

Organization of the United States Armored Infantry Battalion 1942 to 1945

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Contents

	Page
i. Introduction	3
ii. United States Army Ranks	4
iii. Armored Infantry Battalion structure and terminology	6
Overview	8
Evolution of the Armored Infantry Battalion (chart)	10
Vehicles of the Armored Infantry Battalion	11
The elements of the Battalion	17
Annex A - Communication	31
Annex B - Ammunition scales	36
Annex C - Notes on deployment	38
Sources and acknowledgements	43
Would like to find...	45

Introduction

This piece is the third entry in a series of studies examining various US Army unit organizations of the Second World War.

Having begun this series with the standard US Infantry Battalion, there is often a dilemma when trying to apply the same approach to other unit types. This is because no matter how specialist those might be in comparison, the underlying framework of a typical Infantry Battalion still remains.

When it comes to the Armored Infantry Battalion however, fresh avenues of research open up, primarily concerning vehicles but also weapons and communications equipment not found in the standard Infantry Battalion. As a result, this a more substantial piece than one of the 'Notes on' series detailing other unit types. I have therefore rolled over the sections on US army ranks and unit terminology found in the [Organization of the United States Infantry Battalion](#) piece to this one.

As far as possible, the information included herein is obtained from contemporary documents, with a list of sources and acknowledgements given at the end. There will doubtless be omissions and it may well require some update in the future.

A quick note on spelling; while I am British I have gone with the appropriate US spellings in this piece, such as defense, armor and center.

This document then gives an outline of the development of the Battalion, before looking at its component subunits in more detail. Complete descriptions of the various US Armored Infantry Battalions discussed here are available in PDF files accessible from the below linked area of the site.

[United States Army Organization during the Second World War](#)

This continues my efforts in replacing my defunct www.bayonetstrength.150m.com site, which had wandered around the internet since about 2000. This new attempt represents the content and detail I would have very much liked to have been able to include from the outset, but has taken a great deal more time, effort and of course expense to pull together than I ever imagined.

Even then there are always gaps in my understanding, so just after sources and acknowledgements are notes of areas that I would still like to find me detail on. If anyone reading them can give me a pointer on where to look, or more direct assistance, I would be very interested to hear from you. See the Home page for contact info.

I hope this study proves to be of use to anyone interested in the subject.

Gary Kennedy

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United States Army Ranks

United States Army ranks consist of Officers, Warrant Officers and Enlisted Men (EM). Officers include all commissioned officers while Warrant Officers form a separate category. EM includes all grades of Sergeant, plus Corporals and Privates.

The full rank structure for commissioned officers in the United States Army in the Second World War (from most senior to most junior) is given below.

General
 Major General
 Brigadier General
 Colonel
 Lieutenant Colonel
 Major
 Captain
 First Lieutenant
 Second Lieutenant

For the purposes of this piece the most senior rank to be found in an Infantry Battalion was a Lieutenant Colonel.

The full rank structure for Enlisted Men in the US Army in the Second World War (from most senior to most junior) is given below.

Warrant Officer
 Master Sergeant
 First Sergeant
 Technical Sergeant
 Staff Sergeant
 Sergeant
 Corporal
 Private, First Class
 Private

All those holding ranks from Corporal to Master Sergeant were counted within the Enlisted Men category.

Specialists and Technicians - in 1940 the US Army had Specialist Ratings 1st to 6th inclusive. These were held by men ranked as Private or Private, First Class and were applicable to those with a specialised role or duty, ranging from cooks and clerks to machine gunners and mechanics.

In June 1942 these Specialist Ratings were abolished and a series of Technician ranks (3rd to 5th) was introduced, each paralleling the pay grade of one of the lower non-commissioned officer ranks; Technician Grade 3 that of a Staff Sergeant, Technician Grade 4 of a Sergeant and Technician Grade 5 of a Corporal.

Army Circular No.204 of 24th June 1942 described them as follows; *'Technicians are non-commissioned officers. They will receive the pay and allowances of the pay grade indicated by their titles. Technicians, third, fourth and fifth grades will rank among themselves, according to the dates of their warrants, below staff sergeants, sergeants, and corporals, respectively'*.

This created something of a problem, in that a sizeable number of men with no command role were now non-commissioned officers, which suddenly reduced the pool of personnel normally expected to undertake general duties.

In December 1943 it was decided that Technician Grades would only have parity with the relevant NCO ranks in terms of pay, and would carry no command responsibility or authority.

Privates and Privates, First Class - below the NCO and Technician ranks came those of Private and Private, First Class, the latterly usually referred to as PFC. Within a unit such as a Rifle Company there would be a set number each of Privates and Privates First Class. These would be overall totals for the Company and there was no indication in the table as to how many men in say a Rifle Platoon should be Privates and how many PFCs.

The Army Circular quoted above (No.204) gives the calculation to be used in defining how many each of Private and PFC a unit should contain. In short, this took the number of Enlisted Men and subtracted from it all Non-commissioned officers and all Technician Grades. From this figure the number of Basics in the unit (see below) was likewise subtracted. The number remaining was then divided by two; if this gave a fractional result one figure was rounded up and the other rounded down (so for example 153 would be considered as 77 and 76). On that example the unit would be authorised 77 men as PFC. The number of Basics subtracted beforehand (in this example say 22) would then be added to the remaining figure of 76, making for 98 Privates.

In early 1944 this calculation changed for certain units, principally it would seem Infantry Battalions and Regiments. This added an extra stage to the calculation: the figure of 98 reached for Privates in the above example would be halved, and the result was added to the figure arrived at for PFCs, which in this example increased from 77 to 126, while Privates was reduced from 98 to 49.

Basics - firstly, Basic was not a rank, but it is something that arises throughout this study. Basics were men carried on the strength of a unit's Table of Organization, but who were not allotted a specific role or duty. They were intended to provide a unit with a small pool of replacement personnel to make good initial or light losses. The number of Basics allowed was equal to 10% of the Enlisted Men total for the unit. In June 1944 this was reduced to 5% for all but a few units, with one of the exceptions being Rifle Companies of Infantry Battalions

US Armored Infantry Battalion structure and terminology

The United States Army used a fairly standard vocabulary for unit designations. From the smallest up to Regiment this was;

US term	British equivalent	German equivalent
Squad	Section	Gruppe
Section	*	*
Platoon	Platoon	Zug
Company	Company	Kompanie
Battalion	Battalion	Bataillon
Regiment	Brigade	Regiment

*In US vocabulary a Section could refer to two or three Squads operating crew served weapons, as well as service or headquarters related elements. In British usage two weapons related Detachments would also be termed a Section, while in German a pair of mortars or machine guns would be a *Gruppe*.

Unit designations

Within the US Armored Infantry Regiment, Rifle Companies were lettered through the Battalions, excluding Headquarters Companies, and the Battalions were identified as 1st, 2nd and 3rd. Regimental Companies were not included in the sequence. The 1942 Armored Infantry Regiment was organized as follows;

Regimental Headquarters and Headquarters Company
Service Company

1st Battalion	2nd Battalion	3rd Battalion
HQ Company	HQ Company	HQ Company
A Company	D Company	G Company
B Company	E Company	H Company
C Company	F Company	I Company

When the Regimental structure was abolished in the majority of the Armored Divisions from 1943, each Armored (Tank) and Armored Infantry Battalion was given its own Battalion number, which for the Armored Infantry ranged from 7th to 70th. The Rifle Companies in these Battalions were always designated as A, B and C. Those Armored Divisions that retained their Regimental structure continued to designate their Battalions as 1st to 3rd and their Rifle Companies as A to I inclusive.

Assignment of Armored Infantry Units to Armored Divisions

Division	Armored Infantry Battalion			Armored Infantry Regiment
1 st	...	...	...	6 th (to end of Jun 1944)
<i>became</i>	6	11	14	from Jul 1944
2 nd	...	...	...	41 st (to end of war)
3 rd	...	...	...	36 th (to end of war)
4 th	...	...	...	51 st (to early Sep 1943)
<i>became</i>	10	51	53	from Sep 1943
5 th	...	...	...	46 th (to late Sep 1943)
<i>became</i>	15	46	47	from Sep 1943
6 th	...	...	...	50 th (to late Sep 1943)
<i>became</i>	9	44	50	from Sep 1943
7 th	...	...	...	48 th (to late Sep 1943)
<i>became</i>	23	38	48	from Sep 1943
8 th	...	...	...	49 th (to late Sep 1943)
<i>became</i>	7	49	58	from Sep 1943
9 th	...	...	...	52 nd (to early Oct 1943)
<i>became</i>	27	52	60	from Oct 1943
10 th	...	...	...	54 th (to late Sep 1943)
<i>became</i>	20	54	61	from Sep 1943
11 th	...	...	...	55 th (to late Sep 1943)
<i>became</i>	21	55	63	from Sep 1943
12 th	...	...	...	56 th (to early Nov 1943)
<i>became</i>	17	56	66	from Nov 1943
13 th	...	...	...	59 th (late Sep 1943)
<i>became</i>	16	59	67	from Sep 1943
14 th	...	...	...	62 nd (to late Sep 1943)
<i>became</i>	16	62	68	from Sep 1943
	
16 th	18	64	69	not applicable
	
20 th	8	65	70	not applicable

All dates taken from "World War II Order of Battle" (revised) by Stanton.

Unit details also taken from "Order of Battle of the United States Army, World War II, European Theater of Operations" by the Office of the Theater Historian.

Organization of the United States Armored Infantry Battalion

1942 to 1945

In some respects, the Armored Infantry Battalion should be one of the most straightforward US units to examine, given that there were only two sets of organizational tables issued for it between 1942 and 1945. There is though, a complication that needs to be addressed.

In March 1942 the US Army published a new series of Tables of Organization for its Armored Divisions (replacing those drafted in November 1940). These called for a Division built around two Armored Regiments and one Armored Infantry Regiment, with combat support provided by three Armored Field Artillery Battalions, an Armored Reconnaissance Battalion and an Armored Engineer Battalion. The Armored Infantry Regiment consisted of a Regimental Headquarters and Headquarters Company, a Service Company and three Armored Infantry Battalions.

In September 1943 the US Armored Division underwent major reform with the deletion of the Regimental structure. The fighting units became three Tank Battalions, three Armored Infantry Battalions, three Armored Field Artillery Battalions, an Armored Engineer Battalion and a Mechanized Cavalry Reconnaissance Squadron. These would be allotted on a mission basis to one of two Combat Commands, with a third, smaller Combat Command overseeing any reserve.

However, the first three Armored Divisions (1st to 3rd) were exempted from reforming on these new lines. 1st Armored Division was busy fighting in Italy, while 2nd and 3rd Armored Divisions were both in the United Kingdom preparing for the invasion of Western Europe scheduled for 1944. It was felt that trying to reorganize and re-equip these latter two Divisions in particular would disrupt their training for the upcoming offensive. As a result, both 2nd and 3rd Armored Divisions retained their original organization, including an Armored Infantry Regiment, throughout their service in the European Theater of Operations (ETO).

A further 13 US Armored Divisions, beginning with the 4th, went overseas on the September 1943 organization, often referred to as the 'Light' Armored Division. The earlier March 1942 structure became known as the 'Heavy' Armored Division, due in part to its larger tank complement. 1st Armored Division was reorganized on the Light format when it came out of combat for rest and refit around July 1944.

The changes made to 2nd and 3rd Armored Divisions have always intrigued me, but I have never been able to find any real detail on what they actually entailed. All that is generally offered is there were some obvious changes to replace superseded vehicles and weapons, but not unit organization. As may be seen, this leaves some unanswered questions (for me at least) on how the Rifle Companies and Platoons of these two Divisions handled their 57-mm antitank guns in particular.

Overview

The Battalion as detailed herein was to be found in the US Armored Division. There were plans to create a pool of separate Armored Infantry Battalions that could be used to augment the strength of Armored Divisions as required. In the event only one non-Divisional Armored Infantry Battalion, the 526th, served in Europe.

Outline development, 1942 to 1945

The first Tables of Organization for the Armored Infantry Regiment were drafted in November 1940 and called for a Headquarters Company, a Service Company, an Antitank Company and two Armored Infantry Battalions. Each Battalion had a Headquarters Detachment, three Rifle Companies and a Heavy Weapons Company, the latter with two .30-cal Machine Gun Platoons, an 81-mm Mortar Platoon (with four weapons) and an Antitank Platoon with two towed 37-mm guns.

Each Rifle Company was to have a Weapons Platoon and three Rifle Platoons. The Weapons Platoon had one Section with three 60-mm mortars and another with two .30-cal light machine guns, while each Rifle Platoon had three Rifle Squads. As far as possible, Squads were to be carried complete in their own halftrack, with further halftracks provided for Platoon and Company Headquarters elements.

In March 1942 the Armored Infantry Regiment underwent major reorganization. The Regimental Headquarters Company and Service Company were retained, the Antitank Company was deleted, and a third Battalion was added. The Battalion Headquarters Detachment was expanded to a full Headquarters Company, which included a Reconnaissance Platoon, an 81-mm Mortar Platoon, a Cannon Platoon and a Machine Gun Platoon. The Battalion Weapons Company was deleted, as too was the Weapons Platoon in each Rifle Company. There were still three Rifle Companies, each with three Rifle Platoons, each of which added a Light Machine Gun Squad and a 60-mm Mortar Squad.

The Battalion was reorganized again in late 1943, with the introduction of the Light Armored Division that September. Under this the Regimental structure was abolished, with the three Armored Infantry Battalions becoming administratively self-sufficient. This involved the formation of a Service Company, the main elements of which were a Battalion Supply and Transportation Platoon and Battalion Maintenance Platoon. The other major change was the creation of an Antitank Platoon in each Rifle Company, equipped with three towed 57-mm guns, for a total of nine guns in the Battalion. Headquarters Company remained as for 1942, with the Cannon Platoon now termed the Assault Gun Platoon.

Overleaf is a chart that outlines the development of the US Armored Infantry Battalion from 1942 to 1945.

Evolution of the United States Armored Infantry Battalion, 1942 to 1945

Detail	1942	1943 (Sep)	1944 (Nov)	
i). Personnel				
Officers	24	36	36	
Warrant officers	0	3	3	
Enlisted Men	676	962	956	
Total, all ranks	700	1001	995	
ii). Transport				<u>Comments</u>
Motorcycles	4	0	0	
1/4-ton trucks	12	23	23	
3/4-ton trucks	0	2	2	
2½-ton trucks	9	21	21	
M10 ammunition trailers	3	8	8	Trailer in 1942 shown as '1-ton, armored'
1-ton trailers	0	21	21	
M2 halftrack	20	0	0	
M3/M3A1 halftrack	43	72	72	M3A1 specified from 1943, M3 still in use
M4/M21 halftrack (81-mm mortar)	3	3	3	M21 specified from 1943, M4 still in use
Assault gun (75-mm), SP	3	0	0	Substitute is M3 halftrack with 75-mm gun
Antitank gun (37-mm), SP	4	0	0	Substitute is ¼-ton truck & towed 37-mm gun
Howitzer motor carriage (75-mm)	0	3	0	
M4 tank (105-mm)	0	0	3	
Heavy wrecker truck	0	1	1	
Tank recovery vehicle	0	1	1	
iii). Weapons				<u>Comments</u>
Pistols, .45-cal	70	3	3	
Submachine guns, .45-cal	85	126	138	
Carbines	230	394	376	Add 24 M8 grenade launchers from Nov 1944
Rifles, M1	315	469	469	Add 54 M7 grenade launchers from Nov 1944
Rifles, M1C	0	0	9	
Rifles, M1903A4	0	9	0	
Light machine guns, M1914A4	22	23	23	
Heavy machine guns, M1917A1	...	37	37	All specified as halftrack armament from 1943
Machine guns, .50-cal, M2	...	43	43	All specified as halftrack armament from 1943
60-mm mortars	9	9	9	
81-mm mortars	3	4	4	3 on halftracks, 1 on tank recovery vehicle (1943)
2.36-in antitank rocket launchers	0	74	74	
37-mm antitank guns	12	0	0	
57-mm antitank guns	0	9	9	

Vehicles of the Armored Infantry Battalion

One of the things I have to confront with this topic is my fear of all things vehicular. The defining feature of the Armored Infantry Battalion was its use of halftracks, which existed in a variety of forms and were produced by multiple manufacturers.

The US Army published two Technical Manuals on the subject of halftracks, both of which are available online (see Sources and Acknowledgements at the end of this piece). The halftracks relevant to the Armored Infantry Battalion are described in TM9-710 and consist of;

Car, halftrack, M2 (with armament)

Car, halftrack, M2A1 (with armament)

Car, halftrack, M3 (with armament) (also known as Carrier, personnel, M3)

Car, halftrack, M4 (with armament) (81-mm mortar)

Car, halftrack, M4A1 (with armament) (81-mm mortar)

Carrier, personnel, halftrack, M3A1 (without armament)

Carrier, personnel, halftrack, M3A2 (without armament)

Carrier, 81-mm mortar, halftrack, M21 (with armament)

Three major firms were involved in the production of the various halftracks listed above, namely "White", "Autocar" and "Diamond T". The March 1942 Tables of Organization all showed the M2, M3 and M4 halftracks, while those of September 1943 specified the M3A1 and M21. In early 1944 the Tables were amended, with M3A1 being replaced by M3A2, a new version of halftrack which was then undergoing evaluation. In the event however, the M3A2 was not put into production, and units continued to use a mixture of the vehicles listed above.

General description and layout

All the above models shared the same general layout, consisting of a front mounted engine, directly behind which was the driver's cab, and behind that the personnel compartment, which accounted for about half the overall length of the vehicle. The halftrack derived its name from the combination of wheels at the front and tracks at the rear, the latter running roughly the same length as the personnel compartment.

There were different seating arrangements for the M2 (with 10 seats) and the M3 (with 13 seats). In the M2, two men were seated in the driver's cab, with the driver on the left and the passenger on the right. A third seat was situated in the personnel compartment, facing forward and overlooking the gap between the two driver's cab seats, with a fourth backing onto it and facing rear. The space to the left and right of these two seats was occupied by large storage bins. The remaining six seats were in the rearmost part of the personnel compartment, three on either side facing in. The two nearest the rear of the vehicle backed onto the fuel tanks, meaning the third was tucked in slightly ahead of its neighbours.

The M3 had a simpler layout, with three seats in the driver's cab, the centre one having a folding backrest, and ten in the personnel compartment, arranged in two inward facing rows of five. The fuel tanks were behind the two seats nearest the cab, with narrow storage spaces behind the other three, which included racks to hold six rifles.

Both types had doors on either side of the driver's cab, and on the M3 there was a single door at the back of the vehicle, hinged on the right as seen getting into the personnel compartment. There was rear door on the M2.

Some protection was afforded by the armored body, which was ¼-inch (6.35-mm) thick on the sides and rear, and seemingly the same on the engine hood. The cab was fitted with a shatterproof windshield and the cab doors had a hinged upper section; this could be left folded down, lying flat against the outside of the door, during normal driving, and when in combat pulled up to fill the gap to the top edge of the cab door. An armored shield, ½-in thick, was provided for the windshield; under normal conditions the shield was propped open at 90 degrees to allow for full visibility. Before it could be lowered, the windshield glass had to be unclamped and removed. There were two small vision slits in the armored shield and one in the hinged upper section of each side door. There was no overhead protection beyond a removable canvas cover, which could only keep out the rain.

Armament

In their basic form both the M2 and M3 halftracks could be armed with any combination of the Browning machine guns used throughout the US forces, these being the M1917A1 heavy and the M1919A4 light, both .30-cal weapons, and the .50-cal M2 HB (see the Weapons Annex in the [Organization of the United States Infantry Battalion](#) piece for details).

The original M2 halftrack borrowed the same mounting system used on the closely related M3A1 scout car. This consisted of a continuous metal rail fitted within the vehicle body just below the top edge of the armor, and matching its circumference. Three M35 machine gun mounts were initially provided for the M2 halftrack, the same as on the M3A1 scout car. The M35 mount could travel the full length of the rail, also known as a skate rail, at least until it bumped into another such mount. This meant that a machine gun could be positioned at any point on the rail regardless of the way the vehicle was facing. The M35 could accommodate either type of the .30-cal Browning machine guns, and when fitted with the M30 cradle also manage the M2 .50-cal.

The first major change to the M2 halftrack was the replacement of the rail system by the M49 ring mount and a trio of pintle mounts. The M49 consisted of a circular track set inside an outer square frame, which was fixed to the vehicle body or elevated a little way above it, dependent on the vehicle involved, and on the halftrack was fitted over the two passenger seats in the driver's cab.

A carriage was attached to the circular track, onto which went a cradle mount to hold the .50-cal M2, giving the gunner full 360-degree traverse. There were also three fixed pintle mounts on the vehicle body for .30-cal machine guns, one on each side behind the seat between the fuel tank and the storage bin, and one at the rear on the left-hand side when looking out.

On the M3 there was initially only a pedestal mount, the M25, which was fitted to the vehicle floor in the personnel compartment, centred between the two seats directly behind the driver's cab. This mount was only used with the M1919A4 light machine gun. The M3A1 replaced the M25 with the M49 ring mount, in the same position as on the M2A1, and added three pintle mounts, one on each side, between the fuel tank and storage rack, and one at the rear, to the left of the door.

So much for how and where machine guns could be fitted in halftracks: the question of how many would be carried and in what mix is far more vexed by comparison.

When the US adopted the M3A1 scout car, its original armament was one .50-cal M2 and two .30-cal M1917A1 machine guns, with the M2 normally positioned to the front and one M1917A1 on either side. This same arrangement was reflected in the M2 halftrack following its introduction in 1941.

The Tables of Organization issued for the Armored Infantry Battalion in March 1942 do not list vehicle mounted weapons. In common with other Tables of this era, vehicles were described as being either with or without armament. The only reference I have been able to find in a contemporary document is in FM 101-10 (Tentative) dated 25th January 1943. This includes a table of 'Armament Organic to each Vehicle' within the summary tables for each type of Division. That for the Armored Division is based on the March 1942 organization and includes the following for halftracks and wheeled vehicles;

Detail	Cal .30 MG heavy	Cal .30 MG light	Cal .50 MG	Cal .45 sub machine gun	Other
Car, halftrack, M2	1	...	1	1	...
Car, halftrack, M3	1	...	...	1	...
Car, halftrack, M4	1	...	1	1	81-mm mortar
Car, scout	1	...	1	1	...
Gun, antitank, SP	...	...	...	1	37-mm gun
Gun, assault, SP	...	...	1	1	75-mm howitzer

Figures noted as being corrected to 25th January 1943

The second wartime set of Tables of Organization for the Armored Infantry Battalion were issued in September 1943 and show vehicular armament in an entirely different way. All halftracks, excepting mortar carriers, are described as being 'without armament'. All machine guns authorised to the unit in question are given in Section I of the table, along with all personnel, weapons and vehicles.

There is then a note in the 'remarks' column showing which machine guns are to be mounted on which vehicles. All the Armored Infantry Battalion halftracks (excepting those carrying Squads in the Mortar Platoon and the Machine Gun Platoon) are detailed as having a single machine gun, this being either the M1917A1 or the M2.

This is at variance with multiple contemporary US Army manuals, which give the standard armament for the M2, M2A1, M3A1 and M3A2 as both an M1919A4 light machine gun and a .50-cal M2, reduced to just an M1919A4 on the M3. Alongside these are a mountain of photographs of halftracks serving across Europe, which display various combinations of M1919A4, M1917A1 and M2 machine guns.

There is no neat and simple way to explain the contradiction. M3 halftracks were modified to M3A1 standard and the owning units may simply have retained the originally issued M1919A4 to supplement the newly authorised M1917A1 or M2. Also, something such as a Technical Manual cannot necessarily capture all the variations of weapons issue as detailed in Tables of Organization.

Halftracks with armament and armored fighting vehicles

While introduced as a personnel carrier and artillery towing vehicle it was not long before the halftrack was turned into a weapons carrier. A dizzying array of armament was tested over the course of the war years, some proving more successful than others. This piece though is about the Armored Infantry Battalion, and for that unit there were two variants of armed halftrack and two types of fully tracked armoured fighting vehicle that require examination.

Among the first weapons to be mounted in the halftrack was the M1 81-mm mortar, first in a modified M2 designated as the M4. The mortar was kept in its assembled form in the personnel compartment, with the baseplate just behind the two back-to-back seats and the bipod legs and muzzle towards the rear of the vehicle. Unlike the normal M2 there was a rear door, though the continuous machine gun rail was retained. This created an awkward looking obstacle where the rail ran over the open door, limiting the space to more of a hatchway. The fuel tanks were still at the rear and the two large storage bins were kept behind the driver's cab.

Initially at least it would appear the intention was for the mortar to be dismounted and fired from the ground, which was somewhat at odds with the mobile warfare to be practised by the Armored Force. This was addressed with the subsequent M4A1, which anticipated that the mortar would be fired from the carrier. It retained the same overall layout, and added series of drilled holes forming a gentle arc at the rear where the bipod legs met the floor. This was presumably to allow the mortar traverse to be further adjusted without having to move the entire vehicle. The M4A1 did not include the M49 ring mount over the driver's cab.

Crew for the M4 and M4A1 presents some contradictions. Overhead views show the vehicle with six seats, two in the cab, two back-to-back between the storage bins,

then just two in the rear, one on either side of the mortar position. The Squad size however was eight men, though two of those under the March 1942 organization were Basics, so there is potential for them to have been excluded. The successor to the M4A1 was the M21, which was based on the M3. This switched the internal layout, having the mortar pointing forward so that it fired over the driver's cab. Crew was reduced six men, with three in the cab and one seat beside the mortar, on the left-hand side looking forward, with two more at the rear. A pedestal mount was installed between the two rear seats for an M2 .50-cal machine gun.

Ammunition stowage for the mortar in all these vehicles is far from clear. Overhead views of the M4 show two main stowage compartments, one behind each storage bin, and two secondary compartments at the rear, either side of the door. Each main compartment has 20 slots visible, and each secondary one eight, giving 56 in total. Ammunition was stored upright in its protective tubing. The M4A1 deleted the secondary compartments, dropping to 40 ammunition slots overall. The US Technical Manual for Standard Military Motor Vehicles, TM9-2800 of September 1943, lists the ammunition capacity of the M4 as 108 rounds of 81-mm, reduced to 96 on the M4A1, and neither figure reconciles with the visible ammunition stowage capacity. It may simply be that further rounds were kept in the stowage bins. There is a similar issue with the M21. This has 30 slots on the left-hand side (when looking forward) and 27 on the right, with two auxiliary compartments behind the driver's cab with six slots each, for a total of 69. Capacity is given as 96 or 97 rounds of 81-mm ammunition, dependent upon the source.

It has occurred to me that each slot in the ammunition racks of the M21 might be able to hold either a single M56 heavy shell, or two M43A1 light shells, placed one container atop the other. The M56 was considerably longer than the M43A1 but I can offer no evidence to support the theory.

The other major armored vehicle used by the Battalion was the assault gun, which actually covered three quite different machines.

First of these to see service was a modification of the M3 halftrack, the Howitzer Motor Carriage (HMC) T30. This was armed with an M1A1 pack howitzer in the personnel compartment, protected by an imposing gun shield of 3/8-in armor plate. It was used as a stop-gap until a dedicated assault gun was produced, and saw service with the US Armored Divisions (and other units) deployed in North Africa from late 1942. The howitzer faced forward, right over the central seat position in the standard M3, and had limited traverse left and right. There was a pedestal mount opposite the rear door for an M2 .50-cal machine gun.

Successor to the T30 was the Howitzer Motor Carriage M8, which mated the hull of the M5 light tank with a new turret mounting an M2 or later M3 75-mm howitzer. There was also provision for an M2 to be mounted on the turret for antiaircraft use.

The final assault gun authorised for the Battalion was the 105-mm howitzer armed version of the M4 medium tank.

There is one other gun/vehicle combination of relevance, described as the 'gun, antitank, self-propelled (37-mm gun, M3A1, on motor carriage, M4A1). This appeared on many of the Tables of Organization issued for the US Armored Division in March 1942 and described a $\frac{3}{4}$ -ton Weapons Carrier with a 37-mm gun mounted in the cargo compartment, firing over the rear of the vehicle. Originally designated the M4 it became the M6 seemingly due to a change in the 37-mm gun being fitted.

In the 1942 Armored Infantry Battalion, the M6 was to be found with the Administrative, Supply and Mess Section of each Company. While the M6 did see service in North Africa with the recently formed Tank Destroyer Battalions, I do not know whether it was also to be found in the US Armored Divisions in North Africa. The substitute for the M6 in the Armored Infantry Battalion was a standard Jeep towing a 37-mm antitank gun.

The elements of the Battalion, 1942 to 1945

Below follows a more detailed examination of the Companies and Platoons within the Battalion. As some of these changed relatively little over the course of time a single description will suffice while for others their evolution requires greater depth.

Battalion Headquarters (1942 to 1945)

In its 1942 incarnation, Battalion Headquarters was relatively small, consisting of just three officers and a dozen men. The commander was a Lieutenant-colonel, with a Major acting as both S-2 and S-3, and a Lieutenant who doubled as Liaison and Communication officer. The remaining men were mostly drivers or radio operators.

The September 1943 reorganization more than doubled the officer complement of Battalion Headquarters, which now had the following staff roles;

Lieutenant colonel; commander
 Major; Executive officer
 Major; Operations and Training, S-3
 Captain; Intelligence, S-2
 Captain; Communications (also acted as Assistant S-3 for air)
 Captain; Supply, S-4
 Lieutenant; Personnel, S-1
 Lieutenant; Liaison officer

Part of the reason for this expansion was the abolition of the Regimental staff in the Light Armored Division structure, where the officers undertaking S-1 and S-4 duties had previously been located. The Battalion Communication officer lost his liaison job but added a new role of 'Assistant S-3 for air'. This made him responsible for operational arrangements and coordination regarding air support for the Battalion, and also for submitting air support requests to Combat Command Headquarters.

Headquarters transport was initially a single M2 halftrack, three Jeeps and a pair of solo motorcycles. By 1943 this had become two M3 halftracks and four Jeeps.

Headquarters Company (1942 to 1945)

Headquarters Company remained largely unaltered between 1942 and 1945 (aside from the ever-changing type of assault guns) and contained the following Platoons, the first three of which were almost duplicates of those found in the Tank Battalion;

Reconnaissance Platoon*
 Cannon Platoon (became the Assault Gun Platoon from September 1943)
 81-mm Mortar Platoon
 Machine Gun Platoon

*The Reconnaissance Platoon was actually counted as part of Battalion Headquarters under the March 1942 Tables of Organization.

Company Headquarters

The Headquarters element of each Company within the Battalion followed the same format and was divided into three parts; the Headquarters Section, the Maintenance Section and the Administrative, Mess and Supply Section.

The Maintenance Section was commanded by the Company Maintenance Officer, and had a winch equipped M3 halftrack and a Jeep; in the Service Company the Section had a 2½-ton truck instead of an M3. The Administrative, Mess and Supply Section (which was called the Administrative, Supply and Mess Section prior to 1943) was led by the Company First Sergeant and included the Company cooks and one or two kitchen trucks. In 1942 the Section was also to include an M6 self-propelled antitank gun, described earlier, or a Jeep towing a 37-mm gun.

Under the March 1942 organization the Basics of each Company were scattered throughout its Platoons and Headquarters elements. From September 1943 they were concentrated within the relevant Company Headquarters and counted on the strength of its Administrative, Mess and Supply Section.

Reconnaissance Platoon (1942 to 1945)

Considering the overall strength of the Armored Infantry Battalion, its Reconnaissance Platoon was a somewhat subdued affair.

The 1942 model was identical to that found in the Light and Medium Armored Battalions and consisted of a small Headquarters and two Sections. Headquarters was made up of a Lieutenant, Platoon Sergeant, four scouts (originally termed as 'agents, reconnaissance'), a radioman and a driver for the Platoon's single M2 halftrack. Each Section had two ¼-ton trucks, each carrying an NCO, a scout and a driver. Two motorcycle messengers completed the Platoon. There were no support weapons beyond the machine guns mounted on the halftrack.

The 1943 reorganization brought modest changes, key among them being the replacement of the two motorcycles by a Jeep, which was shared by the two messengers, while the halftrack became an M3 armed with a .50-cal machine gun and a Bazooka. This was again the same organization used by the Reconnaissance Platoon of the Tank Battalion.

The organization of the Platoon has always puzzled me. It was acknowledged that it should normally avoid 'engagements with the enemy' but still be prepared to act 'aggressively' if required. In some respects, it was not much more than a reinforced and highly mobile Rifle Squad, being able to dismount a dozen lightly armed scouts, to whom it could offer little in the way of fire support.

As a reconnaissance unit its radio equipment was as important as its weapons and one Jeep in each Section and the Headquarters halftrack carried sets. See the Communication Annex for more details.

Assault Gun Platoon (1942 to 1945)

The 1942 US Armored Division was authorized 42 assault guns, with three per Light and Medium Armored Battalion, three per Reconnaissance Company and three per Armored Infantry Battalion. At the time these tables were drafted however, the US Army did not have an assault gun in service.

Until the first assault guns proper arrived, their role was filled by a substitute vehicle, an M3 halftrack variant designated T30. This was armed with a 75-mm pack howitzer for which it carried 60 rounds of ammunition.

The purpose of the assault gun was to provide units with a readily available means of delivering concentrated fire against enemy targets. In some respects, this was a duplication of the capabilities of the Mortar Platoon (see below). The 75-mm pack howitzer though had a range of over 9600 yards, giving it much greater reach than the almost 3300 yards of the 81-mm mortar's M43 light shell.

The 1942 organization of the Platoon was a Headquarters, in a single M2 halftrack, three assault guns (each described as a Squad) and an Ammunition Section, with three M3 halftracks. Under the Table of Organization each Gun Squad had four men (a Sergeant, two gunners and a driver), against a crew of five for the T30. Each vehicle in the Ammunition Section had a driver, two ammunition carriers and a Basic rifleman, so possibly the extra man needed for the T30 crew came from this Section.

The T30 was used by various US units in North Africa from November 1942. Its successor was the M8, a purpose-built assault gun that married the chassis of the M5 light tank with an elongated open topped turret. It too had the 75-mm pack howitzer as its main armament, plus a .50-cal M2 for air defense.

With the introduction of the M8 the Assault Gun Platoon was reorganized somewhat. Platoon Headquarters was to have an M3 halftrack, and the Ammunition Section was now a single M3 towing an M10 trailer. There were still three assault guns, each now termed a Section and towing an M10 ammunition trailer apiece.

The final change to the Assault Gun Platoon came in September 1944, with the intended replacement of the M8 in Armored Infantry Battalions with the 105-mm howitzer armed M4 medium tank. The only organizational change was the addition of a fifth crewman for each tank, the bow gunner. This gave the Armored Infantry Battalions similar fire support capability to that of the Tank Battalions, which were authorized the 105-mm M4 from late 1943. The howitzer armed M4 was equipped with the same 105-mm howitzer as used by the Field Artillery, the M2A1, which had a range of over 12,000 yards, plus three machine guns (one in the bow position, one coaxial with the howitzer, both .30-cal, and one .50-cal for anti-aircraft use).

While the 105-mm M4 was produced in plentiful numbers, it seems to have been slow in reaching units. It is often held that the similarly armed M7 howitzer motor carriage was issued to both Tank and Armored Infantry Battalions in lieu.

This is something I have asked about in various forums over the years, but the only confirmed examples look to be with a few Tank Battalions in Italy and the Pacific.

There were two Field Manuals issued for the Assault Gun Platoon, with only the later one from September 1944 being readily available. This covered the Platoon as found in both the Tank and Armored Infantry Battalion, and assumed it was equipped with the 105-mm armed M4 in both units. The guidance in the manual was to deploy the Platoon as a single element, with allotment of single guns to individual Companies being possible when the Battalion was operating on a wide front. The guns were to be primarily used for indirect fire support, and regarded as providing the Battalion with its own small but potent artillery capability.

Mortar Platoon (1942 to 1945)

The Mortar Platoon in 1942 was organized into a Headquarters, with an M2 halftrack, and three Squads, each with an M4 halftrack mounting an 81-mm mortar. The only major changes over the next three years were the replacement of the Headquarters M2 by the M3, and more importantly the M4 by the M21 halftrack.

Normally the Mortar Platoon of an Infantry Battalion was regarded as its most destructive element, able to quickly bring down fire on a target area up to two miles distant. The presence of an Assault Gun Platoon in the Battalion in some respects overshadowed the capabilities of the 81-mm mortar but did not render it obsolete.

There was only one Field Manual issued for the carrier mounted 81-mm Mortar Platoon, dated July 1942, and concerned the Mortar Platoon in both the Tank and Armored Infantry Battalion. It is overwhelmingly concerned with the use of the mortar in laying smoke screens, and assumes a ratio of four smoke shells to one of high explosive. Initially it was assumed the mortar would be dismounted and fired from the ground but it was soon recognised the optimal use was from the halftrack.

Contradictions regarding the crew size and the actual amount of ammunition carried have already been covered in the Vehicles of the Armored Infantry Battalion section. On paper the crew was six men, with a Sergeant, halftrack driver, two mortar gunners and two ammunition carriers. Each Squad had two radios, one on the vehicle and one for dismounted use, allowing an observer, normally the Sergeant, to set up an observation post forward of the weapon and pass back corrections. As with the assault guns, mortars could be allocated singly to Rifle Companies.

Machine Gun Platoon (1942 to 1945)

In a unit already equipped with so many machine guns there was still room for a dedicated Machine Gun Platoon.

The Platoon was carried in three halftracks, one for Headquarters and one for each of its two Sections, with each Section serving two M1917A1 Browning heavy machine guns. Both weapons were provided with tripod mounts for ground use.

The two teams in each Machine Gun Section were quite small, with just a commander and two gunners under the 1942 organization, both carried in an M2 halftrack that could accommodate up to three machine guns on its skate rail.

The 1943 reorganization increased the size of the Section, now having a Sergeant, two machine gunners and two ammunition handlers per weapon. Platoon Headquarters also increased its number of riflemen from four to eight, which would provide some extra manpower to transport weapons and ammunition when firing dismounted. These riflemen were also to provide local security to the guns.

No separate manual was issued for the Machine Gun Platoon, its general role and employment being covered in the Field Manual for the Armored Infantry Battalion, which was published very late on, in November 1944. This stressed the weapons being deployed in similar fashion to in the normal Infantry Battalion; that is dismounted and providing support to Rifle Platoons and Companies, where necessary by delivering overhead fire. There is no specific mention of the Machine Gun Platoon firing from its vehicles, though this was perfectly possible.

The Armored Rifle Company (1942 to 1945)

There were two Tables of Organization of note issued for the Rifle Company of the Armored Infantry Battalion, the first issued in March 1942. This called for a Company Headquarters, with Command, Maintenance and Administrative Sections, and three Rifle Platoons. This was superseded by a new Table in September 1943, which added an Antitank Platoon.

The Armored Infantry Rifle Platoon was made up of a Headquarters Squad, two Rifle Squads, a 60-mm Mortar Squad and an LMG Squad, each Squad carried self-contained in its own halftrack. In 1942, the Rifle Squads were each 11 men strong, with a Sergeant Squad leader, a Corporal assistant leader and seven riflemen, all these being armed with the M1 rifle.

Perhaps the most unusual element was the Platoon Headquarters Squad, of one Officer and 11 men. This doubled as both Platoon Headquarters and a Rifle Squad, but in the latter role was only able to deploy a Sergeant and five riflemen, all with the M1 rifle. The Headquarters part of the Squad was simply the commander (a First or Second Lieutenant) and a Platoon Sergeant, each with a carbine. There were no dedicated messengers so when needed these had to be drawn from the Squads. Also tacked on to the duties of the Headquarters Squad was antitank defense, as the Platoon commander's halftrack towed a 37-mm M3A1 antitank gun. Two antitank gunners were included in the Squad to man the weapon, against a crew of six for the same piece in the standard Infantry Battalion.

The final two Squads provided fire support normally found in the Weapons Platoon of the standard Rifle Company. The 60-mm Mortar Squad, with seven men, was commanded by a Sergeant, with two gunners and two ammunition carriers for a

single 60-mm weapon. Both mortar gunners were armed with pistols and the other three men with carbines. The LMG Squad had eight men and two M1919A4 Browning light machine guns, each with a gunner and an ammunition carrier (who doubled as assistant gunner), plus a Sergeant and a Corporal as Squad leader and assistant. The two gunners carried pistols and the others all carbines.

Completing the personnel of each of the above Squads was a halftrack driver and a Basic. All halftrack drivers in the Battalion had the rank of Technician Grade 5 and were armed with a submachine gun. Basics were effectively replacement personnel, normally equivalent to 10% of the total Enlisted Men strength of the unit involved. Under similar Tables of Organization of the period they were usually counted as part of Rifle Platoon Headquarters, however in the Armored Infantry Rifle Company they were allocated one per Squad and armed with the M1 rifle.

The Platoon Headquarters Squad, each Rifle Squad and the Mortar Squad were to be carried in an M3 halftrack, while the LMG Squad had an M2. This latter was possibly so the Squad's M1919A4 light machine guns could be used on the M2's gun rail, though they were principally expected to be used dismounted on their tripods.

Vehicular armament has been looked at previously, if somewhat vaguely. It was usual for each halftrack to carry the tripods for its machine guns, so they could be dismounted and used in the ground role if required.

While billed as three Squads this was effectively a two Rifle Squad Platoon. The abbreviated Rifle Squad included in Platoon Headquarters offered a small reserve element, however if the Platoon commander needed messengers and someone to operate the Platoon radio, its five riflemen could swiftly be used up. The Platoon's support weapons, the 37-mm gun, 60-mm mortar and two light machine guns, were each allocated at most two crewmen. All five Basics, supposedly supernumerary posts, could be used to fill out the skeleton crews assigned to the antitank gun and light machine guns, or indeed make the third Rifle Squad up to strength.

Basics aside, the Platoon had 24 dedicated riflemen, including 7 NCOs, 13 men serving or directing support weapons, 5 drivers and Platoon leader and Sergeant. The Rifle Platoon in a standard 1942 US Infantry Battalion had 36 riflemen, including 6 NCOs and 3 BAR gunners, plus a Headquarters including two messengers. By direct comparison, the Armored Infantry Rifle Platoon was far less durable.

The Command Section of Company Headquarters had an M2 halftrack and a Jeep. The Company was commanded by a Captain, with two Sergeants, one for communications and the other as HQ Section commander. The Company commander's halftrack towed a 37-mm antitank gun. Included in the Command Section personnel were a machine gunner, a radio operator and a messenger, plus two gunners for the 37-mm antitank gun. Unusually there was no officer identified as being the second in command or Executive officer of the Company.

The Maintenance Section had an M3 halftrack, fitted with winch, and five men under the Maintenance officer, a Lieutenant. It was responsible primarily for first line repairs; that is fairly minor issues that could be dealt with by its two mechanics who were equipped with a relatively limited set of tools and spares. There was an emphasis on preventative maintenance being carried out by the crews of individual vehicles, requiring drivers and NCOs to be familiar with the mechanical needs of their transports.

Completing Company Headquarters was the Administrative, Supply and Mess Section, under the supervision of the First Sergeant. It had only two 2½-ton trucks, one acting as kitchen and the other for equipment. Also included under the March 1942 Tables of Organization was a ¾-ton truck mounting a 37-mm antitank gun, the M6 gun carriage, or its substitute, a Jeep towing a 37-mm gun.

September 1943 and the Light Armored Division

The next, and last, major change to the Rifle Company came with the September 1943 Tables of Organization that reformed all units of the Armored Division. Under these the Rifle Platoon retained its overall format of a Headquarters Squad, two Rifle Squads, a 60-mm Mortar Squad and an LMG Squad. Each Squad was now to be carried in its own M3A1 halftrack.

The Rifle Squad was now 12 men strong, with a Sergeant, Corporal and nine riflemen, all armed with the M1 rifle. Platoon Headquarters Squad lost its antitank gun and its personnel became a Sergeant and eight riflemen, one of whom was equipped with an M1903A4 sniper rifle, the remainder having the M1. There were still no dedicated runners provided for the Platoon commander and his Platoon Sergeant, who were both armed with carbines.

The LMG Squad was increased from eight men to a dozen. Each of its two light machine guns was still crewed by a gunner and an ammunition carrier, but there were now five riflemen, who could provide local security and some additional carrying capacity. The Squad's Sergeant and Corporal, and machine gun crews had carbines, while each rifleman carried an M1. The Mortar Squad still had a Sergeant, two gunners and two ammunition carriers, all with carbines, and added two riflemen.

Completing each Squad was its halftrack driver, armed with a submachine gun.

The Platoon now had 37 dedicated riflemen, including Squad leaders and assistants, which finally put it on a par with the Rifle Platoon of the standard Infantry Battalion. There were a further 11 men serving or directing support weapons, plus one sniper, the Platoon commander and Sergeant and five drivers.

Company Headquarters underwent its own changes. The Headquarters Section was reduced, now being the Captain, Communication Sergeant, bugler, a driver and machine gunner for the halftrack, and three riflemen. There was also a messenger with a Jeep. The Maintenance Section added a mechanic, who doubled as the

halftrack driver, and the armorers previously found in the Administrative, Mess and Supply Section. The Company's Basics were now counted in the AM&S Section.

One striking feature of the March 1942 Armored Infantry Rifle Company was the handling of its antitank guns, which were simply tacked onto various Headquarters elements and provided with just two crewmen per gun. The September 1943 reorganization addressed this by forming a dedicated Anti-tank Platoon. This was still a fairly sparse affair, with a Lieutenant, Sergeant and driver with Jeep in its Headquarters, overseeing three Squads. Each of these was comprised of a Sergeant, a Corporal gunner, four cannoneers, three ammunition handlers and a halftrack driver, who together served a single 57-mm antitank gun, which was the British 6-pdr gun produced in the US. This was a much more substantial weapon than the 37-mm it replaced and needed a full complement to deploy it.

Under the September 1943 Tables of Organization, all M3 halftracks were shown as being 'without armament', with the machine guns they were to carry then being specified for the first time. From this time practically all halftracks were to carry a 2.36-inch antitank rocket launcher as standard. Two riflemen in each Squad were designated as the operator (actually termed rocketeer) and loader for the Bazooka.

The allocation of weapons to vehicles within the Rifle Company is given below;

Detail	Vehicle	M1917A1 .30-cal	M2 HB .50-cal	Launcher, AT, 2.36-in
Company Headquarters		...	2	3
Headquarters Section	Halftrack	...	(1)	(1)
Maintenance Section	Halftrack	...	(1)	(1)
Admin, Mess & Supply Section	Truck	...	...	(1)
Three Rifle Platoons, each		3	2	5
Headquarters Squad	Halftrack	...	(1)	(1)
Two Rifle Squads, each	Halftrack	(1)	...	(1)
60-mm Mortar Squad	Halftrack	(1)	...	(1)
LMG Squad	Halftrack	...	(1)	(1)
Antitank Platoon		1	2	...
Two Squads, each	Halftrack	...	(1)	...
One Squad	Halftrack	(1)	...	...
Total		10	10	18

Changes through to 1945

There were relatively few changes made to the Rifle Company organization before the end of the war in Europe.

First of these came in January 1944, with a bump up in ranks for many of the Non-commissioned officers, which was in line with similar changes made at this time in the Infantry Regiment proper. All assistant Squad leaders went from Corporal to

Sergeant, all Squad leaders from Sergeant to Staff Sergeant and all Platoon Sergeants from Staff Sergeant to Technical Sergeant.

In August 1944 grenade launchers made their first appearance in the Tables of Equipment, with 18 M7s (for the M1 rifle) and 5 M8s (for the M1 carbine) listed. The M7s are shown as two per Rifle Squad, which would include the Platoon Headquarters Squad. No distribution is given for the M8. The M1C sniper rifle was also to replace the M1903A4, though this was dependent upon availability.

Unit modifications

Along with these official changes there were several unofficial variations made by units in the field, a key one concerning the Antitank Platoon.

The 57-mm antitank gun, like the British 6-pdr from which it was derived, remained a capable weapon against the majority of German tanks and self-propelled guns through 1944. It was clear however that it no longer provided effective defense against the later generation of German armor being met on the Western front. There was also a dichotomy in equipping a mobile unit like an Armored Infantry Battalion with a towed weapon like the 57-mm antitank gun, which could only be deployed when the Platoon was halted.

It is often stated that some units opted to either disband their Antitank Platoons, or reorganize them as an additional Rifle Platoon. As is often the case with such modifications, the question is not so much whether it was done, but by how many units and from when. It is the type of change that would normally be made by a unit that had gained sufficient experience to judge they could do without the weapons, as once given up they would be difficult to reinstate, especially if the crews had been converted to riflemen.

63rd Armored Infantry Battalion, of 11th Armored Division, states in its After Action Report for January 1945 that '*AT platoon reorganized into rifle and 60-mm mortar squads*' but frustratingly offers nothing on whether this was a Platoon in only one Company, or in each Company.

Several other Battalions also recommended the deletion or rearming of the Antitank Platoon. Multiple Battalions though make direct reference to their Antitank Platoons, or indirect reference to the presence of the 57-mm guns (46th, 47th, 48th, 52nd and 62nd Battalions). A Company, 27th Armored Infantry Battalion, of 9th Armored Division, still had its Antitank Platoon on strength at Remagen in March 1945.

Another unofficial amendment was the addition of Browning Automatic Rifles to the Rifle Squads. These were absent from the Armored Infantry Battalion in its earliest organization of late 1940 and remained so until the Tables of Organization were reissued in June 1945.

In 7th Armored Division, 48th Armored Infantry Battalion noted that “A school on the BAR was conducted for the BAR men of the Battalion by Lt. Steinberg” on 6th January 1945. The use of BARs by “B” Company of the Battalion is also mentioned from its action at Meijel in late October 1944.

38th Armored Infantry Battalion, also of 7th Armored Division, notes the “use of BARs in an attack for the first time by us” at the end of January 1945. I have not seen anything on whether the 23rd Armored Infantry Battalion of 7th Armored Division, also employed the BAR.

60th Armored Infantry Battalion, of 9th Armored Division, reported ammunition expenditure under the heading of BARs in February 1945. 61st Armored Infantry Battalion of 10th Armored Division recommended the addition of one BAR per Rifle Squad in February and April 1945 but do not state if they had acquired them.

Overleaf is a brief summary of the changes in organization of the Rifle Platoon in the Armored Infantry Company.

Rifle Platoon, under Table of Organization 7-27 - March 1942

Personnel	No.	Pistol	Rifle	Carbine	SMG	LMG	60-mm mortar	37-mm gun	Halftrack
Platoon Headquarters									
First or Second Lieutenant	1	-	-	1	-	-	-	-	-
Platoon Sergeant	1	-	-	1	-	-	-	-	-
Sergeant	1	-	1	-	-	-	-	-	-
Rifleman	5	-	5	-	-	-	-	-	-
Antitank gunner	2	-	-	2	-	-	-	1	-
Halftrack driver	1	-	-	-	1	-	-	-	1
Basic	1	-	1	-	-	-	-	-	-
Total, Headquarters	12	-	7	4	1	-	-	1	1
LMG Squad									
Sergeant	1	-	-	1	-	-	-	-	-
Corporal	1	-	-	1	-	-	-	-	-
Light machine gunner	2	2	-	-	-	2	-	-	-
Ammunition carrier	2	-	-	2	-	-	-	-	-
Halftrack driver	1	-	-	-	1	-	-	-	1
Basic	1	-	1	-	-	-	-	-	-
Total, LMG Squad	8	2	1	4	1	2	-	-	1
60-mm Mortar Squad									
Sergeant	1	-	-	1	-	-	-	-	-
Gunner	2	2	-	-	-	-	1	-	-
Ammunition carrier	2	-	-	2	-	-	-	-	-
Halftrack driver	1	-	-	-	1	-	-	-	1
Basic	1	-	1	-	-	-	-	-	-
Total, Mortar Squad	7	2	1	3	1	-	1	-	1
Two Rifle Squads, each									
Sergeant	1	-	1	-	-	-	-	-	-
Corporal	1	-	1	-	-	-	-	-	-
Rifleman	7	-	7	-	-	-	-	-	-
Halftrack driver	1	-	-	-	1	-	-	-	1
Basic	1	-	1	-	-	-	-	-	-
Total, Rifle Squad	11	-	10	-	1	-	-	-	1
Total, Platoon	49	4	29	11	5	2	1	1	5

Notes

1. Halftrack is the M3, except in the LMG Squad which has the M2.
2. Halftrack armament is not shown (see text).
3. Platoon Sergeant is a Staff Sergeant.
4. All rifles to be the M1, .30-cal.

Rifle Platoon, under Table of Organization 7-27 - September 1943

Personnel	No.	Rifle	Carbine	SMG	LMG	60-mm mortar	2.36-in AT*	.30-cal MG*	.50-cal MG*	Halftrack
Platoon Headquarters										
First or Second Lieutenant	1	-	1	-	-	-	-	-	-	-
Platoon Sergeant	1	-	1	-	-	-	-	-	-	-
Sergeant	1	1	-	-	-	-	-	-	-	-
Rifleman	8	8	-	-	-	-	-	-	-	-
Halftrack driver	1	-	-	1	-	-	1	-	1	1
Total, Headquarters	12	9	2	1	-	-	1	-	1	1
LMG Squad										
Sergeant	1	-	1	-	-	-	-	-	-	-
Corporal	1	-	1	-	-	-	-	-	-	-
Light machine gunner	2	-	2	-	2	-	-	-	-	-
Ammunition carrier	2	-	2	-	-	-	-	-	-	-
Rifleman	5	5	-	-	-	-	-	-	-	-
Halftrack driver	1	-	-	1	-	-	1	-	1	1
Total, LMG Squad	12	5	6	1	2	-	1	-	1	1
60-mm Mortar Squad										
Sergeant	1	-	1	-	-	-	-	-	-	-
Gunner	2	-	2	-	-	1	-	-	-	-
Ammunition carrier	2	-	2	-	-	-	-	-	-	-
Rifleman	2	2	-	-	-	-	-	-	-	-
Halftrack driver	1	-	-	1	-	-	1	1	-	1
Total, Mortar Squad	8	2	5	1	-	1	1	1	-	1
Two Rifle Squads, each										
Sergeant	1	1	-	-	-	-	-	-	-	-
Corporal	1	1	-	-	-	-	-	-	-	-
Rifleman	9	9	-	-	-	-	-	-	-	-
Halftrack driver	1	-	-	1	-	-	1	1	-	1
Total, Rifle Squad	12	11	-	1	-	-	1	1	-	1
Total, Platoon	56	38	13	5	2	1	5	3	2	5

Notes

1. All halftracks are M3A1.
2. Weapons with * are vehicular weapons (.30-cal MG is M1917A1).
3. Platoon Sergeant is a Staff Sergeant.
4. One rifle to be M1903A4 sniper version, user designated by Platoon commander.
5. All other rifles to be the M1, .30-cal.

Rifle Platoon, under Table of Organization 7-27 - amended to August 1944

Personnel	No.	Rifle	Carbine	SMG	LMG	60-mm mortar	2.36-in AT*	.30-cal MG*	.50-cal MG*	Halftrack
Platoon Headquarters										
First or Second Lieutenant	1	-	1	-	-	-	-	-	-	-
Platoon Sergeant	1	-	1	-	-	-	-	-	-	-
Staff Sergeant	1	1	-	-	-	-	-	-	-	-
Rifleman	8	8	-	-	-	-	-	-	-	-
Halftrack driver	1	-	-	1	-	-	1	-	1	1
Total, Headquarters	12	9	2	1	-	-	1	-	1	1
LMG Squad										
Staff Sergeant	1	-	1	-	-	-	-	-	-	-
Sergeant	1	-	1	-	-	-	-	-	-	-
Light machine gunner	2	-	2	-	2	-	-	-	-	-
Ammunition carrier	2	-	2	-	-	-	-	-	-	-
Rifleman	5	5	-	-	-	-	-	-	-	-
Halftrack driver	1	-	-	1	-	-	1	-	1	1
Total, LMG Squad	12	5	6	1	2	-	1	-	1	1
60-mm Mortar Squad										
Staff Sergeant	1	-	1	-	-	-	-	-	-	-
Gunner	2	-	2	-	-	1	-	-	-	-
Ammunition carrier	2	-	2	-	-	-	-	-	-	-
Rifleman	2	2	-	-	-	-	-	-	-	-
Halftrack driver	1	-	-	1	-	-	1	1	-	1
Total, Mortar Squad	8	2	5	1	-	1	1	1	-	1
Two Rifle Squads, each										
Staff Sergeant	1	1	-	-	-	-	-	-	-	-
Sergeant	1	1	-	-	-	-	-	-	-	-
Rifleman	9	9	-	-	-	-	-	-	-	-
Halftrack driver	1	-	-	1	-	-	1	1	-	1
Total, Rifle Squad	12	11	-	1	-	-	1	1	-	1
Total, Platoon	56	38	13	5	2	1	5	3	2	5

Notes

1. All halftracks are M3A1.
2. Weapons with * are vehicular weapons (.30-cal MG is M1917A1).
3. Platoon Sergeant is a Technical Sergeant. All changes in ranks of Squad leaders and Assistant Squad leaders effective from January 1944.
4. One rifle to be M1C sniper version, user designated by Platoon commander. M1903A4 rifle may be issued in lieu.
5. All other rifles to be the M1, .30-cal.
6. Two men in each Rifle Squad and two in Headquarters Squad also equipped with an M7 rifle grenade launcher for use with the M1 rifle.

Service Company (1943 to 1945)

Under the March 1942 organization there was a single Regimental Service Company, which provided a Transport Section and a Maintenance Section for each Battalion. With the dissolution of the Regiment in the Light Armored Division structure, each Armored Infantry Battalion added its own Service Company.

The Company included a small Administrative and Personnel Section, commanded by a Warrant Officer, and two Platoons. The first of these was the Battalion Supply and Transportation Platoon which contained the Battalion's relatively small motor pool, consisting of nine 2½-ton trucks, each with a 1-ton trailer. There were four trucks for ammunition, three for fuel, and one each for rations and water.

The other Platoon was the Battalion Maintenance Platoon, commanded by the Battalion Motor officer. This included a dozen mechanics and a tank recovery vehicle, which was a medium tank with its main armament removed and a winch installed. The first conversions were M3 medium tanks (the Grant or Lee in British nomenclature) followed by the M4 (Sherman), and it was the latter vehicle that was specified under the Table of Organization for the Service Company.

The M32 tank recovery vehicle (initially designated T5) took the M4 and replaced the turret with a fixed superstructure. A winch with a 30-ton (US) payload was installed in the hull, and a distinctive 'A-frame' boom was mounted on the front hull, roughly level with the driver and bow gunner positions. This could pivot both forward and back, and be laid flat with the apex secured to a bar jutting out from the vehicle rear.

The M32 carried multiple weapons, with the hull mounted .30-cal machine gun retained and a .50-cal machine fitted in the open topped, static turret. Perhaps most impressive was the 81-mm mortar position on the hull front, complete with bipod and baseplate. This was to allow the crew to lay down a smoke screen if required during a recovery operation.

Another recovery machine was the heavy wrecking truck, M1 or M1A1. This was a 6x6 wheeled vehicle equipped with a crane and two winches. The wrecker could be raised off the ground on telescoping jacks to gain maximum lift with the crane of 16,000lbs. The rear winch could pull over 37,000lb and the front one 20,000lb.

Annex A - Communication equipment

Unlike other US Infantry Battalions there was no Communication Platoon in the Armored Infantry Battalion. This usually consisted of the Message Center Section, the Wire Section and the Radio and Visual Section. In the Armored Division, radio was the primary means of communication, initially almost to the exclusion of wire. Messengers were retained and were mounted in Jeeps.

Radio sets were distributed widely throughout the Battalion, down to almost every Platoon Headquarters and in a few cases to each vehicle in a Platoon. These were drawn from the SCR-500 series of sets, with six different types appearing on the authorised table of equipment for the Battalion during the course of the war. These can be divided into three parts for examination.

First was the SCR-506, which was distinct from the other two groups of sets as it was an AM (amplitude modulation) set. As such it could be used to receive and transmit in both voice and continuous wave (CW), better known as Morse code. The SCR-506 was a vehicle mounted set and was powered by the vehicle's battery. In British terminology it was a 'rear link set' used to connect Battalion Headquarters with higher levels, such as Regimental or Combat Command Headquarters.

Range of the SCR-506 using voice was up to 25 miles stationary, dropping to 15 miles when in a moving vehicle. CW range was up to 70 miles and 35 miles respectively using the same criteria. A 15-foot antenna was used while driving, augmented by a 10-foot extension when stationary.

The second radio set used by the Battalion, and numerically the most important, was the SCR-510. This was an FM (frequency modulation) set and as such could not be netted with an AM set, such as the SCR-506. In the period immediately before the US entered the war, the Armored Force had opted for FM sets in its tanks and vehicles, even though there were none immediately available.

The SCR-510 was another vehicle set, powered by the battery of the truck or halftrack that carried it. It was a combined receiver and transmitter with a frequency range of 20.0 to 27.9 megacycles and a range of 5 miles, which was not impaired if the vehicle was moving. The frequency was controlled by the choice of crystals fitted, which had to be done before the radio was to be used. The frequency range meant there were 80 possible channels, each of which had its own specific crystal. The radio though could only be fitted with two crystals at any one time, meaning it was limited to two channels in action. The operator could select these as required simply by changing the CHAN (channel) switch from A to B.

The SCR-509 was a man portable version of the SCR-510, sharing the same operating range and frequencies. It was powered by two dry batteries and weighed 50lbs complete as a manpack set. Both the 509 and 510 used an 8-foot aerial.

The third range of sets was derived from the SCR-508. This was actually designed for tanks, not infantry, and was another vehicle mounted radio. There were three sets in this small family, all of which used the same basic components.

SCR-508 - this was the command version and was fitted with a single transmitter unit and two receiver units.

SCR-528 - this was originally an intermediate command set and was fitted with a single transmitter and a single receiver.

SCR-538 - this was originally intended as the basic tank radio and was simply a receiver unit, with no transmit capability. It was superseded by the SCR-528.

All three of these sets used the same model of receiver and transmitter in different combinations. The receiver unit and the transmitter unit were separate items, each covering the frequency band of 20.0 to 27.9 megacycles, and each unit could be fitted with ten crystals at one time. As with the SCR-510 the selection of frequencies had to be made before the set began operation.

This meant that an SCR-508 could transmit on ten different channels within its frequency range, and receive on 20, while the SCR-528 could receive on ten and transmit on ten. The SCR-508 and associated builds were push button sets, so all the operator needed to do to change from one frequency to another was to press the appropriate number on the front panel of the receiver or transmitter unit. All three variants were powered by the battery of the vehicle they were carried in and used a 9-foot antenna. Maximum range was around 7 miles, moving or halted.

It was possible for an SCR-510 or SCR-509 to talk to and receive from an SCR-508 or SCR-528, when fitted with the appropriate crystals. None of these sets could be netted with the SCR-506 AM set, or the SCR-300 or SCR-536 sets (see below).

Aside from the SCR-509, all the above sets weighed in at around 200lbs, meaning they could only be carried in vehicles, which also provided their power supply. This meant that commanders were very much tied to their vehicles, which was fine during mobile operations but not when troops were on foot or occupying static positions. In August 1944 the SCR-536 (handie-talkie) was issued to Rifle Companies in Armored Infantry Battalions, followed by the SCR-300 (walkie-talkie) a few months later, which gave them a radio network when operating on foot.

While the FM type sets used by the US Army proved to be very reliable there was a real limitation in which sets could be netted together. The SCR-300 was a case in point. This operated in the 40.0 to 48.0 megacycle range which meant there was no other FM set that it could connect with. The most expedient solution was to modify the SCR-300 to operate from a vehicle, which resulted in the AN/VRC-3. From late 1944 onwards these sets were added to Armored Infantry Battalion equipment.

Distribution of radio sets through the Battalion changed during the course of the war. Details for the Battalion on the 1942 organization have been reconstructed in the below, while those for late 1943 onwards are taken from the Tables of Equipment.

Detail	Mar-42	Sep-43	Aug-44	Nov-44
Battalion Headquarters				
Halftrack (Battalion commander)	506/508	506/508	506/508	506/508 AN/VRC-3
Halftrack (Battalion S-4)	...	506/510	506/510	506/508 300
Headquarters Company				
<i>Company Headquarters</i>				
Halftrack	510	508	508	508
¼-ton truck	510	510	510	510
<i>Maintenance Section</i>				
¼-ton truck	...	...	510	510
<i>Reconnaissance Platoon</i>				
Platoon Headquarters halftrack	510	510	510	508
Each Section (first ¼-ton truck only)	...	510	510	510
<i>Cannon/Assault Gun Platoon</i>				
Platoon Headquarters halftrack	510	510	510	528 AN/VRC-3
Each assault gun/M8/M4 105-mm	510	510	510	528
<i>Mortar Platoon</i>				
Platoon Headquarters halftrack	510	510	510	528 300/536
Each mortar carrier	510/509	510/509	510/509	510/536
<i>Machine Gun Platoon</i>				
Platoon Headquarters halftrack	510	510	510	510
Three Rifle Companies, each				
<i>Company Headquarters</i>				
Company Headquarters halftrack	528	528	528 536 x2	508/300 536 x2
¼-ton truck	...	510	510	510
<i>Maintenance Section</i>				
¼-ton truck	...	...	510	510
<i>Three Rifle Platoons, each</i>				
Platoon Headquarters halftrack	510	510	510/536	510/536
<i>Antitank Platoon</i>				
¼-ton truck	...	510	510/536	510/536
Service Company				
<i>Company Headquarters</i>				
¾-ton truck	...	506/510	506/510	506/510
<i>Maintenance Platoon</i>				
¼-ton truck	...	510	510	510
Halftrack	...	528	528	528
Tank recovery vehicle	...	538	528	528
Total, all radio sets	29	44	66	74

While the number of radios increased continually the authorised number of dedicated radio operators remained unaltered through 1943 to 1945, with five in Battalion Headquarters and two in Service Company Headquarters, ostensibly to man the more demanding SCR-506 AM sets found there. The various vehicle mounted and man-packed FM sets were handled by personnel in addition to their other duties.

An outline of the typical radio network for the Battalion is included in the November 1944 Field Manual.

Battalion commander (linked with);

SCR-506 Combat Command

SCR-508 Each Rifle Company Headquarters
 Headquarters, Company Headquarters
 Commander of the 81-mm Mortar Platoon
 Commander of the Assault Gun Platoon

Headquarters Company commander (linked with);

SCR-508 Battalion commander
 Reconnaissance Platoon commander
 Machine Gun Platoon commander
 Service Company commander
 Medical Detachment commander

Mortar Platoon;

SCR-510 Platoon commander linked with Battalion commander
 Platoon commander linked with Mortar Squads

SCR-510 Mortar Squads linked with Platoon commander
 Mortar Squad linked with dismounted observer

SCR-509 Dismounted observer linked with Mortar Squad

Assault Gun Platoon;

SCR-510 Platoon commander linked with Battalion commander
 Platoon commander linked with Gun Squads

SCR-528 Gun Squads linked with Platoon commander

Each Rifle Company commander (linked with);

SCR-528 Battalion commander
 Each Rifle Platoon commander
 Antitank Platoon commander
 Company messenger in ¼-ton truck

The later addition of the SCR-536 and SCR-300 sets allowed Rifle Companies to set up a radio net when dismounted but this could not link in with any of the vehicle mounted sets, until the arrival of the AN/VRC-3.

Battalion Headquarters (linked);

SCR-300 Rifle Company commanders

Assault Gun Platoon;

AN/VRC-3 linked with Rifle Company commanders

Mortar Platoon;

SCR-300 linked with Rifle Company commanders

SCR-536 Platoon commander linked with Mortar Squads
Possible link from Mortar Squads to Rifle Companies/Platoons

Each Rifle Company (linked with);

SCR-300 Battalion Headquarters

SCR-536 Company commander (two sets, one being spare)
Each Rifle Platoon commander
Antitank Platoon commander

Wire communication equipment

This did not initially feature in the Armored Infantry Battalion's communication equipment. The September 1943 table of equipment listed eight EE-8 telephones, one BD-72 switchboard and five miles of W-110-B wire, and a CE-11 equipment reel and one mile of W-130 wire for the Mortar Platoon. Each Rifle Company was authorised six EE-8 telephones, three CE-11 reels and three miles of W-130 wire, divided equally among the three 60-mm Mortar Squads.

These items have already been looked at in the [Organization of the United States Infantry Battalion](#) piece however their distribution in the Armored Infantry Battalion does raise some queries. In the 60-mm Mortar Squads presumably the two EE-8 telephones were to be linked together by the W-130 lightweight assault wire, with the CE-11 reel used for laying and recovery. This would allow for an observer to go forward some distance and report corrections to the mortar team.

Presumably this same method was to be used by the 81-mm Mortar Platoon, which would require two of Battalion Headquarters eight telephones, leaving six to be used with the BD-72 switchboard. The BD-72 was practically identical to the BD-71 used by the normal Infantry Battalion but had a 12-line capacity rather than six.

Annex B - Ammunition scales

There are some interesting figures in FM-101-10 (Organization, technical and logistical data) of the ammunition to be carried by various units of the Armored Division. The Field Manual was issued in revised form multiple times and the copies for October 1943 and August 1945 refer only to the Light Armored Division.

Unfortunately, these figures are as infuriating as they are enlightening, particularly in terms of machine guns and rifles. Below is a table showing the figures as given in the Manuals for 1943 and 1945, along with my comments.

Weapon	A No. of wpns (Unit of Fire)	B Equivalent in rounds	C Refill	D Resupply	E Basic Load	F UF as decimal%
Carbine, .30-cal	394 (60)	23,640	29,500	7400	36,900	1.56
Rifle & MG, .30-cal	478 (150) 63 (2000)	197,700	268,000	67,000	335,000	1.69
SMG & pistol, .45-cal	126 (200) 3 (10)	25,230	22,700	5700	28,400	1.13
MG, .50-cal	46 (500)	23,000	29,700	7400	37,100	1.62
57-mm, antitank	9 (100)	900	270	135	405	0.45
75-mm, howitzer	3 (300)	900	414	207	621	0.69
60-mm, mortar	9 (100)	900	684	342	1026	1.14
81-mm mortar	4 (100)	400	321	161	482	1.21
2.36-in, rocket, AT	74 (6)	444	740	185	925	2.08
Grenade, M2 (frag)	...	...	1070	...	...	...
Grenades, smoke	...	...	1035	...	...	...
Mines, M1	...	...	2180	...	...	...
Revisions (1945)						
Carbine, .30-cal	376 (60)	22,560	29,500	7400	36,900	1.64
Rifle & MG, .30-cal	478 (150) 71 (2000)	213,700	294,000	74,000	368,000	1.72
SMG & pistol, .45-cal	138 (200) 3 (10)	27,630	24,900	6200	31,100	1.13
105-mm howitzer	3 (200)	600	294	146	440	0.73
Comments (figures rounded in original tables)						
Col A	First figure is number of weapons, bracketed figure is Unit of Fire per weapon					
Col B	Equivalent in rounds of number of weapons times Unit of Fire per weapon					
Col C	Refill is number of rounds carried by Battalion vehicles and personnel					
Col D	Resupply is capacity of general-purpose vehicles allotted to ammunition supply					
Col E	Basic or Prescribed load = Refill + Resupply					
Col F	Unit of Fire equivalent of Basic or Prescribed Load, written as a decimal percentage					

1. Total of 63 machine guns for 1943 is 3 more than T/O total. Assume this refers to the armament on the mortar carrier halftracks.
2. Total of 46 .50-cal machine guns is 3 more than T/O total. Assume this refers to the armament on the M8 howitzer motor carriages.
3. 57-mm ammunition indicates 30 rounds carried per gun.
4. The M8 HMC was able to carry 46 rounds of 75-mm ammunition. This would mean two full reloads were available per piece.
5. 60-mm mortar ammunition would indicate 76 rounds per Squad (which does not fit neatly with 18 rounds per bundle).

6. 81-mm mortar ammunition includes that for the tank recovery vehicle. The M32 carried 30 smoke rounds for its 81-mm mortar, which leaves 291 rounds for the three 81-mm armed halftracks. That would allow 97 rounds per halftrack, which is the stated capacity for the M21.
7. The total of 2.36-inch antitank rockets indicates 10 per launcher.
8. The increase of machine guns from 63 to 71 with the August 1945 version of the table does not correlate with the changes in armament for the Battalion. The only additions were the three M4 tanks equipped with 105-mm howitzers, which would add 6 light machine guns (one coaxial and one bow LMG per tank). There is no indication that any more MGs were added.
9. Despite numerous attempts I have not been able to reconcile the totals for .50-cal ammunition. Generally speaking, the M3 halftrack is shown as carrying 700 rounds of .50-cal ammunition, reduced to 400 on the M21. If the M21 is furnished with an M2 then the number of LMGs should actually decrease, not increase. The M8 HMC carried 400 rounds for its M2 and the tank recovery vehicle 300. Five trucks also carried an M2.

Annex C - Notes on deployment

There are several aspects concerning the deployment of Armored Infantry Battalions that require some examination.

Armored Infantry in the Combat Command system

While this piece is focussed on the Armored Infantry Battalion, it is not possible to discuss its organization and tactical handling without reference to the wider subject of the US Light Armored Division.

The 1940 US Armored Division was built around an Armored Brigade of two Light and one Medium Armored Regiments. The Light Armored Regiments each had three Battalions and the Medium Regiment two Battalions, for a total of eight tank Battalions. In support was an Armored Infantry Regiment with just two Battalions.

With the reorganization of March 1942, the Armored Division was slimmed down to two Armored Regiments, each of three Battalions (one Light and two Medium), and an Armored Infantry Regiment with three Battalions.

The Light Armored Division of September 1943 had three Tank Battalions (each with three Medium and one Light Companies) and three Armored Infantry Battalions. Each of these Battalions had its own Service Company to handle basic administrative duties in the absence of a parent Regiment.

These developments saw the ratio of tank battalions to infantry battalions within the Armored Division drop from an initial four tank to one infantry in 1940, then two of tanks to one of infantry in 1942, and ending as one tank to one infantry in 1943.

The March 1942 US Armored Division included two Combat Command Headquarters, which occupied a position between Divisional Headquarters and the various Regimental Headquarters. As outlined in the Armored Force Field Manual of 1942 it was anticipated that these would oversee various groupings of combat elements, one example being an Armored Regiment, an Armored Infantry Battalion and at least one Armored Field Artillery Battalion, plus Company sized Engineer, Tank Destroyer and Reconnaissance units.

In September 1943 the Light Armored Division organization was introduced, and was applied to all US Armored Divisions commencing from the 4th Armored Division.

The Light Armored Division had two Combat Commands; Combat Command A (CCA) was headed by a Brigadier General and Combat Command B (CCB) by a Colonel. There was also a much smaller Headquarters, Reserve Command (CCR) under a Colonel, who also had responsibility for infantry training within the Division. Some Divisions used CCR as the nucleus of a third fully fledged Combat Command Headquarters, but this needed significant augmentation in terms of personnel, transport and equipment to become a viable Combat Command itself.

Units were allotted to the Combat Commands. In general terms Divisions tended to have one Tank Battalion and one Armored Infantry Battalion paired together under each of the two full Combat Command Headquarters, with the remaining Tank Battalion and Armored Infantry Battalion being kept in reserve.

Task Force organization

Combat Commands would generally operate with two Task Forces, each built either around a Tank or an Armored Infantry Battalion, the relevant Battalion Headquarters serving as the Task Force (TF) Headquarters.

Tank and Armored Infantry Battalions were not intended to fight separately from one another and each TF would consist of a mix of Tank and Armored Infantry Companies, often augmented by elements from supporting arms, such as Armored Engineer, Tank Destroyer and Cavalry Reconnaissance units. The two TFs in a Combat Command could consist of a Tank Battalion (less one Medium Tank Company and plus one Rifle Company), and an Armored Infantry Battalion (less one Rifle Company and plus one Medium Tank Company). This resulted in one primarily Tank equipped TF, with a single Armored Infantry Company, and another principally Armored Infantry TF including a single Medium Tank Company.

Another TF option was a direct 'marrying' of one Medium Tank Company with one Armored Infantry Company, which meant one or other TF would have two such 'Tank-Infantry Teams' while the other TF would have only one.

An Armored Infantry Battalion that was providing the core of a TF would then find itself operating with at most two Companies rather than the preferred three, while a detached Armored Infantry Company could well find itself operating away from its parent Battalion for extended periods. In a TF with a single Armored Infantry Company supporting two or three Tank Companies, the infantrymen could find themselves dispersed as Platoons, each working with a single Tank Company.

One way to alleviate the relatively small number of infantrymen in the Armored Division was to attach units from Infantry Divisions. This could range from a single Infantry Battalion to an Infantry Regiment, or a full Regimental Combat Team, in all cases drawn from an Infantry Division.

The attached infantry units were motorized by the addition of one or more Quartermaster Troop Transport Companies. Each QM Truck or Troop Transport Company had 48 2½-ton trucks. It took roughly 30 of these trucks to lift all the marching elements of a single Infantry Battalion, plus around 5 more for Regimental units, so two QM Companies could transport a standard Infantry Regiment.

Armored Infantry - mounted versus dismounted actions

This is perhaps one of the most intriguing and at the same time most elusive aspects of Armored Infantry deployment. It is also difficult to address depending on whether or not you agree with the following proposition. Simply put, I think the perception has grown that the Armored Infantry Battalions used their halftracks in a highly aggressive manner, riding them as far as possible in the assault phase before dismounting, with the vehicle mounted weapons being used to lay down machine gun fire to cover the riflemen as they advanced.

The Field Manuals for the Armored Infantry Company, FM 17-40, and the Armored Infantry Battalion, FM 17-42, were both published in November 1944, which was somewhat late during the war. Chapter 1, paragraph 4, of FM 17-40 says under the heading of 'Employment';

"The armored infantry rifle company normally fights dismounted. Under favorable conditions vehicular armament either mounted or dismounted is used to support. If vehicles are to be used they must be placed in defilade and dispersed. The company moves forward in vehicles until forced by enemy fire, or unfavorable terrain, to dismount. In mounted movement, it is sensitive to mine fields, other obstacles, unfavorable terrain and weather".

Chapter 6, paragraph 30 of the Battalion manual expands on this description;

"30. Characteristics of the attack

a. CHARACTERISTICS. The armored infantry battalion in the attack makes full use of its mobility, firepower and light armor protection from small arms fire.

b. MOBILITY. The armored infantry uses its transportation to move quickly to initial attack positions where the infantry dismounts and fights on foot. Vehicles, except those used for fire support, are then withdrawn to the best available concealed and protected positions. Here they are dispersed and local security established. The reserve company or companies may remain with vehicles in concealed positions until committed to action or required to change position. When the objective is taken, vehicles are moved forward to new positions as necessary.

c. FIREPOWER. In the attack the battalion utilizes all available weapons, including dismounted vehicular weapons when these are not needed for protection of vehicles.

d. ARMORED PROTECTION. The half-track personnel carriers provide protection for the troops against small-arms fire up to close ranges. The armor also gives protection against bomb and shell fragments. Troops are transported as far forward as possible in each situation; terrain, cover, and the type of weapons available to the enemy governing the dismounting. The vehicular weapons are used to protect the attacking troops against air attack. Armor on the half-track does not protect crews against antitank weapons and direct hits by assault guns and light artillery."

Commanders of Armored Infantry were faced with a choice when undertaking an attack against an enemy position, that of having the men advance on foot from an appreciable distance away, or of keeping them in the halftracks for as long as possible before ordering the dismount. The latter option would give them some respite from the effects of mortar and machine gun fire for the majority of the advance. It would however mean they were extremely vulnerable to a hit from a dedicated antitank weapon, or even a light anti-aircraft gun firing in a ground role.

Following a discussion on a forum early in 2020 I conducted a search for online accessible accounts of actions by Armored Infantry units. The Ike Skelton Library Combined Arms Research Library (CARL) includes After Action Reports (AARs) of around 24 Armored Infantry Battalions that served in the ETO. It would be misleading to say that these documents enable a scientific study of the frequency of Armored Infantry units attacking whilst mounted in their halftracks. The detail included in the After Action Reports in particular varies greatly. They are though the only record I am aware of that provides any insight into the subject.

50th Armored Infantry Battalion - "The first of a series of savage counter-blows in our own sector was repulsed by "A" Company at 0800. Reorganizing swiftly, Task Force Wall jumped off at 0925 to continue the attack against strongly defended dug-in positions; the mounted advance cleared woods and approaches to towns against heavy artillery, mortar and small arms fire".

From the 'Action Against Enemy' report covering the month of January 1945, which details an attack on the towns of Oubourcy and Michamps at the start of January 1945 in the vicinity of Bastogne.

63rd Armored Infantry Battalion - "In the afternoon, Commanding General, CCA...organized TASK FORCE RICHTER composed of companies C and Hq of 63rd Armored Infantry Battalion and Co(mpany) A 42nd Tank Battalion, and ordered this TASK FORCE to capture or destroy the enemy in vicinity of HUBERMONT. TASK FORCE commander's decision was to attack mounted with tanks leading N(orth) along W(est) edge of BOIS des VALETS and then attack W towards HUBERMONT. Attack jumped off from HUMONT at 1600 rode into the enemy position and gained the high ground ringing HUBERMONT. Personnel losses during the action - 1 Officer and 2 EM wounded, 1 EM killed. Enemy killed were estimated at 150. 10 prisoners were taken".

From the 'Action Against Enemy' report covering the month of January 1945, detailing an assault on RECHRIVAL in Belgium.

These accounts represent pretty much all of the references to Armored Infantry conducting a mounted assault that I have, at time of writing, been able to find. While there were no doubt more, I have formed the opinion that mounted assault was very much an exceptional tactic.

Another method of carrying Armored Infantry into the assault was for them to ride on their accompanying tanks, which may initially seem an odd tactic given that they were provided with their own armored transport. It was however seemingly common enough an occurrence for an appendix on the subject to be included in the November 1944 Armored Infantry Company Field Manual.

This showed how either one or two Armored Infantry Platoons could be carried by a Medium Tank Company, using nine or 18 tanks respectively. The recommendation was that no more than six men should be carried on the rear deck of an M4 tank during a tactical deployment, this being the maximum number who could remain in cover behind the turret.

On this basis it would take two tanks to transport each Squad of 11 men (the halftrack driver remaining with his vehicle), with five or six men on each tank. The Mortar Squad was to be carried on a single tank, with its seventh man utilising a spare slot in the Platoon Headquarters Squad.

This would appear to have been a far more common eventuality than that of the infantry using their halftracks as assault vehicles. It was recognised that the infantry carrying halftracks could not necessarily keep pace with their married tanks over difficult terrain, so having at least some of the infantry ride on the tanks would keep the two together and able to provide the mutual support necessary. Speed in the advance also offered a protection of its own to the infantry, as noted by 51st Armored Infantry Battalion of its action on 1st December 1944.

“The enemy threw heavy concentrations of artillery in our zone of advance. “B” Company, riding the tanks, moved in quickly under the barrage and entered Rimsdorf within 20 minutes without casualties, but “A” Company, following on foot, suffered considerable casualties from artillery during the advance...”

Once the Armored Infantry left their halftracks however, whether to conduct a conventional advance to contact on foot, or to ride on their accompanying tanks, they were faced with the same problem, as described below.

“Organically the Armored Infantry is equipped to fight on or near its vehicles. If dismounted for extended periods it loses a great deal of its fire power, mobility and radio communications. The problem of supply, too, becomes a major one when Armored Infantry fights as Infantry”. **Commander of the 52nd Armored Infantry Battalion, Section IV of the ‘After Action Against Enemy’ report for March 1945.**

The AARs available for the final few months and weeks of the war often refer to the Armored Infantry making full use of their mobility, with Companies of infantry and tanks utilising the German road network to move swiftly from one town to another. Where resistance was deemed to be light, they may ride in, whereas if it was more substantial a dismounted action would normally be put in.

Sources used and Acknowledgements

The amount of information that is available at the click of a mouse regarding the US Army during World War Two is quite incredible. There remains a great deal that is only accessible by requests to various archives and libraries, which is complicated by being on the opposite side of the Atlantic.

Tables of Organization (includes Equipment only where stated)

7-26, Headquarters and Headquarters Company, Armored Infantry Battalion - 1st March 1942

7-27, Rifle Company, Armored Infantry Regiment - 1st March 1942

7-26, Headquarters and Headquarters Company, Armored Infantry Battalion - 15th September 1943 (including equipment, including Changes 1 to 6)

7-27, Rifle Company, Armored Infantry Battalion - 15th September 1943 (including equipment, including Changes 1 to 4)

7-29, Service Company, Armored Infantry Battalion - 15th September 1943 (including equipment, including Changes 1 to 5)

Many thanks to Richard Hedrick for sharing copies of the Equipment sections of the September 1943 Tables of Organization, which have proved immensely helpful.

US Army Field Manuals

FM 17-71, Crew Drill for Half-track Vehicles, 27 September 1943*

FM 17-40, Armored Infantry Company, 21 November 1944**

FM 17-42, Armored Infantry Battalion, 10 November 1944*

FM 101-10, Staff Officers' Field Manual; Organization, Technical and Logistical Data, June 15, 1941*

FM 101-10, Staff Officers' Field Manual; Organization, Technical and Logistical Data, 25 January 1943***

FM 101-10, Staff Officers' Field Manual; Organization, Technical and Logistical Data, 10 October 1943

FM 101-10, Staff Officers' Field Manual; Organization, Technical and Logistical Data, 1 August 1945****

All of the above marked * are available for download free from;

<http://cgsc.contentdm.oclc.org/>

Scroll down to the 'Obsolete Military Manuals' link then select 'Field Manuals'.

** available from <https://digital.library.unt.edu/ark:/67531/metadc11807/>

*** available from Google Books

https://play.google.com/store/books/details/United_States_War_Department_Organization_Technica?id=NnovW_Ey5K8C&hl=en

**** available from <https://www.bits.de/NRANEU/others/amd-us-army.htm>

US Army Technical Manuals

Catalogue of Standard Ordnance Items, second edition 1944, Volumes 1 to 3, from;

<https://bulletpicker.com/usa.html>

TM 9-707, Basic Half-track Vehicles, May 21, 1943*

TM 9-710, Basic Half-track Vehicles, 23 February 1944*

TM 11-600, Radio sets SCR-508, SCR-528, SCR-538, March 25, 1943**

TM 11-605, Radio sets SCR-509 and SCR-510, 15 November 1943*

TM 11-227, Signal communication equipment directory, Radio Communication Equipment, 10 April 1944***

* available from www.archive.org

** available from Google books

*** available from http://www.radionerds.com/index.php/Main_Page

After Action Reports

Those I have been able to consult are available for download free from;

<http://cgsc.contentdm.oclc.org/>

An initial search for 'armored infantry' followed by a 'search within these results' for 'after action' should bring up around two dozen files. The scans made of some of these documents are sadly unreadable and the quality of the content varies widely.

There are also some particularly detailed accounts of specific actions submitted by Company commanders in the 27th, 38th and 48th Armored Infantry Battalions;

<https://www.benning.army.mil/Library/Donovanpapers/wwii/index.html>

Also, my thanks to all those who replied to my request for help on the TMP WWII Discussion Forum, as I finally undertook to learn the differences between the various models of halftracks.

Would like to find...

The School of Infantry at Fort Benning produced a number of 'Reference Data' booklets for the Infantry Regiment. I have no idea if there was an equivalent for the Armored Infantry Battalion, or indeed Regiment, but I would be very interested to know if anyone has seen something of this type.

Similarly, if anyone has any contemporary documentation, particularly as regards ammunition scales and vehicle stowage, they would be willing to share, then please let me know (my email address is on the Homepage, which is accessible at the bottom left hand corner of each page).