

ADVANCED COMBINED ARMS

By
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Back in 1974, James Dunnigan came out with experimental tactical game system, based on the company as the main operating unit, not the platoon as in his previous games at the time. Combined Arms was an interesting game which emphasized maneuver with the goal of pushing the enemy back as opposed to actual enemy destruction, although this could happen too. The map was at the same scale as the old Red Star/White Star game of only three years before. (In fact, the map design was based on the map of the old game as well.) This showed the continuing SPI trend of reducing the scale of the tactical game. The counters were quite plain, no values printed on them, just a counter I.D. number. To find the counter values one had to look on special chart unique to the scenario being played. While this made the counters unattractive, it did allow them to be used in any scenario, in any time period. The rules concerning movement and combat were more generalized, with less detail than one would expect in a tactical game, but this was consistent with the game's emphasis.

While certainly a unique game, it did not catch on in the general wargaming population. It only appeared once on the game rating charts, and in a rather low position in its category at that, prompting its early removal. But gamers missed the intent of the magazine game. It was not the complete game, rather it was an introductory version of what would later become a more complete game. Of course, further development of the game system would require a more popular rating, and when that did not happen, further work in the game ceased. But now, almost fifty years later, I feel it is time to take another look at this game and see what can be done with it, hence Advanced Combined Arms was born.

[19.0] Artillery

In the original game, artillery was treated rather simply, but this was due to lack of allotted space in the rules booklet more than anything else. Here are a further developed set of rules for artillery. Still, these rules violate one of the basic rules in the original game, that Indirect Fire is never used in Combined Arms. I believe that this is a mistake and one of the reasons for the failure of the original game. Therefore, these rules should be considered an exception to Rules [6.64] and [8.86] in the original game.

A. Indirect Fire

Artillery units may now use Indirect Fire, that is, fire at a defending unit or hex that they cannot see due to some intervening terrain hex blocking the line of sight between the artillery and defending unit or target hex. To do so, another friendly unit must be able to spot the defending enemy unit or target hex.

1. In order to make an Indirect Fire attack, the firing artillery unit may not move in the same Player-Turn in which it makes an Indirect Fire attack. The artillery unit cannot be Disrupted nor can it be out of Command Control when it fires. (It takes longer to set up for Indirect Fire, than it does for Direct Fire.)
2. Any friendly unit, except empty Truck and APC units, which can see the enemy unit or target hex to be attacked, can be designated the Spotting unit. Such a unit cannot be Disrupted or out of Command Control. The Spotting unit may move and fire during the same turn that it spots for Indirect Fire. (Forward observers are presumed to be spread out among the forward units.)
3. Artillery units may only use Indirect Fire against units and hexes that are more than $\frac{1}{4}$ of their given Range in the scenario away from them. (Example: An artillery unit with a range of 27

hexes can use Indirect Fire at ranges 7-27 hexes.)

4. An artillery unit may make normal attacks, Rapid Fire attacks, and Interdiction attacks using Indirect Fire. Indirect Fire attacks may be made in conjunction with Direct Fire attacks against the same enemy unit.

B. Direct Fire

Artillery units may only use Direct Fire by themselves at units and hexes at a range of 16 hexes or less. Any Direct Fire at ranges of 17 hexes or greater requires another Friendly unit to spot the target unit or target hex in question. (The sighting equipment on artillery guns and howitzers, at least during World War II, was inadequate for adjusting Direct Fire at ranges greater than 5,000 meters, requiring forward observers at those greater ranges.)

C. Smoke

Artillery units, instead of firing normal attacks, Rapid Fire attacks, or Interdiction missions, may fire Smoke into a hex. These may be placed using either Direct or Indirect Fire.

1. When firing Smoke into a hex, a Smoke counter is placed in the hex.
2. The Smoke Marker remains on the hex through the next Enemy Player-Turn. The marker is removed at the end of it.
3. The Smoke marker acts like a Rough terrain hex in that it blocks the Line of Sight through the hex it is in, although the Line of Sight does extend into the hex. Smoke markers affect Primary and Secondary Zones of Control in the same manner as Rough terrain hexes.
4. In addition, any Direct Fire at, or Overrun made against, a unit in a hex with a Smoke marker has a +2 die roll modifier to the Combat Result roll. Modified die rolls exceeding a result of "6", count as "6". Indirect Fire would not receive the die roll modifier unless used in conjunction with Direct Fire in the same attack.
5. Also, a unit moving into a hex containing a Smoke marker has +1 Movement Point movement cost to enter the hex, in addition to any other movement costs to enter the hex.
6. The number of Smoke missions that a Player may fire during a scenario are limited. In the Special Rules of a scenario, the number of Smoke fire missions that each Player has is listed. Once a Player has fired his given number of Smoke missions, he cannot fire any more for the duration of the scenario. Likewise, a Player who is not given any Smoke missions may not fire any during the whole scenario.

D. Mortars

Artillery units which have a given range of 15 hexes or less are considered to be Heavy Mortar Battalions. These artillery units may use Indirect Fire at any range up to their Range limit.

E. Self-Propelled Artillery

Self-Propelled Artillery units have brackets around their Defense Factor, making them a Hard Target. Self-Propelled Artillery units may move and make Indirect Fire attacks in the same Player-Turn.

F. Rocket Artillery Battalions

The Germans and Russians both have Rocket Artillery Battalions. When they are in a scenario, it will be so noted in the scenario's Special Rules.

1. Historically these units always fired their rockets indirectly, therefore, Rocket Artillery Battalions can only fire at Enemy units that are at a distance of greater than $\frac{1}{4}$ of their Range Factor, regardless of whether they make an Indirect or Direct Fire attack.
2. In addition, they must always have another Friendly unit spotting the target unit for them (they had no Direct Fire sights).

3. Rocket Artillery Battalions may not make Rapid Fire or Interdiction attacks.

[20.0] Improved Positions

In the original rules, Improved Positions were a special defensive advantage given to units in Rough terrain hexes when stated in the Special Rules of certain scenarios. Again, the rules were kept very minimal due to lack of space in the rules sheet. Now these rules are expanded and Improved Position markers are now used to indicate those hexes where they exist. (Here, Improved Positions represent various fortifications or entrenchments of different types.)

1. Improved Positions are assigned to a Player by the scenario's Special Rules and are set up on the board before the game begins. An Improved Position marker may be placed any type of terrain hex, even Clear ones. Only one Improved Position marker may be placed in a hex. Once placed on the board, Improved Position markers may not be moved to another hex. Improved Position markers do not count against Stacking limits.
2. Improved Positions may only be occupied by friendly unmounted Infantry units and are placed underneath the Improved Position marker to signify their occupation.
3. There is no additional cost in Movement Points to enter or exit a hex with an Improved Position marker on it. There is no movement cost to enter into or exit the Improved Positions themselves. Infantry units can dismount from Trucks and APCs directly into Improved Positions and can load onto Trucks and APCs from Improved Positions as well.
4. Improved Positions double the defensive strength of the Infantry units occupying them. This doubling is in addition to any defensive modifiers given to the unit by the terrain in hex. (Example: An Infantry unit in a Rough #1 terrain hex in Mixed Mode, and in an Improved Position, would have its Defense Strength multiplied by four.)
5. Improved Position markers may be set up on the board empty, in anticipation of future occupation by friendly Infantry units during the game. Enemy Infantry units may not use Friendly Improved Positions. Should any enemy unit move into a hex with an empty Improved Position marker on it, they remain on top of the marker, and at the end of their movement phase if they remain on top of the marker, the marker is removed from the board and the Improved Positions be considered to be destroyed.
6. Improved Positions are also destroyed if a occupying friendly Infantry unit moves out of the hex voluntarily or is forced to retreat as a result of Combat. Upon movement out of the hex, the marker is removed. If an Infantry unit occupying an Improved Position is destroyed in Combat, the Improved Position is also considered to be destroyed and both are removed from the board.
7. Scenario Special Rules assign Improved Positions for friendly Infantry units to be set up in and may also assign empty Improved Positions to be set up as well. Special Rules may also assign units other than Infantry to be set up in Improved Positions as an exception to the above stated rules, but only that particular scenario.

[21.0] Mines

Mine counters represent more than just minefields, although they are the most predominate type of barrier. They also represent other types of barriers such as anti-tank ditches, abatis, barb wire, and even rubble piled up to form a barrier to movement. The mines or other barriers in the Mined hex are presumed to affect both vehicles and personnel. In Combined Arms, their primary purpose is to impede movement, with inflicting damage on units being a secondary feature. Mine counters are assigned to one Player in the scenario, usually one in a defensive role.

1. The scenario's Special Rules will state which Player receives mines in his set up in terms of the number of hexes he can place them. The player then chooses which hexes he wishes to place the mines and writes down the hex numbers of those hexes. Mines can be placed in any Terrain hex. The mine counters are not placed on the map at this time, but are left aside to be placed later in the game. Thereafter, in the course of play, whenever a unit (friendly or enemy) enters a Mined hex, it stops its movement, and an immediate Mine Attack is executed against it. The Combat Result from the attack is then applied to the unit and the Mine counter is then placed on the hex.
2. A Mine Attack is executed against any unit, no matter what its Defense Strength or Target Type is, just as though the unit was attacked by another unit. The attack is made using the Mine Attack Table below, using the appropriate column for the Target Type of the unit.
3. A Disruption result is just that, an appropriate Disruption marker is placed on the unit. A Number result is not a retreat, instead it is the number of Movement Points subtracted from the unit's Movement Allowance on his next Player Turn. Once the result is applied to the unit, it is then moved off of the Mined hex into the exit hex and stops all further movement. This exit hex must be opposite of the one which the unit entered the Mined hex from.
4. The unit's Defense Strength, and any modifications to it from the terrain in the Mined hex, are ignored when executing a Mine attack. When an Enemy unit enters the Mined hex, the owning Player announces the fact, rolls the die, and reads the result from the appropriate column on the Mine Attack Table. This means that the strongest and weakest units are equally vulnerable to mines.
5. After a unit exits the Mined hex into the next hex, it immediately ceases all further movement for the remainder of the current Movement Phase, regardless of whether the Mine Attack caused it to become Disrupted or just lose Movement Points in the next Player Turn. A unit which suffers a loss of Movement Points from a Minefield Attack has its Movement Allowance reduced by that number in the owner's next Player Turn. This movement penalty only lasts one Game Turn.
6. When a unit makes an Overrun attack through a Mined hex, it suffers two successive Mine attacks in the Mined hex. What happens next depends on whether or not the target unit of the Overrun is in the exit hex. If the target unit is not in the exit hex, the attacking unit is stopped in the exit hex and its Overrun attack is canceled. If the target unit is in the exit hex, the Overrun attack is carried out and the attacking unit stops in the exit hex from the Overrun. In the case of a Wave Overrun Attack, an armored unit would have to pass through both the enemy unit and the friendly Infantry, Cavalry, Motorcycle, or Armored Recon unit before coming to a stop. In either case, the overrunning unit's Attack Strength is halved after all modifications if it suffered a Disruption result from the Mine attack.
7. If a unit is forced to retreat through a Mined hex, the retreating unit suffers a Mine Attack in the Mined hex, and then continues its retreat to the required number of hexes. If the final hex of retreat is a Mined hex, the retreating unit will suffer a Mine Attack and then retreat one additional hex to exit the Mined hex. In both cases, the unit suffers a D1 result in addition to the result it suffered in the Mine Attack.
8. If a unit entering the exit hex from a Mined hex encounters another Mined hex, it will suffer a Mine Attack in that hex and then move on to the next exit hex.
9. Mines attack both Enemy and Friendly units alike. A friendly unit may not set up in a Mined hex during initial deployment before the start of the game.
10. Disruption results from Mine Attacks can be checked for removal in the same friendly Player-Turn in which they occur. If they occur during an Enemy Player-Turn, they cannot be checked for removal until the next friendly Player-Turn.

Mine Attack Table		
Die Roll	Hard Target	Soft Target
1	D2	D2
2	D1	D2
3	D1	D1
4	3	2
5	3	2
6	3	1

[22.0] Combat Engineers

Combat Engineers in Combined Arms are not represented by counters. Instead, they are represented by Combat Engineer Points which are assigned to individual counters in the game. (This will require record keeping on paper.) The Combat Engineer points provide die roll modifiers when dealing with Mine Attacks and when performing Overrun Attacks. They are considered to be part of the counter that they are assigned to, move with the counter when it moves, and share in the counter's various fates during the game. (A Combat Engineer Point represents about a platoon of combat engineers.)

1. The number of Combat Engineer Points that a side has is listed in the Special Rules of a given scenario. The owning Player assigns these points to his various counters before the beginning of the game. Once assigned, they stay with the counters to which they are assigned and cannot be transferred to other counters during the course of the game. No more than one Combat Engineer Point may be assigned to a counter.
2. When a unit with a Combat Engineer Point assigned to it moves into a Mined hex and suffers a Mine Attack, a modifier of +2 is applied to the die-roll. (Modified die-rolls above 6, count as 6.) In addition, the Mine counter is removed from the map in the owning Player's following Disruption Removal Phase of the Player Turn. In this case, the Mine counter remains active and will attack any other unit that moves onto it before it is removed.
3. When a unit with a Combat Engineer Point assigned to it performs an Overrun Attack, the Combat Die-Roll receives a -2 die-roll modifier to the results. (Modified die-roll results of less than 1 are treated as 1.) This also applies in a Wave Overrun Attack when one of the overrunning units have Combat Engineer Points assigned to them. If both have Engineer Points in an Overrun Attack, there is no cumulative modifier of -4, only -2.

[23.0] Anti-Aircraft

Anti-Aircraft defense in Combined Arms is not represented by counters. Rather, it is represented by Anti-Aircraft Points which are assigned to individual counters in the game. (This will require keeping records on paper.) These AA Points provide a defensive modifier to units being attacked by an Airstrike. They are considered to be a part of the counter that they are assigned to, move with the counter when it moves, and share in the counter's various fates during the game. (An Anti-Aircraft Point represents about a platoon of anti-aircraft guns or vehicles of various types.)

1. The number of Anti-Aircraft Points that a side has is listed in the Special Rules of a given scenario. The owning player assigns these points to his various counters before the beginning of the game. Once assigned, they stay with the counters to which they are assigned and cannot be transferred to other counters during the course of the game. No more than one Anti-Aircraft Point may be assigned to a counter.
2. The Combat effect of Anti-Aircraft Points is that they add two to the Defense Strength of the

unit they are assigned to, and to the Defense Strength any friendly unit in the assigned unit's Primary Zone of Control, when attacked by an enemy Air Strike. Anti-Aircraft Points add one to the Defense Strength of friendly units in the assigned unit's Secondary Zone of Control when attacked by an enemy Air Strike. These modifiers only apply against Air Strikes and do not apply to any other form of combat.

3. An Anti-Aircraft Point assigned to a counter that has a Disruption marker on it, only adds one to the Defense Strength of the counter and any friendly unit in its Primary Zone of Control, and nothing to the defense strengths of any friendly units in the counter's Secondary Zone of Control, when attacked by an enemy Air Strike. This reduction remains in effect until the Disruption marker is removed. An Anti-Aircraft Point assigned to a counter that is destroyed in combat, is destroyed as well and can no longer be used in the game.
4. An Anti-Aircraft Point assigned to a counter that has lost Command Control still retains its full effects, both on the assigned unit and to friendly units in both the Primary and Secondary Zones of Control of the assigned unit.
5. A unit may benefit from multiple Anti-Aircraft Points, depending on their assigned unit's location of the board, relative to defending unit in question. In these cases the defensive modifiers to the defending unit are cumulative.

[24.0] Revised Scenario Unit Values

One of the problems with the Unit Values in the game, and in the variant article from Moves #18, is that the values look so generic. Line companies were usually pure in that they had one type of armored vehicle, gun/howitzer, or infantry in them. Of course, there were exceptions to this like the German early war panzer companies which always had a mixture light and medium tanks. Therefore, we should have a variety of unit values based on what type of armored vehicle, infantry, or gun/howitzer are in them. Below are listed the values of the major companies and battalions of the various Nationalities in the game. These lists will provide a better guide for players when designing their own scenarios. Note that I have largely restricted these values to the World War 2 era as this is where the vast majority of scenarios in the game occur. Unit values for the post-war modern era will be the subject of a future article.

A. New Counters

The following new counters are to be included in the counter manifest.

Medium Tank Company – This is for scenarios where a side has three different types of tank units in play.

Medium Artillery Battalion – This is for scenarios where a side has three different types of artillery units in play.

Self-Propelled Anti-Tank Company – These are a variation of the anti-tank units in that these are guns mounted on armored vehicles.

Motorcycle Company – These are a variation of the armored recon units in that they are a soft target.

SMG Company – These are for scenarios where a side has two different types of infantry units in play.

Cavalry Troop – In the game they are treated as a faster form of infantry.

It is suggested that Players craft a completely new counter set which not only would include the new counters listed here but also more of the original counters from the game as well. The original counter set only had enough units for the scenarios that came with the game. This new counter set should also include more informational counters as well as the new Improved Position, Mine, and Smoke counters.

In the lists below, those entries with only a single year listed can be used starting that year to the end of the war. Those entries with a range of years can only be used during those years. The unit values for each company or battalion are listed in the following order; Hard Attack Strength, Soft Attack Strength, Range, Defense Strength, and Movement Allowance.

B. German Units

Tanks

1939-40 Light Company – [2] [6] 2 [2] 10
 1941 Light Company – [3] [8] 3 [3] 10
 1939-41 Medium Company – [4] [8] 4 [4] 10
 1942 Pz IIIj Company – [4] [8] 4 [4] 10
 1942 Pz IVg Company – [5] [10] 4 [4] 10
 1943 Pz IVh Company – [5] [10] 5 [5] 10
 1943 Pz V Company – [6] [10] 6 [6] 11
 1943 Pz VIe Company – [6] [10] 6 [6] 10
 1944 Pz VIb Company – [8] [10] 6 [8] 7

Artillery

75mm How Battalion – 1 10 20 1 3
 75mm How (Mot) Battalion – 1 10 20 1 10
 105mm How Battalion – 1 10 27 1 3
 105mm How (Mot) Battalion – 1 10 27 1 10
 150mm How Battalion – 1 10 30 1 3
 150mm How (Mot) Battalion – 1 10 30 1 10
 150mm Rocket Battalion – 1 10 24 1 10
 170mm/210mm (Mot) Battalion 1 10 38 1 10
 1943-45 Wespe/Hummel Battalion – 1 10 27 [4] 10

Armored Reconnaissance

1939 Recon Company – 1 7 1 [7] 10
 1940 Recon Company – 1 8 1 [8] 10
 1941-42 Recon Company – 1 9 1 [9] 10
 1943 Recon Company – 1 9 1 [9] 12
 1944 Recon Company – 1 10 1 [10] 12
 1945 Recon Company – 1 12 1 [12] 12
 1939-40 Motorcycle Company – 1 5 1 5 12
 1941-43 Motorcycle Company – 1 6 1 6 12

Notes: The German Light and Medium tank companies of the 1939 to 1941 represent mixed tank companies. The Light companies were composed of Pz I and Pz II tanks during 1939-40. They were composed of Pz II, Pz III, and Pz 38t in 1941. The Medium companies were composed of Pz II, Pz 35t, Pz 38t, Pz III, and Pz IV tanks in various combinations during 1939-40. They were composed mostly of Pz IVs during 1941.

C. Russian Units

Tanks

Assault Guns

1940-42 SG IIIb Company – [3] [10] 4 [4] 10
 1942 SG IIIg Company – [4] [10] 5 [5] 10

Self-Propelled Anti-Tank

1940-41 JgPz 47 Company – [3] [5] 3 [3] 10
 1942 Marder Company – [4] [10] 5 [3] 10
 1943 Elefant Company – [8] [10] 8 [8] 5
 1943 Nashhorn Company – [8] [10] 8 [4] 10
 1944 JdgPz IV Company – [4] [10] 5 [5] 10
 1944 JdgPz V Company – [7] [10] 7 [6] 10
 1945 JdgPz VI Company – [9] [10] 7 [8] 5

Anti-Tank

1939-42 37mm AT Company – [2] [5] 2 1 10
 1941 50mm AT Company – [3] [8] 3 1 10
 1942 75mm AT Company – [4] [10] 4 1 10
 1940 88mm AT Company – [6] [10] 8 1 10
 1943 88mm AT Company (L) – [8] [10] 8 1 10

Infantry

1939-40 Infantry Company – 1 5 1 5 3
 1941-43 Infantry Company – 1 6 1 6 3
 1942-44 SS Infantry Company – 1 7 1 6 3
 1944 Infantry Company – 1 7 1 5 3
 1944 Volksgrenadier Company – 2 6 1 4 3

Transportation

1939 Truck Company – 0 0 0 1 10
 1940 Halftrack Company – 0 0 0 [1] 10

Assault Guns

1939-41 T-26 Company – [2] [5] 2 [2] 10
1939-41 BT-7 Company – [2] [5] 2 [2] 15
1939-41 T-28 Company – [3] [10] 3 [3] 10
1940-42 KV-1 Battalion – [3] [10] 3 [4] 10
1940-42 T-60 Company – [1] [5] 1 [2] 10
1941 T-34 Company – [3] [10] 3 [3] 12
1942-43 T-70 Company – [2] [5] 2 [2] 10
1942-44 KV-1c Battalion – [3] [10] 3 [5] 10
1943-44 KV-85 Battalion – [4] [10] 4 [4] 10
1944 T-34/85 Company – [4] [10] 4 [4] 12
1944 JS-II Battalion – [5] [10] 5 [5] 10

Artillery

76.2mm Gun Battalion – 1 10 20 1 3
76.2mm Gun Battalion (Mot) – 1 10 20 1 10
120mm Heavy Mortar Battalion – 1 10 13 1 3
120mm Mortar Battalion (Mot) – 1 10 13 1 10
122mm How Battalion – 1 10 26 1 3
122mm How Battalion (Mot) – 1 10 26 1 10
132mm Rocket Battalion – 1 10 24 1 10
152mm Gun/How Regiment – 1 10 35 1 10
203mm How Regiment – 1 10 38 1 8

Armored Reconnaissance

1939-1943 Recon Company – 1 6 1 [6] 10
1943 Recon Company – 1 5 1 [6] 10
1939 Motorcycle Company – 1 6 1 6 12

Transportation

1939 Truck Company – 0 0 0 1 10
1944 Halftrack Company – 0 0 0 [1]10

1940-41 KV-2 Battalion – [6] [10] 4 [4] 8
1943 SU-122 Battalion – [3] [10] 4 [4] 12
1943 SU-152 Battalion – [5] [10] 5 [4] 10
1944 JSU-152 Battalion – [5] [10] 5 [5] 10

Self-Propelled Anti-Tank

1943 SU-76 Battalion – [3] [10] 3 [3] 10
1943 SU-85 Battalion – [4] [10] 4 [4] 12
1944 SU-100 Battalion – [5] [10] 5 [4] 10
1944 JSU-122 Battalion – [5] [10] 5 [5] 10

Anti-Tank

1939-42 45mm AT Battalion – [2] [5] 2 1 3
1939-42 45mm AT Battalion (Mot) – [2] [5] 2 1 10
1942 45mm AT Battalion (L) – [2] [5] 3 1 3
1942 45mm AT Battalion (L) (Mot) – [2] [5] 3 1 10
1943 57mm AT Battalion – [3] [6] 3 1 3
1943 57mm AT Battalion (Mot) – [3] [6] 3 1 10
1941 76.2mm AT Battalion – [3] [10] 3 1 3
1941 76.2mm AT Battalion (Mot) – [3] [10] 3 1 10
1943 85mm AT Battalion – [4] [10] 4 1 10
1944 100mm AT Battalion – [5] [10] 5 1 10

Infantry

1939-41 Infantry Company – 1 6 1 6 3
1939-41 Cavalry Troop – 1 6 1 6 6
1942 Infantry Company – 1 7 1 7 3
1942 Cavalry Troop – 1 7 1 7 6
1942 SMG Company – 1 8 1 6 3
1943 Guards Company – 1 8 1 8 3

Notes: The battalion designations of the heavy tank, assault gun, self-propelled anti-tank, and anti-tank unit was just the Russian practice of over-naming their units during the war. These are equivalent to Western companies of the same type. The big-gun artillery regiments are the same size as Western artillery battalions.

D. US Units

Tanks

1941-42 M-3 (37mm) Tank Company – [2] [6] 2 [2] 11
1942-43 M-3 (75mm/37mm) Tank Company – [3] [10] 3 [3] 10
1942 M-4 (75mm) Tank Company – [4] [10] 4 [4] 10
1943 M-5 (37mm) Tank Company – [2] [6] 2 [2] 12
1944 M-4 (76.2mm) Tank Company – [5] [10] 5 [5] 10
1945 M-26 (90mm) Tank Company – [6] [10] 6 [6] 10

Self-Propelled Anti-Tank

1942 M-3 (75mm) Tank Destroyer Company – [3] [10] 3 [1] 10

1943 M-10 (76.2mm) Tank Destroyer Company – [5] [10] 5 [3] 10
1944 M-18 (76.2mm) Tank Destroyer Company – [5] [10] 5 [2] 12
1944 M-36 (90mm) Tank Destroyer Company – [6] [10] 6 [3] 10

Anti-Tank

1942 37mm Anti-Tank Company – [2] [6] 2 1 10
1943 57mm Anti-Tank Company – [3] [7] 3 1 10
1944 76.2mm Anti-Tank Company – [4] [10] 5 1 10
1944 90mm Anti-Tank Company – [6] [10] 6 1 10

Infantry

1941-43 Infantry Company – 1 5 1 5 3
1943 Parachute Company – 1 6 1 6 3
1943 Armored Infantry Company – 1 6 1 5 3
1944 Infantry Company – 1 6 1 5 3

Armored Reconnaissance

1942-43 Recon Troop – 1 5 1 [5] 12
1944 Recon Troop – 1 6 1 [6] 12

Assault Gun

1943 T-30 (75mm) Support Company – [3] [10] 3 [1] 10
1944 M-8 (75mm) Support Company – [4] [10] 3 [2] 12
1944 M-4 (105mm) Support Company – [5] [10] 4 [4] 10

Artillery

75mm How Battalion – 1 10 20 1 10
105mm How Battalion – 1 10 27 1 10
155mm How Battalion – 1 10 30 1 10
8 inch How Battalion – 1 10 36 1 10
1943 M-7 (105mm) SP Battalion – 1 10 27 [4] 10
1944 M-12 (155mm) SP Battalion – 1 10 30 [4] 10

Transportation

1941 Truck – 0 0 0 1 10
1942 Halftrack – 0 0 0 [1] 10

Notes: The 37mm and 57mm anti-tank companies were part of the infantry regiments and never committed as a whole, but instead were divided among the regiment's battalions, which when combined with the battalion's own anti-tank guns, did make a company of sort. As for the assault guns, these were organized in platoons and assigned directly to battalions (one in an armored infantry battalion and two in an armored battalion). But when you add the platoons up that were in a Combat Command, you would get a company of assault guns.

E. British/Commonwealth Units

Tanks

1939-40 Mk IV Squadron – [1] [5] 1 [2] 10
1939-41 A13 Squadron – [2] [5] 2 [2] 10
1940-42 Matilda Squadron – [2] [5] 2 [5] 6
1941-42 Valentine I Squadron – [2] [5] 2 [2] 8
1941-42 Crusader I Squadron – [2] [5] 2 [3] 10
1942-43 Valentine II Squadron – [4] [6] 3 [3] 8
1942-43 Crusader II Squadron – [4] [6] 3 [3] 10
1943 Churchill III Squadron – [4] [6] 3 [5] 6
1944 Cromwell Squadron – [4] [10] 4 [4] 12
1944 Firefly Squadron – [6] [10] 6 [4] 10
1944 Churchill IX Squadron – [4] [10] 4 [6] 6
1945 Comet Squadron – [5] [10] 5 [5] 10

Assault Guns

1939-41 A13 CS Squadron – [3] [10] 4 [2] 10
1941-43 Crusader CS Squadron – [3] [10] 4 [3] 10
1944 Cromwell CS Squadron – [3] [10] 4 [4] 12

Self-Propelled Anti-Tank

1942-43 Deacon SPAT Squadron – [3] [6] 3 [1] 8
1944 Achilles SPAT Squadron – [6] [10] 6 [3] 10
1944 Archer SPAT Squadron – [5] [10] 6 [3] 10

Anti-Tank

1939-42 2 Pdr AT Company – [2] [5] 2 1 10
1942 6 Pdr AT Company – [3] [6] 3 1 10
1943 17 Pdr AT Company – [5] [10] 6 1 10

Armored Reconnaissance

1939-40 Motorcycle Squadron – 1 5 1 5 12
1939-41 Recon Squadron – 1 5 1 [5] 11
1942-43 Recon Squadron – 1 6 1 [6] 11

Infantry

1939-43 Infantry Company – 1 5 1 5 3
1943 Parachute Company – 1 6 1 6 3

1944 Recon Squadron – 2 8 2 [8] 12

1944 Infantry Company – 1 6 1 5 3

Artillery

1939 25 Pdr How Battalion – 1 10 28 1 10

1939 4.5 in How Battalion – 1 10 31 1 10

1941 7.2 in How Battalion – 1 10 36 1 10

1942-43 Bishop (25 Pdr) SP Battalion – 1 10 28 [3] 10

1944 Sexton (25 Pdr) SP Battalion – 1 10 28 [4] 10

Transportation

1939 Truck Company – 0 0 0 1 10

1939 Bren Carrier Company – 0 0 0 [1] 10

Notes: Starting in 1941, British and Commonwealth units were using available US vehicular and artillery units so these can be substituted for British/Commonwealth units in set ups

F. Japanese Units

Tanks

1939 Type 95 Company – [2] [5] 2 [1] 10

1939 Type 97 Company – [2] [6] 2 [2] 10

1942 Type 97a Company – [3] [5] 3 [2] 10

1944 Type 1 Company – [3] [8] 3 [3] 10

1945 Type 3 Company – [4] [10] 4 [3] 10

Assault Guns

1943 Type 1 AG Company – [2] [10] 4 [3] 10

Self-Propelled Anti-Tank

1944 Type 1 TD Company – [3] [10] 4 [3] 10

Anti-Tank

1939 Type 94 (37mm) AT Company – [2] [5] 2 1 10

1942 Type 1 (47mm) AT Company – [3] [5] 3 1 10

Armored Reconnaissance

1939 Recon Company – [1] [7] 1 [7] 12

Artillery

1939 Type 90 (75mm) Field Gun Battalion – 1 10 21 1 3

1939 Type 90 (75mm) Field Gun Battalion – 1 10 21 1 10

1939 Type 92 (105mm) Field Gun Battalion – 1 10 30 1 3

1939 Type 92 (105mm) Field Gun Battalion – 1 10 30 1 10

1939 Type 94 (150mm) How Battalion – 1 10 34 1 3

1939 Type 94 (150mm) How Battalion – 1 10 34 1 10

1939 Type 97 (150mm) Mortar Battalion – 1 10 12 1 10

Transportation

1939 Truck Company – 0 0 0 1 10

1942 Halftrack Company – 0 0 0 [1] 10

Infantry

1939 Infantry Company – 1 5 1 5 3

1939 Cavalry Troop – 1 5 1 5 6

1941 SNLF Company – 1 4 1 5 3

1944 Infantry Company – 1 5 1 6 3

Notes: As can be seen, the Japanese had an infantry army with tanks for infantry support. Japanese cavalry units were only in China, as were their big armored formations. But in 1944, the Japanese transferred their 2nd Armored Division to Luzon in the Philippines where the Americans encountered various elements of it in 1945. The Type 3 Tank Company would only be encountered in Japan proper in a hypothetical scenario.

G. French Units

Tanks

1939-40 FT17 Tank Company – [2] [4] 2 [1] 2

1939-40 R35 Tank Company – [2] [5] 2 [3] 5

1939-40 H35 Tank Company – [2] [5] 2 [2] 6

1939-40 H39 Tank Company – [2] [5] 2 [3] 9

1939-40 D2 Tank Company – [3] [6] 3 [2] 6

1939-40 S35 Tank Company – [3] [6] 3 [3] 10

Assault Guns

None

Self-Propelled Anti-Tank

1940 Tank Destroyer Company – [3] [6] 3 [1] 10

Anti-Tank

1939-40 B1 Tank Company – [3] [10] 4 [3] 6

Armored Reconnaissance

1939-40 Motorcycle Company – 1 5 1 5 12

1939-40 Recon Company – 1 2 1 [2] 12

Artillery

1939-40 75mm Gun Battalion – 1 10 24 1 3

1939-40 75mm Gun Battalion – 1 10 24 1 10

1939-40 105mm How Battalion – 1 10 27 1 3

1939-40 105mm How Battalion – 1 10 27 1 10

1939-40 155mm How Battalion – 1 10 30 1 3

1939-40 155mm How Battalion – 1 10 30 1 10

1939-40 25mm Anti-Tank Company – [1] [3] 2 1 10

1940 47mm Anti-Tank Company – [3] [6] 3 1 10

1940 75mm Anti-Tank Company – [3] [10] 4 1 10

Infantry

1939-40 Infantry Company – 1 5 1 5 3

1939-40 Legionnaire Company – 1 5 1 6 3

1939-40 Cavalry Troop – 1 5 1 5 6

1939-40 Conscript Company – 1 4 1 4 3

Transportation

1939-40 Truck Company – 0 0 0 1 10

1940 APC Company – 0 0 0 [1] 10

Notes: Obviously these values are for the French early in the war. After the fall of France in 1940, the French divided into two groups, the Free French and the Vichy French. The Vichy were largely an infantry force, although in her declared colonies there was some artillery and light armor. The Free French was also an infantry group under the tutelage of the British from whom they would receive armor and artillery support from 1941 to 1943. In 1944, both groups came under the tutelage of the Americans and fought with their equipment and organization.

H. Italian Units

Tanks

1940-41 CV35 Tank Company – [1] [5] 1 [1] 10

1940-43 L6/40 Tank Company – [2] [5] 1 [2] 10

1940-41 M11/40 Tank Company – [2] [5] 2 [2] 8

1941-43 M13/40 Tank Company – [3] [6] 3 [2] 7

1942-43 M14/41 Tank Company – [3] [6] 3 [3] 8

1943 M15/42 Tank Company – [3] [7] 3 [3] 10

Assault Guns

1942-43 M40 75/18 Company – [3] [10] 4 [3] 8

Self-Propelled Anti-Tank

1942-43 L40 47/32 Company – [3] [6] 3 [2] 10

1943 M41 90/53 Company – [6] [10] 6 [2] 6

Artillery

1940-43 75mm Field Gun Battalion – 1 10 20 1 3

1940-43 75mm Field Gun Battalion – 1 10 20 1 10

1940-43 100mm How Battalion – 1 10 27 1 3

1940-43 100mm How Battalion – 1 10 27 1 10

1940-43 149mm How Battalion – 1 10 30 1 3

1940-43 149mm How Battalion – 1 10 30 1 10

1940-43 210mm How Battalion – 1 10 36 1 10

Anti-Tank

1940-43 AT Company – [3] [6] 3 1 10

Armored Reconnaissance

1940-43 Motorcycle Company – 1 4 1 4 12

1940-43 Recon Company – 1 5 1 [5] 10

Infantry

1940-43 Infantry Company – 1 4 1 4 3

1941-43 Bersaglieri Company – 1 4 1 5 3

1942-43 Parachute Company – 1 5 1 5 3

1940-43 Alpini Company – 1 5 1 6 3

1940-43 Cavalry Troop – 1 5 1 5 6

Transportation

1940-43 Truck Company – 0 0 0 1 10

APC - None

Notes: From 1941 to 1943, Italian units were often supplemented with German equipment and vehicles in Russia, North Africa, and Sicily. After 1943 the Italians were out of the war.

I. Polish Units

Tanks

1939 TKS Company – [1] [4] 1 [1] 10
1939 FT-17 Company – [2] [4] 2 [1] 3
1939 7TP Company – [2] [5] 2 [2] 10

Assault Guns

None

Self-Propelled Anti-Tank

None

Armored Reconnaissance

1939 Recon Company – 1 2 1 [1] 10
1939 Motorcycle Company – 1 4 1 4 12

Anti-Tank

1939 37mm AT Company – [2] [5] 2 1 3

Artillery

1939 75mm Field Gun Battalion – 1 10 20 1 3
1939 75mm Field Gun Battalion – 1 10 20 1 10
1939 100mm How Battalion – 1 10 27 1 3
1939 100mm How Battalion – 1 10 27 1 10
1939 155mm How Battalion – 1 10 30 1 3
1939 155mm How Battalion – 1 10 30 1 10

Infantry

1939 Infantry Company – 1 4 1 4 3
1939 Cavalry Troop – 1 5 1 5 6

Transportation

1939 Truck Company – 0 0 0 1 10
APC – None

Notes: Not much to say about the Polish as they only lasted a month. Those Poles who escaped to the West were first under French tutelage in 1940 and then under British tutelage for the rest of the war. Those who were captured by the Russians, barring those who were executed or deported to the West, fought under them in 1944 and 45.

J. Finnish Units

Tanks

1940-41 Vickers Company – [2] [5] 2 [1] 10
1941-44 T-26 Company – [2] [5] 2 [2] 10
1943-44 T-28 Company – [3] [10] 3 [3] 10
1943-44 T-34c Company – [3] [10] 4 [3] 11

Assault Guns

1943-44 BT-42 Company [3][10] 4 [2] 10

Self-Propelled Anti-Tank

1944 Stu-40 Company – [3] [10] 5 [4] 10

Armored Reconnaissance

1940-44 Recon Company – 1 4 1 [2] 10

Anti-Tank

1939-44 37mm AT Company – [2] [5] 2 1 10
1941-44 45mm AT Company – [2] [6] 3 1 10
1943-44 50mm AT Company – [3] [8] 3 1 10
1944 75mm AT Company – [4] [10] 5 1 10

Artillery

1939-44 75mm Field Gun Battalion – 1 10 20 1 10
1939-44 105mm How Battalion – 1 10 27 1 10
1939-44 152mm How Battalion – 1 10 32 1 10
1941-44 203mm How Battalion – 1 10 36 1 10

Infantry

1939-40 Infantry Company – 1 5 1 5 3
1939-41 Jeager Company – 1 5 1 6 3
1939-43 Cavalry Troop – 1 5 1 5 6
1941-44 Infantry Company – 1 5 1 6 3
1943-44 SMG Company – 1 6 1 6 3
1944 Cavalry Troop – 1 6 1 5 6

Transportation

1939-44 Truck Company – 0 0 0 1 10
APC – None

Notes: Basically, an infantry army with armored vehicles for support. The Finnish were out of the war after 1944. (Yes, they were busy pushing the Germans out of northern Finland up to 1945, but these

were infantry fights and not worthy of Combined Arms scenarios.)

K. Special Unit Rules

Self-Propelled Anti-Tank Units: Self-Propelled Anti-Tank units do exert a Secondary Zone of Control. They may voluntarily enter Enemy Primary and Secondary Zones of Control. They are not required to move out of an Enemy's Zone of Control. It costs them one additional Movement Point per hex to enter the Secondary Zones of Control of Enemy armored reconnaissance, motorcycle, cavalry, and infantry (both mounted and dismounted) units. It costs them two additional Movement Points per hex to enter the Secondary Zones of Control of Enemy tank, assault guns, and self-propelled anti-tank units. Self-propelled anti-tank units exert the same movement costs and restrictions upon Enemy units moving into their Secondary Zones of Control as tanks and assault guns. They may not make Overrun Attacks.

Motorcycle and Cavalry Units: Motorcycle and Cavalry units do exert a Secondary Zone of Control. They may voluntarily enter Enemy Primary and Secondary Zones of Control. However, they may only enter one hex of an Enemy's Zone of Control per Movement Phase. It costs them one additional Movement Point to enter the Secondary Zones of Control of Enemy armored reconnaissance, motorcycle, cavalry, and infantry (both mounted and dismounted) units. It costs them two additional Movement Points to enter the Secondary Zones of Control of Enemy tank, assault gun, and self-propelled anti-tank units. Motorcycle and Cavalry units exert the same movement costs and restrictions upon Enemy units moving into their Secondary Zones of Control as armored reconnaissance and infantry units. Motorcycle and Cavalry units may perform Overrun Attacks. However, they perform them in the same manner as unmounted infantry units and can move no further than three hexes in the Movement Phase in which they perform the Overrun Attack. The Attack Strengths of Motorcycle and Cavalry units are doubled when performing Overrun Attacks. Motorcycle and Cavalry units can participate in a Wave Overrun Attack providing they act as the attacking infantry unit in the attack.

Cavalry Units: Cavalry units cannot be transported in Truck and APC units.

Range Attenuation: In the unit values of some units in this section, most notably in the tanks, assault guns, and self-propelled anti-tank units, the Range is greater than the Hard Attack Factor. In these cases, once a unit's Hard Attack Factor goes down to a strength of 1 due to Range Attenuation, it remains at a strength of 1 for the remainder of its Range. (Example: A German JdgPz IV unit would have a Hard Attack Factor of 4 at a Range of 1, 3 at a Range of 2, 2 at a Range of 3, and 1 at a Range of 4 and 5.) In some other units the Range is less than the Hard Attack Factor. In these cases, the Hard Attack Strength will never be attenuated down to 1 or 2, depending on the vehicle in question. (Example: A British Churchill III Squadron would have a Hard Attack Factor of 4 at Range 1, 3 at Range 2, and 2 at Range 3. A Russian KV-2 Company would have a Hard Attack Factor of 6 at Range 1, 5 at Range 2, 4 at Range 3, and 3 at Range 4.)

Conclusion

I have presented several options to Combined Arms in order to improve the game. When creating their own scenarios, players should be careful when applying these options. For example, if one side gets Air Strikes, the other side should have Anti-Aircraft, but if there are no Air Strikes, then Anti-Aircraft is not needed. Many players over the years, and even decades, have complained how boring and uninteresting the game is. It is my hope that this improved Combined Arms will put their past complaints to rest.