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A quarterly newsletter devoted to A WORLD AT WAR, GMT Games' strategic simulation of World War II. To order AWAW, go to www.gmtgames.com or phone 1-800-523-6111.

# ACHTUNG PANZER!

## Armor Tactics in A WORLD AT WAR

by Markus Kässbohrer

**“... we shall set our panzer forces the task of gaining a decisive victory.”**

*Heinz Guderian, Achtung Panzer! (1937), p. 178  
English Translation Arms & Armor Press, 1992*

World War Two in Europe was a war of tanks, and so it is in A WORLD AT WAR. Armored overruns, breakthroughs, and exploitation dominate the European mapboard. Poland wouldn't fall as quickly without armor, France might not fall at all, even a British surrender usually involves some exploitation up the isle, and of course the war altogether is usually decided as Panzermänner and Tankisti have it out on the steppes of Russia. A closer look at the tactics involved is therefore helpful.

### Taking Hexes

The two purposes of ground attacks are to kill enemy units and to take control of enemy-occupied hexes. Usually the two go hand in hand. There are ways other than combat to eliminate enemy units (principally, placing them out of supply), but those tend to require successful combat in the first place (usually not only that, but something special: breakthrough and exploitation). So how do you take enemy-occupied hexes? The surest way is offensive attack, which comes in three categories (as Dave Hanson's article later in this issue will show with

great clarity). Simplified, in ascending order of combat odds:

- combats where suicidal attackers take some defenders with them
- combats that have a good chance of taking a hex albeit at potentially heavy cost
- combats that will destroy the defender at little cost

Clearly, the attacker wants to increase the odds as much as possible.

One possibility to increase the odds is to add units, and there are several ways to do that.

First, it goes without saying that each hex adjacent to the defender should contribute the maximum two regular ground units to the attack. Second, special troops (paratroops, marines, etc) can attack on top of those troops. However, they are only one factor each, and if they add points to a simple regular combat they are not fully using the special abilities that justify their cost, both in BRPs to build and in RPs to create. Russia can add powerful three-factor infantry units as Shock Troops to selected attacks, although these troops will not survive the attack (which rather defeats the purpose of increasing the combat odds to limit attacker losses!).

A better way is to attack from more hexes. This

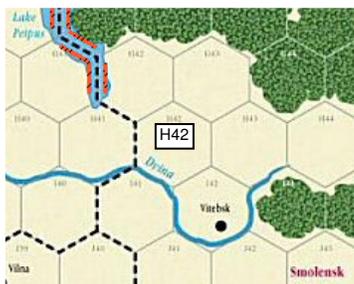
### Ground Combat Tactics

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has important implications for the defender's line. As an example, let's say you have six BRPs' worth of infantry (you're building it this turn) to hold the Pskov gap (Hex H42 and either H41 or G42 at the southern end of Lake Peipus in Russia). What should you do?



Let us analyze the possibilities. The simplest solution is to put three factors into each hex. They defend at six. Hex G42, which can be attacked only from H41, is reasonably

safe that way, as the attacker cannot bring significantly more ground factors to bear. H42, however, can be attacked from two hexes by four units with twelve or more ground factors, which is a reasonable attack to take – and the hex is within five movement points of both Leningrad and Moscow (let's hope you have armor to backstop that line).

With H42 much less vulnerable, maybe two factors are enough, leaving four to defend the more vulnerable hex G42. It will then defend at eight, requiring 16 factors for a bare 2:1. It is still likely to be overwhelmed, but the



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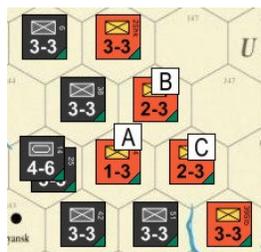
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opponent has to commit significantly more forces to do so. However, H41 is weaker in this configuration – its two factors can be attacked at 2:1 by two four-factor armor units (one of which could be replaced with a three-factor infantry and an air factor). Nevertheless, I prefer this defense over the first, as it presents two difficult attacks rather than one easy and one very hard one. ***Your opponent (as long as he can break through and exploit) needs only one successful attack to destroy your line, not one on every hex. It is worthwhile to weaken the strongest point of your defense if that strengthens its weakest point.***



Is a forward defense better? H41 is clearly far more exposed than H42, so H42 must make do with two factors. They defend at six across the river and can be attacked from

only one hex (I41), so they should be relatively safe. That leaves four factors for H41, which therefore defends at eight. However, and this is where length of frontage comes into play: the enemy can attack H41 from four hexes, easily allowing 24 ground factors to participate – 3:1 odds! Clearly, this bulge would be too exposed and should not be defended (unless the attacker doesn't have enough ground units in the area to fill all hexes). It may be worth considering that the potential breakthrough hex is one movement point further away from Moscow, but then again, there is the possibility of an airdrop negating the river benefit for H42... ***Generally speaking, shorter stronger lines are better than longer weaker ones. Giving up single hexes hurts a little; having half your army encircled hurts a lot.***



For the attacker, the optimum approach also merits some thought. Consider this situation – a situation that can frequently arise after attrition advances. Hex "A" can be attacked from four hexes, allowing a large number of units to participate, so a high-odds attack will most likely eliminate the defender with little or no loss to the attacker. And then? That's it. Consider instead attacks on hexes "B" or "C". If either succeeds and the

hex can be occupied with an armor unit, the troops in “A” are out of supply and, pending a rescue operation, will die anyway. Furthermore, a breakthrough in “B” or “C” allows the attacker’s armor to race off to the horizon (or at least, to the defender’s backstopping armor), while one at “A” will have to contend with the units in “B” and “C” first. ***Unless you’re attacking a key objective, don’t just roll the dice to kill enemy units. Attack to kill the enemy’s position.***

So: while attacks from many hexes generate good combat odds, they’re not generally those that attackers really want to take. What, then, to do when large numbers of ground units cannot be brought to bear?

Stronger units are the first option. We have, for example, been analyzing single hex attacks against two defending factors in terms of six or more attacking factors. If the attacker really wants to punch through, he may be able to employ a five- and a four-factor armor unit, which a little air can easily increase to a 2.5:1 or 3:1 attack. Of course, the biggest units tend to be in the shortest supply, so the use of this tactic is limited. Using multiple armor units in a single regular attack also commits armor that might more profitably exploit from a breakthrough.

Air is the second alternative. The one air factor of ground support that, for example, takes a 7:4 attack to 2:1 can make a big difference – on almost every die roll, the result is more favorable (with the possible exception of a “5” by CTL “1” troops against two defending units). Of course, the numbers can get a little out of hand. A 6:6 attack can be turned into a 2:1, but only with more than a whole 5-4 air wing. That is a significant commitment and will not be made lightly; on the other hand, it is entirely feasible if the payoff is big enough. ***A little air goes a long way in turning decent attacks into good ones. A lot of air can turn a weak attack into a decisive victory.***

## Breakthroughs

To get anywhere, armor first needs to break through the enemy front line. In A WORLD AT WAR, this is defined as a specific event: a Breakthrough. The requirements are defined in rule 16:

- Regular combat must eliminate all defending units
- One attacking unit must advance into the contested hex

- At least one of the units participating in (not necessarily surviving) the final round of combat must have been a fully supplied armor unit with its mechanized component not impaired by weather, terrain or oil effects and with a CTL of “1” or more.

When a breakthrough occurs, armor units adjacent to or stacked with any of the attacking units (before the combat began and potentially took its toll, and before any advance into the contested hex) that were fully supplied from an unlimited supply source can be stacked on the breakthrough hex, move from there in the exploitation movement phase, attack in the exploitation combat phase, and will be in supply next turn (unless they redeploy). Next turn, such armor units can create breakthroughs, but can only exploit if they were again supplied from an unlimited supply source. In truth, this limitation tends to be more helpful for Germany in 1943/44 than (as imagination, in its endless optimism, would immediately leap to) Russia in 1941.

It is also important (particularly if you are stretching the envelope) that exploiting units only need to have been in the correct position; their intent is only declared when they move to the breakthrough hex after combat. Thus, would-be exploiting units can be stacked with units intended for combat, and if the odds don’t work out after air combat, be added to the attack; it may be better to exploit with one less unit, than not to exploit at all. Similarly, potential exploiters can be stacked so that they are adjacent to two potential combats, ready to exploit from either breakthrough. The defender then has to stop two attacks, not just one, to prevent exploitation.

Finally: with the single exception of attacking an empty beach, a defending ground unit is necessary for a breakthrough to be achieved. No defense (a misnomer anyway; somebody always shoots back, although at a certain point they just don’t show up on an AWAW map any more) is usually better than a weak one. ***Don’t put units that are easily defeated into positions from which you can’t allow enemy exploitation. The best defense against enemy exploitation is not to allow a breakthrough to occur.***

Similarly, one strong line is better than two weak lines. This principle is strongly supported by the reduced defense multiplier of infantry against exploiting armor:

**15.33 NEGATIVE DMs:** Ground units are subject to a negative DM as follows:

A. Infantry, replacements and partisans attacked by exploiting armor, unless defending in a capital, objective hex, IC, bridgehead or railhead.

For any normal length of front, defending force pool, and attacker with sufficient armor and air units, a second line of non-armor units will be overrun, placed out of supply, and destroyed. AWAW is not a game for half measures: either a line is strong enough (or backed up strongly enough) to withstand a direct attack, or it should not be there at all. ***Pile your troops into one strong (maybe partial) front line; don't spread them out into several lines or along one line that is too long to hold.***



## Exploitation

Exploitation is why we go to all the trouble of creating breakthroughs. More (or less) skilled exploitation in Russia can decide a game. Generally, an army never has greater freedom of movement towards the enemy's key areas than when it exploits. The enemy's regular defenses are no longer an obstacle; any remaining infantry is under reduced defense multipliers and there is never enough enemy armor to form a complete line – and Zones of Control can be walked through. So if you're more free than ever to move where you want, where do you want to move to?

The answer? To where you can kill as many enemy units as possible. If you have a choice of taking a juicy objective (but leaving part of the enemy army intact) or of destroying the enemy army (but not reaching the objective yet) – destroy the army. The objective will fall later if there is no one to defend it, but it will be retaken if you leave enough enemy units alive and mobile to counterattack. This applies regardless of whether the weather allows you to attack in the immediately following turn. ***When exploiting, focus on immobilizing and destroying enemy units. If there is no army to defend it, their position will fall to you by default.***

## Geography

## But they have more air!

Of course, any self-respecting attacker will strive for air superiority, and indeed, your first questions in its absence should be, "Am I really in a position to attack? Shouldn't I start to think about preserving my forces, build five AAF with the money, and see what *they* have got offensively?"

But let's assume that you feel your army still has it and the whole Red Army is waiting for you to encircle it ... if only you can pull off a huge overrun in the south and break through against five excess Russian AAF in the north. Victory beckons and you've just got to do it. So how do you do it?

First, especially against inferior air forces, you can run the numbers on multiple rounds of air combat (more on this next issue). That alone may free up the odd air factor needed to make your attacks work.

Second, remember the sequence of ground combat: Ground support is placed, defensive air support is placed, DAS is intercepted, and only then are ground combats declared. In other words, if you can do without ground support (a 1.5:1 is often still possible), your opponent has to place his DAS blindly, without knowing where you will attack. Unintercepted and unattacked DAS just flies home and is inverted.

Attackers with a sufficiently large budget can make this decision still harder by placing small amounts of ground support. They still don't have to attack the hex in question, although not doing so will result in the loss of the air committed.

More common may be the attacker who carefully sets up two attacks, stages air to intercept DAS in range of both, and then fights with all of his factors over only one of the defending hexes – wherever the opponent places fewer factors. That alone may induce the defender to keep his DAS at home ("If I can't prevent the breakthrough, why lose air now, when it will be gone for my whole turn?") and leave the attacker to do his evil deeds.

Defenders need to be careful where they place DAS, as often the resulting attack, while risky, is still likely to result in destruction of the defenders. If this includes their defensive air support (which is at risk in every result from "Ex" to "D"), it can be very costly.

Needless to repeat, these are the tactics of a desperate player. Unless the enemy's front line is weak (in which case, why would they have air superiority?), these tactics will usually come with attacks at lower odds, high friendly losses, and limited progress. But, there are exceptions, and sometimes, needs must ...

Geography can help make exploitation more deadly. Since only armor units, with Zones of Control, can exploit, a few units in the right (or wrong!) place can cut supply to wide areas.



An example that comes into play in every game is the Somme estuary. The diagram above shows a well-executed German Spring 1940 attack. The ZoC on N23 places the French units on the Channel coast out of supply, and as France is highly unlikely to take more than one hex full of four-factor armor in either attrition or offensive combat, and sea supply would have to contend with the whole Luftwaffe, the troops along the Channel coast are dead. In fact, offensive combat against the Luftwaffe and Heer would be suicidal at this point for the Allies, and by picking up the two armor in N24 as attrition losses, Germany can ensure they have two hexsides across which to attack to create a breakthrough adjacent to Paris in Summer. There is more than enough space to marshal exploiters behind, overstack them to the sky on the breakthrough hex, airdrop to negate the river, and painlessly take Paris, almost regardless of its defense. This is how France falls.

From the French perspective, the best tactics in the world will not prevent this disaster. The fact that Germany applies the massive power of the Luftwaffe against the French army for these two turns is victory enough. Some French players conclude that with this geography, it is impossible and therefore makes no sense to defend the Channel coast. Indeed, I (who was the defender in the game portrayed) placed only one, not the standard two, French infantry units in Dieppe (M23). But I did feel that one unit was necessary, as any less would allow the Germans to break through in Calais and run for an exploitation attack on N23 – at 8:8 combat factors from ground units and Germany with enough air to improve those odds.. Together with an attack through Sedan, the traditionally British sector on the Belgian border becomes difficult to supply. As it was, the Germans wiped the British out in exploitation combat; at least I forced them to roll the dice (which could have caused losses, although in this game it didn't) and tied down a significant amount of air to offset the RAF.

Even with two factors in Dieppe, the Germans could break through in Calais, overrun Dieppe during exploitation at 12:2 (two armor plus 4 AAF) and attack N23 in exploitation... though in this game they'd have needed more air than they had to do that.

North Africa is another tight area, where a small number of armor units can cause large problems (especially as, given the logistics of moving troops there, neither side tends to have many units in the theater in the first place). This not only applies in the most-fought over area between Tobruk and Alexandria, but also in Algeria and Morocco. ***Armored attrition advances and even short exploitation are especially dangerous in North Africa.***



Suez is another area where the interaction of ZoCs and terrain produces interesting results. An Axis armor unit in LL31 is major trouble for the Allies, as they then have to run a sea supply line to Suez, which requires an extra Indian Ocean transport. Further transports are necessary to ship oil (offsetting the army oil effect would be helpful!) and then more again to maintain the one-third ratio of oil transports (i.e., to be *allowed* to use a transport for oil at all). Further, Axis air can attack the sea supply line, so the Allies need naval escort and/or air within range to maintain their position as well.



On the other hand, an oiled, supplied armor unit in Suez prevents land supply to any Axis conquests further east (although it doesn't split off a separate attrition zone). As long as the Axis don't have a port in the Levant or the Eastern Mediterranean Squadron of the Royal Navy is still oiled, supplied and based within range, there is a chance of Allied recovery even after Axis troops have broken through. By the time the Axis have managed to reach Suez, they are generally quite short of time, so a determined stand at Suez of even a couple of turns can make a large difference.

In the example shown, Cairo (which is also a limited

supply source) is also still under Allied control, preventing redeployment into Alexandria. If this position is adequately supported with air, reinforcements, and naval units in the Middle East and the South Africa box, the Axis have their work cut out to bring this victory home.



Italy obviously also belongs to the list of narrow armor-friendly areas. In this case, however, the effect is more defender-than attacker-friendly. The reason is simple: Monte Cassino. An armor unit in this hex,

preferably supported by a fortification, is almost impossible to place out of supply if the mountains are adequately defended further up the spine of the peninsula, extremely costly to take frontally, and almost useless to bypass. It just sits there like a cork in a bottle and the Allies will never get full supply and enough units past it to make a difference. As a consequence, it is rare to see Allied players actually going to the trouble of campaigning up the boot; they need an Italian surrender to meet their victory conditions, but once the Italian DP level is zero, that's it for this theater.

The British Isles are even better. There are choke points where a single unit can block everything – such as the airborne in Rosyth in the diagram. Every hex on the shortest path from there to Scapa offers the same opportunity for mischief. Every hex south of Rosyth and northeast of Manchester allows an armor unit to cut off everything further south. Clearly, the British should not allow an invader past the Midlands, but somehow they don't usually seem to be able to prevent this; the Axis usually bludgeon their way through with massive air support and balls-to-the-walls attacks. The defense must therefore reckon with the worst. For example, in the diagrammed position (just after the Axis took Manchester), I should in my previous Allied player turn, have put the one-factor infantry into Rosyth and set up the exploitation stopper line one row further to the north. As it was, they died out of supply, the Axis brought armor into Rosyth (which split Glasgow off as a

separate supply and oil zone) and even took the first mountain hex. They held fortified Rosyth until supply was cut to occupied Britain altogether. If I'd been able to contain the Axis south of Rosyth, I'd have had more transports free to bring the USAAF over more quickly, and could have projected air power over southern England earlier and more strongly.

Defensively, a British armor unit in (preferably fortified) London greatly supports the defense of Kent (the beach to the southeast) and one between Plymouth and London makes the other beaches and ports much less attractive – but if in doubt, remember again: one unassailably strong hex is better than two weak ones! *Better let the Axis walk past London than lose the capital to a Fallschirmjäger-supported cross-river assault against too weak a defense.*

## Armor against Exploitation

If you don't have geography to help contain exploitation, you need armor. While there is no extra cost to enter a hex in an enemy Zone of Control, an additional two movement points must be paid to leave one. This means a line of armor units with interlocking ZoCs can drastically limit exploitation. Even the champions of exploitation, American 5o6s with fuel coming out of their ears, German 4o6s and 5o6s chasing the sunset in search of the elusive Endsieg, and Russia's battle-hardened 5o6 Guards tanks, cannot move more than two hexes through enemy ZoCs – as opposed to six through undefended open terrain. Quite a difference!

There are differences to the differences, though. Some configurations are easier to break than others, as the following example will show. To focus on exploitation, the front line is represented simply by Russian one-factor infantry units. If you really had no more than that in an actual game, then either this front line would have to be more than four hexes away from the nearest supplied Axis-controlled hex (in other words, out of air range), or it shouldn't be there and you



should instead defend the ICs with strong, short partial front lines and the middle with nothing.



Now consider the defense on the left. Without reading further, quickly record whether you consider this to be a strong, an average, a weak or an abysmal defense.

What was your choice? Every hex behind the front line between Moscow and Rostov is either occupied by armor or in a ZoC, so perhaps it is not horrible. However, that line is only one hex wide for the most part.

The enemy could, for example, break through in I46 or J46, move through I47 (one movement point), H48 (leave ZoC, three MPs) and H49 (not in a ZoC, one movement point!) to cut off Moscow or to leave the area shown and take Gorki. Similarly, a breakthrough at L46 with exploitation through K48 can go quite a way. In this particular case, the question could be asked whether acquiring this empty territory would really make Germany happy, but it would certainly produce a fairly unbreakable encirclement and greatly stretch any Russian line that still tried to include both Moscow and Stalingrad. In a location where there is anything interesting within four hexes of the front line, this type of defense is clearly inadequate.

Contrast this with the position in the great Don bend (hex rows M to R). Any exploiting armor here must go through two ZoC hexes before it can go further. That is still enough to get behind the defending armor and cut it off, but it just about halves the enemy advance. At least, it's better than the setup further north!

Overall, I'd call this line "weak" – with the middle section bordering on "abysmal".

Now again, without reading on, write down how you would improve this position. You can ask Stalin for one additional infantry unit to support your efforts.

Here is one approach: first, move the armor and

infantry in M47 and M46 west one hex each. That establishes ZoC coverage two hexes deep. Second, move the armor and infantry in P46 and P45 one hex west each; that prevents the end run around Rostov and maintains ZoC cover two hexes deep in the Don bend. The additional infantry unit should be placed in H48 or I47, supporting Moscow.

Alternatively, the units in the J, K and Q hex rows could be moved one hex to the west, the units in the L to P rows two hexes west, and the new unit placed in R43. This line has the advantage of defending the airbases of Orel, Kursk, Kharkov (with IC), and Stalino. The Germans can isolate practically all the units anyway, but at least somewhat less territory will be lost.

If you let the label in R45 trick you into placing a unit there, shame on you! It is a good position to backstop the defense of Rostov (and may play a part in keeping Maikop), but in this case the Russians are better off defending further forward.

This all said, Zones of Control are not the miracle cure to exploitation. First, few nations (apart from possibly the Russians) have enough armor units in the force pool to combine a sufficient offensive with dense cover against exploitation. Second, they never prevent exploitation, they just limit it and slow it down.

Exploitation can only be completely prevented in one of two ways. The first is to prevent breakthroughs altogether. The second is a solid second line of ground units. Given the limited numbers of armor, that means infantry. Keeping in mind the limitations discussed earlier, that actually means either relatively strong infantry outside the range of enemy air (two and three factor units both require the attacker to fly ground support to achieve the 6:1 odds for an overrun), or weaker units under defender air superiority (keeping in mind how many forward airbases are available to the attacker – although this can become expensive in air combat losses).

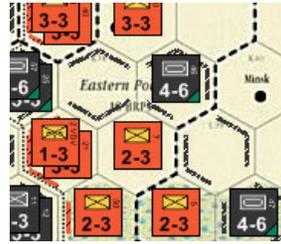
Sometimes, exploiting armor can move through an undefended airbase, forcing air to displace and thereby to invert, which can alter the air balance over a key hex.

## Breaking the Grip

If exploitation in many cases can't be stopped, that doesn't mean that the resulting encirclements can't be dealt with. If the right point and method of attack are selected, there is often a reasonable chance of turning a

deadly encirclement into a confusing situation that may well end up as the turning of the tide (it is also possible that utter defeat will come one turn later; players must never let themselves be blinded to the overall strategic situation by the possibility of a tactical coup!).

If a pocket can be opened to allow supply to flow to the encircled units at all, it is almost always at the end of the chain of exploiting armor units. The rules ensure that from the breakthrough to the end of the chain, every hex is under the exploiters' control and either occupied by a unit or covered by two Zones of Control. If the defenders have the means to pry that open then how did they get themselves encircled in the first place?



In some cases there is an easy point of attack: if the enemy did not have enough armor or it did not have enough movement points to complete the ring then partisans or an airdrop may have been used to close the gap. These units are glaringly weak. Partisans cannot receive defensive air support even if friendly air is in range, do not receive the basic non-terrain defensive multiplier, and relinquish control of their hex if they are eliminated even if their hex is not occupied after combat. Paratroops share none of these weaknesses, but they are still only one-factor units.



Note the Russian tactics in the diagram – two “inner” pincers around Kharkov and an “outer” ring with the partisans on the Dnepr. An armor unit in N41 would have been nice – the one shown in N43 didn't have the movement points to get there, unfortunately.

The most common case, then, is where the last armor unit in an exploitation chain needs to be attacked. This can also be a fairly hopeless proposition if there is only a one-hex gap to the enemy armor unit at the end of the chain of armor units forming the *other* encircling arm. In this case, the only improvement against the impossible “middle of the chain” situation above is that the hex between the ends of the two armor chains is

defender-controlled; therefore, two attrition “hex” results (and two units eligible to advance) will allow each arm to be forced back one hex – just far enough to allow a supply line between them. In Russia after 1941 and in France late in the war, sufficiently high attrition totals and large enough force pools to safely allow so many units in direct contact are possible.



It is far better for the defender if there are defender-controlled hexes within the ring that are only under a single enemy ZoC. In this case, it is enough to eliminate a single enemy unit without even advancing into its hex, or to gain a single hex by attrition (assuming that the order of attrition retreat priorities pushes the enemy armor unit in the right direction).



The first result can commonly be achieved (with varying degrees of risk – see Dave Hanson's article) by offensive attack. In rare cases attrition will work, too, either by surrounding an enemy unit on all six sides with a unit (or airbase counter!) or impassable terrain, or by inducing the attacker to remove the problematic armor unit as an attrition “counter” loss.

The second result is obviously only possible in an attrition, and then only if the advance would not be across a river or into a hex that cannot be selected for an attrition advance, but otherwise it is not terribly hard to achieve given a sufficient number of factors in contact. The defender does need to consider that “in contact” is not the right place for a number of his units (especially armor) when the opponent's next player turn begins. Furthermore, the units to which supply was just re-established will usually, at best, be able to TR, and are therefore not likely to contribute much to the position next turn, other than by denying control of their location to the enemy. If the previously encircling force has the means to push on further, these units will just die from isolation one turn later. However, if the attacking force is now itself decimated, struggling for supply, and running up against a stiffening defense, then success at breaking an encirclement can be worth one or even more victory points at the end of the game.

## Unbreakable!

Ways to produce unbreakable encirclements follow clearly from the discussion above. Unsupplied units cannot move, therefore exploiting armor is safe from their attacks if it keeps at least a hex away. Confident attackers will even minimize contact by their own infantry front line, to keep attrition totals low and prevent suicide attacks. Where possible, enemy armor should also be encircled. Cover from the nearest friendly airbase may occasionally argue in favor of limiting exploitation. If a three hex wide breach in the enemy line can be achieved, infantry and uninverted air can be redeployed forward. Finally, rivers, forests, swamps, mountains and objective hexes are attrition-proof and therefore excellent places for exploiting armor if the movement points work out; this is one reason why it is dangerous for the Russians to defend too far forward of Leningrad.

## Conclusion

Exploitation can only be totally prevented by a strong front line, backed up by enough air so that the enemy cannot break through. Given the probabilities of a hex being taken even on the 1:1 column of the CRT (especially at CTL 2 and with some factors to spare) and the mobility of air, the possibility of a breakthrough will almost always remain. Therefore, cover must be in place to limit the damage (which will often make the effort unattractive to the opponent).

However, the defender is almost always operating with limited resources (otherwise why is he the “defender”?) and must make do with what’s available. Always remember that a defense has to be strong or not at all. A good defense will allow the attacker to take only what the defender leaves him.

In reality, to say it with Joe Brophy, “There is always a hole.” More defenders have been surprised by their attacker’s reach and direction (and resourcefulness!) than there are units in the Russian force pool. But at least as many attackers have been surprised by ingenious or desperate rescue operations.

Be that as it may, nothing beats armor charging into the sunset – unless it’s German armor charging into the *sunrise* in Russia. Enjoy it while you can!

## A question of mobility

Most cures for encirclement need at least one unit able to move and/or to advance after combat. This can be ensured in one of several ways. The first and best is simply to have a unit that can trace supply at the beginning of the friendly player turn. For Russia in particular, it is more than worthwhile to build a few one-factor infantry units out of reach of enemy exploitation (or at least, enemy air) so that it can move forward and help break encirclements after the Germans have done what they almost inevitably do.

Sometimes every single BRP is precious, so a single unit has to cover a large area. An air transport can enable it to do that – and if it is placed centrally enough, it can stage to support one of several units (if the Germans have enough juice left to encircle one sector of the front, but not all of it, or if Russia is happy enough to break just one encirclement). The ground troops should be set up on existing cities or airbases. Only one new airbase can be placed before movement and that is usually necessary at the destination of the air transport – just out of range of enemy air, but near enough that the air transported troops can reach the targeted armor unit.

When (rarely) no destination airbase is available, enemy air coverage is not good, and CTL “2” has been attained, an airdrop might work, too. Remember that an airdropped unit cannot move or advance after dropping.

If not even a one-factor unit is available to place behind the lines, the air transport alone can provide limited supply to a single unit by air – if enemy air can be prevented from interfering, this can allow an “isolated” unit the mobility needed to advance after combat or occupy a hex via attrition.

A limited supply source or previously-exploiting armor may be inside the pocket and capable of moving at least at non-mechanized speed. This (especially the former) is often the case for retreating Germans. Russian-controlled ICs are also limited supply sources; thus Russia may have a choice whether to maintain the highest defense of a Hero City, or to move a unit out behind enemy lines.

Note that fortifications in AWAW only keep units alive; they do not make them mobile.

# FAIR FIGHTS

## The Combat Results Table

By Dave Hanson

**“Fair’ means all of your men get home safe.  
The only ‘unfair’ fight is the one you lose.”**  
(Attributed to the U.S. Marine Corps)

**15.47** Only two ground units may attack from any one hex (EXCEPTIONS: Armor units in a breakthrough hex - [16.45](#); airborne units, commandos, marines and Chindits; Russian ground units employing shock army tactics - [42.24](#)).

Almost every game turn of A WORLD AT WAR sees someone, somewhere, conducting a ground attack. Every one of them ends with a result given by the eight-column, six-row Combat Results Table (CRT).

A player casts a die and matches the result to the table on the proper odds column. And cardboard blood shall surely flow: in each attack most if not all of at least one side’s units will go back to their national force pool.

We shall in this article examine: 1) the seven possible combat outcomes; and 2) the eight combat odds columns on the Table and their interactions.

## What can Happen

It’s hard to explain this more clearly than the rules:

### 15.4 MECHANICS OF GROUND ATTACKS:

**15.41** All defending ground units in a hex must be attacked collectively [...] The combat factors of the defending units, as modified by their DM, are added together, as if they were one unit. The attacker may not attack them separately.

**15.42** If the attacker has more than one ground unit in a hex, they need not all attack the same enemy hex. For example, one ground unit could attack in a northeasterly direction while another attacked to the southeast, or did not attack at all.

**15.43** An attacking ground unit may not split its combat factor and make two or more separate attacks. The entire combat factor must be applied to one attack.

**15.46** A ground unit may only be attacked once during the regular combat phase, although this attack may consist of more than one round of combat. [...] This does not preclude a second attack against a defending unit during exploitation.

### How do we calculate the outcome?

Total up attacking ground, air and naval factors for each of attacker and defender. Compare them as a ratio, rounding in favor of the defender. Ignore any attacking factors beyond the number needed to make the highest multiple of the defender’s factors (affected by Defensive Multipliers).

Combat Results Table - <a href="#">15.6</a>								
	1:4	1:3	1:2	1:1	2:1	3:1	4:1	5:1
<b>1</b>	A	A	A	A	a	Ex	Ex-1	Ex-2
<b>2</b>	A	A	A	a	Ex	Ex-1	Ex-2	d
<b>3</b>	A	A	a	Ex	Ex-1	Ex-2	d	D
<b>4</b>	A	A	Ex	Ex-1	Ex-2	d	D	D
<b>5</b>	A	Ex	Ex	Ex-2	d	D	D	D
<b>6</b>	Ex	Ex	Ex	d	D	D	D	D
Modifier								
<b>+1</b>	For each previous round of combat							

### 15.5 RESOLVING GROUND ATTACKS:

**15.51 DETERMINING GROUND COMBAT ODDS:** When all preparations for attack and defense are complete, each attack is resolved. The attacker calculates the strength of his attacking force, including air factors from ground support air missions and fleet factors from shore bombardment. The defender calculates the strength of his defending force, including defensive air support, taking into account the net DM due to terrain and other factors ([15.32](#), [15.33](#)). The strength of defensive air support is not affected by the DM of the defender’s ground units. The total attacking and defending strengths are expressed as a ratio (fractions are ignored), one die is rolled and the appropriate odds column on the Combat Results Table is consulted.

**15.52 RESTRICTIONS:** The attacker may not select a column on the Combat Results Table which is lower than the actual odds. Attacks greater than 5:1 are allowed, but the 5:1 column is used to resolve the attack. Similarly, attacks at less than 1:4 are allowed, but these automatically result in the elimination of the attacker without loss to the defender [...]

**EXAMPLES:** 20 factors attacking units with a defensive value of 10 would be a 2:1 attack; 19 factors attacking units with a defensive value of 10 would be only a 1:1 attack; five factors attacking units with a defensive value of 13 would be a 1:3 attack.

Rule 15.61 tells us the meaning of the symbols on the CRT. There are seven:

**15.61 COMBAT RESULTS:**

**A:** The attacker loses a number of factors equal to the modified value of the defender's units, taking into account the defender's DM.

**a:** The attacker loses a number of factors equal to half the modified value of the defender's units, taking into account the defender's DM.

**Ex:** The side with the fewer combat factors, taking into account the defender's DM, loses its entire force. The larger side removes at least an equal number of factors, taking into account the defender's DM. The strength of defensive air support is unaffected by the DM of the defender's ground units when computing the attacker's exchange losses.

**Ex-1:** The defender loses his entire force. The attacker loses as many factors as the defender, applying to the defender's ground units a DM one level lower than the defender's actual DM. If this reduces the defender's DM to zero or less, the attacker's losses are limited to the strength of the defender's defensive air support.

**Ex-2:** The same as an "Ex-1", except the defender's DM is reduced by two before determining the attacker's losses.

**d:** The defender loses half the number of defending factors, ignoring DMs.

**D:** All defending units are eliminated.

See 15.3 for a discussion of Defensive Multipliers (DMs) – those lie outside the scope of this article (very generally speaking, a defender has a basic DM of two, which can be increased by terrain or fortifications and decreased by isolation or defending against exploiting armor).

**What happens? Combat Results**

The CRT provides one of life's occasional circumstances where a player would much rather earn a "D" than an "A". Note that the defender's combat value is always determined as the sum of the printed defense strengths of the ground units involved, times the applicable defense multiplier (see 15.3) plus any DAS at face value, and that "half factor" losses are always rounded up.

**A** = Attacker eliminated (usually). All of your units up to the value of the defender's units perish as a result of their attack. In a word: Suicide. Defenders like "A" results.

**a** = half of "A". The Attacker loses half the value of the defender's units. Usually not complete suicide, but not beneficial for the attacker's health.

**Ex** = the "Full Exchange". The smaller side completely dies. The other side loses as many factors as the dead side had. In perishing, the smaller side may take down all units on the other side, leaving no units alive on the map. Call that "murder/suicide". But an "Ex" produces a victory—a 'victory'?—so long as the attack clears the hex of all defending units and the attacker has at least one unit left that can advance into and thereby capture the hex.

**Ex-1** = the defenders all die. In this case the

defender's DM is reduced by one when determining the number of factors the attacker needs to lose. Should the DM reduction produce no losses to ground units the attacker will still lose factors equivalent to any defensive air support.

**Ex-2** = the same, except the attacker drops two levels from the defender's DM. Generally attackers will be happy with Ex-2; in most circumstances they lose no casualties, or just a few if the DM was three or better or there was DAS.

**d** = the defender loses half (rounded up) of his defending factors. Whether or not this result is 'better' than "Ex-2" depends on the attacker's Combat Training Level (CTL—see 15.8). If the attacker has a CTL of only one then he has now made his only attack roll for the attacking units for that turn. If the CTL of at least some of the attacker's remaining units is two, then the attacker can roll a second attack, which often bloodlessly captures the hex. If not—then either the attacker contents himself with losing no units but not capturing the hex, or he may elect an "Ex" result:

**15.53 SELECTING AN "Ex" RESULT IN PLACE OF A "d" RESULT:** An attacker who obtains a "d" result may take an "Ex" result instead [...]

**D** = Defender loses all his forces while attacker loses nothing. Attackers like "D" results.

**Combat Odds**

**A. "Low Odds" attacks at 1:4, 1:3, and 1:2  
The Suicide Columns.**

Respectively, these three columns give an attacker five, four, and three-out-of-six probabilities of suffering an "A" result on his attack. The "victory" alternative is an "Ex" (except in the 1:2 column, where an "a"

appears, and that result almost never matters tactically). Who in his right mind wants to fight where the most likely outcome is an “A” result? Usually, whoever has units trapped behind enemy lines (where they will die assuredly, either in combat or out of supply), and desires to extricate them smoothly, or wishes to rebuild armor at single rather than double cost. Often a player will prefer to have his isolated unit(s) take some enemy unit(s) with them as they go.

Occasionally, a 1:2 attack makes good tactical sense. In specific situations a successful 1:2 ‘sacrifice’ attack may clear a vital hex, if the attacker gains an “Ex” result to kill the defenders. Then the now-vacant enemy hex might be occupied during exploitation, or by partisan construction. Some Axis players will use this maneuver against a high-DM hex like Gibraltar, by attacking with just over half of the defender’s DM-modified factors, aiming to commit ‘murder/suicide’ against defending British units by means of an “Ex” result—then taking the empty fortress by airdrop during exploitation.

Be aware of a special rule affecting attacks using these “low odds” CRT columns. Unlike attacks at 1:1 or higher, you must announce your low-odds suicide attack early and give the opposing player (usually the player holding strategic initiative and controlling the battlefield airspace) another opportunity to assign Defensive Air Support (DAS).

**18.619 DEFERRED DEFENSIVE AIR SUPPORT AGAINST LOW-ODDS ATTACKS:** When the attacker announces a ground attack at odds of less than 1:1, the defender may use eligible, uncommitted air units to provide defensive air support to the attacked unit(s). Deferred defensive air support may be intercepted by the attacker in the normal manner. The ensuing air combat does not affect any previously provided defensive air support. Regardless of the outcome of any air combat between the attacker’s intercepting air units and the deferred defensive air support, the attacker must complete the ground attack, even at worse odds. This sequence is repeated throughout the attacker’s player turn, provided the defender has air units eligible to provide deferred defensive air support.

This rule prevents pockets of isolated units attacking their surrounding attackers ‘by surprise’ (which would force the other player to spend time diagnosing and preventing those possibilities). The attacker gets the opportunity to push the defender’s suicide attack further down the odds columns (increasing the likelihood that the attacked units survive) or even to less than 1:4 (in which case they never take losses).

Probably only one consideration will affect your decision to attack in order to die: Do you want to rebuild your units lost on the “A” result in the turn of their loss? If so, then you’ll have to spend money for their offensive action, or else spend double the construction

costs. Either way, suicide and resurrection will cost you double, unless more than 15 factors need to suicide attack on one front in one turn, or unless it is an armor unit (which, at a construction cost of two BRPs per factor, is more expensive to rebuild at double cost than to suicide and rebuild, each at single cost). Finally, it is worth considering that the “attack” share of the suicide cost does not count against the unit construction limit. See Rule 9.4, and especially Rule 9.8:

#### 9.8 ATTACKS BY ISOLATED UNITS:

**9.81 ATTACKS BY ISOLATED UNITS PERMITTED:** Ground units which fail to receive supply during initial supply determination of their turn may engage in offensive or attrition combat during the ensuing combat phase of that turn.

**9.82 OFFENSIVE ATTACKS AT NO BRP COST:** Isolated ground units which carry out offensive attacks have the choice of attacking at the normal BRP cost (9.51A), including as part of a full offensive, or of attacking at no BRP cost. Isolated units which attack without expending BRPs are not counted when determining whether attrition combat is permitted (9.61), may not attack in combination with supplied ground units which are conducting offensive attacks, may not receive ground support, are eliminated once their attack is resolved, regardless of the outcome on the Combat Results Table, and may be rebuilt in the turn they are eliminated only at double the normal BRP construction cost (27.13A).



### B. “High Odds” attacks at 3:1, 4:1, and 5:1 The Sure Thing Columns

Anyone attacking at 3:1 odds or higher is going to win his battle and his hex. He faces but a single uncertainty: in gaining the victory, will he pay any casualties at all, and if so then how many? Worst possible result in these columns is a one-out-of-six chance for an “Ex” on a 3:1 attack, if the attacker rolls “1”. Note that a “d” result on any column may also produce a full exchange if: a) the attacker’s CTL is only one, b) the defender has two units in the hex, and c) the attacker elects the “Ex” result. At 3:1 the attacker also has a two-of-six chance for a full “D” result—and better for the higher columns. Higher ratios further reduce the likelihood of attacker casualties. A player will always desire to use these columns if he possibly can.

A variant of the 5:1 attack is the 6:1 “overrun”, made by armor units. Essentially an overrun attack roll is made on the 5:1 column, but with a full “Ex” result taking the place of the Ex-2 in the “1” row at the top.

This “automatic” result permits attacking armor units to exterminate defending units in their way.

### 13.5 OVERRUNS:

**13.51 RESTRICTIONS:** Overruns are an offensive operation. Overruns may take place during the movement phase of both regular and exploitation movement. Units being overrun are subject to both positive and negative DMs in the same manner as units being attacked (15.3).

**13.52 MECHANICS:** Overruns are conducted by moving no more than two units (EXCEPTION: Specialized units may overstack for overruns) through the same hexside into a hex containing enemy unit(s) at odds of 6:1 or greater. At least one of the overrunning units must be an armor unit with a functional mechanized component. Each overrunning unit must expend one additional movement point to occupy the overrun hex. If the overrunning units do not have sufficient movement points, the overrun is prohibited.

**13.54 CASUALTIES:** Units which are overrun are eliminated. At the moment of overrun, a die is rolled to determine whether the attacker suffers casualties. On a die roll of “1” the moving player suffers a full “Ex” result [...] These losses may be taken from any attacking ground or air units which took part in the overrun, subject to the normal air loss requirement (15.63). On all other rolls, the moving player suffers no losses. Both sides remove their losses immediately.



### C. “Bread and Butter” attacks 2:1 The “Fairly Sure Thing” Column

Potential outcomes for the 2:1 column run from complete success (“D”) to moderate failure (“a”). Each of these results has a one-in-six chance of turning up. With the same one-in-six probability, the other victory results (“d”, “Ex-2”, “Ex-1” and full “Ex”) can occur. All defenders are eliminated in each of these outcomes, at increasing cost in victor’s cardboard. Remember that “d” may equal “Ex” for an attacker with CTL of one.

The big question is that “a” result. Again, consider an attacker with a CTL of 1. For him, “a” equates to “failure”. If the CTL 1 attacker wants to avoid the “a”

and guarantee himself capture of the hex then he needs to reach 3:1 odds. But an attacker with CTL of two can attack again. If he had plain 2:1 odds then the next attack will be at 1:1, but it will be with a +1 bonus (rules 15.74-15.75), and in almost all cases (unless the attacker has only very big ground units in the attack) with someone left over after an “Ex” result. Thus, this attack will capture the hex on every roll except a “1”. Therefore, two consecutive rolls of “1” are necessary to cause failure of a plain 2:1 attack.

It is possible to guarantee capture of an enemy hex at 2:1. To do this, the attacker has to hit the hex with enough units to absorb an “a” result and then still attack at 2:1 with an all-CTL two force. This is called a “2.5:1” factor ratio.

### D. The “Even Odds” attack at 1:1 “The Knife Edge” or “The Reaper” Column

Most AWAW players try to avoid attacking at 1:1 odds frequently. The possible outcomes show why: Lots of attacker blood may be shed! And failure is a realistic prospect. An attacker has a two-out-of-six prospect for failure, rolling “1” or “2” for an “A” or “a” result. The best ‘victory’ available is a “d” on a die roll of “6”. If the defender has two units in the hex then the attacker needs a CTL of 2 to make that result pay, or it becomes the same as a “3” roll, producing an “Ex” result. “Ex-1” on “4” and “Ex-2” on “5” also produce victories, but not always bloodless wins. Make a habit of rolling 1:1 attacks and you assure yourself of a constant stream of casualties recycling through your force pool, draining your BRPs. But notice: So long as the attacker has at least one more factor than the defender, the attacker has a four out of six probability for a ‘victory’. So despite the carnage the 1:1 may produce, it still gives you better odds to capture the hex than for outright defeat.

Sometimes you must dare that 1:1 attack. Critical moments where 1:1s should be considered include:

1) a simple Axis ground attack at Alamein, seven Axis factors against six Commonwealth in Winter 1940; if the Axis wins then Rommel exploits to capture Suez and roll into the Middle East; waiting leaves Rommel blocked, probably permanently, at Alamein by the big British Army hurrying up the Red Sea from South Africa.

### Combat Results Table Probabilities

	1:4	1:3	1:2	1:1	2:1	3:1	4:1	5:1
<b>A</b>	83%	67%	33%	17%				
<b>a</b>			17%	17%	17%			
<b>Ex</b>	17%	33%	50%	17%	17%	17%		
<b>Ex-1</b>				17%	17%	17%	17%	
<b>Ex-2</b>				17%	17%	17%	17%	17%
<b>d</b>				17%	17%	17%	17%	17%
<b>D</b>					17%	33%	50%	67%

Yellow background denotes hex taken if attacker has one unit over even number of factors. Orange = hex taken if only one defender unit.

### Simplified probabilities (Defense Multiplier 2 or less)

	1:4	1:3	1:2	1:1	2:1	3:1	4:1	5:1
<b>A</b>	83%	67%	33%	17%				
<b>a</b>			17%	17%	17%			
<b>Ex</b>	17%	33%	50%	17%	17%	17%		
<b>Ex-1</b>				17%	17%	17%	17%	
<b>d</b>				17%	17%	17%	17%	17%
<b>D</b>				17%	33%	50%	67%	83%

Yellow background denotes hex taken if attacker has one unit over even number of factors. Orange = hex taken if only one defender unit.

2) a 24:18 strike by Army Group von Manstein upon fortified Stalingrad in Winter 1942; if Germany wins then Russian resistance drops to -1.

3) Japan, having occupied Wake and Midway Islands, spots a mid-war moment where the U.S. leave now-backwater Oahu defended by nothing but a three-factor infantry. Loss of Hawaii's oil reserve would stall the U.S. in the South Pacific. Japan has only its Midway garrison available to attack, but a 15:9 is still possible with the Combined Fleet (with Magic interceptions and carrier battles to increase the challenge).

4) Germany dug into Fortress Berlin in Spring 1945 with two big armor and four airborne – 14 ground factors with a DM of three, for a defense of 42. Russia can attack from two hexes and the U.S. have an exploitation attack from one. Even with Russian Shock Armies and lots of U.S. air neither alliance can attack with more than 60 factors (they would need 63 for a 1.5:1). If the Allies succeed they have a +1 victory; if they don't try, the Germans get a draw.

You, the player, must judge when you think the reward of a successful outcome makes a 1:1 attack worth the risk of loss. Win, and the fight is "fair". Don't

think about the prospect of losing...

As with 2:1 attacks, a CTL of 2 improves the attacker's prospects for victory, in event of an "a" result on a die roll of "2". The attacker can attack with at least half again as many factors as has the defender plus one unit, to make odds of "1:5:1". An "a" result kills off attacking factors equal to half the defenders. The remaining factors attack at 1:1 with +1. They still risk failure if they roll "1", which becomes "a". But so long as one unit survives any "Ex" result, the hex may still fall.

Take a 7:4 attack on the Hague. A German 3x3 and 1x3 infantry, a 1m3 airborne unit and two AAF attack the Dutch 2x3. A roll of "2" produces an "a" result. Germany kills an AAF and the 1x3. The remaining five factors attack again at 5:4, rolling a "5" +1 which becomes a "d" result. The Hague falls with no further loss.

## Conclusion

Keep attacks on the High Odds columns whenever you possibly can. By doing so, you increase the productivity and efficiency of your alliance faction's war machine in the long term. You thereby increase the prospect that you'll survive the long haul to gain a victory, rather than constantly fight draining lower-odds attacks for petty gains and ever-larger losses. If you need to attack a lot, and your research budget allows, then increase your CTL as soon as possible. Increase is a must for Russia and the Western Allies; very nice but not necessary for the Axis Powers, and probably not efficiently obtainable in the early years when the Axis most need it. But your war likely won't be won on the "fair fight" 3:1 column. Against many important hexes you'll have to make 2:1 attacks. And do not fear the Reaper—I mean, the 1:1. Keep 1:1 attacks to a minimum but train yourself to recognize when a critical moment may demand a 1:1 from a scratch force, to gain that Big Breakthrough. And the Suicide Columns remain available to liberate your isolated units from enemy encirclement and allow their timely reconstruction. All in all, the AWAW CRT easily meets its designed intention: resolving lots of fights on terms that we must admit are "fair".

# COMBAT TRAINING LEVELS

By Markus Kässbohrer

As we have just seen, the A WORLD AT WAR Combat Results Table is pretty simple. There is quite a twist to it, though, through the simple addition of Combat Training Levels. CTLs govern how many rolls on the CRT the attacker may make for an attack on a given hex, as well as a few other things.

## 15.8 COMBAT TRAINING LEVELS:

**15.81 CTLs:** All ground, air and naval units have a CTL, which reflects the research results in combat training for that alliance faction (41.92). The CTL of ground units in partial supply or subject to army oil effects is reduced by one (30.522A, 33.61C). This reduction is not cumulative. CTLs of air and naval units are distinct from the Air and Naval Nationality DRMs.

## 15.82 EFFECTS OF CTLs:

**A. GROUND ATTACKS:** A CTL of one or less permits only one round of ground combat. A CTL of two allows a second round of ground combat. A CTL of three allows a third round of ground combat, and so on.

**B. AIR AND NAVAL SUPPORT FOR GROUND ATTACKS:** The CTL of air and naval units only affects their participation in ground combat and has no effect on the number of rounds of air or naval combat in which they may engage. Air units are considered to be participating in ground combat when they are providing ground support (18.55); naval units are considered to be participating in ground combat when they are carrying invading ground units (21.51) or providing shore bombardment (21.52). Air units with a CTL of one may only provide ground support for the first round of ground combat; destroyers with a CTL of one must withdraw from invasion combat, together with the ground units they were carrying (regardless of the CTL of the ground units) after the first round of invasion combat; naval units with a CTL of one may only provide shore bombardment for the first round of invasion combat.

**C. BREAKTHROUGHS:** Armor units with a CTL of zero or less may not create breakthroughs or exploit.

**D. EXPLOITATION MOVEMENT:** Armor units with a CTL of one have their exploitation movement allowance halved (round up); this reduction is determined before movement reductions from weather (34.41) are applied. Armor units with a CTL of two or more may exploit normally.

**15.74 GROUND COMBAT ODDS RECALCULATED:** The combat odds are recalculated before each round of combat. [...]

**15.75 ATTACKER RECEIVES A +1 DRM:** The attacker receives a +1 DRM for his combat die roll for each successive attack. This modifier is cumulative (+1 in the second round of combat, +2 in the third round of combat, and so on).

That combines to something quite fine-grained, as the table on this page shows. Note that CTL does not affect the losses suffered by the attacker, except insofar as there is much less need to covert “d” to “Ex” results to take hexes defended by two enemy units.

Finally, the table shows that with a CTL of two, the minimum odds to ensure capture of a hex drop from 3:1 to “2.5:1” (the attacker has enough to absorb one “a” result and still get a 2:1 for the second round).

CTL affects most special units’ performance:

**10.53D. COMBAT TRAINING:** Airborne units may only airdrop if they have a CTL of two or more.

**10.61 AIRDROPS:** The Chindit may airdrop in the same manner as an airborne unit. All normal airdrop restrictions apply.

**10.83 CTL REQUIREMENT:** Commandos may not utilize the special abilities set out in 10.81 (invading ports) and 10.82 (overstacking in invasions) unless the Western Allied CTL is two or more.

Combat Training Levels also affect attritions:

**14.42 ATTRITION MODIFIERS:** The attacker’s attrition die roll is:

**B. CTL:** Increased or decreased by the difference in CTLs between the units involved. A higher CTL increases the attrition die roll and a lower CTL decreases the attrition die roll. If a player has units with different CTLs engaged in attrition combat, the CTL of the largest number of factors engaged is used to determine this modifier, with the less favorable CTL

CRT – simplified view (DM 2 or less, CTL “2”)										
	1:4	1:3	1:2	1:1	1.5:1	2:1	2.5:1	3:1	4:1	5:1
<b>A</b>	83%	67%	44%	23%	20%	3%				
<b>a/Ex</b>					3%	3%	3%			
<b>Ex</b>	17%	33%	56%	17%	20%	20%	20%	17%		
<b>Ex-1</b>				31%	17%	17%	17%	17%	17%	
<b>a/d</b>					5%	5%	3%			
<b>d</b>						3%				
<b>a/D</b>					3%	3%	8%			
<b>¼A/D</b>				3%	3%					
<b>D</b>				28%	31%	48%	51%	67%	87%	100%

Yellow background denotes hex taken if attacker has one unit over even number of factors. Orange = hex taken if only one defender unit. Assume attacker always takes the second round and can always make exact “change” or absorb excess. Assume no conversion of “d” to “Ex”. Where two results are shown both apply. “¼A” means the attacker loses a quarter of the defender’s strength.

applying if equal numbers of factors are engaged.



## Getting Better

There is no question that both the Western Allies and Russia need to get their CTL up to two. Too much air and shore bombardment are required to lift each key attack (and for the U.S., most invasions in the Pacific are critical) to 3:1, and if attacks are made at lower odds, sooner or later the “1,1” is going to hit and cost the Allies a turn and hence a victory point. Airdrop and exploitation capability are also required to bring the Axis down.

The question is whether a further increase to CTL three is worthwhile. With the negative feedback and a high target value on the research table, and other military projects and especially production crying for RPs, it is a substantial investment. What does it get you?

Obviously, some combats can be taken to a third round. As the orange rows on the table above indicate, very few combats actually go that far. In these cases, CTL three just saves the “d” to “Ex” conversion in those combats where two or more units were defending the hex. That leaves a “1,1” on 1.5:1 and 2:1 attacks, where CTL three would allow a third round at 1:2 and 1:1, each at +2, respectively.

A 1:1 (+2) is actually certain to take the attacked hex, so with CTL three the “certain” odds drop to 2:1. That, finally, is a significant advantage. Usually, the last few factors to make an attack 100% certain are air; if these are not required to guarantee ground combats, they’re available for other use. Seen that way, the RPs for CTL three may be worthwhile.

For Germany, a CTL increase will also lift Italy and the other Axis minor allies to a Combat Training Level

of two, which makes them much more useful. For the Allies on the other hand, there are few minor allies while the Chinese do not benefit from any CTL increase, ever.

Finally, a +1 on every friendly attrition will increase enemy losses and decrease friendly losses on each die roll. In one third of the cases, it will cause an increase or decrease of one hex. That is also significant (especially for Germany and Russia, where it also applies to the special Russian Winter attritions).

Overall, it’s well worth considering, especially for Germany, which already starts with a CTL of two and gets extra benefits, and often goes for quite a few military breakthroughs, anyway.

## The Second Coming

The first printing of A WORLD AT WAR has been sold out completely. 5,000 games are now in the hands of gamers around the world. GMT Games and Bruce Harper will not let this be the end, though. A “second printing” edition of the rules is being prepared and AWAW 2 has been placed on the P500 list for a reprint. As of this writing, 70 pre-orders have been placed. Ordering information is on front cover of this magazine.

The second edition will include all the clarifications and improvements produced for the rules in the last five years – 60,000 posts’ worth on the internet discussion list alone.

With their usual excellent customer service, GMT Games intend to make a 280 counter sheet with the new playing pieces available separately. A more detailed announcement will be made closer to the publication date of the full game.

