



Afrika Korps

The desert war from Agheila to the Delta — April 1941 to October 1942

Manual · Package version 1.0.0 · Tronsoft Games

A browser recreation of the Avalon Hill game of 1964, built from the publisher's scans of the mapboard, the tables sheet, the counter sheet and both orders of battle.

1. What was transcribed, and from where

Everything in this section came off the scanned material rather than from memory. Two of the sources disagree with each other, and where they do, this says which one was followed and why.

The combat results table

The tables sheet and the mapboard print *different tables*. The tables sheet runs thirteen columns, 1:7 through 7:1, with the codes AD, AE, AR, EX, DR, DE and AV; the 1:7 column is an automatic defeat at every die and the 7:1 column an automatic victory, so the two footnote rules of the original board are columns of the table rather than conditions attached to it. That table is monotone: it never gets worse for the attacker as the odds improve.

The mapboard prints the 1964 original: eleven columns, ATK ELIM, ATK Back 2, EXCHANGE, DEF Back 2 and DEF ELIM. That table is *not* monotone — a die of 6 gives DEF ELIM at 3-1 but only EXCHANGE at 4-1, and dice 5 and 6 are savage at low odds in a way no smooth table would be.

This version follows the **tables sheet**, because it is the reference sheet of the pair and is unambiguous at magnification. The 1964 table is transcribed as well and kept in the source as D.CRT_1964; the test harness asserts both against the source each came from. Nothing reads the 1964 table at present.

The combat results table as used (die roll down, odds across):

Die	1:7	1:6	1:5	1:4	1:3	1:2	1:1	2:1	3:1	4:1	5:1	6:1	7:1
1	AD	AE	AE	AE	AE	AE	AE	AE	EX	EX	DR	DR	AV
2	AD	AE	AE	AE	AE	AE	AE	AR	EX	DR	DR	DE	AV
3	AD	AE	AE	AE	AR	AR	AR	EX	DR	DR	DE	DE	AV
4	AD	AE	AE	AR	AR	AR	EX	EX	DR	DE	DE	DE	AV
5	AD	AE	AR	AR	AR	EX	DR	DR	DE	DE	DE	DE	AV
6	AD	AR	AR	AR	AR	DR	DE	DE	DE	DE	DE	DE	AV

Code	Result
AD	Automatic defeat. The attack is destroyed and does not count as an attack.
AE	Attacker eliminated.
AR	Attacker retreats two hexes.
EX	Exchange. The attacker loses attack factors equal to the defence destroyed.
DR	Defender retreats two hexes.
DE	Defender eliminated.
AV	Automatic victory. Requires a dump within five hexes to be expended.

The Axis convoy table

Turns	Months	Convoy lost on a die of
1–6	April – June 1941	1 or 2
7–16	July – November 1941	1, 2 or 3

The turn record track

Thirty-eight turns, two to the month, April 1941 through October 1942. Reinforcements arrive on the turns printed on the orders of battle: Axis on 3, 15, 21, 29 and 33; Allies on 5, 7, 9, 15, 27, 33 and 37. Both sides begin drawing replacement points in early March 1942, turn 23 — the Axis one for W3 and one for Tobruch, the Allies two for J62 and one for Tobruch. The replacement track caps at nine.

The board

Sixty-nine columns by twenty-four rows, pointy-top hexes on an odd-row offset, carrying the hex numbering of the printed map: **W3** Agheila, **G25** Tobruch, **L55** El Alamein, **J62** Alexandria. 915 land hexes, all one connected body, verified by the harness.

The Via Balbia runs the coast; the desert chord runs Agedabia – Msus – Mechili – Tmimi; the Trigh Capuzzo and the Salum tracks cross the frontier. Escarpment ridges are laid as hexes. The Qattara Depression is impassable, and it is what narrows the front at El Alamein to a few hexes.

The orders of battle

Both are transcribed counter for counter, including the at-start deployments — Agheila for the Axis; Bengasi, Mechili, Salum, Tobruch, Matruh and El Alamein for the Allies — and every reinforcement wave at its printed turn.

2. The rules as applied

The turn

Each side in turn: supply, then reinforcements and replacements, then movement, then combat. Two turns make a month.

Supply

The supply table gives a **maximum range** — three hexes for the Axis, four for the Allies — under a column headed *Condition*. The combat sub-phases separately say "eliminate 2× **isolated**". These are two different rules and this version treats them as two:

- **Out of range** of a dump: the formation fights at half weight, attack and defence both, for as long as it stays there. It is not in danger of removal.
- **Isolated** — no path home at any distance, cut off by enemy formations and their zones of control: removed on the second consecutive turn, in the closing combat sub-phase. It therefore still fights, and an attack that reopens its road still saves it.

A headquarters standing in the net relays it onward. Dumps are ordinary counters and must be walked forward. Axis dumps arrive by sea at W3 and can be sunk on the table above.

Movement

- Entering an enemy zone of control ends the move.
- A formation may not step directly from one enemy zone of control into another.
- Entering escarpment ground ends the move. A road hex cut through a ridge is a pass and does not.
- The road is worth ten extra movement factors, spendable only between two road hexes.
- A formation with no attack factor — a dump or a headquarters — is captured by moving onto it.

Combat

- Total the attack factors and the defence factors, halving whatever supply has already halved.
- A fortified city doubles the defence. So does escarpment ground. Doubling is capped at twice and does not accumulate.
- Cut the ratio **down** to the printed column, never up. The defender keeps the remainder.
- Worse than 1-7 is an automatic defeat and does not count as an attack.
- 7-1 or better takes the hex without a die if a dump within five hexes is expended — 5-1 against a surrounded hex. Without the dump the attack reads on the column below.
- Retreats are two hexes. A formation that cannot fall back is destroyed where it stands.
- An exchange is paid in printed attack factors, by the cheapest bundle of formations that covers the bill.

Victory

Occupying Alexandria ends the campaign at once for the Axis. Occupying Agheila, or destroying the whole Panzerarmee, ends it at once for the Allies. Otherwise the close of turn 38 is read against the ladder:

Axis holds	Result
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El Alamein	Axis marginal victory
Matruh	Drawn
Tobrukh	Allied marginal victory
None of these	Allied decisive victory

Victory points are kept as a running measure of ground held but do not decide anything.

3. Where this differs from the board

- Stacking is unlimited, as in the original.
- Doubling is capped at twice and does not accumulate.
- Retreats, and the formations spent to pay an exchange, are chosen for you — the cheapest bundle that covers the bill.
- Allied battle groups sit in the replacement pool at a cost equal to their attack factor, rather than substituting for particular named formations as the substitution table specifies.
- The escarpment ridges are laid from 35 hexes read off the map image. On the printed board the chains look more extensive than that; extending them would have been guesswork from a scan, so they were left where they could actually be seen.
- There is no audio.

4. The machine commander, and what it is worth

Three settings: cadet, staff officer and veteran. They differ in how carefully they mind their supply, how much they concentrate before attacking, how good the odds have to be before they will, and — the setting that matters most — whether every formation gets an order every turn.

The settings were measured by playing full campaigns in matched pairs: each campaign number is played twice, once with each commander in each seat, and the pair counts as a single observation. Pairing takes the seat and the campaign out of the comparison, which is most of the variance. Each row below is 160 campaigns.

Pairing	Share	95% interval	Verdict
Staff officer vs cadet	68.1%	61.9–74.4%	stronger
Veteran vs staff officer	56.4%	51.2–61.6%	stronger
Veteran vs cadet	75.3%	69.1–81.6%	stronger

The ladder is ordered: every step clears its interval. The top step is small — about six points — and the middle row above pools two independent runs of 160 campaigns to resolve it.

A note on how this figure was arrived at, because the first answer was wrong. An earlier version of the measuring tool reported a bare percentage over 24 games. On that basis the top two settings looked identical, and nine individual settings were measured one at a time to find out why; several appeared to help by ten points or more. A new commander was built from the ones that "helped", and on campaign numbers that had not been used to choose anything it was *worse* than the one it replaced. Every one of those effects had been inside the noise. The tool now carries an error bar and states the smallest difference the run could resolve, so a null reads as "nothing larger than X" rather than "nothing" — and the top step, at six points, was simply below the old floor of fifteen.

The seat is also not balanced. With equal commanders on both sides, the Axis share of the points runs about 73% at cadet, 37% at staff officer and 19% at veteran. Better play favours the Allies substantially, which most likely means the defensive machinery is stronger than the offensive.

5. Saving, and campaign numbers

The campaign is saved automatically after every action, in the browser's local storage, under the keys `tronsoft_afrika_korps_save` and `tronsoft_afrika_korps_prefs`. There is one save; starting

a new campaign replaces it.

Every campaign has a number. The same number always deals the same campaign, so one can be handed to somebody else and played again exactly. It can be typed on the opening sheet, and it is shown in the situation column throughout.

6. Accessibility

- Everything the game does has a key: arrows or W A S D to pan, plus and minus to zoom, F to fit the board, N for the next formation, U to take back, Escape to put a formation down, ? for the rules.
- The interface scales with the browser's text size and reflows from a wide desktop down to a phone.
- Animation is suppressed when the system asks for reduced motion.
- Colour is never the only carrier of meaning: hexes that end a move are labelled *stop*, odds are printed as figures, and supply state is written out in words as well as marked.
- There is no audio, so nothing is conveyed by sound alone.