



Colour plates by RON VOLSTAD

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Artist's Note

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The publishers regret that they can enter into no correspondence upon this matter.

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Information does not exactly abound on the subject of web gear, especially in regard to its development, this information being lost in Quartermaster reports and studies, many of which are retained for only a few vears. It is because of this that collectors of these 'smelly old' treasures are of particular value. A number of collectors willingly made their collections available for study and shared information. I wish to record my special appreciation to the 36th Infantry Division Association Ceremonial and Demonstration Auxiliary, a Texas-based World War II re-enactment organisation, and in particular to Marvin F. Schroeder, President, for sharing his collection of equipment from the first half of this century. Paul Lemmer deserves special thanks for sharing his World War I and earlier period collection and reference library. Shelby Stanton generously provided many photographs from his vast collection, some of which appeared in his excellent Order of Battle U.S. Army World War II, (Presidio Press). Thanks too to the Public Affairs Office, US Army Infantry School for providing the latest equipment information. I wish also to thank my wife, Enriqueta, for her support. And last, but not least, a very special thanks to Ron Volstad whose artistic efforts have added so much to this and my previous books.

U.S. Army Combat Equipments 1910-1988

Introduction

Whether referred to as web gear, TE-21, TA50, LBE or LCE, the American soldier's individual combat equipment was seldom praised-except by its developers. Nevertheless, it has always been, and will continue to be an essential part of the fighting man's burden. To say that a soldier's web gear (the most common soldier's term for it from World War I to the present) is close to him is an understatement. It has long been a precept that while he is in the field, if a soldier is not actually wearing his gear, it had better be within arm's reach. A combat soldier withdrawn to the rear can feel quite naked without his gear-his attitude now is very different from his reaction during the first days in basic training, when staring down at a confusing tangle of belts, straps, pouches, and unknown objects, while the drill sergeant announced, 'I'm gonna show ya all how to put this junk together . . . it's gonna be part of ya!'

Correct **terminology** has long been a military obsession, but in the field of combat equipment it has never been quite standardised. A magazine pocket, ammunition pouch, magazine carrier, ammo bag, and small arms case all do the same thing—carry bullets. It is not uncommon for the terms pouch, pocket, and case to be used interchangeably for the same items, even in different official publications. In this book I will attempt to use the correct terms, but there has always been a degree of variance. I will avoid the unintelligible quartermaster's reversed nomenclature, e.g., 'Pack, field, combat, medium, nylon, olive green', in favour of a more coherent jargon.

Equipment **colours** have changed little over the years. Original M1910 and most earlier gear was 'olive drab shade no. 9', actually khaki, a sand colour which varied from a mustard shade to almost white. It was standard until late 1943 when 'olive drab shade no. 7' (OD) was introduced. This was a dark brownish green, the green much more pronounced. Olive green (OG) was adopted in 1956, and is a dark green colour. With the introduction of nylon equipment OG became even darker, though some has a distinctly brownish tint. A black 'U.S.' is printed on virtually all items.

The realities of the soldier's load remain the same to this day . . . what is perceived to be needed, as opposed to what is actually required. (From *Corporal Si Klegg and His 'Pard'* by Wilbur F. Hinman, published by N. A. Hamilton and Co., Cleveland, Ohio, 1888)



With regard to equipment **issue and replacement**, it has generally been the year following its adoption before it was actually fielded, and it could be several years before it was fully issued. Current contracts were usually completed and existing stocks exhausted before new gear was issued.

The development of US combat equipments has been evolutionary since the introduction of the first 'modern' system after the turn of the century. A number of factors have a direct influence on its development. Materials have a great deal to do with it. For centuries, leather was used for the soldier's equipment. While suitable, it had many drawbacks. The industrial revolution saw enormous advances in the textiles industry, leading to the development of durable cotton canvas and webbing suitable for combat equipments. The demand for even more durable materials, per-

A rifleman, (left) equipped with the bedroll, M1907 suspenders, M1907 cartridge belt, M1905 bayonet, M1908 haversack, M1907 canteen, M1909 shovel carrier, and M1907 first aid pouch (not visible); contrasted with (right) the M1910 equipment. (US Army)



mitting lighter weight construction, led to the adoption of nylon. The heavier the soldier's equipment, the fewer combat-essential items he can carry. Lighter weight gear also permits a more efficient soldier by allowing more freedom of movement.

The physiological, or 'comfort', factor is just as important as the more obvious considerations of material and weight. The ability of the soldier to maintain an erect posture and a balanced centre of gravity are critical. The equipment must not interfere with respiration, perspiration, or circulation. Chaffing and cutting must be prevented, accomplished by the use of padding or softer materials.

A critical factor is the trade-off between light weight and durability. If the materials are too light, they simply will not stand up to the rigours of combat abuse. The gear must also be 'soldier proof'. While a recreational backpacker may get years of service from an ultra-lightweight pack, he paid a considerable sum for it and will take great care of it. The soldier, on the other hand, had his 'given' to him—and 'there's always another to replace it'!

Regardless of developments in new materials, the search for the elusive 'light load', and improved designs allowing greater agility and comfort, most major changes in combat equipments have in fact been caused by the adoption of new weapons and the need to transport their ammunition. But weight is the key factor governing the design of combat equipment, and the overriding factor in most writings and studies of the soldier's load:

'The Infantryman of nearly every army today groans under the pack that is required to be carried in campaign. To reduce that burden is a matter that should be a prime consideration of the designers and approving authorities of many arms and equipment and certainly should be foremost in the minds of those who prescribe the articles to be carried on the person of the soldier.'

'(The) risk analysis approach for lightening the soldier's load must now address a mission load item that almost triples the load on a foot soldier. Those of us who, in the past, have humped and jumped the old loads can only marvel at what the Army has done in its "attempts" to take care of the troops.'

The first statement was written by the editors of *Infantry Journal* in the July 1926 issue; the second by



a retired officer in a letter to the editors of *Infantry* Magazine in the July-August 1987 issue.

Predecessors of the M1910 Equipment

Leather dominated combat equipments for most of the 19th century. It was expensive, heavy, stiff, easily cracked, prone to damage when wet, and required constant work to keep it clean and serviceable. It also caused brass cartridges to corrode after prolonged contact. In 1880 the Army adopted the Mills cartridge belt of dark blue machine woven web, with loops for $40 \times .45^{-70}$ A cavalryman with the M1912/14 cavalry equipment, with the M1903 rifle carried in the belt ring. (US Army)

Springfield cartridges. Wider use of canvas and webbing came with the M1885 equipment, which added a khaki canvas haversack and a round, stamped metal, cloth-covered canteen¹ to the belt; both being carried by leather shoulder slings. A blanket, poncho and shelter-half (half of a small button-together two-man tent) were rolled into a blanket roll and worn over the left shoulder in a fashion reminiscent of the American Civil War. A 'A water-bottle, in British parlance.



A cavalryman with the M1914 cavalry equipment configured for dismounted use. Note the ration bags strapped together to form a knapsack. (US Army)

khaki double-loop cartridge belt for $90 \times .30-40$ Krag rifle rounds was adopted in 1896.

This gear saw the Army through the 1898 Spanish-American War, which nevertheless demonstrated its defects. It was not until after the turn of the century that replacements were adopted, and not as a collective system, but piecemeal. The first item was the M1903 cartridge belt, the first to have pockets for loading clips, later replaced by the M1907, similar, but with small metal eyelets along the top and bottom edges, or selvage-the former for attaching M1907 'X'-back suspenders, and the latter for equipment items. This was to be a characteristic of all subsequent belts. The M1907 round, stamped, metal canteen and M1907 first aid pouch followed. The M1908 haversack was an improvement over the M1885. Following European practice, an M1909 shovel and carrier were added. The slightly modified M1909 suspenders replaced the M1907. Each of these items was attached to the belt by a double hook which matched pairs of lower selvage eyelets. A twopocket (12 rounds each) revolver belt for officers, and an M1903 seven-pocket (six rounds each), were also introduced.

Though the individual items were improvements over the M1885 gear, the overall system had a number of disadvantages, the principal being that the blanket roll exerted pressure on the chest, interfering with breathing. Most of its weight was borne on the left shoulder, and this, plus the haversack carried on the left hip, caused an unbalanced load. The haversack, shovel, and canteen also had a severe 'bounce' effect. While lighter than many foreign infantrymen's loads, at 56 lbs it was still judged too heavy.

The adoption of canvas duck and webbing can be traced to Capt. (later Brig. Gen.) Anson Mills. While campaigning against the Indians he found the leather gear then in use had many disadvantages. In 1877 he developed a web cartridge belt; and in conjunction with weaver Charles Gilbert, he established the Mills Woven Cartridge Belt Company in Worcester, Mass. in 1880. It was through the efforts of this firm that the M1885 gear was adopted. The company developed cotton canvas duck¹ and cotton webbing specifically for

¹A heavy tightly woven cotton fabric with water repellent qualities, hence the name 'duck'.

use in military equipments, along with metal fittings. The firm was responsible for developing most of the web gear used by all US armed forces, and manufactured most of it until America's entry into World War I. Many of the design styles and methods of manufacture developed by the Mills Company are still in use today.

The M1910 Infantry Equipment

Historical

Around the turn of the century the British, German, and French armies began to study the soldier's load and how he carried it. They each came to the same conclusion: the soldier should carry no more than one-third of his own weight. Earlier tests had found that the soldier burned 5,000-6,000 calories a day. Just over 3,000 calories were needed to 'fuel' basic life and movement; the remainder was available for marching, working, and fighting. To expend more energy resulted in a rapid loss of efficiency, followed by exhaustion. These studies led not only to the realisation that the soldier's load must be kept as light as possible, but to recognition of the importance of sufficient rations. The physiological effects of combat stress and its subsequent energy drain also began to be appreciated.

A scientific analysis of the soldier's load, coupled with dissatisfaction with the blanket roll and haversack, led the US Army to re-evaluate its equipments. The Mills Company worked closely with the Infantry Board to develop a new system specifically designed to meet the soldier's physical requirements. This early 'human engineering' effort set a maximum weight of 50 lbs, on the soldier's load. The total weight of a rifleman's M1910 gear came to 48 lbs.

Although well designed for its time, the system did have shortcomings. The principal one was the design of the haversack and pack carrier, together carried as a backpack. It was designed solely to transport a prescribed and restricted load, due to the specified weight limitations. This prevented even a few additional items—including cold weather clothing and shelter, extra missionessential equipment, or even extra rations—from being carried. The length of the securing straps and the size of the flaps were cut to accommodate solely the prescribed load, which looked great on the parade ground, but was a monster for a tired soldier to pack in a muddy field with wet, numbed fingers at 0400 hours.

Another problem was that the haversack could not be worn without the cartridge belt as it was not equipped with shoulder straps, but with integral suspenders that attached to the belt. Likewise, if the haversack was removed, the belt's support suspenders went with it. A few units issued M1909 suspenders for this purpose; but the idea was for the haversack, with essential items, to be retained by the soldier at all times.

The M1910 equipment, though often modified,





was to provide the basic concept of equipment used by the Army until 1956, and even then its influence was not to disappear.

Description

This gear was made almost entirely of khaki webbing and canvas duck; the few leather components were russet brown. The metal fittings were of bronze or brass of a dull dark bronze colour, the same as prescribed for uniform buttons. The snap fasteners bore in relief the US coat of arms, again the same as on uniform buttons. All items, unless otherwise noted, were designated M1910.

The dismounted cartridge belt was a three-part assembly: right and left pocket sections and an

M1918 Browning automatic rifle (BAR) equipment: (top to bottom) BAR cover, assistant automatic rifleman's belt, automatic rifleman's belt, and left and right automatic rifle ammunition bearer's bandoleers. (US Army) adjusting strap. On each end of the adjusting strap was a metal tab with two hooks. The strap was passed through the adjustment buckles on the back ends of the pocket sections. The hooks matched two rows of round evelets set in the backs of the pocket sections, allowing an easy and balanced adjustment of the belt's waist size from the back centre, rather than from the front ends as on the M1903 and M1907 belts. The five cartridge pockets on each section 'puckered' at the bottom, each held two five-round .30 cal. loading clips for the M1903 Springfield. A small retaining strap was fitted inside each. One clip, bullet points up, was inserted in front of the strap, and the strap snapped to a fastener on the pocket front. The second clip, points down, was inserted behind the strap and first clip, and was to be used first. The pocket flap was then snapped to its own fastener below that of the retaining strap. Washer-reinforced round eyelets





were placed on the belt's top selvage between each pocket and to the rear of the last at the back to attach suspenders. Elliptical (oval) eyelets were fitted in corresponding positions on the bottom selvage, to attach equipment items. The belt was buckled with a male 'T'-fastener on the right end and a female 'U'-fastener on the left, as were all subsequent belts.

The mounted cartridge belt (not all infantrymen walked) was of the same design, but without a left front pocket. In its place was a web extension of the pocket section backing. A two-cell magazine pocket for the .45 cal. M1911 Colt pistol's seven-round magazines was designed to be slipped on to the belt over the buckle fastener. On its back was a web loop of the same width as the pocket; it was a tight fit to hold it in place. The web pockets were puckered at the bottoms, and closed by a two-snap flap.

A mounted cartridge belt for revolvers was also developed, with four rifle cartridge pockets on each side along with two revolver cartridge pockets, each holding six .38 cal. M1892 or five .45 cal. M1909 Colt revolver cartridges.

Additional ammunition was carried in cotton M1903 bandoleers with six pockets each for two clips. In combat a rifleman was to carry two, slung

Extensive use of hand grenades in World War I led to the introduction of the 11-pocket grenade carrier and ten-pocket M1918 grenade belt, both for carrying Mills bombs. A holster frog is attached to the belt. (Lemmer collection)

over his left and right shoulders and crossed on his front.

The first aid pouch was a horizontal web packet closed by a two-snap flap. It was attached by means of a double hook; where on the belt it was carried depended on the period or unit.

The dismounted canteen cover was lined with $\frac{1}{4}$ in.-thick grey felt; serving to insulate the canteen and, when wet, to keep it cool. Two snap-secured flaps retained the canteen; initial issue covers had 'square'-end flaps secured by tab fasteners on the cover that fitted through metal eyelet slots in the flaps and rotated 90°. The quart-capacity flaskshaped canteen, with a flat bottom and slightly concave on the side next to the body, was of aluminium. An aluminium pint-capacity canteen cup with a folding metal handle fitted over the canteen's bottom. Canteens and cups have retained this basic design to this day.

The mounted canteen cover was of the same design as the dismounted, but did not have a double hook; instead it was attached to the saddle by an inch-wide web loop strap with a snap hook on the end.

For individuals armed only with a handgun, two belts were adopted. The M1910 revolver belt had four pockets on the left front and side, each holding six .38-cal. or five .45-cal. rounds. It was adjusted by doubling back the belt's right end and securing it with a single hook to eyelets in a row down the centre. A sliding keeper was provided at the 'male' end. Round eyelets were fitted on the top and bottom selvages. The M1912 pistol belt was a plain

The M1918 Pedersen device enabled the M1903 Mk. I rifle's specially modified bolt to be removed and the device inserted in its place; this permitted full-automatic fire, using a pistol-type .30 cal. cartridge. Never used in combat, almost all of the 65,000 devices were destroyed after the war. (*Top*) Pedersen device combination tool and a three-pocket bandoleer for 200-round cartons. (*Bottom*) The M1910 cartridge belt; canteen and first aid pouch have added, (*L to R*) an M1903 Mk. I rifle bolt carrier; M1918 Pedersen device in its black metal carrier; and Pedersen device magazine pouch for five 40-round magazines. (Paul Lemmer)

belt without fixed cartridge pockets. The same .45 cal. pistol magazine pocket as used on the M1910 dismounted belt was slipped on to it and usually worn on the left front. Two models were issued, with and without a sabre ring—a small brass trapezoid ring 10¹/₈ in. from the belt's left end, issued to officers, staff NCOs, and first sergeants.

Five models of garrison belts were also issued. They had no selvage or visible adjustment eyelets set in the belt. They were adjusted by doubling back both ends, on which were tabs with two hooks, which hooked into eyelets set in loops woven in the back of the belt. There were sliding keepers on both ends. The male buckle fastener of enlisted men's models was a round disc with a raised red 'U.S.'. Officers' models bore the eagle coat of arms. The female end was a round ring, the officers' model having a raised oak leaf wreath design around it, all others being plain. Double sabre carrier straps were





fitted to the left side of the officers', staff'NCOs', and first sergeants' models, which had no other fittings. Enlisted men's had two sliding rifle cartridge pockets each for one loading clip, one near each end, and a web bayonet carrier slide. The orderlies', scouts' and machine gunners' model had the cartridge pockets, but no bayonet slide. The bandsmen's and musicians' model had no attached items. These fell out of use after World War I.

The haversack and pack carrier were an almost nightmarish assembly of canvas and webbing far too space-consuming to fully describe here-see Plate A. The system's concept envisaged the haversack being worn at all times so that critical items remained with the soldier. Its integral suspenders had two straps each on the front, two being attached to the front and one to each side of the belt. A single rear strap attached back centre of the belt. Rations and toilet articles were carried in the haversack; the mess kit (then called a 'meat can') was carried in a detachable outer pouch; the M1905 bayonet was carried on the left side by a web loop, and the shovel carrier attached under the meat can pouch. The overcoat, if carried, was rolled in a horseshoe and fastened to the haversack's top. The blanket roll, with blanket, poncho, and extra clothing rolled inside a shelter half, was strapped vertically into the pack carrier, and protruded over the soldier's hips. The pack portion could be



detached and left in a unit position or carried on transport.

Several different tools were available to the soldier and distributed within his squad. Most men carried a shovel1 in a canvas carrier hooked to an attachment tab above the meat can pouch, which was secured to the haversack only at its sides, allowing the carrier to be placed under it. A hand axe was also issued with its own carrier. The pickmattock broke down into a handle and head, and its unusual carrier permitted it to be carried in this manner. The Army's Philippine experience led to the adoption of the bolo, a short, heavy-bladed tool useful for clearing brush. It used a wood scabbard. wrapped in rawhide, and covered with duck. The M1909 bolo, still in use, had a longer blade. The wire cutter had insulated handles to protect against 5,000 volts. All of these tools' carriers and scabbards were fitted with a double hook to permit attachment to belts or the haversack. The engineer compass was carried in a leather belt case.

'Initially called a shovel, it was soon officially redesignated the intrenching tool. English also accepts spelling it entrenching ... it was not long before the soldier coined the common acronym 'E-tool'.

The M1912/14 Cavalry Equipment

Historical

The cavalry had long used equipment designed specifically for its needs. Leather gear was retained by some units after the introduction of the M1885 web equipment, specifically the Dwyer and McKeever cartridge boxes, belts and suspenders. The cavalry did use the M1903 and M1907 cartridge belts, M1907 canteen and first aid pouch, and M1907 and M1909 suspenders. Some units initially used the M1910 mounted cartridge belt. Personal and horse equipment were carried on their mount in M1904 leather ration bags, pommel pockets and saddle bags.

The Cavalry Board developed two sets of equipment: the M1912 gear, first issued in 1913, consisted principally of items carried on the saddle, while the M1914 gear was the trooper's counterpart to the M1910. A few M1910 items were incorporated with the M1912/14.

The most disliked items were the ration bags, designed to fit together forming a knapsack when dismounted: they proved to be a poor backpack and only marginal as ration bags. The principal

A cavalryman, demonstrating the folding of a saddle blanket, wears the M1923 mounted cartridge belt, M1909 suspenders, M1912 magazine pocket, and M1916 holster (with M1911 pistol): early 1920s. (US Army)



complaint was that the canvas bags failed to keep dust out, nor were they sufficiently water-repellent; the old leather ones were sorely missed.

The various tools based on the picket pin were eventually dropped from use, as is often the case when something is designed to do too many things. It proved to be a good shoeing iron and picket pin (for tethering horses), but made a poor entrenching tool, pick, or hatchet handle.

Another item dropped from use was the cartridge belt's folding rifle ring, itself replacing the M1904 leather rifle scabbard. The rifle's forearm, protected by a leather sleeve, was placed through the ring while the butt was inserted in a leather rifle carrier boot attached to the left rear of the saddle. A leather rifle strap secured to the ring's mounting bracket was snap-hooked to the triggerguard. To use the rifle the trooper had to remove the butt from the boot, unsnap the triggerguard hook and, keeping the weapon vertical, lower it toward the ground before he could bring it to his shoulder. This system could cause injuries to rider and horse during a fall. It was eventually decided simply to sling the rifle across the back.

With the decline of the cavalry in World War I, followed by the adoption of the principle of moving mounted and fighting dismounted, and subsequent mechanisation, the need for special cavalry equipments began to diminish; the M1914 items were gradually replaced by dismounted gear. One point to remember is that all cavalrymen, besides being armed with an M1903 rifle, also carried an M1911 pistol.

Description

The M1914 cavalry cartridge belt was made in one section. Adjustment was accomplished by doubling the ends back through the buckle fasteners. Metal end tabs with two hooks fastened into two rows of eyelets running down the belt's centre. Round suspender eyelets were fitted between the cartridge pockets on the top selvage and elliptical ones in corresponding positions on the bottom. The nine pockets were the same as on the M1910. A riveted leather tool frog was affixed between the first and second pockets on the left side, but later deleted. The rifle ring was attached under the third pocket on the left. The same pistol magazine pocket as used with the M1910 mounted and M1912 pistol belts was slipped on the left end. The M1909 suspenders were sometimes used to support the belt.

The M1910 dismounted canteen cover was attached on the left hip, the M1910 mounted cover to the saddle's right rear. Troopers armed with only the pistol used the M1912 pistol belt and magazine pocket.

Additional ammunition was carried in the M1914 cavalry bandoleer with 12 pockets (one rifle clip each) and three pistol cartridge pockets (seven .45 cal. rounds each). The bandoleer was made in a curved form so that it would lie close to the body. A web adjusting strap fastened to a buckle on the other end. This strap was worn over the left shoulder so that the pistol cartridge pockets were at

the wearer's right waist. The M1905 bayonet, with a slip-on cloth scabbard cover, was carried behind the left shoulder by attaching it to the adjusting strap.

The M1912 ration bags consisted of two large duck pouches with strap-closed flaps. A long web strap was attached at the top back of each by a 'D' ring. A short strap was buckled to another sewn to the bags' bottom rear. The long strap of the opposite bag was snapped to the back of the other and secured to the back of the saddle, allowing one bag to hang on either side. When dismounted the cavalryman needed a backpack; he unsnapped the two long straps and laced the bags together side-byside with a lacing strap, forming a two-



compartment knapsack. The two short straps were unbuckled from the bottom straps and rebuckled to similar straps on the long straps. The long straps were now snapped to rings on the bags' bottom, forming shoulder straps; and the short straps, now on the front of the shoulder straps, were snapped to the front of the cartridge belt. The meat can was carried in the left bag, toilet articles in the right, and rations in both.

The M1912 picket pin, a 13³-in. steel spike, had a small claw-hammer head for nailing and pulling horseshoe nails. It was carried in a leather case; on its back was an 'O' ring to attach it to the saddle. A 15-ft khaki lariat was supplied, with an 'O' ring on one end through which the pin was slipped before being driven into the ground, and a hook on the other to attach to the horse's bridle.

The pin had another purpose, as a handle for one of three tools. As an entrenching tool, a shovel blade was fitted to the pin's pointed end. A cotter pin on a small chain, attached to the blade, was placed in a hole in the picket pin's shaft to retain the blade. The other tools were the hatchet and pick, which slid on to the picket pin towards the hammer head, and were held in place by giving the hammer head a sharp rap on a solid object. Duck covers were provided for both, but they had no carrying attachments. A leather E-tool carrier was issued to all troopers, in which was carried the E-tool blade, hatchet, or pick head. Horseshoes were also carried, along with nails (in a small leather bag, secured to the inside by a short thong). Its flap was secured by a leather billet (strip) threaded through two staples. These tools were unpopular due to the abuse inflicted on hands by a grooved steel handle. When mounted, the E-tool carrier was attached beside the sabre carrier on the saddle's right rear. When dismounted, the entrenching tool was assembled and attached to the cartridge belt's tool frog with the blade's concave side towards the body and the handle hanging beside the leg. All cavalrymen below the rank of major were issued the M1910 wire cutter as a shoeing tool, but no carrier was provided as it was carried in the M1912 service pommel pockets (double leather bags for tools, brushes, combs, etc., carried across the saddle front).

The cavalry's affection for leather caused it to retain leather garrison belts with all-leather attachments. An enlisted man's M1912 belt is depicted in Plate A. The officer's was similar, but had fitted only the leather magazine pocket, sabre frog and strap, and two slides, for the M1910 first aid pouch and M1912 holster.

The M1917/18 Equipment

Historical

While all armies involved in the Great War were illprepared for the conflict, the US Army was even less ready than most to fight a European war; it was still a frontier army trained and deployed to defend the nation and its overseas possessions. Not only was it not trained and organised for such a conflict, but its rapid expansion in late 1917 meant that a completely new, and vastly larger army had to be re-armed and equipped. The further evolution of the soldier's combat equipment was governed by these same circumstances: new organisations and units, new weapons and tactics, and the need to manufacture the gear quickly.

The first formations deployed overseas were outfitted with standard M1910 gear. It was not long before existing stocks were depleted, even with the Mills Company and the newer Russell Manufacturing Company of Middletown, Conn., working at full capacity. Before long another dozen textile companies were producing web gear; some of them had previously made cotton belts, fire hoses, and asbestos brake linings. To speed manufacture, many of the woven items were redesigned to be sewn and stitched, which could be accomplished on industrial sewing machines instead of the special weaving looms possessed by Mills and Russell.

The robust 'lift-the-dot' (LTD) fastener, a large egg-shaped 'doughnut' snap that fastened to a metal stud and was less prone to jamming by mud, replaced the smaller snap fastener on most items manufactured after March 1917, but not redesignated.

Conservation of leather was critical; a Hide and Leather Control Board was even established. While many items had to be made of leather, as many as possible were now replaced by web and canvas equivalents. One obsolete item, the M1908 haversack, was resurrected and issued to aviators as



a map/document bag. The profusion of new weapons demanded the development of new means of carrying ammunition. The inability to produce sufficient qualities of standard weapons also required that new items be developed for their substitutes. No complete new system of web gear was fielded, but rather a hotch-potch of easily manufactured, substitute and new items.

Description

Most M1910 items were modified to some degree to speed manufacture. The cartridge belts' lower selvage elliptical eyelets were replaced by round ones, as along the top. The M1910 haversack and pack carrier were also modified to speed manufacture, but no improvements were made to ease the soldier's difficulties with the infamous 'long pack'.

To further speed the manufacture of cartridge belts, the M1918 dismounted and mounted belts were adopted, although the M1910 models were still manufactured by the companies possessing the required looms. The M1918 had a canvas backing rather than the M1910's heavy woven back, and lacked the pocket 'puckers'. The M1918 cavalry cartridge belt and M1918 bandoleer likewise had sewn pockets rather than the M1914's woven pockets. There was also a limited-issue M1917 bandoleer made straight rather than curved as the M1914 and M1918. Due to shortages of M1903 rifles the M1917 Enfield was also adopted, a .30 cal. version of the .303 P-14 rifle made in the US for Britain; the M1910 and M1918 belts carried its clips as well.

(Left) Experimental jungle packs in the South-West Pacific, 1942; these are the small models which proved uncomfortable and made it difficult to reach the bayonet. (Centre) The M1943 field pack, formerly the improved jungle pack, was issued only in limited numbers. (Right) The top compartment of the M1943 jungle/field pack could be detached and used as a combat pack, similar to the new field pack adopted in 1987. (Infantry Journal)

A little-used 20-round extension magazine was adopted for the M1903 rifle. It was fitted into the magazine well with the floorplate removed and reloaded with five-round clips while in the rifle. Consequently, only one magazine was issued per man. When not in use it was carried in a pouch attached to the cartridge belt by a double hook on a $5\frac{1}{2}$ in. web strap, the pouch resting on the wearer's thigh and secured by leg tie-cords.

The M1910 mounted canteen cover's web carrying strap had proved to be prone to wear. Even though there were restrictions on the use of leather, the web strap was replaced by a leather one on the M1917 canteen cover.

A severe shortage of M1911 pistols soon developed. Colt and Smith & Wesson modified their existing 'New Service' and 'N'-frame 'Hand Ejector' model revolvers, respectively, to handle the M1911 pistol's rimless .45 cal. cartridge, accomplished by the use of three-round 'half-moon' clips. These weapons were almost identical, and were both designated M1917. The M1917 revolver cartridge pouch had three pockets with two halfmoon clips carried in each two-cell pocket. The back of the top pocket was fitted with a canvas loop (same width as the pocket) which slipped on to the pistol or mounted cartridge belt. The Army quickly adopted the Winchester Models 1897 and 1910 and Remington Model 11 trench guns—short 12-gauge pump shotguns. The M1917 shotshell pouch had 28 internal shell loops and was carried by a web shoulder sling. A new two-cell pistol magazine pocket was adopted; the M1918 was of the slip-on type like the M1912, but had a rounded flap, rather than 'V'-shaped, with two LTD fasteners, and without 'puckers'. The M1912 pocket, still in use, had its small snaps replaced by LTD fasteners.

The massive use of hand grenades required some means to transport them. This resulted in the 11pocket grenade carrier and ten-pocket grenade belt, both seeing limited use. A shoulder strap was provided, along with corner tie-tapes permitting it to be worn square on the chest. The M1918 grenade belt was of almost identical design to the M1918 cavalry cartridge belt, but with ten grenade pockets.

The adoption of the M1918 Browning automatic rifle (BAR) saw the introduction of several magazine carriers, all designated M1918. The automatic rifleman's belt was made in three sections like the M1910 cartridge belt, but the cartridge pockets were replaced by three BAR magazine pockets on the left section and two BAR pockets and

(Left) The M1944 field combat pack with blanket roll and the M1943 E-tool carrier, worn without the cargo pack. (Centre) The M1944 combat pack with the cargo pack, blanket roll, and a poncho under the E-tool carrier. (Right) The M1944 combat pack, with an M1910 E-tool, was sometimes carried by artillerymen using an M1936 carrying strap. It permitted ease of carriage since they transported it in vehicles and could not be encumbered while manning the guns. (Infantry Journal)

an integral two-cell pistol magazine pocket on the right. Each BAR pocket held two 20-round magazines. A later version had the second pocket on the right side replaced by a metal butt holder on a leather base. The assistant automatic rifleman's belt was of the same design, but both front end pockets were replaced by two rifle cartridge pockets. One other squad member carried BAR magazines in mirrored left and right side bandoleers with three magazine pockets, carried on shoulder slings.

The M1910 wire cutter was not capable of cutting German manganese barbed wire. The issue French two-hand cutter, capable of resisting 10,000 volts, was adopted as the M1918 and issued with a leather carrier. The M1917 bolo was the same as the M1910, but lacked a locking device on the guard and scabbard. Some were issued with stamped sheet metal OD-painted scabbards.

Early World War II Improved M1910 Equipment

Historical

The end of the 'war to end all wars' found the Army with vast amounts of equipment, with many contracts being continued after the cessation of hostilities, as a large Army of Occupation remained in Europe until 1919. The demobilisation of the Army was accomplished swiftly, to almost pre-war





levels; but the USA now found itself in a new position, with more troops deployed overseas. It was hoped that the gear available would suffice the Army for some time as its peacetime budget was rather lean.

The first new items were the M1923 dismounted and mounted rifle cartridge belts, and a pistol magazine pocket for the mounted belt. The M1912/14 cavalry equipment was replaced by M1910 items and the M1923 mounted belt. The haversack and pack carrier were modified and issued as the M1928, but still with the same limitations as the M1910; it was to see the Army through most of World War II.

Several equipment items were adopted in 1936 specifically for officers: the M1936 pistol or revolver belt¹, suspenders, and canvas field bag. Issued in lieu of the haversack, the latter was modelled on the French musette bag, coveted by many Doughboys, and was almost universally referred to by that name. The pistol belt was also issued to enlisted men armed with handguns, sub-machine guns, and carbines. The suspenders, improved over the stillin-use M1909, were likewise issued to some enlisted personnel.

A wide assortment of gear is carried by these 29th Inf. Div. troops near Brest, France, 1944. (US Army via Shelby Stanton)

The M1937 automatic rifleman's belt had only BAR magazine pockets and none for the pistol or rifle; it was adopted to replace both the M1918 automatic rifleman's and the assistant's. Assistants now carried the BAR bandoleers and normal rifle cartridge belts.

The M1 rifle was adopted in 1937, and while its eight-round *en bloc* clips could be accommodated by the M1923 belts, the new clips required less space. The dismounted and mounted M1938 cartridge belts were developed; these were almost identical to the M1923, but the dismounted had 12 pockets rather than ten, and the mounted 11, plus space for an M1923 pistol magazine pocket. Few of the belts were actually issued; in fact manufacture ceased in the early 1940s, and the M1923 continued as standard.

In 1941 the Army began to develop a vast assortment of clothing and equipment for specialised units such as mountain and ski troops. Alaska was becoming a major area of concern, and it was found that few existing items were suited for this harsh environment—especially the M1928 haversack, which could not carry the necessary loads. A pack was required that permitted the

¹Officially designated the 'pistol or revolver belt', it was commonly referred to as the 'pistol belt', and this phrase will be used in this book.



Troops of the 96th Inf. Div. advance on Leyte Island, 1944. The kneeling man wears the M1928 haversack, jungle first aid kit, and two canteens as authorised for Pacific Theatre troops. (US Army via Shelby Stanton)

unrestricted movement needed by skiers. The Norwegian Bergen-type *Norse Pac* was used as a model for a new mountain rucksack.

It was with this gear—Table of Equipment 21, or TE-21—that the American soldier entered World War II.

Description

The M1923 cartridge belts were similar to their M1918 counterparts, but simplified and of slightly lighter weight. A female snap was fitted to the mounted belt's pistol magazine web backing to better secure the magazine pocket, itself fitted with a matching male snap. The M1923 magazine pocket reverted to a 'V'-shaped flap secured by one LTD fastener, but retained the pocket-wide web loop on the back. The M1938 rifle cartridge belts were the same, but with two more pockets and no clip retaining straps.

The M1924 first aid pouch was a larger version of the M1910, so that a larger field dressing could be accommodated. The M1928 haversack was simplified for manufacture and slightly modified.

The M1936 pistol belt was identical to the M1912, most being modified to M1936 standards by the addition of a female snap to secure the M1923 magazine pocket. The M1936 musette bag was a simple pouch-like bag with two internal compartments. There was a small pocket on the left side and a thin one on the back. Two short straps were fixed to the top back with snap hooks on their ends for attachment to 'D' rings on the shoulders of the M1936 belt suspenders or shoulder carrying strap. The suspenders were of the 'X'-back type, similar to the M1909. Officers carried their mess kit, rations, raincoat, toilet articles, and some extra clothing in the musette bag.

The M1937 automatic rifleman's belt, besides having six pockets, differed from the M1918 by the use of rifle cartridge belt-size buckle fasteners rather than the earlier full belt-width ones. M1918 belts modified to M1937 standards had the smaller buckles installed and the pistol and rifle pockets and butt holder replaced by BAR pockets at depots. The limited issue BAR suspenders were a very simple lightweight 'H'-style; M1909 and M1936 suspenders were also used. The Thompson sub-machine gun 20-round magazine pocket had five cells, carried on the pistol belt by means of two wide web loops.

The mountain rucksack was a large canvas bag closed by a drawstring and a flap secured by two web straps. On the sides were two large leather strap-secured cargo pockets. Equipment attachment tabs and securing straps were also fitted to the sides. The rucksack was mounted on a thin tubular steel frame, two of which could be lashed to a pair of skis and used as a litter. A large leather bracket secured the frame's top and protected the shoulders; a web band rested the rucksack on the hips, and sway was reduced by a web waist strap. A snowcamouflage cover was issued with it. There were some problems with its design, and several minor modifications were made during the course of the war.

The M1941 mounted canteen cover was

(Left) M1944 cargo-and-combat field packs. (Right) M1945 cargo-and-combat field packs. The cargo packs are detached in order to display them better. (Schroeder collection)

basically an M1910 with two horizontal securing straps on its back, a strap with a snap hook on its upper end and a web carrier on its bottom for the cover's double hook to fasten to. The strap could be removed and the hooks attached to the belt in the normal manner, a requirement long demanded by the cavalry.

Late World War II M1910 Equipment

Historical

Climatic extremes as well as new weapons led to the introduction of further equipment items at a rapid pace. But other factors affected the design of equipment, principally material shortages and the use of substitutes. Brass fittings were replaced by enamelled steel and zinc hardware. Canvas and webbing began to be treated to prevent mildew. New weapons meant new means of carrying their ammunition and a wide range of pockets, pouches, and bags were introduced accordingly. Some equipment items were produced under contract in Britain and Australia.



In late 1943 it was directed that 'OD shade no. 7' replace the 'OD no. 9', the khaki shade. The brownish green OD shade had several advantages over khaki: it blended in better with European forests and Pacific jungles. Crude camouflage patterns were occasionally applied with green or brown paint to some khaki items, especially in the Pacific. Though OD items were soon put into production, existing stocks of khaki gear were still issued and remained in use for years. It is not unusual for items to be found made of both colour materials, e.g. a cartridge belt with khaki backing, adjusting strap, and flaps, but with OD pocket bodies; or a khaki wire cutter carrier with OD edge binding. Some items were repaired using contrasting old or new colour materials.

There were problems caused by conflicts between the different agencies tasked with equipment

Heavily armed 42nd Inf. Div. troops in Germany, 1945. The bazooka man carries a general purpose ammunition bag. (US Army via Shelby Stanton)

development, either developing items suited to their needs alone, or disputing which items were standardised. One of the principal battles in the logistics war was fought over the adoption of a new combat pack. As the war progressed it became more apparent that the M1928 haversack was ill-suited to the soldier's needs, especially in the tropics where the dry, level, ground needed to lay out and roll the gear was a rarity. Development of a jungle pack began in Panama in early 1942. Test models were issued in New Guinea, and certain problems identified: inability of the wearer to reach his bayonet, cargo compartment too small, and the shoulder straps uncomfortable. Improved test models were issued in early 1943, but there were still some problems.

In the spring of 1943 contracts for the M1928 haversack were being completed, and it was deemed that a replacement was needed. Army Ground Forces (AGF) desired that the jungle pack be adopted to replace the haversack and musette





(*Left*) A Yukon pack board, consisting of a wood frame with a laced canvas backing, loaded with an 81mm M1 mortar bipod. There were a wide variety of cargo attachments, with every test agency inventing its own, leading to confusion in proper use of the board. (*Right*) The plywood pack board loaded with a 60mm M2 mortar. It replaced the Yukon model in 1944, though

bag. The Quartermaster Corps Technical Committee redesignated the jungle pack the M1943 field pack in late 1943, but only as limited standard due to continuing problems.

That same year also saw the AGF test the Marine Corps' M1941 pack. This was a two-piece assembly consisting of a backpack and a detachable cargo pack strapped under it, permitting essential items to be carried by the soldier in the backpack while the cargo pack, with extra clothing and non-essential items, could be dropped in the rear areas. In April 1944 the AGF reversed its request that the jungle pack be made standard and the Marine pack be adopted without further testing—an action opposed by Office of the Quartermaster General (OQMG), which recommended that a new pack incorporating the two-piece feature be developed.

This was begun, and the M1944 cargo-andcombat field pack was standardised in July 1944.

old-timers preferred the former. To prevent confusion, only three accessories were authorised: cargo attachment, quickrelease strap, and lashing rope. Later versions had metal pins on the top and sides allowing a rifle to be hung. It was used into the 1970s. (*Infantry Journal*)

Numerous improvements were recommended by the Infantry Board and incorporated into production packs. These and further improvements were included in the new M1945. AGF wanted the new items issued to the troops as they became available; OQMG, on the other hand, wished to exhaust existing stocks of haversacks and musette bags because of the 1944–45 canvas and webbing shortage. The M1945 was made standard in April 1945, and the M1944 made limited standard. Regardless, most troops finished the war with the M1928 haversack.

The M1936 musette bag was dropped from TE-21 with the adoption of the M1945 pack, but it remained in use until the end of the war. Besides issue to officers, it was issued to mountain troops (to supplement the rucksack) and all motorised units (tank, armoured infantry, artillery, cavalry reconnaissance, etc.) in lieu of the haversack. The equipment adopted prior to and during the war served the American soldier through the Korean War (1950–53) and into the late 1950s.

Description

The M1923 rifle cartridge belt remained standard, but the clip retaining straps were deleted in about 1943, though British-made belts retained them. The M1942 first aid pouch with a 'V'-shaped flap, influenced by a British-made pouch for US forces, replaced the M1924, which remained in use, however.

The M1 Thompson sub-machine gun was adopted in the spring of 1942 and the M3 'grease gun' at the end of the year. With the M1 came the 30-round magazine, which also fitted the M1928A1. A three-cell magazine pocket with a wide web belt attachment loop, was adopted for both. A shotshell pouch with 12 internal loops for 12-gauge shells was also introduced, attached to the pistol belt by two web loops.

The M1 carbine was adopted in late 1941 to

(*Top*) A former M1918 automatic rifleman's belt converted to an M1937. Note the difference between the right and left side pocket flaps, indicating that it was assembled from components; note the special BAR suspenders introduced between the wars. (*Bottom*) An M1937 BAR belt. (Schroeder collection)

provide a more substantial alternative to the pistol. A very limited issue was made of a three-cell pocket closed by a two-LTD-fastener flap for its 15-round magazines. It was soon replaced by a web two-cell pocket with a canvas loop fitted with a male snap fastener to secure it to the pistol belt. By removing the carbine's stock, a pocket could be slipped on from the forearm end, resting on the right side of the butt after re-assembly. In 1942 a more versatile pocket was introduced; made of canvas, the cells were slightly larger to accommodate an M1 rifle clip. A pair of evelets were fitted to the bottom edge permitting attachment of other items. Belt attachment was by two web loops; no snap was provided. The selective fire M2 carbine was adopted in September 1944 and with it the 30-round 'banana' magazine. The first 30-round pocket consisted of two cells attached to the belt by two web loops. This was followed by a single compartment pocket; inside were two cells sewn to the backing for one magazine each, and two more magazines were carried in the main compartment.

Two- and three-pocket hand grenade carriers were issued on a limited basis; each pocket held two grenades. Attached to the belt by a double hook, they were further secured by leg tie-tapes. A



general-purpose ammunition bag, designed for 19 different types of ammunition and grenades, was adopted in the spring of 1943. Often used by paratroopers to carry extra ammo, this was a large pouch with a strap-closed flap. 'D'-ring-fitted straps were sewn to the sides for attachment of the musette bag's carrying strap. The M1936 musette bag was made slightly larger, and an equipment attachment tab added on the flap, in 1943.

The jungle M1943 field pack was basically a canvas bag, made in either OD or camouflage pattern, with integral shoulder straps. The top flap was secured by two web straps; extra long to permit loading additional gear, these were sewn to the pack's back, ran through retaining loops on the bottom, and thence to the flap's buckles. The main compartment was also secured by a drawstring. Two horizontal straps allowed tightening if a full load was not carried. On the flap was a separate zippered compartment; on the later models it could be removed and worn as a small combat pack. Equipment attachment tabs were fitted on both sides of the pack and the top flap. A waterproof clothing bag was issued with it as a liner.

The M1943 folding entrenching tool was copied from a similar German design, and a carrier developed for it was attached to the pack or belt by a double hook.

The M1944 cargo-and-combat field pack consisted of a small backpack attached to 'X'-shaped suspenders. The inside was divided by canvas partitions, themselves designed to accommodate ration cans. On the right side was a small pocket, and equipment attachment tabs were fitted on the flap and left side for the E-tool and bayonet respectively. On either side and the top were three straps to secure the horseshoe bedroll. The cargo pack was a separate single-compartment bag attached under the combat pack by three quickrelease straps. Both packs' mouths had rubberised fabric collars which helped protect the contents from rain.

The M1945 cargo-and-combat field pack was similar, but the combat pack was slightly larger, a simplified cargo pack attachment system was used, and the suspenders were more comfortable.

A 36th Inf. Div. Ceremonial & Demonstration Auxiliary member displays the twin medical packs and their special yoke-type harness. (Schroeder collection)

The M1956 Load Carrying Equipment

Historical

The Army began to take a fresh look at its gear in 1950. The Quartermaster Research and Engineering Laboratories conducted tests to appraise the soldier's load under realistic combat conditions, studying what was carried and how, and the gear's physiological and bio-mechanical aspects. This led to a new authorised load weight of 45 lbs in 1952: a combat load of 20 lbs, and an existence load of 25 lbs. The former consisted of weapons and battlefield survival gear carried on the cartridge belt and in the M1945 combat pack. The latter was made up of



additional shelter items and extra clothing carried in the cargo pack and bedroll. Table of Allowance 21 was still much the same as the World War II TE-21 gear.

Development of new equipment began in 1954, coinciding with the search for an M1 rifle replacement. The new concept foresaw the elimination of the cartridge belt, replacing its clip pockets with magazine pouches. Another aspect was a new means of attaching items to the belt in order to eliminate the double hook's 'bounce' effect. A vertical sliding bar attachment—the slide keeper—was developed to secure items against the belt rather than hanging them.

The M1956 load carrying equipment (LCE) was introduced along with the new M14 rifle in 1957 under TA-50. It included several innovative features: pouches that could carry most types of ammunition, slide keepers for attachment, a small combat pack attached to the belt and not carried behind the shoulders, and a sleeping bag carrier. The M1956 LCE was to serve the soldier fairly well in Vietnam, though a suitable combat pack was needed to carry more than just a day's rations and two canteens. Like the M1910 gear, the M1956 was to influence all future equipments.

Members of the 25th Inf. Div. receive decorations in Korea, 1951. Gear includes M1945 suspenders, M1932 pistol belts, M1942 first aid pouches, M1918 pistol magazine pocket, and compass cases. (US Army via Shelby Stanton)



Description

The M1956 LCE was made of olive green (OG) cotton canvas and webbing; hardware was of black painted steel alloy. The pistol belt was similar to the M1936, but was adjustable at both ends. The male buckle fastener had a small round end rather than the earlier 'T'-shaped one. In 1966 a large 'quick-release' buckle was adopted, which sometimes came unfastened at the wrong times. The suspenders were a lightly padded 'H'-harness; the front straps were attached to the belt and the rear to the pack—or the belt if the pack was not carried—by simple hooks. It was found that the rear hooks often came unfastened, and these were replaced by snap hooks.

Two universal small arms ammunition cases (pouches) were attached to the belt's front. There was some criticism that they might invite groin area injuries; though this seldom happened, a semi-rigid plastic panel in the back of the case helped to prevent this. Two slide keepers attached it to the belt and a small strap fixed to the top back was attached to a square ring on the front of the suspenders to help bear the load. It was 'universal' to the maximum extent and could carry: two M14 rifle 20-round magazines, four M2 carbine 30round magazines, four M16 rifle 20-round magazines1, six M1 rifle 8-round clips, 24 × 12-gauge shotshells, three 40mm M79 grenade launcher rounds, or two hand grenades internally; two more grenades could be attached to the case's sides by web loops and snap straps. In 1968 a shorter case, otherwise identical to the universal model, was adopted for M16A1 rifle 20-round magazines.

The canteen cover was similar to the M1910, but fitted with slide keepers and snaps and lined with acrylic pile ('fake fur'). An OG plastic canteen was adopted in the mid-1960s. The entrenching tool carrier was attached by two slide keepers. An M8A1 bayonet scabbard² attachment tab was sewn to a leather base on the carrier along with a snap strap. The first aid pouch was of a vertical design and was also intended to carry the lensatic compass; it could be attached to the belt, the side of an ammo case, or the suspenders.

The combat field pack, more commonly referred

[&]quot;The case was too deep for these so many troops put an extra field dressing in the bottom to raise them.

 $^{^{2}} The~M8A1$ scabbard carried the M_{4} (M1/M2 carbine), M_{5} (M1 rifle), M6 (M14 rifle), M7 (M16 rifle), XM8 (M16) bayonets.

















to as the 'butt' or 'ass' pack, was attached to the belt's back by two slide keepers, and the suspenders hooked to tabs on the back top. On the sides were loops to attach other equipment, and a rolled poncho was strapped underneath. It had room for only one or two C-ration boxes, a change of underwear and socks, and toilet articles—hardly sufficient for the extended operations in Vietnam. A slightly improved model, the M1961 pack, was developed, but the M1956 remained the more common. The slightly larger M1961 had a flap which covered the pack's opening better, a rubberised fabric collar around the opening, and longer poncho straps.

Much of the existence load was borne by the sleeping bag carrier, a double 'H'-strap affair in which the sleeping bag and inflatable pad (air mattress) were rolled. This was secured to the suspenders by running straps through web loops on its front. This arrangement proved to be an awkward burden, far too heavy to be carried in such a manner, especially since some units required shelter-halfs and extra clothing in the 'bedroll'. There was a great deal of side sway and pressure on the shoulders, and it often caused the belt and ammo pouches to be pulled up under the ribs.

Two-quart bladder canteens were developed in the mid-1960s, consisting of a plastic bladder contained in a nylon cover; both square and rectangular shaped examples were issued.

In the early 1960s another tangle of straps was introduced as the 'pack adaptor strap assembly', permitting the pack to be worn on the shoulders when the bedroll was not needed, but it was seldom used. Space to carry additional rations, water, and other items was critical in Vietnam where troops were often 'out' for several days between helicopter resupply runs. A few units adopted the field expedient of using both the M1956 and M1945 packs.

One of the few Korean War era items adopted was the M1951 mountain rucksack, essentially an improved 1941 model. It incorporated a better designed tubular steel frame, had three cargo pockets rather than two, and used leather flap securing straps. The lightweight rucksack was introduced in 1961 to replace the M1951, though the latter remained in use with some Special Forces units well into the 1960s. It consisted of an OG 106 nylon combat pack with three cargo pockets and equipment loops on the sides and back, and a flap storage compartment. The pack was attached to a tubular aluminium frame, usually on the bottom, but it could be fitted to the top part. Normally the bedroll was strapped above the pack. Web waist and upper back straps were provided along with a rifle carrier strap and pocket that fitted to the frame's right side. The padded shoulder straps were attached to the frame, the left having a quickrelease device. A cargo support shelf could be fitted to the frame, after removal of the pack, so that it could be used as a packboard. Both this and the

Components of the M1956 load carrying equipment: (1) pistol belt, (2) suspenders, (3) first aid or compass pouch, (4) universal small arms ammunition case, (5) E-tool carrier, (6) combat field pack, (7) canteen cover, (8) sleeping bag carrier. (US Army)



M1951 were issued with snow-camouflage covers, since they were principally intended for arctic use.

The lightweight rucksack was also intended for jungle use, but as the frame rested on the back of the pistol belt, items could only be attached to the front and sides. Consequently, the lightweight rucksack was little used in Vietnam, but was much used by troops in Alaska, by Special Forces, LRRPs and Pathfinder units elsewhere.

Troops who did use it in Vietnam usually carried all their canteens on the rucksack. Some took this to the extreme and used no web gear; everything except ammo was attached to the rucksack. M16 magazines were carried in the seven-pocket cotton bandoleers in which 5.56mm ammo was issued in ten-round loading clips (two clips or one magazine per pocket). Magazines, grenades, and 40mm rounds were also carried in M18A1 Claymore mine bags and canteen covers—especially 30-round magazines, first issued in the late 1960s, since a standard pouch for them was not adopted until 1974.

(Left) Experimental 1954 MG belt carrier with prototype slide keepers. (Right) ALICE E-tool carrier displaying the standard slide keepers adopted with the M1956 gear. (Lemmer collection)

The M1967 Modernized Load Carrying Equipment

Historical

As with just about everything else used in Vietnam, from boots to field dressings to ammunition packaging, the design of LCE was also changed in an effort to provide light-weight gear that could better withstand the rigours of a tropical environment. Cotton duck and webbing, even when treated to prevent mildew, is still affected by it, along with dry rot due to constant wetting and drying. Cotton gear also absorbs a great deal of water (40%), adding to its weight, and is slow drying; it also withstands abrasion poorly.

Nylon had already proven itself in the lightweight rucksack. It is lightweight, unaffected by mildew, fast-drying as it absorbs little water (only 8%), and resists abrasion well. It does have limitations; it is shiny when new; being somewhat stiff, it makes a rustling noise against vegetation; and it melts when exposed to high heat (482°F—but cotton deteriorates at 300°F).



The M1967 modernized load carrying equipment (MLCE), or lightweight LCE, was developed specifically for use in Vietnam, its issue beginning in 1968. Even so, issue was limited, and the M1956 LCE remained in general use; some was issued in other areas. M1967 MLCE consisted essentially of the same items of a similar design as the M1956, but substituted nylon for cotton, and aluminium and plastic for steel and brass hardware where possible.

A suitable combat pack was desperately needed in Vietnam, leading to the appearance of the nylon tropical rucksack in 1967. (A cotton canvas version saw very limited issue in the USA.) Its design was influenced by the indigenous rucksack used by the Special Forces-advised Civilian Irregular Defense Group (CIDG). Usually referred to as 'cidge' or 'indig' rucksacks, they were procured through the Special Forces' Counter-insurgency Support Office (CISO) on Okinawa. A captured North Vietnamese Army rucksack was sent to the CISO as a model in the early 1960s. Soon issued to the CIDG, they were often used by US LRRP and Ranger units. The indigenous rucksack was very simply made, with crude fittings and devoid of any amenities. Three cargo pockets were fitted on the sides and back. Most were made of a stiff waterproof-treated grey-green canvas, but some were of untreated OD canvas.

Description

The M1967 equipment belt, suspenders, small arms ammunition case, canteen cover, and first aid pouch were essentially the same as their M1956 counterparts. The combat pack was similar to the M1961. The belt was issued with both standard and quick-release buckles. The suspenders had snap hooks fitted to the shoulders permitting the pack to be worn in this position, though, again, this was seldom done. Only an M16 magazine-sized ammo case was issued, closed by a plastic clip fastener. M1956 cases were used when the M14 rifle was issued. The canteen cover had a small Velcro[®]secured water purification tablet bottle pocket. The sleeping bag carrier consisted of a nylon panel with two web straps. The E-tool carrier was designed for the new all-metal collapsible E-tool; the M1956 carrier was used when the old E-tool was issued, but the new model would fit in it.

The collapsible two-quart canteen was made of



The M1956 combat field pack attached to the suspenders by means of the field pack adaptor assembly. The adaptor assembly and M1956 suspenders are pictured below. The 'cute' rolled pack straps may have looked great at service schools, but had no place in the field. (US Army)

OG plastic. Its cover was nylon, lined with acrylic pile, the flap secured by a plastic clip fastener. It was either carried by a web shoulder sling or could be attached to a rucksack by two slide fasteners; it is still standard. The five-quart flotation bladder canteen was a clear vinyl bladder carried in a nylon cover. It had retaining loops and tie-cords at each corner so that it could be secured to a rucksack. Both were fitted with water purification tablet bottle pockets. The one-quart arctic canteen was made of insulated aluminium with a pop-off plastic cap. Its acrylic pile-lined nylon cover was fitted with two slide keepers.

The tropical rucksack had three large cargo pockets and equipment loops on the sides and back. The pockets were sewn to the rucksack only at their sides, forming a tunnel to permit a machete to be attached to a loop and passed under the pocket. The flap, secured by two straps, contained a thin rubberised fabric-lined pocket. The rucksack's opening was also secured by a drawstring. A flat metal riveted frame supported the rucksack; some tended to bow outward, rubbing against the wearer's back. The detachable shoulder straps were padded, the left having a quick-release device. Rubberised fabric waterproof liners (drawstring bags) were issued with it, three small ones for the pockets and a large one for the main compartment.

The All-Purpose Lightweight Individual Carrying Equipment

Historical

Nylon's light weight and durable qualities led the Army to consider the M1967 MLCE for Armywide adoption. A study was undertaken in the early 1970s to identify any shortcomings and to propose improvements for a new LCE system to replace the M1956 and M1967. The new system was developed by the US Army Material Command and extensively tested at the Infantry School.

The result was the All-Purpose Lightweight Individual Carrying Equipment or ALICE system (the use of year models ceased). This was adopted in 1974, and issue began the following year, though the ammunition cases were released in late 1974 since no other 30-round magazine pouches were available. The fighting and existence loads concept was retained, with the former items carried on the belt and suspenders and the latter in the combat field pack. The designation LC-1 or -2 (load carrying) was used to additionally identify some items.

The Army learned many lessons from Vietnam, and one was the need for a rucksack capable of carrying complete mission loads. Included in the system were medium and large combat field packs, provided with a common frame, and both derived from the tropical rucksack. Though officially termed 'pack', most troops call them rucksacks, or simply 'rucks'. The medium combat pack was very similar to the tropical rucksack and could be used with or without the frame. It was issued to all

Typical individual equipment display: 91st Engr. Bn., Ft. Belvoir, Va, c.1962. Note that only a single late carbine magazine pocket, capable of carrying two M1 rifle clips, was issued along with World War II gear. (Shelby Stanton)




Two Special Forces troopers display early tropical gear at Ft. Bragg, NC, c.1964. (Top, L to R) Tropical uniform (jungle fatigues), rainsuit, long range patrol rations, M1942 machete, lightweight nylon rucksack and frame. (Bottom) Tropical boots, tropical sleeping shirt, multipurpose net, poncho liner (early camouflage pattern), early 2-quart bladder canteen and cover, tropical survival kit, lensatic compass, and snake bite kit (US Army)

combat troops; support troops often used M1961 or M1956 butt packs. Later, they too were often issued the medium pack, without a frame, which was generally issued only to airborne units and those in extremely cold regions. Butt packs were also used in basic and advanced individual training units. The large pack replaced the lightweight rucksack issued to Special Forces, Ranger, LRRP and Pathfinder units as well as troops in arctic regions and, from 1985 to the new light infantry battalions. It had to be used with the frame due to the weight of the loads carried.

ALICE, M1967 and M1956 equipments were interchangeable. It was, and is, not uncommon to

see them mixed, especially in Army National Guard and Army Reserve units where equipment wearout is not as rapid as in the Active Army. As in the past, existing stocks of equipment were depleted before new items were issued.

Description

All ALICE items were of OG nylon, with the exception of the E-tool carrier, and made of light green plastic.

The equipment belt and first aid pouch were identical to the M1967, the former initially being fitted with the standard buckle, replaced in the mid-1980s by an OG plastic type. The suspenders were of the 'Y' type with a single back strap; an inverted web 'V' at its lower end had two snap hooks for belt attachment. The LC-2 canteen cover was similar to the M1967.

The small arms ammo case was secured by a plastic clip fastener and attached to the belt by two slide keepers. A strap fitted to the top back secured it to the suspenders. A pocket and retaining strap were fitted to either side for 'baseball'-shaped grenades. The interior was divided into three magazine cells by straps, for 30-round M16A1 magazines only. The flexible moulded plastic E-tool carrier, fitted for the collapsible E-tool, was secured by two snaps and attached to the belt by two slide keepers.

At the development stage the medium combat field pack was to have three detachable cargo pockets, attached to web loops on the pack by slide

A radio-telephone operator (RTO) and rifle platoon leader of the 9th Inf. Div., Vietnam, 1968. The RTO has an AN/PRC-25 radio, Claymore mine bag, and radio accessory bag attached to a lightweight rucksack frame. The officer carries the frame with the rucksack. His M16A1 magazines are carried in the bandoleer. (US Army via Shelby Stanton) keepers. It was envisaged that they could be removed and attached to the belt, or carried by shoulder slings as utility or ammo bags for short duration missions. Just before contract production began it was decided to attach them permanently to the pack, as it was thought that if they were detachable some troops would neglect and lose them.

The medium pack was of the same basic design as the tropical rucksack, but was slightly larger and a little more stoutly built; it had a thick shoulder pad under which the pack frame was slipped, and a strap secured a pocket sewn to the inside for an AN/PRC-25 or -77 radio (or other gear). Initial issue packs had spring-loaded buckles on the pocket and flap straps; these proved easily damaged and were replaced by conventional ones. All three cargo



pockets were tunnelled. One large and three small waterproof liners were issued with the pack, but these were dropped in 1976 as they were seldom turned in when a soldier left a unit. The padded shoulder straps, each with a quick release device, could be attached directly to the pack or removed and attached to the frame. A sleeping bag could be secured under the pack by either cargo tiedown straps or the ALICE sleeping bag carrier.

The large pack was simply a deeper and slightly wider version. Its centre back cargo pocket was larger, and there were three small pockets above it. A snow-camouflage cover could be used on both packs.

The ground combat troops pack frame consisted of a tubular aluminium frame reinforced by vertical and horizontal stamped braces. A wide web waist band and waist strap were fitted. The frame bottom was narrower than the lightweight rucksack's 'wrap around' version, but use of the frame still limited the items carried on the belt. A metal cargo support shelf could be attached to the frame's bottom or middle brace, allowing it to be used as a packboard; cargo tiedown straps were issued with it. The early LC-1 frame was black anodised; the LC-2, introduced in the early 1980s, was dark OG anodised, and had other minor improvements.

Troops of the 198th Inf. Bde. (Light), Vietnam, 1969. The man on the left has an M1951 rucksack, and the RTO to the right a lightweight rucksack festooned with smoke grenades and canteens. (US Army via Shelby Stanton)



The Integrated Individual Fighting System

Historical

The Army has occasionally used vest-type loadbearing systems for special purposes: the Britishdeveloped battle jerkin¹, aviator's survival vests (used by some recon units in Vietnam), 40mm grenade carrier vest and police-type assault vests (used by selected Ranger battalion elements). In Vietnam a Special Forces NCO developed a combat vest in the early 1960s; it was studied, but turned down. Three versions were designed: rifleman's, machine gunner's and medic's.

A vest's advantages include: more items can be carried, as they are not only secured to the belt, but distributed over the torso; the load's weight is more equally distributed with the soldier actually 'wearing' it rather than having it hung on him; and it permits more flexibility in mission load configuration. Its principal disadvantage is that body heat is trapped and causes more perspiration.

Development of the Integrated Individual Fighting System (IIFS) began in 1984 at the Army's Natick Research and Development Center, Massachusetts. Further development was approved in early 1985. It is compatible with the Personal Armor System for Ground Troops (PASGT), adopted in 19782. It consists of the Individual Tactical Load Bearing Vest (ITLBV) designed to replace ALICE gear in all infantry units, though the latter will continue in use in most others. The second IIFS component is the Field Pack, Large, Internal Frame (FPLIF) which will replace the large ALICE pack in units that presently use it. Mechanised infantry units will retain the medium ALICE pack. The IIFS was presented for type classification in April 1987, but not approved for adoption due to minor deficiencies. It was finally adopted in October 1987; fielding will begin in mid-1988. Test units were the 7th Inf. Div. (Light), 10th Mountain Div. (Lt. Inf.), and Special Forces elements.

²See MAA 157, Flak Jackets.

Description

The ITLBV is made of woodlands-pattern camouflage Kevlar® ballistic fabric (offering only very limited fragmentation protection) and OG and woodlands pattern nylon. It consists of wide foam-padded shoulder straps and a harness system fitted with Kevlar® chest panels, secured by two plastic quick-release buckles. On each are an upper two magazine and a lower one magazine pocket for M16-series rifle 30-round magazines and a grenade utility pocket, all secured by Velcro® and snap tabs. Across the shoulders is a web yoke on which the patrol pack fits. The small of the back has a Kevlar® panel laced to the chest panels by parachute cords permitting full adjustment; two plastic equipment 'D' rings are fitted to it. The back panel has two and the chest panels four snap loops for attaching the ALICE belt. Empty, the ITLBV weighs only 1.8 lbs. Woodlands-pattern first aid pouch and canteen covers of the same design as the ALICE versions, are attached to the belt as is the ALICE plastic Etool carrier. A carrier for the M249E1 squad

This is not southern Germany, 1945, but Camp Drum, NY, 1970. This 42nd Inf. Div., NY National Guard BAR man was still equipped with World War II gear. (US Army via Shelby Stanton)



⁴Issued as the 'assault pack' to the 16th and 18th Inf. Regts., 1st Inf. Div and 116th Inf. Regt., 29th Inf. Div. for the Normandy landing; most were discarded in the first few days. See MAA 108, British Infantry Equipments 1908–80

automatic weapon's 200-round magazine can also be attached to the belt.

The FPLIF is made of woodlands-pattern Cordura[®] nylon and has a larger capacity than any previously standard pack. Two aluminium internal frame bars can be bent to conform to the soldier's back contour and can be used as splints. The padded shoulder straps have a quick-release system. Two horizontal compression straps permit tightening the load. It has four deep side pockets. On the bottom is a zippered sleeping bag compartment. The top flap is detachable, and is actually a twocompartment patrol pack that can be attached to the ITLBV's shoulders by slide keepers for shortduration missions; it is also provided with separate straps for use without the ITLBV. Both the large pack and the patrol pack are closed by two straps, and the former additionally by a drawstring.

The grenade carrier vest, constructed of nylon fabric front panels and nylon mesh back and shoulders, had pockets for 20 HE and four pyrotechnic 40mm rounds for the M79, XM148, and M203 grenade launchers. The longer pyro rounds (flare and smoke) were carried in the two upper pockets on each side. (US Army)

The Plates

(*Note*: When identifying items attached to belts, the order of description is: the pack, suspenders, and the items attached to the belt from the reader's left to right.)

A: M1910 Infantry and M1912/14 Cavalry Equipments (1) A rifleman's M1910 infantry equipment included the haversack and pack carrier with the long pack roll, on which are attached the shovel carrier and M1905 bayonet. The dismounted cartridge belt carries the bolo, original style dismounted canteen cover and first aid pouch.

(2) Left end of the M1910 mounted pistol cartridge belt with the two-cell magazine pocket.

(3) Right end of the M1910 mounted revolver cartridge belt, with two pockets on both ends.

(4) Left end of M1910 four-pocket revolver cartridge belt.

(5) M1910 hand axe and carrier.

(6) A composite M1910 garrison belt (not an actual



configuration). Only the officers' and staff NCOs' belts were fitted with the sabre sling. The bayonet sliding frog was worn only on enlisted men's belts. Two cartridge pockets were fitted near both ends of the enlisted men's and the mounted orderlies', scouts' and machine gunners' belts. The band and musicians' belt had no fittings.

(7) Cavalryman's M1912/14 equipment (configured for dismounted use) included the left and right side M1912 ration bags assembled as a knapsack, M1914 cavalry belt with M1912 magazine pocket, tool frog, rifle belt ring (lowered)

Below:

Components of the experimental model of the nylon MLCE: (1) equipment belt (with quick release buckle), (2) suspenders, (3) M14 magazine pouch (never issued, M16A1 model used instead), (4) first aid pouch, (5) E-tool carrier (with bayonet attachments, not on issue model), (6) combat field pack, (7) canteen cover, (8) sleeping bag carrier. (US Army)





Above: A diagram of the issue model M1967 MLCE gear assembled in a standard configuration. (US Army)



and rifle strap, M1910 dismounted canteen cover, and M1912 holster with an M1911 pistol.

(8) M1912 E-tool carrier, also used to carry a pick or hatchet head, and horse shoes and nails.

(g) M1912 E-tool assembled with a picket pin handle.

(10) M1912 picket pin and carrier.

(11) M1912 pick assembled with a picket pin handle.

(12) M1912 pick head in its cover.

(13) M1912 hatchet head in its cover.

(14) Cavalryman's M1912 garrison belt with a rifle cartridge pocket (five loose rounds), rifle belt ring (raised) and rifle strap, two sliding frogs for the M1910 first aid pouch and the M1912 holster (not pictured), and the M1912 leather magazine pocket. (15) M1914 cavalry bandoleer.

B: World War I M1917/18 Equipment

(1) M1918 dismounted cartridge belt with a 20round extension magazine carrier, M1917 trench knife, M1910 canteen cover, and first aid pouch. This depicts the belt back made of duck rather than the M1910's woven webbing.

(2) Mk. I trench knife, sometimes incorrectly referred to as the M1918.

(3) M1917 mounted canteen cover. The M1910 mounted cover was similar, but had a web strap.

(4) M1912 pistol belt with an M1917 revolver cartridge pouch, and M1917 revolver holster with a S&W or Colt M1917 revolver.

(5) M1918 pistol magazine pocket on an M1912 pistol belt.

(6) This 1918 rifleman is outfitted with the M1910 wire cutter and carrier and armed with an M1917 Enfield rifle and M1917 bayonet.

(7) The M1918 shotshell pouch carried 28×12 gauge shells for trench guns (Model 1897 pictured). (8) This 1918 automatic rifleman has the M1918 automatic rifleman's belt and is armed with the

Special Forces-advised Civilian Irregular Defense Group (CIDG) Strikers wear a mix of World War II and M1956 gear. The men to the left carry the indigenous rucksack. Vietnam, c.1968. (US Army)



M1918 BAR, and M1911 pistol in an M1916 holster. His modified M1910 haversack is without the carrier and long pack roll.

(9) Both sides of the M1918 assistant automatic rifleman's belt had two each BAR magazine and rifle cartridge pockets.

C: Early World War II Improved M1910 Equipment

(1) By the beginning of World War II, little of the rifleman's 'M1910' equipment was actually M1910. The M1928 haversack, with a short pack roll, has an M1910 E-tool and carrier and M1942 bayonet (M1903 series and M1 rifles) attached.

Experimental nylon three-pocket carriers for six 30-round M16A1 magazines were tested by the Infantry School in 1975. Each version utilised different pocket closures and straps, which could be worn over the shoulder or around the waist. The system was rejected due to circulation restriction caused by the leg straps, and the fact that the carrier bounced, even with tight tie-straps. (US Army)

The M1938 12-pocket dismounted cartridge belt is fitted with the M1938 wire cutter and carrier, M1910 canteen cover, and M1924 first aid pouch. (2) Thompson M1928A1 sub-machine gun magazine pocket holding five 20-round magazines.

(3) M1936 field, or musette, bag fitted with the carrying strap used on many other bags.

(4) M1938 dispatch bag, often called a map case. (5) This 1942 infantry officer is outfitted with typical dismounted officer's field gear: M1936 field bag attached to M1936 suspenders, M1936 pistol belt, engineer compass case, M1923 magazine pocket, M1 (formerly M1916) holster with M1911A1 pistol, and (not visible) M1924 first aid pouch, M1910 canteen cover, and M17 binoculars case.

(6) M1937 automatic rifleman's belt with its special suspenders.



(7) M1918 right-side automatic rifle ammunition bearer's bandoleer.

(8) M1910 pick-mattock rigged in its carrier.

D: Late World War II Improved M1910 Equipment

(1) The rifleman's 'M1910' equipment had evolved even further by 1945. The M1945 combat field pack has its cargo pack attached below. The M1 bayonet (M1 rifle) and M1943 E-tool and carrier are attached to the pack. The M1923 dismounted cartridge belt is fitted with the M1910 canteen cover (with a black enamelled canteen issued only in 1942), and British-made first aid pouch. A Mk.IIA1 fragmentation grenade is attached to the suspenders.

(2) M1941 mounted canteen cover.

(3) Sub-machine gun magazine pocket for three 30-round M1928A1, M1-series (Thompson), and M3-series ('grease gun') magazines.

(4) An individual armed with an M1 carbine might be equipped with an M1936 pistol belt, two or more 15-round carbine magazine pockets (the left pocket is the early web version and the right is the later

A diagram of the ALICE gear assembled in a typical configuration. (US Army)





A 1st Cavalry Div. trooper attending the Northern Warfare Training Center, Ft. Greely, Alaska, wears the ALICE large combat field pack and frame with the arctic 1-quart canteen, early 1980s. (US Army)

duck model), three-pocket grenade carrier (the two-pocket was similar), M4 bayonet (not issued until very late in the war), jungle first aid bag issued in the Pacific, and M1942 first aid pouch.

(5) A 15-round carbine pocket converted for 30round magazines by adding a flap extension; 30round pocket production did not keep pace with M2 carbine production.

(6) Early pocket for two 30-round carbine magazines.

(7) Late pocket for four 30-round carbine magazines.

(8) Shotshell ammunition case for 12×12 -gauge shells.

(9) General-purpose ammunition bag with M1936 carrying strap.

(10) The jungle pack, later redesignated the M1943 combat pack, was also issued in an OD version.

E: M1956 Load Carrying Equipment

(1) A rifleman's M1956 equipment consisted of a combat field pack with a poncho secured under it, suspenders, pistol belt, two universal small arms ammo pouches, E-tool carrier with the M1943 or combination E-tool, and M6 bayonet (M14 rifle),



First aid pouches: (Top, L to R) M1924 and M1910. (Centre) M1942 khaki, British-made c.1941, and M1942 OD. (Bottom) M1956 and M1967 MLCE ALICE. (Schroeder collection)

canteen cover (metal ones remained in use well into the 1960s) and first aid pouch. An M26 fragmentation grenade is secured to an ammo pouch. (2) The early two-quart plastic bladder canteen and cover.

(3) The quick-release pistol belt buckle, with an M16A1 pouch attached.

Entrenching tool carriers: (*Top*, *L* to *R*) M1909, M1910 and M1943. (*Bottom*) M1956, M1967, and ALICE. (Lemmer collection)



(4) The small arms accessory case was made of synthetic rubber-coated nylon.

(5) The M16A1 rifle XM3 bipod carrying case also accommodated cleaning items and rod.

(6) This 1965 automatic rifleman, armed with an M14E2 AR, is outfitted with standard M1956 gear, but with the M1961 combat pack. His canteen is attached to eyelets on the right side of the pack flap. He is carrying the unpopular M1956 sleeping bag carrier with an M1949 mountain sleeping bag.

(7) A combination E-tool.

(8) The M_{1951} mountain rucksack replaced the 1941 model and was itself replaced by Eq.

(9) The lightweight rucksack with frame. Since the E-tool was seldom used by Special Forces, this was a common method of carrying it.

F: M1967 Modernized Load Carrying Equipment (MLCE)

(1) A rifleman's M1967 MLCE gear consisted of basically the same items as the M1956 gear, but made of nylon. The combat field pack, with the lightweight poncho secured, is attached to the shoulders rather than the belt. Two M16A1 ammo cases, M7 bayonet (M16-series rifles), E-tool carrier, plastic canteen and cover, and first aid pouch complete the equipment. An M68 impactdetonated fragmentation grenade is secured to an ammo pouch.

(2) The still-standard two-quart plastic collapsible canteen and cover.

(3) The five-quart flotation bladder canteen and cover.

(4) The one-quart arctic canteen and cover.

(5) The M18A1 Claymore anti-personnel mine bandoleer, or simply the 'Claymore bag', was often used in Vietnam to carry magazines, grenades, and other items in its two compartments.

(6) This 1968 fire team leader carries typical Vietnam M1967 MLCE. The pack, with a poncho and poncho liner, and an M1956 E-tool carrier attached, is fastened to the belt. Additional M16A1 magazines are carried in seven-pocket bandoleers. M18 coloured and AN-M8 HC white smoke grenades are attached to the gear.

(7) A partly folded collapsible E-tool; test models were OG.

(8) The nylon tropical rucksack, with an 18-in. M_{1942} machete in a plastic sheath.



The individual tactical load bearing vest (ITLBV) worn over the PASGT armour vest with the Kevlar® 'Fritz' helmet, 1987 (US Army)

(9) The indigenous rucksack was used by the Civilian Irregular Defense Group (CIDG) and some US LRRP and Ranger units, since a comparable US-made model was not available until F8 was introduced.

G: All-Purpose Lightweight Individual Carrying Equipment (ALICE)

(1) A rifleman's ALICE gear consisted of suspenders, equipment belt, two small arms ammo cases, M7 bayonet, plastic E-tool carrier (with collapsible tool), LC-2 canteen cover (with the plastic canteen and an M1 NBC drinking cap), and first aid pouch. An M67 fragmentation grenade is secured to an ammo case.

(2) Outfitted in a chemical protective suit, this soldier demonstrates the use of the M1 NBC drinking cap with the M17A1 protective mask and M6A2 hood.

(3) This 1976 grenadier is outfitted with normal



The complete integrated individual fighting system (IIFS): field pack, large, internal frame (FPLIF) worn with the ITLBV, 1987. (US Army)

ALICE gear. He has the ALICE medium combat pack, without a pack frame, and an M17A1 protective mask carrier. He is armed with an M16A1 rifle with a 40mm M203 grenade launcher attached.

(4) This simple two-compartment combat field pack was developed for use by the Contras in the early 1980s and subsequently adopted by the Army for limited issue. (5) Medium combat field pack with the early LC-1 frame.

(6) Large combat field pack with the later LC-2 frame.

(7) Pack frame cargo support shelf, here the black LC-1; the LC-2 is the same, but OG.

H: Integrated Individual Fighting System (IIFS)

(1) This rifleman's IIFS gear is made up of the ALICE belt attached to the individual tactical load-bearing vest (ITLBV). On the belt are the first aid pouch, M9 multipurpose bayonet (M16-series rifles), plastic ALICE E-tool carrier, and canteen cover.

(2) Front and backside views of the 'ambidextrous' Kevlar[®] M12 holster for the M9 pistol (Beretta 92SB-F 9mm) and magazine pouch.

(3) The general officer's leather version of the M_{12} holster with a leather magazine pouch, attached to the leather general officer's belt.

(4) Carrier for the M249E1 squad automatic weapon's belted 200-round magazine.

(5) MX-991/U flashlight used since the late 1950s.
(6) M2 compass moulded plastic case used by artillerymen, mortarmen, and forward observers.

(7) This 1988 light infantryman is outfitted with IIFS gear and armed with an M16A2 rifle. He wears the patrol pack (detached from the large field pack) and an M17A2 protective mask carrier, on which is attached an M258 individual decontamination kit.

(8) The field pack, large, with internal frame (FPLIF).

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