Operation Battleaxe

"Tiger Cubs at Bay"



Game Rules

TSWW GAME V

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Global Rules (Abridged) for Battleaxe

vI.4Battleaxe

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I. Introduction

- A. The Second World War system covers the entire war in all theatres, from 1939-1945 at 15 miles to the hex, with 75 mile sea zones, and half monthly game turns. The European Theatre Series allows for the play of the entire war in the European and Mediterranean theatres but will also connect with the Pacific Theatre series covering the Pacific, China, Southeast Asia, Burma, and India.
- B. The rules and charts contained in the Global Rules can be used to play the game and constitute a standardised set of rules covering all Theatres and Commands. Each game in the series will have a set of rules optimised for it and smaller games can have a heavily abridged version of the rules cutting out anything unnecessary, but it is intended that any game can be played with the full set of rules and the latest version of those rules.
- 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 their 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, including terrain effects such as cities in mountain hexes.

C. Die Rolls.

- I. 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. ID10 I 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 ID10, 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 ID10 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 Commonwealth). 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. Nations.

1. National Contingents: Armies fight most effectively when they have a common structure, language, and training with which to develop plans. To represent this, the games make use of 'national contingent' rules. When units of differing national contingents are trying to attack together, they suffer a reduction in their overall strength (see 'National contingents' on page 17). Some nations formed, equipped and trained units that were made up of refugees from conquered countries. These units are shown or listed in the P&E Rules and Orders of Battle and/or Appearance (OB/OA) as being part of the sponsoring nation's contingent.

For Example: Free Polish troops, ships, and air units are part of the British Contingent.

F. 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 P&E 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 and Communication:
 - a. 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 SEAC 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 SEAC may over fly enemy owned territory. See Rule 13 for details.
 - b. 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 13.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 13.G on page 26.

G. Naval System Concepts.

In Battleaxe the naval system is abstracted. See the OB for details.

H. 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 13.

I. 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. All activities in the Initial Phase (see Rule 6.3.a on page 10) 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. I.e on page 12.
- 3. Air Rules. Bombing factors for CAS (ONLY) are multiplied by 10 Rule 8.E.I.c on page 16.
- 4. Naval Rules: Not applicable in Battleaxe.
- 5. All other rules remain in place.

3. Geography and Climate

A. Weather.

I. Climate. The weather in the game is always Good, and as such weather has no effect.

4. Facilities

A. Fortifications.

- I. Field Fortifications: These are the only type of fortifications that can be built by the player during the game. Whenever a fortified hex becomes owned (not controlled, see Rule 7.H) by the enemy, its field fortifications cease to exist. All field fortifications more than 25 hexes from enemy forces in regular supply cease to exist in the initial phase of the owner's turn unless at least I SP of friendly forces are in the hex. There are four levels possible, their effects on combat are shown on the Terrain Effects Chart:
 - a. Level I (Field Works)
 - b. Level 2 (Defensive Fortifications)
 - c. Level 3 (Fortified Network)
 - d. Level 4 (Deep Defences)
- 2. National Special Works and Coastal Defences (CD): Forts printed on the map are either Improved and treated as Major Fortification Hexsides or Unimproved and treated as Fortified Hexisdes. In Battleaxe Tobruk is Improved and Bardia is Unimproved. See the Fortification Types chart for details. They cannot be rebuilt in the context of the game if reduced. They are reduced if as a result of combat a defender has to retreat and the attacker advances after combat to occupy the hex. Place a suitable marker on the map to indicate a reduced fortification. If a hex containing a fortified feature changes ownership without combat then the fortification remains intact and is usable by the new owner.

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. They can be built be Engineers see Rule 12.B.2 on page 24.
- 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. Treat as 'Airfield' unless specifically noted below.
 - b. Airfield: A facility built by engineers in the course of the game. Airfields may be built in clear, hills, woods and wooded hill terrain, including any hex with a city or town, excluding Great Cities. Each Airfield has a capacity of 3 and no hex may contain more than four Airfields.
 - c. Each hex may contain up to four airfields in addition to any airport a city in the hex has.
- 3. Capacity and Operational Status:
 - a. The capacity of an airbase is the number, in wings (i.e. full strength counters), of friendly air units that may begin air missions from the airbase each player turn. 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 P&E 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. Airstrips may not be captured.
 - 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 airbase 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.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 I Air Replacement Point (per hit on the base), chosen randomly by the player for each hit the airbase suffers.
- d. Engineer units with construction ability repair hits on airbases at the rate of 1 hit removed per MP expended, per SP of engineers.
- 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.
- I. Definition: Ports are marked on the map (see the Terrain Key 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.

- I. 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 parenthesise, (1)-6 for instance, is rated as having $\frac{1}{2}$ a combat point, except against partisans and Special Forces when 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. Semi-motorised. Any unit with the single wheel symbol centred under their unit icon. These units move along roads and tracks as per motorised units. They move across country as motorised units or they can choose to utilise their unit symbol properties. However, if they do the latter their printed movement rating is halved. In combat they are treated as non-motorised. During the pursuit phase they may move as motorised along roads and tracks as per motorised units.
 - c. Cavalry. Any unit with the cavalry icon that is not motorised. Cavalry units may move their full movement point rating during the pursuit phase unless specified otherwise.
 - d. 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.
 - e. 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. Size:
- a. Corps: A unit with the corps size symbol.
- b. Division: A unit with the division size symbol.
- c. Non-divisional Unit: A unit smaller than a division.
- d. 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. e. Some units may have a reduced side. The reduced side is half the SP size of the full strength unit.
- 5. 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 P&E 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 = I SP
- d. Battalion II = $\frac{1}{2}$ (0.5) SP
- 6. 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. 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.
- b. 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.
- c. Units that cannot retreat (Rule 9.G page 18) are eliminated.
- d. Attacks can be made from multiple adjacent hexes into any hex type, regardless of the limits of stacking in the attacked hex, however, only attacking forces up to the stacking limit of the target hex may advance after combat (see Rule 9.G page 18).

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.

- 7. Stacking Restrictions: The types of stacking are based on the type of terrain or weather zone the hex is in. They are:
 - a. Limited Land Mass: This represents the very limited space of small islands. (Islands smaller than one quarter (1/4) of the hex they occupy in size). Four SP of any unit type plus 2 SP of Artillery. *For Example:* one division, 2 SP of artillery or any viable combination of such, including 6 SP of Artillery.
 - b. Mountain: 11 SP of any unit type plus 4 SP of Artillery. For Example: 2 divisions, 3 SP of non-divisional units, 4 SP of artillery, or any viable combination of such.
 - c. All Other: 44 SP of Normal Units, 12 SP of Artillery. For Example: 9 divisions, 8 SP of non-divisional units and 12 SP of artillery, or any viable combination of such.
- 8. Zones of Influence (ZOI): 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.
- 9. 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 or its national CEV whichever is the lowest. 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.I.b) and railroad network interdiction (see the Rail Marshalling Yard bombing missions). Battlefield Air Interdiction (BAI) (and Partisan Interdiction if Partisans are in play) can add up to no more than a 40% reduction in the CEV. Railroad network interdiction can contribute an additional 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-ii 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 $20 \times 2.0 = 40$
- 10. Unit Breakdowns: Some division sized units in the game may be split into their major sub units in the course of the game. This may be done at any time during the Movement or Pursuit Phases of the owning player's turn, and can never been done during the Combat Phase. Breakdown activity is only possible at the owner's choice (see Rule 12.A).
- 11. Special Unit Capabilities: Many ground units have special capabilities as detailed in other parts of the Rules and Charts. For a summary see the Unit Abilities Information Chart.

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 P&E 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, the reduced strength side of air unit counters) or as Wings (about 40 aircraft, full strength side). In the air combat (see 10.C) and air administration (see 14.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: If an air unit's bombing rating is a * this means $\frac{1}{2}$.
 - 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, absorbing 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: All air units have a type and some have one or more descriptors. Both are to be found in the top centre position of the air unit counter. For Example: a counter with NHF is a Night Heavy Fighter.
 - 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.
 - 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 and for Operational Bombing Missions their close air support (tactical bombing) rating is x 1.5.
 - v. 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 attack factor reduced by 50% at night, but never below one.
- 4. Air Unit Codes: Air units may have one or more codes as listed below. Codes are located in the centre of the bottom row on a counter and a number in this position indicates SP capacity of transport aircraft with * representing ½ SP. 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. Air units with codes have the following abilities:
 - a. L: Low Altitude. Code L air units generally operate at low altitudes, and the effects of this are shown by the modifiers on the AA Combat Results Table and noted in Rule 11.B.1.e
 - b. T: Close Air Support (CAS). Code T air units are equipped with special close air support weaponry. When operating in the interdiction role (BAI) a wing of Code T aircraft add 5 factors to their OBF and a squadron adds 2. 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-1 has an operational bombing factor of 5, and is Code T. During a CAS mission, it adds 7.5 (as it is also Type D) to the ground strength of friendly ground forces; during a battlefield air interdiction mission it adds 7.5 points from its OBF and 5 points as a result of being Code T and Type D to the interdiction calculation, thus it adds a total of 12.5 CAS points to the zone.

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) Type 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.

6. Order of Play

- I. *Turns*: The game is played in a series of game turns, which represent approximately half a month. Each game turn is divided into two player turns with initially 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. Phasing player spends LPs/GSPs as necessary. Any special events required by scenario rules may occur.
 - ii. The Phasing Player conducts administration activities and distributes Offensive supply to HQs or directly to units using GSPs.
 - b. Movement Phase
 - i. The Phasing Player moves ground units, including moving to an airbase and being flown on a Transport Mission.
 - ii. Air Missions during the Movement Phase:
 - I PRIOR TO ANY OTHER MOVEMENT DURING THE MOVEMENT PHASE
 - a. The Phasing Player flies airbase attack missions. Resolve as necessary.
 - b. The Non-Phasing Player flies airbase attack missions. Resolve as necessary.

NOTE: An airbase subject to such an attack cannot fly any mission until the attack is resolved except interception of the incoming attack, all air missions are resolved in order as determined by the owning player, one at a time. In no case may air interception missions be intercepted.

Optional Randomisation of Air Movement Order. Excepting naval co-operation, if players wish to vary the air mission orders as listed in this Order of Play, the players utilise either a deck of playing cards, 2 Dice of any sort, or use a coin (heads or tails). The Phasing player nominates whether higher or lower as winning draw/die roll, or nominates heads or tails. The winner flies the first air mission, the loser flies second, then the winner flies again, loser again etc. until all missions are flown. In no case can air interception missions be intercepted.

- 2 AT ANY TIME DURING THE MOVEMENT PHASE
 - a. The Phasing Player flies and resolves bombing missions and other air mission except CAS. Non-Phasing player Intercepts at the target if required. Resolve as necessary.
 - b. The Non-Phasing Player flies and resolves bombing missions and other air missions except CAS. Phasing player intercepts at the target if required. Resolve as necessary.

NOTE: All air missions are resolved in order, one at a time, and prior to the Combat Phase. The order in which missions may be flown can be randomised as in 6.3.b.ii.l above. In no case can air interception missions be intercepted.

- c. Combat Phase
 - i. THE PHASING PLAYER DECLARES ALL ATTACKS. Once declared the attacks must take place.
 - ii. PRIOR TO GROUND COMBAT RESOLUTION
 - I The Phasing Player flies CAS missions. Non-Phasing Player Intercepts at the target if required. In no case may air interception missions be intercepted.
 - 2 The Non-Phasing Player flies CAS missions. Phasing Player intercepts at the target if required. In no case may air interception missions be intercepted.
 - 3 Resolve all CAS missions in whatever order the Phasing Player wishes.
 - NOTE: CAS flight order may be randomised as per Rule 6.3.b.ii. I.
 - iii. Both players determine the isolation status of their units and hexes for combat replacement purposes.
 - iv. The results of combat are applied in the following order:
 - I 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 are eliminated.
 - 5 The Phasing Player executes any movement after combat allowed.
- d. Reaction Movement Phase. Non-phasing units allowed reaction (Rule 7.C.I.e) can move up to ½ their movement allowance.

e. Pursuit Phase. The Phasing Player may move all ground units again using the tactical movement rate and rounding down any fractions.

- i. Units in offensive supply: cavalry and all motorized class units may use their full movement allowance; all other units may move up to $\frac{1}{2}$ of their allowance.
- ii. Units in general supply: cavalry and 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 E1: cavalry and all motorized class units may move up to 1/4 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.
- g. End Player Turn Phase. Complete any turn administration including calculating combat replacements.

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.e) 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 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. Note this means they do extend into sea ice hexes and frozen lakes.
 - ii. Force size and the ZOI they exert, along with any combat effects of the force size, are detailed on the Zone of Influence (ZOI) charts. There are two such charts, one for all types of terrain (excluding mountain), and one for mountain terrain.
 - iii. In addition to the notations on these charts, certain terrain, weather, or supply conditions, result in a unit having a Reduced ZOI. When a ZOI is reduced by two separate causes the force exerts no ZOI.
 - For Example: A regiment normally exerts a Reduced ZOI. If that force was out of supply, and its condition called for a reduced ZOI, the force would have no ZOI.
 - iv. 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.
 - v. If units of opposing sides exert a ZOI into a hex, the level of control exerted is determined as follows:
 - I 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 greater ZOI negates the lesser ZOI for all game purposes.
 - vi. Support units such as artillery, along with air and naval forces never exert a ZOI. However, artillery can exert a ZOI into Sea and Lake Ice hexes: Field artillery has a Reduced ZOI whilst Heavy, Siege and CD artillery have a Full ZOI.

b. Effects of the ZOI.

- i. Movement of Enemy Forces. See the Zone Of Influence Movement Cost Chart.
- ii. Tracing of Overland Supply Routes.
 - I Full EZOI: An overland supply route can be traced through a Full EZOI, but each hex costs double the regular cost of the hex's terrain when calculating MSR expenditure. Railroad Supply Routes (RSR) cannot be traced through an uncontested Full ZOI and require at least I SP of friendly non Support units to negate the effects of the EZOI.
 - 2 Reduced EZOI. An overland supply route being traced through a Reduced EZOI costs one and a half (1.5) times the regular cost of the hex's terrain when calculating MSR expenditure. A RSR can be traced through a 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 its P&E Rules.
- iv. Combat Replacements. No nation can receive combat replacements from forces eliminated while surrounded by Full EZOIs unless allowed to do so by their P&E Rules.
- c. Modifications of ZOI Effects
 - i. Weather Zones. Some weather zones modify ZOIs from Full to Reduced or from Reduced to None. See the ZOI Charts for details.
 - ii. Supply. The supply status of a force may cause the ZOI it exerts to be reduced from Full to Reduced or from Reduced to None. See the Supply Effects Chart for these effects.
 - iii. Across a Major River hexside a Full ZOI is modified to Reduced and a Reduced ZOI is modified to None, but check the P&E Rules for any nation specific exceptions.

C. General Movement.

1. 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 and/or entered.

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General Rules

- 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. Units moving in the pursuit phase may use their movement points for movement and or overruns. They may also use their MPs to destroy infrastructure per the engineering rules (Rule 12.B). They may not use their MPs for any other purpose. The following tactical movement allowances are used in this phase with all the usual costs for movement such as terrain and moving through EZOIs:
 - i. Units in offensive supply: cavalry and all motorized class units may use their full movement allowance; all other units may move up to 1/2 of their allowance.
 - ii. Units in general supply: cavalry and all motorized class units may move up to $\frac{1}{2}$ of their movement allowance; all other units may move up to $\frac{1}{4}$ of their allowance. For Example: an infantry unit with a movement rating of 6 would have $\frac{1}{2}$ movement points available.
 - iii. Units out of supply at E1: cavalry and all motorized class units may move up to ¹/₄ of their movement allowance; all other units may move one hex. E2, U1, U2 and U3 cannot move at all.
- 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). Overruns occur during the movement, advance after combat, and pursuit phases.
- d. 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.
- e. 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.

1. Only Tactical movement is used in Battleaxe. 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). Where losses are inflicted, round the losses up to the nearest full strength point.
 - a. Overruns are possible at a variety of odds levels, but cannot be conducted at less than 7:1 calculated odds. Overrunning either a zero strength unit, one with no defence strength, or a unit with a parenthesised combat or defence strength of (1) at odds of 12:1 never results in attacker losses. In all other cases losses suffered by the overrunning force are based on the modified attack or defence strength (whichever is greater) of the overrun units. Roll 2D10 (percentile) die. The result is a percentage of the maximum loss possible at the overrun level indicated below:
 - i. 10:1 or higher, the attacker loses a percentage of the total attack or defence strength of the force overrun.
 - ii. 9:1, the attacker loses a percentage of twice the total attack or defence strength of the force overrun.
 - iii. 8:1, the attacker loses a percentage of three times the total attack or defence strength of the force overrun.
 - iv. 7:1, the attacker loses a percentage of four times the total attack or defence strength of the force overrun.
 - NOTE: losses are applied immediately to the attacking force and need to be recorded in SPs for the Combat Replacement system (if the attacker would ordinarily be eligible to receive combat replacements).
 - For Example: A player makes a 7:1 overrun against 4 strength points defending. The 4 points are multiplied by 4 to get a maximum potential loss of 16. The attacker rolls 2D10, with 65 as the outcome requiring the loss of 11 strength points (65% of 16 = 10.4 rounded up to 11). The attacker chooses how to remove SPs to satisfy this loss in combat strength.
 - b. Overruns can happen during the movement, advance after combat, and pursuit phases of a player turn. Units making the overrun during the movement and pursuit phases 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 cannot violate stacking limits. An Airborne

unit may overrun on the turn it executes an airdrop, but if it does so it may not move for the remainder of the player turn. Units that overrun after combat have only half of their normal allotment of MPs during the pursuit phase.

- c. 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.
 - iv. Using tactical movement a unit or stack with an attack strength greater than zero can automatically overrun a unit or stack with a defence strength of zero at the 15:1 overrun cost.
 - v. Using operational movement a unit or stack with an attack strength greater than zero can automatically overrun a unit or stack with a defence strength of zero at the 12:1 overrun cost.
- d. A unit with the capability to retreat before combat may make use of this ability when an overrun is attempted against it. This may not be done if there are units without this capability stacked with it. The overrunning units pay I MP in addition to the costs of entering the hex if all the defenders in the hex retreat before combat.
- e. All units making an overrun must enter the hex being overrun and must pay all required MP costs to do so.
- f. All units involved in either an overrun or a retreat before combat relating to an overrun must be capable of moving into the terrain type in the hex they are moving into.

F. Transportation Lines.

- 1. 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 I MP (never below IMP) in all terrain types except salt marsh and marsh
- 2. Note that the rail line leading to Tobruk had not been completed at the time of Battleaxe and terminated at Mersa Matruh. This rail line was committed to the transportation of supplies and cannot be used to transport units.

G. Abilities of Special Unit Types.

1. 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.

H. Change of Ownership.

- I. Each nation on the map owns territory as described in the Module and P&E Rules.
 - a. Territory may exchange hands within the game following the rules noted below:
 - i. I SP or more of non-support combat units occupy the hex. By itself, a force smaller than I SP of non-support combat units may not gain permanent ownership of a hex.
 - ii. A $\frac{1}{2}$ 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:
 - I 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.
 - v. In the event that a nation either surrenders or goes into exile, two turns after the last loyal regular ground unit departs from the nation (or colony), or is removed from the game, all of the hexes in that nation are considered to be the property of the conquering nation.
 - 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 when returning to a friendly airbase. Note that a unit's range and the point at which it returns to a friendly airbase may vary from mission to

mission as laid out in the following rules. Unless otherwise noted in the mission profiles 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.

- I. 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. Definition. An air mission is defined as any aircraft or group of aircraft:
 - a. Assigned to attack a specific target within a hex, plus any escorts provided.
 - b. On any mission to achieve the same objective as defined in the rules.
 - c. Intercepting any enemy air units undertaking an air mission.
 - For Example: $10 \times B17G$ targeting a port in Emden, escorted by $17 \times P51D5$ (CODE D) are an air mission; $\frac{1}{2} \times Mosquito IV$ (CODE H) reconnoitring Singapore is an air mission.
- 3. Air Mission Resolution. In Battleaxe there is only one type of mission resolution:
 - a. Against a physical target or directed at a particular hex, such as CAS or an Air Drop:
 - i. Launch aircraft from base(s) and form the mission force if necessary.
 - ii. Move mission forces to the target.
 - iii. At the target:
 - I Resolve Air-To-Air Combat (ATAC).
 - 2 Resolve Anti-Aircraft Combat (AAC).
 - 3 Resolve the mission.
 - iv. In the Air Return Step: return to base resolving any AA and Mid-Course Interceptions as they occur during movement.
- 4. 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.
- 5. 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):
 - a. Normal Range. This range band is applied to all missions flown at ranges exceeding ¼ 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.

- b. 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.
- c. 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 (1/4) of their printed values. 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.
- d. Extended Range. The capability to operate at Extended Range is restricted to the air units of Germany, Italy, Japan, the British Commonwealth, the USA and France. The printed range of the counter is increased by 50%. A counter with a printed range of 10 is considered to have a base range of 15. Fighters have their Air-to-Air combat rating reduced by 25% at this range, but never below 1. Bombing factors and transport capacity are reduced by 50%.

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.

- I. 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 Allies, Italy and Germany.
- 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.
 - i. The escorting fighters may fly at Short, Normal, Long or Extended range but if their range is less than that of the rest of the mission force they can only escort the mission part of the way before turning back.
 - ii. 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.
 - iii. If the Mid-Course Interception rules is being used, mission forces may be intercepted on their return journey. Escort missions can, therefore, be assigned to cover the mission force on the return leg. The escorts can rendezvous with the mission force when it comes within range of the fighters. The rendezvous is automatic if the mission force has already been intercepted by the enemy, if not the escorts need to roll on the Success Table using their ACEV as a DRM: an 'S' result means they find the mission force and 'F*' or 'F' means they fail to rendezvous and return home.
- c. Operational Bombing. Fighter type aircraft with a bombing factor can use it for operational bombing missions (See Rule 10.B.1.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) and this mission is executed in the same manner as the 'Airbases' Operational Bombing Mission below.

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. 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. When flying any operational bombing mission, factors delivered by Type 'D' aircraft are increased by 50%.

For Example: A Blenheim successfully drops two bombing factors 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. Airbases. These attacks are resolved before any air units located at the airbase fly any mission other than interception of the incoming raid. 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 I 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 (EFT) 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.

- b. 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. If the air unit is a Wing of Code T add 5 factors to their OBF (add 2 if only a Squadron). 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:
 - I 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 an Army or Corps HQ. Any units supplied through the interdicted HQ (and any subordinate HQs supplied through said HQ) are affected by the successful interdiction mission. Hence a successful interdiction mission on any Army HQ affects ALL units and Corps HQs supplied through said Army HQ.
 - 3 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:
 - I 12 OBF points delivered create a level I 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. The effect on CEV caused by units tracing supply through multiple zones is cumulative up to maximum of 40% from BAI.

- For Example: Passing the overland supply line through two level 1 interdiction zones would yield a -10% to the CEV.
- 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.
- c. 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 (except Code T which add their unmodified OBF). The factors delivered are not modified by CEV or ACEV. Where fractions are left roll ID10. 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.

F. 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, antiaircraft 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. 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 CAS or Carpet Bombing missions 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.

- I. The attack (combat) strengths of all the forces attacking are modified for terrain, supply, national contingent (see 9.C.5 below), special unit types (see 9.L on page 19), and CEV (including BAI), then totalled.
- 2. The defence (combat) strengths of all the forces defending are modified for supply, national contingent, weather, special unit types 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.
- 4. ID10 is rolled and the result is adjusted by any DRMs see the 'Possible DRMs for Ground Combat' chart.
- *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 $2.34 5 \times 1.5 \times 1.25 \times 0.25$.
- 5. Terrain Hexside DRMs. When a hex is attacked from more than one adjacent hex it is possible to have multiple DRMs caused by different terrain hexsides. For Example, if a hex is attacked from 4 adjacent hexes, one across a Major River hexside (-2 DRM), one

across a Minor River hexside (-1), one across a Wooded Hill hexside (-1), and one across a hexside with no DRM which added together would give a -4 DRM. In these cases use only one DRM but use the one with the greatest effect, which in the example above would be -2. Alternatively, if players agree, they may choose to:

- a. Average the DRMs across the hexsides. In the example above (attack across 4 hexsides with a total of DRM of -4) this would give a DRM of -1. Resolve any fractions using percentile dice.
- b. Randomly choose one of the DRMs to apply to the combat. In the example above there would be a one in four chance of getting any one of the results.
- 6. The adjusted die roll result is then cross indexed on the Ground Combat Resolution Table with the odds column using the ratio determined above.
- 7. This final result is then applied to all forces involved in the combat. See the Ground Combat Results table.
- 8. Results are applied to both sides immediately after the die roll for each individual combat.

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.

- I. AE: Attacker Eliminated. The defending forces take no losses. The Attacking force is eliminated. Any remaining attacking units must retreat.
- 2. AH: Attacker Halved. The attacker must lose 1/2 the stacking points of the DEFENDING force total. The defender retains the hex.
- 3. AQ: Attacker Quartered. The attacking force must lose 1/4 of the stacking point total of the defending force. The defending force retains the hex.
- 4. HR: Halved Retreat. The attacking forces lose 1/2 of the total stacking point size of the defending force; the defending force must retreat.
- 5. QR: Quarter Retreat. The attacker must lose 1/4 of the defending force total of stacking points. The defender must retreat.
- 6. HQ: Attacker Halved, Defender Quartered. The attacking force must lose 1/2 of the total stacking point size of the defending force; the defending force must lose 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 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. DR: Defender Retreat. Neither the attacker nor defender takes losses. The defending force must retreat.
- 8. QH: Attacker Quartered, Defender Halved. The attacking force must lose 1/4 of defending forces total stacking points; the defending force must lose 1/2 of its total stacking points. The defending force must retreat.
- 9. 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.
- 10. HX: Half Exchange. The smaller force (fewer SPs) 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. DQ: Defender Quartered. The defending force must lose 1/4 of its total stacking points. The defending force must retreat.
- 12. DH: Defender Halved. The defending force must lose 1/2 its total stacking points and must retreat.
- 13. DE: Defender Eliminated. The attacking force takes no losses, the defending force is eliminated. Any remaining units must retreat.
- 14. 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.

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 losses ISP 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.
- 6. Where multiple contingents are involved in a combat, losses should, if possible, be spread across the contingents equally. However, where this is impossible the larger contingent takes the loss.

F. Reduced Strength Capable Units.

1. Most divisions and some other ground units can 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 ½ its initial SRP size. NOTE: there is no combat replacement system in Battleaxe.

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 or AE), 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.
 - I 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:
 - I 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. Any units that cannot retreat to avoid exceeding stacking are totally eliminated (not reduced).
 - 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.

- I. 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 0.5 strength unit in all respects except against partisan units when it has a combat strength of 1.

I. Terrain Effects.

1. 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.

1. 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 gains 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 that are $\frac{1}{2}$ 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 ($\frac{1}{2}$ x SP) 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.

Combined Arms Effects. Specialised units can 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.

1. Armour and Anti-Tank Effects:

a. Armour Shock Effects (ASE) and Antitank Effects (ATE): To reflect the 'shock' impact of armoured fighting vehicles in combat, all units that have a significant armour component have a point value assigned to them showing their 'armour' value. See below for these values. Opposing this impact is the density of antitank guns resisting the armoured attack. All units that have a significant antitank component have a point value assigned to them showing their AT value. The following list summarises in general the units affected:

i. Armour. Equate to their SP total in Armour points. They also equate to their SP strength in AT points.

- ii. Heavy Tanks. These have their Armour, AT and ADE points doubled.
- iii. Assault Guns and Tank Destroyers. Equate to 50% of their SP strength in Armour points. They also equate to their SP strength in AT points.
- iv. Light Armour and Armoured Cavalry Units. Equate to 75% of their SP total in Armour Points. They also equate to 50% of their SP strength in AT points.
- v. Special Armour. Special Armour (such as Engineer or Flame Tank Units) count as 25% their SP total in Armour Points. They also equate to 50% of the SP strength in AT points.
- vi. Mechanised Infantry. Equate to 25% of their SP total in Armour points. They also equate to 75% of their SP strength in AT points.
- vii. NOTE: The following units do have AT values but no Armour Points:
 - I Anti-Tank. Equate 50% of their SP strength in AT points until the Initial Phase of the June I Turn, 1942. Between that date and the Initial Phase of the June I Turn, 1943, they equate to 100% of their SP strength in AT points. From that turn until the end of the game, they equate to 150% of their SP strength in AT points.
 - 2 Heavy Anti-Aircraft. When deployed as AT weapons, Heavy AA units count in general as 100% of their SP strength as AT points.
- viii. Artillery. All types of Artillery are ignored when calculating the AT or Armoured Shock Effects totals.

NOTE: These are not combat factors, but values for use in determining the effects in an individual combat in the turn. All Armour Point and AT point values are subject to the P&E Rules where they may be amended by Nationality.

b. Determining Armour Shock Effects (ASE). The number of armour points the attacking force has can be affected by terrain. (See Terrain Effects Chart). Total all the armour points in the attacking force, modify by terrain and supply effects, and use the modified total, rounding up if less than I, to determine the armour benefit for the attacker. The actual DRM depends on the number of modified Armour Points as follows:

i. I-5 Armour Points	+I DRM
ii. 6-10 Armour Points	+2 DRM
iii. 11-12 Armour Points	+3 DRM
iv. 13+ Armour Points	+4 DRM

- c. Determining AT Effect. The defending force totals up the AT points it has. ATE can be affected by supply and terrain. Modify the total by these effects. This modified total is used to determine the AT benefit received by the defender. To gain the effects, the following conditions are set:
 - i. With 2-5 Antitank Points -I DRM (if 3+ unmodified Armour Points in the attack)
 - ii. With 6-12 Antitank Points -1 DRM (if 3-8 unmodified Armour Points in the attack),
 - -2 DRM (if 9+ unmodified Armour Points in the attack)
 - iii. With 13+ Antitank Points -2 DRM (if 3-8 unmodified Armour Points in the attack)

-3 DRM (if 9-12 unmodified Armour Points in the attack)

- -4 DRM (if 13+ unmodified Armour Points in the attack)
- d. To determine the points in an attack, total up the armour points and the AT points, compare them, and the DRMs are applied. *For Example:* The Attacking force is 100% Armour and consists of 20 SP, for a +4 DRM. The defending force has 6 AT points for a -2 DRM. The net DRM is +2.
- e. Armour Defensive Effects (ADE). This comes into play when Armoured or Light Armoured/Armoured Cavalry units are defending, ATE is not triggered, and ASE is allowed on the TEC. There must be at least one SP of qualifying units present to benefit from the effect. If only one SP of qualifying units are present then there must be at least one other SP of non-Support units defending to gain the effect. If the hex qualifies then the defender receives a -1 DRM for ADE. Check the Charts for the ADE status of combatants in Battleaxe.
- 2. Machine Gun and Light AA. Machine Gun and Light AA units have a significant increase in the percentage of automatic weapons. If a MG or Light AA unit (or a stack containing a MG or Light AA unit) is attacked by a force which is at least 25% Infantry or cavalry, multiply the defence strength of the MG or Light AA unit by 1.5.
- 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/AT rule above.
- 4. Engineer Effects. Engineers have a variety of missions, dependant on their specific training. Construction and repair work are dealt with elsewhere (see 12.B on page 24). Combat Engineers have effects in attack as well as construction capabilities. In addition to standard Combat Engineers, this rule also covers Assault Engineers, Armoured Engineers and Flame Tank units.
 - a. Adjustments to SP total. Combat Engineers receive 'multipliers' to their SP value as follows:
 - i. Combat Engineers. These units have their SP size doubled when attacking cities, port fortifications, fortresses or major fortified works.
 - b. Combat Engineers in Attacks against Cities and Fortifications. When attacking a city (any size), field fortification (any level), or other fortified work, Combat Engineers provide benefits to the attacker. If the attacking force includes modified SP equivalent of Combat Engineers it receives the following benefits:
 - i. With I-3 SPs

- +I DRM.
- NOTE: Less than I SP has no effect.
- 5. 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. The mode of locomotion e.g. rail, motorised etc. does not impact upon the combat effects of the various types of artillery noted below.
 - a. Types of Artillery. Artillery is divided into four groupings for the game. They receive any benefits described below:
 - i. Field Artillery. All artillery or rocket units not designated as being Siege, Heavy, or Coastal.
 - ii. Heavy Artillery. Generally guns or howitzers from 6" to 9.2" in calibre, depending on the nationality. Used for a variety of tasks.
 - iii. Coastal Defences (CD). This is artillery dedicated to engaging ships at sea.
 - NOTE: No artillery can fire at more than a one-hex range on land in the game.
 - b. Effects of Artillery.
 - i. Field Artillery. There is no benefit for field artillery other than those described in the TEC.
 - ii. Heavy artillery.
 - I All size cities: Factors x 3
 - 2 Major Fortifications. Major fortifications are level 3 & 4 field fortifications, and major pre-war structures such as Maginot Line, Fortified hexsides etc. (See the P&E Rules and maps for more details): Factors x 4.
 - 3 All other occasions: Factors as printed.

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. 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.
 - b. To determine if surprise is achieved in all the above conditions, consult the Success Table, roll 1D10, and modify that roll as per the table. 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.

10. Air to Air Combat (ATAC)

A. Definitions.

1. Air combat occurs when air units of one side intercept air units of the opposing side. Air to air combat (ATAC) 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.

B. General Air Combat Conditions.

- 1. 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 usually only participate in one ATAC 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 using Operational Bombing. 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 the non-phasing player in the hex, and each combat is resolved separately.
 - b. Type "F" units. There are four conditions that directly apply to affect 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 (up to ¹/₄ printed range) have their air attack strengths doubled. See the GCI table for who has this capability and when.
 - ii. Fighters have their ATAC ratings reduced by 25% at Extended Range, but this is never modified below 1.
 - iii. All fighters flying Long Range escort missions have their attack strengths halved, but this is never modified below 1.
 - iv. Fighter type units who retain their bombs during ATAC 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.

C. Air Combat Resolution.

- I. Where air units are firing at each other 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. The defender separates his mission force 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. Consult the Air CRT DRMs chart and note the DRMs that will be applied to each die roll in the subsequent combat. 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.
 - iv. 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.
 - v. 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 the interceptor survives it may engage the bombers.

vi. 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.

- vii. Roll ID10 on the Air Combat Results Table, modify the result by the ACEV modifier and any air combat type, fighter ratio, and any other relevant DRMs (see the Air Combat DRM Summary table).
- viii. Apply the results outlined below immediately and note that any fractions f dispersed bomb factors are always rounded up:
 - I 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 I step loss. The balance of the unit breaks through to the target, Roll AA for all effects.
 - 4 2: Air unit is eliminated (2 step loss). It cannot complete any other mission steps.
 - 5 2R: Air unit is eliminated (2 step loss) as above. In addition if, after all other ATAC results have been applied, any other air units of a similar type have survived then select 1 of these at random and apply an R result to it.
- 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.
- NOTE: This is for later use in balancing the losses in the upcoming player initial p
- 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.

II. 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 play 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 an AA/AT mode marker, or place them in the AAA rather than Artillery section of the Ground Stacking Charts.
 - ii. Optional Rule. If, during a Combat Phase, a Heavy AA unit uses its AA capabilities against enemy aircraft then for any ground combat during the remainder of the phase its attack factor is zero and its defence factor is halved.
 - iii. 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.

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 AA Combat Results Table and the DRMs from the AA DRM chart and National Technical Means (AA) chart. Determine the mission of the air units being engaged. Aircraft executing separate missions are engaged separately.
 - a. Operational Bombing All types of land based AA factors may engage aircraft flying this mission.
 - b. Interdiction Missions. Due to the 'area' nature of these missions, the AA value for the defender is an average of all the AA factors in the interdicted zone.
 - c. Close Air Support. All types of AA can fire on aircraft executing these missions if in the target hex. Where an attacking force is attacking a hex from multiple adjacent hexes, the AA strength of the attacker is the total of all AA factors on units involved in the attack divided by the number of hexes attacked from. The result is rounded down.

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 divided by 3 = 2.67, which is rounded down to 2 for engaging enemy CAS missions.

- d. AA is doubled against DBA missions (Rule 10.B.1.c above).
- e. Code L units. All AA is doubled against Code L units.

For Example: The Allied player launches a DBA mission with 3 Battle (CODE L) bombers against a bridge over the Meuse. The Germans have a total LAA strength of 4 plus 2 HAA points in the hex. All the German AA is in AA mode. The total AA against this mission is 6, doubled TWICE for DBA and CODE L. They can fire on the 24 column against the Battles.

- f. AA factors may be fired against each separate mission operating against targets within a hex (or adjacent hexside). For Example: In the hex there are 12 Points of Heavy AA from all sources. The hex is the target of air missions attacking the bridge across the adjacent river, the Rail Marshalling Yard, the Oil Production Facility, an airbase in the hex, the port in the hex,
- as well as a Night Area Bombing mission. EACH of these missions will be engaged by all 12 AA points in turn during mission resolution.

C. Resolving 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. If target is BAI 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. If target is a 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 from the AA DRM and National Technical Means (AA) charts, plus 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 by 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 ships 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 I (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 x 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.

- I. 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. I: The air unit suffers I step loss. 0.5 x 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. IR: Apply the step loss per (c) 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.

12. Other Activities and Special Units

A. Unit Breakdowns.

1. Definition: Some division sized units in the game may be split into their major sub units during the course of the game. The OBs identify which divisions may be broken down and also specify the individual breakdown components for the division where these are fixed. If no breakdown components are identified for a division the player is free to choose appropriate brigades and regiments with a

combined combat values equal to that of the division and with reference to the P&E rules for any special cases. This may be done at any time during the Movement or Pursuit phases of the owning player's turn, and never during the Combat phase. Breakdown activity is only possible at the owner's choice.

2. Procedure:

- a. A unit that is to be broken down is removed from the map and is immediately placed in an appropriate lettered or numbered box on the Unit Breakdown Chart.
- b. The correct breakdown counters are placed on the map where the unit was located. There is no MP cost for this operation and it may occur at any point during the phase.
- c. For a unit to be reassembled, the procedure can be reversed if all the necessary components are in the same hex, with the proper breakdown counters being removed and the larger unit being returned to the map. The correctly designated counters must be used to reassemble a unit if the breakdowns include as part of their unit ID the designation of the parent formation.
- 3. Unit Breakdown Charts: These are provided to help keep track of those units that are able to breakdown. The boxes should contain either the breakdown components when the full combined counter is in play on the map, or vice versa.
- 4. Special Combinations: Some breakdown boxes have a specific identification on them. These boxes, and counters, may only be used to breakdown and reassemble the unit shown.

B. Engineers.

- I. General: Most engineer operations, except combat support, require the expenditure of MPs to pay for the work. MPs cannot be 'split' for an engineer project. The minimum expenditure possible is 1 MP from a single unit. These costs reflect the relative amount of time to complete the task. All MP expenditures and repairs are done during the movement phase of the owning player's turn; no engineer operations are allowed in any other phase (unless specified below). Construction and Combat Engineer units can be Regiments, Brigades or Battalions. The MP Costs below relate to Regiment (1 SP) sized units. Units other than Regiments have construction Movement Costs amended:
 - a. Brigades: all MP costs are halved (retaining fractions)
 - b. Battalions: all MP costs are doubled.

For Example: a Motorised Combat Engineer Regiment with a movement rating of 16 in clear terrain and good weather could build a Level 3 field fortification. A Construction Engineer Battalion with a movement rating of 6 in clear terrain and good weather could use all its movement allowance to build an Airfield.

- 2. Construction: Construction and Combat Engineers have a variety of capabilities as described below:
 - a. Co-operation. Multiple units may combine their movement points to effect repairs. A unit can spend its entire printed movement rating in the movement phase on engineering projects.
 - b. Building Field Fortifications. There are four levels of field fortifications that can be constructed by engineers. See the Fortification Types chart for the effects of each level. A field fortification level costs 5 MPs to build, with units able to combine their movement factors to complete one or more levels. Levels must be built from Level 1 to Level 4 in order. The expenditure of 20 MPs in a hex during one turn by construction engineer(s) will create a level 4 field fortification. Field fortifications are available for use immediately upon completion. A hex fortified during the phasing player's movement phase gains the defensive benefit of the completed fortifications in the opposing players reaction movement phase. Field fortifications may be built in any type of terrain but may not be built in hexes with an unreduced fortification printed on the map.
 - c. Building Airfields. Airfields may be built in clear, hills, woods and wooded hill terrain, including any hex with a city or town, excluding Great cities. Each hex may contain up to four airfields in addition to any airport a city in the hex has. A standard 3 capacity airfields cost 3 MPs to build, with multiple units able to combine their MPs for completion of one or more airfields in a movement phase. Airfields are available for use immediately on being completed. Airfields must be completed before they can be used. Airfields cannot be built in mud weather.
 - d. Building Airstrips. An airstrip can be built in any type of terrain a construction engineer unit can enter. They cost 2 MPs to build and only one may be in any hex. Airstrips can be built in mud weather, or on partial frozen lake and frozen partial sea hexes. A construction unit must be in a hex containing an airstrip at the end of the movement, reaction, and pursuit phases for the airstrip to remain operational. However, if the unit is maintaining an airstrip on a partial frozen lake or sea hex must remain in a coastal hex immediately adjacent to the air strip, rather than in the hex with it. Airstrips cannot be built in a hex containing an operational airbase or airfield.
 - e. Demolishing Ports. For every 4 MPs a construction engineer spends in a port hex, it inflicts one hit against the port's capacity.
 - f. Repair of Damaged or Destroyed Facilities. Repairing a facility means that hits accumulated by it are being removed. Repairs are effected by spending MPs as required per hit below:

i. Port	8 MPs
ii. Minor Bridge	2 MPs
iii. Airbase	I MP
iv. Rail Break	0.5 MP

3. Combat Engineer Combat Effects: (See Engineering Effects on page 20).

13. Logistics

This is the movement of supplies from the National Supply Source to forces in the field. There are two logistical systems in the game which share many characteristics but are used under different circumstances: the Continental System where an overland supply route can be traced from the National Supply Source to the units being supplied; and the Overseas System where an overland supply route cannot be traced from the National Supply Source. In Battleaxe all units will be operating on the Overseas System. For a graphical representation of the TSWW logistics system see the 'Supply in Pictures' file, a copy of which can be downloaded from the files section of the eTSWW Yahoo Group https://groups.yahoo.com/neo/groups/etsww/info

A. General Definitions.

- I. National Supply Source: Where a nation's forces ultimately receive supply from.
- 2. General Supply: Units in General Supply have limits placed upon their capabilities.
- 3. Offensive Supply: Units in Offensive Supply can fully utilise their capabilities.
- 4. Hierarchy of Supply: Units may not be placed directly in Offensive Supply; they must be in General Supply first.
- 5. Continental System: Linked by a rail line or road to the national supply source.
- 6. 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 QM units must be used. This is a critical concept and exceptions exist on a limited basis.
- 7. Ground Unit Supply: Units may be in or out of supply. When in supply units may be in General or Offensive Supply.
- 8. Air Unit 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.
- 9. Supply Terminal (ST): A major supply base, tertiary distributor of supply, and a key component in the supply system as a whole.
- 10. Logistics Point (LP): A large quantity of supplies.
- II. General Supply Points (GSP): Fractions of LPs that can be used to supply units.
- 12. Army HQ: Secondary distributor of supply and can move supply to up to 4 Corps HQ.
- 13. Corps HQ: Primary distributor of supply.
- 14. Supply Routes: These deliver supplies to units and include MSR, QMSR, and RSR.
- 15. Main Supply Route (MSR): A limited length overland route from a source of supply or element in the supply chain (typically a LOC, ST or GSPs) to units or HQs. It is affected by weather and terrain. The MSR can be extended by the use of Army and Corps HQs. The length of the MSR varies over time and between nations see the MSR Chart for details unless it is defined as being a specific length in the rules below in which case this is the same for all nations all of the time.
- 16. Quarter Master (QM) Unit: A motorised unit that facilitates the distribution of supply via a QM Supply Route. They can also move STs or LPs. They may be part of a chain of QM assets.
- 17. QM Supply Route (QMSR): When emplaced QMs can distribute supplies within a radius of up to 20 hexes of their location, weather and terrain permitting.
- 18. Rail Supply Route (RSR): A limited length route along a rail lines in the Overseas System used for distributing supplies.
- 19. Line of Communication (LOC): On the Continental System a route from the National Supply Source to a Supply Terminal via road or rail (unlimited in length if High Volume rail). On the Overseas System a limited length route via road or rail from a Supply Terminal to a unit. The LOC may not enter an enemy Zone Of Influence or enemy owned territory. See the LOC Supply Element and Overseas RSR Chart for more information.
- 20. Line of Supply (LOS): An unlimited overland route from an ST or the National Supply Source to units. It may not be traced through prohibited terrain or through an EZOI unless negated by the presence of friendly non-support units. In Battleaxe the Axis can trace a LOS off the western map edge and the Allies can trace one off the eastern map edge. The LOS is used solely to determine isolation.
- 21. Isolation: Isolation is defined as not being able to trace a LOS.
- 22. Restrictions:
 - a. Nationality: See the MSR Chart for any alterations to a nation's MSR range.
 - b. Fuel Stocks: Ranges may be affected by fuel stocks. See the P&E Rules for details (only applicable if the economic rules are in being used).
 - c. EZOI Impact: Units cannot trace a LOC or supply route through an EZOI, but this can be negated by 4 SP of friendly nonsupport units in each hex in an EZOI on the LOC or supply route.

B. Summary of Key Concepts.

The following is a summary of how supply flows in the TSWW system from the National Supply Source to units in the field. The remainder of Rule 13 explains in detail how this is achieved.

- I. Continental Supply: Not applicable in Battleaxe.
- 2. Overseas Supply (Standard QM method): Ship supplies from a port to another port with an ST; an emplaced QM unit has a QMSR can distribute supply to all units within its 20 hex radius of 20. An Army HQ located within the radius of a QMSR can provide supply to units or Corps HQs; an Army HQ can project an MSR to a Corps HQ where units stacked or adjacent to it can be supplied. Units are in General Supply if located within the radius of a QMSR based on an ST that has expended LP (or fraction thereof) for the purpose of General Supply note they do not need to be with or adjacent to an HQ.

- 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 I GSP per SP to get General Supply, and spends another I GSP per SP to get Offensive Supply. Air units may also be supplied via this method.
- 4. Air on Continental Supply: Not applicable in Battleaxe.
- 5. Air on Overseas Supply: On a supply route from an ST where 1/3 of an LP has been spent for the purpose of supplying air units, or from a location where defined GSPs have been spent for this purpose at the rate of 1 per F, D, A and 2 per B, HB, T. When utilising an RSR or RvSR the airbase must be located on the rail line or adjacent to the river.
- 6. The Supply Chain: The elements used to distribute supply are: Supply Terminals (ST), Army and Corps HQs, motorised QMs and features printed on the maps railroads and ferry routes. Note that units used to distribute supplies such as HQs do not themselves consume supplies.
- 7. Supply Effects: E1-2 for overextended. U1-3 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 allows units to operate at maximum effectiveness.

C. Continental System.

I. Both sides are using the Overseas System in Battleaxe.

D. Overseas System (Motorised QM).

- I. Methodology: Rules common to both QM and RQM units.
 - a. Ship LPs to a Large or Great Port that has an ST emplaced at it. Each emplaced ST can only support a single Army HQ.
 - b. Expend 1/3 LP for General Supply, and an additional 1/3 LP for Offensive Supply.
 - c. Units not adjacent to a Corps HQ or stacked with an Army HQ can never be in Offensive Supply unless specific GSPs have been spent on them.
 - d. Air units are supplied by spending LPs. A player must expend 1/3 LP per turn at a Supply Terminal to operate all air units on the Overseas System provided those air units are within the radius of the QMSR or adjacent to the RvSR. If they are not then GSPs can be expended to keep them operational in accordance with Rule 13.B.5.
- 2. Supply Using Motorised QM:
 - a. Army HQ's project a MSR to a Corps HQ.
 - b. Army HQ must be within the QMSR from an emplaced QM unit to distribute supply. If there is no Army HQ the Corps HQ must be within the QMSR but it does not project its own MSR as it would in the Continental System.
 - c. All units are in General Supply if they are able to trace a 20 hex QMSR to an emplaced QM unit at a ST where a third of an LP has been spent for this purpose unless the QM has an SP limit in which case it may only supply SPs up to its limit.

E. Overseas System with no QM.

- I. Definition: Terms and effects for alternative limited Overseas systems for supplying ground forces without QM units.
 - a. Supply through a Port or Airbase. In all cases units could only be in Offensive supply if stacked with an Army or Corps HQ, 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 an Army HQ followed by the Army HQ's MSR to a Corps HQ. Units within the MSR or adjacent to a Corps HQ can be in General Supply.
 - ii. GSPs with an Army HQ: trace a MSR to a Corps HQ. Units within the MSR or adjacent to a Corps HQ can be in General Supply.
 - iii. GSPs with a Corps HQ: units within its MSR could be in General Supply.
 - iv. GSPs alone: units and airbases within a 3 hex MSR could be in General Supply.

F. Out of Supply and Tracing Overland Supply Routes (MSR/QMSR/RSR).

- I. Out of supply isolated: A ground unit cannot trace a LOS or a MSR to a LOC, a ST or the National Supply Source.
- 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 and are summarised on the MSR Modifiers Chart. 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 woods, sandy terrain and hills the cost of tracing the MSR is 2 hexes. In Mountains and swamps or across mountain hexsides it is 3 hexes. Un-bridged wadis, river hexsides, and escarpments cost 2 hexes. Un-bridged Major River and mountain hexsides cost 3 hexes. Other hexsides are the same cost as if it were a full hex of the terrain type.
 - b. Poor Weather. Not applicable in Battleaxe

G. Isolation Status.

- I. 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 to be able to trace a LOS. This determination is used only for calculating combat replacements, and has no impact on the supply status of the unit involved.
- 2. "U" & "E" Markers:
 - a. The first time a unit is found to be out of supply it receives a "U-1" if isolated or an E-1 marker if overextended (in both cases Blue if during an Allied initial phase, Red if in an Axis initial phase), indicating the unit is 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:
 - I Regaining LOS (if "U" status), or being able to trace a supply route (if "E" status), or moving to within a 6 hex MSR of a 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 "U" marker is placed on the unit (blue in the Allied initial phase, red in the Axis). The effects of being isolation take effect immediately after the unit is determined to be isolated. "U" markers remain on a unit until the unit is no longer isolated in an Initial Phase.

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 13.1.2 on page 28:

a. Out of Supply - Over Extended:

- i. E-I. Attack Factor halved, movement factor halved, reduced ZOI, ASE DRM reduced by -I, 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. There are no greater consequences 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 movement, no ZOI, no ASE/ATE/ADE. Unit collapses on a ID10 roll result of three or higher. +1 for each additional turn 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 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 P&E 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 when the weather is Freezing (unless receiving the -4 DRM 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 ID10. 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 ID10, rolling 8. The unit collapses and is eliminated.
- 2. Out of Supply Airbases:
 - a. On the Continental system airbases that are in supply but are isolated suffer no negative effects.
 - b. On the Overseas system airbases that are out of supply but un-isolated have their capacity reduced by one.
 - c. In both the Continental and Overseas supply systems, airbases that are out of supply and 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 UI and EI 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 DRM 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 P&E Rules should be consulted for any nation specific details.

- a. Units arrive in the same supply status as the hex or Port (if new build shipping) they arrive at. 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 GSPs must be spent in accordance with the rules unless the unit appears in a hex adjacent to a stacked with Corps HQ or stacked with an Army HQ.
- 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 when Offensive Supply is also distributed to Army and Corps HQs. Units may be placed in Offensive Supply if, prior to combat, they are already in General Supply, adjacent to a Corps HQ or stacked with a Corps HQ or Army HQ, and an LP or portion thereof has been expended to provide 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 LPs or GSPs as defined in 13.P and 13.Q 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 operate at their full printed 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 only in General Supply and attacking it has 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 NSPs.
 - 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 I Army Group plus I Army HQ and its 4 related Corps HQs on the Overseas system. Note that in most cases an Army Group HQ may not be present.
 - d. When being moved by rail or by 2 QM units, their total supply capability is reduced. On the Overseas system it may only provide Offensive Supply via the Army HQ to 2 Corps HQs when moving, but still provides General Supply to all 4 Corps HQs.
 - e. It takes one turn to emplace a ST and they may be emplaced as follows:
 - i. In the Overseas system:
 - I At any Large or Great Port, or at any RMY within a QMSR or on an RSR or RvSR that has two or more connections across different hexsides to other Rail Marshalling Yards.
 - 2 In Egypt and Libya (only) they may be established on any rail line within the QMSR of a QM linked 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 13.E.1.a.
 - f. When emplaced an ST has an MSR as indicated on the MSR Chart. This is primarily of use on the Continental system as on the Overseas system an ST will often be stacked with an emplaced QM unit making the ST's MSR redundant.

K. Quartermaster (QM) Units.

- Definition: QM units are used in the transportation and distribution of supplies and are a key component in the Overseas system. They
 do not need to be supplied themselves, but obviously need access to supplies before they can distribute them to other units and HQs.
 Only motorised QM units are used in Battleaxe. All QM units have no combat effects, no combat strength and do not count against
 stacking. To distribute supply a QM unit must first be emplaced.
- 2. *Motorised QM Units:* Where the rules simply refer to a 'QM' unit then they are referring to the standard motorised QM. These have the following features:
 - a. If enemy non-support units enter their hex at any time in the Movement or Pursuit phase the QM unit is destroyed. Otherwise the QM unit retreats to a permissible hex using the retreat rules if the hex it is located in suffers an adverse combat result that permits units to survive. It is immediately flipped from it OP to its movement side if the unit was emplaced. If there is no viable retreat route not in an uncontested enemy ZOI the QM is destroyed.

- b. All QMs have a fully motorised movement rating of 20 for all game purposes. This rating is used to calculate their rail movement rate as well as their land movement allowance.
- c. These units can only transport LPs, GSPs or Supply Terminals, they cannot "motorise" units.
- d. Their capacity is 2 LP, or 40 GSP, or $\frac{1}{2}$ a supply terminal. 2 QMs are required to move a ST. Each QM must spend 5MP to load or offload an ST.
- e. QMs may carry 2 LPs during the movement and pursuit phases if they are not emplaced.
- f. It takes one full game turn to emplace a QM or revert back to its movement side if already emplaced. Turn the QM to its 'OP' side to indicate when it is emplaced. While on its 'OP' side (including any turn when it reverts back to its movement side) it may distribute supply. An emplaced QM has a QM Supply Route (QMSR) with a radius of up to 20 hexes.
- g. QMs emplaced at an ST, or in a supply chain linked to an ST, may distribute supply from an LP. Otherwise they may only distribute supply from GSPs.
- h. QMs may daisy chain their QMSRs, but must be emplaced to do so.
- i. An Army HQ must be within the radius of the QMSR to accept supplies. The Army to Corps to unit MSR remains per the MSR chart. In the absence of an Army HQ a Corps HQ within the QMSR can accept supplies.
- 3. QM Units and Limited Rail Nets: Where special rules provide the option to commit the whole capacity of a limited rail net to be devoted to the movement of supplies, such as in Egypt, QM units may:
 - a. Be emplaced at the end of a rail net to extend supply per the usual QM rules.

For Example: At the time of Battleaxe the rail line from Egypt to Tobruk had not been completed. The railhead was at Mersa Matruh and the Allied player may emplace an ST at that location. However, in this case the rail net cannot be used for any other purpose.

L. Army HQ Markers.

- I. Definition: These high-level command units are a key component of the logistics system receiving supplies and then passing these on to Corps HQs or direct to units. They distribute both Offensive and General Supply but do not themselves count against supply. Other units may stack with Army HQs.
- 2. Features of Army HQ Markers:
 - a. Army HQ markers have no effect on stacking and no combat strength.
 - b. Each Army HQ marker may provide supply to not more than 4 Corps HQ markers and may not provide supply into or across prohibited terrain unless it is crossed by a transportation line.
 - c. They have an MSR as per the MSR Chart on both the Continental and Overseas systems.
 - d. They move as per their unit type icon on their counter and have the indicated number of movement points.
 - For Example: A German Mountain Army HQ marker moves up to 6 MPs using mountain unit movement rules.
 - e. They are subject to all combat results in their hex, but may retreat before combat.
 - f. Units stacked with an Army HQ that is in Offensive supply are also in Offensive supply.
 - g. On the Overseas system they normally receive supply from an ST via an emplaced QM provided they are within the radius of the QMSR.
 - h. They may draw supply from GSPs which are in the same hex as the HQ.

M. Corps HQ Markers.

- 1. Definition: These mid-level command units are a key component of the logistics system receiving supplies and then passing these on to units. They distribute both Offensive and General Supply and are often the final link in the supply chain, but they do not themselves count against supply. Other units may stack with Corps HQs.
- 2. Features of Corps HQ Markers:
 - a. Corps HQ markers have no effect on stacking and no combat strength.
 - b. Each 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.
 - c. They have an MSR as per the MSR Chart on the Continental system but, unlike Army HQs, they normally have no MSR in the Overseas system (see Rule 13.E.1.a.iii on page 26 for the exception).
 - d. They move as per their unit type icon on their counter and have the indicated number of movement points.
 - e. They are subject to all combat results in their hex, but may retreat before combat.
 - f. 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.
 - g. On the Overseas system they normally receive supply from an ST via an emplaced QM provided they are within the radius of the QMSR or are along the path of an RSR. They can also form part of the supply chain in conjunction with Army HQs.

N. National Supply Sources.

In Battleaxe the Axis can trace to their National Supply Source off the western map edge, and the Allies trace to theirs off the eastern map edge.

O. National Contingents.

Generally, national contingent rules apply for all purposes in the provision of logistics, with the exception that a single Corps HQ on the Overseas system may draw supply from an allied Army HQ. Any other exceptions will be noted in the OB/OA or P&E rules.

P. Logistics Points.

- 1. Definition: LPs represent the additional resources required to support intense combat operations on the offensive and can represent the basic resources needed to keep forces in 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 supply route 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 QMSR 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 in the Continental system, and in the Overseas system, 1/3 to provide General supply, followed by 1/3 to provide Offensive supply, leaving 1/3 to supply air units. Note that air units are automatically supplied in accordance with the rules above whilst on the Continental system.
 - 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.

Q. 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.

- I. General Supply Point Transportation: GSPs cannot move by themselves. They can be transported by QM units. 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 13.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 I GSP per SP of force. No penalty other than those for being in General Supply.
- b. Offensive Supply: Spend I 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. 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 I 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 I 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.

R. Stockpiles.

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

S. Capture of Supply.

A force can capture GSPs or LPs belonging to the enemy.

- a. GSPs or LPs in a hex that becomes enemy owned with no ground combat in the hex are captured automatically, as are supplies in hexes that are overrun.
- 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 LPs are rounded down to the nearest third, unless the capturing player rolls a 10.
 - ii. Captured GSPs 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.

14. Administration

A. Unit Administration.

- I. 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.

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

15. Political & Economic Rules.

A. Definitions.

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

B. National Regulations.

I. Germany.

- a. There are no special conditions in effect for the German player.
- 2. Italy.
 - a. There are no special conditions in effect for the Italian player.
- 3. United Kingdom, its Empire, and the Dominions.
 - a. The rail line leading to the railhead at Mersa Matruh is dedicated to the transhipment of supplies and cannot be used to transport units.

16. 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.

17. 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 checkout the Facebook Page:

https://www.facebook.com/pages/TSWW-Games/790706127714105?fref=photo

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.

18. Game Credits

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

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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 VIII

19. Appendices

A. Abbreviations

AA	Anti-Air	LOC	Line of Communication
ACE	Air Combat Efficiency Variable	LOS	Line of Supply
ASE	Armour Shock Effects	LP	Logistics Point
ATAC	Air-to-Air Combat	MP	Movement Point
ATE	Anti-Tank Effects	MSR	Main Supply Route
BAI	Battlefield Air Interdiction	NSP	Naval Shipping Point
CAS	Close Air Support	NTF	Naval Task Force
CD	Coastal Defence	NTG	Naval Task Group
CDA	Coastal Defence Artillery	OA	Order of Appearance
CEV	Combat Efficiency Variable	OB	Order of Battle
CGI	Ground Controlled Intercept	OBF	Operational Bombing Factors
CRT	Combat Results Table	P&E	Political & Economic rules
DBA	Determined Bombing Attack	QM	Quarter Master unit
DRM	Die Roll Modifier	SP	Stacking Point
DTM	Determined Transport Mission	SRP	Stacking Replacement Point
E-#	Out of Supply Overextended (#	ST	Supply Terminal
	no of turns)	TEC	Terrain Effects Chart
EFT	Eliminated Over Friendly Territory	TF	Task Force
ЕНТ	Eliminated Over Hostile	TG	Task Group
	Territory	TMA	Tactical Movement Allowance
EZOI	Enemy Zone of Influence	TMR	Tactical Movement Rating (speed)
FoW	Fog of War	U-#	Out of Supply Isolated (# no of
FZOI	Friendly Zone of Influence		turns)
GSP	General Supply Point	UIT	Unit ID Table
GUIC	Ground Unit ID Chart	ZOI	Zone of Influence

B. List of Charts

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

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