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FORCED ENTRY: DOES THE CURRENT AIRBORNE DIVISION STILL
RETAIN THIS CAPABI. (U) ARMY COMMAND AND GENERAL STAFF
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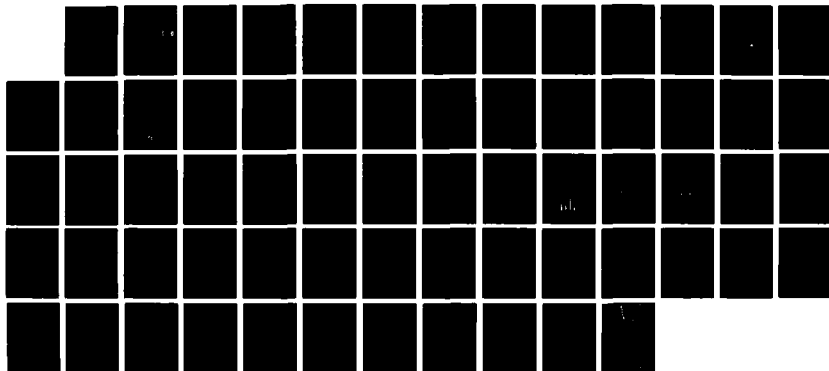
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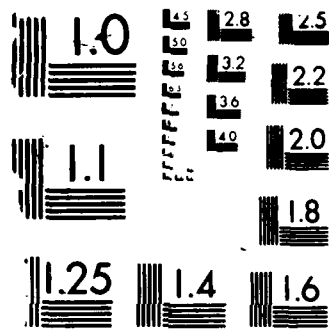
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Forced Entry:

Does the Current Airborne Division Still Retain This Capability Under
the Light Infantry Tables of Organization and Equipment?

AD-A179 595

by

Major John F.W. Caldwell

Infantry

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I. Introduction

The United States is a power with worldwide responsibilities. Because of this it has forward deployed large amounts of its armed forces outside its national borders. However, even with this forward stationing of troops not all possible contingencies can be covered. The United States has sought to cover part of the gap by the retention of one airborne division. This division is considered part of the nation's strategic reserve.

"The primary mission of the airborne division is to deploy rapidly anywhere in the world and be prepared to conduct combat operations to protect U.S. national interests."¹

This mission can be executed during either war or peace. A key element of the primary mission is the need to be prepared to conduct combat operations. This is further supported with the following list of specific missions.

1. Seize and hold via vertical envelopment vital objectives behind enemy lines until linking with supporting forces.
2. Exploit the effects of nuclear or chemical weapons.
3. Rescue U.S. nationals besieged overseas.
4. Reinforce forward-deployed forces (if augmented with transportation).
5. Serve as a strategic or theater reserve.
6. Conduct large scale tactical raids.
7. Occupy areas or reinforce friendly or allied units beyond the immediate reach of ground forces.
8. Capture one or more intermediate staging bases or forward operating bases for protracted ground/air operations.²

Six of these missions require the airborne division not only to be prepared to deploy, but also to be able to fight an enemy on arrival. That enemy could vary from a terrorist organization to Soviet combat troops.

The intent of this monograph is to examine whether the airborne division still retains its ability to conduct successful forced-entry missions with the new Light Infantry L-series TO&E. In order to arrive at a decision two historical examples of airborne operations will be studied along with the H-series TO&E, which is just being dropped. An analysis of the difference between the H-Series and L-series will be conducted to determine which best supports forced entry in terms of combat power.

The term "combat power" is, of course, a very loose and imprecise term. Therefore, the following elements of combat power are those which this study will consider:

1. Numbers of infantry soldiers available to the fire team, rifle squad, rifle platoon, rifle company, rifle battalion, rifle regiment/brigade, and airborne division.
2. The estimated numbers of soldiers actually dropped at each unit level. I equate this to the foxhole strength of each of the above.
3. The weapons mix of rifles, grenade launchers, squad automatic weapons, medium and heavy machineguns, anti-tank weapons, mortars, artillery tubes, and air defense assets of each of the above.
4. The vehicle mix of light 4x4s and motorcycles of each of the above.

Coupled with the term "combat power" is the concept of forced entry. Forced entry means seizing and holding via vertical envelopment vital objectives behind enemy lines until linking-up with supporting

forces. These areas are controlled by forces hostile to the U.S. and beyond the immediate reach of ground forces.

Some assumptions and limitations are necessary for this monograph. The first of four assumptions is that United States Air Force support, in terms of the D-Day assault force, will not be considered a limiting factor. The second assumption is that there will be no airlandings on D-Day of an airborne assault. Only men and equipment that can be inserted by parachute assault, container-delivery system, heavy-equipment drop, and/or low altitude parachute extraction system will be considered. This restriction directly applies to helicopters because they can arrive in the airhead only by airlanding or self-deploying.

The third assumption is that a company-level anti-tank weapon in the TO&E of 1944 equates to a company level anti-tank weapon of 1986. Weapons' effectiveness will not be differentiated.

Finally, a short-notice scenario will be used to evaluate the H-Series and L-Series. A short-notice deployment into a forced entry situation is a worst case for an airborne unit. The short time available usually means that units must deploy with men and equipment present upon notification. Given this scenario the 82d Airborne Division Readiness Standing Operating Procedures (RSOP) will be used to provide common planning figures to estimate what forces would be dropped using H and L Series TO&Es. This RSOP is the only division level RSOP from which to extract well thought out and planned movement figures.

There are three major aspects of combat power that I shall not evaluate during the course of this monograph. First, I shall not

evaluate the impact of major multipliers of combat power such as training, morale factors, surprise, etc... Second I cannot anticipate what, if any, combat power from corps or higher would be allocated for the mission. Finally, it is impossible to predict the amount of combat power planned for insertion, but which would fail to arrive in the objective area because of friction, combat loss, etc. Accordingly, I will adjust the H-Series and L-Series TO&Es for this third limitation using the percentage factors found in the historical examples.

II. Operation MARKET: The Airborne Assault Into Holland, September 1944

The linkage between the parachute forces of 1944 and the parachute forces of the 1980s is very direct and clear. The missions, capabilities and functions are the same. Training Circular No. 113, dated 9 October 1943, Employment of airborne and troop carrier forces, gives the following definition of airborne forces.

"Army Ground Force units which are specially organized, trained, and equipped to utilize air transportation for entry into combat....Airborne forces should not be confused with other light units of the Army Ground Forces, many of which may be transported by air, which are not specifically organized, trained, nor equipped for this method of movement."³

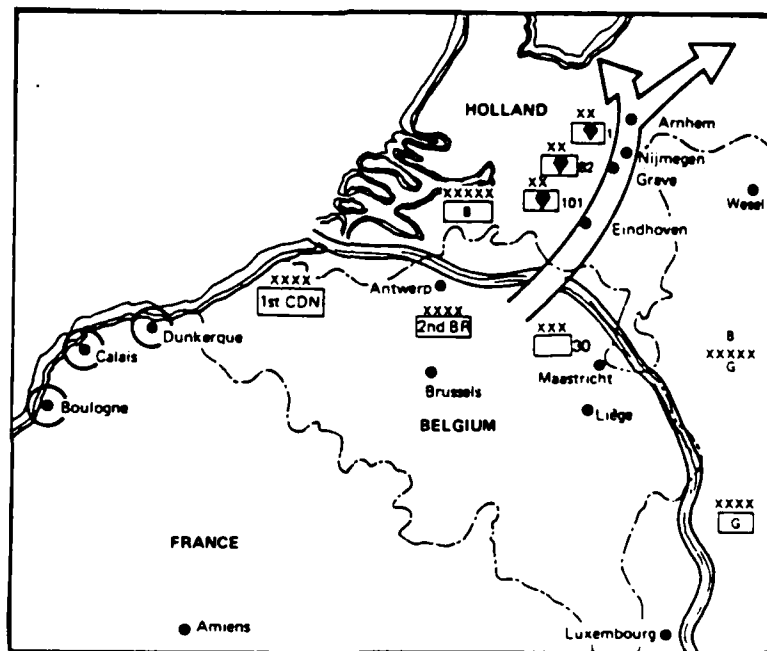
When this is compared to the definition in Field Manual 101-5-1, Operational Terms and Symbols, dated October 1985 the linkage comes to life.

"Airborne force--A force composed of ground and air units organized, equipped, and trained for primary delivery by airdrop into an area. Airlanded techniques may also be employed."⁴

The missions do not seem to have changed during the last forty-two years. Operation MARKET was planned and executed to make possible the advance into Germany of the Northern Group of Armies. The

First Allied Airborne Army was to support the 21st Army Group until a bridgehead was secured across the lower Rhein. MARKET had a matching ground operation in Operation GARDEN.⁵

The intention of GARDEN was a planned advance from the Albert and Escaut Canals to the Zuider Zee. "The advance was to be on a very narrow front, with only one road most of the way, through Eindhoven, St. Oedenrode, Veghel, Uden, Grave, Nijmegen, Arnhem, and Apeldoorn."⁶



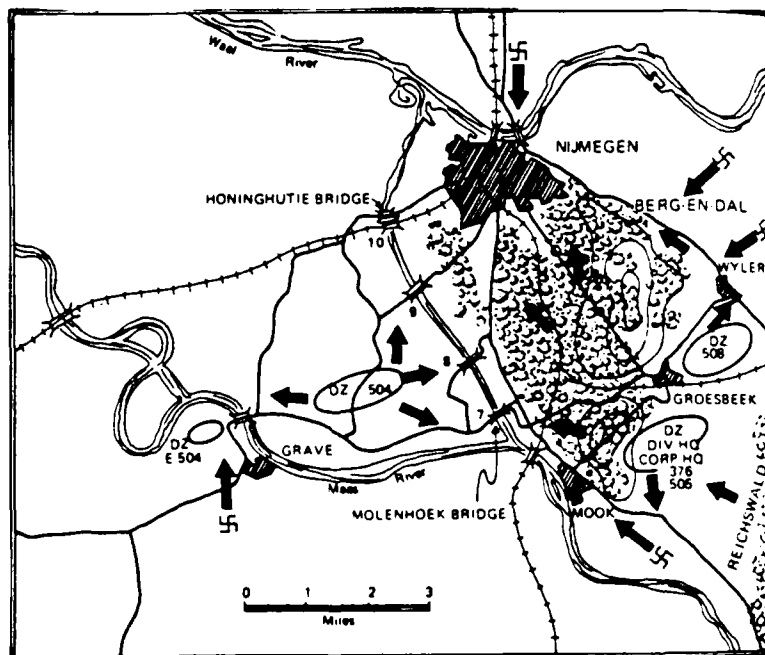
MARKET was to provide the corridor for the ground forces (spearheaded by 30th British Corps) to advance to the northeast. This task was vital because of the numerous bridges that had to be seized across the Wilhelmina canal, Dommel river, Willems canal, Aa river, Maas river, Maas-Waal canal, Waal river, and finally the Lower Rhein.⁷

The units selected to take part in the MARKET phase were the 101st Airborne Division (U.S.), the 82d Airborne Division (U.S.), the 1st Airborne Division (BR), 52d (Lowland) Division (Airportable) (BR), and the 1st Polish Parachute Brigade. These units placed a total of

34,876 troops into the various objective areas by 30 September 1944, the end of the airborne phase.⁸ This monograph will examine the operations of the 82d and 101st airborne divisions on D-Day, 17 September 1944, to determine the amounts of combat power inserted into their respective areas of operations.

The mission of the 82d Airborne Division was to:

"Land by parachute and glider commencing D-Day South of Nijmegen; seize and hold the highway bridges across the Maas River at Grave and the Waal River at Nijmegen; seize, organize, and hold the high ground between Nijmegen and Groesbeek; deny the roads in the Division area to the enemy; and dominate the area bounded North by line running from Beek West through Hatert thence Southwest to Eindschestraat, South by River Maas and the Mook-Riethorst highway, East by Cleve-Nijmegen highway and Forest Reichswald, and West by line running North and South through Eindschestraat."⁹



The intelligence enemy order of battle that supported this mission stated that in the 82d operational area there was "...a fair quota of Germans, and an estimate of a divisional strength...." The OB further stated that "a broken Panzer division" was north of the town of Arnhem with about 50 tanks (Arnhem itself was only eleven miles north of Nijmegen). Based on the intelligence and the mission, the 82d decided to place as much combat power as possible on its drop zones on D-Day.

The limiting factors for the D-Day drop were aircraft, gliders, and inexperience involving parachuting field artillery (previously all artillery had been inserted by glider). With three divisions being inserted at one time, only 482 aircraft and 50 gliders were allocated to the 82d. This meant that the glider regiment, three field artillery battalions, and some division troops could not arrive on D-Day. However, the bulk of the division, consisting of three parachute infantry regiments, one airborne field artillery battalion, a parachute engineer battalion(-), and an anti-tank battery, plus assorted division headquarters and support troops, were dropped on D-Day. (See Appendix A)10

Preceded by division pathfinders at 171230 September 1944, the main assault elements started jumping at 1300hrs. By 1400hrs the 82d had 7,498 troopers in its objective area along with 70 tons of supplies, twelve 75mm howitzers and eight 57mm anti-tank guns. Less than four hours later bridges at both Grave and Molenhoek were secured. However, the large bridge across the Waal river at Nijmegen was not seized by the end of D-Day. This meant that the 30th British

Corps had bridges to advance only to Nijmegen once they had advanced through the zone cleared by the 101st south of Grave.¹¹

Clearly, the initial critical missions for the 82d were achieved by securing the first two bridges needed for the ground link-up. Even if the third bridge had been captured early it would have been for naught if one or both of the first two crossings had not been secured or the high ground north and east of Groesbeek had been lost to enemy action. This high ground dominated the drop zones and landing zones through which future reinforcement and resupply were planned.¹²

Concurrent with the 82d the 101st had the following missions:

"The Division missions called for the seizure of the four highway and railway bridges over the Aa River and WILLEMS VAART CANAL at VECHTEL; the seizure of the highway bridge over the WILHELMINA CANAL at ZON; and the seizure of EINDHOVEN and the main highway bridges over the streams in that city. The Division objectives were spread over a road distance of some fifteen miles."¹³

Because of the larger objective area and the fact that the 101st was closer to the 30th British Corps, Major General Maxwell D. Taylor (division commander) elected to insert a different combat power mix for his division on D-Day. Also, confronted by the same type of aircraft and glider restrictions that faced the 82d, the 101st inserted only 6,921 troopers in 424 planes and 53 gliders by 171430 September 1944. This force included three parachute infantry regiments, one battery of airborne artillery, a parachute engineer battalion(-), divisional headquarters troops, and support personnel. (See Appendix B)¹⁴

With approximately 500 fewer troops to insert on D-Day, much less artillery and no anti-tank guns, the 101st brought in more jeeps for mobility and more signal equipment to cover the long distances

involved. The risk involved in inserting less artillery initially was accepted based on the fact that any large amounts of known enemy armor would have to fight its way through both the British 1st and the U.S. 82d airborne divisions before attacking the 101st. Furthermore, the artillery of 30th Corps was expected to be able to support the 101st within 24 hours.

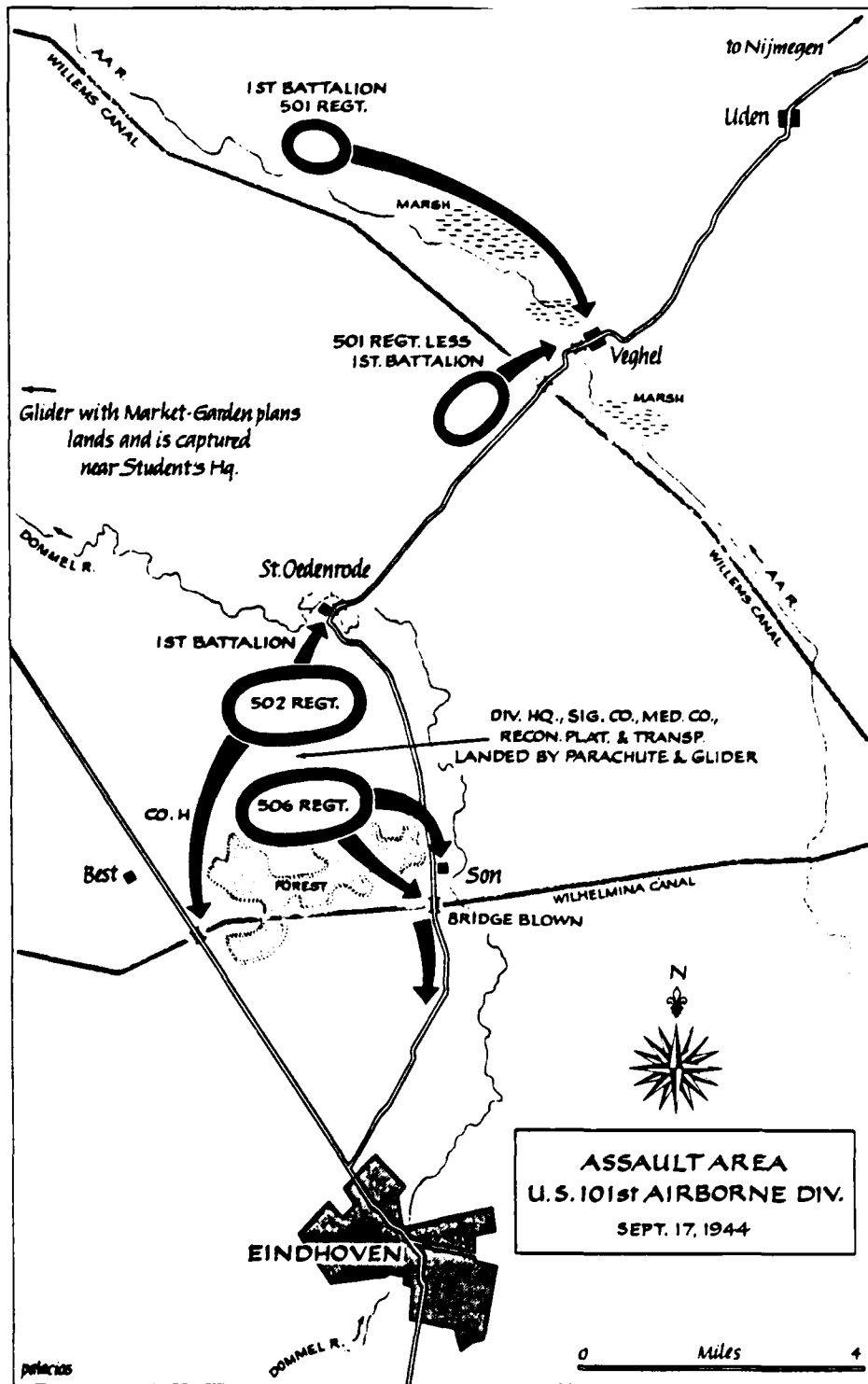
As D-Day closed the 101st had captured bridges at both St. Oedenrode (Dommel river) and Veghel (Aa river). Unfortunately, the Germans managed to retain and finally destroy all bridges over the Wilhelmina canal. The city of Eindhoven was captured the following day with its badly needed bridges over the Dommel river. Contact with the main attacking British force was effected at 181900 September (D+1).¹⁵

The failure to capture any bridges over the Wilhelmina canal held up the attack by 30th Corps until 0615hrs D+2 when a bridge was completed spanning the canal. The leading 30th Corps division (Guards Armored) linked up with the 82d at 0820hrs, D+2, at Grave. The advance to the lower Rhine was 38hrs late and the Germans still held the bridge at Nijmegen.¹⁶

It was not until 201830 September (D+3) that the bridge across the Waal River at Nijmegen was secured and tanks of 30th Corps (Grenadier Guards) were able to cross. Sadly for the overall plan, the bridge seized across the Lower Rhein by the 1st airborne division (BR) was recaptured by the Germans later that same evening. 30th Corps finally reached the river 221730 September.

The battle at the Rhein river would grind on until the early hours of 27 September when the 1st airborne (BR) retreated across the river into 30th Corps lines. The failure to retain the vital last

101st Airborne Division D-Day Assault Area



bridge doomed the entire operation. Both the 82d and the 101st had battled for ten days to capture and maintain their respective sectors in support of Operation MARKET. Yet, each division had failed to seize a key bridge in its sector on D-Day. Both divisions had committed three-fourths(+) of their infantry/engineers to assault objectives and failed on D-Day.¹⁷

In both the 82d and 101st areas of operations, failure to seize the key bridges may have been because of the inability to insert more combat power on D-Day. The initial shortage of combat power occurred because the glider borne elements (read airlanded elements today) could not land on D-Day. The reason was that the missions required quick and violent assaults by all available forces. Therefore, there were not adequate forces to secure the landing zones for the gliders. The second lack of combat power resulted from the divisions' TO&Es not having the needed AT weapons to fight and win against armored forces. The 82d failed to seize a bridge across the Waal river at Nijmegen because the 9th SS Panzer [Division] Reconnaissance Battalion arrived to defend both bridges. This arrival forced the lightly equipped paratroopers to try to dislodge the panzers without the proper weapons. These lessons learned carried forward to future TO&Es.¹⁸

III. 187th Airborne Regimental Combat Team Airborne
Operations: SUKCHON-SUNCHON, Korea
20 October 1950

When the Korean War started on 25 June 1950, the U.S. Army was a mere shadow of its former World War II strength. From ninety combat divisions in 1945 it was down to ten divisions (four in the U.S., two in Germany and four in Japan) and nine separate regimental combat

teams. One of these ten divisions was airborne. In conjunction with the new U.S. global policy of containing communism the airborne division, with its rapid mobility, was functioning as the nation's strategic reserve.¹⁹

The Joint Chiefs of Staff during the first few months of the Korean War were convinced that it was a prelude to a world wide effort by the Soviet Union for world domination. Thus, Korea was not the main target. Rather, Europe, with its vast skilled population and resources, was thought to be the main target. When General MacArthur requested an airborne regimental combat team with supporting airlift be allocated to the Far Eastern Command (FEC), it was approved, but not forwarded to Korea until September 1950. While some of the time lag was because of the problem posed by a shortage of shipping assets, most of it accrued from the need to retain a complete reserve as long as possible in case of a more serious conflict.²⁰

Beginning with the amphibious assault at Inch'on the war in Korea changed dramatically. Starting with the bold operational flanking maneuver at Inch'on, the Eighth (U.S.) Army counterattacked out of the Pusan perimeter north towards the Korean capital at Seoul. This attack quickly changed to a vigorous exploitation and finally a pursuit. The North Korea Army everywhere tried to break contact and escape to the north towards China.

The 187th RCT landed at Kimpo airfield between 24 and 27 September 1950. Serving as the General Headquarters (GHQ) reserve they continued training for airborne operations. Such an operation was quick to be ordered. General MacArthur decided to exploit the operational mobility of the RCT and insert it 35 road miles north of

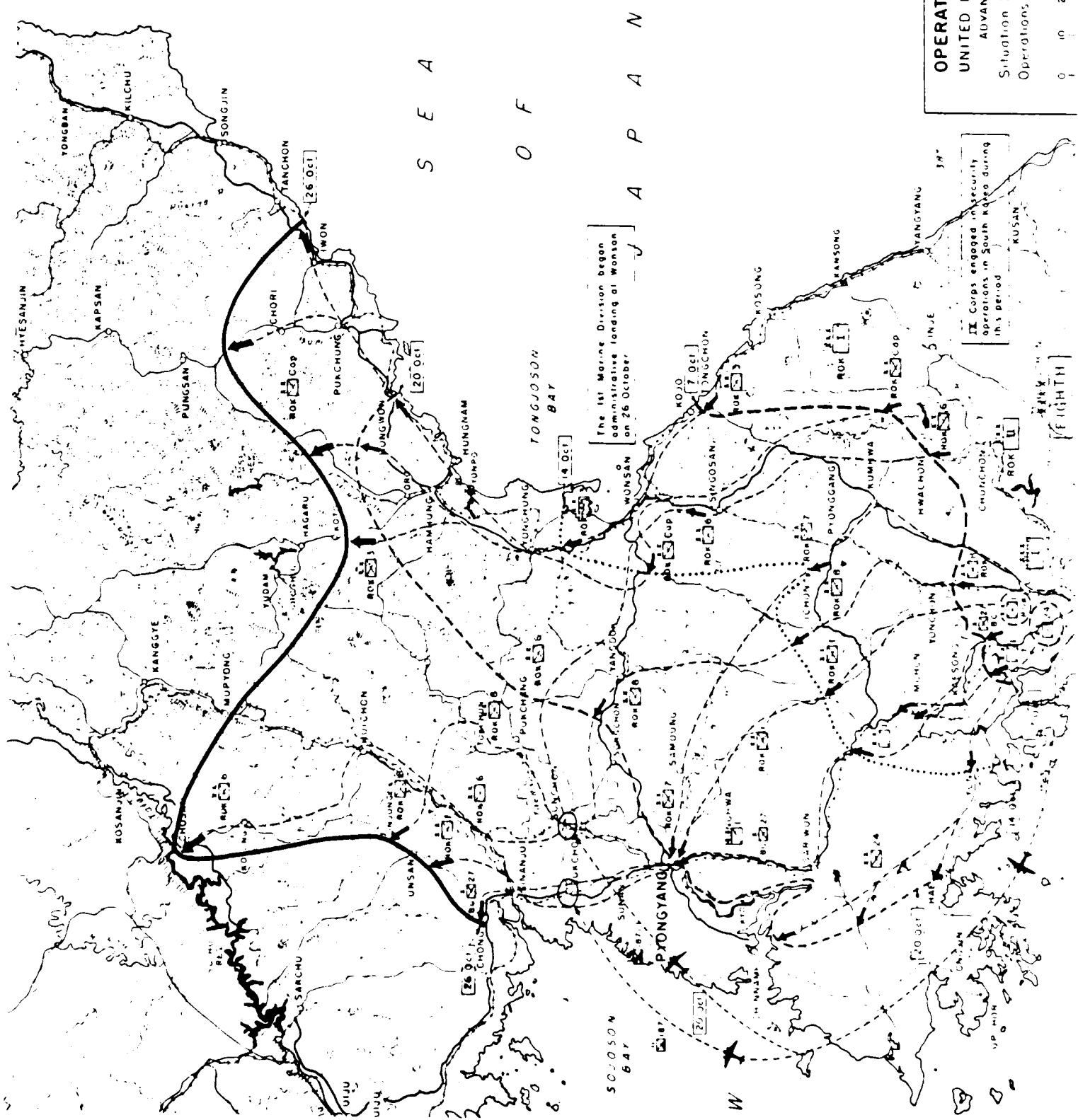
the North Korean capital of P'yongyang (also, the forward U.S. positions).²¹

The regimental missions as stated in the RCT order were to:

- "(1) Land by prcht H-Hour, D-Day, seize, occupy and defend SUKCHON-SUNCHON area.
- (2) Disrupt an MSR and loc to prevent en withdrawal to the N and passage of reinforcements and supply S in sector.
- (3) Capture important NK military and civilian officials.
- (4) Facilitate adv of friendly units.
- (5) Perform such POW liberation raids as can be accomplished without jeopardizing primary missions in par 2a (1), (2), and (3) above.
- (6) When contact is established rpt to CG 8th Army."²²

With the Eighth Army conducting a pursuit all across the Korean peninsula, the lack of accurate intelligence made planning the mission difficult. In fact, the date was changed several times. Finally, 20 October 1950 was selected. Even then, the operations order intelligence annex (#2) did not give the RCT commander any usable information about the enemy.

Colonel Frank S. Bowen Jr. (Cdr 187th RCT) led the jump into Drop Zone WILLIAM (SUKCHON) at 1400hrs. He was followed by regimental HQ, 1st and 3rd battalions, artillery, engineers and supporting troops. All assault objectives around SUKCHON were secured by 1700hrs. Objective SUNCHON was secured at nightfall by TF 2-187 which jumped into DZ EASY at 1420hrs. (See Appendix D) These two objectives were selected because they were the only places that road and rail LOCs led north out of P'yongyang.



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OPERATIONS IN KOREA
UNITED NATIONS OFFENSIVE
 ADVANCE TO MANCHURIA
 Situation 26 October 1950 and
 Operations Since 7 October

0 10 20 30 40 50 60

The 1st Marine Division began administrative landings at Wonsan on 26 October.

UN Corps engaged in security operations in South Korea during this period

EIGHTH

Unfortunately, the attack came too late. As the official history states, "The airborne troops had not cut off any sizable part of the North Korean forces....No important North Korean Army or government officials were cut off and killed or captured." Also, no allied POWs were recovered by the 187th RCT. Altogether, the RCT suffered 111 casualties (46 jump and 65 battle) and captured 3,818 North Koreans by the time it was pulled out of the objective area on 23 October.²³

Though the airborne assault was launched too late to be totally effective, the use of the 187th by GHQ FEC matched perfectly past airborne missions and helped confirm the need for future forces with similar missions. Three of the current eight specific missions for airborne units are:

1. Seize and hold via vertical envelopment vital objectives behind enemy lines until linking with supporting forces.
2. Serve as a strategic or theater reserve.
3. Conduct large scale tactical raids.²⁴

This airborne operation contained all three of these missions. Even though parachute forces were not used again to execute airborne assaults in the Korean War, they continued to support missions expected of them. They reinforced forward-deployed forces and at times served as a theater reserve. Interestingly, this particular operation matched one of the specified airborne missions of 1950 almost perfectly; "To delay a retreating enemy until the main force can overtake and destroy him. Such a mission can be accomplished by landing airborne units astride the enemy's route of retreat to demolish bridges, to destroy roads, to lay mines, to defend defiles, and to otherwise delay him."²⁵

IV. Comparison of the New Light Infantry Airborne TO&E
To the World War II, Korean and Just Dropped
H-Series TO&Es.

The divisions that executed Operation MARKET were suppose to operate under TO&E No. 71; dated 1 August 1944. However, based on the data available it would appear that neither the 101st nor the 82d were following the matrix below.

MATRIX FOR AIRBORNE DIVISION TO&E NO. 71 1 Aug 1944

	Foxhole		Grenade		Machinegun		Artillery		HMMV	
	Soldiers	Strength	Rifle	Launcher	SAW	Anti-Tank	Mortar	ADA	Vehicle	Motorcycle
Rifle Squad X 3	12	12	11	3	0	1	0			
Wpn Sqd X 1										
Rifle Plt. X 3	41	41	37	0	1	2	0	0	0	0
Rifle Co. X 3	164	164		0	0	3	0	3	0	0
Totals:										
Battalion, Abn.	583		554	81	0	45	21	13	0	0
Totals:										
Regiment, Abn X 1	1,968		1,890			136	73	39	0	0
Regiment, Gli X 2	1,554		1,346		36	23	89	36	0	0
Others										
Division Totals	8,165		7,733	729	72	277	506	111	40	50

ENDNOTE 26

Four reasons lead to this conclusion. First, no Browning Automatic Rifles (BAR) were authorized in the rifle squads. However, all squads went into combat with at least one and the 82d had two per squad.²⁷ Second, the TO&E lists the total number of troops authorized per airborne battalion as 583. However, the 82d averaged 615 jumpers per

battalion on D-Day. (See Appendix C) The TO&E also listed only one parachute regiment authorized per division, yet both divisions jumped three regiments on D-Day. Furthermore, the total number of troops listed for a parachute regiment was 1,968, but the 82d and 101st averaged 2,004 and 2,097 troopers respectively. Finally, the total number of troops authorized for the 1 August 1944 TO&E was 8,165. Both the 82d and 101st had already inserted 7,498 and 6,921 respectively on D-Day and still had not landed their last glider regiment, two-thirds of their artillery and the remainder of divisional troops. Therefore, I feel it would be more appropriate to study the 16 December 1944 TO&E. This more clearly depicts the structure of the parachute divisions.

MATRIX FOR AIRBORNE DIVISION TO&E NO. 71T 6 Dec. 1944

	Soldiers	Foxhole Strength	Rifle	Grenade Launcher	Machinegun SAW	Anti-Tank	Mortar	Artillery	ADA	MMW Vehicle	Motorcycle
Fire Team											
Rifle Squad X 3	12	12	10	3	1	0	0	0	0	0	0
Rifle Plt HQ X 3	5	5	4	0	0	1	2	0	0	0	0
Plt. Totals	41	41	34	9	3	1	2	0	0	0	0
Rifle Co HQ X 3	41	41	41	0	0	2	0	3	0	0	0
Co Totals	164	154	143	27	9	5	6	3	0	0	0
Rifle Bn. Abn. X 6	214	155	277	0	9	20	3	4	0	0	0
Totals: ***											
Battalion, Abn.	706	614	706	81	36	35	21	13	0	0	0
Battalion, Glider	863		775	81	45	24	32	18	0	0	46
Regiment, Abn X 2	246	157	241			8	12	0	0		24
Regiment, Glider X1	389		392			11	30	0	0		60
Totals:											
Regiment, Abn.	2,364	2,004	2,434	243	168	113	73	39	0	0	24
Regiment, Glider	2,978		2,667	243	162	83	126	45	0	0	198
Others	5,273	1,198	4,059			140	345	0			156
Division Totals	12,979	7,210	11,594	729	381	449	621	123	60	36	781

ENDNOTE 28

*The Glider battalions are inserted to show the complete combat make up.

The 6 December 1944 TO&E appears to be the one in use by both divisions. As in other times in Army history, Army headquarters lagged

behind what was happening in the field concerning the evolution of TO&Es. This is understandable since the airborne TO&E and doctrine were constantly evolving as combat lessons came to light.

Using the lessons learned from World War II the Army quickly devised and fielded a new TO&E for its airborne forces. The following matrix covers the important combat figures for the TO&E used during the Korean War.

MATRIX FOR 187TH AIRBORNE REGIMENTAL COMBAT TEAM TO&E No. 7

	Soldiers	Foxhole Strength	Rifle Launcher	Grenade Launcher	SAW	Machinegun	Anti-Tank	Mortar	Artillery	ADA	MMV Vehicle	Motorcycle
Fire Team	5	5	5	2	0	0	0	0	0	0	0	0
Rifle Sqd. X 3	9	9	8	3	1	0	0	0	0	0	0	0
Wpn Sqd X 1	9	9	7	0	0	1	1	0	0	0	0	0
Rifle Plt HQ X 3	5	5	5									
Plt. Totals	41	41	36	9	3	1	1	0	0	0	0	0
Rifle Co HQ X 3	54			0	0	1	5	3	0	0	3	0
Co. Totals	177		150	27	9	4	8	3	0	0	3	0
Rifle Bn. Abn. X 3	346		346	0	18	9	9	4	0	0	23	0
Regiment, Abn.	745	366	527	0	0	19	15	8	0	0	61	0
Totals:												
Battalion, Abn.	877	744	797	81	45	25	33	13	0	0	32	0
Regiment, Abn.	3,376	2,598	2,768		135	94	128	47	0	0	253	0
RCT Totals	4,368	3,102							12	8		
Others												
Division Totals	17,490		14,569	729	421	593	765	149	84	24	2,078	9

ENDNOTE 29

First, the airborne units were getting more men, firepower, and support. Most of the increase was at battalion and higher levels. At the company level anti-tank firepower increased by 25%. Mobility and sustainability increased with the addition of three 1/4 ton jeeps. The battalion level showed even more increases. Squad automatic weapons (SAW) increased by 20%, anti-tank weapons by 36%, and a total of thirty two jeeps or weapons' carriers were added. The only decrease was a 29% reduction in machineguns. Most of this reduction came at

battalion level. Only one machinegun was dropped from each line company. All of this new combat power added 171 troops to the rifle battalion.

At the regimental level, 499 more troops filled the rolls. Extensive enlargement at regiment increased machineguns by 58%, anti-tank weapons by 20%, mortars by 17%, and vehicles (jeeps/weapon carriers) by an immense 1054%. A great deal of the vehicle enlargement came with a new medical company and a much larger service company. As the airborne regiment expanded to gain more combat power, the ability to deploy on wider frontages and conduct independent missions became a more viable concept.

This trend in growth also applied to the divisional base. The experiences of airborne forces in World War II showed that they fought as infantry long after link-up in both Normandy and Holland. When this experience was coupled with an airborne mission of "reinforcing forward-deployed forces," aggregate strength increased from 12,979 to 17,490. Two battalions of tanks were added and artillery tubes jumped by 29%, including twelve non-airdropable 155mm howitzers.

The potential to insert combat power on D-Day of an airborne assault became greater with the stronger T0&E. Part of the increase came from improved aircraft capability and airdrop techniques. If the 187th (1950) and 504th (1944)(82d) drops are used as examples, the following comparison of the two T0&Es can be made.

1. Giving the 504th (1944) its "share" of the 82d "MARKET" D-Day drop means that it needed 167 planes and gliders to bring in its troops and equipment. This came to 2,299 troopers, a howitzer battery (4 howitzers+4 jeeps), an anti-tank platoon(+), and 23 tons of ammunition.³⁰

2. The 187th (1950) used 115 planes to try to insert 3,102 troopers, a FA battalion (12 howitzers+12 jeeps), half the regimental support company, and 42 tons of ammunition.

Thus, the larger 1950 TO&E allowed for more combat power to be available when and where it was needed. This consideration is very important because of the specialized nature of airborne troops, equipment and entry into combat. Unlike regular combat units, it is difficult or even impossible to task organize extra combat power that is not airborne qualified.

During the years after the Korean War the Army made several TO&E changes to its airborne forces. The last two will now be examined. MTO&Es will be examined instead of straight TO&Es because this is what the field forces were and are now using. Documentation that is on hand will be used to support such an examination.

The first is the H-series MTO&E which lasted from 1970 until 1986. The following matrix breaks down its major combat power elements.

MATRIX FOR AIRBORNE DIVISION MTO&E 7-17H

	Soldiers	Foxhole Strength	Rifle	Grenade Launcher	SAW	Machinegun	Anti-Tank	Mortar	Artillery	ADA	MMV Vehicle	Motorcycle
Fire Team	5	5	4	1	1	0	0	0	0	0	0	0
Rifle Sqd. X 3	11	11	9	2	2	0	1	0	0	0	0	0
Rifle Plt. X 3	9	9	5	0	0	2	0	0	0	0	0	0
Plt. Totals	42	42	33	6	6	2	3	0	0	0	0	0
Rifle Co HQ X 3	28	28	12	0	0	0	0	3	0	0	7	0
Co. Totals	154	130	111	18	18	6	9	3	0	0	7	0
HMC & CSC X 1	270	136	209	15	0	12	15	4	0	0	54	3
Battalion totals	732	526	542	69	54	30	42	13	0	0	75	3
HMC & TOW Co X 3	211	100	160	8	0	3	18	0	0	0	42	0
Brigade totals	2,400	1,678	1,782	215	162	93	144	39	0	0	267	9
Others												
Division totals	16,575		13,711	1,410	644	780	462	117	54	136	1,718	99

DIVISION ALSO HAS:
M551 SHERIDAN
AH1S
UH1H
OH-58C
EH-60A

54 ARMOR BN
48 ATK BN=21, CAV=27
90 ASSAULT CO=45, CAV=21, GS CO=24
74 CAV=30, ATK BN=13, GS CO=31
3 GS CO=3

ENDNOTE 31

While retaining the basic structure of the 1950 TO&E, the H-Series TO&E contained 915 fewer soldiers. At the same time it increased the airdroppable combat power of the division from squad up to division level. In the rifle companies the SAWs, machineguns, anti-tank weapons, and jeeps all increased 100%, 50%, 12%, and 58% respectively. This was coupled with a reduction of 25 troop spaces. The cumulative totals at battalion also showed increases: SAWs (17%), machineguns (17%), anti-tank weapons (21%), and jeeps (117%). The total loss in troop slots for the battalion was 145 (-16.5%).

When the Army abandoned the regimental system and adopted the brigade headquarters as a command and control headquarters, a major change occurred in the combat power concentrated at brigade level. With all the service troops and most of the combat troops gone, troop strength, exclusive of the battalions, fell from 245 to 211. The only increase was in anti-tank weapons which went from 15 to 18 (16.7%). The biggest loss was from 8 mortars to 0.

The total brigade figures were 976 fewer troops, 16% more SAWs, 1% fewer machineguns, 11% more anti-tank weapons, 17% fewer mortars, and a 5% increase in jeeps. These changes reflected the world threat trends towards more mechanization.

The combat power changes at the division level become harder to quantify for two reasons. First, the H-Series had only one armor battalion whereas the 1950 TO&E had two full medium-tank battalions.

The difference was that the H-Series battalion was airdroppable. The H-Series also gained 215 helicopters verses 1 helicopter and 17 fixed wing aircraft in the 1950 TO&E. The problem is that unless the airborne assault is close enough and the air threat low enough, the helicopters cannot arrive on D-Day, since they must be landed by Air Force transports or self-deploy.

Ignoring for the moment the differences noted above, the resultant changes to the H-Series division were:

Division Level Comparison of 1950 to H-Series

	<u>SAW</u>	<u>MG</u>	<u>AT</u>	<u>Mortar</u>	<u>Arty</u>	<u>ADA</u>	<u>Vehicle</u>
% Change from 1950 to H-Series	+35	+24	-40	-21	-29	+560	-17

Several of these categories need explanation. A drop in anti-tank weapons is indicated, but it is not as large as it seems. Of the total 765 anti-tank weapons in the 1950 TO&E 615 were either 2.36in (81ea) or 3.5in (534) rocket launchers. By the time the H-Series took effect the Light Antitank Weapon (LAW) had entered the inventory and helped to cover the ground that a portion of the 615 rocket launchers had been issued to cover. LAWs will not be examined because they are treated as a round of ammunition rather than a weapon. Every trooper could be issued two LAWs in this monograph and run the anti-tank total up, but rounds of ammunition are not what this study is about.

The advent of jet aircraft meant that more specialized weapons were needed in the anti-air role. The H-Series met this requirement with an increase in the ADA weapons. However, a 560% increase is really not a true increase. Both the 1944 and 1950 TO&Es depended more

on USAF air superiority and organic weapons and less on specialized ADA weapons.

Just as the 187th was able to insert greater combat power with fewer aircraft, the H-Series brigades and divisions were capable of the same. The U.S. has not combat dropped an airborne unit since Korea. Because of this lack of drops, planning figures to compare for the H-Series are based on standing operating procedures found in the 82d Airborne Division RSOP. These planning factors are "no notice" planning guidelines for force planners. The concept is that the force packages are designed to conduct forced entry operations against "generic" threats in low to mid-intensity environments and to be quickly tailored for a specific crisis. Force packages are not designed for employment in high intensity environments as "go to war" packages, but tailored according to the factors of METT-T to accomplish specific missions.³²

1. The 187th planned 115 planes to insert 3,102 troopers, a FA battalion (12 howitzers+12 jeeps), half the regimental support company, and 42 tons of ammunition.
2. Using a 'Generic' tailored brigade force package 2,159 troopers, an FA battalion(-) (12 howitzers+14 prime movers and 2 trailers), an ADA platoon (18 stingers), an engineer company(-), combat service support, and 153 tons of ammunition/equipment can be airdropped. This force uses 100 C-130 aircraft (35 for troops & 65 for heavy drop).
3. A division drop would insert 6,840 troops, 268 vehicles, 122 trailers, 12 Sheridan tanks, 36 howitzers (105mm), 474 tons of ammunition/equipment and 4,500 gallons of fuel. It would use either 301 C-130E aircraft (107 for troops and 194 for heavy drop) or 143 C-141B aircraft (55 for troops and 88 for heavy drop).³³

These H-Series combat power figures compare very favorably with the historical studies. The 82d used 532 aircraft and gliders to

attempt to insert 7,498 troops, 30 jeeps, 8 anti-tank guns, 70 tons of supplies, and 12 howitzers. The 101st used 506 aircraft and gliders to try to insert 6,921 troops, 45 jeeps, about 80 tons of supplies and 6 howitzers. The difference highlights the vast amount of combat power the H-Series TO&E could project just with an airborne assault. The numbers of vehicles alone help shape the battle. Not only do they carry ammunition, heavy weapons, communications gear, and supplies, but they also allow more ammunition and supplies to be heavy dropped into the objective area. To be air dropped, equipment must have a minimum weight and can have a maximum weight. Once rigged at their minimum weight the following vehicles can have the noted pounds added to the package.

- 1) 1/4 ton jeep: 300lbs. inside & 550lbs. on the platform.
- 2) 5/4 ton Gama Goat: 2500lbs. inside.
- 3) HMMV: 2000lbs. inside.
- 4) 1/4 ton trailer: 500lbs inside & 1818lbs. on the platform.³⁴

This allows more supplies to be dropped into the objective area without using more aircraft. I now arrive at the current MTO&E, the L-Series. The matrix which follows gives a good idea of what combat power is now on hand in the airborne division.

MATRIX FOR AIRBORNE DIVISION MTO&E 7-36L

	Soldiers	Foxhole Strength	Rifle	Grenade Launcher	SAW	Machinegun	Anti-Tank	Mortar	Artillery	ADA	HMMV Vehicle	Motorcycle
Fire Team	4	4	3	1	1	0	0	0	0	0	0	0
Rifle Sqd. X 3	9	9	7	2	2	0	0	0	0	0	0	0
Wpn Sqd X 1	9	9	1	0	0	2	2	0	0	0	0	0
Rifle Plt HQ X 3	3	3	3	0	0	0	0	0	0	0	0	0
Plt. Totals	39	39	31	6	6	2	2	0	0	0	0	0
Rifle Co HQ X 3	15	15	7	2	0	0	0	2	0	0	0	0
Co. Totals	132	132	103	18	18	6	6	2	0	0	0	0
MHC & AT Co. X 1	293		254	43	18	5	20	4	0	0	29	15
Battalion totals	697		518	103	72	23	38	10	0	0	54	15
Brigade X 3	88		75	4	0	3	0	0	0	0	16	0
Brigade totals	2,155		1,764	313	216	72	114	30	0	0	193	0
Division totals	12,788		10,970	1,128	867	703	432	90	54	87	2,185	137

DIVISION ALSO HAS IN CAB:

AH-64	30ea	ATK BN=18 & CAV=12
UH-60	38ea	ASSAULT CO=15X2 & CAV=8
OH-58	43ea	HHC=12, ATK=13, CAV=18
EH-60	3ea	Cav=3

ENDNOTE 35

Comparison with the H-Series shows that the L-Series has the following changes: at rifle company level, 14% fewer troops, 33% fewer anti-tank weapons, 33% fewer mortars, and no vehicles. At battalion the overall changes are: 5% fewer troops, 32% more grenade launchers, 25% more SAWs, 13% fewer machineguns, 10% fewer anti-tank weapons, 23% fewer mortars, and 28% fewer vehicles. For the division as a whole the differences come to a 13% decrease in troops, 20% decrease in grenade launchers, 26% increase in SAWs, 10% decrease in machineguns, 7% decrease in anti-tank weapons, 13% decrease in mortars, and a 36% decrease in ADA assets. The armor battalion was also dropped from the MTO&E.

The L-Series is just now being implemented in the 82d and the new planning figures for an airborne assault are still evolving; however, using old H-Series RSOP figures to estimate what a L-Series battalion level drop would consist of, reveals the following:

1. All personnel in the rifle companies can jump on D-Day.
2. This gives the battalion 2.6% more of its total troops on the DZ on D-Day. (Remember though that L-Series battalions are smaller by thirty-five soldiers)

3. Less ammunition, supplies, and no long range radios will accompany companies. The reason is that no vehicles are authorized. Less ammunition, and supplies, will accompany battalions because HMMWVs are replacing JEEPS and no trailers are authorized. This is because the HMMWV takes up the same space as a JEEP and trailer when rigged for heavy drop. Therefore, if the HMMWV brings in 2,000lbs. verses JEEP and trailer of 3,168lbs. every vehicle dropped means 1,168lbs. less ammunition and supplies.

V. Analysis

When analyzing the data presented the original aim must be remembered: the intent of this monograph is to examine whether the airborne division still retains its ability to conduct successful forced entry missions with the new Light Infantry L-series TO&E. I will begin with the rifle battalion because it has always formed the backbone of the airborne division.

Below are the percentages of D-Day jumpers at battalion from 1944 to 1986 as given in the historical records and the 82d RSOP. This chart gives a good point to begin the final comparison.

Troops Inserted At Battalion Level

Series	TO&E Totals	Total Jumpers	Percentage of Bn Jumping
1944	706	614	87
1950	877	744	84
H	732	526	72
L	696	526	76

* See Appendix C for a breakdown of the 1944 figures.

During the assaults examined in 1944 and 1950 the battalions were jumping against a real threat and were organized to defeat a specific enemy and complete the mission. The percentages are higher

because they needed every soldier they could muster. Also, their heavy weapons were all man portable and labor intensive. This is not the case for the generic 1985 and 1986 plans.

With an L-Series battalion drop the first problem is that the battalion commits all of its line infantry, even using the planning "generic" packages.

Rifle Company Drop Figures as per Airborne RSOP

<u>Series</u>	<u>#Jumpers</u>	<u>Mortars</u>	<u>Anti-Tank</u>	<u>Vehicles</u>
H	130 of 154	3 of 3	9 of 9	1 of 7 JEEP w/trl
L	132 of 132	2 of 2	6 of 6	0

At the company level there are no additional soldiers to deploy if more infantry is needed. Associated with this shortage of troops is the fact that these companies have 33% fewer mortars and anti-tank weapons and no transportation/long range radios. The rifle company is also short the 3,168lbs. of ammunition and supplies that would have arrived with its vehicle. Finally, the mortar section and rifle platoons must carry the company's mortar rounds, AT rounds, mines, etc. or do without them.

The L-Series battalion commander can influence the action only by deploying his AT company, mortar platoon or scout platoon. Granted this was all the H-Series commander could do, but he had not lost one infantrymen from every rifle squad, sixteen soldiers from every company headquarters/weapons platoon, and five scouts and all vehicles from his reconnaissance platoon. It should be noted that all members of airborne rifle companies are expected and trained to jump and fight as infantry if required. The ability to deploy those sixty-six

infantrymen, nine Dragons, three mortars, and twenty-four vehicles will be sorely missed on D-Day by the L-Series battalion commander.

When the brigade and division commanders examine their L-Series combat power they have to wonder if lighter represents a good decision. The brigade commander now has three smaller and less mobile battalions. To fight the increasingly tougher armored forces of the world, these battalions have fewer direct and indirect fire weapons. In fact, brigade lost its best ability directly to influence the antiarmor battle when the brigade TOW company failed to survive the transition from H to L Series. The rifle battalion AT companies gained the TOWs lost at brigade, but loss of a completely trained and equipped separate antiarmor company will hamper the higher commander's flexibility to thicken the critical point of the battle. Doctrine (FM 7-30, Infantry, Airborne, and Air Assault Brigade Operations) states that with more than one armored avenue into the brigade sector some antiarmor reserve should be maintained.³⁶ This reserve must now come from the line battalions.

With the loss of 7% of the division's anti-tank weapons (all in the rifle battalions), the additional deletion of the armor battalion heavily degrades the division's antiarmor defense. Without question there must be some re-evaluation of FM 71-101, Infantry, Airborne, and Air Assault Division Operations, since it states:

"If there is more than one mounted avenue of approach into the area of operation the armor battalion should be held into reserve until the location of the enemy main effort is determined."³⁷

Because the three brigade TOW companies are broken up and the light armored battalion is deleted, the airborne division must depend

on infantry battalion TOWs to function as its "mobile" anti-tank reserve. The only other help comes when the attack helicopters arrive in the objective area. Not knowing when or if the attack helicopters will arrive, infantry battalions face the prospect of both brigade and division pulling vital TOW assets to form an antiarmor reserve. These are the same rifle battalions that lost 10% of their anti-tank assets when they became L-Series units.

Simultaneous with the world wide expansion of armor forces and loss of thirty AT weapons systems is the 36% decrease in division air defense weapons. The airborne assault is to start only when local air superiority is achieved. But nobody said the U.S. Air Force was perfect or the enemy totally incompetent. From the moment the drop zone(s) and objective area are recognized as a threat, the enemy will try to reduce them. One of the quickest ways to begin is with fixed wing and helicopter aircraft. The divisional objective areas for the 82d and 101st on D-Day were nine miles X nine miles and eight miles X fifteen miles, respectively. Even today these are large areas for twenty-seven Vulcans and sixty Stinger teams to cover. Doctrine now calls for "Air defense batteries [to] enter the airhead early to provide air defense for drop zones...and other critical division installations."³⁸

One thing that has not been discussed is the effect that losses might have on the mission. The figures from the historical studies indicate that a great deal of combat power might fail to get from the departure airfields to the drop zone(s).

Loss Percentages

<u>Unit</u>	<u>Troops</u>	<u>Equipment</u>	<u>Supplies</u>
82d	.5%	8.0%	4%
101st	2.5%	24.3%	11%
187th	14.0%	25.0%	12% 39

While these losses vary greatly, history establishes that both the 1944 and 1950 operations took place with total air supremacy by the U.S.. These, of course, are only losses suffered by the above units getting to the drop zone(s) on D-Day. Weather, maintenance, friction, and luck seem to strike airborne units harder than most others. With the L-Series TO&E, nominal losses of 10% would be extremely hard to absorb. Losses of 20% might well endanger the mission.

Bde Loss Projections At 15%(remaining)

<u>TO&E</u>	<u>Troops</u>	<u>MG</u>	<u>AT</u>	<u>Mortars</u>	<u>Vehicles</u>
1944	2,364	113	75	39	0
1950	3,376	94	128	47	253
H	2,400 (2,040)	93(79)	144 (122)	39(33)	267(227)
L	2,155 (1,832)	72(61)	114 (97)	30(26)	193(164)

*All numbers outside() are 100% TO&E, not drop numbers.

The H-Series, conversely, could absorb 10% to 20% losses and still be close to or above the L-Series(at full strength) in mortars, anti-tank weapons, machineguns, and vehicles. Of course, it is difficult really to predict loss rates because there are so many variables. Nevertheless, it is very easy to see that after possible

losses the L-Series brigade is low in combat power even when compared to the 1944 and 1950 TO&Es.

I will now summarize the data from all studied TO&Es. This will cover rifle company to division. Although I am specifically comparing the L-Series with the H-Series, I also show the trend by comparing them both to the 1944 and 1950 cases.

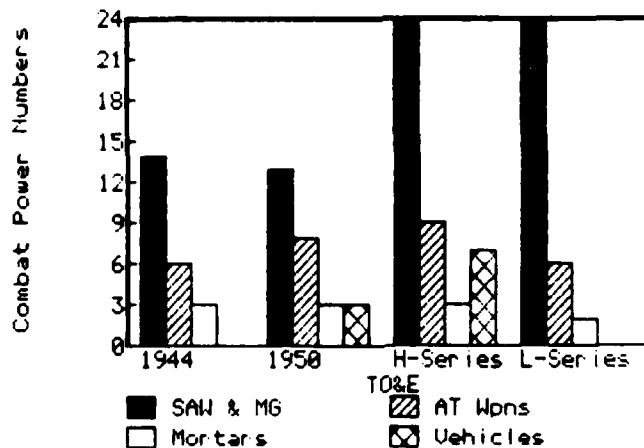
1) Company Level Changes (H to L)

- Rifle squads are smaller by one trooper.
- One AT weapon was deleted from every platoon.
- Company HQs and mortar platoon lost sixteen soldiers.
- Mortar platoon lost one mortar and reduced to section status.
- Company lost seven vehicles. This loss meant that 3,168lbs. of ammunition and supplies per vehicle and trailer could not be inserted.

Totals

TO&E	Soldiers	SAW&MG	AT Wpns	Mortars	Vehicles
1944	164	14	6	3	0
1950	177	13	8	3	3
H-Series	154	24	9	3	7
L-Series	132	24	6	2	0

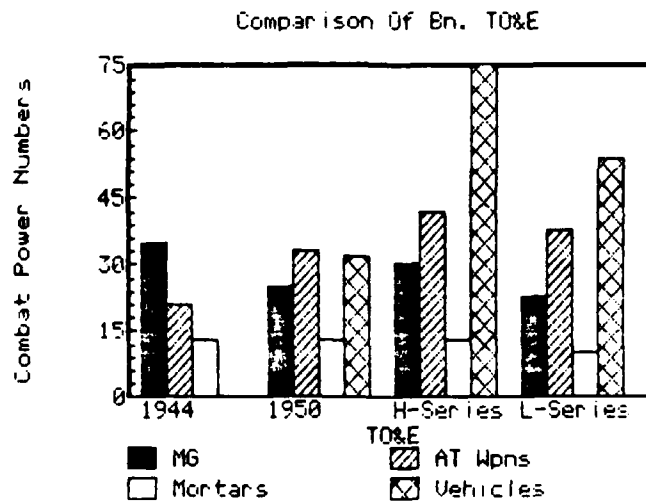
Comparison Of Co. TO&E



2) Battalion Level Changes (H to L)

- Reconnaissance platoon lost five scouts, three AT weapons and all vehicles.
- Gained eight AT weapons from brigade TOW Co.
- Lost seven machineguns.
- Thirty-five troop slots dropped.

TO&E	Total				
	Soldiers	MG	AT Wpns	Mortars	Vehicles
1944	706	35	21	13	0
1950	877	25	33	13	32
H-Series	732	30	42	13	75
L-Series	697	23	38	10	54



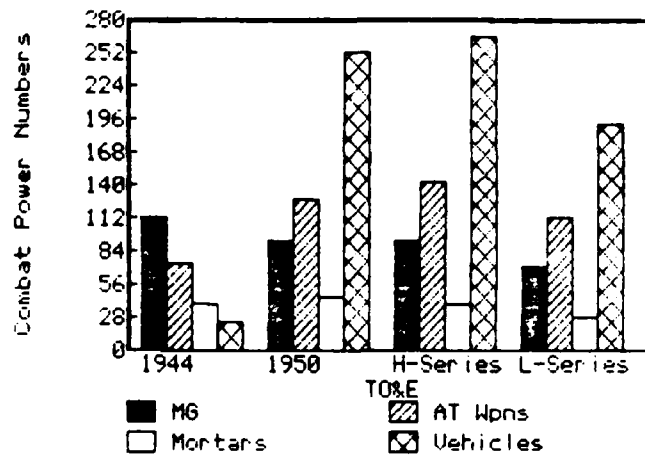
3) Brigade Level Changes (H to L)

- Lost separate TOW company.
- Lost AT reserve at brigade level.

Total

TQ&E	MG	AT Wpns	Mortars	Vehicles
1944	113	73	39	24
1950	94	128	47	253
H-Series	93	144	39	267
L-Series	72	114	30	193

Comparison Of Regt/Bde

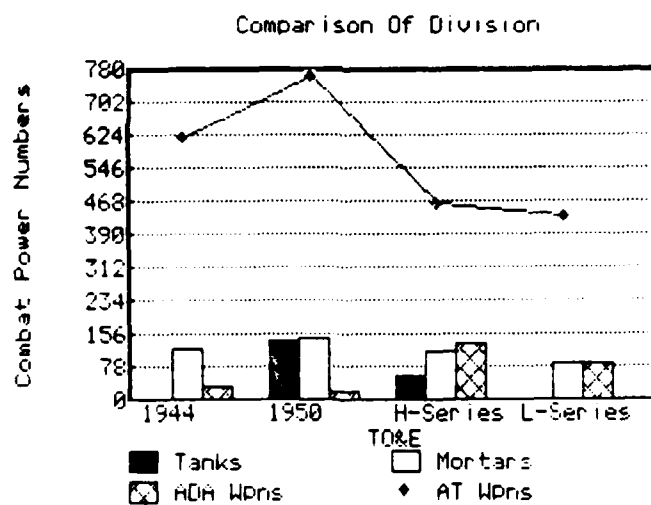


4) Division Level Changes (H to L)

- All armor was removed.
- ADA systems were reduced by forty-nine.
- Except for helicopters no armor defeating maneuver reserve was retained in the division base.

Total

TO&E	Tanks	AT Wpns	Mortars	ADA Wpns
1944	0	607	123	36
1950	142	765	149	24
H-Series	54	462	117	136
L-Series	0	432	90	87



Conclusion

As the analysis reveals, there are today fewer fighters, mortars, AT weapons, ADA weapons, tanks, and vehicles in the L-Series airborne division from company to division level than in the H-Series. Furthermore, the loss of vehicles implies a critical difference in ammunition and supplies dropped on D-Day, a severe loss of mobility for mortar sections, and less effective communications (with no vehicle mounted radios for rifle companies).

Brigade and division commanders now face a greater armored threat, coupled with greater air threats attacking the airborne assault quicker than ever before. At the same time, the armor battalion has been deleted and the number of ADA weapons reduced by 36%. Thus, the division tactical flexibility is reduced.

From the historical examples, it is easy to see that operations conducted by airborne forces face all of the problems and dangers that any other infantry unit experiences. When the execution of an airborne forced entry mission is added to the uncertainty of war, these are multiplied. First, the battle itself is located beyond friendly ground forces. Yet to be successful and not destroy the airborne force there must be a quick link-up; something that failed to happen during Operation MARKET. Second, the element of surprise is of incalculable importance. The objective(s) must be secured before the enemy has a chance to react. After all, the airborne unit is working behind the enemy's lines without the normal support afforded to attacking or defending American infantry. This means that there is less margin for

error. The last thing that a airborne assault needs is to have limited tactical options because of its TO&E even before the mission starts.

The 82d and 101st airborne divisions both failed to achieve all their D-Day assault objectives. These failures, coupled with other tactical mistakes made at the same time, ultimately meant failure for Operation MARKET-GARDEN. The key to remember concerning Operation MARKET was that this was only the second multi-divisional drop conducted by the U.S. Army. All airborne operations by the U.S. Army in Europe prior to the Normandy invasion had been regimental and division (minus) size. There was hardly any experience upon which the War Department could base a TO&E. Nevertheless, the airborne commanders knew that the current TO&Es were incapable of supporting the missions given to the divisions. This belief was reflected in the mismatch between the August 1944 TO&E and the combat power that both the 101st and 82d inserted into Holland during Operation MARKET. The disregard for the August 1944 TO&E (which was in effect) was possible because almost three divisions of airborne troops were in Europe from which to draw extra combat power. Today the Army only has one airborne division, a ranger regiment, and three separate battalions of airborne troops to use for planning. Even worse, this small amount is scattered from Alaska to Italy. Being under three major commands (Forces, Southern and European) these forces are not very supportive of short notice airborne assaults.

The 1950 TO&E continued the trend towards giving the airborne units more combat power. The lessons from World War II showed that once on the ground the parachute units needed the soldiers, weapons, mobility, communications, and supplies to fight the battle against

armored forces from the very beginning of the airborne assault. Certainly during Operation MARKET the 82d and 101st might have secured all their objectives on D-Day if more troops had reached objectives quicker and with the necessary weapons to fight armored forces. While the 187th RCT in Korea did not fight a high intensity battle, the frailness of the operation surfaced in the fact that only 86% of the jumpers, 75% of the howitzers, 75% of the jeeps, 50% of the AT guns and 88% of the ammunition slated for insertion on D-Day actually arrived in the objective area.

The H-Series TO&E continued the trend of providing more airdroppable combat power to the airborne company and battalion. Company and battalion levels increased in SAWs, machineguns, anti-tank weapons, and vehicles and stayed the same with mortars. However, the change from 1950 TO&E to H-Series reduced overall combat power at regiment and division levels. Two tank battalions and the only 155mm artillery battalion (neither of which was airdroppable) were deleted. Also, the combat power in the 1950 TO&E regimental support company was dropped. Thus, from the December 1944 TO&E to the H-Series the trend was to add combat power at the company and battalion levels while reducing combat power at regiment and division levels.

The L-Series TO&E reversed this trend towards strengthening the combat power of the airborne division. There is no apparent rationale for the decreases. The threat did not get any weaker. "Third World nations everywhere are increasingly heavily armed. The heavy threat is great, even in areas thought of as infantry country. North Korea has 2,800 tanks, Cuba has 540 and Vietnam has 2,500. One-third of the Nicaraguan army is mechanized."³⁹ Technological breakthroughs did not

give the L-Series new weapons to compensate for this reduction in strength.

There has been no published analysis of what it takes in terms of combat power to conduct forced entry missions. Studies of past missions and TO&Es give some idea but nothing conclusive. However, it does not seem prudent to decrease the amount of combat power as does the L-Series TO&E, particularly when faced with the same (or even an increasing) threat as the H-Series and with no major technological advances. Furthermore, even compared against the 1944 and 1950 TO&Es the L-Series has fewer mortars, AT weapons and machineguns. These are vital weapons to infantrymen who cannot depend on the normal artillery, armor, ADA, etc. that comes with fighting in a main battle area.

This monograph did not ascertain the minimum combat power that is needed for airborne units to conduct forced entry missions. Nevertheless, the decision to change from the H to L-Series TO&E in the face of historical trends and in view of increased world wide enemy threats, which are only becoming more sophisticated, leaves serious doubt as to whether the L-Series division can respond to the full spectrum of forced entry combat.

Returning to the eight specific missions that are given to the airborne forces, we find some that may not be possible to complete.

1. Seize and hold via vertical envelopment vital objectives behind enemy lines until linking with supporting forces.
2. Exploit the effects of nuclear or chemical weapons.
3. Rescue U.S. nationals besieged overseas.

4. Reinforce forward-deployed forces (if augmented with transportation).
5. Serve as a strategic or theater reserve.
6. Conduct large scale tactical raids.
7. Occupy areas or reinforce friendly or allied units beyond the immediate reach of ground forces.
8. Capture one or more intermediate staging bases or forward operating bases for protracted ground/air operations.

Against soviet troops or well-trained, armed, and motivated Soviet surrogates, missions one, five, and eight might need to be deleted or modified. Given the lesser combat power available to the L-Series at the departure airfield, friction and luck alone might kill any chance for success based on historical loss rates. Even worse, the L-Series division has bet its likelihood of mission completion against armor on a piece of equipment (the helicopter) that cannot be airborne assaulted into the objective area. The attack helicopter is the only division level asset that is capable of reacting to, attacking, and defeating enemy armor quickly. The 1944 TO&E had this problem in Holland. The glider regiment could not land until landing zones had been secured for it. Then because of bad weather the regiment was delayed for four days before getting into combat. Weather might or might not delay the introduction of helicopters, but one can think of any number of reasons for delays.⁴⁰

If forced entry is not feasible, what could the Army do? First, it could change the missions expected of the airborne division. This would have national policy implications. Or, the L-Series TO&E could be strengthened with more combat power. Examples might include:

1. Go back to one anti-tank weapon per squad and ten soldiers in a rifle squad. Retain the weapons squad.
2. Give the rifle company a mortar platoon with three tubes and at least one vehicle.
3. Issue the rifle company HQ two more vehicles.
4. Give the Scout platoon some mobility besides boots and some type of armor defeating weapon.
5. Give the Brigade commander some maneuver force at his level to weight the anti-tank battle.
6. Insure that the division commander has some airdroppable combat force that he can influence the armor battle with in a major fashion.
7. Add more air defense weapons to the division base to fight helicopters that can function even with friendly air superiority.

Option two appears to be the only real possibility. National policy appears to require that the Armed Forces support foreign policy decisions, but without stationing more troops overseas. The Army also needs an airborne division in its inventory in case of war for the flexibility the division gives a Theater Commander. Therefore, the Army needs to stop the changeover in progress with the L-Series. It should then attempt to get the airborne division back closer to the H-Series. This will return more combat power and mission capability to the division.

APPENDIXES

TASK ORGANIZATION

- I. 82D Airborne Division
- A. 504th Prcht Inf Regt
 - B. 505th Prcht Inf Regt
 - C. 508th Prcht Inf Regt
 - D. 325th Gli Inf Regt
 - E. DivArty
 - 1. 319th Gli FA Bn
 - 2. 320th Gli FA Bn
 - 3. 376th Prcht FA Bn
 - 4. 456th Prcht FA Bn
 - F. 80th A/B AA Bn
 - G. 307th A/B Engr Bn
 - H. 407th A/B QM Co
 - I. 307th A/B Med Co
 - J. 782d A/B Ord Co
 - K. 82d Sig Co
 - L. Prcht Maint Co
 - M. Recon Plt
 - N. MP Plt 41
- II. 82d A/B Division D-Day Units Inserted and How
- A. 82 A/B HQ
159 troops/7 Jeeps
9ea C-47 A/C + 12ea Gliders
 - B. Div Air Spt Party
2ea Gliders
 - C. 504th Prcht Inf Regt
1,953 troops
135ea C-47 A/C + 2ea w/Pathfinders
 - D. 505th Prcht Inf Regt
2,139 troops
126ea C-47 A/C
 - E. 508th Prcht Inf Regt
1,919 troops
130ea C-47 A/C
 - F. 325th Gli Inf Regt
40 troops
2ea C-47 Pathfinders
 - G. DivArty
 - 1. DivArty HQ
30 troops
3ea C-47 A/C
 - 2. HQ Btry
25 troops
2ea Gliders
 - 3. 376th Prcht FA Bn
544 troops, 12x75mm How + 700rds
48ea C-47 A/C
 - H. Btry A 80th A/B AA Bn
93 troops/9 Jeeps/8x57mm guns
22ea Gliders
 - I. 307th A/B Engr Bn
398 troops
27ea C-47
 - J. 82d Recon Plt
28 troops/3 Jeeps
6ea Gliders
 - K. 82d Sig Co
47 troops/4 Jeeps
6ea Gliders

Totals 7,498 troops arrived in Holland with 70 tons of supplies. 482 C-47 A/C and 50 WACO Gliders were used. 46 of the 50 gliders arrived in Holland with their loads intact (92%). 7,282 troops emplaned and 7,251 jumped into Holland (99.5%). 42

TASK ORGANIZATION

I. 101st Airborne Division

- A. 327th GII Inf Regt
- B. 501st Prchr Inf Regt
- C. 502d Prchr Inf Regt
- D. 506th Prchr Inf Regt
- E. DivArty
 - 1. 321th GII FA Bn
 - 2. 377th Prchr FA Bn
 - 3. 907th GII FA Bn
- F. 81st A/B AA Bn
- G. 326th A/B Engr Bn
- H. 426th A/B QM Co
- I. 326th A/B Med Co
- J. 801st A/B Ord Co
- K. 101st Sig Co
- L. Prcht Maint Co
- M. 101st Recon Plt
- N. MP Plt 43

II. 101st A/B Division D-Day Units Inserted and How

- | | |
|-----------------------------|-----------------------------|
| A. 101st Div HQ | 7ea C-47 A/C +8ea Gliders |
| 106 troops | |
| B. 501st Prchr Inf Regt | 129ea C-47 A/C +8ea Gliders |
| 1981 troops/7 jeeps | |
| C. 502d Prchr Inf Regt | 135ea C-47 A/C +8ea Gliders |
| 2109 troops/4 jeeps | |
| D. 506th Prchr Inf Regt | 132ea C-47 A/C +8ea Gliders |
| 2200 troops/4 jeeps | |
| E. DivArty | |
| 1. HQ Btry | 3ea C-47 A/C +3ea Gliders |
| 71 troops | |
| 2. Btry A 377th Prchr FA Bn | |
| 44 troops/6x75mm How | |
| F. 326th A/B Engr Bn | 16ea C-47 A/C |
| 252 troops | |
| G. 326th A/B Med Co | 6ea Gliders |
| 54 troops/2 jeeps | |
| H. 101st Sig Co | 2ea C-47 A/C +14ea Gliders |
| 70 troops/5 jeeps | |
| I. 101st Recon Plt | 15ea Gliders |
| 34 troops/5 jeeps | |

Totals 6,921 troops arrived in Holland. 436 C-47 A/C and 70 WACO Gliders were used. 53 of the 70 Gliders arrived (75.7%). 6,835 troops emplaned and 6,669 jumped (97.5%).⁴⁴

D-DAY REGIMENTS/HOLLAND, 82D AIRBORNE DIVISION

505TH REGIMENT SERIALS

SERIAL NO. A-2			SERIAL NO. A-8			SERIAL NO. A-9		
UNITS	JUMPERS	AIRCRAFT	UNITS	JUMPERS	AIRCRAFT	UNITS	JUMPERS	AIRCRAFT
HHC/505TH	114	6	HHC/505TH	65	3	HHC 82D	107	7
HHC 3-505	169	10	HHC 2-505	161	9	HHC 1-505	159	9
CO. G	165	10	CO. D	160	10	CO. A	181	9
CO. H	166	10	CO. E	157	10	CO. B	161	9
CO. I	164	9	CO. F	153	10	CO. C	164	9
			SIG BN	24	2			
TOTAL	778	45	TOTAL	720	44	TOTAL	772	43
BN TOTAL	664	39	BN TOTAL	631	39	BN TOTAL	665	36

504TH REGIMENT SERIALS

SERIAL NO. A-10			SERIAL NO. A-11			SERIAL NO. A-12		
UNITS	JUMPERS	AIRCRAFT	UNITS	JUMPERS	AIRCRAFT	UNITS	JUMPERS	AIRCRAFT
HHC/504TH	51	3	HHC/504TH	50	3	HHC/504TH	49	3
HHC 1-504	150	9	HHC 3-504	148	9	HHC 2-504	144	9
CO. A	156	11	CO. G	144	11	CO. D	156	11
CO. B	149	11	CO. H	145	11	CO. E	167	11
CO. C	150	11	CO. I	138	11	CO. F	156	11
TOTAL	656	45	TOTAL	625	45	TOTAL	672	45
BN TOTAL	605	42	BN TOTAL	575	42	BN TOTAL	623	42

508TH REGIMENT SERIALS

SERIAL NO. A-20			SERIAL NO. A-21			SERIAL NO. A-22		
UNITS	JUMPERS	AIRCRAFT	UNITS	JUMPERS	AIRCRAFT	UNITS	JUMPERS	AIRCRAFT
HHC/508TH	37	2	HHC/508TH	106	6			
HHC 1-508	153	9	HHC 2-508	145	9	HHC 3-508	164	10
CO. A	150	11	CO. D	150	10	CO. G	150	11
CO. B	138	10	CO. E	146	10	CO. H	158	11
CO. C	147	11	CO. F	135	10	CO. I	140	10
PATHFINDER/325	40	2						
TOTAL	665	45	TOTAL	682	45	TOTAL	612	42
BN TOTAL	588	41	BN TOTAL	576	39	BN TOTAL	612	42

RIFLE CO AVG	154
BN HHC AVG	155
RIFLE BN AVG	615
REGT HHC AVG	157
REGT AVG	2004

REGT TOTAL 505	2139
REGT TOTAL 504	1953
REGT TOTAL 508	1919

CO AVG 505	163
CO AVG 504	151
CO AVG 508	146

ENDNOTE 45

TASK ORGANIZATION

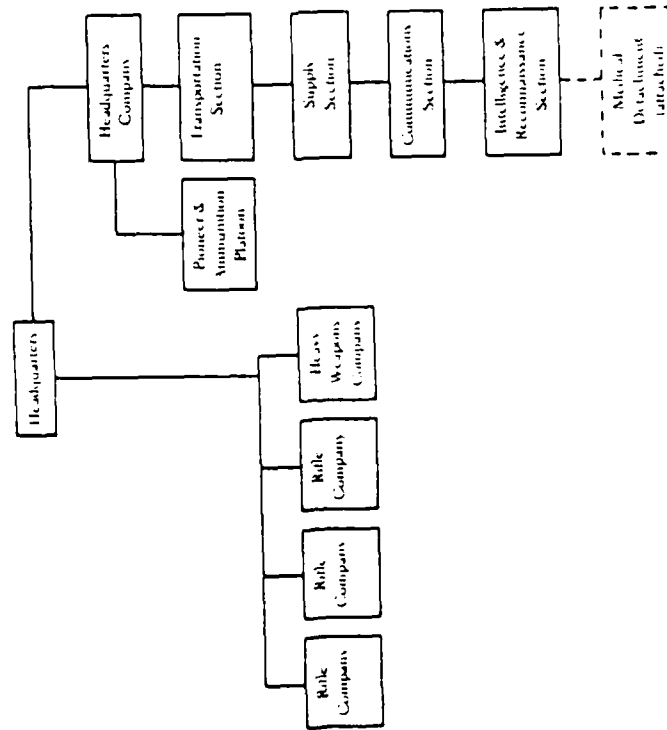
- I. 187th Airborne Regimental Combat Team
- A. HHC/187th Abn. Inf. Regt.
 - B. 1/187th Abn. Inf Bn
 - C. 2/187th Abn. Inf Bn
 - D. 3/187th Abn. Inf Bn
 - E. 674th Abn. FA Bn
 - F. Co. A 127th Abn. Engr Bn
 - G. Battery A 88th Abn. AA Bn
 - H. Det 11th Abn. MP Co
 - I. Det 11th Abn. QM Parachute Maint Co
 - J. Plt.(Clearing Co) 11th Abn. Med Bn
 - K. Plt.(Ambulance Co) 11th Abn. Med Bn
 - L. 2384th QM Air Packaging and Resupply Co 46

- II. 187th Abn Units Inserted On D-Day and How
- A. 187th RCT HQ 3 C-119
126 troops
 - B. Spt Co. 187th 2 C-119
152 troops/4x90mm guns(AT Plt)
 - 4x4.2(Mtr Plt)/4x3/4 ton trks
 - C. 1-187th 20 C-119
756 troops
 - D. 2-187th 17 C-119
756 troops
 - E. 3-187th 40 C-47
720 troops
 - F. 674th FA Bn 27 C-119
378 troops/12x105mm How/12 Jeeps
6 Jeep trls/28 tons arty ammo
 - G. Co A 127th Engr 3 C-119
126 troops
 - H. Svc. Co 187th 2 C-119
42 troops/14 tons assorted ammo
 - I. Med. Co 187th 1 C-119
46 troops⁴⁷

Totals Of the 3,102 troops who emplaned only 2,673(86.17%) arrived on the drop zones. The following heavy drops arrived on the drop zones: 9 howitzers(75%), 9 jeeps(75%), 2x90mm AT guns(50%), 3x3/4 ton trks(75%), 6x1/4ton trls(100%) and 37 tons of ammo(88%).⁴⁸

CHARTS

INFANTRY BATTALION



1. Infantry battalion authorized manpower strength - 550-750
2. The heavy weapons company of an infantry battalion is authorized the large st caliber weapons in battalion, consisting of 81-mm mortar, 75-mm recoilless rifles, 50-caliber machine guns, and 30-caliber water cooled machine guns. Heavy weapons company authorized manpower strength - 160
3. Unlike Army battalions, Marine battalions do not use letter designations for their weapons companies. Thus, 1st Battalion comprises A, B, C, and Weapons Company, 2d Battalion - D, E, F, and Weapons Company, 3d Battalion - G, H, I, and Weapons Company

INFANTRY RIFLE COMPANY

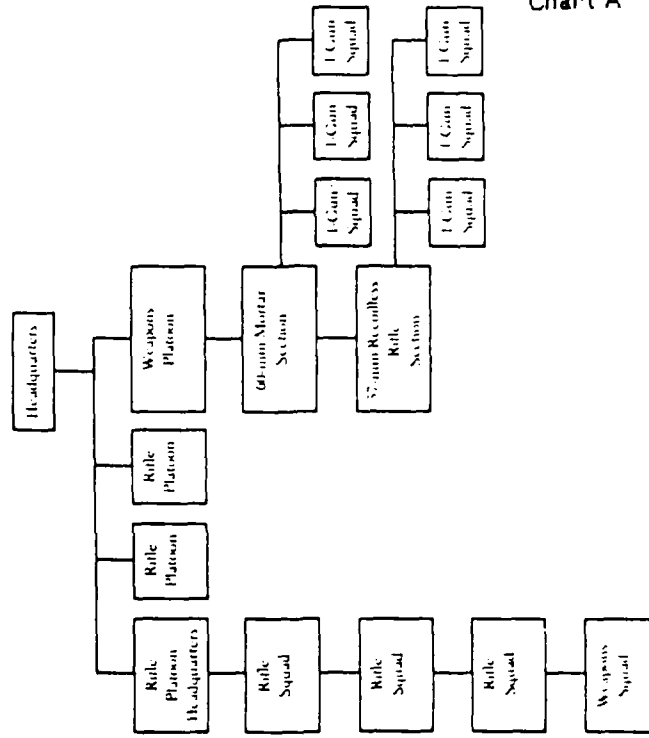
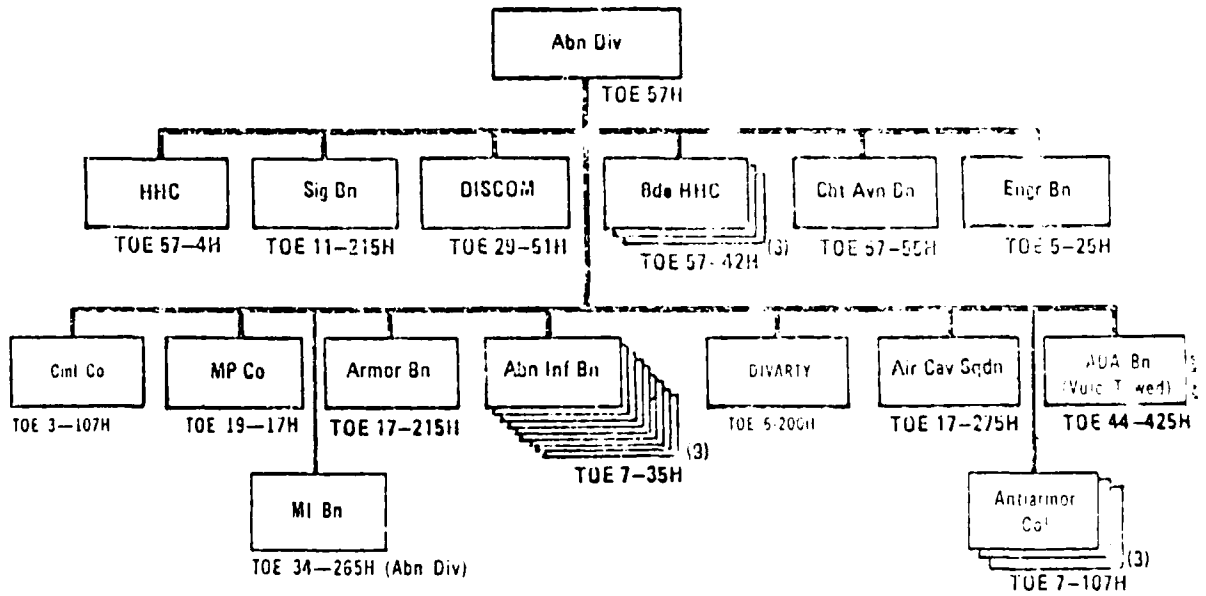


Chart A

1. Infantry company authorized manpower strength 203
2. Infantry company authorized weapons consists of 45 caliber pistols, 30 caliber carbines, M1 rifles, 30-caliber BARs (Browning automatic rifles), 30-caliber light machine guns, (3) 60-mm mortars, (3) 57-mm recoilless rifles, (3) 5-inch rocket launchers
3. An infantry rifle platoon consists of four squads of 9 enlisted men. A weapons platoon consists of six squads of 5 enlisted men

Chart E



1One antiarmor co normally attached to each bde.

AIRBORNE DIVISION

XX

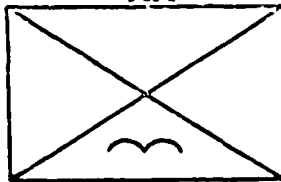
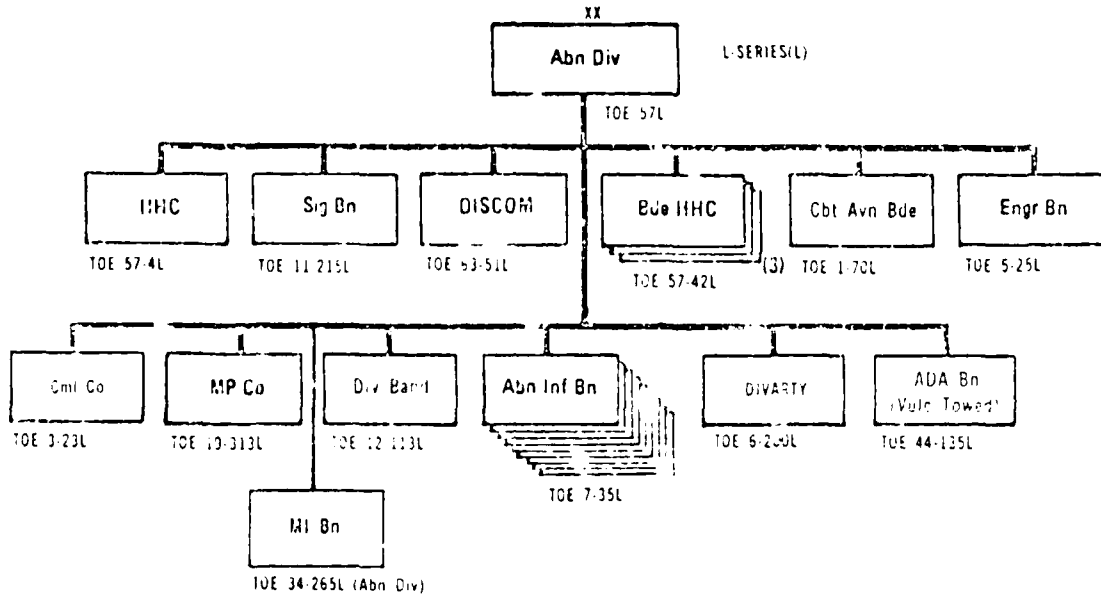
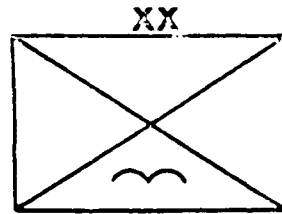


Chart C



AIRBORNE DIVISION



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1. U.S. Army, Student Text 101-1, Organizational and Tactical Reference Data For The Army In The Field, (Fort Leavenworth, KS., June 1986), p. 5-18.
2. Ibid., p. 5-18.
3. U.S. Army, Training Circular No. 113: Employment of airborne and troop carrier forces, (Washington, D.C., 9 October 1943), p. 2.
4. U.S. Army, Field Manual 101-5-1, Operational Terms and Symbols, (Washington, D.C., 21 October 1985), p. 1-2.
5. HQ, XVIII Corps, Report of Airborne Phase (17-27 Sept., 44) Operation "MARKET", (APO 109, Europe, 4 December 1944), Inclosure 1, Part I, p. 1.
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13. HQ, XVIII Corps, Report of Airborne Phase (17-27 Sept., 44) Operation "MARKET", Inclosure 1, Part II, p. 2.
14. Ibid., p. 1.
15. Ibid., pp. 1-3
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17. Cornelius Ryan, A Bridge Too Far, (New York, 1974), pp. 480-573.
18. Ibid., 287-289.

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27. HQ, XVIII Corps, Report of Airborne Phase (17-27 Sept., 44) Operation "MARKET", Inclosure 1, p. 5.

28. This matrix is my best interpretation of all the sources listed under this endnote. There are conflicts between the sources in more than one area.

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War Department, Field Manual 7-20, Infantry Battalion, (Washington, D.C., 1 October 1944), pp. 1-44.

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War Department, Table of Organization and Equipment No. 71T, Airborne Division and Table of Organization and Equipment No. 7-31T, Infantry Regiment, Parachute and Table of Organization and Equipment No. 7-51T, Infantry Regiment, Glider, (Washington, D.C., 16 December 1944), pp. 1-9 in all.

John F.W. Caldwell, Personal notes of an interview conducted with John D. Caldwell, ex. Infantry officer with 1/504th Parachute Infantry, 1943-1949, (Ft. Leavenworth, KS., 27 September 1986).

HQ, XVIII Corps, Report of Airborne Phase (17-27 Sept., 44) Operation "MARKET", Inclosure 1, Part IV, pp. 1-3. The foxhole strengths came from my averaging of the jump records of the 82d Airborne Division rifle regiments only. The figures do not match from one page to another in the after action report. They were always 1 to 10 men off.

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29. This matrix is my best interpretation of all the sources listed under this endnote. There are conflicts between the sources in more than one area.

War Department, Field Manual 7-10, Rifle Company, Infantry Regiment, (Washington, D.C., October 1949), pp.1-174.

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Ibid., Annex 1-3. These figures were used in the foxhole strength column.

U.S. Army, HISTORY OF THE KOREAN WAR: Problems In The Airdrop Of Supplies And Personnel, (Tokyo, 15 August 1952), pp8-10 & pp. 18-21.

30. U.S. Army, 187th Airborne Regimental Combat Team: Airborne Operations, Sukchon-Sunchon, Korea, 20 October 1950, (APO 75, Korea, 19 May 1951), Annex 1, 2, 3, 22, 23, 24, 25.

31. This matrix is my best interpretation of all the sources listed under this endnote.

U.S. Army, TO&E, Rifle Company, Infantry Battalion (Airborne), Airborne Division and/or Rifle Company, Infantry Battalion (Airborne), Separate Airborne Brigade, (Washington, D.C., 30 November 1970), w/change 30, pp. 1098-1114.

U.S. Army, TO&E, Combat Support Company, Infantry Battalion (Airborne), Airborne Division and/or Combat Support Company, Infantry

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U.S. Army, TO&E, Headquarters and Headquarters Company, Infantry Battalion (Airborne), Airborne Division and/or Headquarters and Headquarters Company, Infantry Battalion (Airborne), Separate Airborne Brigade, (Washington, D.C., 30 November 1970), w/change 31, pp. 1032-1072.

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37. U.S. Army, Field Manual 71-101, Infantry, Airborne, and Air Assault Division Operations, (Washington, D.C., 26 March 1980), p. 7-11.

38. U.S. Army, Field Manual 7-30, Infantry, Airborne, and Air Assault Brigade Operations, p. 7-9.

39. John A. Adams, Heavy Forces Versus Light Forces: A Middle Ground, Military Review, (Fort Leavenworth, KS., October 1986), p71.

40. HQ, XVIII Corps, Report of Airborne Phase (17-27 Sept.,44) Operation "MARKET", Inclosures 1 and 2.

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