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Air Operations & General Use Tables

2.2 Outline Sequence of Play

I. Pre-Turn Phase
1. Weather Determination Segment
2. First Player Determination Segment

II. First Player, Player Turn
- A. Air Unit Return
- B. Air Unit Refit
- C. Reinforcement Phase
- D. Mode Determination and Movement
  - Mode & Movement Segment
  - Barrage Segment
    - (Air & Ship only)
- E. Supply Phase
- F. Reaction
  - Movement Segment
  - Barrage Segment
- G. Combat
  - Barrage Segment
  - Combat Segment
- H. Exploitation
  - Movement Segment
  - Barrage Segment
  - Combat Segment
- I. Clean Up

III. Second Player, Player Turn
Repeat the steps of the first player with the roles of phasing and non-phasing player reversed.

IV. Turn End Phase

4.2b Order of Stacking

A. Active air units (when on map).
B. Hedgehogs, Mode Markers, HQs, Combat Units, Ships and Landing Craft
C. Supplies, Transport Points
D. Airbases, Railhead, Rail Interdiction & Damage Markers.
E. Inactive Air Units.

4.10 Transportation Equivalents

• If the Move Mode MA of the unit is 6 or less, then each RE costs 2T of capacity. All other units cost 1 SP per RE.

• Rail transport done exclusively on multi-track lines costs 1/2 of normal rail cap cost for the load involved.

• Rail transport done along exclusively single-track lines or a combination of single- and multi-track lines costs the normal rail cap.

• Rail transport done through one or more Rail Interdiction hexes costs double what it would have without going through them.

14.6c Air to Air Combat Table

Modified Dice Roll	Result
5 or less	Attacker Abort
6-8	Both Sides Abort
9 or more	Defender Abort

Modifiers:
Add the Attacker's air to air rating
Subtract the Defender's air to air rating
+1 to side using Advantage, See 14.6d.
-1 if on Interdiction, **OR** (optional 21.4) 1/2 range or more
+1 if F-type air unit over its own air base/strip or carrier

Third Die:	1-5: No Effect,
	6: Step Loss from Aborting Air Unit(s)

10.0j Air Unit Reduction Table

Given that an air base with air units *has* been attacked using the Barrage vs. Facility Table *and* a result of AB or better *was* obtained, roll one die for each air unit at the base. Roll for both active and inactive air units in the same way.

Die	Result
1-4	No Effect
5-6	Reduce Air Unit (Destroy if already reduced.)

9.15e Air Base Capture & Air Unit Reduction Table

If an air base has been captured by enemy ground units, roll for each air unit separately below. After rolling and taking any losses, remaining air units must displace to another base and become inactive there.

Two Dice

Active	Inactive	Result
4 or less	6 or less	Air Unit Step Loss
5+	7+	No Effect

+2 if Air Base capture as a result of an advance after combat (9.12c) into that hex or in self-inflicted rolls (9.15e, part 2).

14.11a Air Transport Success Table

Hex Status	Terrain Type	Drop Method	Failure	Success
Friendly Hex	Clear	Glider	2-3	4+
		Paradrop	2-4	5+
	Closed	Glider	2-4	5+
		Paradrop	2-5	6+
Enemy Hex	Clear	Glider	2-4	5+
		Paradrop	2-5	6+
	Closed	Glider	2-5	6+
		Paradrop	2-6	7+

Hex Status: "Friendly" is any hex **occupied** by a friendly unit at the beginning of the current phase, otherwise the hex is "Enemy".
Terrain Type: "Clear" is Open terrain, Open with a Village, OR any hex with an airfield, otherwise the hex is "Closed".
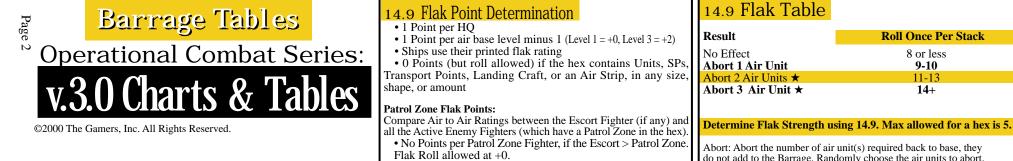
Modifiers:
Allied Air Drops, ETO 1944 or earlier: -1
Soviet Air Drops (any time): -1

Summary of Air Unit Movement and Functions

Unit	Move up to max range to attack targets or Interdict[1,3]	Return in Return Phase?	Execute Barrage Attack?[2]
Active at a friendly base	Yes	No	No
Active (elsewhere)	No	Yes	Yes
Inactive	No	No	No

Notes:
[1]—Allowed in Movement, Reaction, and Exploitation Phases for the appropriate player.
[2]—Allowed in the Movement, Reaction, Combat, and Exploitation Phases for the appropriate player
[3]—No Interdiction at 1/2 range or more.

Phase	Move up to Range
Movement	Phasing A/C
Reaction	Non-Phasing A/C
Combat	None
Exploitation	Phasing A/C

Barrage Tables

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14.9 Flak Point Determination

• 1 Point per HQ
• 1 Point per air base level minus 1 (Level 1 = +0, Level 3 = +2)
• Ships use their printed flak rating
• 0 Points (but roll allowed) if the hex contains Units, SPs, Transport Points, Landing Craft, or an Air Strip, in any size, shape, or amount

Patrol Zone Flak Points:
Compare Air to Air Ratings between the Escort Fighter (if any) and all the Active Enemy Fighters (which have a Patrol Zone in the hex).
 • No Points per Patrol Zone Fighter, if the Escort > Patrol Zone. Flak Roll allowed at +0.
 • 1 Point per Patrol Zone Fighter, if the Escort ≤ Patrol Zone.
 • 2 Points per Patrol Zone Fighter, if there is no Escort Fighter.

14.9 Flak Table

Result	Roll Once Per Stack
No Effect	8 or less
Abort 1 Air Unit	9-10
Abort 2 Air Units ★	11-13
Abort 3 Air Unit ★	14+

Determine Flak Strength using 14.9. Max allowed for a hex is 5.

Abort: Abort the number of air unit(s) required back to base, they do not add to the Barrage. Randomly choose the air units to abort. If there is an abort result, make the roll below. Excess aborts are ignored.

Roll one die: On a 5 or 6, take one step loss from any randomly chosen aborting air unit. On any other roll, the air unit(s) abort without step loss.

+1 to the Loss Roll if the ★ result occurs

10.0 Barrage Table

Total Barrage Strength

Cost -->	1 or less	2	3-4	5-7	8-11	12-16	17-24	25-40	41-68	69-116	117+
	1T	1T	2T	2T	2T	3T	3T	4T	5T	8T	10T
2	-	-	-	-	-	-	-	-	-	-	DG
3	-	-	-	-	-	-	-	-	-	DG	[1/2]
4	-	-	-	-	-	-	-	-	DG	[1/2]	[1/2]
5	-	-	-	-	-	-	-	DG	DG	[1/2]	[1/2]
6	-	-	-	-	-	-	DG	DG	[1/2]	[1/2]	1/2
7	-	-	-	-	-	DG	DG	[1/2]	[1/2]	1/2	1
8	-	-	-	-	DG	DG	[1/2]	[1/2]	1/2	1	1
9	-	-	-	DG	DG	1/2	1/2	1/2	1	1	1
10	-	-	DG	DG	1/2	1/2	1/2	1	1	1	2
11	-	DG	DG	1/2	1/2	1/2	1	1	1	2	2
12	DG	1/2	1/2	1/2	1	1	1	1	2	2	3

Roll once for hex (or ship). Owner's choice of which unit(s) take the step loss(es) (targeted ship subject to any loss in that case).

Results:
-: No Effect
#: Lose # steps and become disorganized.
[1/2]: If in a level 3 Hedgehog (or more), or if No friendly unit adjacent to the target hex treat as DG, otherwise treat as regular 1/2. Against ships, always 1/2 result.
1/2: Roll one die, on a 4-6 lose one step and become disorganized, otherwise, become disorganized only.
DG: Target is disorganized.

Ship to Shore Barrages:
 Reduce each result as below:
 • DG remains DG.
 • 1/2 (either kind) becomes DG
 • 1 becomes 1/2, 2 becomes 1

Apply each *line* a maximum of once in a given barrage if one or more of its reasons apply.
Use all lines which do apply.

1. Shift 1 column left if in a **Hedgehog** (any level, see also the [1/2] result).
2. Shift 1 column left if in a **Close or Very Close** Terrain Hex.
3. Shift 2 columns left if in an **Extremely Close** Terrain Hex.
4. Shift 2 columns left if **no correct spotter unit adjacent** to the target (always apply to S-types and Naval Shore Barrages).
5. If any unit or units in the target hex are in Strategic Move Mode, shift 3 columns right.
6. Shift 1 column right if all air units at or within 10 hexes of their base.
7. (optional 21.4) Shift 1 column left if any air unit at half range or more.

Density Modifiers

REs in Hex (don't round)	Shifts
1 or less	left 1
Greater than 1, up to 3	none
Greater than 3, up to 4	right 1
Greater than 4, up to 5	right 2
Greater than 5, up to 6	right 3
Greater than 6	right 4

Barrage vs Facility Table

Total Barrage & GS Strength

Cost -->	1-4	5-10	11-20	21-40	41-80	81+
	1T	1T	2T	4T	6T	8T
1	-	-	-	-	AB	1
2	-	-	-	AB	1	1rr
3	-	-	AB	1	1rr	1rr
4	-	AB	1	1rr	1rr	2rr
5	AB	1	1rr	2rr	2rr	2rr
6	1rr	1rr	1rr	2rr	2rr	2rr

-: No Effect
AB: No effect except the attacking player can attack inactive air units at an airbase.
1: Air Base reduced by one level
2: Air Base reduced by two levels
 Note: Air Bases cannot be reduced below Level 1.
rr: Railroad Hex Interdicted
#: Increase in Hits applied to a port, the MAX NUMBER of hits is 4.

Current Hits on port ⇨	0	1	2	3	4
% of Capacity ⇨	100	80	60	40	20

Barrage vs Dump/Transport Point Table

Total Barrage & GS Strength

Cost -->	1	2-4	5-8	9-12	13-24	25-48	49-62	63+
	1T	1T	1T	2T	3T	4T	6T	8T
1	-	-	-	-	5%	5%	10%	10%
2	-	-	-	5%	5%	10%	10%	15%
3	-	-	5%	5%	10%	10%	15%	20%
4	-	5%	5%	10%	10%	15%	20%	25%
5	5%	5%	10%	10%	15%	20%	25%	30%
6	5%	10%	10%	15%	20%	25%	30%	30%

Result is applied to each target type separately. For example, a 25% result against a hex with 10 trucks, 4 wagons, and 15 Supply Points would generate a loss of 3 trucks, 1 wagon, and 4 SPs.

Apply each *line* a maximum of once in a given barrage if one or more of its reasons apply.
Use all lines which apply. "Points" in hex is the **Total** of all Truck, Wagon, and Supply Points in hex.

1. Shift 1 column left if in a **Hedgehog** (any level).
2. Shift 2 columns left if in a **Close or Very Close** Terrain Hex
3. Shift 3 columns left if in an **Extremely Close** Terrain Hex
4. If at least 5, but less than 15 "Points" in hex, shift 1 column right.
5. If **15 or more "Points"** in hex, shift 2 columns right.

Patrol Zone Effects (14.5)

 A) Patrol Zones increase the Flak Rating of their hexes.
 B) No air unit can enter interdiction in this zone.
 C) Only air units stopping in such a Zone are subject to "Interception", see 14.5a.

9.8 Surprise Modifier: Roll two dice, add Action Rating differential for the combat.

Overrun Attack:
...if 9 or more, Attacker Surprise
...if 6 or less, Defender Surprise

Regular Attack:
...if 10 or more, Attacker Surprise
...if 5 or less, Defender Surprise

☞ **Modifier:** Add 1 to the defender's Action Rating if the defending units occupy any Hedgehog. If a player has surprise, roll one die and shift that many columns in that player's favor.

COMBAT TABLE
(Two Dice)

Extr Close	1:2	1:1	2:1	3:1	4:1	8:1	12:1	16:1	20:1	28:1	36:1	44:1	52:1	
Very Close	1:3	1:2	1:1	2:1	3:1	4:1	6:1	9:1	12:1	15:1	18:1	21:1	24:1	
Close	1:4	1:3	1:2	1:1	2:1	3:1	4:1	6:1	8:1	10:1	12:1	15:1	18:1	
Open	1:5	1:4	1:3	1:2	1:1	2:1	3:1	4:1	5:1	7:1	9:1	11:1	13:1	
1 or less	AL2	AL2	AL2	AL2	AL2	AL2	AL2	AL1o1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	AL1 Do1	AL1 DL1o1	**1 or less**
2	AL2	AL2	AL2	AL2	AL2	AL2	AL1o1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	AL1 Do1	Ao1 DL1o1	Ao1 DL1o1	**2**
3	AL2	AL2	AL2	AL2	AL2	AL1o1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	AL1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 DL1o1	**3**
4	AL2	AL2	AL2	AL2	AL1o1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	AL1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	**4**
5	AL2	AL2	AL2	AL1o1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	AL1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ae4 DL1o2	**5**
6	AL2	AL2	AL1o1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	AL1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 DL1o1	Ae4 DL1o2	Ae4 DL1o2	**6**
7	AL1o1	AL1o1	AL1o1 Do1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	**7**
8	AL1o1	AL1o1 Do1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ae4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	**8**
9	AL1o1 Do1	AL1o1 Do1	AL1o1 Do1	AL1 Do1	Ao1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ae4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	Ae3 DL2o2DG	**9**
10	AL1o1 Do1	AL1o1 Do1	AL1 Do1	Ao1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ae4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae2 DL2o3DG	**10**
11	AL1o1 Do1	AL1 Do1	Ao1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 DL1o1	Ae4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae2 DL2o3DG	**11**
12	AL1o1 Do1	Ao1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae2 DL2o3DG	Ae2 DL2o3DG	**12**
13	Ao1 Do1	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae2 DL2o3DG	Ae2 DL2o3DG	Ae2 DL2o3DG	**13**
14	Ao1 Do1	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ao1 e4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae2 DL2o3DG	Ae2 DL2o3DG	Ae2 DL2o3DG	Ae2 DL2o3DG	**14**
15 or more	Ao1 DL1o1	Ao1 DL1o1	Ao1 e4 DL1o2	Ae4 DL1o2	Ae4 DL1o2	Ae3 DL2o2DG	Ae3 DL2o2DG	Ae2 DL2o3DG	Ae2 DL2o3DG	Ae2 DL2o3DG	Ae2 DL2o3DG	Ae2 DL2o3DG	Ae2 DL2o3DG	**15 or more**

9.7 Standard Action Rating Dice Roll Modifier:

Action Rating of selected Attacking Unit — Action Rating of selected Defending Unit — Level of Defender's Hedgehog, if any = DRM

9.2 Combat Sequence Summary

1. The attacker identifies the defending and attacking hexes.

2. Both players expend required supply points. See the Supply Tables.

3. The attacker identifies his Action Rating unit, followed by the defender identifying his.

4. Determine the initial odds.

5. Using each side's action rating unit, determine the Dice Roll Modifier. (9.7)

6. Roll two dice to determine surprise. Modify the odds column as needed, as per 9.8.

7. Roll two dice, modify by the DRM in 9.7, determine result.

8. Execute results. Attacker first, then the defender.

Supply Level Effects

Supplied: All values Normal

Out of Supply: Attack and Defense x1/2, movement is normal (given possible fuel problems), roll on Attrition Table each turn. These units may attack (at x1/2) if combat supply can be found. Action Ratings are unaffected by Supply Level.

BARRAGE Values are **always** full provided the required Barrage Supply is expended.

Explanation of Results:

A: Attacker, **D: Defender**
L#: Loss Number, lose # steps.
o#: Option Number, retreat or step loss option.
DG: Defender is disorganized.
e#: Attackers with action ratings of # or more are exploitation marked. (This is never applied in Overruns)

1) If the attacker takes his option as a retreat, any exploitation result is void.

2) The defender can ignore his options if the attacker chooses to apply any of his options as a retreat or if the attacker is destroyed before taking all his options. The defender can **choose** to apply his full option, even if it is negated by this rule.

3) Any unit which retreats 2 or more hexes is DG.

4) No attack involving three or more hexes attacking a defender **OR** any two non-adjacent hexsides **ever** generates an exploit result. Ignore any "e" result from such an attack, but execute the rest of the result normally.

9.4e Combined Arms

In some situations, when the normal special modifier for attacking is x2, reduce it to x1.5. This occurs when the following rules apply.

Definitions for 9.4e (only): "Armor" is defined as Yellow-coded units (or Red-coded units with a Tank Symbol, such as a Soviet Tank Brigade). "Mech" is defined as those Red-coded units which do not have a Tank Symbol (such as Panzergrenadiers). "Other" type units are those which are neither Red nor Yellow-coded. "Antitank" units are only those with the Antitank or Anti-Aircraft symbol on their counter.

• A hex with a Hedgehog in it is assumed to have a nominal Anti-tank unit.

1) Attacking Armor is x1.5 instead of x2 (where applicable) if the defending hex contains any Armor or Antitank units.

2) Attacking Mech is x1.5 instead of x2 (where applicable) if the defending hex contains any Armor, Mech, or Antitank units.

12.11a Dump Blowing Table

Die	% Destroyed
1	25
2-3	50
4-5	75
6	100

12.8b Supply Level Effects

Supplied: All values Normal

Out of Supply: Attack and Defense x1/2, movement is normal (given possible fuel problems), roll on Attrition Table each turn. These units may attack (at x1/2) if combat supply can be found. Action Ratings are unaffected by Supply Level.

BARRAGE Values are **always** full provided the required Barrage Supply is expended.

12.8 Attrition Table

Roll once per stack per Supply Phase for each stack determined to be Out of Supply. A single unit is a stack of one. Roll on the column of the best OOS Action Rating unit in the stack (DO NOT modify for DG effects).

	OOS Action Rating					Result
	5-4	**3**	**2**	**1**	**0**	
	2-8	2-5	2-3	2	—	No Loss
Two	9-10	6-7	4-5	3-4	2-3	-1 Step
Dice	11	8-9	6-7	5-6	4-5	-2 Steps
Roll	12	10-11	8-9	7-8	6-7	-4 Steps
	13+	12+	10+	9+	8+	-All Steps

Dice Roll Modifiers:
+3 if 5 OOS steps or more in the hex.

Capture Table[1]

Roll whenever enemy units enter the hex and no friendly units are also in the hex.

Die	Dump (on Ground)[2]	Trucks (and loaded SPs)[3,5]	Other Transport Points (and loaded SPs)[4,5]
1	0	0	0
2	25	0	0
3	25	25	25
4	50	50	50
5	50	50	75
6	75	75	100

Notes:
1. Roll for each category in the hex separately. Number is % captured. Handle the remainder according to the below.
2. Remainder is destroyed.
3. Remainder displaces up to 10 hexes.
4. Remainder displaces up to 5 hexes.
5. Captured portion includes the vehicles the dump might be with. These are converted into friendly counters and can move during the phase of capture (if it is the Movement Phase) or not (if it isn't).

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Supply Tables

❑ *Combat Supply (either side):*

Attacker: 1T per step. (DAK: 2-step Brigade costs 1T)
Defender: 2T (unless 1 RE or less is defending, then defender combat supply is 1T).

NOTES: **Attackers which do not have their full combat supply available cannot attack.** If required to expend supply and supply is not available (even internals), defenders are x1/2.

❑ *Barrage Supply:*

Pay as per the Barrage Table being used. Do not use this for Air or Ship Units.

❑ *Fuel Supply:*

1 SP per division or HQ (when the HQ pays for all non-divisionals within range) OR 1T per unit

When paid using the 1 SP method, the Fueled status lasts until the next friendly Clean Up Phase. If the 1T per unit method is used, the Fueled status lasts for the current phase only.

Units which are moving using tracked or truck MPs cannot move under their own power (except as a combat result) at all unless they are currently in a Fueled Status. Units which cannot move in one of their modes for this reason, can move in another mode if that mode uses Leg MPs. Fueled Status has no effect on a unit's ability to move using rail transport.

If a unit must be supplied from on-map supplies:

Supplied — 1T per 2 RE

Unsupplied — Any unit which isn't paid for above and cannot trace.

❑ **Supply Requirements for Special Purposes**

• **Transport Points:** None
• **Aircraft Units:** Air units never expend supply themselves, they are supplied when refitted.
• **Air Bases:** An air base is supplied if there is 1T available it can draw to refit air units. If 1T is expended, the air base can refit air units. Air bases so paid for can refit up to 2x their base level.
• **Improve/Build An Air Base One Level:** 1 SP (2 SP in Very or Extremely Close Terrain). One level per turn max. Must have engineer capable unit present to do so. See also 15.1b.
• **Hedgehogs:** Build/improve one level costs 2 SPs. One level per turn max (*two* if engineer capable unit in hex, 4 SP total supply cost.)
• **Port Repair:** 1 SP. Must have engineer capable unit present to do so.

12.10b Internal Stocks Recovery

During the Supply Phase, marked units MUST recover—2T per level recovered per unit or RE (whichever is more) paid for from the on-map SPs **before** determining supply status. (A Battalion or Regiment would cost 2T per level to recover, etc.). If the on-map supply is available, it must be expended to replenish used internal stocks. Any SPs that the unit can draw on (via HQs or direct) are subject to this requirement. (EXCEPTION: SPs loaded on Organic Transport Points are exempt from this requirement).

13.2d Loading/Unloading Costs

It costs 10% of the Transport Point's printed MA (adjusted for weather and rounded normally at the moment of loading/unloading) to load or unload.