

The German Airborne Antitank Battalion And the Wiesel Armored Weapon Carrier

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During 1994, the Wiesel airborne weapon carrier was deployed to Fort Bragg for airdrop and further testing by the U.S. Army's Test and Experimentation Command, while it was concurrently undergoing a series of tests by the German Army at Manching and at the German airborne school at Altenstadt. Both series of tests were successfully concluded. With the Wiesel 1, the German Army has at its disposal a

combat vehicle of unlimited deployability for the airborne forces, and one which is the basis of the German Army's newest unit, the airborne antitank battalion. In this article, I would like to discuss the possibilities offered by this new battalion organization, as they apply to both of our nations.

For U.S. early entry forces such as the 82d Airborne Division, one or more airborne battalions appropriately equipped

with the Wiesel would have at their disposal units that, after strategic air transport and landing, would possess high mobility and high combat power, and would be highly useful in combat. Moreover, "tactical leaps" (airmobile operations) would be possible—depending upon the situation, the mission, and the terrain—with transport helicopters for over-watch missions, counterattacks, blocking actions, or the formation of strongpoints.

Personal Observations

These new requirements in the context of an expanded mission can no longer be executed to the same extent by all units of any Army.

Next to the main defensive forces which will represent the backbone of national defensive capability after mobilization, it is the crisis reaction forces (CRF) that will have to serve as rapid reaction components. These crisis reaction forces will have to be designed, equipped, and trained for the entire spectrum of possible employment to meet the new missions. This is especially applicable for the airborne/airmobile and hence light combat forces of the CRF and can even include operations other than war.

The rapid availability of units and their problem-free transport for humanitarian missions may not be the only consideration. It perhaps matters little to facilitate the easy exchange of units and companies by means of task organization. What does matter is to have at one's disposal for different missions the ideal units to deter the potential enemy in the area of operations by sheer combat power, and—when needed—the units that possess the ability to conduct the fight in a highly mobile manner and with a strong capability for accomplishing the mission.

An additional consideration is that of both maintaining and expanding the specific capabilities of the branches of the Infantry according to the various demands of combat. The airborne antitank battalion is one contribution toward having the optimal type of battalion for specific missions, as a highly mobile and mission capable special airborne unit within the framework of an airborne brigade, and the present organization offers several possibilities.

Armament and equipment fundamentally determine the principles of employment. On the eve of World War I, the disregard for the machinegun that was coming into use turned maneuver warfare into trench warfare, but at the end of the war the emergence of the tank made maneuver again possible in spite of machinegun fire. Following World War I, visionary military thinkers formed the armor into an element that made possible extensive, enveloping movements by means of the massing of forces, movement, and firepower. The early days of World War II saw the classical formation and employment of armor in combination with the air forces and large follow-on motorized units.

Today, we have in essence an armor force that is highly evolved technologically, tactically, and operationally, but whose capability for rapid mobility and momentum can be clearly restricted by modern countermobility measures. Modern intelligent mines, launched by rockets or tube artillery, or

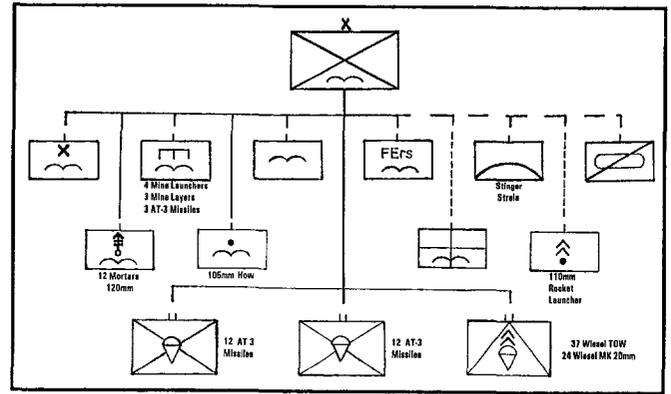


Figure 1

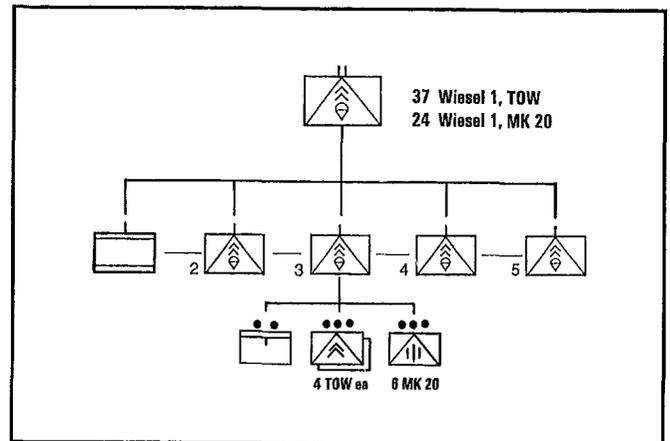


Figure 2

laid by engineers, can bring the movement of large armored forces to a halt.

Extensive minefields more than four to six kilometers wide and of corresponding depth can be laid within minutes, or fired in advance of large armored units in the attack. The clearing of minefields can be rendered more difficult, or even impossible, by the insertion of intelligent mines. Lanes cleared at the cost of heavy casualties can be once again closed within a few minutes.

To be sure, these possibilities do not call into question the fundamental role of armor as a combat arm, but they do lead to rethinking and reflection in such areas as branches of the service, armament, equipment, and the principles under which the force is to be employed. In the context of such developments, a unit that can rapidly bypass these and other impediments—while retaining its combat capability—through the use of the dimension of air mobility achieves a new significance.

(The airborne brigade organization is shown in Figure 1 and the airborne battalion organization in Figure 2.)

The Airborne Antitank Battalion

With its 61 Wiesel air-transportable armored weapon carriers, the battalion is a highly mobile and combat capable special unit within the organization of the airborne brigade that should more appropriately be called "The Wiesel Infantry Battalion." The battalion will fight on the basis of the equip-

ment of the Wiesel, and not necessarily according to the principles that govern the employment of the antitank, armor, mechanized infantry or reconnaissance forces.

This type of battalion fights as a "pursuit" formation through its exploitation of large areas, in which it compensates for its lack of shock effect by its high mobility and flexibility of combat operations, thereby combining optimal use of terrain with constant movement, interrupted only by stops for observation, to engage targets by fire, and to occupy covered positions.

The special nature of this battalion is marked by its air transportability, its readiness for action immediately upon dismounting from its prime mover, its high mobility in the area of operations, and the combat power of 37 TOW Wiesel weapon carriers and 24 Wiesels with the 20mm machine cannon.

In its actual employment, the airborne antitank battalion goes from the basic organization to the organization for combat (see Figure 3), which takes into account the temporary principles of employment, as well as the experience gained and collective ideas.

The following planning considerations apply to the employment of the Wiesel:

- A mix of TOW and 20mm cannon Wiesels is ideal.
- The 20mm machine cannon escort Wiesel for the battalion commander is supplied by an airborne antitank company.
- The battalion commander and company commanders command from TOW Wiesels.
- The company command post (CP) is run by the command and control vehicle of the airborne antitank company.
- The command and control vehicle of the battalion commander remains at the battalion CP and is at the disposal of the S-3.
- The trucks designated for ammunition transport are pooled at the company CP in order to ensure availability of ammunition, as well as to be available for general transport.

An airborne antitank company employed in a combat reconnaissance role is doctrinally organized as shown in Figure 4.

The battalion commander directs the unit either in person or by radio directly from his Wiesel, at the point of decisive action or immediately behind the point of the attack. In this way, the command vehicle cannot be differentiated from the other TOW Wiesels on the battlefield.

Commanders, particularly when the battalion is rapidly moving, must understand the concept of leading from the front. In doing so, another Wiesel with cannon must be prepared to provide overwatch for the command vehicle.

By its very nature, the airborne antitank battalion is especially capable of conducting without delay a tactical, operational, or strategic repositioning in the form of air movement or tactical ground movement day or night, on any terrain and under any weather conditions. Moreover, the unit's tactical mobility can be even further increased by the air transport assets of Army aviation.

After vertical envelopment, the battalion is also especially suited for such forms of battle as the delay and the defense.

UNIT	COMPONENT UNITS	
	Air Echelon	Ground Echelon
	 1 Wiesel 1, TOW  1 Command/Control Vehicle	5-ton Truck, 1SG HQ Section 2-ton, S-3 Ops Sgt
	 3 Wiesel 1, TOW  2 Wiesel 1, MK 20  2 2-ton Ammunition Vehicles	
	 3 Wiesel 1, TOW  2 Wiesel 1, MK 20  2 2-ton Ammunition Vehicles	
	 2 Wiesel 1, TOW  2 Wiesel 1, MK 20  2 2-ton Ammunition Vehicles	

Figure 3

FORCES	RECON SECTION	SECTION LEADER
1 Wiesel 1, TOW, Co Cdr 1 Wiesel 1, MK 20	1	Company Commander
2 Wiesel 1, TOW 1 Wiesel 1, MK 20	2	1st Platoon Leader
2 Wiesel 1, TOW 1 Wiesel 1, MK 20	3	Squad Leader, 1st Platoon
2 Wiesel 1, TOW 1 Wiesel 1, MK 20	4	2nd Platoon Leader
1 Wiesel 1, TOW 1 Wiesel 1, MK 20	5	Squad Leader, 2nd Platoon
1 Wiesel 1, TOW 1 Wiesel 1, MK 20	6	3rd Platoon Leader

Figure 4

GENERAL CHARACTERISTICS		
	WIESEL MK 20	WIESEL TOW
Combat Weight	3.1 short tons	3.1 short tons
Crew	2 men	3 men
Overall length	11.63 feet	10.86 feet
Width	5.97 feet	5.97 feet
Overall height	5.99 feet	6.22 feet
Armament	DM 6, 20mm machine cannon in turret	TOW launcher
- Traversing range	± 110 degrees	± 45 degrees
- Elevating range	- 10 to + 45 degrees	± 10 degrees
Muzzle height	5.38 feet	5.89 feet
Ammunition storage	400 rds of 20mm	6 TOW missiles inside 1 TOW missile mounted
Night vision, weapon	Image intensifier telescope PERI Z 16	Thermal image system AN/TAS 4
Night vision, driver	Image intensifier periscope	Image intensifier periscope
Engine	VW 5-cylinder diesel with exhaust turbocharger	
- Performance	86 horsepower at 4500 rpm	
- Displacement	122 cubic inches	
Transmission	Three-gear automatic, two-gear splitter group	
- Gears	Six forward, two reverse	
Specific ground pressure	5.22 psi	
Maximum speed	47 mph	
Minimum cruising speed	2.5 mph	
Gradability	60%	
Side slope	30%	
Cruising range (Average 60% road, 40% off-road)	124 miles	
Cruising range at 75% of maximum speed (34 mph) on paved roads	186 miles	

With the attachment of mobile combat support assets such as attack helicopters, airborne forward observers, minelayers of the airmobile engineer company, and high angle fire of the airborne mortar company, the airborne brigade has at its disposal a unit that can conduct mobile warfare from the air and on the ground without interruption.

This unit is likewise well suited for the overwatch of extended areas and for the movement to contact. In these the battalion can make contact with the enemy, halt, transition into the delay, and thereby create the decisive conditions for the commitment of the airborne brigade in the role of *Find-Turn-Fix-Strike*.

Since the flanking operations of friendly elements always include frontal security and frontal protection against the enemy's long-range, direct-fire weapons, such operations are to be avoided. In such operations, the fires of friendly elements into the enemy's front are not directed into the enemy's flank, and are not suitable for the airborne antitank battalion.

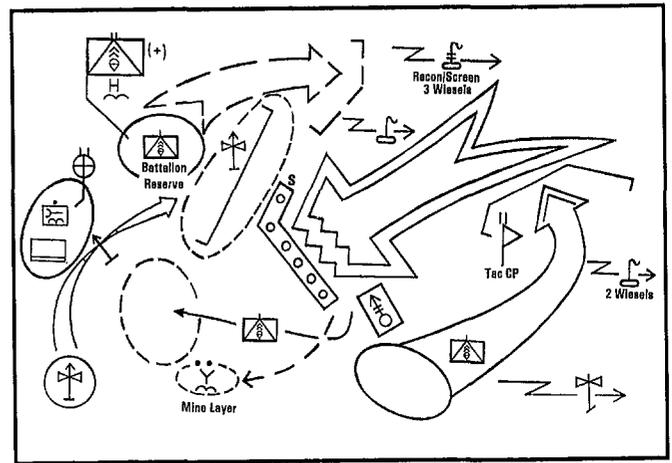
In the employment of the battalion, the consideration must always be to gain access to the enemy's deep flanks. In order to achieve this, the commander cannot be deterred by boundaries, and the battalion must think and act in terms of space. For this, a flexible command structure that can be simply employed and that, above all, can operate at night and under stress without mistakes is absolutely essential. One airborne antitank company is to be maintained as battalion reserve.

Another essential prerequisite is unbroken combat reconnaissance (Figure 4) that—in cooperation with aerial and ground (Wiesel) reconnaissance—maintains constant contact with the enemy and thereby always delivers secure intelligence information.

The counterattack consists of a sharp, decisive attack against a deep flank of the enemy and the destruction of the enemy from favorable blocking positions with the concentrated fire of TOW, machine cannon, and available combat support. In such actions decisive engagements or duels with the enemy should not be allowed to develop, since the battalion needs some time to test its main weapon, the TOW, before successive rounds can be fired.

SEQ. NO.	ELEMENTS	EQUIPMENT	PERSONNEL	MEDIUM TRANSPORT HELICOPTER LOAD
1		1 Wiesel 1 TOW 1 Wiesel 1 MK 20 (Commander's escort)	Commander	1
2		1 Command post truck 1 Communications truck 1 Tent set for CP truck	Battalion S-3	1
3		1 Maintenance truck for airmobile maintenance section	Battalion Motor Sergeant	1/2
4		1 Medical truck for the airmobile medical section Additional: * 1 Light transport helicopter for wounded * 1 Light transport helicopter for battalion surgeon	Battalion Surgeon	1/2

Figure 5



In the employment of the Wiesel battalion, the scheme of maneuver must always focus on gaining access to the enemy's deep flanks.

Three elements are necessary for the highly mobile and flexible conduct of battle:

An Air-Transportable Maintenance Unit. The conduct of movement warfare is only possible when the maintenance that accompanies the unit is likewise mobile. Figure 5 shows the maintenance elements in the headquarters and support company of the battalion. Even small maintenance tasks, such as the changing of fan belts, require removal of the engine. It is interesting to note here that even when the engine is removed from the Wiesel on its own hoist, the motor can be started and the vehicle's weapon system remains operational with the electrical power the engine provides. The only recovery and heavy lifting capability available to the battalion is one four-ton crane, which does not have a cross-country capability and is not air transportable. It can be employed after the arrival of the ground support element, at either a forward support location, or at a support facility located in the field trains.

Here is an important operational consideration: Since a commander must strive to keep the 61 Wiesel weapon carriers available for combat as long as possible, it is essential to conduct maintenance in the field rather than recovery with maintenance later.

An important point to remember is to move a disabled Wiesel to the first available cover and have the airmobile maintenance team service it there, as the action continues.

The unit's Wolf maintenance section truck can serve as the prime mover for the maintenance contact team. The necessary repair parts package—assembled prepackaged according to established demand—the general and special tool kits, as well as the lifting machinery for the engine, are stored ready for air movement.

The Airmobile Main Battalion Command Post. Highly mobile battle command is possible only if the command and control match the capabilities of the main weapon system. A first step toward achieving this is to have a battalion command post which can be moved by air.

In this connection, it is necessary to determine whether the concept of having a main CP and a tactical CP will cause the staff and supply company to be expanded. At least for the air

borne antitank battalion, a flexible command structure consisting of an air movable battalion main CP and a movable tactical CP appears to be both functional and sufficient. A further step is the introduction and linkage of a modern command and control system such as the intervehicular information system (IVIS).

The Airmobile Medical Unit. Until a unit medical service is organized that is tailored to and capable of meeting the requirements of the new missions, we will have to fully utilize the capabilities and means at hand.

One possibility that is immediately available is the incorporation of the airmobile medical unit into the unit medical service (Figure 6).

Airmobile Mortar and Airmobile Engineer Companies

A mortar company and an engineer company are likewise attached to the airborne brigade, and both company commanders are integrated into the first-wave airborne battalion. Since they are found in the tactical CP of the battalion commander, they are able to assist the commander in the following ways:

- Provide input on the barrier and fire support plans on the ground.
- Discuss further plans with the battalion commander on the spot.
- Deliver the barrier and fire support plans for the opening engagement to the brigade CP on the way to the battalion main CP. These actions ensure that planning can be conducted and the flow of information to all critical points maintained without delay.

In addition to artillery-fired or engineer-emplaced mines, helicopters can also be used to lay minefields.

The Mine Launcher Equipment Set for the UH-1D Light Transport Helicopter consists of:

- Installation Kit, Mine Launcher/UH-1D.
- Two magazine racks.
- Installation, testing, and firing apparatus (ITFA).

The magazine racks and ITFA were introduced for the ground-mounted mine launcher, and the system replaces the AT 02 antitank mine.

The following employment data apply to the helicopter mounted minelayer:

- Minelaying speed over ground—25 meters/second.

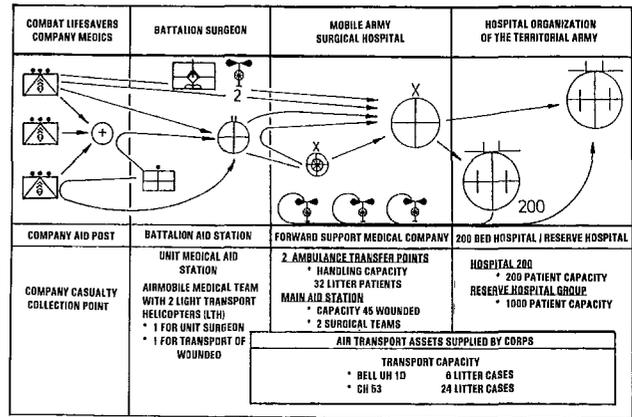


Figure 6

- Cruising radius—approximately 150 Km.
- Maximum flight speed—approximately 170 Km/hr.
- Time to mount equipment—approximately 30 min./two persons.
- Number of mines—200.
- Length of launched mine barrier—500m (density of 0.4 mines/meter).

Lessons Learned

The experience of commanding the airborne antitank battalion has provided a number of insights into the advantages and planning considerations of fielding and employing units of this type:

- One condition for success is that the brigade plans, organizes, and issues orders for the airborne antitank battalion's battle to be a highly mobile one.
- Restricting the battalion to an area that is too narrow, or to the role of static forces will keep the strengths of the unit from being properly employed and will drastically reduce the value of the action.
- The Wiesel weapon carrier is in no way simply another combat support asset!
- In order to simplify command of airborne operations, the unit should be task organized upon deployment into the area of operations.
- The company commanders of the engineer and mortar companies must be included in the planning for the first ech-



The CH-53 helicopter can carry two combat-loaded Wiesel armored weapon carriers for rapid insertion.

elon of the supported unit to ensure an information flow without delay to the brigade main CP—by way of the battalion main CP—once coordination and planning have been conducted with the battalion commander.

- Company sectors will serve only a coordinating role within the context of the opening battle. Afterwards, while maintaining steady contact, the unit must wrest a deep flank from the enemy to strike at him there with the greatest combat power possible.

- Doctrinally, the battalion reserve consists of one airborne antitank company. It will be committed without hesitation, if this employment promises a successful counterattack. At the same time this is done, another company is to be made available as the battalion reserve.

- In the event of an enemy counterattack with insufficient shock effect, the deep flank of the enemy is to be aggressively attacked, whereby the enemy is smashed with a combination of TOW and machine cannon fire, along with the addition of all other available combat support fires.

- Operations in conjunction with attack helicopters have proved effective. Both ground maneuver forces and attack helicopters complement one another splendidly in mobile warfare. Attack helicopter flights have reported their availability over the battalion command net in the aerial sector of operations, and have then been assigned missions by the battalion commander. The conduct and tempo of mobile warfare do not permit face-to-face discussion.

- The introduction of a modern command and control system such as IVIS would considerably improve flexibility.

- In the conduct of mobile warfare, combat reconnaissance assumes a new prominence. Doctrinally, an airborne antitank company was employed for reconnaissance, with six patrols as scouts. They reported decisive information on the enemy and were the basis for deep thrusts into the enemy's flank. A self-sufficient reconnaissance force, supported by the Wiesel on the ground and airborne forward observers, has proven its worth.

- The ability to move swiftly and easily, combined with night vision devices, permitted continuous overwatch of the battlefield even under conditions of reduced visibility.

- The detachment of individual TOW and machine cannon weapon systems has proved inappropriate. The compelling necessity of the TOW/cannon combination must be preserved. While the Wiesel 1 TOW weapon carrier with the AN/TAS thermal optics can annihilate lightly armored and hard targets under almost all conditions of visibility beyond 800 meters, the effectiveness of the cannon-mounted Wiesel 1 with image intensification optic ranges from 100 meters to 1,000 meters against soft targets, and out to 800 meters against lightly armored targets. It should also be noted that at night targets in shadows cannot be acquired by the image intensification of the cannon Wiesel, and hence cannot be engaged. Here the TOW with its thermal sights is needed to identify targets, direct fires, and assist the cannon Wiesel.

- To ensure mobility and communications, doctrinally the crews do not dismount. Any necessary discussions are conducted from the vehicle.

- The Wiesel weapon carrier is a fully developed, easily operated and maintained combat vehicle of the airborne force that is well suited to the troops who will employ it.

Summary

The airborne antitank battalion represents a modern battalion organization of the airborne infantry that optimizes tactical mobility and places a high volume of firepower at the disposal of the airborne infantry. It is the only infantry unit of the airborne force that can transfer the mobility of air movement into maneuver on the ground, day or night, in any terrain, and under all conditions of weather, without delay.

Even now, with its TOW or machine cannon-equipped Wiesel weapon carriers, the battalion—combined with attack helicopters, the high angle fire of the airborne mortar company, and the engineer company's mine launchers—is capable of uninterrupted, highly mobile combat on the ground, and from the air after long-range vertical envelopment.

In addition, the high degree of tactical mobility can be further enhanced by the availability and employment of the transport helicopter assets of Army aviation, while the reinforcement, attachment, or tasking of air-transportable MLRS (multiple launch rocket system) units would also open up extraordinary employment possibilities for a Wiesel unit.

The Wiesel is an ideal combat vehicle for the airborne infantry, in terms of training, air transportability, and tactical employment, whose limitations imposed by weight must be recognized if we are to fully capitalize on its strengths. In employing the Wiesel, the airborne brigade has at its disposal two types of battalions, both of which can be immediately put into action without further task organization. Nevertheless, the commander still remains able to task organize, depending upon the situation, mission, and terrain.

The airborne antitank battalion and its Wiesel armored weapon carriers are well-suited, without limitation, to create critical conditions for the conduct of future operations, after strategic air transport and landing or off-loading, in the context of early entry forces. Their rapid deployability, extensive flexibility, and high mobility offer today's airborne and air-mobile forces the ability to provide timely and decisive response to a wide range of contingencies around the world.

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