

Combined Arms: Assembling the war machine.

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Introduction to combined arms: The simple truth behind the myth.

From ancient times till the present, there have always been units with very different capabilities fighting on the battlefield. Like the chariots, phalanxes, and catapults of ancient time, the infantry, armor, and artillery of modern day fight in close cooperation to achieve a military objective.

The knowledge of combined arms allows us to utilize the different units to their maximum effectiveness by knowing which unit to utilize for what, when and in what order. The units in a combined arms force will always cover each other's weaknesses while combining the strengths to achieve victory. In one word, it is TEAMWORK.

As a result of the application of combined arms, your army will operate cohesively as a group and not as individual ill-coordinated units.

Unit strengths and weaknesses: Know your assets well.

Before we assemble our force we have to briefly go through the main unit types, describing their main strengths and weaknesses. We need to know every piece of the puzzle before adding them to the big picture. This chapter is the basis of the forthcoming ones!

The infantry

Infantry is the queen of the battlefield. **Remember you can NEVER win a battle without them.** No matter how advanced your weapon systems are, you need the grunts to go in and occupy the place. They control a specific area by sitting there. (For more details see the Infantry course.)

Strengths:

1. Spotting
2. Hiding
3. Operating in close terrain like urban area, forests, mountains and other rough terrain.
4. Operating at close range (except machine guns).
5. Having both anti personnel AND anti armor capability.
6. Neutralizing anti armor guns (ATGs)
7. Removing obstacles (see also engineers later)
8. Excelling in defense operations and holding ground in general.

Weaknesses:

1. They are extremely vulnerable; they ALWAYS need terrain with good cover. This is especially true when they are moving.
2. They move extremely slow compared to motorized units.

The armor

Armor is the king of the battlefield. It has immense firepower provided by the main gun. Because of its mobility, it can be at the place where the battle is decided in the momentum of the battle. If your infantry is in trouble the armor can quickly be there to provide support. If a weakness is found at the enemy lines armor can quickly exploit the advantageous situation. (With supporting mechanized infantry of course.) It is resistant to most projectiles except anti armor shells; this gives protection to the crew. For these reasons, **armor is the decisive factor in most battles.**

However without support they are blind giants that can be quickly destroyed by ATGs, mines, infantry, or other stronger armor.

They excel in destroying infantry and, in some cases, other armor. Some armor fulfills a support role by destroying infantry while other armor fulfills the anti-armor role by destroying enemy armor AND infantry (except some cases). Tanks control a certain area by covering it with their main guns. (For more details see the Armor course.)

Strengths:

1. Firepower
2. Mobility
3. Protection
4. Long range fight
5. Open terrain operations
6. Offense and the taking of ground in general.

Weaknesses:

1. Reduced spotting!!! This is especially true when buttoned. Always keep this in mind.
2. Extremely vulnerable to ATGs, mines, infantry AT weapons and infantry close assaults
3. Ineffective in dense terrain opposite to infantry
4. Ineffective in soft terrain
5. Ineffective at close range combat

The artillery

We are talking about classic artillery here. Artillery is the god of war - said comrade Stalin. Napoleon was an artillery officer at the beginning of his career. Artillery operates in an indirect way. **It is best for suppressing the enemy thus creating ideal conditions for infantry and armor to do their jobs.** Artillery can create concealment for the other units by firing smoke. Keep artillery well behind your front line because it is vulnerable.

It is used in both offensive and defensive missions to soften up dug-in defenders or to disrupt an enemy attack. (For more details see the Artillery course.)

Strengths:

1. Suppressing a given area
2. Suppressing a specific unit (most of the time an ATG or MG) with mortars

Weaknesses:

1. Extremely vulnerable at close range
2. Extremely low mobility in most cases

The recon units

Recon units are a very important part of your force. They excel in gaining information about the enemy and in preventing him from gaining information about you. **You can never prevail if you do not know about the opposing force: where they are, how many are there, and what their intentions are. Recon units are a must in every situation.** Recon units are for spotting and not for fighting.

There are two main types of recon units: infantry and armored recon units.

All recon units need cover. Armored recon units need some room to maneuver as well. (For more details see the Recon course)

Strengths:

1. Spotting ability. That IS their job.
2. Hiding (infantry recon is the best at this)
3. Speed (armored recon is the fastest)
4. Countering enemy recon operations
5. Providing support against soft targets (in the case of armored recon units) if there isn't any anti-armor threat.

Weaknesses:

1. They are vulnerable and will not survive combat for a long time.

The anti tank guns

An anti tank gun (ATGs) is a special piece of artillery made to counter armor threats. They excel in holding ground against an armor attack. Being a soft target it needs good cover with open terrain in front of it.

Strengths:

1. Excellent anti armor capability
2. Excellent at destroying any other vehicle moving in the controlled area
3. Long range fighting
4. Defensive operations
5. Hiding (A concealed AT gun can fire 3-4 shots per turn without being 'seen' by enemy units, reducing the effectiveness of return fire.)

Weaknesses:

1. Vulnerable to infantry and artillery
2. Extremely low mobility

The anti air guns

An anti air (AA) gun is a special piece of artillery made to counter air threats. It excels in protecting ground assets against air attack. Being a soft target, it needs good cover with open terrain in front of it.

Strengths:

1. Excellent anti air capability
2. Excellent anti infantry capability especially in case of light and medium AA guns
3. Excellent anti armor capability in case of heavy AA guns
4. Long range fighting
5. Defensive operations
6. Hiding
7. Good rear area defense against recon troops

Weaknesses:

1. Vulnerable to artillery
2. Extremely low mobility

The Engineers

The engineer units are special units that create and remove obstacles (mines and dragon's teeth) in order to bolster defenses or breach through them. Engineers can blow up bridges and can breach walls and hedges. Engineers are infantry units with all the strengths and weaknesses of other infantry units. There are engineer tanks as well that are designed to remove obstacles. **Engineers have the greatest ability to change the terrain.**

Strengths:

1. Creating obstacles
2. Removing obstacles
3. Blowing bridges
4. Eliminating fortifications (Assaulting fixed defenses such as pill-boxes and MG nests.)
5. Engaging in close combat (Engineers are the best units for this.)
6. Infantry engineers have infantry strengths while engineer tanks have armor strengths

Weaknesses:

1. Engineers are specially trained units and they are very expensive.
2. Infantry engineers have infantry weaknesses, engineer tanks have armor weaknesses.

The airborne units

Airborne units are mostly infantry units trained to be dropped behind enemy lines. **Their task is to destroy targets behind the front line like artillery, ammo dumps, and enemy headquarters and to hold key ground (bridges for example) to deny the arrival of enemy reinforcements in time.** They also assault the enemy from the back if needed. (For more details see the Airborne course)

Strengths:

1. The ability to reach targets behind enemy lines.
2. They are highly trained units.
3. Airborne infantry inherits infantry strengths.

Weaknesses:

1. Airborne units are specially trained units and thus are very expensive.
2. Airborne infantry inherits infantry weaknesses.
3. They usually only have infantry AT weapons or light AT guns.

The special ops units (infiltrators)

The special ops units are highly trained and rare units which reach their targets behind enemy lines by infiltration. They are the best soldiers and extremely rare. They are ideal for recon missions. (They can be given infiltration missions at the beginning of the game.)

Strengths:

1. Very high experience and morale
2. Capability of infiltrating behind enemy lines
3. They are the best at hiding (along with the recon units)
4. All infantry strengths

Weaknesses:

1. They are highly trained and rare and thus are very expensive.
2. Infiltration is not always successful.
3. They have all other infantry weaknesses.

The cavalry units

Cavalry is a special infantry unit with better mobility and less firepower and hiding ability. **They are best used in dense terrain like forests or mountains where their mobility is the best compared to other units.**

Strengths:

1. All infantry strengths plus better mobility and less hiding

Weaknesses:

1. All infantry weaknesses
2. Large target compared to infantry – easier to hit, harder to gain concealment

The transport units

Transport units enable other units with weak mobility to move fast on the battlefield. Transport units are often used for infantry and artillery pieces. Armor can also carry infantry units, but such use is much riskier for the transported unit. Air transport units drop airborne units and glider infantry. Barge carriers carry barges for river crossings and amphibious transports enable amphibious operations.

Strengths:

1. They increase the transported unit's mobility immensely, though some are used for special purposes, such as river crossings.

Weaknesses:

1. Transport is not for free. Every point you spend on transport could be used for a fighting unit.
2. Unless heavily armored, they will not survive in a firefight. Their best role is as battlefield taxis, dropping the infantry off where they need to be and then retreating to safe cover. Every truck destroyed is points lost.

The air units

Combat air units are used as ground support units like artillery. They are also good for recon missions.

Strengths:

1. Extremely high mobility
2. Good anti armor and anti infantry capability
3. Good recon capability

Weaknesses:

1. Vulnerable to AA guns and AA machine guns.
2. Inaccurate target identification (They often bomb friendly units if their attack runs are not properly set.)
3. Very limited amount of ammo

This was a long chapter summarizing all the main unit types. All decisions and battle plans are created taking into account the strengths and weaknesses listed above.

How combined arms work: Assigning the right men for the right job.

When a commander assembles a task force, (or Kampfgruppe) he has to build up a combined arms group capable of operating by itself to complete its combat mission. Taking into account the mission objective (attack/defend), the terrain (open/dense), the weather, and visibility, he will choose a certain mix of everything. Recon units are included to gain intelligence. Infantry and armor form the force backbone. Artillery is a must for support. If the conditions allow, he will be able to use air support as well. The composition of the task force can vary widely according to the terrain and mission objectives. Know the strengths and weaknesses of all your units.

What happens if we do not mix the different units?

1. Most beginners tend to buy hordes of King Tigers with little support for them (I did). Then they see their force being halved in a turn by his seasoned opponent's ATGs, mines, infantry close assaults and enemy armor flank shots before the steel monsters saw what hit them. The opponent had infantry support for spotting and close support; he also had anti armor weapons (the ATGs) to decimate the threatening armor. He was able to maneuver his fewer in number armored units to advantageous positions before attacking since he bought adequate recon as well.

2. Let us visualize an urban fight. In an urban fight, infantry dominates. Buying just infantry alone won't do the job though. Artillery is needed to suppress the opposing units. Some armor is still required for several reasons. Armor can shrug off a lot of MG and rifle shots while routing enemy infantry, an ability that infantry don't have. Of course you have to be very careful not to have them ambushed in the city. (Moving them with infantry will prevent ambushes) And also watch out for infantry AT weapons because they are deadly at close range. Infantry spot the neighboring houses. The armor shoots at the spotted enemy units, and then the supporting infantry finish the job by eliminating the routed enemy infantry squads. A combined arms force will most likely prevail over an infantry-only force here as well. Of course in an urban fight, most of the units will be infantry in the combined arms force as well but support is also necessary in the form of artillery and a small amount of armor as well.

Going through the previous chapter, some interesting facts can be seen:

Tanks win against infantry (at long range and supported with spotters). Infantry wins against ATGs, and ATGs win against tanks.

Aircraft wins against artillery; artillery wins against AA guns, and AA guns win against aircraft (most of the time).

That means that every unit has a counter unit that is capable of destroying it.

Mixing different unit types is not enough. You do not want tanks to chase infantry in the forest nor do you want infantry assaulting machine gun bunkers in open terrain. You want the artillery to soften up the infantry in the forest and then clear it with your own infantry. And the tanks will easily take out the MG bunker in the open terrain. Of course if there are a few ATGs near that MG bunker a tank alone will not do; those ATGs have

to be neutralized before tanks get into the action and the story continues endlessly. A competent commander has to assign the right men for the right job.

Most wins can be achieved by eliminating a certain capability of a combined arms task force. If the opponent was scarce in buying enough infantry, you may want to destroy his weak infantry force at the price of losing some of your armor. After that you can creep close to his tanks with your own infantry. Then you blind and suppress the tanks with rifle, MG fire, and some arty so that your armor can go in for the kill. If you can separate your opponent's infantry from his or her armor, then you can finish off one and then the other with appropriate units from your own force.

Combined arms on offense: The boys are advancing side by side protecting each other.

When doing an offensive operation the following activities will most likely be done in a normal rural terrain in daytime (see other situations later):

1. Recon operations have to be performed to get information about the enemy units and their locations.
2. A smart opponent will try to deny that information by layering the defense in depth and combining his different units well to deny getting close. Then a recon by force is necessary to lure the ATGs and MGs to fire on targets they will miss or fail to hurt. (For example: Lure an ATG to fire at a fast moving recon vehicle, a slowly moving infantry squad or at a thickly armored tank which can destroy the ATG with impunity. Be sure to have some infantry recon to locate the enemy assets when they fire.)
3. When there is a clear picture of what is waiting in front of the task force, a decision can be made as to what is the weakest capability of the defense and where is a spot where anti armor and anti infantry weapons are not covering each other well, -or simply not there in enough numbers. Such a place is where the attack will be focused.
4. Special attention has to be paid to detect minefields integrated into the defense. If a corridor has to be opened, the engineers have to be applied to the job. Of course the engineers must work under heavy smoke cover provided by the artillery.
5. During the attack, that area has to be pounded with artillery to suppress the opposing units.

If the opposing force has a lot of ATGs and few infantry, your artillery will focus on suppressing the opposing infantry allowing your own infantry to close in and finish the enemy units off. If the ATGs can be blinded with smoke, then armor can support the infantry routing the opposing infantry. When the opposing infantry is eliminated, your own infantry can take out the remaining ATGs with ease.

If there is poor anti armor support, your artillery can focus on suppressing the anti armor assets while your own armor can start suppressing and routing the opposing infantry. Of course while the tanks are doing their job (at long distance), the scouts and some

supporting infantry need to spot to avoid opposing infantry trying to sneak close to the tanks. Supporting infantry also detect mines which are lethal to armor. When the opposing infantry is on the run, your own infantry mounted on halftracks can advance and mop up and occupy the area. One of the most brutal yet effective combinations is infantry riding on tanks. Infantry on tanks will lessen the risk of the tank being assaulted by unseen infantry. In addition infantry gain mobility by riding on the tanks. (Of course it is a dangerous job riding on a tank because it attracts enemy fire.)

6. The attacking force has to be prepared for a counter-attack, which most likely will be an armor counter attack. If the attacker has tanks with good anti-armor capability, the armor counter attack can be defeated. If your own armor is not effective against the opposing tanks, it is advisable to cover the advance with friendly ATGs which are. That should keep enemy armor at bay.

7. When the objective territory is occupied by your own infantry, artillery and ATGs can be brought up to establish a defense to hold the gains of the offensive. That brings us to the next chapter.

Combined arms on defense: The tough nut to crack.

When a commander is assigned to lead a force with the task of holding a certain area, he also has a lot of toys to play with.

Holding an area needs the following unit types:

1. Infantry. Yes, grunts in good cover. If the terrain is open then more MGs are needed than if the terrain is dense where normal infantry squads with SMGs are preferable.
2. ATGs. They are excellent in defense missions since they seriously damage the attacking armor force. They need good cover as well!
3. Artillery. Suppressing artillery is excellent in slowing the attack by suppressing the assaulting units.
4. Armor in reserve. You have to have mobile forces ready to send to the place where the opposing force is trying to break through your defenses. Counter-attacking armor can spoil an attack if it can counter attack from the enemy advance's flanks.
5. Mechanized infantry in reserve. They need to be quickly transported to the hot spots along your defense line.
6. Fortifications. Fortifications are immune against most infantry fire at ranges over 1 hex and they quickly rally after an artillery barrage. They are vulnerable against units with anti armor capability like tanks, ATGs and infantry AT units. They can be taken out by flame tanks, flamethrowers, and infantry close assaults as well. They are immobile thus they can be blinded with smoke once they are spotted.
7. Obstacles. Mines are the one of the most deadly assets in a defender's hands. Obstacles can channel the opposing force into your kill zones.

8. AA guns. They are a must in order to keep the recon and support aircraft away from the defenders.
9. Recon units. As always, they are the key to success by letting you know where the point of the attack is going to be.

Infantry, ATGs and AA guns are the backbone of a force that has the task of defending a certain area.

ATGs and machine guns support each other by engaging the enemy at long range. Remember, the MGs excel in killing infantry and ATGs are good at destroying armor and other vehicles. Infantry squads are deployed in front of the ATGs and MGs in good cover (preferably trenches) to protect them from close engagements.

Artillery fires a barrage in front of the main defense line. It is good to have the defenders in multiple layers. In that case if the enemy manages to break through the first line he has to assault the second line while his flanks are threatened, giving you time to re-deploy your reserves to prevent further break through.

Recon units do passive recon in front of the defense line and monitor enemy movements. Infiltrators can do serious damage to the attackers' artillery as well as providing invaluable information.

One effective combo is to pair MG bunkers with AT guns. MG bunkers are invulnerable to infantry at long range. When a tank is assigned to destroy the MG bunker, it is destroyed by the hidden ATGs. This is just the tip of the iceberg regarding the correct use of the combined arms principle.

When the Air force comes into play: Avoiding death from above

Modern warfare has brought the threat from the sky as well. Controlling the skies gains immense advantage to a warring side.

Every ground force has to protect itself from enemy aircraft unless their side has total air superiority. That is done with AA guns (both towed and mounted on vehicles). The towed AA guns are best at defense as stated before whereas self propelled AA is ideal for escorting moving vehicles, especially armor.

A moving force is the most vulnerable to air attack. Aircraft find ground troops in cover much harder to spot and the troops in cover are less vulnerable to attack as well.

Aircraft may attack friendly forces by mistake as well so it is not advised to keep vehicles near the aircraft's target area.

Aircraft provides invaluable recon information as well.

Mobile operations and how combined arms support them.

A modern task force performs a lot of maneuvers to gain a position which provides advantage over the opposing force. The safe movement of a unit - especially a transport unit like trucks, halftracks and prime movers but armor as well – has preconditions.

These vital conditions are.

1. The area of movement has to be scouted in advance.
2. LOS to the advance area has to be denied to the enemy. Terrain and smoke fired by artillery can help that. The moving force has to use terrain features well to stay hidden from enemy eyes.
3. Friendly ATGs and AAGs overwatching the moving force to cover them.

A hiding infantry unit in an ambush position can destroy any vehicle. A hiding AA gun can destroy an entire column of trucks or light armored vehicles. A hiding ATG can destroy a moving column of everything. Tanks hiding behind a hill that overlooks the road you are advancing on can devastate your forces as well because they can crest the hill in the appropriate moment and destroy your vulnerable moving force. If enemy scouts manage to see your columns, they can call artillery and aircraft on them. Not to mention that the opponent is informed as to where you are and what your intentions are.

Yet again we see all the types of units playing their part in the action.

Force selections in different situations: The never ending story.

There is no set recipe for choosing and forming an effective task force. Combined arms is more of an art than an exact science even though it has the basic principles discussed above.

There are a lot of factors that affect what constitutes a good composition for an effective combined arms force.

Usual rural terrain, day operations

I will give a force composition for a task force built for a meeting engagement at normal rural terrain, daylight and good weather. If you have X points to buy yourself a task force here are some percentages for a possible mix of different unit types. I emphasize this is just a hint where to start experimenting and not a rule! Remember the unit strengths and weaknesses and the combined arms principles learned.

Artillery and air 10%
Infantry 20-30%
ATGs and AA guns 10%
Transport (Halftracks and/or prime movers) 10%
Armor 30-40%
Recon units 10%

Armor has a slightly greater percentage simply because it is the most expensive unit type. If the terrain is dense, then more infantry and less armor have to be bought. On assault missions, 20% artillery is advisable and other unit type expenses have to be cut accordingly.

Night operations

At night the visibility is greatly reduced. Because of this, all long range capabilities are neutralized. The infantry's role is even more important. Also, mortars have increased value since the enemy units that are spotted will be close and the mortar's accuracy is preferred over the spread that some other artillery types have.

Wet ground conditions

Wet ground conditions deny armor movement except on the paved roads. It is an excellent defensive element. The infantry's role is more important here as well.

Winter battles

Ski infantry comes into play. Snowstorms reduce both visibility and movement.

Urban warfare

Infantry is key once again. LOS is very limited. Artillery is also important. Engineers are invaluable.

Desert warfare

Tanks have their greatest influence here. Because of that, ATGs are also important. The infantry's role is almost decreased to spotting and scouting missions in most cases. Dunes can still hide nasty surprises.

Jungle warfare

Infantry close combat is most common here as in any other dense terrain. Advances require close and ample use of artillery since moving often requires moving directly adjacent to dug-in infantry. If these enemy units aren't suppressed, your units will get cut to shreds and pull back without every getting a shot off.

River crossing

The hardest and most complicated operation of all. Yet again every unit type is involved. The vital equipment here are the barges which can carry your tanks to the other bank of the river. Artillery is heavily involved but you need excellent recon and good infantry support as well.

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