Resolve ATAC one bombing mission in a target hex at a time using the following method:
 - b. Both Players:
 - i. Separate missions into bombers and escorts.
 - ii. Air units allocated to intercept are designated as Air Superiority or Bomber Destroyers. Those attacking as Air Superiority solely engage the escort, those operating as Bomber Destroyers engage the bombers and any fighters not engaged by the Air Superiority Group.
 - iii. The intercepting player allocates his attacking aircraft against enemy aircraft, and may not allocate more than one aircraft against a defending air unit unless each defending air unit in the mission group has an aircraft allocated against it.
For Example: The intercepting player has 6 fighters; the intercepted player has 3 escorts and 5 bombers. The intercepting player allocates 3 fighters as the Air Superiority force, and 3 fighters as Bomber Destroyers. The intercepting player allocates one fighter against each escort. The bypassing Bomber destroyers are allocated against 3 of the bombers. 2 of the bombers are ignored for this combat.
 - iv. If an escort has been selected by the intercepting player to be engaged it may, at the owning player's discretion, ignore the Air Superiority unit and attempt to attack the Bomber Destroyers. If it tries to do this the intercepting player rolls

with a +3 DRM on the air to air combat chart against the escort which cannot return fire. If the escort survives it may attack the Bomber Destroyers which in turn must decide to either engage the escort or continue to attack the bombers. Similarly, an interceptor may attempt to bypass an escort it has been paired with and attack the bombers. The escort attacks with a +3 DRM and if it survives it may engage the bombers.

- v. Consult the Air CEV table and compare the general pilot quality for each side. Subtract the lower ACEV from the higher ACEV to produce a differential. Use this as a DRM for both players' die roll on the Air CRT: positive for the side with the higher ACEV, negative for the other, and no DRM if both have the same ACEV.
For Example: the pilot differential for the intercepting player is +3, that of the defending player is (-1). The result is +3- (-1) = +4 DRM to the intercepting player, -4 DRM for the defender. If the intercepting player is -2, and the defending player is +1, the result would be a +3 in favour of the defending player etc.
- vi. Overwhelming allocations of Type F air units to a combat may result in an additional DRM. This is determined by consulting the Air CRT DRM Chart. Apply the DRMs per the chart to the air combat resolution die roll. This chart is NOT affected by percentile die rolls. Type HF units are treated as "other" if the opposing side consists solely of Type F units.
- vii. Roll 1D10 on the Air Combat Results Table, modify the result by the ACEV modifier, and the fighter ratio modifier.
- viii. Compare and impose the results. The results are expressed as follow:
 - 1 R: Return to base, suffer no combat loss, if a bomber, 0.25 times the applicable bombing factor is dropped. Roll AA to see if the payload is dispersed.
 - 2 R*: Return to base, suffer no combat loss, if a bomber, 0.5 times the applicable bombing factor is dropped. Roll AA to see if the payload is dispersed.
 - 3 I: Air Unit suffers 1 step loss. The balance of the unit breaks through to the target, Roll AA for all effects.
 - 4 2: Air unit is eliminated. It cannot complete any other mission steps.
 - 5 1R/2R: If 1R the unit suffers step losses as per 3 above, if 2R suffers losses as per 4 above. In both cases if there are additional air units involved in the air combat of a similar type, one other of those air units selected at random, after all other ATAC results have been applied, suffers a R result.
 Note: Dispersed bomb factor is always rounded UP to the nearest full factor.
- ix. Remove all eliminated air units from the map. Record the loss by model if applicable, and whether EFT or EHT.
 NOTE: This is for later use in balancing the losses in the upcoming player initial phase.
- x. Surviving air units may be attacked by AA prior to mission completion.
- xi. During the air return phase, surviving air units return to base.

12. Antiaircraft Combat

A. Antiaircraft Artillery.

- I. Various units and facilities have antiaircraft (AA) strengths and can engage enemy air units.
 - a. Types of Antiaircraft. There are two types of antiaircraft strength; heavy and light:
 - i. Heavy AA. Only heavy AA, and a percentage of naval ship AA, can fire against economic bombing missions. Ground units with heavy AA are treated as artillery for combat, are full antitank effect, and can fire on operational and CAS missions. Heavy AA units may be in one of two modes – AA or AT. Immediately before resolving any air or ground combat the owning player must decide what mode any Heavy AA units are in, and they must remain in that mode for the rest of the Player Turn. If deployed for AA the unit has zero AT effects. If deployed for AT effects the unit has zero AA strength. Make a note of units in AT mode or identify them with a convenient marker, or place them in the AAA rather than Artillery section of the Ground Stacking Charts.
 - ii. Light AA. Light AA can fire on operational and CAS missions. Exception: LAA may not engage a carpet bombing mission.
 - b. Unit and Organic Capabilities: Ground combat units with the AA branch symbol, naval units, cities, and airfields etc (see the National Organic AA Chart and the UIT) have specific capabilities which are listed below:
 - i. Ground Combat Units. Any ground combat units with an AA factor (other than AA branch units) have light AA.
 - ii. Ground Combat AA Units. The AA factor of this unit is usually printed inside the unit symbol. This factor is only used against air units in flight and has no influence on the ground combat strength of the unit.
 - iii. Naval Unit AA. All naval AA is a mixture of light and heavy AA. See the Naval Gunnery Split Chart for more details of the percentage splits. Only Type F, A, D and B (only when flying torpedo or skip bombing missions) units maybe engaged by the full AA rating. Type HB or B (flying level bombing missions) may only be engaged by the modified heavy AA rating of the target ships.

B. Antiaircraft Fire Resolution Preparation.

- I. AA fire is resolved as indicated in the sequence of play, after all air combat in the hex, and prior to the resolution of any mission the attacking air units are attempting. AA fire is resolved using the National Technical Means AA Chart and the AA Combat Results Table. Determine the mission of the air units being engaged. Aircraft executing separate missions are engaged separately.
 - a. Strategic Bombing – Only heavy AA may fire against the bombing aircraft. Losses are determined by use of the AA Combat Results Table for the AA's firing nationality and date.
 - b. Operational Bombing – All types of land based AA factors may engage aircraft flying this mission.
 - c. Interdiction Missions. Due to the 'area' nature of these missions, when the air units are placed in the central hex of the zone that is being attempted, the defender can take any two hexes in the projected zone, total their AA value and use that total to engage the air units.
 - d. Close Air Support. All types of AA can fire on aircraft executing these missions if in the target hex. For an attacking force the AA strength in all the hexes being attacked from is totalled and then divided by the number of hexes attacked from. The result is rounded down.
 - e. AA factors may be fired against each separate mission operating against targets within a hex (or adjacent hex side).
For Example: An attacking force is coming out of 3 hexes, it has a total of 8 Heavy AA factors deployed in AA Mode within the hexes. $8 \div 3 = 2.67$, which is rounded down to 2 for engaging enemy CAS missions.
NOTE: AA is doubled against DBA and DTA missions (Rule 11.B.1.c & d above)

C. Antiaircraft Combat.

- I. After all ATAC is completed, any AA units in the target hex or zone must attack the mission force (only) prior to resolving any bombing attack. Method:
 - a. Determining AA factor:
 - i. Target Zone: Total the AA in all hexes of the zone, and divide by the number of hexes in the zone. This is the applicable AA factor.
 - ii. Target Hex: Total the AA in the hex. This is the applicable factor. Exception: If the mission force includes TYPE HB, only the sum of Heavy AA may fire on the HBs.
 - b. Resolution:
 - i. Roll 1D10 for each air counter involved in the bombing mission. Apply all applicable DRMs to the result, including NEM where relevant.
 - ii. Consult the Anti-Aircraft Combat Results Table, applying the results to each aircraft in turn.
 - iii. Apply losses prior to calculating the bomb factor dropped. Remove destroyed air units from play, and note lost steps model and whether EFT or EHT. Note: This is for later use in balancing losses in the upcoming player initial phase.
 - iv. Total the delivered bomb load, splitting it into delivered on target and dispersed totals per the outcome(s) of the AA and ATAC results.
 - v. Dispersed factors dropped on an operational target or ship have no effect. Dispersed factors dropped on a strategic target may have an effect per the bombing rules.
For Example: A player has 5 bombers after ATAC available to attack a strategic target. 2 of the bombers were returned, R* during ATAC, the remainder were unaffected. Each bomber has a bomb factor of 12. The defending player rolls on the AA table for each airplane on the 5-8 column on the AA CRT.

Plane 1 (R*) roll is 3, there is a +2 total DRM (National Effects, AA DRM): Result is – so no effect, 6 points dropped, no dispersion.

Plane 2 (R*) roll is 7, there is a +2 total DRM: Result is R* so a 6 points are dropped, but $0.25 \times$ the modified load is dispersed, thus 1.5 factors are dispersed (round up) to 2. 4 points hit the target, 2 are dispersed.

Plane 3 (- so no ATAC effects) roll is 1, there is a +2 total DRM: Result is -, 12 points hit the target.

Plane 4 (-) roll is 8, +2 DRM: Result is R, 12 points are dropped, all 12 are dispersed.

Plane 5 (-) roll is 5, +2 DRM: Result is -, 12 points are dropped, all 12 hit the target.

Plane 6 (-) roll is 5, +2 DRM: Result is -. 12 points are dropped, all 12 hit the target.

Total results are: 46 points hit the target, 14 are dispersed. As this is below 160 points, they are ignored. Damage is inflicted per the bombing rules with the 46 “on target” points.

D. Determining the Results of AA Fire.

1. AA fire may have the following results:

- a. R: Return the air unit to base, no combat loss, 0.75 mission payload dropped, all factors dropped are dispersed for strategic missions.
- b. R*: Return the air unit to base, its' entire mission payload is dropped, 25% of dropped factors are dispersed.
- c. 1: The air unit suffers 1 step loss. $0.5 \times$ its mission payload is dropped, and half of its factors are dispersed.
- d. 2: The air unit is eliminated (2 Step loss). Its mission payload is not dropped at all.
- e. 1R/2R: Apply the step loss per (3) and (4) above. After all AA results have been applied, if any mission units have not been affected, one additional air unit selected at random is affected by an R result.

NOTE: If the air unit was returned in air to air combat, it may not suffer casualties in the AA step, however its' remaining bomb load may be affected per the results above. If the air unit was step reduced either during air to air combat, or as a result of being a half unit prior to combat resolution, a single step loss during AA resolution would eliminate it, however 0.5 times its payload is dropped, suffering dispersion as listed above.

E. Naval AA.

Exactly as above but “dispersed” bomb load is a clean miss and naval units use their NEM as a DRM.

13. Naval Combat

A. Definition.

- I. The owning player of a Naval Task Force or Carrier Battle Group may engage a spotted enemy task group in a transit combat if both his own task group and the enemy task group are in the same sea zone. Transit combat consists of a series of rounds until one side evades, is sunk or completely disengages.
 - a. Round One:
 - i. Attempt to Evade or Scatter. See C and D below. DRMs – Naval Efficiency Modifier (NEM Chart), weather and tactical movement differential (speed).
 - ii. Allocate Divisions. See F below.
 - iii. Long Range Gunnery (Short Range if poor weather). See E, I and J below. DRMs – E.I.e & f, NEM and Radar.
 - iv. Range Determination. See F.I.h and G below. DRMs – NEM and speed.
 - b. Second and subsequent Rounds:
 - i. Attempt to Disengage. See F.I.h and H below. DRMs – NEM, weather, covering divisions, torpedoes and speed.
 - ii. Combat Phase. See E, F.I.h, I, J and K. DRMs – E.I.e & f, NEM, covering divisions and Radar.
 - iii. Range Determination. See F.I.h and G below. DRMs – NEM and speed.

B. Pre Combat Stage.

Both players determine their remaining SMA both for that movement segment, and that ship's overall movement allowance. They may then elect to engage or evade.

C. Evasion.

- I. Once a transit combat has been declared, either player may attempt to evade prior to combat commencing. Method:
 - a. In the unlikely event that both sides elect to evade, the attempt is automatically successful.
 - b. Evasion may be affected by forces being dispersed to spot. See Rule F.I.a for more information.
 - c. Otherwise, the slowest ships in both task groups have their tactical movement ratings compared.
 - d. Roll one die, adding the difference in tactical movement and modifying by appropriate modifiers from the Naval Efficiency Modifiers Chart. Note that bad weather assists the evading side so a minus weather DRM turns into a positive weather DRM in this case.
 - e. On a result of S on the Naval Success Table the evading player is successful.
 - f. If a task group successfully evades, it remains in the sea zone and it remains spotted but cannot be attacked by the enemy TG that attacked it during the remainder of the movement segment. Other enemy TGs may attempt to engage it.

D. Scattering.

- I. Convoys (only) may scatter if engaged by enemy naval forces. Method:
 - a. Total the gunnery factors of the attacking force; this is the scatter attack strength of the attacking naval forces.
 - b. If the Convoy has no escort force, Eliminate convoy NSPs equal to 20% of the total scatter attack strength at random.
 - c. If the convoy has an escort, the escort may attempt to engage the attacking naval forces in combat to screen the scattering NSPs. A transit combat starts immediately at short range with the escort and attacking naval forces only (the NSPs are not part of the transit combat). For every turn of naval combat the escorts continue to engage the attacking naval force, reduce the percentage of scattered NSP's eliminated by 5%. At any time, after the first round of transit combat, the escort may attempt to disengage.
For Example: If the escort is able to survive for 5 rounds of combat, all NSP's are able to successfully get away.
 - d. The convoy escort may elect to evade at the beginning of naval combat leaving the NSPs to their fate. In this case, the tactical movement ratings of the NSPs are ignored for evasion. If the escort successfully evades, NSPs equal to 50% of the total scatter attack strength are eliminated.
 - e. Scattered NSPs remain with the Convoy and continue to be spotted. The escort force is moved to a new spotted task group and no longer provides any support for the convoy. Either of these task groups may be engaged by other naval or air assets but must be engaged separately i.e. one or the other (but not both) may be attacked by a new mission force.

E. Combat Range.

- I. Ships have 3 ranges at which they may engage in combat: Long, Short, and Torpedo. Ships are placed on the tactical display in one of these range bands. Method:
 - a. Naval combat normally commences at long range. In poor weather and for escorts screening a scattering convoy, naval combat commences at short range.
 - b. Naval gunnery factors are used to determine the attack strength of ships involved in combat.
 - c. A ship firing at long range uses its long range gunnery factor against enemy ships also at long range, but can use both long and short range gunnery against targets at short and torpedo range.
 - d. A ship firing at short range may use all its gunnery factors (printed gunnery strength) against targets at any range.
 - e. Ships with a torpedo factor may attempt to close to torpedo range and may attack with their torpedo factors once at torpedo range.

F. Combat Preparation.

- I. Prior to resolving naval combat, players allocate ships within their task group to divisions, and the divisions operate independently within the following methodology:
 - a. Determine if either force was using Extended Search mode to “spot” in adjacent sea zones. The following applies to dispersed forces in the first round of combat:
 - i. Randomly select 25% of the ships in the force and exclude them from combat.
 - ii. Evasion for those ships engaged is modified by a -2 DRM.
 - iii. Evasion for those ships excluded from the combat is modified by a +2 DRM.
 - b. Each division may be grouped as the player sees fit with some restrictions as outlined below.
 - c. Carriers are always grouped together and automatically attempt to disengage. NSP's are always grouped together in a division and must attempt to disengage.
 - d. If Carrier(s) or Capital Ships are part of a surface combat, their escorts may not disengage until the Carrier(s) or Capital Ships have successfully disengaged.
 - e. Otherwise, Divisions may attempt to disengage at will. If successful they are removed from the combat.
 - f. Divisions may individually attempt to change the range.
 - g. Ships in divisions that have been damaged may split off into another division after a round of combat and may attempt to disengage during the next disengagement phase.
 - h. Divisions may attempt to “cover” other divisions to aid an attempt at disengaging. To do this they must close the range:
 - i. This attempt to close range is always successful and in the round this screening action is initiated provide a +3 DRM to the disengaging division's disengagement roll.
 - ii. Covering divisions may not disengage nor extend range until the divisions they are covering have themselves successfully disengaged.
 - iii. Enemy fire is modified by a +2 DRM against covering divisions during a covering effort.
 - iv. If the attempt to disengage is not immediately successful in subsequent rounds attempts to disengage are covered in the same manner as H.I.a.iii below.

G. Changing the Range in Combat.

- I. Once Transit Combat is declared, players may attempt to change the range of individual divisions. Ships may not move more than one range band per combat round. Ships can enter the torpedo range band even if it is already occupied by enemy ships, but they may not “crossover” to the enemy's side of the tactical display.
For Example: A division may not close directly to torpedo range from long range, it must first close to short range and then close to torpedo range.
 - a. If both players elect to close or both players elect to extend the range with any or all divisions then the range change is automatically successful.
 - b. Otherwise the slowest ships in both task groups (including the effects of damage) have their Tactical Movement Ratings (TMR) compared and the difference is used as a DRM.
 - c. The player wanting to change the range rolls one die using the DRM from (b) above (positive if he has the faster ships, negative if not) plus any appropriate modifiers arising from a comparison of naval efficiency (see Naval Efficiency Modifiers Chart). Refer to the Naval Success Chart where a result of ‘S’ means the player is successful and the range changes accordingly.
 - d. Where multiple divisions on both sides are involved in a combination of range changes and holding position use the following procedure:
 - i. First pair off divisions from each side that are executing mutually compatible range changes (i.e. both want to close or extend the range). These occur automatically without needing to roll.
 - ii. Any remaining divisions need to roll individually using the difference in tactical speed as a DRM whilst taking damage into account. For this calculation each division compares the slowest ship within the division with the slowest ship in the opposing task group.

Example 1: In a fleet engagement in the Mediterranean, the Italians have 5 Divisions: 1 with 2 BBs, 2 with CA/CLs and 2 with DDs. The British (RN) has 7 Divisions: 1 with 2 BBs, 3 with CA/CLs and 3 with DDs. The BBs on both sides wish to remain at long range. The Italian CA/CLs wish to close to short range as do the RN CA/CLs. All Italian DDs and all RN DDs wish to close the range to torpedo range. The DDs must alter range over two turns. In this example all BBs remain at LR (No Change); both Italian and 2 of the RN CA/CL divisions close the range automatically. The remaining RN CA/CL division must roll against the slowest ship in the opposing NTF (in this case one of the Italian BBs). Both Italian and 2 of the RN DD divisions close range automatically. The remaining RN division must roll on the Naval Success Table against the slowest ship in the opposing NTF.

Example 2: In the South China Sea the IJN has three divisions engaging one division of the Chinese navy. The Chinese divisions and two IJN divisions are at Short Range whilst the remaining IJN division is at Long Range. If the Chinese division and one of the IJN divisions at Short Range wish to extend the range whilst the IJN division at Long Range wishes to close the range then only the IJN division closing the range needs to roll on the Naval Success Chart as the other two range changes are automatic in accordance with G.I.d.i above. If The IJN division at Long Range wished to close the range and

only the Chinese division wished to extend the range then both would need to roll on the Naval Success Chart as there would be no mutually compatible range changes.

H. Disengagement.

- I. Once a transit combat has been declared, either player may attempt to disengage his divisions after combat has commenced. Ships must first move out of Torpedo range before they attempt to disengage. Method:
 - a. Preparation.
 - i. The tactical movement rating of the slowest ship in the disengaging division is compared to that of the slowest ship in the opposing Task Group irrespective of divisional allocations.
 - ii. The Disengagement roll is modified by the difference in speed - positively if friendly forces are faster, negatively if they are slower.
 - iii. A player with torpedo carrying ships may use his torpedo armed ships to improve his disengagement attempt. These ships automatically close the range to torpedo range (one range band at a time) and may attack with their torpedo factors. The disengagement roll is modified by +3 in the first round this screening action is taken, however the ships carrying out the torpedo attack will be engaged by the enemy player for at least two gunnery phases prior to making any disengagement attempt of their own. Whilst the screening force remains at torpedo range any further disengagement rolls made by any Division in subsequent rounds is modified by +1 or (OPTIONALLY) a +2 in any round where additional ship(s) are committed to the screen.
 - b. Determination: Roll one die, adding the difference in tactical movement and modifying by appropriate modifiers from the Naval Efficiency Modifiers Chart and Rules F.I.h above and a.iii above.
 - i. On a result of F* the player trying to Disengage is successful, however the enemy player's ships may fire one last gunnery attack using long range guns only.
 - ii. On a result of S the player trying to disengage is successful, and his forces disengage freely.

I. Gunnery and Torpedo Phases.

Gunnery combat between ships takes place in a series of consecutive phases. Gunnery combat is seen to take place simultaneously. Damage is applied after both players' ships have fired. Eligible ships that survive gunnery may fire torpedoes.

J. Naval Gunnery Combat Resolution.

1. Total the gunnery strengths allocated against each ship. Find the Armour Value of the target ship from the ship's Protection Rating using the Ship Protection Chart.
2. Subtract the Armour Value from the total gunnery strength allocated against the target ship. This is the Combat Value on the Naval Gunnery Combat Results Table. If the Combat Value is negative, the ship rolls for combat resolution on the 1-2 column.
For Example: If the total gunnery strength is 25 after subtracting armour, the attacker makes 3 rolls; two on the 11+ column and one on the 3-4 column.
3. Roll 1 die and consult the Gunnery DRMs table.
 - a. Each ship in a task force may fire at more than one enemy ship per gunnery phase. If the ship is firing at more than one ship, there is a -1 DRM on the Naval Gunnery CRT for each ship fired at. This represents the process of fire control acquiring and ranging in on new targets.
 - b. If more than one ship engages a target, each additional ship incurs a -1 DRM on the Naval Gunnery CRT. This represents interference to fire control of shell splashes from multiple ships.
 NOTE: These effects are cumulative.
For Example: If two battleships split their fire onto 3 enemy light cruisers, the cumulative DRM will be -4 (-3 for acquiring and ranging onto 3 targets and -1 for interference for 2 ships firing at the same target).
4. For each hit consult the Naval Gunnery Results Table and apply the relevant number of hits to the target ship.
5. On a die result of 10 on the 11+ column the target may suffer a critical hit. Consult the Critical Hit Chart and Roll 1D10 which may result in more damage inflicted on the target ship.

K. Torpedo Combat.

- I. Each ship that has a torpedo combat rating may close to torpedo range and engage in a torpedo attack. At torpedo range they may fire torpedoes at targets at the same range or at short range. They may also fire at targets at long range if the enemy has no covering forces at short range.
 - a. Ships with a torpedo rating greater than one, may make a number of torpedo attacks equivalent to their torpedo rating. For example, a ship with a Torpedo Rating of three may make 3 rolls on the Success Table.
 - b. For each torpedo attack roll 1 Die, modifying it with applicable DRMs, and consult the Naval Success Table.
 - c. On a result of S a torpedo has come close enough to be considered to be a strike. For each strike made, roll 1D10, total the result and divide by 5 rounding down. This is the number of hits made on the target. For all ships other than BB and BC, each torpedo hit is considered to be a possible critical hit and a throw must be made on the Critical Hit table. For BB's and BC's, an unmodified torpedo strike roll of 10 is considered to be a possible critical hit and a roll must be made on the Critical Hit Table.
 - d. Japanese ships with a Long Lance Torpedo symbol (Code "L") may make torpedo attacks at short gunnery range as well as Torpedo Range, representing the extraordinary range of the Long Lance torpedo.
 - i. Code L have their roll for damage divided by 3 rather than 5 if they achieve a hit which represents their lethal effects.

- e. Once ships have made a torpedo attack, ready use torpedoes are expended and the ship may not make any more torpedo attacks in the current transit combat even if it has a torpedo reload capability. Ships may not make any more torpedo attacks in further naval engagements until they have returned to port or have resupplied from a supply ship during that player turn, except ships with a torpedo reload capability.
- f. Torpedo Reload: Certain ships may have a torpedo reload capability. This is shown on their counter as a Code T. A ship with a reload capability may engage in 2 torpedo attacks during a player turn. As noted in (f) above, only one torpedo attack per transit combat is permitted.

L. Damage Results.

M	Miss, no damage
M*	Hit against LB, LC or units with an Armour value of 1.
H*	Hit against SL, NSP, LC, LB, or units with an Armour value of 1 or 2.
H	1 Hit
2H	2 Hits
2H*	2 Hits plus a roll on the Critical Hit table, but only capital ships and CAs may score critical hits on other capital ships using gunnery.

NOTE: Torpedo hits can cause critical hits. See K.I.c above.

M. Damage Resolution.

1. Individual Ship Counters. The Ship Protection Chart shows the number of hits each Armour value can absorb, except for NSPs and LCs which are covered below. If the number of hits equals or exceeds the number of hit points available to a ship, the ship is sunk.
For Example: If a ship has a protection rating of 5, it has 3 hit points. If the ship incurs 3 or more hits it is sunk.
 - a. If the number of hits is less than the number of hit points available to the target ship, place hit markers on the ship counter to illustrate the number of hits incurred.
 - b. Ships that have hits have their TMR and combat ratings reduced. For each hit on a ship, reduce its AA, torpedo and movement ratings by one (but never below zero). Gunnery strengths are reduced in proportion to the number of hits sustained compared with the total hits available (rounding down all fractions).
For Example: A ship that takes 4 hits to sink has its gunnery factor quartered for each hit sustained. The modified factors are the available combat and movement factors until the ship has been repaired.
2. Flotillas. These have reduced sides. Once a flotilla has lost half of its hit point it is flipped to the reverse side and continues to operate with the reduced ratings and no other adverse effect until it takes hits again.
3. NSP Counters. NSP counters represent a number of transport and or merchant ships that can carry cargo as noted by their capacity on the counters. They have the following traits:
 - a. NSPs that are engaged in combat are treated as unified counters for combat resolution but losses are in steps of capacity.
For Example: the Allied player has a 9 capacity NSP. The Axis player attacks the NSP with naval gun fire gaining 4 hits on the NSP. The NSP loses 4 points of capacity and in effect becomes a 5 capacity NSP. Cargo (if carried) is lost as noted below.
 - b. NSPs have a protection value as noted on the counters. This represents the variable number of ships in each NSP counter and indicates the difficulty (or ease) of engaging the vessels in each counter combination.
 - i. Each step of NSP capacity has a hit point value of 1. Therefore, one hit on an NSP in effect sinks 1 step of capacity.
 - ii. If engaged by CL, CA, CAV, BC, BB, BAV type units the NSP protection ratings are halved, rounding up.
 - iii. If unescorted and engaged by any type of naval units NSP protection ratings are halved, rounding up.
 - c. If eliminated, remove the NSP and cargo from play, placing in the relevant replacement pools.
 - i. If a proportion of the NSPs carrying cargo are sunk the owning player reduces the NSP counter accordingly and randomly selects the cargo lost converting whole units into replacement points or supply points (see Rules 14.N) where necessary.
For Example: Four NSPs are carrying a 4SP infantry division when one of the NSPs is sunk. The division is flipped to its reduced side, one infantry SRP goes into the replacement and one infantry SRP remains with the convoy. If 8 NSPs were carrying an armoured brigade (without a reduced side) and two GSPs when one NSP is sunk and a randomised check indicates part of the brigade was lost, the owning player places one armoured SRP with the convoy and one in the replacement pool.
 - d. Sunk NSPs may be replaced per the New-Build rules.
 - e. Ground or air units may be placed in any Replacement Pool in the theatre in which they were sunk. Logistics items are destroyed if sunk.
4. LC Counters. LC counters are destroyed if they suffer a NGS or Air unit bombing hit. See rule 9.I.I.b.

N. Fuel Costs.

1. Naval combat is always fought at high speed unless the ship(s) involved has a fuel supply problem.
 - a. Every NGF resolution phase costs a player's ship one SMA point counted against their available SMA.
 - b. If ships run out of fuel, and cannot disengage, enemy NGF is given a +4 modifier in each round of gunnery resolution. Ships that are out of fuel also have other penalties as noted in the Supply Rules.

O. Submarines.

1. General Concepts:
 - a. SSFs have two sides (plus dummy markers). The owning player may deploy all his dummy markers in the game.

- i. SSFs may be deployed to a maximum range as noted on their counter. For Example: Type VIIc U-boats have 46 sea zone range, Type IXc U-boats have 74 sea zone range.
- ii. The owning player should note whether a dummy SSF counter actually has a SSF Flotilla assigned to it on a hidden piece of paper.
- iii. If the SSF is deployed into a sea zone that already contains an enemy NTG the enemy force may immediately attempt to spot the SSF using Rule 9.G.3.d and evade or attack, but if it fails to spot then the SSF may attempt to spot it using Rule 9.G.5.
- b. Once deployed to a sea zone, submarine flotillas may not change position unless returned to a friendly owned port with SSF repair facilities.
- c. SSF Flotillas must remain in port for the following two game turns prior to being committed to another sea zone. This represents the costly and time consuming refits that SSFs had to have between major redeployments.
- 2. Depletion: SSFs are never depleted when operating at normal range (each counter represents a group of 10-14 submarines, 1/4 of which are on patrol, 1/2 of which are moving to/from the SSF sea zone, 1/4 of which are in refit at any given time).
- 3. Naval ASW Combat. Certain ships as noted on the ASW/Air ASW chart are dedicated ASW units. If a naval force contains ASW points it may expend one SMA point and try to engage in ASW combat against a detected SSF in the sea zone that it occupies.
 - a. For every 8 ASW points over and above the first 4 ASW points within the naval force, the naval force gains a +1 DRM (in addition to any others) to its 'to hit' die roll.
 - b. For each ASW point less than 4 within a naval force, the naval force suffers a -1 DRM on its SSF combat die roll.
 - c. If an SSF attacks a naval force it may be counter detected per the spotting rules, and the escorts may engage in ASW combat (as resolved below) prior to the SSF resolving it's combat result.
 - d. ASW Combat resolution:
 - i. Roll one Die on the Naval Success Table and refer to the ASW Attack DRMs table.
 - ii. On a result of S the SSF is Reduced and is driven off.
 - iii. On a result of F* the SSF is Reduced, but may attack at full strength.
 - iv. On a result of F, SSF is unaffected and may attack at full strength.
 - e. The attacking force is automatically spotted by the SSF and if it survives ASW combat may counter attack even if it had previously failed to spot its attackers.
- 4. SSF Torpedo Combat. SSFs have a torpedo rating just like surface ships. Torpedo attacks are resolved as noted in the Torpedo Combat rule above.
- 5. Air Units. SSF counters attempting to attack a naval task group are significantly more vulnerable to ASW Attack. Air units that successfully detect an SSF may attempt to attack it.
 - a. The Air ASW Conversion Chart multiplied by the air unit's operational bombing strength gives the number of air ASW attacks per air unit. Round fractions up. Roll one Die per attack on the Air ASW Attack Chart and consult the Air ASW Attack DRMs table.
 - b. If the roll results in a hit on the Air ASW Attack Chart, the defending player consults the Air ASW Results Chart.
 - c. Results as noted on the chart are applied immediately to the SSF prior to resolving any other combat.

P. Naval Gunfire Support (NGS) Missions.

- 1. The following missions take place along enemy coasts. Naval forces involved in these missions are automatically spotted, and may be engaged by coast defences (where applicable).
 - a. Bombardment. Naval units in an NTG may bombard enemy ground installations in coastal hexes only. Method:
 - i. They may spend 2/3 of their modified SMA in the movement segment within which bombardment is to be undertaken to reach the sea zone adjacent to their target.
 - ii. Total the gunnery strengths of the ships in the attacking naval force and divide them by 8. This is the bombardment strength, which may be split into a number of attacks as long as the total strength of the individual attacks does not exceed the bombardment strength.
 - iii. For every four points of "bombardment strength" the target selected receives one hit.
 - iv. En route to or from their target they may be spotted normally and are automatically spotted when bombarding.
 - b. Amphibious Gunnery Support and Combat Gunnery Support. Naval units in a CBG or NTF may provide gunnery support to ground units involved in an amphibious assault, or ground combat.
 - i. Amphibious Gunnery Support (AGS). This is the provision of naval gunnery to support amphibious landings and as a mission can last from one to four consecutive game turns before the vessels must return to port for a refit. Method:
 - 1 Ships must be assigned the AGS role in at the start of a player's naval movement phase.
 - 2 During the naval movement segment in which the assault is scheduled to occur, they may spend a maximum of 1/3 their modified SMA moving to the location of an amphibious assault, and may remain in the sea zone (called the assault zone) adjacent to the hex(es) that will be assaulted in line with their sea-time limit (Rule 9.B) .
 - 3 They may replenish by returning to base during a movement segment and using 1/3 of their SMA at a friendly Naval Dockyard, and must then return to the assault zone from which the amphibious assault was launched.
 - 4 AGS units are automatically spotted by the enemy while in the assault zone once the assault has been declared. They may be spotted and engaged normally during transit to or from the target hex.

- 5 If engaged by enemy surface forces, their naval gunnery factor total is reduced by 80%.
- 6 Total the gunnery strengths of the ships in the attacking task force, and divide them by two. This is the Amphibious Gunnery Support Strength (AGSS).
- 7 Add the AGSS to the combat strength of the units assaulting the enemy beach.
- 8 AGSS does not count against ground stacking or combat losses (if applicable) and is never affected by terrain or CEV.
- 9 AGSS may engage targets up to three hexes inland in support of friendly offensive operations, and two hexes inland in support of friendly defensive operations. If the target hex is two or three hexes away only the heavy guns of CA, BC, BB and monitor type ships may fire.
- 10 Limit and effects on the ships.
 - a. AGSS may be provided until the friendly amphibious assault has gained control of 15 enemy hexes including those taken by supporting airborne operations.
 - b. Ships committed to AGS may not participate in any other mission until their AGS mission is over, at which point they must spend two game turns in refit at a friendly owned naval dockyard replacing worn gun barrels prior to being committed to any other operation.
 - c. They may remain allocated to AGS for a maximum of four consecutive game turns prior to a refit as noted in (b) above, whether or not AGSS may still be permissible.
- ii. Combat Gunnery Support (CGS). Method:
 - 1 A TG may move up to 2/3 of its modified SMA prior to providing CGS.
 - 2 Their mission is time limited by Rule 9.B.
 - 3 They may be spotted normally en route to and from the sea zone in which they provide CGS and are automatically spotted whilst providing CGS.
 - 4 Ships with Long Range gunnery factors may provide CGS to units in partial sea hexes, and may also provide CGS to units in hexes adjacent to partial sea hexes. All other gunnery factors may only provide CGS to units in partial sea hexes.
 - 5 Total the applicable gunnery strengths that are in range of the ships in the attacking task force, and divide them by eight.
 - 6 This is the Combat Gunnery Support Strength (CGSS). Add the CGSS to the combat strength of the units involved in combat. CGS does not count against ground stacking or combat losses (if applicable) and is never affected by terrain or CEV.

Q. Naval Interception (Optional Rule)

1. Naval Interception. This rule is designed to provide a more accurate naval system giving players the chance of intercepting spotted enemy naval forces at sea during the opposing player's movement segments.
2. Who can intercept. The following Naval Task Groups may have the opportunity to intercept enemy naval movement:
 - a. Ships assigned to NTFs or CBGs that are located at a naval base, have not left port, and are not more than 5 sea zones from a spotted enemy naval force.
 - b. NTFs at sea within 3 Sea Zones of a spotted enemy naval force.
 - c. CBGs at sea within 5 Sea Zones of a spotted enemy naval force.
3. Restrictions.
 - a. Intelligence drives naval interception missions. Therefore, any interception may only occur if the target force has been spotted by NIM or Air Search. Additionally, forces spotted as a result of conducting an amphibious assault (but not an amphibious raid) may also be intercepted.
 - b. Ships intercepting must have sufficient SMA to both reach the target force and conduct at least 3 rounds of surface combat.
 - c. CV, CVL, CVE type ships and their designated escorts may not enter the sea zone in which the enemy group is located, but may launch embarked air units as soon as they are in range.
 - d. SSFs cannot intercept.
4. Method. If a player wishes to attempt an interception he interrupts the opposing player conducting naval movement and rolls 1D10 on the Naval Success Table applying the modifiers specified below. On a result of S the intercepting forces moves to carry out the interception and any resulting combat is resolved before the phasing player continues with his naval movement..
 - a. Modify Die Roll by:
 - i. For NTGs in a naval base -2 for every sea zone greater than 3 to the target.
 - ii. For NTFs at sea (with no CVE) -2 for every sea zone not adjacent to the zone in which the intercepting force is located.
 - iii. NTGs at sea with a carrier -1 for every sea zone greater than 2 from the intercepting force.
 - iv. Radar affects interception as follows:
 - I Royal Navy from Jan I 1941 to Jun II 42:
 - a. +1 for Type R in intercepting task force
 - b. -1 for Type R in target task force
 - v. Naval efficiency for both target and intercepting force.
 - vi. +1 for any air unit assigned to the air search mission from a carrier in the intercepting forces.

vii. From Sept I 1939 to Jun II 1943:

- 1 +1 for each British, Japanese or French CL, CA, BC, BB in the intercepting force.
- 2 +1 for each US Navy CA, BC or BB in the intercepting force.
- 3 +1 for each BC or BB in the intercepting force of other navies.
- 4 -1 for one or two CL, CA, BC or BB class that is in the target force.
- 5 -2 for 3-6 CL, CA, BC, BB that are in the target force.

viii. From Jul I 1943

- 1 +1 for each BC or BB in any Navy.

5. Special. Due to the ability of naval forces to use short range transmissions to communicate orders:

- a. If a CBG and a NTF are both designated to attempt interception, use the carrier search method above but move the CBG and NTF together.
- b. If the carrier search spots the target force, the naval task force may attempt to engage the target force.
 - i. The intercepting task force attempts to spot the opposing force as if it is adjacent to the sea zone in which the target force is located.
 - ii. The intercepting force gains a +3 DRM for spotting if it belongs to the USN, IJN, RN, or RM.

14. Logistics

This is the movement of supplies from the national source of supply to forces. There are two systems in the game, which retain similar concepts, the continental system and the overseas system, as defined in detail below.

A. General Definitions.

1. *Ground Units Supply*: Units may be in or out of supply. When in supply units may be in general or offensive supply.
2. *Air Units Supply*: Air units may be in or out of supply. When in supply air units may operate normally, otherwise they may not fly missions except transfer missions to a base that is in supply. If air units remain out of supply for more than 2 turns they are eliminated.
3. *Naval Units*: May be in full supply, extended supply, or depleted. See the Naval Supply system (Section Q) for full information on the naval system.
4. *Supply Terminal (ST)*: A major supply base and tertiary distributor of supply, and a key component in the supply system as a whole.
5. *Logistics Point (LP)*: A large quantity of supplies.
6. *Corps HQ*: Primary distributor of supply.
7. *QM Unit*: A unit that facilitates the distribution of supply and can also move STs or LPs. They provide a QM MSR or transportation for LPs/STs in the overseas system. Only Air QMs appear in Merkur.
8. *National Supply Source*: Where a nation's forces ultimately receive supply from.
9. *Continental System*: Linked by a high capacity rail line to the national supply source.
10. *Overseas System*: Any location that is not linked by a high capacity rail line to the national supply source is on the overseas system. To distribute supply over large distances within the overseas system a QM unit must be emplaced in the same hex as an ST. This is a critical concept. Exceptions exist on a limited basis.
11. *Line of Communication (LOC)*: An unlimited length route from a supply terminal via road or rail to the national supply source or, Overseas, an unlimited length route via road or rail from a unit to a supply terminal. In China Burma India (CBI) the route may also include an air element as defined in the OB/OA. The LOC may not enter an enemy Zone Of Influence or enemy owned territory, but in CBI may over fly enemy owned territory. See the Rail LOC Supply Element Chart for more information.
12. *Main Supply Route (MSR)*: A limited length route from a supply terminal to Army, then Corps HQ, and finally to units. In overseas theatres the MSR also refers to the range of supply provided by a Quarter Master Unit.
13. *Line of Supply (LOS)*: An unlimited overland line of supply to an ST or the National Source of supply, used solely to determine isolation.
14. *General Supply*: Limited unit capabilities.
15. *Offensive Supply*: Full unit capabilities.
16. *General Supply Points (GSP)*: Fractions of LPs that can be used to supply units.
17. *Restrictions*:
 - a. *Nationality*: See the MSR Chart for any alterations to ranges of MSR.
 - b. *EZOI Impact*: Units cannot trace an LOC or MSR through an EZOI, but this can be negated by 4 SP of friendly non-support units in each hex in an EZOI on the LOC or MSR.

B. Key Points of the Logistics System.

1. *Continental Supply*: Rail LOC to supply terminal, then 6 hex MSR to army, then 6 hex MSR to corps, units stacked or adjacent to corps (only way to get offensive supply). 6 hexes to LOC from unit (this allows supply of rear area troops which can never be in offensive supply unless provided with GSPs at a rate of 1 GSP per SP).
2. *Overseas Supply (Standard QM method)*: Ship from a port to a port with ST. Emplaced QM has a 20 hex MSR (QM MSR). An Army HQ has to be located within a QM MSR to provide supply to units or Corps HQs. Then 6 hex MSR to a Corps HQ, units stacked or adjacent to corps, which is the only way to get offensive supply. If located within a QM MSR from an ST that has expended LP (or fractions of LP) for the purpose then units are in general supply.
3. *General Supply Points (GSPs)*: GSPs are generated from LPs, fractionalised. They are distributed via transport (any type) to the unit, then the player spends 1 GSP per SP to get general supply, and spends another 1 GSP per SP to get offensive supply. Air units may also be supplied via this method.
4. *Air on Continental Supply*: Trace 6 hexes to a LOC to national supply source, units are then supplied.
5. *Air in Overseas Supply*: Within the MSR of an ST at which 1/3 LP has been spent for the purpose of supplying air units or defined GSPs have been spent at the rate of 1 per F, D, A and 2 per B, HB, T.
6. *Supply Effects*: EI-2 for overextended. UI-3 for isolated and out of supply. General supply is not full supply and is punitive in terms of evening out CEV and reducing capability. Offensive supply negates this.

C. Continental System.

1. *Tracing the LOC*: The player must trace a high capacity rail LOC from the national source of supply to a supply terminal (ST).
 - a. This places units belonging to the army and corps (see below) in general supply if they are within the MSR of their army and corps HQs. The ranges are listed on the MSR Chart and Rail LOC Supply Element Chart.
 - b. At that ST, the player must spend 1 LP for 3 armies, each of which may supply not more than 4 corps to get offensive supply. The player may opt to expend fractions of the LP to only supply one army, and thus may stockpile LPs.
2. *Tracing the MSR*: From the ST the player must then trace an overland supply line to the unit via army and corps HQ. Exceptions:
 - a. In general units not adjacent to a Corps HQ or stacked with an Army HQ may never be in offensive supply.
 - b. In general, units within 6 hexes of a LOC are in general supply.
 - c. Army HQs can be omitted from the chain resulting in a shorter MSR.

3. *Air Units*: Air Units are always in supply as long as they can trace 6 hexes to an LOC to the national supply source.

D. Overseas System and Air QM.

1. *Supply Using Air QM*: Corps and Army HQs do not play a role in supply via an Air QM. Both General and Offensive supply are distributed directly to the units by the Air QM itself.
 - a. Units may be supplied through any air base (capacity of that air base is irrelevant) within the Air QM's MSR. This Air MSR is equal to the range of the transport unit with the smallest range that is committed to the Air QM. Units up to the Air QM's SP capacity within a ground MSR of 6 hexes from the supplied air base are automatically in General Supply.
 - b. In addition to supply via an airbase/strip, units may be supplied in any hex within the Air MSR up to the Air QM's SP capacity via air drop. These units are treated as in General Supply, Over Extended I (EI).
 - c. *Isolation*. Use of Air MSR does not remove isolation effects for combat purposes, however a unit eliminated while using an Air MSR generates Infantry Combat replacements (only) at half the normal rate. For example: A British I-6 Chindit brigade is destroyed while isolated but supplied via an Air MSR. It should generate 1/3 Inf SP – instead it generates 1/6 Inf SP.
 - d. Ground units using an Air MSR cannot be in offensive supply unless the player drops the required GSPs to such units using additional transport assets, or allocates the necessary additional resources via the Air QM or a second Air QM.
For example: a player has a 10SP Air QM at Chittagong and a 5SP Air QM at Dimapur. He is using the 10SP Air QM to provide 4SP at Akyab airbase with general supply, and 6 out of 8SP at Imphal with general supply. He may then allocate the 5SP Air QM at Dimapur to provide offensive supply to 5 of the ground SPs at Imphal.

E. Overseas System with no QM.

1. *Definition*: Terms and effects for alternative limited overseas systems without QM units (necessary in Merkur as there are no motorised QM units in the game).
 - a. Supply through a Port or Airbase. In all cases units could only be in offensive supply if stacked with or adjacent to a Corps HQ, unless GSPs could otherwise be transported to the unit.
 - i. GSPs or LPs with an emplaced ST: trace a 6 hex MSR to a Corps HQ. Units within the MSR or adjacent to a Corps HQ can be in general supply.
 - ii. GSPs with a Corps HQ: units within a 6 hex MSR could be in general supply.
 - iii. GSPs alone: units within a 3 hex MSR could be in general supply.

F. Out of Supply and Overland MSR.

1. *Out of supply isolated*: A ground unit cannot trace a LOS or an overland supply line to LOC or an MSR to a supply terminal or the national source of supply.
2. *Out of supply over extended*: A ground unit cannot trace a LOS but is not isolated, and is further than 6 hexes from a rail LOC.
3. *Tracing MSRs*: MSR costs are per hex. In general it costs one hex of the MSR range to enter one road or rail hex, but this is modified by terrain and weather as follows:
 - a. *Good Weather*. In clear hexes the cost of tracing the MSR is the same as for road hexes. In steppe and desert terrain the cost of tracing the MSR is increased by half. In rough, woods, sandy terrain, hills the cost of tracing the MSR is 2 hexes. In Mountains and swamps or across mountain hex sides it is 3 hexes. Un-bridged wadis, river hex sides, and escarpments cost 2 hexes. Un-bridged major river and mountain hex sides cost 3 hexes. Other hex sides are the same cost as if it were a full hex of the terrain type.
 - b. *Poor Weather*. Not applicable in Operation Merkur
4. *Amphibious Operations*: Units allocated to amphibious operations or raids are always in offensive supply on the turn in which they land, as long as they have been in offensive supply for one turn prior to the operation or raid, and have at all times during the planning process been in general supply. On all following turns they must be supplied on the overseas or continental systems.

G. Isolation Status.

1. *Status*: The isolation status of all units and hexes is determined at two points during a turn.
 - a. *Isolated for General Supply*. This is determined during the Initial Phase. A unit or hex determined to be isolated for supply purposes remains so for one player turn.
 - b. *Isolation for Replacement Points*. This is determined at the start of every combat phase and requires the unit tracing a LOS. This determination is used only for calculating combat replacements, and has no impact on the supply status of the unit involved.
NOTE: in Merkur there are no combat replacements.
2. *"U" & "E" Markers*:
 - a. The first time a unit is found to be out of supply it receives a "U-I" if isolated or an E-I marker if overextended (in both cases Blue if during an Allied initial phase, Red if in an Axis initial phase), marking the unit as being out of supply.
 - b. The "U" and "E" status of a unit can be changed by the following conditions:
 - i. *Change of status*. The unit is found to be in supply in any following initial phase. If so, the marker is immediately removed. The unit can be placed back into supply by any of these methods:
 - 1 Regaining LOS (if "U" status), MSR (if "E" status) or moving to within 6 hexes of an LOC (either status).
 - 2 Expenditure of supply points (GSPs).
3. *Passage of Time*: The "U" and "E" status increases one level for each game turn the unit has remained out of supply and can change from one marker to the other.

For Example: A unit found out of supply and isolated (blue U-1) on the Allied OCT I 41 turn, becomes blue U-2 on the Allied OCT II 41 initial phase. A unit found to be over extended (blue E-1) on the Allied OCT I 41 turn which became isolated during the following Axis player turn would become blue U-2 on the Allied OCT II 41 initial phase.

4. *Isolation:* When a unit is determined to be “out of supply and isolated”, the appropriate colour isolated marker is placed on the unit (blue for the Allied initial phase, red for the Axis). The effects of being isolated at the “U” level the unit is at take effect immediately after the unit is determined to be isolated. The isolated marker remains on a unit regardless of its supply status until the unit is no longer isolated.

H. Effects of Being Out of Supply.

1. *Units:* Units can be in limited supply because they are too far from their supply lines (Over Extended) or out of supply because they are cut off from supply (Isolated). Depending on its isolation status, and the number of turns the unit has been without supplies, the effects of being out of supply grow more severe as time passes. If a unit is “out of supply and isolated” long enough it will collapse as it is no longer combat effective. The effects of being out of supply are as follows and these penalties are in addition to the limitations of being in General Supply in Rule 14.1.2 on page 46:

a. Out of Supply - Over Extended:

- i. E-1. Attack Factor halved, movement factor halved, reduced ZOI, ASE DRM reduced by -1 no reaction movement.
- ii. E-2. Attack Factor quartered, defence, AA, and movement factors halved, no ZOI, no ASE/ATE/ADE, no pursuit or reaction movement. No greater level for Un-isolated units.

b. Out of Supply – Isolated:

- i. U-1. Attack, defence, and movement factors halved, reduced ZOI, ASE/ATE DRM reduced by -1 no pursuit or reaction movement.
- ii. U-2. Attack factor quartered, defence, & AA factors halved, movement reduced to one hex in the movement phase, no ZOI, no pursuit or reaction movement, no ASE/ATE/ADE. Unit collapses on a 1D10 roll result of seven or more.
- iii. U-3. Attack, & AA factors zero, defence factor quartered, movement factor zero, no reaction or pursuit phase movement, no ZOI, no ASE/ATE/ADE. Unit collapses on a 1D10 roll result of three or higher. +1 for each additional turn being rolled for after the first U-3 turn.

- c. *Collapse.* A unit which collapses is eliminated; if it has a reduced strength side it is flipped to that side, retaining the supply status of the collapsed full strength side. Units in conditions isolated U-2 and U-3 are rolled for in the initial phase every player turn until eliminated or returned to a better supply status. The collapse die roll is modified by the following factors:

- i. -4 if the unit is in a major or great city that has been owned by the player since SEP I 39. See Political and Economic Rules for special fortifications.
- ii. -2 if the unit is in a major or great city that was captured by the player in the course of the game.
- iii. +2 during below freezing weather. This also does not apply when receiving the -4 above.

For Example: A unit found isolated and out of supply (U-1) in the Oct I 41 turn initial phase, becomes U-2 in the Oct II 41 initial phase. The player Rolls 1D10. The result is 3, and the unit survives. On the next turn, Nov I 41 initial phase, the unit remains out of supply and Isolated. The player again rolls 1D10, rolling 8. The unit collapses and is eliminated.

2. *Out of Supply Airbases:*

- a. Airbases that are in supply, but are isolated, suffer no negative effects.
- b. In the overseas system, airbases that are out of supply - un-isolated - have their capacity reduced by one.
- c. In both the continental and overseas supply systems, airbases that are out of supply - isolated - have their capacity reduced by two.
- d. An airbase reduced below a capacity of one, would be considered to have a capacity of zero. When reducing an airbase's capacity round all fractions down. The capacity cannot drop below zero.
- e. Airstrips are exempt from this rule. Their capacity is never reduced due to supply or isolation.

3. *Air Units:*

- a. At U1 and E1 bombing factors are halved.
- b. At U2 and E2 only Transfer missions may be flown.
- c. At U3 only Transfer mission may be flown. In addition the air units have no ACEV (if this is positive), suffer a -2 if engaged in ATAC, and role for Collapse as ground units do above, collapsing on a roll of 7+ with a +1 DRM for each additional turn at U3.

4. *Supply Status of Reinforcements and Replacements:* During the course of the game, each player receives reinforcements and replacements; may convert, upgrade, or disband units; and may be required to withdraw units from play. This rule covers the general procedure for such actions. The Political and Economic Rules should be consulted for specific details.

- a. Units arrive at the same supply status as the hex or Port (if new build shipping) they arrive in. Supply status of the hex or port is determined at the instant of arrival. Use the normal supply tracing rules to determine the status of the unit. The unit may either be in general supply or is out of supply at the same level as any other units that may be in the hex. If the player wishes to provide offensive supply to the unit, supply points must be spent per the supply point rule unless the unit is in a hex satisfying the Corps HQ marker rule.
- b. Units appearing in a hex where they are required to roll for collapse do roll and may collapse immediately after arriving. Units lost in this case do not generate replacement points.

For Example: A unit is scheduled to arrive in a city that is out of supply, and ready to collapse (U-3). The replacement/reinforcement arriving would be automatically be at U-3 when they arrive.

I. Offensive Supply and General Supply.

Units can be in two levels of “in” supply: either offensive or general. Units are placed in General Supply during the player’s Initial Phase and Offensive Supply is distributed to Army and Corps HQs. Units may be placed in Offensive Supply if they are adjacent to a Corps HQ marker or stacked with a Corps HQ or Army HQ marker prior to combat and an LP or portion thereof has been expended for Offensive Supply. GSPs may also be expended to place units in Offensive Supply. *Exception: the units of all nations are in Offensive Supply in the first turn their nation is involved in active hostilities, unless otherwise stated in the P&E Rules.* Units in General Supply may not attack using their full capabilities unless the owning player spends logistic points or general supply points as defined in I4.M and I4.N below.

1. Effect of being in Offensive Supply:

- a. Units may operate at their full printed strength.
- b. Units may operate utilising their full national CEV.
- c. Units may operate using all their combat effect modifiers.
- d. Units may pursue using their full pursuit movement point allowance.

2. Effect of being in General Supply:

- a. Units may attack and defend at 100% of their printed combat strength.
- b. Units defending may utilise their full national CEV and their full combat effect modifiers.
- c. Units attacking have a base CEV of 0.75 for CEV calculations, Odds are automatically rounded down.
- d. Units pursuing have their pursuit movement point allowance reduced by 50%.
- e. Units attacking have their combat effects reduced by 50%.

For Example: If a unit has an ASE point value of 4, and a CEV of 1.3 when in offensive supply, if it is out of offensive supply it has only 2 ASE points and a CEV of 0.75.

J. Supply Terminals.

1. General Features of Supply Terminals:

- a. Supply Terminals may be moved by unlimited QM units, rail transportation, or by naval shipping points.
- b. Supply Terminals are 10 SP in size and their counters are back-printed with “OP” to indicate when they are emplaced and Operational.
- c. Supply Terminals may supply not more than 1 Army Group (3 Army HQs, and their 12 related Corps HQs {4 per Army HQ}) in a player turn.
- d. When being moved by rail or by 2 QM units, their total supply capability is reduced. It may only supply one Army HQs and 4 Corps HQs with offensive supply. It may still provide general supply to 3 Army HQs, and 12 Corps HQs (4 per Army HQ).
- e. Supply Terminals can be created by spending 1 Arm SRP and 1 LP at any city that qualifies as a valid location for one (see below), or they may arrive in the OB/OA.
- f. When being moved by sea or river, it may not operate until it is emplaced.
- g. It takes one turn to emplace a ST and they may be emplaced at either:
 - i. In the continental system:
 - 1 Any Rail Marshalling Yard that has three or more connections across different hex sides to other RMYs, and can trace supply from the national supply source by rail.
 - Or:
 - ii. In the overseas system:
 - 1 At any Large or Great Port, or at any RMY within a QM MSR that has two or more connections across different hex sides to other Rail Marshalling Yards.
 - 2 In Egypt and Libya (only) they may be established on any rail line that can trace a QM MSR to another supply terminal. This ST does not require a QM to be placed at it for units to trace supply from it in the same manner as described in Rule I4.E.1.a.

K. Quartermaster (QM) Units.

1. **Definition:** QM units are used in the transportation and distribution of supplies and are a key component in the Overseas System. Most QM units can provide logistical resources to an unlimited number of units; however, if the QM unit icon contains a number then this is the total number of SPs that may draw logistical resources via that QM. In Merkur there is only one QM in play and this is an Air QM belonging to the Luftwaffe. QM units have no combat effects, no combat strength and do not count against stacking.
2. **Air QM Units:** These provide a limited capacity to supply ground units. Place the number of air transport units as specified per the OB in the Air QM unit holding box. On the following turn the Air QM unit is available for placement. Additional air transports may be allocated to the Air QM in order to absorb possible combat losses, but they do not increase its SP capacity.
 - a. **Emplacement.**
 - i. An Air QM should be placed at an airbase with sufficient air base capacity to match its SP size.
 - 1 Other air units at the airbase in excess of the base capacity must immediately leave via a transfer mission and if for any reason this is not possible they are eliminated. Place them in the EFT box without receiving combat replacements.
 - 2 If an Air QM is placed at an airbase less than its capacity the capacity of the Air QM is reduced to that of the airbase.

For example: A player bases a 10 SP air QM at an airbase which has a capacity of 6. The Air QM is limited to a capacity of 6SP until either it is moved to a larger air base, or the air base is increased in capacity.

- ii. Air QM air bases must be on clear or hilly terrain.
- iii. Air QM air bases must be co-located with or adjacent to a general port, a high volume rail line, on a road (metaled or gravel) within a QM MSR, or at a port served by a QM RVR unit. Air QM capacity is reduced to that of a size limited QM unit if placed within such a zone. If within the MSR of a limited QM the Air QM absorbs resources before any other units supported by the limited QM.

For example: The Allied player places a 15 SP QM at an ST in Chittagong. He locates a 5SP Air QM at the Dimapur air base complex (12 capacity). The allied player must allocate 5SP to the Air QM, leaving 10 SP of ground units that may be supported by the QM MSR. Check the P&E rules for any nation specific limits.

- iv. No other air units may operate from an airbase occupied by an Air QM unless the Air QM's SP value is less than the total capacity of the air base.

For example: A player bases a 10SP Air QM at an airbase with a capacity of 12. A further 2 air units could operate out of that airbase alongside the Air QM.

- b. Relocation. Once emplaced an Air QM can be moved to another airbase. To do this the unit must be removed from the map and replaced by its transport aircraft in the holding box. These then transfer using the air rules to their new location and the Air QM can then be reformed as above.
- c. Capacity. The number of SPs an Air QM can supply is determined by the sum of the SP capacity of the air transport units assigned to it. *For Example:* The US player assigned 6 C46 wings to an Air QM giving it a total supply capacity of 12SP. An Air QM's capacity is modified as follows:
 - i. Air units assigned may operate at Extended or Long Range with the normal reductions in capacity.
- d. Radius. This is the range of the Air MSR.
 - i. The maximum radius is equal to the Air QM "movement" value printed on the counter.
 - ii. An Air QM's SP capacity is doubled if the Air QM operates exclusively at less than half its radius.
- e. Air Combat. Air QMs can be affected by enemy air operations.
 - i. Attacking an Air QM. Fly an interception mission to any hex between the Air QM's air base and the unit(s) being supplied, but excluding any overland MSR which is not also along the flight path of the Air QM. This hex must be along the shortest route between the Air QM air base and the supplied unit(s). If engaged by enemy fighters resolve ATAC.
 - ii. Escorts. Air QM counters can be escorted by friendly fighters. Escorts may fly to any hex within range which is subject to an enemy air attack on the Air QM where ATAC is resolved prior to resolving the attack on the Air QM.
 - iii. Resolving the attack. Surviving fighters deduct 1/5th of the Air QM's SP value from their attack strength.
 - 1 Roll 1D10 and subtract the result from the fighters modified attack strength. This is the no of SPs of interdiction placed on the Air QM for that turn and the corresponding reduction in the number of ground units may not be supplied. The owning player immediately changes affected units from General Supply to Isolated 1 status, or from Over Extended 2 status to Isolated 2.
 - 2 Apply the total number of interdiction hits noted above as hits on the air transports in the Air QM holding box (these losses are treated as EET).
- f. Antiaircraft Artillery. Enemy AAA may reduce the SP total of an Air QM
 - i. For every 10 points of AA within 3 hexes of a hex supplied by an Air QM from any type of unit excluding intrinsic AA apply 1 SP of interdiction to the Air QM and make a corresponding reduction to the number of ground units that may be supplied. The owning player immediately changes affected units from General Supply to Isolated 1 status, or from Over Extended 2 status to Isolated 2. When calculating the amount of AA available, all Heavy AA is halved and Light AA is doubled.
 - ii. AAA fire may damage or destroy transport units. Roll 1D10 for each block of 10 AA points allocated, and subtract the total of air units (i.e. the number of counters, either half or full strength) plus the interdiction hits from the result. Any positive number left is the total number of hits applied to the Air QM's components.

L. Corps HQ Markers.

1. *Definition:* In general, these markers function in the Logistics System as the final link in the supply system.

2. *Features of Corps HQ Markers:*

- a. Corps HQ markers may provide Offensive supply to units stacked in up to 4 hexes that are directly adjacent to the HQ Marker, or the hex in which the Corps HQ marker is located and three additional hexes that are directly adjacent to the HQ, except into or across prohibited terrain. In effect the Corps HQ may only supply 4 stacks of units.
- b. Corps HQ markers have no effect on stacking.
- c. They move per the Army HQ movement limits.
- d. At the player's option, they may be used as Stacking Replacement Markers as well as an element of the supply system, in the same way that Task Force Markers are used in the Naval System.
- e. They cost ½ SRP of their unit type icon and ½ Arm SRPs to replace.
- f. They are subject to all combat results in their hex, but may retreat before combat.

g. In general their MSR is 6 hexes, drawn from an Army HQ marker. An individual Corps may also draw a 6 hex MSR from an ST, at the same LP cost as an Army HQ marker.

3. *Optional Rule:* The ONLY units that can draw offensive supply are those stacked with the Corps HQ marker.

M. Logistics Points.

1. *Definition:* LPs represent the additional resources required to support intense combat operations on the offensive, and may represent the basic resources needed to keep forces within the field, particularly in isolated pockets or on the overseas supply system.

2. *Features:*

a. Each logistic point represents 5 NSPs (or 5 SPs) worth of naval transport capacity, and may provide general and/or offensive supply to a maximum of three Army Headquarters, depending on the supply system in use. Each Army Headquarters may provide offensive supply to four Corps HQs. An LP may be transported by rail costing 5 SPs of capacity. LPs may be air lifted, however they cost triple their size for air lift.

For Example: German forces have been surrounded at Stalingrad, and the pocket includes an ST. The German player wishes to air lift an LP into the surrounded position. He may do so, but it would take a minimum of 15 full transport air wings to lift the LP into Stalingrad.

b. Each Army HQ to be supplied by the LP must be on the MSR from the ST at which the LP is spent to be placed in offensive supply (and general supply in the overseas system) or within the QM MSR of an emplaced QM unit in the Overseas System.

c. Each Army HQ uses 1/3 of an LP per turn to provide offensive supply, and in the overseas system, 1/3 to provide general supply leaving 1/3 to supply air units.

d. LPs can be broken down into 1/3 LPs. These have an SP size of 2 and can be recombined when stacked together.

e. If a player has fewer than three Army HQs within supply range of his supply terminal, he may retain any unused thirds of the LP or ship the balance to another Supply Terminal for use. If transferred to another ST it may not be used until the turn after it arrives.

f. One LP may be broken down into 20 General Supply Points (GSP). A third of an LP may be broken down into 6 and 2/3 GSPs.

g. As an option players may ship an LP to any port that has sufficient capacity to handle the LP. At the instant of arrival the LP is converted to 20 GSPs if the port does not have an ST.

N. General Supply Points.

One LP can break down into 20 General Supply Points (GSPs) and a third of an LP can break down into 6.66 GSPs. GSPs cannot be created in any other fashion.

1. *General Supply Point Transportation:* GSPs cannot move by themselves. They can be transported by rail, sea, air, or QM units. For all forms of transportation (except QM units – see K above), one general supply point equals 1/4 of a Naval Shipping Point (NSP) point or Stacking Point for cost of transport. Ground units may not carry GSPs.

2. *Use of General Supply Points:*

Supply points may be expended in any friendly owned hex to which they have been transported. The MSR between the GSP and the unit is calculated as in 14.E.1.a above, otherwise the unit needs to be in the same hex or adjacent to the GSP. GSPs can provide general or offensive supply to ground units, and permit air units to operate:

a. General Supply: Spend 1 GSP per SP of force. No penalty other than those for being in General Supply.

b. Offensive Supply: Spend 1 GSP supply point per SP of force in general supply. No penalty.

c. Air units. Spend GSPs per full strength air wing as noted below.

3. *Other Ground Units:* Ground Units based on islands that cannot trace a rail LOC to their national source of supply must be supplied using GSPs, except for national forces belonging to that nation and based on islands within their 1939 national borders. Islands (with the exception of the Shetland Isles and the Japanese Home Islands as delineated on the maps) which are more than 1 sea zone from the mainland are excluded from this rule. French Colonial possessions, even if politically a region of France are also excluded from this rule (i.e. Algeria MR XIX is on the overseas system).

4. *Other Air Units:*

a. Air Units Based on islands or in overseas theatres that cannot trace an overland supply line to an ST at which part of an LP has been expended for air supply, or trace to their national supply source, must have supplies spent on them to keep them fully operational in the same way that friendly ground units in small islands do. GSPs must be spent per wing per turn to keep them fully operational. For game purposes wings have varying sizes in terms of supply costs:

i. Types F, A, D, are 1 SP.

ii. Types B, HB, and T are 2 SPs.

iii. Type G do not have an SP size and do not require GSPs to be spent on them.

For Example: Half an Me109 (Type F) and half a Ju87 (Type D) would require 1 GSP.

b. Only air units originating an air mission from an Overseas Theatre or an island are restricted.

For Example: A JU88 flying from Italy to bomb Benghazi, would spend no GSPs. If it lands in Crete, it must then have supply spent on it to take off again for any reason.

O. Stockpiles.

GSPs can be stockpiled for use by the owning player at a later time. GSPs do not 'expire' over time, but remain in stock till used. All supply points remain on the map until expended.

P. Capture of Supply Points or Logistics Points.

A force can capture supply or logistics points belonging to the enemy.

- a. Supply or logistics points in a hex that becomes enemy owned with no ground combat in the hex (or just by the hex being overrun) are captured automatically.
- b. If there is combat in the hex, and the defenders must retreat (leaving the supply or logistics points), roll 1D10. The Die roll is the percentage (in tens rounded up) of the points that are captured:
 - i. Captured logistics points are rounded down to the nearest third, unless the capturing player rolls a 10.
 - ii. Captured supply points are rounded down to the nearest whole number unless the capturing player rolls a 10.
- c. Captured supply or logistics points can be used in the new owner's next initial phase.

Q. Naval Supply.

In Merkur naval units are always in supply. They must return to a friendly naval base by the end of their fourth consecutive movement segment where they need to spend at least one naval movement segment taking on supplies before putting to sea again.

15. Administration

A. Unit Administration.

1. *Reinforcements*: The OB shows the arrival dates of the reinforcements a nation receives. Historical identifications on these lists are advisory and need not be followed as long as the correct type and strength unit is used. These units are placed on the map in the owning player's initial phase and ground units may be placed in violation of stacking, but cannot end the movement phase in violation.
 - a. Enemy ZOIs do not affect the appearance of new units, but they may not appear in enemy owned territory. If, for any reason, units are unable to enter play as scheduled they are lost.

B. Combat Replacements.

1. *Losses*: Due to the limited timescale of the campaign there are no ground or air combat replacements in Merkur. Dead is dead.

16. Political Rules.

A. Definitions.

1. *Major Power Blocs*.
 - a. In the game there are two major power blocs:
 - i. The Western Allies, consisting of the United Kingdom and Greece.
 - ii. The Axis, consisting of Germany and Italy.

B. National Regulations.

1. *Germany*.
 - a. There are no special conditions in effect for the German player.
 - b. The 22 Air Landing XX is Air Portable.
2. *Greece*.
 - a. All Greek units are considered to be Mountain type for combat, but only those with the Mountain unit identifier can use the movement point costs of Mountain units.
3. *Italy*.
 - a. There are no special conditions in effect for the Italian player.
4. *United Kingdom, its Empire, and the Dominions*.
 - a. There are no special conditions in effect for the British player.

17. Winning the Game

A. Victory Conditions.

1. Victory is determined by a comparison of player performance based on capturing or retaining possession of objectives worth victory points at the end of the game and the loss of units.
2. Determination. Victory is determined by the following process:
 - a. Refer to the VP Chart for points awarded.
 - b. The players then total the VPs for each side.
 - c. The players then subtract the Allied VP total from the Germany total.
 - d. Players then determine who won and how large the victory by finding the result of (c) above in the victory chart for game.
 - e. In all cases, if players disagree with the manner in which victory points or victory levels are determined, players may ignore the victory rules and charts, and are free to agree on any type of victory between them that they desire. In doing this players may want to take into account losses on both sides, how long it took to end the module, as well as how many objectives or how much territory they hold.

18. Designer's Notes

Welcome to the TSWW game system. Firstly I would like to thank you all for buying the game, and having bought it, I hope that you will all enjoy the experience. The game that you have here is the first game in a series that will fully cover The Second World War at a consistent operational level, taking in Air, Land, and Naval operations in a way never before done.

The concept is simple, the player gains the opportunity to fight the war with historic goals and objectives as a guide, and can experiment with whatever operations he sees fit within the framework of the game. It also opens an admittedly small window initially, but with growing consequences for the player's forces, into the economic and political decisions that in many cases provided the impetus for the campaigns fought during the war.

The design of the games take into account the essential nature of combined arms operations at all levels within the war, and highlights the crucial importance of the war of supply to enable successful operations in all theatres of the globe. Indeed, without the sinews of war, logistics, war cannot be prosecuted at all with any hope of success.

At the operational scale, the design team have researched every army, air force, and navy whilst examining the capabilities of the systems involved in the actual combat that decides battles. We are confident that, within reason, we have created unit strengths and capabilities that reflected those of the main combatants, and have filled in many holes that we are aware of in other game systems. The reliability of our data enables us to say that the at start locations for the main ground forces in all cases are very reliable. However, the relative shortage of good information has adversely affected our ability to precisely determine, for example, the exact capabilities of some minor neutral nations.

That said, we are continuing our efforts to fill in those details with a view to correcting or amending any errors that come to light as the main Order of Battle files are expanded. We are also expanding our research into the political and, more crucially, the economic imperatives that dictated war time production and policies, although I would be the first to admit that my understanding of China in The Second World War is currently lacking! Our air and naval research highlights the fast moving nature of the campaigns in the air and on the seas – and the huge scale of the forces deployed. We have tried and hopefully succeeded in showing the massive scale, for example, not just of the Royal Navy, but of the British Merchant Navy (some 17.5 million tonnes of shipping). We have used known air loss rates to determine the combat resolution systems and the costs of maintaining the air forces in operation, even before they flew a combat mission.

We as a team have spent a great deal of time working out how forces interacted on the battlefield, and have tried to follow known doctrines to show the impact of supply, air power, and tactical ability on the results of combat, not forgetting the influence of mother nature on the battlefields of the world. Meantime, we have also worked incredibly hard to bring you bespoke counters, maps, rules, charts, orders of battle, and box art, which we hope will add to the pleasure of ownership.

Clearly, we are always open to suggestion, and offers of help. We have done our best to bring you an exciting game. If you have any questions relating to the game, cannot understand a part of the rules, or find errors of omission or information, please do not hesitate to contact us at:

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You can also join our web groups at:

etsww@yahoogroups.com and <https://www.tsww-online.com/forum/>

We will be placing updates regularly on the web group as the game develops, and we look forward to hearing from you about your experiences of playing the game.

19. Game Credits

Design Team: John Bannerman, Cory Manka, Matthew Manka, Martyn Potts.

Design Support: Ashley Barclay, Larry Frost, Mike Kaspar, Wolf, Tom Davidson, Robert Borries, Daniel Tebbutt, Sam Douglas, Robert MacDonald, Robin Sillem, Rob Brown, Chris, Alex Tennant, Andrew Gibson, John Soper, Craig Petersen, Alan Philson, Richard Duval, Darby McDonald, Una Bannerman, Trevor Holman, Troy Kenily, Alan Conrad, Tim Erickson, Samuel Manka, Simon Tett, David Hughes, Mike Tapner, Douglas Clouston and members of the Axis History Forum.

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Website Design: Patrick Harris

Thanks: Grateful thanks to all who supported the effort to get the game out the door. If I have omitted a name it is because I forgot, not because we do not appreciate your huge level of help and support.

End of TSWW Game V

20. Appendices

A. Abbreviations

AA	Anti-Air	DTM	Determined Transport Mission
ACE	Air Combat Efficiency Variable	EFT	Eliminated Over Friendly Territory
AGS	Amphibious Gunfire Support	EHT	Eliminated Over Hostile Territory
AGSS	Amphibious Gunnery Support Strength	ESG	Escort Support Group
APZOI	Anti-Partisan ZOI	EW	Electronic Warfare
ARP	Air Replacement Point	EZOI	Enemy Zone of Influence
ASE	Armour Shock Effects	FoW	Fog of War
ASW	Anti-Submarine Warfare	FP	Fuel Point
ATAC	Air-to-Air Combat	FPF	Fuel Production Facility
ATE	Anti-Tank Effects	FPP	Fuel Production Point
BAI	Battlefield Air Interdiction	FZOI	Friendly Zone of Influence
CAS	Close Air Support	GSP	General Supply Point
CBG	Carrier Battle Group	GUIC	Ground Unit ID Chart
CBI	China/Burma/India	I-#	Out of Supply Overextended (# no of turns)
CD	Coastal Defence	LOC	Line of Communication
CDA	Coastal Defence Artillery	LOS	Line of Supply
CEV	Combat Efficiency Variable	LP	Logistics Point
CGI	Ground Controlled Intercept	MP	Movement Point
CGS	Combat Gunnery Support	MSR	Main Supply Route
CGSS	Combat Gunnery Support Strength	NEM	Navel Efficiency Modifier
CP	Cargo Point	NGS	Naval Gunfire Support
CRT	Combat Results Table	NIM	National Intelligence Means
DBA	Determined Bombing Attack	NNCT	Night Naval Combat Trained
DMW	Defensive Mine Warfare	NRP	Naval Replacement Point
DRM	Die Roll Modifier	NSP	Naval Shipping Point

TSWW		General Rules		Merkur
NTF	Naval Task Force	SP	Stacking Point	
NTG	Naval Task Group	SRM	Stacking Replacement Marker	
OA	Order of Appearance	SRP	Stacking Replacement Point	
OB	Order of Battle	SSRP	Synthetic Rubber Point	
OBF	Operational Bombing Factors	ST	Supply Terminal	
OMW	Offensive Mine Warfare	TEC	Terrain Effects Chart	
ONS	Operational Naval System	TF	Task Force	
P&E	Political & Economic rules	TG	Task Group	
POL	Petrol, Oil and Lubricants	TMA	Tactical Movement Allowance	
QM	Quarter Master	TMR	Tactical Movement Rating	
QM RVR	River Quarter Master	U-#	Out of Supply Isolated (# no of turns)	
RMV	Rail Marshalling Yard	UIT	Unit ID Table	
RRP	Natural Rubber Point	WA	Wing Allowance	
SF	Special Forces	ZOI	Zone of Influence	
SMA	Strategic Movement Allowance			

B. List of Charts

The page numbers below refer to the pages of the game charts distributed with the game Merkur. Page numbers will differ if using game charts from other games in the series.

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