Organization of the United States Infantry Battalion 1940 to 1945

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Introduction

This is my attempt at analysing the evolving organization, equipment and weapons of the United States Infantry Battalion during the Second World War.

The evolution of the US Infantry Battalion is not that involved, certainly compared to its principal allies and enemies. The Rifle Battalion of October 1940 was superseded beginning in April 1942 by a new Infantry Battalion organization. While this underwent amendments, most particularly in terms of antitank weapons, its overall structure influenced all subsequent Tables of Organization issued for the Battalion.

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 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 is a list of topics I am still seeking information 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.

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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 range of non-commissioned officers; 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 lead to a fractional result one figure was rounded up and the other rounded down (so for example 127 would be considered as 64 and 63). On that example the unit would be authorised 64 men as PFC. The number of Basics subtracted beforehand (in this example say 17) would then be added to the remaining figure of 63, making for 80 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 80 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 64 to 104, while Privates was reduced from 80 to 40.

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 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 Infantry Regiment, Companies were lettered through the Battalions only, excluding Headquarters Companies, while the Battalions were identified as 1st, 2nd and 3rd. Regimental Companies were not included in the sequence. Overall the wartime US Infantry Regiment was organized as follows;

Regimental Headquarters and Headquarters Company
Service Company
Infantry Cannon Company (added from April 1942)
Infantry Antitank Company

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

The Heavy Weapons Companies were always D, H and M with all other lettered Companies being Rifle Companies. 'J' was traditionally excluded.

Organization of the United States Infantry Battalion

1940 to 1945

The organizational development of the US Infantry Battalion during World War Two is not actually that complicated and can be considered in three stages.*

Tables of Organization issued in October 1940, which were in place at the time that the United States entered the conflict.

Tables of Organization issued in April 1942. These were part of the first major revision to US Army organization and were used in North Africa and the Pacific.

Tables of Organization issued in July 1943 and amended in February 1944. These effectively decided the organization of the US Army's Infantry Divisions for the upcoming campaigns in Europe and the next round of operations in the Pacific.

A new series of Tables of Organization were approved in June 1945, and had the war continued into 1946 were to be used by US Infantry Regiments in the invasion of Imperial Japan. These are looked at in Annex C.

*In March 1943 a new series of Tables of Organization were issued for the US Infantry Division, intended to reduce personnel and transport. Given there was no opportunity for units outside the United States to organize on them the March 1943 Tables of Organization are excluded from this work.

Overview

The Battalion as detailed herein was to be found in the Infantry Regiment of the Infantry Division. The US Army opted to use standardized organizations across all theaters, though some variations were needed to suit local conditions.

Outline development, 1940 to 1945

In October 1940 a series of Tables of Organization were issued for the Infantry Regiment, Rifle. The same Regiment was used in the older 'square' Division, which included two Brigades, each of two Regiments, or the newer 'triangular' Division, which deleted the Brigade Headquarters and had three Regiments.

The October 1940 Regiment consisted of a Headquarters Company, a Service Company, an Antitank Company and three Infantry Battalions. Each Battalion had a Headquarters Detachment, three Rifle Companies and a Heavy Weapons Company. The Heavy Weapons Company had two .30-cal Machine Gun Platoons, one .50-cal Machine Gun Platoon and one 81-mm Mortar Platoon; each of these Platoons had four weapons of the relevant type. Each Rifle Company had 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 and an Automatic Rifle Squad, the latter with two BARs.

In April 1942 the Regiment was reorganized, adding an Infantry Cannon Company to the above outline. The three Infantry Battalions also underwent a series of changes.

The Battalion now consisted of a Headquarters Company, three Rifle Companies and a Heavy Weapons Company. Headquarters Company included an Ammunition & Pioneer Platoon and an Antitank Platoon, the latter with four 37-mm guns. The Heavy Weapons Company now had two .30-cal Machine Gun Platoons, each still with four weapons, and an 81-mm Mortar Platoon with six mortars. Each Rifle Company had a Weapons Platoon (still with two .30-cal light machine guns and three 60-mm mortars) and three Rifle Platoons, the Rifle Platoons now having three Rifle Squads, each with its own BAR.

The new Tables of Organization of July 1943 had relatively little change on this overall format. Antitank defense was improved with the replacement of the Battalion's four 37-mm guns by three 57-mm guns, while the recently introduced antitank rocket launcher (forever known as the Bazooka) was liberally issued throughout the units of the Regiment and Battalion.

In February 1944 the Infantry Regiment's Tables of Organization were rewritten and reissued. This made practically no change to the capabilities of the Regiment, and mostly detailed a redistribution of antitank rocket launchers and alterations in the ranks of Enlisted Men. The last major revision to the Regimental and Battalion organization came in June 1944, with amendments that added a number of unallocated automatic weapons and reduced the number of Basics in all units excepting the Rifle Companies.

Major changes were planned for both the Battalion and Regiment in the event that US forces invaded the Japanese Home Islands in late 1945 into early 1946. For the Battalion these would have built upon the existing organization. The 57-mm Antitank Gun Platoon was to be deleted from Headquarters Company while a new Gun Platoon, with six 75-mm recoilless rifles, was added to the Heavy Weapons Company. In the Rifle Companies the Weapons Platoon was to be augmented by a Gun Section with three 57-mm recoilless rifles, and also an Assault Section equipped with six rocket launchers.

Overleaf is a chart that outlines the development of the US Infantry Battalion from late 1940 to mid-1945.

Evolution of the United States Infantry Battalion, 1940 to 1945

Detail	1940	1942	1943	1944	1944 (with Changes)	1945 (Redeployment)
i). Personnel						
Officers	28	32	35	35	35	37
Enlisted Men	904	884	836	836	825	977
Total, all ranks	**932**	**916**	**871**	**871**	**860**	**1014**
ii). Transport						
Motorcycles (with sidecar)	4	0	0	0	0	0
1/2-ton trucks	31	0	0	0	0	0
1/4-ton trucks	0	22	34	34	34	41
3/4-ton trucks	0	25	2	2	2	2
1 1/2-ton trucks	0	0	4	4	4	4
1/4-ton trailers	0	0	22	22	22	29
1-ton trailers	0	0	1	1	1	4
iii). Weapons						
Pistols, .45-cal	313	60	75	81	81	114
Submachine guns, .45-cal	0	0	0	0	20	0
Carbines	0	290	225	219	219	249
Rifles, M1	601	469	535	535	524	615
Rifles, M1C	0	0	0	0	0	9
Rifles, M1903	0	50	0	0	0	0
Rifles, M1903A4	0	0	9	9	9	0
Browning Automatic Rifles	32	47	27	27	45	45
Light machine guns, M1914A4	6	6	6	6	12	14
Heavy machine guns, M1917A1	8	8	8	8	8	8
Machine guns, .50-cal, M2	4	0	6	6	6	6
60-mm mortars	9	9	9	9	9	9
81-mm mortars	4	6	6	6	6	6
M7 rifle grenade launchers	0	0	126	126	126	132*
M8 carbine grenade launchers	0	0	26	26	26	26*
2.36-in antitank rocket launchers	0	0	25	29	29	32
37-mm antitank guns	0	4	0	0	0	0
57-mm antitank guns	0	0	3	3	3	0
57-mm rifle (M18)	0	0	0	0	0	9
75-mm rifle (M20)	0	0	0	0	0	6

*Figures for M7 and M8 launchers for 1945 are estimates only

The elements of the Battalion, 1940 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 (1940 to 1945)

The Battalion command staff remained largely unaltered during the period covered here. The commander was a Lieutenant colonel, with a Major as his Executive officer (second-in-command). In 1940 there were two First Lieutenants, each with a combination of staff duties. From April 1942 one of these became a Captain.

Staff duties in the US Army were divided into four categories, each identified by a number and prefixed with the letter G or S. G was for officers serving on Divisional and higher staffs, while S was used for officers on Regimental or Battalion staffs. Within an Infantry Regiment the staff roles were;

S-1 Personnel matters
S-2 Intelligence
S-3 Operations and Training
S-4 Supply

In 1940 the Battalion staff duties were;

Lieutenant colonel; commander
Major; Executive and S-3
First Lieutenant; Adjutant, S-1 and S-2
First Lieutenant; commander of Headquarters Detachment and transport officer

From 1942 onwards the roles became;

Lieutenant colonel; commander
Major; Executive officer
Captain; Operations officer, S-3
First Lieutenant; Intelligence, S-2

The roles of Adjutant and S-1 and Transport officer did not vanish, but were now undertaken by two officers in Company Headquarters, Headquarters Company.

Mention should also be made of two officers who were not carried on the strength of Battalion Headquarters itself. First of these was the Battalion S-4 (Supply officer), located with the Battalion Supply Section in the Regimental Service Company. This Section included the seven 2½-ton cargo trucks that provided the Battalion with its major lift capability. The other officer was the Battalion Surgeon, who was also the commander of the Battalion Medical Detachment. He was responsible for setting up the Aid Station and was the unit medical officer.

Headquarters Detachment (1940 to 1941), then;
Headquarters Company (1942 to 1945)

This was the 'catchall' unit for a varied number of Sections and Platoons that sat outside either the Rifle or Heavy Companies.

In 1940 to 1941 the Headquarters Detachment contained;

Headquarters Section (for the Detachment)
Message Center Section
Intelligence Section
Ammunition and Pioneer Section

From April 1942 Headquarters Company contained;

Company Headquarters
Battalion Headquarters Section
Communication Platoon
Ammunition and Pioneer Platoon
Antitank Platoon

Intelligence Section (1940 to 1941), then;
Battalion Headquarters Section (1942 to 1945)

The original Intelligence Section was quite small, with a Staff Sergeant (who doubled as a topographical draughtsman for map work), Intelligence Corporal and six men titled scout, observers, intelligence.

From April 1942 it included a Sergeant Major (Staff Sergeant), an Operations Sergeant (who updated the situation map), a Corporal responsible for anti-gas duties and a Clerk. The intelligence Corporal became a Sergeant (later Staff Sergeant) and there were still six scout observers. Also added were three Jeeps and drivers, pared back to two vehicles from July 1943.

The Intelligence Section worked under the S-2, with its six scouts used to lead patrols or guide the advance of Battalion units, and maintain observation posts. With the increase in strength these duties remained for the scout observers, while the additional personnel manned the Battalion Command Post.

The Command Post, usually referred to as the CP, was the overall term for the relevant forward headquarters of a unit. In the Infantry Battalion this encompassed the command staff, the Battalion Headquarters Section, the Communication Platoon and selected personnel from Company Headquarters of Headquarters Company.

Message Center Section (1940 to 1941 only)

Under the October 1940 organization the Battalion only included an organic Message Center Section. This had six messengers, two with motorcycles, and was

responsible for the receipt and delivery of messages in written or oral form. The Infantry Regiment Communication Platoon included three Battalion Sections, each with a Wire Section and a Radio and Visual Section. These would be attached to the Battalion Message Center as required.

Communication Platoon (1942 to 1945)

This somewhat unusual division of signal duties did not last long and from April 1942 the Battalion fielded a complete Communication Platoon. This consisted of a small headquarters overseeing three Sections;

Message Center Section
Wire Section
Radio and Visual Section

The strength of the Platoon was initially 29 all ranks with three Jeeps and two ¾-ton trucks for transport. From July 1943 personnel was 1 Officer and 22 EM, the reductions mostly achieved by deleting the five dedicated drivers, which meant the communication personnel now had to double in this role. Transport was also amended to five Jeeps, two of which each towed a ¼-ton trailer.

Methods of communication (see Annex A for more details)

The methods of communication within the US Infantry Battalion were familiar enough to signallers in other armies.

The Message Center Section of April 1942 consisted of a Sergeant, two clerks and four messengers, and that remained the case through to 1945. From mid-1943 onwards at least two of the messengers were also likely to be drivers for Jeeps.

The 1942 Section had the same role as the Message Center Section of 1940, and was normally situated close to the Battalion Command Post. It was the destination for any messenger from another unit or higher headquarters who was tasked with delivering a communication to the Battalion commander, be this written or verbal. It was also where messages from the Battalion commander would be sent out to his subordinate Company commanders from.

The Wire Section in 1942 had a Sergeant, three switchboard operators and four linemen (telephone and telegraph). By mid 1943 this was changed to five linemen and just two switchboard operators. The Section switchboard was located at the Battalion CP, and ran lines from there out to those Companies, Platoons and observation posts the commander needed to keep in contact with.

Finally there was the Radio and Visual Section. Its key concern was maintaining radio communication, normally forward to each Company Headquarters and back to Regimental Headquarters. As well as radio it was also responsible for the Battalion telegraph set, as well as signalling flags and pyrotechnics and ground panels for

communicating with allied aircraft. Despite these many duties it only numbered a Sergeant and four radio operators, latterly adding a radio repairman.

Each Company Headquarters also included a Communication Sergeant who was responsible for radio sets issued to it by the Communication Platoon.

Ammunition and Pioneer Section (1940 to 1941) then;
Ammunition and Pioneer Platoon (1942 to 1945)

As its title implies, this Section, later Platoon, had two particular duties. In 1940 the Section consisted of a Sergeant and two Squads, each with seven ammunition carriers and a driver for a ½-ton truck. From 1942 this was expanded to a Platoon of three Squads, now an NCO and seven men each, with two ¾-ton trucks at Platoon Headquarters. These were replaced by a single 1½-ton truck towing a 1-ton trailer from mid-1943.

The Platoon commander doubled as the Battalion munitions officer, in which role he oversaw the ammunition distribution point. This was where ammunition supplies were delivered to, normally by the Battalion Transport Section of the Regimental Service Company, for unloading by the ammunition bearers. Munitions would then either be transferred onto the Battalion's own vehicles for delivery to units, or carried forward to the waiting weapons by the ammunition bearers.

For its pioneer role the Platoon was equipped with basic tools and largely tasked with facilitating passage of the Battalion's vehicles over difficult terrain. Also tacked onto its duties was defense against gas attack. Latterly it was concerned with minefield laying and clearance and the neutralising of enemy booby traps.

Antitank Platoon (1940 to 1941) then;
Antitank Platoon (1942 to 1945)

In 1940 the Battalion's Antitank Platoon was part of the Heavy Weapons Company (which is detailed later) before it moved to Headquarters Company in April 1942. Rather than looking at it twice in these different locations it is detailed in its various forms here.

The Battalion Antitank Platoon of the October 1940 tables of organization consisted of a Headquarters and two Sections, each with a Sergeant commanding two Squads. Each Squad was eight strong and provided with a ½-ton truck to transport its primary weapon, the .50-cal M2 Browning machine gun.

Most other armies of the mid to late 1930s were working towards antitank rifles, or weapons in the class of light cannons that fired a 20-mm or larger shell, so the use of a machine gun in the same capacity was unusual. The large 12.7-mm round proved capable against the pre-war generation of tanks, such as the Panzer I and II but by 1940 it was obvious that a more modern weapon was needed.

This was already in service with the US Army in the shape of the 37-mm M3A1 antitank gun, and equipped the Regimental Antitank Company in October 1940. By April 1942 the 37-mm gun replaced the .50-cal in the Battalion Antitank Platoon, using the same format of a Headquarters and two Sections, each Section with two Squads. The Squad consisted of a Corporal, the gunner, assistant gunner, an ammunition bearer and two drivers for the pair of ¼-ton trucks. One Basic was also counted on the strength of the Squad.

37-mm rounds were a familiar calibre for pre-war antitank guns, which included the German Pak 35/36 and the Japanese Model 94 (1934). While these pieces did not have interchangeable ammunition, the limitations of the 37-mm round had been apparent to the Germans since at least 1940, and were reinforced by their experience in the opening days of their invasion of the Soviet Union.

It was during operations against the Axis forces in North Africa, in the closing months of 1942 that the US M3A1 underwent its first real test, and was found similarly wanting. Like the British and Commonwealth forces before them the US found that the Panzers of 1942 and 1943 were much better protected than their predecessors of just two year earlier. Despite this new reality the US initially chose to retain the 37-mm gun, citing that it was small enough to be manhandled by its limited crew and could be more easily concealed than larger guns.

By mid-1943 this opinion had changed, at least for forces expected to be facing German tanks in the near future. With no readily available homemade weapon to replace the 37-mm gun the US called on its British ally to fill the gap. This resulted in the British 6-pdr gun being introduced into US service as the 57-mm M1 with the July 1943 Tables of Organization.

Under these the Platoon was reduced to a small Headquarters and three Squads, each with ten men and a single 57-mm gun. The Jeep was replaced as the prime mover by the larger 1½-ton truck, which also carried the crew, with one of the three trucks mounting a .50-cal machine gun. Initially at least the Squad was also authorised two 2.36-in antitank rocket launchers (see later), which was reduced to one by February 1944. The Platoon could lift all its personnel with its allocated transport of one Jeep and three trucks.

The 37-mm gun did not entirely disappear from the Infantry Regiment however. In the Pacific some were retained by certain units, though establishing which ones and for how long is a study in itself. Both the 27th and 77th Infantry Divisions deployed the 37-mm gun for ‘Forager’, the assault on Saipan in June 1944. It remained an effective weapon against the relatively few Japanese tanks likely to be encountered, which largely equated to the pre-war designs that the 37-mm round was expected to combat. In amphibious operations its relative lightweight (some 900lbs) made it easier to manhandle than the 57-mm, which was almost three times as heavy.

Heavy Weapons Company (1940 to 1941), then (1942 to 1945)

The Heavy Weapons Company of the Infantry Battalion only really existed in two forms, that laid out in the October 1940 Tables of Organization and that introduced from April 1942, which itself was slightly amended in July 1943. Under the first of these the Company was made up of a Headquarters, two Machine Gun Platoons (each with four .30-cal guns), one Antitank Platoon (with four .50-cal Browning M2 guns) and one Mortar Platoon (with four 81-mm mortars).

By April 1942 the .50-cal Platoon was deleted and the Mortar Platoon was increased to six 81-mm weapons. After that the only changes affecting the Heavy Weapons Company were with respect to transport and the issue of weapons for antitank and antiaircraft defense. As a result it is easier to examine the two principle Platoons, the .30-cal Machine Gun and the 81-mm Mortar, which themselves underwent remarkably little variation during the course of the war.

.30-cal Machine Gun Platoon (1940 to 1945)

Like many nations the US was still using a machine gun that dated back to World War One at the outset of World War Two. The M1917A1 was an updated version of the original M1917, which consisted of the gun, the barrel of which was surrounded by a water cooling jacket, and a detachable tripod mount, making for a total operational weight of over 94lbs.

The Machine Gun Platoon of 1940 established the format of a Headquarters and two Section leaders, each overseeing two Squads. Initially the Squad consisted of a Corporal, a gunner, assistant, four ammunition bearers and driver. From 1943 one of the ammunition bearers became the driver, trimming the Squad to seven men. Squad transport was originally a ½-ton truck, replaced by a ¾-ton weapons carrier from April 1942 and finally a ¼-ton Jeep and trailer by July 1943.

The basic fire unit was the Section of two guns, though there is some mention of individual Squads being attached to support smaller Rifle units. The Platoon was capable of delivering either direct or overhead fire, the latter requiring some computation by Platoon Headquarters.

81-mm Mortar Platoon (1940 to 1945)

In 1940 the organization of the Mortar Platoon was identical to that of the .30-cal Machine Gun Platoon in terms of personnel and transport. The resemblance continued into April 1942, though from that date the Mortar Platoon was expanded to three Sections, giving it six 81-mm mortars. In July 1943 a Lieutenant was added to each Section Headquarters, which had previously consisted of a lone Sergeant.

The M1 81-mm mortar was a US produced version of the French Brandt model. It was of normal, three part design (barrel, baseplate and bipod) and weighed 136lbs fully assembled.

An unusual aspect of the US 81-mm was that it fired two types of high explosive shell, one termed light and the other heavy. The light shell had a maximum range of nearly 3300 yards and the heavy shell around 2500 yards. The light shell was intended for use as an antipersonnel round while the heavy was to be used against emplacements and minor field fortifications.

Unlike the machine guns the basic fire unit of the Mortar Platoon was the individual Squad. Normally each Squad leader would act as the observer for his own mortar situated forward of its position. Platoon Headquarters would establish its own observation post or posts to control the fire of the Sections and Squads.

General notes on the Heavy Weapons Company

Compared to the contortions of support weapons in the British and German Infantry Battalion, the development of the US Heavy Weapons Company is positively dull. It used the same .30-cal machine gun and 81-mm mortar in 1945 that it had in 1940, and aside from its slight reorganization in April 1942 underwent no major alteration. As a result there is not a great deal more to say, other than a few comments on the perceived handling of the Platoons and the antiaircraft and antitank measures particular to the Company until mid-war.

The Field Manual (FM) for the Heavy Weapons Company, FM 7-15, was issued in May 1942, and not subsequently superseded during the war years. At least three Changes were published for the FM by 1945 but these are not included in the examples available online (all of which appear to be of the same copy).

The FM of mid-1942 did recognise that there would be occasions when the Heavy Weapons Company commander would need to detach Sections or whole Platoons and attach them directly to the Rifle Companies. Examples it lists are;

1. Heavy weapons attached to a unit protecting the flank of a marching column (the flank guard).
2. Heavy weapons attached to a unit performing a rear guard role.
3. Heavy weapons deployed with units on outpost duty.
4. At the direction of the Battalion commander the attachment of a Machine Gun Section or Platoon, and a single Mortar Section, to each leading Rifle Company (normally there would be a maximum of two Rifle Companies ‘up’ with the third held in reserve).
5. Attachment of a Section of machine guns to a Rifle Company or Companies conducting a ‘hasty occupation’ of a new position to reinforce their fires.

The FM also noted that when elements of the Heavy Weapons Company were attached to Rifle Companies, they would become the responsibility of the unit concerned for the duration of the attachment.

Another key role of the Heavy Weapons Company referred to in the FM was that of antiaircraft defense. By 1942 the destructive effect of enemy air attack on ground

forces had been well learned across Europe and in the early Pacific battles. The M1917A1 could be used against low flying aircraft on its tripod mount, though with limited elevation. An elevator mount was available to transform the tripod into a pedestal style mount, though this required some preparation.

Up until mid-1943 the principle means of antiaircraft defense within the Battalion was not the machine gun but a weapon looked at later with the Rifle Platoon, the Browning Automatic Rifle (BAR). One BAR was issued for each pair of weapons carriers in the Machine Gun, Mortar and Antitank Platoons of the 1940 Heavy Weapons Company. A pedestal mount, the M24, was used in the original ½-ton truck, fitted behind and in between the two front seats. This mount could be used for any of the machine guns found in the Battalion (M1917A1, M1914A4 or M2) as well as the BAR.

During 1942 the earlier ½-ton truck began to give way to the ¾-ton weapons carrier. The ratio of one BAR per pair of trucks was maintained under the April 1942 organization, the BAR now being considered the individual weapon of the driver. A new M24A1 mount was designed for the ¾-ton truck that could handle all the same weapons as the M24, except the .50-cal, which needed the M24A2.

Another machine gun mount was the M48, used on the ¼-ton truck, the Jeep. This was fitted to the passenger side of the vehicle, just off the dashboard, and was known as a dash mount. It too could be used with all the .30-cal weapons but not the .50-cal M2. Each Jeep in the Machine Gun Platoon was fitted with the M48 from July 1943 onwards.

One of the two Jeeps in Company Headquarters carried a .50-cal M2 machine gun on the M31 mount from July 1943. This was another pedestal mount, fitted in the gap between the two front seats and could accommodate all types of .30-cal as well.

In terms of antitank defense the Heavy Weapons Company relied largely on antitank rifle grenades, launched from the M1903 bolt action rifle. This again is covered in more detail with the Rifle Platoon. Each Squad leader (eight with the machine guns and six with the mortars) was issued an M1903 for this purpose under the April 1942 tables. From July 1943 the principal infantry antitank weapon was the antitank rocket launcher (also dealt with later). The Heavy Weapons Company was issued six launchers, initially all carried by the 81-mm Mortar Platoon, which were distributed out as two per Platoon from early 1944.

The Rifle Company (1940 to 1941), then (1942 to 1945)

The outline organization of the standard US Rifle Company underwent little change between 1940 and 1945. It consisted of a Company Headquarters, a Weapons Platoon and three Rifle Platoons. Indeed the Rifle Platoon was the only element of the Company to experience significant alteration, as seen with the move from the October 1940 Tables of Organization to those of April 1942.

The Rifle Platoon of 1940 consisted of a Headquarters, three Rifle Squads and one Automatic Rifle Squad. The Platoon was commanded by a Second Lieutenant, assisted by a Platoon Sergeant and a Platoon Guide. The latter was a Sergeant responsible for movement discipline, ammunition supply and monitoring Platoon security. Completing Headquarters were two messengers and five Basics.

Each of the three Rifle Squads was commanded by Sergeant, with a Corporal as the Assistant Squad leader, and ten riflemen. The Automatic Rifle Squad likewise had a Sergeant and Corporal, and two Automatic Rifle teams, each of a gunner, assistant and ammunition bearer with a single automatic rifle per team. A third automatic rifle could be issued to the Squad for defensive operations.

While this Platoon structure did not last long, it is important because it decided in large part what the principle weapons of the US Infantry would be during the course of the war, which in turn dictated its tactical handling and capabilities.

The three weapons of the Rifle Platoon in 1940 were the M1 rifle, the M1911A1 semiautomatic pistol and the M1918A2 Browning Automatic Rifle. As might be inferred from the dates, two of these weapons were designed and introduced either side of the Great War of 1914-18, while the M1 rifle was a much more recent arrival.

Oldest among the trio of weapons was the M1911A1. This was a semiautomatic pistol manufactured by Colt, fed from a seven round magazine that slid into the grip. It fired a .45-cal round that was much larger than its contemporaries, with the majority of semiautomatic pistols available in the 1940s chambered for 9-mm or lower. In October 1940 the Platoon commander, Platoon Guide and both assistant automatic riflemen were armed with the pistol. Other than the two automatic riflemen the remainder of the Platoon were issued the M1 rifle.

Many armies had been searching for a self-loading rifle to replace their bolt action models, which often dated back to the 1890s. While there was no shortage of designs the key obstacle remained mechanical reliability, which was hampered by the insistence that the existing rifle round of the army concerned be used in any replacement weapon. The US Army had entered World War One using the M1903 rifle, which was based on the bolt mechanism used by the German Mauser 1898, against which the M1903 found itself pitted. The M1903 fired a .30-cal round from a five-round integral magazine and proved itself to be a reliable and accurate gun. Even so, a successor was being considered in the interwar period.

The winner of the competition was designed by a Mr John C. Garand, who worked at the Springfield Armory, which also lent its name to the M1903. His weapon was designated the Rifle, .30-cal, M1, which was also frequently referred to as the Garand. It was officially adopted as the replacement for the M1903 in 1932, but with the financial chaos of the 1930s it did not enter full production until much later.

The M1 rifle fired the same .30-cal round as the M1903. It was fed from a clip holding eight rounds that was inserted into the receiver. The action of firing the first round operated a piston, which performed the extraction of the empty casing and allowed the loading of a fresh round into the chamber, the same functions that were accomplished in the M1903 and like rifles by the user working the bolt.

The ability of the M1 to fire eight rounds in rapid succession conferred an obvious advantage on a rifleman engaged in infantry combat, by comparison to those armed with a bolt action rifle. In turn, a Rifle Squad of twelve men all so armed was reckoned to be able to produce a sufficient volume of fire as to obviate the need for a light machine gun at this level.

Completing the weapons of the 1940 Rifle Platoon was the M1918A2 Browning Automatic Rifle, generally referred to as the BAR (said to always be spoken as the letters B-A-R rather than as the word ‘bar’). The BAR had seen service in the closing battles of the First World War but was too late to make a major impact. In January 1918 it was anticipated that the fourth Section of each US Rifle Platoon would have four BARs, supporting the other three Sections armed with rifles and grenades. During the interwar period there were some occasions when the BAR was integrated into Rifle Squads but by 1940 it was back in a separate Squad.

The BAR fired the same .30-cal round as the M1903 and M1 rifles, using a 20-round magazine that was loaded into the underside of the weapon. By 1940 a revised M1918A2 was in production, fitted with a bipod that offered improved stability when firing prone. The original M1918 had allowed for both semiautomatic and automatic fire but the M1918A2 deleted the single shot option. Instead there were two rates of automatic fire, a slow rate of 300 to 350 rounds per minute, or a high rate of 500 to 600 rounds per minute. It is said that skilled users could manipulate the trigger quickly enough to fire single shots on the low rate.

This division of rifles and automatic weapons at such a low unit level did not endure, as will be examined below. It does though help illustrate why the US Rifle Squad did not have a weapon akin to a light machine gun as did its allies and opponents.

Field Manual (FM) 7-5 of October 1940 details the organization, equipment and tactical handling of the new Rifle Battalion. It includes numerous paragraphs on the conduct of both the Rifle Squad and the Automatic Rifle Squad in offensive and defensive actions, as well as patrols and security missions. Overleaf are a few of the paragraphs pertaining to offensive action (see the sources at the end of this piece for a link to the full document).

Rifle Squad

Paragraph 219 Fire Fight;

a. During the attack the squad seeks to advance rapidly and with minimum exposure; it does not open fire until fire action is necessary to cover its advance. Advantage is taken of intense burst of fire by the artillery and infantry supporting weapons to effect rapid bounds from cover to cover. Rifle fire is not ordinarily opened at ranges beyond 400 yards.
b. The terrain and effectiveness of hostile fire determine the method of advance. The squad advances as a unit when hostile fire is sufficiently neutralized; under fire it works forward by individual advances. The squad leader indicates the objective of each advance and issues further instructions under cover in rear of the new position.

Paragraph 220 Fire Discipline;

a. Fire discipline in the rifle squad is maintained by careful observance of the instructions relative to the use of the rifle in combat and exact execution of the orders of the squad leader…Fire discipline also requires that upon release of fire control by the squad leader to individual skirmishers, each rifleman acts on his own initiative, selects his target, estimates the range, and opens and ceases fire in accordance with the situation.

Paragraph 222 Fire Distribution;

> Each rifleman fires his first shot on that portion of the target corresponding generally to his position in the squad. He then distributes his remaining shots to the right and left of his first shot, covering that part of the target on which he can deliver accurate fire without changing position. The amount of target each rifleman can cover will depend upon the range and the position of the firer. In some cases each rifleman will be able to cover the entire target with accurate fire. Fire is not limited to points known to contain an enemy; on the contrary, riflemen space their shots so that no portion of the target remains unmolested. This method of fire distribution is employed without command. It enables squad leaders to distribute the fire of their units so as to cause the entire target to be kept under fire…

Paragraph 226 Fire and Movement;

a. After the fire fight commences, the squad must carry out its movement in close coordination with its own fire and that of adjacent squads and supporting weapons.
c. Squad advances may take place by rushes of the entire squad, rushes by groups of several men, or by advance of individuals. Rushes under fire are ordinarily resorted to only when moving from cover to cover across short stretches of terrain. Periods of neutralization of hostile resistance by strong

concentration of supporting fires favor rushes by larger fractions. Infiltration of individuals along defiladed approaches, where practicable, constitutes the most effective method of advance where marked fire superiority is lacking.

d. The squad intensifies its fire during periods when any part of it or of an adjacent squad is in movement. It seeks to time its fires in preparation for an advance so as to combine them with bombardments of artillery or aviation, the fire of supporting weapons, and adjacent units. During periods when no movement is in progress or impending, it reserves its fires and conserves its ammunition and fighting power.

Paragraph 227 Support Squad;

b. When directed to reinforce the attacking squads, he (the squad leader) points out to his men from cover the positions of the enemy and the attacking squads. He indicates the part of the line to be reinforced and prepares the squad for a rush, extending intervals if necessary.

Automatic Rifle Squad

Paragraph 240 Fire Direction and Control;

The platoon leader assigns a general position area and a target or a target area to the squad leader. The squad leader assigns approximate positions and targets or sectors of fire to the automatic rifle team.

Paragraph 241 Attack;

a. The automatic rifles constitute a reserve of fire in the hands of the rifle platoon leader. They are put into action when conditions develop especially favoring their employment. Difficulties connected with ammunition supply restrict the use of these weapons to situations where their support is vital to the success of the platoon.
b. Situations especially favoring use of the automatic rifle are offered where an open flank permits the establishment of a base of fire for the support of the movement of the rifle squads. Such a situation may result from the development of the rifle company over a wide front or from separation of the platoon from contact with adjacent units in the course of the battle. Gaps in depth make available flanking fields of fire which facilitate the full development of the automatic rifles.
c. The squad is preferably put into action on a flank of the platoon. It intensifies its fires during periods when any part of it or any squad of the platoon or adjacent units is in movement. It seeks to time its fires so as to combine them with the bombardments of artillery and aviation, the fires of supporting weapons and adjacent units, and thus contribute to creating the conditions most favorable for the advance of the platoon. During periods when no movement is in progress…it reserves its fires and conserves its ammunition.

While more than a little laborious to type out, those selected paragraphs I think help illustrate the relationship between the M1 rifle and the BAR in the Rifle Platoon, and the expectations for each of them in battle. With each man equipped with a rapid firing (but not fully automatic) weapon, the Rifle Squads were deemed to be able to produce a sufficient volume of fire to suppress, close with and destroy the enemy, in concert with multiple supporting arms.

Part of that support would come from the BARs of the Automatic Rifle Squad, but not from BARs or light machine guns within the Rifle Squads themselves. One reason for this differentiation was the belief that a Rifle Squad, encumbered by a physically heavy weapon, was notably slower and less agile than a Rifle Squad equipped with only rifles. As such, the whole Squad was more susceptible to the impact of enemy fire, which in turn was likely to inflict greater casualties upon it.

In defensive situations, the Automatic Rifle Squad could be augmented by the issue of a third BAR, in which case its two teams of three would reconfigure into three teams, each of two men with a single BAR. The October 1940 Field Manual stated that in this circumstance one BAR team would be attached to each Rifle Squad.

Reorganization of the Rifle Platoon - 1942

At the beginning of 1941 then, the Rifle Platoon was made up of three purely Rifle Squads, each capable of generating a significant volume of semiautomatic fire, supported by a single Automatic Rifle Squad. This latter was equipped with a weapon that was measured against the rifle in terms of its mobility and firepower. In the first category it was judged to be somewhat inferior, in that a rifleman with the M1 had greater speed and movement than an automatic rifleman with the BAR, while in the latter category the BAR could offer much greater firepower than the M1 rifle.

In April 1942 the first wartime Table of Organization was issued for the Infantry Regiment. This saw several major developments for the Rifle Platoon, and also the introduction of new weapons. Principal among these was the deletion of the Automatic Rifle Squad, which took Platoon strength down from 54 to 46 men.

Platoon Headquarters remained as before in terms of personnel, with an Officer, Platoon Sergeant, Platoon Guide and two messengers, and continued to count five Basics on its strength. The Platoon Sergeant was now armed with a rifle rather than a pistol, while the Platoon commander adopted a new weapon, the M1 Carbine.

The idea of a carbine was by no means new and usually referred to a slightly modified version of an existing bolt action rifle. Generally speaking these modifications were limited to a shorter barrel and a minor saving in weight when compared to the standard weapon. Given these modest advantages it remained common for armies to issue pistols to those soldiers responsible for crew-served weapons, such as mortars and machine guns, and also to officers. This meant he

was at once unable to engage the enemy himself at other than point blank range, and was also quickly marked out as a leader in and among his rifle armed men.

Pre-war the US Army had sought a weapon that could be issued to the ever increasing number of personnel whose primary role did not involve them firing a rifle at the enemy, but who needed something that offered more utility than the pistol. The weapon that emerged was designated the M1 Carbine.

The M1 Carbine was eight inches shorter and over four pounds lighter than the M1 rifle. It fired a unique .30-cal round, which bore no resemblance to the .30-cal round of the M1 rifle. The carbine was semiautomatic, fed from a detachable magazine with a 15-round capacity. It was issued widely to US forces and was considered the standard arm for Lieutenants and Captains.

The dissolution of the Automatic Rifle Squad did not spell the end for the BAR as one was added to the armament of each Rifle Squad. This saw a reorganization of the Squad, which from 1942 onwards consisted of a Squad leader, an Assistant Squad leader, seven riflemen and a three-man Automatic Rifle team. Two of the seven riflemen were designated as scouts, while the Automatic Rifle team was made up of an automatic rifleman, an assistant and an ammunition bearer. All men were armed with the M1 rifle, excepting for the automatic rifleman, with the BAR, and the Assistant Squad leader.

Antitank defense for small units, such as Platoons, was a key concern for most combatant nations. In 1942 the US answer was the M9 antitank grenade, which was to be fired from a rifle fitted with the M1 grenade launcher. The problem was that the M1 launcher could not be fitted onto the M1 rifle, so a substitute weapon was required. This already existed in the form of the M1903 Springfield bolt action rifle, which could be married with the M1 launcher. In the 1942 Rifle Squad the Assistant Squad leader, a Corporal, was armed with an M1903 rifle, which was issued for the express purpose of launching rifle grenades.

This simple, and temporary, expedient has often been misinterpreted as meaning that each Rifle Squad was issued with an M1903A4 sniper rifle. This is contradicted by the contemporary Tables of Organization and Field Manuals, both of which specifically identify the M1903 as being provided for antitank defense. Despite this, the view persists and is still repeated.

In June 1942 a new Field Manual was published, reference FM 7-10, outlining the organization and tactical handling of the April 1942 Rifle Company. This included a brief description of the three main weapons of the Rifle Squad;

"Rifle M1 - The M1 rifle is the principal individual weapon assigned to rifle company personnel. On account of its long range, ease of operation, and light weight it is well adapted for use in all types of infantry combat. These characteristics enable a

rifleman or group of riflemen to deliver promptly a large volume of accurate fire upon any designated ground or air target within range.

Rifle M1903 - One M1903 rifle is furnished to each rifle squad for use in firing the antitank rifle grenade. This rifle can also be used for firing at ground and air targets with caliber .30 ammunition.

Automatic rifle - The automatic rifle provides the rifle squad leader with an easily controlled and maneuvered weapon capable of a large volume of fire. It is used against ground targets in a manner similar to the light machine gun, and also engages air targets. Its light weight permits the automatic rifleman to maintain the rate of advance of riflemen and to fire from any position."

The 1940 assessment was that "the automatic rifleman has the marching mobility but not the capacity for short bursts of speed of the rifleman", which view was somewhat reversed with the 1942 Field Manual, though the BAR had not become any lighter. The paragraph on fire distribution was largely unaltered, other than the text being amended to remove specific references to the rifle, and the inclusion of a short sentence that said "automatic riflemen fire bursts of about five rounds at the slow cyclic rate (in about 1 second)". Overall the emphasis remained firmly on the individual riflemen providing a substantial amount of the fire necessary to advance the Squad against immediate opposition, with the BAR being used sparingly.

Reorganization of the Rifle Platoon - 1943 to 1944

As noted previously, a new series of Tables of Organization were issued in March 1943, which were intended to reduce the size of the Infantry Division to facilitate overseas movement. In the event these tables were quickly superseded as commanders protested that the cuts imposed were too deep. New Tables of Organization were issued in July 1943, which also incorporated savings of personnel and vehicles from the figures of April 1942, and it was these that provided the basis for the US Infantry Division and its component units over the next two years.

The strength of the Rifle Platoon was set at one Officer and 40 Enlisted Men, with the Basics that had previously inflated the headcount being removed to Company Headquarters. Platoon Headquarters remained as a Lieutenant, a Platoon Sergeant (Staff Sergeant), Platoon Guide (Sergeant) and two messengers. Each of the three Rifle Squads remained as before, with a Sergeant, a Corporal, seven riflemen and a three-man Automatic Rifle team.

There were some changes to weaponry. First was a new rifle grenade launcher, the M7, which could be fitted to the M1 rifle and removed the need for one man to carry the M1903. The Platoon was provided with ten such launchers, one for the Platoon Guide and one for the Corporal and two other men in each Rifle Squad. Along with the new launcher came an improved antitank rifle grenade, the M9A1, and a fragmentation grenade, the M17, which was based on the standard hand grenade.

Secondly, each Rifle Platoon was now issued with a dedicated sniper rifle, the bolt action M1903A4, which was fitted with a telescopic sight offering at least two and a half times magnification. The sniper was designated by the Platoon leader. The March 1944 version of FM 7-10 indicates that the snipers could be removed from their Platoons to operate under the direction of Company Headquarters.

At the end of 1943 many of the non-commissioned officers in the Infantry Battalion received a promotion. While I have not been able to locate a copy, this appears to have been authorised via War Department Circular No.323 (13th December 1943). Within the Rifle Platoon, Assistant Squad leaders became Sergeants, Squad leaders became Staff Sergeants, as too did Platoon Guides, and Platoon Sergeants became Technical Sergeants. There were similar promotions in other parts of the Battalion and Regiment which saw most NCOs advance one rank.

In February 1944 the final wartime Table of Organization was published for the Rifle Company. This made no changes to the structure of the Rifle Platoon from that previously established in July 1943, and confirmed the NCO ranks as outlined above. In early 1945 a sniper version of the M1 rifle, the M1C, was approved as a replacement for the M1903A4. This was a modified version of the standard M1, which retained its semiautomatic operation, combined with a telescopic sight.

Another new weapon that was to be of great importance was the Launcher, Rocket, AT, 2.36-inch, more generally known as the Bazooka. This began to appear in late 1942, just as early US experience against Axis forces in North Africa demonstrated that the threat of enemy tanks required something more than a rifle grenadier in each Squad. The Bazooka was a launch tube, some 54 inches long, fitted with a pistol grip and rudimentary shoulder stock that fired a rocket fitted with a shaped charge warhead. Ignition was provided by a dry cell battery; when the trigger was pressed an electrical circuit was completed, which in turn fired the rocket.

At the time of its introduction the launcher provided the infantryman with a weapon that was both lightweight and powerful, and capable of defeating the majority of Axis tanks and armored vehicles. Unfortunately, that position quickly changed in relation to German tanks, with a new generation of Panzers beginning to appear from the middle of 1943 onwards such as the Panther and Tiger, which presented a far more formidable opponent than the Panzer IIIs and IVs of the desert battles.

The Bazooka was issued widely to US units of all types. Initially, under the July 1943 tables, the Infantry Battalion was allotted 25, which included three per Rifle Company. These were officially counted on the strength of the Weapons Platoon (see later) but were for issue to the Rifle Platoons as required. In February 1944 this was increased to five, now all shown under Company Headquarters. There was no dedicated crew for the launchers under either the July 1943 or February 1944 Tables of Organization (though see Annex C for later developments).

The Weapons Platoon

As well as its three Rifle Platoons, the Rifle Company included a Weapons Platoon. This underwent only minor alterations during the course of the war, mostly affecting its transport, while its primary weapons remained unchanged. It consisted of a Headquarters and two Sections.

First of these was the 60-mm Mortar Section. The Section of 1940 was commanded by a Sergeant, with a messenger and two Basics, and three Squads, each of a Corporal (who was also the mortar gunner), an assistant and three ammunition bearers. By April 1942 the Corporal was the Squad leader, overseeing two mortar crewmen and two ammunition bearers. From July 1943 the two Basics were removed, and from the end of that year the NCOs were each promoted one rank.

The Squad's weapon throughout the war was the 60-mm M2 mortar, which was based on a Brandt design that was also used by the French Army. Unlike other small caliber mortars the M2 was effectively a reduced size version of a medium mortar, with a fully assembled weight of 42 pounds, which was about a third that of its larger 81-mm cousin. It was initially limited to high explosive shells, later adding illuminating rounds, and had a maximum range of almost 2000 yards.

Alongside the mortars was the Light Machine Gun Section. This mirrored the organization of the Mortar Section in terms of personnel but had two Squads only. What the US Army considered a light machine gun was very different from other armies, and similarly to the BAR, was a design that was heavily influenced by the battlefields of the Great War.

The M1919A4 evolved from a weapon originally developed for use in the early generation of tanks, which was in itself a modification of the M1917 heavy machine gun looked at with the Heavy Weapons Company. The principal change was the switch from water to air cooling. This was effected by using a heavier barrel (up from 3lbs in the M1917 to over 7lbs in the M1919) protected by a perforated sleeve that allowed air to be drawn in to reduce the temperature of the barrel.

Most light machine guns of the 1930s came in at around 22lbs, were fed from a fixed capacity magazine and mounted on a bipod. The M1919A4 weighed 31lbs and sat on a tripod adding another 14lbs, making it around twice the weight of a British Bren or Soviet DP. While both these guns were limited by the size of their magazines, the M1919A4 was fed from a 250-round belt, which enabled it to produce an impressive amount of automatic fire. It could not though ordinarily be handled by a single man, and was considered a crew served weapon.

The Weapons Platoon was commanded by a First Lieutenant, who was throughout assisted by a Sergeant and two messengers. Its transport began as two ½-ton trucks, one for each Section, both trucks carrying a BAR for antiaircraft defense. From April 1942 the vehicles were changed to a single ¼-ton truck and a ¾-ton

weapons carrier, each with a BAR armed driver. Both these organizations included a Transport Corporal who was responsible for the availability, protection and latterly basic maintenance of the vehicles. From July 1943 onwards the post of Transport Corporal was deleted and the Weapons Platoon vehicles became two ¼-ton trucks each towing a ¼-ton trailer. Also at this time, one of the two Jeeps was fitted with a .50-cal M2 Browning machine gun, as the BAR finally ended its days as an optimistic antiaircraft weapon.

The 1940 Field Manual describes the Weapons Platoon as operating in three distinct parts during an offensive attack. Firstly, the Light Machine Gun Section is noted as operating under the direction of the Rifle Company commander, while the 60-mm Mortar Section was handled by the Weapons Platoon leader; the vehicles would be held at a designated position that afforded concealment or protection from enemy fire. The 1942 Field Manual amended this slightly, with the Platoon leader and Platoon Sergeant each to manage one Section.

In general the Light Machine Section was to operate as a single unit, being assigned a particular target or sector of fire. In the case of the mortars the primary concern appears to have been the provision of ammunition, with the recognition that only a restricted amount could be handled forward by the Squad.

This tended to suggest the 60-mm Mortar Section was likewise used as a single unit however there are multiple mentions in the Rifle Company Field Manuals of 60-mm Mortar Squads being detached to support Rifle Platoons in various scenarios. This could include a Squad being attached to a Rifle Platoon that was leading an assault, or conversely one that occupied a somewhat isolated defensive position. In such cases the Mortar Squad came under the command of the Rifle Platoon leader.

Company Headquarters

Company Headquarters did not change greatly in terms of personnel. It was generally divided into a command group and an administration group. The former included the Company commander, a Captain, and his second in command, also known as the Executive officer, a First Lieutenant. The senior non-commissioned officer of the Company was the First Sergeant, who assisted the officers as required and normally oversaw the Company command post. The command group was completed by the Communication Sergeant, Bugler, messengers and until mid-1943 an Orderly for the commanding officer. The Communication Sergeant was responsible for all the various signals equipment issued to the Company, including radios issued from the Communication Platoon. Perhaps surprisingly Headquarters had no organic transport.

The administrative element included Sergeants for supply and mess duties, the Company clerk, cooks and an armorer. From July 1943 the Rifle Company's Basics were counted on the strength of Company Headquarters having previously been dispersed with the Platoons.

Amendments of June 1944

In June 1944 a number of amendments were made to the Tables of Organization and Equipment used by the Infantry Battalion. In terms of personnel, Company Headquarters of both Headquarters Company and the Heavy Weapons Company each lost around half their Basics (five and six respectively). There was no similar reduction made to the Rifle Companies.

At the same time there was an increase in the number and type of automatic weapons available to the Battalion. These were additional weapons and did not replace any existing items -

Each Rifle Company added;

6 Browning Automatic Rifles

6 Submachine guns

Heavy Weapons Company;

No change

Headquarters Company added;

2 Submachine guns

6 M1919A4 light machine guns

It is very easy to assume that the extra BARs would be used to double the automatic firepower of the Rifle Squads, but if that were the case why limit this to only two Squads in three? The US Army view that only one BAR was required per Rifle Squad was reiterated in Study No.15 of the General Board (European Theater) of late 1945. This acknowledged that the addition of a second BAR would increase the automatic firepower of the Squad, but would in turn lead to an 'undesirable' reduction in the number of riflemen available for the maneuver element.

It might be the extra BARs were to be used for anything from reinforcing an outpost or other isolated position, or to augment the firepower of a Rifle Platoon acting as a base of fire. By having a small pool of BARs at Company level such temporary increases could be made without implicitly undermining the organization and tactics of the Rifle Squad, equipped with a single automatic rifle.

The additional M1919A4 light machine guns were another substantial increase that seems unusual. These were crew served weapons and there were no extra machine gunners provided to man them. Given later developments (see Annex C) it might be they were substitutes that could replace some M1917A1 heavy machine guns, where these proved too great a weight to manhandle forward. Another obvious question arising from that suggestion then is why they were not issued directly to the Heavy Weapons Company.

Finally there is the first mention of submachine guns on the Table of Organization for the standard Infantry Regiment.

Submachine guns were already recognised as being valuable for occasional jobs such as patrols, raids and prisoner escort, and there is no question they were used by Infantry before June 1944. What is uncertain is how they were made available to Infantry units and on what scale. The tactical reliance on multiple M1 rifles in Squads did mean that every man armed with something such as a carbine or an SMG diluted the firepower that each Rifle Squad was expected to generate through its own weapons.

The following is a brief summary of the changes in organization of the Rifle Platoon.

Rifle Platoon, under Table of Organization 7-17 - October 1940

Personnel	No.	Pistol	Rifle	Automatic Rifle
Platoon Headquarters				
Second Lieutenant	1	1	-	-
Platoon Sergeant	1	-	1	-
Platoon Guide (Sergeant)	1	1	-	-
Messenger	2	-	2	-
Basic	5	-	5	-
Total, Headquarters	10	2	8	-
Automatic Rifle Squad				
Sergeant	1	-	1	-
Corporal	1	-	1	-
Automatic Rifleman	2	-	-	2
Assistant Auto Rifleman	2	2	-	-
Ammunition bearer	2	-	2	-
Total, Auto Rifle Squad	8	2	4	2
Three Rifle Squads, each				
Sergeant	1	-	1	-
Corporal	1	-	1	-
Rifleman	10	-	10	-
Total, Rifle Squad	12	-	12	-
Total, Platoon	54	4	48	2

Notes

1. A third automatic rifle could be made available when the Platoon was operating in a defensive situation. If so the Automatic Rifle Squad switched from two teams of three men to three teams of two men.
2. All rifles to be the M1, .30-cal.

Rifle Platoon, under Table of Organization 7-17 - April 1942

Personnel	No.	Carbine	Rifle	Automatic Rifle
Platoon Headquarters				
Second Lieutenant	1	1	-	-
Platoon Sergeant	1	-	1	-
Platoon Guide (Sergeant)	1	-	1	-
Messenger	2	-	2	-
Basic	5	-	5	-
Total, Headquarters	10	1	9	-
Three Rifle Squads, each				
Sergeant	1	-	1	-
Corporal	1	-	1	-
Automatic Rifleman	1	-	-	1
Assistant Auto Rifleman	1	-	1	-
Ammunition bearer	1	-	1	-
Rifleman	7	-	7	-
Total, Rifle Squad	12	-	11	-
Total, Platoon	46	1	42	3

Notes

1. Platoon Sergeant is a Staff Sergeant.
2. Each Corporal armed with an M1903 rifle equipped with M1 rifle grenade launcher.
3. All other rifles to be the M1, .30-cal.

Rifle Platoon, under Table of Organization 7-17 - July 1943

Personnel	No.	Carbine	Rifle	Automatic Rifle
Platoon Headquarters				
Second Lieutenant	1	1	-	-
Platoon Sergeant	1	-	1	-
Platoon Guide (Sergeant)	1	-	1	-
Messenger	2	-	2	-
Total, Headquarters	5	1	4	-
Three Rifle Squads, each				
Sergeant	1	-	1	-
Corporal	1	-	1	-
Automatic Rifleman	1	-	-	1
Assistant Auto Rifleman	1	-	1	-
Ammunition bearer	1	-	1	-
Rifleman	7	-	7	-
Total, Rifle Squad	12	-	11	-
Total, Platoon	41	1	37	3

Notes

1. One Rifle Platoon in Company commanded by a First Lieutenant.
2. Platoon Sergeant is a Staff Sergeant.
3. One rifle to be M1903A4 sniper version, user designated by Platoon commander.
4. All other rifles to be the M1, .30-cal.
5. Platoon Guide and the Corporal and two men in each Rifle Squad also equipped with an M7 rifle grenade launcher for use with the M1 rifle. Note states that these may be replaced by M1903 rifles with M1 grenade launcher pending availability.
6. Amendment of December 1943 promoted NCOs as follows;

- Platoon Sergeant became Technical Sergeant
- Platoon Guide became Staff Sergeant
- Each Rifle Squad Sergeant became Staff Sergeant
- Each Rifle Squad Corporal became Sergeant

Rifle Platoon, under Table of Organization 7-17 - February 1944

Personnel	No.	Carbine	Rifle	Automatic Rifle
Platoon Headquarters				
Second Lieutenant	1	1	-	-
Platoon Sergeant	1	-	1	-
Platoon Guide (Staff Sergeant)	1	-	1	-
Messenger	2	-	2	-
Total, Headquarters	5	1	4	-
Three Rifle Squads, each				
Staff Sergeant	1	-	1	-
Sergeant	1	-	1	-
Automatic Rifleman	1	-	-	1
Assistant Auto Rifleman	1	-	1	-
Ammunition bearer	1	-	1	-
Rifleman	7	-	7	-
Total, Rifle Squad	12	-	11	-
Total, Platoon	41	1	37	3

Notes

1. One Rifle Platoon in Company commanded by a First Lieutenant.
2. Platoon Sergeant is a Technical Sergeant.
3. One rifle to be M1903A4 sniper version, user designated by Platoon commander. From early 1945 the M1903A4 could be replaced by an M1C.
4. All other rifles to be the M1, .30-cal.
5. Platoon Guide and the Sergeant and two men in each Rifle Squad also equipped with an M7 rifle grenade launcher for use with the M1 rifle.

Annex A - Communication equipment

There is much information online that details the technical specifications of US Army communication equipment. The following on the scale of issue of this equipment is taken from contemporary documentation with regards to the October 1940 and the July 1943 and February 1944 Tables of Organization. Unfortunately I do not have the same available for the April 1942 version of the Battalion, as noted below.

Wire (Line) equipment

The wire equipment available to the Infantry Battalion underwent relatively little change during the course of the war. At the heart of the communication network was the BD-71 portable switchboard. It had a capacity of six lines and the operator was provided with a head and chest set that incorporated earphones and a mouthpiece that allowed hands free use.

Working to the BD-71 was the telephone EE-8, which normally ran on two dry cell batteries when used in the field. This was a speech only set with no Morse function. Two EE-8 telephones could be linked directly together for simple point-to-point communication or connected to the BD-71. A hand crank was turned to alert the other end of the line that a caller was trying to connect.

Several types of wire were available. Type W-110 and W-110-B both weighed 132lbs per mile. W-130 was termed ‘assault wire’ and weighed considerably less at 32lbs per mile. The trade-off was between weight and durability, with W-110 having a tensile strength three times that of W-130, meaning it was less prone to breakages.

Another means of telephone communication was provided by the CE-11. This was a sound powered telephone (the TS-10) and a ¼-mile length of W-130 assault wire on a reel. When used within the Infantry Battalion two CE-11 sets were normally paired together to provide point-to-point communication over a ½-mile distance. It was possible to combine more than two CE-11 sets to create a small network.

Also issued at Battalion level was the TG-5 telegraph set for sending Morse.

The signal equipment for the October 1940 Infantry Regiment is given in FM 101-10 of June 1941, which shows the Battalion Section of the Regimental Communication Platoon as having;

1 switchboard, BD-71

1 telegraph set, TG-5

4 telephones, EE-8

30 CE-11 sets (each 1 handset and ¼-mile wire W-130)

4 miles, wire, W-110

By July 1943 the Infantry Battalion was authorized the following equipment;

1 switchboard, BD-71

1 telegraph set, TG-5

8 telephones, EE-8

34 CE-11 sets (each 1 handset and ¼-mile wire W-130)

4 miles, wire, W-110-B

4 miles, wire, W-130

I have not been able to obtain the same level of detail for the Battalion under the April 1942 Tables of Organization, which had a separately issued Table of Equipment. Given the minor differences between 1940 and 1943 I would suggest that the July 1943 scales reflected those that were established in April 1942.

The July 1943 and February 1944 tables both indicate that the eight EE-8 telephones were considered as one for direct connection to the BD-71 switchboard, one for each of the six-lines and one spare.

The CE-11 sets were issued as follows;

4 for the Battalion Communication Section (1940 to 1941), then

8 for the Battalion Communication Platoon (1942 to 1945)

2 per Rifle Company (1940 to 1945)

20 for the Heavy Weapons Company (1940 to 1945)

Radio equipment

In late 1940 the Infantry Battalion was allocated a solitary wireless telegraph set, the SCR-131, held by the Battalion Section of the Regimental Communication Platoon. The SCR-131 (SCR standing for Signal Corps Radio) was a 1930s design with a range of up to 5 miles and was only capable of Continuous Wave (CW, better known as Morse). It could be mounted in a vehicle or disassembled into smaller loads and carried by two or three men, in which state it was inoperative. The single set was used to connect each Battalion to the Regimental net.

By 1943 wireless communication was transformed entirely as a new generation of radio sets began to enter service.

Taking the place of the SCR-131 was the SCR-284, which had the ability to send and receive in voice as well as CW, with a range of 30 miles for CW and 7 miles voice. An alternative set was the SCR-288. This was similar to the SCR-284 and could be carried by a two-man team when disassembled. Both sets used dry cell batteries to power the receiver, while the transmitter had a hand turned generator.

When the SCR-284 was installed in a vehicle the generator was replaced by a power unit connected to the vehicle battery.

For communication between Battalion and Company Headquarters a much more mobile set was required. This was initially provided by the SCR-511, which had been designed for use cavalrymen on horseback. The SCR-511 had a striking look as the receiver/transmitter unit was mounted atop a three-foot long 'staff' that contained a telescopic aerial, which extended out 90 inches. The set was provided with a chest mounted microphone that also acted as a speaker, a button on the upper portion of the staff being used to switch between the two modes.

The SCR-511 was connected to a power supply unit, itself using a battery, and this same unit could also power the microphone/speaker in the chest set. A pair of headphones and a handheld microphone, included with the power unit, could be used in place of the chest set. Range was in the order of 5 miles and the set was only capable of voice transmission.

From early 1944 the SCR-284 began to be superseded by the newer SCR-694. This was similar to the SCR-284, with an improved voice range of 15 miles and CW range of 30 miles. The set could be vehicle mounted and when operating while moving these ranges were both roughly halved.

Another new item was the SCR-300, which was introduced in late 1943. It was designed to be worn by an individual in the style of a backpack. The SCR-300 was the original 'walkie-talkie' as it could be used when the operator was moving as a well as stationary. It was voice only with a range of approximately 5 miles.

Finally was the SCR-536, also referred to as the 'handy-talkie'. It consisted of a rectangular case with a fixed earphone and microphone on one side; to turn the set on the telescopic antenna was pulled upwards (a feature also used on the earlier SCR-511). It had a short range of around 1 mile.

The earliest date I have been able to confirm radio set issue from is July 1943;

Unit	SCR-284 (SCR-694)	SCR-300 (SCR-511)	SCR-536
Communication Platoon	1	6	-
Heavy Weapons Company	-	-	6
Three Rifle Companies (each)	-	-	6
Total, Battalion	**1**	**6**	**24**

The SCR-694 was identified in the February 1944 equipment table, with a note that the SCR-284 would be substituted dependent on availability.

The SCR-300 was identified in both the July 1943 and February 1944 equipment tables, with the proviso in both that the SCR-511 could be issued in lieu.

The suggested allocation of these sets is detailed in several sources.

Battalion Communication Platoon

One SCR-284 set tuned to the Regimental net at Command Post.

One SCR-300 set tuned to the Battalion net, retained at Command Post.

One SCR-300 set tuned to the Battalion net, to accompany Battalion commander if he needs to leave the Command Post.

All sets operated by Communication Platoon personnel.

Each Rifle Company

Six SCR-536 sets all tuned to the Rifle Company's own net. One set furnished to each Platoon commander (total four), one for the Company commander and one utility set held by Company Headquarters for issue as required. By late 1944 it was anticipated that one extra SCR-536 should be issued for use by any attached artillery Forward Observer.

One SCR-300 set (from the above Communication Platoon allotment) at Company Headquarters tuned to the Battalion net.

All sets operated by Rifle Company personnel.

Heavy Weapons Company

Six SCR-536 sets all tuned to the Company's own net. One set furnished to each Platoon commander (total three), one for the Company commander and two utility sets held by Company Headquarters for issue as required.

One SCR-300 set (from the above Communication Platoon allotment) at Company Headquarters tuned to the Battalion net.

All sets operated by Heavy Weapons Company personnel.

SCR-300 notes; only capable of communicating with another SCR-300 set. It could be tuned to one of 41 available channels within the range of 40 to 48 megacycles. Channel could be changed by the operator by simple dial. A short, 33-inch antenna was normally used for mobile operation; this had to be kept vertical in order to function. Had an anticipated working range of from 3 to 7 miles, dependent upon conditions. Approximate total weight 38lbs.

SCR-536 notes; able to communicate with other crystal operated sets that shared its frequency range of 3.5 to 6.0 megacycles. The frequency used was determined by the crystals and coils fitted and this could not be changed by the operator. Used a fixed 44-inch telescopic antenna and had an anticipated working range of 1 mile. Approximate total weight 5.5lbs.

Annex B - Weapons and Ammunition

US Army Tables of Organization include almost full detail on weapons allocation, including the intended individual armament for each man and all support weapons. Grenade launchers however were normally only shown on the Equipment Table.

i. Small arms

Pistols - the primary pistol for the US Army throughout the war was the M1911A1. This was a single-action, semiautomatic that fired a .45-in round. Normally three magazines were issued per pistol, one carried in the weapon and two more in a twin pouch worn on the belt.

Revolvers did not vanish entirely from US service, with both Colt and Smith and Wesson offering .45-cal designs, though ammunition for these was not compatible with that used in the M1911A1 as the revolver round used a rimmed case.

Carbine - near enough all armies found themselves with a category of personnel for whom a rifle was perhaps seen as an impediment to their main role, but who still needed a weapon of some sort, if only for personal protection. The immediate solution was a pistol, the effective range of which, even in the hands of a skilled shooter, could be measured in a few dozen yards.

In 1942 the US introduced the semiautomatic M1 Carbine, which weighed roughly twice as much as the M1911A1 pistol and half as much as the M1 rifle. This was intended to provide a medium between the convenience of a pistol and the utility of a rifle. The carbine fired a unique .30-cal round that bore no resemblance to that used in US rifles and machine guns, and indeed it was the performance of its ammunition that has driven so much of the debate on the effectiveness of the carbine ever since.

For its detractors the carbine fired an underpowered round with suspect stopping power and, despite its lesser weight and length, presented the same challenge as a rifle proper to a man tasked with carrying it as a secondary consideration. For its proponents it offered a much greater reach than the pistol, and was accurate over several hundred yards.

Submachine guns - the usage of submachine guns (SMGs) is a particularly vexed question as regards the US Infantry Regiment proper.

The first, and indeed only time that submachine guns appeared on the authorized Tables of Organization for the Infantry Regiment was following the changes of 30th June 1944 discussed earlier, which included an allowance of six per Rifle Company.

The US Army had a perfectly serviceable submachine gun in the form of the Thompson, which had equipped law enforcement officers and gangsters alike during the later years of the Prohibition era. The original M1928 Thompson was adopted by the British Army in 1940, before being superseded by the less popular Sten gun.

In the US, the M1928 was modernised and put into mass production as the M1A1, which deleted the forward grip and shaved a little weight off. It fired the same .45-cal round as the M1911 pistol. The M1928 came with an impressive 50-round capacity drum magazine, which made for a visually striking image. This aside, drum magazines did not lend themselves to easy carriage and there were both 20 and 30 round straight magazines available.

The Thompson was among the last of the craftsman firearms, only intended for limited production. With the US involved in a truly World War it needed something that could be churned out in multiple thousands, which left no room for sentiment in design or appearance. Learning from the British experience with the Sten a new submachine gun was commissioned for US forces, which proved to be every bit as ugly but perhaps not quite so maligned.

The M3 submachine gun bore a general resemblance to the German MP40; it was fed from a straight 30-round magazine loaded into the underside of the weapon, housed slightly ahead of a pistol grip. There was no wooden furniture and the stock was simply metal tubing that could be slid forward to shorten the overall length.

As with the Sten, the initial M3 required modifications in the light of experience and by 1944 the M3A1 was the production model. It had a slow cyclic rate of fire of between 350 and 450 rounds per minute, fired the standard US .45-cal round and had no semiautomatic option.

Rifles - as discussed earlier, the primary weapon of the US Rifle Squad was indeed the rifle, specifically the .30-cal M1 Rifle. The M1 was not the only semiautomatic rifle to see service during the war, but it was the only one that can be considered to have completely superseded its bolt action predecessor at the Platoon level.

The M1 used the same basic principal as other self-loading rifles; some of the gases created by the firing of a round were tapped off via a port situated just before the muzzle. These gases then powered the rearward motion of an operating rod, which performed the action of the bolt being unlocked and pulled back, and also extracted the spent cartridge case, before the recoil spring forced the bolt forward again, stripping the next round from the clip. When the forward motion was complete the bolt was closed and a fresh round was ready in the chamber, with the hammer having already been cocked by the rearward action. The rifleman now only had to squeeze the trigger to fire again.

Ammunition was preloaded in clips, simple metal holders with no moving parts, holding eight rounds in two staggered columns of four. To load, the operating rod was pulled to the rear by its handle until it locked. A clip was placed into the now exposed interior of the weapon and pushed down with the right thumb. So long as the loader kept the clip under pressure the bolt would remain to the rear. Once that pressure was released, the thumb had to be smartly withdrawn before the bolt came

forward. In the event that the bolt failed to travel fully the operating rod handle could be pushed forward to complete the action.

After the first round was fired, all subsequent actions were automated. When the last round of the eight was expended, the action was locked to the rear and the empty clip ejected up and out to the right. A new clip could now be loaded and the process started again.

There are a surprising number of misconceptions about the M1. Typical examples are that it could only be loaded with a clip that contained exactly eight rounds, or that a clip could not be topped up with individual rounds, or that once inserted a clip could not be ejected. These allegations are false but have been repeated in print many times (including a few online by myself in past website incarnations).

The original Field Manual for the M1 gave instruction on ejecting a loaded clip while an amendment of late 1943 to the US Army Infantry Drill Regulations of 1941 outlined the procedure to be used for topping up a partially empty clip. It was also possible to load a single round directly into the chamber without using a clip. Without these actions being possible not only was basic firearm safety compromised, it was also impossible to load the special blank cartridges used to fire rifle grenades.

The other US Army rifle to see extensive use was the M1903, also known as the Springfield. This was a bolt action rifle of conventional design, with a five-round internal magazine. It also existed as the M1903A1, with a pistol grip stock.

Both the M1 and M1903 rifles fired a .30-cal round that had been introduced just before 1900. This was redesigned in 1906, replacing the round nose with a pointed tip, and being designated the .30-06. The same ammunition was also used in the various Browning automatic weapons described later.

The standard rifleman's belt had ten pockets, each able to hold either two five-round clips for the M1903 or a single eight-round clip for the M1. Additional ammunition was issued in bandoleers that held six clips (total 48 rounds) for the M1 or twelve (total 60 rounds) for the M1903. The 60-round type were also used for the BAR.

Browning Automatic Rifle - supporting the M1 rifle was the BAR, which had seen fleeting combat experience in the final stages of the First World War.

It weighed about twice as much as a rifle and was for use by a single man. The BAR fired the standard .30-cal round and was fed from a 20-round magazine loaded into its underside. By 1940 the M1918A2 was in wide use, which added a bipod to facilitate firing from the prone position and deleted the semiautomatic option in favour of alternative rates of automatic fire; retarded (approximately 300 rounds per minute) and high (approximately 600 rounds per minute).

The following is the sum amount that I have found to date on the ammunition expected to be carried by the BAR team under various Squad organizations.

From ‘Table of Basic Allowances’, November 1940

In Rifle Squad (when equipped with a BAR, Table of Organization not known)

Carried by Automatic Rifleman - basic load of 80 rounds (in four magazines), with a further 100 rounds (in five magazines) to be issued prior to combat.

Carried by Assistant Automatic Rifleman - basic load of 120 rounds (in six magazines), with a further 80 rounds (in four magazines) to be issued prior to combat. Further 120 rounds (in two bandoleers) also issued prior to combat.

Total 380 rounds (in 19 magazines) plus further 120 (in bandoleers) = 500 rounds

In Automatic Rifle Squad of Rifle Platoon (October 1940 Tables of Organization)

Carried by Automatic Rifleman - basic load of 80 rounds (in four magazines), with a further 100 rounds (in five magazines) to be issued prior to combat.

Carried by Assistant Automatic Rifleman - basic load of 120 rounds (in six magazines), with a further 80 rounds (in four magazines) to be issued prior to combat. Further 96 rounds (in two bandoleers) also issued prior to combat.

Carried by Ammunition Bearer - basic load of 120 rounds (in six magazines), plus 40 rounds for rifle. Further 192 rounds (in four bandoleers) also issued prior to combat.

Total 500 rounds (in 25 magazines) plus further 288 (in bandoleers) = 788 rounds

From Reference Data, the Infantry Regiment, November 1943*

In Rifle Squad of Rifle Platoon (July 1943 Tables of Organization)

Carried by Automatic Rifleman - 100 rounds (in five magazines)

Carried by Assistant Automatic Rifleman - 140 rounds (in seven magazines)

Carried by Ammunition Bearer - 140 rounds (in seven magazines)

Total 380 rounds (in 19 magazines) = 380 rounds

*(These figures exclude ammunition for the rifles of the assistant automatic rifleman and ammunition bearer).

A different belt set was issued for BAR men which had six pouches each able to hold two magazines. That would, on paper, allow the automatic rifleman to carry 13 magazines, assuming one was loaded in the weapon.

The July 1943 tables of equipment show all three men in the BAR team of each Rifle Squad being issued with this belt. During 1945 this was changed to one BAR belt set per BAR in the Rifle Company, which included the six unallocated weapons added by the changes of June 1944.

Browning machine guns - John Moses Browning left an indelible mark on the US armed forces, producing not only the BAR but also three key machine guns.

Earliest of these was the M1917A1. This was a water-cooled heavy machine gun, designed to dominate ground and fire for sustained periods. As with similar weapons, it was heavy in the physical sense, the gun weighing in at 41lbs with water and 32.6lbs without, while the tripod mount was another 53.2lbs. There was also an elevator mount that could be married with the tripod to raise the gun some two foot higher at the cost of another 12lbs.

The next Browning was the M1919A4 light machine gun. It used the same mechanism as the M1917A1 but swapped water for air as the means to keep the barrel cool. It had a low tripod mount, meaning the weapon was normally fired with the crew lying prone. Total weight of gun and mount was 45lbs. The M1919A4 could also be fitted to the tripod mount of the M1917A1.

Both the M1917A1 and M1919A4 used the same type of fabric belt, which held 250 rounds of .30-cal ammunition. The two weapons had similar cyclic rates of fire, with 400 to 550 rounds per minute for the M1919A4 and 450 to 600 for the M1917A1.

Field Manual 23-55 dated July 1945 gives the likely equipment distribution for both the light and heavy version of the Machine Gun Squad, and compares very closely to the same type of information in USMC literature from 1943.

M1919A4 equipped Machine Gun Squad

Squad leader;	cleaning rod
Gunner;	tripod (one ammunition box)
Assistant gunner;	machine gun (one ammunition box)
Ammunition bearer;	spare barrel, spare parts and one ammunition box
Ammunition bearer;	two ammunition boxes

The 1945 manual lists the gunner and assistant as only carrying ammunition boxes in the absence of ammunition bearers, while the Marine manual indicates they each carried a box as standard.

M1917A1 equipped Machine Gun Squad

Squad leader;	cleaning rod, spare barrel, clinometer
Gunner;	tripod
Assistant gunner;	machine gun plus steam condenser
Ammunition bearer;	water container and one ammunition box
Ammunition bearer;	spare parts and one ammunition box
Ammunition bearer;	two ammunition boxes

The same type of ammunition box was used for each gun, holding a single belt of 250 rounds. While not listed above the M1917A1 Squad was completed by a driver.

The final Browning was the .50-cal M2. Browning had been working on a .50-cal weapon at the time the US entered World War One, but its ammunition was proving problematic. The German Army had introduced a 13-mm rifle as a means to combat the first generation of tanks being used by the British and French. Examination of captured 13-mm ammunition helped solve the issues with the .5-in US round, even so the war ended before the weapon appeared. It was revived in the early 1930s, primarily as an antiaircraft weapon, but it was still effective against the relatively lightly protected tanks of the interwar period. As discussed earlier, the M2 was originally the main armament of the Infantry Battalion Antitank Platoon, and while it disappeared from the Battalion for a while it returned in the antiaircraft role.

The version used by the Infantry was the M2 HB (Heavy Barrelled), which relied on the weight of the barrel (27lbs) to permit sustained or longer bursts of fire without causing the weapon to overheat. The Browning M2 HB weighed in at 84lbs complete and could be used with a variety of vehicle mounts, or in the ground role on a tripod weighing 44lbs. It was fed from metal link belts holding 110 rounds each, which disintegrated as each round was fired. Cyclic rate of fire was from 450 to 575 rounds per minute.

Example packaging of small arms ammunition

Round	Rounds per bandoleer, carton or belt	Bandoleers, etc. per container	Rounds per box of two containers	Notes
.45-cal ACP	50 (carton)	18	1800	-
.30-cal carbine	50 (carton)	30	3000	-
.30-cal rifle	48 (bandoleer)	8	768	Six 8-round clips per bandoleer for M1 rifle
.30-cal rifle	60 (bandoleer)	8	960	Twelve clips of 5-rounds per bandoleer for M1903 or BAR
.30-cal MG	250 (belt)	1 per metal box	1000* *4 boxes per crate	LMG or HMG; 1 round in 5 tracer
.50-cal MG	110 (belt)	1 per metal box	220	M2 HB; tracer 1 round in 5 tracer

ii. Mortars

The US Army used two types of mortar in its Infantry Battalions, the 60-mm M2 and the 81-mm M1. Both were designed by a French company (Edgar Brandt) and were manufactured under license in the US.

The 60-mm M2 broke down into three loads of barrel (12.8lbs), baseplate (12.8lbs) and bipod (16.4lbs). Ammunition was issued in what were termed bundles, each bundle made up of three outer containers, which each in turn had six inner containers, with a single round in each for 18 rounds per bundle. Initially only high explosive rounds were available, latterly joined by an illumination round.

The various Field Manuals for the Rifle Company and Battalion all stressed the limited amount of ammunition that could be carried along with the mortar. In 1940 the figure was 60 rounds per 60-mm weapon, all on the Section truck in the Weapons Platoon. The below is taken from a 1943 US Marine Corps manual and outlines the duties of a Squad of five men, which was the same 60-mm Mortar Squad organization used by the Army.

Squad leader;	baseplate, sight, spare parts
Gunner;	barrel and bipod
Assistant gunner;	12 mortar rounds
Ammunition bearers (2, each);	12 mortar rounds

That would make for a total of 36 rounds carried per 60-mm Mortar Squad, which figure is indicated in several Army manuals but not explicitly stated.

The 81-mm M1 of the Heavy Weapons Company was a much more substantial item, with each of its three components weighing as much alone as the 60-mm did combined. The barrel was 44.5lbs, the bipod 46.5lbs and the baseplate 45lbs.

FM 23-90 of April 1943 shows the Squad with the following loads;

Squad leader;	sight, aiming post (M9)
Gunner;	bipod
Assistant gunner;	barrel, aiming post (M8)
Assistant gunner;	baseplate
Ammunition bearers (3, each);	1 ammunition bag (6 or 4 rounds, see below)
Ammunition bearer;	drove Squad vehicle

The above could be amended into a ‘two-man load’ configuration. In this the gunner added an ammunition bag and one of the ammunition bearers helped him carry the bipod. Similarly the assistant gunner with the barrel wore an ammunition bag and

was assisted by a bearer in carrying the barrel. One of the ammunition bearers also carried the mop like cleaning staff.

There was a variety of ammunition available for the 81-mm mortar. Primary of these was the M43A1, also known as the light shell, which weighed approximately 7lbs and had a maximum range of almost 3300 yards. This was intended for use against personnel and had a fragmentation effect comparable to that of the 75-mm howitzer.

Next was the M56 heavy shell, weighing 10.62lbs. This was designed for use against light fortifications and field emplacements and was likened to the 105-mm howitzer shell in terms of effect. Maximum range was approximately 2600 yards.

There was also a smoke bomb, the M57, with a range of around 2400 yards.

The M43A1 was packed in containers of six rounds, while the M56 and M57 came in three round containers. FM 23-90 shows the ammunition bag as accommodating either six light shells or four heavy or smoke shells.

iii. Antitank weapons

The US Army was reliant upon foreign designs for a number of its weapons requirements and this included its infantry antitank guns. First of these to see service was the 37-mm M3A1, which is sometimes referred to as a copy of the German 3.7-cm Pak 35/36. Whether a copyright complaint would have been upheld we shall never know, however the M3A1 was very much in the spirit of the Pak 35/36 if not identical to it.

A key concern in the design of the M3A1 was to produce a weapon that was comparatively light, allowing it to be towed by the average motor vehicle and worked into position by a relatively small crew. Its 37-mm caliber was shared not only with the Pak but also the Japanese Model 94 antitank gun, but the ammunition was not interchangeable with either.

In November 1942 the Allies landed in French North Africa, providing the first opportunity for the 37-mm to face German and Italian tanks. By this time the British were moving away from the 2-pdr (40-mm) gun and the Germans from the 3.7-cm Pak 35/36 as their basic antitank weapons. Early US experience against the newer variants of the Panzer III and IV proved disheartening, showing just how far it had been left behind by real world developments.

Despite this, the initial response was that the gun remained effective when used in the correct manner, namely at very short range and firing from concealed positions at the last possible moment. The often open terrain of North Africa did not necessarily afford such opportunities however. Even so, it was not until the middle of 1943 that the 37-mm M3A1 began to be replaced in the Infantry Regiment.

Several early war manuals give a figure of 80 rounds of 37-mm ammunition being carried on the ½-ton truck that served as the prime mover for the M3A1 before 1942. When the guns were integrated into the Infantry Battalion, transport changed to a pair of ¼-ton trucks (Jeeps) for each gun, which presumably reduced this total and spread it over both vehicles. Ammunition for the 37-mm included armor piercing, capped (APC), high explosive and canister.

Succeeding the 37-mm was the 57-mm M1, which was the British 6-pdr anti-tank gun produced in the US under reverse Lend-Lease arrangements. This is looked at in the Organization of the British Infantry Battalion piece. In US service the 57-mm gun was provided with two types of armor piercing rounds; the M70 was standard solid shot while the M86 was APC and contained a HE charge intended to explode inside the target. Both were issued in containers holding three rounds.

Until 1943 Rifle Squads and Platoons were entirely reliant upon antitank rifle grenades as a counter to enemy armor. This changed with the introduction of the Launcher, Rocket, Antitank, 2.36-inch, forever known as the Bazooka. This fired a rocket fitted with a high explosive antitank (HEAT) shaped charge warhead. This used an impact fuze that detonated the charge on contact with the target; the resultant blast was focussed into a single stream, which burned through the protective plate in an instant before exploding into the interior of the vehicle.

An advantage of the hollow or shaped charge warhead was that it did not have to be delivered via a high velocity shell to function, which in turn allowed for a lightweight launch system to be used rather than a gun. The Bazooka weighed less than 14lbs complete, though the four and half foot long launch tube was a little awkward to carry. The later M9 version could be broken into two equal lengths that were quickly re-joined to allow firing.

As with all antitank weapons the Bazooka quickly found itself playing catch up to principally German developments. Its 2.36-inch rocket was reckoned to be able to defeat 4-inches of armor plate (100-mm), and while maximum range was over 600 yards effective range was in the 100 to 200 yard bracket. A white phosphorus (WP) round was also developed. Ammunition was issued in boxes of 20 rockets each.

iv. Grenades and Pyrotechnics

Hand grenades - the Mk.II was the standard hand grenade at the outset of the war. It was a normal fragmentation grenade fitted with a serrated cast iron body, which was transformed into a lethal field of shrapnel on detonation. The normal issue was in wooden boxes that held 25 grenades.

An offensive grenade, the Mk.III, was also produced. This had a much greater explosive content (6.83 ounces compared to 0.74 ounces in the Mk.II) and was intended for demolition work.

Rifle grenades - the US produced a number of grenade launchers for use with various weapons. One of the earliest was the M1, which attached to the M1903 rifles (except the M1903A4) but could not be used with either the M1 rifle or the M1 carbine. These received their own launchers in the form of the M7 (M1 rifle) and the M8 (for the carbine). A blank cartridge had to be loaded into the chamber of the rifle or carbine to enable firing.

When the M7 was fitted to the M1 rifle it was still possible to fire the rifle without having to first remove the attachment, however the semiautomatic action could not be utilised and the user would have to manually reload using the operating handle. The M1 carbine could be used as normal with the M8 launcher fitted.

The M9 was an antitank rifle grenade and used a hollow charge warhead fitted to a stabiliser tube. The improved M9A1 had an expected armor penetration in the same order as that of the Bazooka. The M17 was a standard Mk.II hand grenade fitted with an impact rather than a delay fuze. They were issued in boxes of ten.

Both the M9 and M17 consisted of the warhead attached atop a stabilizer tube which had a fin at its base. The launcher was fitted to the muzzle of the rifle or carbine and a grenade was slid down over it. The launcher was marked at intervals with 'rings'. The further down the launcher the grenade was pushed, the greater the range it would achieve when fired. Roughly speaking, the base range using a single ring (or graduation) was 55 yards; for each ring more used a further 25 yards could be expected, while the maximum range using the fifth ring was given as 165 yards.

A further boost to range could be had by using the 'vitamin pill'. This was an auxiliary charge that was pushed into the top of the launcher before the grenade was slipped over. When detonated with the normal charge in the grenade the two combined to add anything from 100 to 150 yards additional range.

The Mk.II hand grenade could also be fired from a rifle or carbine fitted with its relevant launcher device. This required a further item, the grenade projector adapter (M1), which was effectively a stabiliser tube. At the top of the tube were four claws, into which a standard Mk.II grenade was inserted. One of these claws was designed to hold the arming lever of the grenade in place when the safety pin was removed, as would be done with the hand prior to throwing. When the grenade was launched, the arming lever was released and the five-second fuze engaged.

Pyrotechnics - the US used a variety of flare cartridges, also known as pyrotechnics. Some of these produced a 'single star' that could be red, yellow or green, and others a 'double star' that introduced mixes (red-yellow, red-green or green-yellow) or two matching stars of red, yellow or green. One means of launching these was the M9 projector, which resembled a small, handheld mortar. To fire the base of the projector was either struck against a hard surface, or with the flat of the hand. There were also a series of parachute flares and cluster flares that could be fired using the M7 or M8 grenade launchers.

Ammunition allocations

The US Army had its own terminology regarding ammunition supply that requires some explanation.

Basic or Prescribed Load - this was the ammunition to be carried on the man or with the gun and in the ammunition train of the unit to which they belonged.

Unit of Fire - this was a unit of measurement for ammunition supply represented as a specified number of rounds per weapon.

Day of Supply - this was the estimated average expenditure for ammunition expressed as rounds per weapon, per day.

While the above definitions were particular to the US Army the concepts were common to others. All armies of the day had their own means of calculating the ammunition available to units and the expected rate of resupply required.

These various US definitions did not relate to one another in numerical terms. For example the Prescribed Load of a unit did not always equate to full a Unit of Fire for each weapon type, and could be a fraction of the Unit of Fire or a multiple of it. Likewise the Day of Supply was a calculation of ammunition expenditure for resupply purposes and did not simply equal the Unit of Fire.

The Unit of Fire is perhaps the best known of the above terms. Each weapon type had its own Unit of Fire, which was, where appropriate, subdivided into the different types of ammunition used by a weapon (smoke, high explosive, armor piercing, etc). While the Unit of Fire was determined centrally by the US War Department, it could be modified by Theater commanders to meet local needs, so the Unit of Fire for a 60-mm mortar in Europe was not necessarily the same as that in the Pacific.

The US Army Infantry School issued a Training Bulletin titled “Reference Data, The Infantry Regiment”, which was published in at least three versions between late 1943 and 1945. This included the Prescribed Load for each weapon of the Regiment and had the closest I have seen to a ‘loading table’ for the vehicles of the Regiment.

Overleaf is a table that shows the authorized Unit of Fire at various points in the war for the weapons common to an Infantry Battalion. Accompanying this is a table showing the Prescribed Load as recommended by the Infantry School, taken from various drafts of the Reference Data booklets. It should be noted that these booklets all carried the proviso that the information in them had not been subject to War Department approval and was liable to change.

Unit of Fire, Infantry Battalion weapons, 1941 to 1945

Weapon Ammunition Type	Unit of Fire (in rounds per gun)			
	1941	1943	1945	PTO
Rifle, M1 .30-cal	**150**	**150**	**150**	**100**
Rifle, M1C .30-cal (from 1945)	**…**	**…**	**150**	**…**
Ball	70%	…	…	…
Armor piercing	10%	80%	80%	80%
Tracer	20%	20%	20%	20%
Rifle, M1903 .30-cal	**150**	**…**	**…**	**…**
Rifle, M1903A4 .30-cal (from 1943)	**…**	**150**	**…**	**100**
Ball	70%	…	…	…
Armor piercing	10%	100%	…	80%
Tracer	20%	…	…	20%
Automatic Rifle, M1918A2 .30-cal	**750**	**750**	**750**	**500**
Ball	85%	…	…	…
Armor piercing	5%	80%	80%	80%
Tracer	10%	20%	20%	20%
Carbine, M1 .30-cal	**…**	**60**	**60**	**45**
Ball	…	100%	100%	100%
Pistol, M1911 .45-cal	**20**	**20**	**20**	**14**
Ball	100%	100%	100%	100%
Submachine gun .45-cal	**…**	**…**	**200**	**200**
Ball	…	…	100%	100%
M1919A4, Light machine gun .30-cal	**2000**	**2000**	**2000**	**1500**
Ball	70%	…	…	…
Armor piercing	10%	80%	80%	80%
Tracer	20%	20%	20%	20%
M1917A1, Heavy machine gun .30-cal	**3000**	**2000**	**2000**	**1500**
Ball	70%	…	…	…
Armor piercing	10%	80%	80%	80%
Tracer	20%	20%	20%	20%
M2 HB, machine gun .50-cal	**3000**	**500**	**500**	**600**
Armor piercing	80%	80%	80%	40%
Tracer	20%	20%	20%	20%
Incendiary	…	…	…	40%
Mortar, 60-mm	**400**	**100**	**100**	**100**
HE	100%	97%	97%	90%
Illuminating	…	3%	3%	10%
Mortar, 81-mm	**300**	**100**	**100**	**100**
HE (Light)	70%	70%	70%	50%
HE (Heavy)	10%	20%	20%	40%
Smoke	20%	10%	10%	10%
Launcher, Rocket, Antitank	**…**	**6**	**6**	**6**
HE (antitank)	…	100%	100%	100%
Grenade, M9A1, antitank	**…**	**6**	**6**	**2**

Weapon Ammunition Type	Unit of Fire			
	1941	**1943**	**1945**	**PTO**
Gun, 37-mm, antitank	**120**	**…**	**…**	**100**
Armor piercing	90%	…	…	40%
HE	10%	…	…	40%
Canister	…	…	…	20%
Gun, 57-mm, antitank	**…**	**100**	**100**	**90**
Armor piercing	…	100%	70%	100%
HE	…	…	15%	…
Canister	…	…	15%	…
Recoilless Rifle, 57-mm*	**…**	**…**	**76**	**…**
HE	…	…	68%	…
HEAT	…	…	12%	…
Smoke	…	…	20%	…
Recoilless Rifle, 75-mm*	**…**	**…**	**50**	**…**
HE	…	…	60%	…
HEAT	…	…	30%	…
Smoke	…	…	10%	…

Notes

1. 1941 figures from FM 101-10 of June 1941.
2. 1943 figures from “Reference Data, the Infantry Regiment” November 1943.
3. 1945 figures from “Reference Data, the Infantry Regiment” November 1945.
4. PTO (Pacific Theater of Operations) figures from March and August 1944.
5. Recoilless Rifles* - only for Redeployment units (late 1945, see Annex C).

Prescribed Loads, Infantry Battalion weapons, 1941 to 1945

Weapon	Prescribed Load		
	1941	1943	1945
Rifle, M1 .30-cal	**232**	**144**	**144**
On man	40	48	48
On Battalion Ammunition Train	192	96	96
Rifle, M1C .30-cal (from 1945)	**…**	**…**	**160**
On man	…	…	40
On Battalion Ammunition Train	…	…	120
Rifle, M1903 .30-cal	**160**	**…**	**…**
Rifle, M1903A4 .30-cal (from 1943)	**…**	**160**	**…**
On man	40	40	…
On Battalion Ammunition Train	120	120	…
Automatic Rifle, M1918A2 .30-cal	**1172**	**740**	**740**
On man	320	380	380
On Battalion Ammunition Train	852	360	360
Carbine, M1 .30-cal	**…**	**60**	**60**
On man	…	60	60
Pistol, M1911	**28**	**20**	**20**
On man	21	20	20
On Battalion Ammunition Train	7	…	…
M1919A4, Light machine gun	**5000**	**2000**	**2000**
On vehicle	3000	2000	2000
On Battalion Ammunition Train	2000	…	…
M1917A1, Heavy machine gun	**6750**	**4000**	**4000**
On vehicle	6750	4000	4000
M2 HB, .50-cal machine gun	**1200**	**660**	**660**
On vehicle	1200	660	660
Mortar, 60-mm	**120**	**96**	**84**
On vehicle	60	48	48
On Battalion Ammunition Train	60	48	36
Mortar, 81-mm	**150**	**78**	**78**
On vehicle	100	63	63
On Battalion Ammunition Train	50	15	15
Gun, 37-mm, antitank	**200**	**…**	**…**
On vehicle	160	…	…
On Battalion Ammunition Train	40	…	…
Gun, 57-mm, antitank	**…**	**60**	**…**
On vehicle	…	60	…
Launcher, Rocket, Antitank	**…**	**6**	**6**
On vehicle	…	6	6
Recoilless Rifle, 57-mm*	**…**	**…**	**27**
On vehicle	…	…	27
Recoilless Rifle, 75-mm*	**…**	**…**	**35**
On vehicle	…	…	35

Notes

1. 1941 figures from FM 101-10 of June 1941. These exclude the figures for ammunition on Trains of higher units.
2. 1943 figures from “Reference Data, the Infantry Regiment” November 1943.
3. 1945 figures from “Reference Data, the Infantry Regiment” November 1945.
4. Recoilless Rifles* - only for Redeployment units (late 1945, see Annex C).

Additional comments

M1 rifle ammunition; a note in FM 101-10 of June 1941 states that *“In mobilization, all ammunition for the US rifle, M1 is packed and issued in 8-round clips in 48-round bandoleers in boxes”.* This same source notes that of the 192-rounds carried on the ammunition train, 96 was to be issued prior to combat and 96 was to be retained on the train as a reserve. This additional total of 192 rounds per M1 was only for those M1 rifles in Rifle Platoons.

The November 1943 “Reference Data” booklet states that 48 rounds was to be carried by each man armed with the M1 rifle, with a further 96 rounds carried on the Ammunition Train for each M1 rifle in Rifle Platoons only.

M1911A1 pistol ammunition; while the figure of 20 rounds to be carried on man appears ‘counterintuitive’ given three magazines could hold 21 rounds, this is the figure stated in multiple sources published across several years.

Annex C - The Infantry Regiment (Redeployment) June 1945

In early 1945 the US Army began a review of the organization of the Infantry Division. This exercise was undertaken by Army Ground Forces (AGF) and resulted in three plans being submitted. Each of these kept the overall format of the Infantry Division as found in March 1945, with varying levels of augmentation provided for its constituent units, the fewest being under Plan 1 and the greatest under Plan 3.

In April 1945 the War Department announced that all the three Plans had been rejected, citing in part the personnel limitations affecting the armed forces as a whole. Instead it requested new Tables of Organization be drafted that incorporated elements of the three Plans drawn up by AGF. Such Tables were published with a date of 1st June 1945 and included the suffix 'R' to distinguish them from the Tables of Organization then currently in force for an Infantry Division.

Had the war in the Pacific continued into late 1945 and early 1946, the US Infantry Divisions committed to the invasion of the Japanese Home Islands would have adopted this organization. In the event Imperial Japan surrendered on 15th August 1945, long before any Divisions had an opportunity to actually do so. As such the 'R' Tables can only be considered as a paper exercise, it is however interesting to see the changes to the Infantry Regiment and Battalion they would have entailed.

Below is a summary of the changes recommended by the AGF under Plan 3, compared against those adopted with the R Tables.

Changes proposed to the Infantry Regiment under AGF Plan 3

Rifle Squad; no change, remaining at 12 men with one BAR.

Rifle Platoon; add one Squad of seven men to provide permanent crews for rocket launchers (also responsible for flamethrowers when issued).

Rifle Company; increase size of LMG Section in Weapons Platoon from two Squads to three; add a Special Weapons Section armed with three of the newly developed 57-mm recoilless rifles. The Section was to be organized as the 60-mm Mortar Section in terms of personnel.

Heavy Weapons Company; reorganize the two Heavy Machine Gun Platoons into a single Platoon, with three Sections each of two Squads, equipped with six light and six heavy machine guns (presumably so Squads could choose the most appropriate weapon). Add a new Gun Platoon equipped with six 75-mm recoilless rifles.

Battalion Headquarters Company; delete the 57-mm Antitank Platoon, its role now undertaken by the 75-mm recoilless rifles of the above Gun Platoon. Increase personnel strength of the Communication Platoon and provide an Intelligence and Reconnaissance Section.

Regimental Cannon Company; replace the unit armed with six 105-mm towed howitzers with a Tank Company of 17 tanks, latterly reduced to nine tanks in three Platoons of three tanks each.

Regimental Antitank Company; retire the towed 57-mm antitank gun and re-equip the Company with nine tanks, each armed with a 90-mm main gun, mirroring the Cannon Company. Transfer of the Antitank Mine Platoon (see below).

Service Company; increase in personnel (and presumably vehicle) strength.

Regimental Headquarters Company; addition of a Counter Mortar Section tasked with locating enemy mortars and receipt of the Antitank Mine Platoon.

These were the general recommendations from AGF submitted to the War Department in early 1945.

Tables of Organization for the Infantry Regiment dated 1st June 1945

Rifle Squad; there was no material change to the Squad used since 1943, remaining as 12 men armed with eleven M1 rifles and one Browning Automatic Rifle. The Automatic Rifleman was promoted to a Corporal.

Rifle Platoon; no change from 1943-44. The sniper rifle was confirmed as the M1C.

Rifle Company; the Weapons Platoon was greatly increased in size. A Special Weapons Section was added, equipped with three 57-mm recoilless rifles, each handled by a five-man Squad. An Assault Section was also added with three Squads, each with two teams of three men. Each team handled a single Bazooka or flamethrower as required. Weapons Platoon Headquarters received two more Jeeps with trailers and a second officer. The Light Machine Gun and 60-mm Mortar Sections remained unchanged. Company Headquarters added a dedicated radio operator and had an increased number of Basics.

Heavy Weapons Company; retained two Machine Gun Platoons and a single 81-mm Platoon. Each MG Platoon was now issued with four light and four heavy machine guns, the former for use as an alternative when required. The Mortar Platoon deleted the post of a Section Lieutenant and added a second officer to Platoon Headquarters. There was the addition of a Gun Platoon armed with six 75-mm recoilless rifles (replacing the Antitank Gun Platoon as below), organized into three Sections each of two Squads. Each Section had a 1.5-ton truck for transport.

Battalion Headquarters Company; deleted the 57-mm Antitank Gun Platoon and made some minor increases to the strength of the Communication Platoon.

Regimental Cannon Company; now equipped with nine M26 tanks, each mounting a 105-mm howitzer.

Regimental Antitank Company; now equipped with nine M26 tanks, each mounting a 90-mm main gun.

Service Company; increase in personnel and transport vehicles.

Regimental Headquarters Company; addition of a ‘Counterfire Section’ tasked with locating the position of enemy mortars. Minor increase in the strength of the Communication Platoon, no changes to either the Intelligence and Reconnaissance Platoon or the Antitank Mine Platoon acquired from the Antitank Company.

Overall strength of the Regiment (excluding attached Medical and Chaplains) increased from 3068 officers and men as of June 1944 to 3562 with the June 1945 Tables of Organization.

Aside from the introduction of tanks to the Infantry Regiment the only other major change in weaponry was the inclusion of recoilless rifles. The 57-mm M18 weighed just over 40lbs and could be fired from the shoulder in similar fashion to the Bazooka. It could also be mounted on the tripod of the M1917A1 heavy machine gun for greater stability. When using high explosive ammunition expected range was almost 4400 yards.

The 75-mm M20 recoilless rifle came in at some 103lbs and was a crew-served weapon, with a maximum range of 7000 yards. Like the M18 the M20 utilised the M1917A1 tripod and both weapons were provided with high explosive antitank (HEAT) and white phosphorous (WP) as well as HE rounds.

The M18 and the M20 recoilless rifles saw limited service in Europe (with a number used by 17th Airborne Division in March 1945) and the Pacific (on Okinawa), effectively for troop trials. They proved more accurate than the Bazooka and far more mobile than the towed 57-mm gun. Neither was fully tested against tanks until the first major post-war conflict began in Korea in June 1950, where both struggled against the 1940s era T-34.

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)

7-16, Headquarters & Headquarters Detachment, Battalion, Rifle - 1st October 1940

7-17, Infantry Company, Rifle - 1st October 1940

7-18, Infantry Company, Heavy Weapons - 1st October 1940

7-16, Headquarters and Headquarters Company, Infantry Battalion - 1st April 1942

7-17, Infantry Rifle Company - 1st April 1942

7-18, Infantry Heavy Weapons Company - 1st April 1942

7-16, Headquarters and Headquarters Company, Infantry Battalion - 15th July 1943 (including equipment)

7-17, Infantry Rifle Company - 15th July 1943 (including equipment)

7-18, Infantry Heavy Weapons Company - 15th July 1943 (including equipment)

7-16, Headquarters and Headquarters Company, Infantry Battalion - 26th February 1944, plus Change 1 of 30th June 1944 (including equipment)

7-17, Infantry Rifle Company - 26th February 1944, plus Change 1 of 30th June 1944 (including equipment, courtesy of Yves Bellanger)

7-18, Infantry Heavy Weapons Company - 26th February 1944, plus Change 1 of 30th June 1944 (including equipment)

7-16, Headquarters and Headquarters Company, Infantry Battalion - 1st June 1945 (not including equipment)

7-17, Infantry Rifle Company - 1st June 1945 (including equipment)

7-18, Infantry Heavy Weapons Company - 1st June 1945 (not including equipment)

Many thanks also to Yves Bellanger and John Thatcher for their continued generosity and patience.

US Army Field Manuals

FM 7-5, Organization and Tactics of Infantry, the Rifle Battalion, October 1940*

FM 22-5, Infantry Drill Regulations, August 4, 1941*

FM 7-20, Rifle Battalion, September 28, 1942*

FM 7-20, Infantry Battalion, 1 October 1944*

FM 7-10, Rifle Company, Rifle Regiment, June 2, 1942*

FM 7-10, Rifle Company, Infantry Regiment, 18 March 1944**

FM 7-15, Heavy Weapons Company, Rifle Regiment, May 19, 1942*

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

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

Infantry weapons

FM 23-55, Browning machine guns, July 1945**

FM 23-90, 81mm Mortar, M1, April 1943 (available from www.merriam-press.com)

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'.

** These are available from;

www.archive.org

(Search on the FM reference number and narrow the media type to text).

***FM 101-10 of 1945 is 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 9-2200, Small Arms, Light Field Mortars, 11th October 1943, from;

https://bulletpicker.com/technical-manuals.html

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

TM 11-235, Radio Sets SCR-536, May 1945

TM 11-242, Radio Set SCR-300-A, June 15, 1943

http://www.radionerds.com/index.php/Main_Page

The latter site includes copies of the technical manuals for pretty much all WW2 era US radios.

Period publications

Infantry School Training Bulletin No.1, 1 November 1943: Chapter 2 “Reference Data, the Infantry Regiment”.

Infantry School Training Bulletin No.1, 1 April 1944: Chapter 1 “Organization of the Infantry Regiment”.

Infantry School Training Bulletin No.1, 1 June 1944: Chapter 2 “Reference Data, the Infantry Regiment” (courtesy of John Thatcher).

Infantry School Training Bulletin No.1, 1 June 1944: Chapter 1 “Organization of the Infantry Regiment” (courtesy of John Thatcher).

Infantry School Training Bulletin No.1, 1 January 1946: Chapter 2 “Logistics Reference Data, Infantry Regiment (Divisional)”.

General works

The Organization of Ground Troops for Combat, Center of Military History, 1987, available from;

https://history.army.mil/html/books/002/2-1/index.html

Would like to find…

As mentioned earlier, the internet hosts a variety of documents related to this study. There are still though a few subjects that I'd like to follow up on.

Tables of Organization

This is actually just a general query and not related specifically to Infantry Battalion research. To the best of my knowledge the only US archives that retain US Army Tables of Organization are the Army Heritage Center Foundation (at Carlisle Barracks, Pennsylvania) and NARA (the National Archives and Records Administration). Over the years I have tried a few other archives and museums but have not been able to obtain any such Tables from them.

Research in the Carlisle archives is a slow process (at the time of writing I am close to two years into a search with them) and to my surprise their holdings are not complete. I have tried NARA but could not even establish from them which of their multiple facilities might hold T/O documents, let alone which ones.

If anyone reading this does know of either a better way to access the above mentioned archives, or an alternative means of acquiring copies of the original Table of Organization documents (which is ideally quicker and within my budgetary restrictions) I would be interested to know.

Infantry School Training Bulletins and similar items

These are documents that I only found out about fairly recently. Of particular relevance to this study is Infantry School Training Bulletin No.1, which consisted of Chapter 1 (Organization of the Infantry Regiment) and Chapter 2 (Reference Data).

These were published at various dates during the war and I have not seen a full listing. I have a physical copy of the 1st November 1943 edition of Chapter 2, and scans of Chapter 1 (1st April 1944 and 1st June 1944) and Chapter 2 (1st June 1944 and 1st January 1946), though some of these are of variable quality. If anyone knows where other examples of these documents could be found I would be interested to know (I did try the current School of Infantry, but they have none sadly).

Also if anyone knows of any training publications or manuals of the period that cover subjects such as unit allowances of equipment and ammunition, loading tables for vehicles, or recommended loads of ammunition and equipment for personnel within Rifle Squads and Platoons, I'd be interested to hear about them.

Gary Kennedy

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