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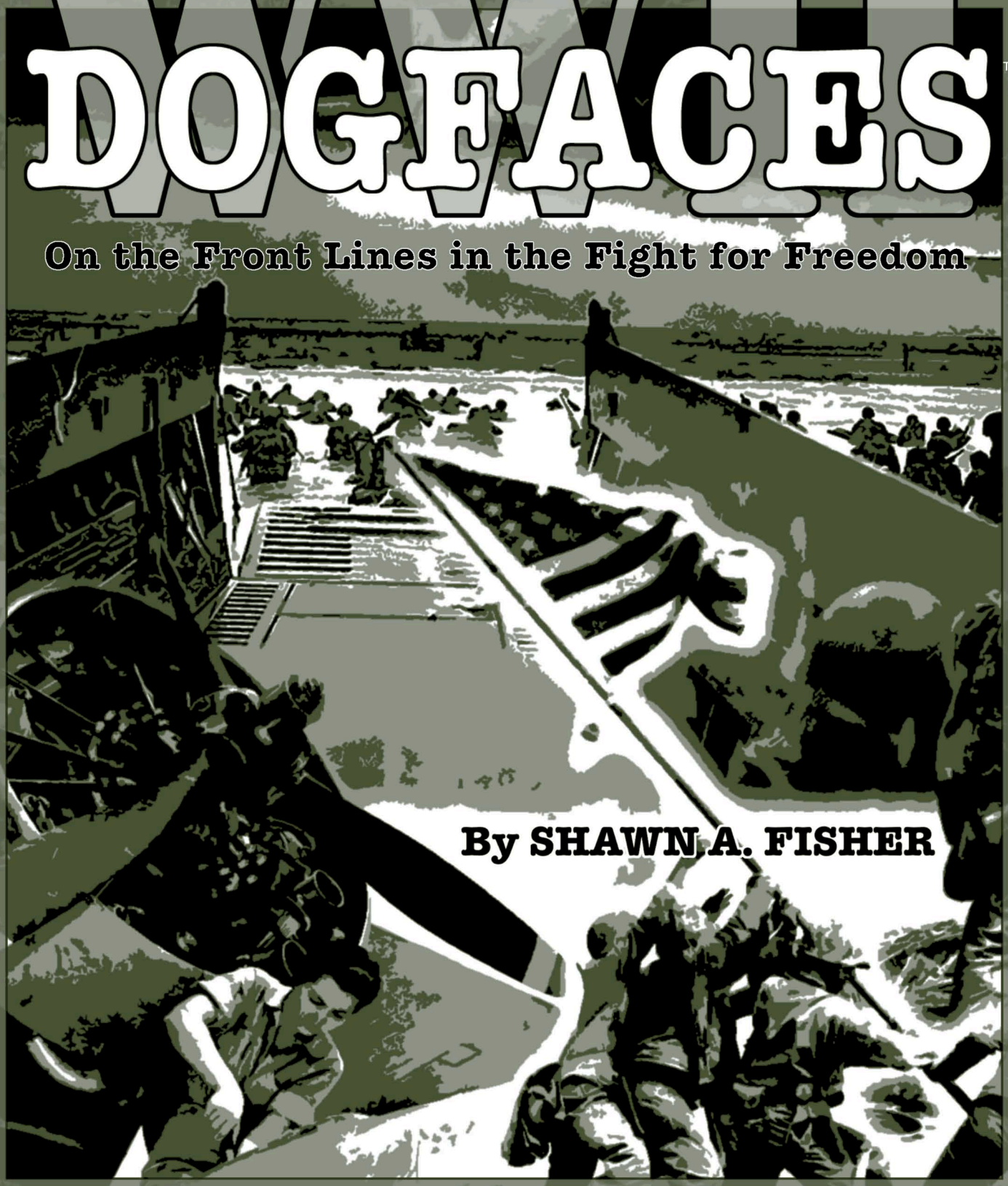
WWII™

DOGFACES™

On the Front Lines in the Fight for Freedom



By SHAWN A. FISHER

STEVE JACKSON GAMES

DAY OF INFAMY!

From the smoking wreckage of Pearl Harbor to the ashen wastelands surrounding Tokyo Bay nearly four years later, join the United States and its armed forces as they make the world safe for democracy in *GURPS WWII: Dogfaces*! Inside you'll find:

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GURPS WWII or ***GURPS Basic Set,*** *Third Edition Revised,* are required to use this supplement in a ***GURPS*** campaign. Other ***GURPS WWII*** supplements as well as ***GURPS Compendium I, Compendium II, High-Tech,*** and ***Vehicles*** can provide further detail and campaign options. The content can be used with *any* game system.

THE CITIZEN-SCRIBES

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Shawn A. Fisher

Edited and Illustrated by

Gene Seabolt

First Edition, First Printing
Published April 2003

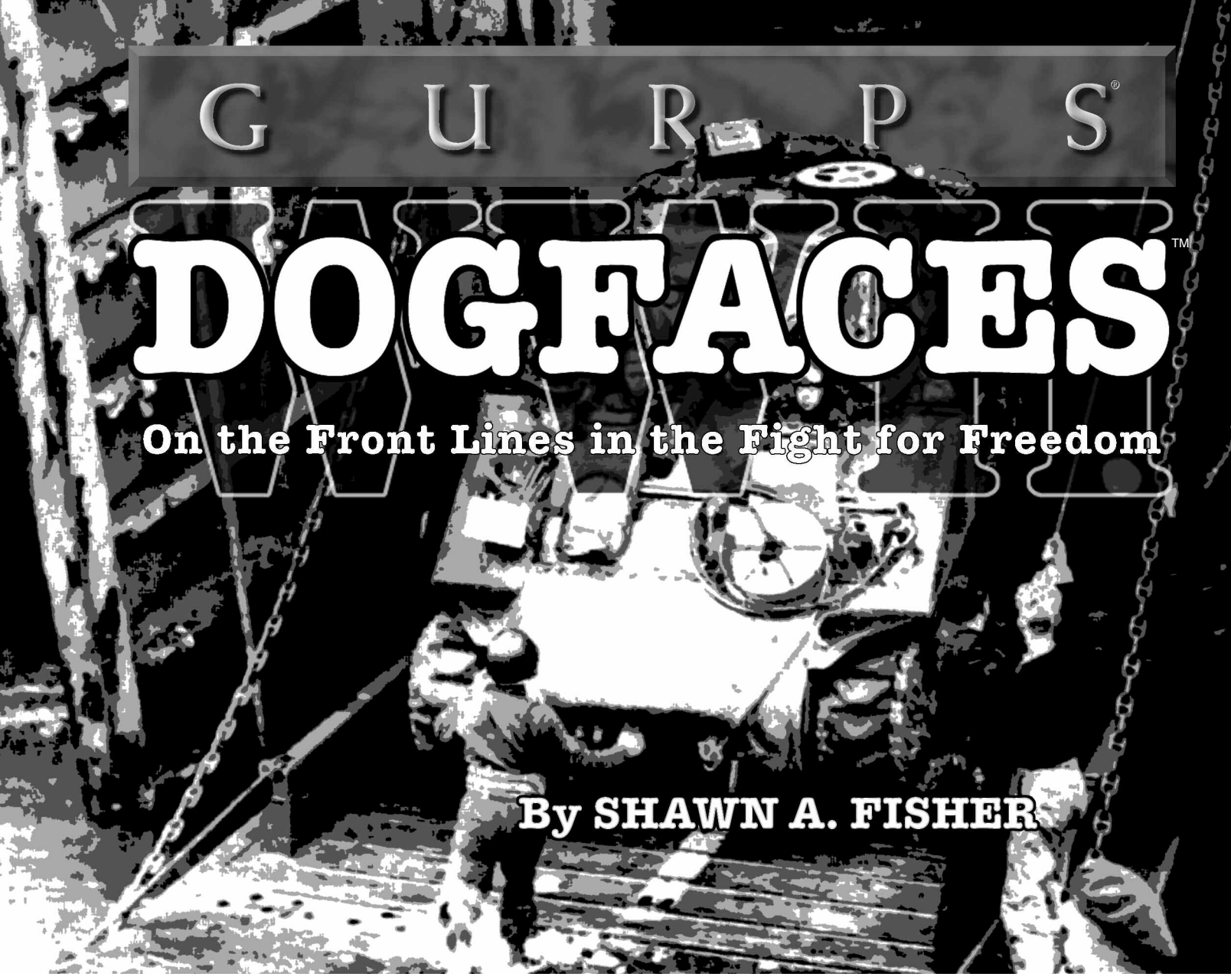
ISBN 1-55634-636-0

52295

9 781556 346361

SJG02295 **8005**

Printed in the USA



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ISBN 1-55634-636-0

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Page References

Rules and statistics in this book are specifically for the ***GURPS Basic Set,*** *Third Edition.* Any page reference that begins with a B refers to the ***GURPS Basic Set*** – e.g., p. B102 means p. 102 of the ***GURPS Basic Set,*** *Third Edition.* Page references that begin with CI indicate ***GURPS Compendium I.*** Other references are CII to ***Compendium II***, VE to ***Vehicles***, W to ***WWII***, W:HS to ***WWII: Hand of Steel***, W:IC to ***WWII: Iron Cross***, and W:RH to ***WWII: Return to Honor***. The abbreviation for *this* book is W:D. For a full list of title abbreviations, see p. CI181 or visit the updated web list at **www.sjgames.com/gurps/abbrevs.html**.

INTRODUCTION

As this book goes to press, the United States stands poised for a new war. By the time that you read this, the fighting may well be over, and we will know what balance of glory, justice, and bitter regret that it held in store. For now, though, this unpopular decision has spawned a surge of criticism of this nation and its approach to global conflict.

Some of these critics, at home and abroad, have accused the nation of romanticizing and inflating its role in past wars. They point out that, at the end of WWI, Germany already was reeling when U.S. troops arrived at the 11th hour. This is true. What they omit is that the Entente powers were reeling, too, and the Kaiser's men still held almost everything they had conquered. They could have, probably would have, held out for a costly negotiated peace if the United States had not set aside a commendable sense of discretion for a commendable sense of valor.

Similar accusations target the nation's part in WWII. By that fateful Sunday in Hawaii, Poland and France had fallen, the Battle of Britain had been won, and Hitler's panzers had closed on Moscow. Soviet and British troops already were giving their lives to turn the tide – at Stalingrad and El Alamein – when the first U.S. riflemen finally joined the fight against the Nazis. In some minds, every U.S. battle would play out an almost foregone conclusion. The stakes would be more about *when* the Axis powers would fall, not *if*. Other men, not Americans, had died to strip most of the "if" from the equation, at least in Europe, but the United States would claim most of victory's glory.

All this, too, is true. It's also incomplete. Putting aside the fact that U.S. industry and financial credit had propped up the Allied cause from the start, this indictment of U.S. motives misses a simple, telling truth: After the attack on Pearl Harbor, not a single American soldier died in defense of his country. Not one. Every single Englishman, Russian, and Frenchman gave his life knowing – and only after – the peril to home and country was immediate and real. Americans fretted over an invasion – just as we fret about another terrorist masterstroke now – but then as now the hyperbole was less about the reality of the hour than our fear for an unforeseeable future. It was about getting pumped up to take care of business early. It was about dying for their grandchildren – us – rather than their children.

They were not heroes, the men who did this, not in the classical sense. Many of them entered their first battle with visions of valor and glory; few held on to those ideals for their second. They were ordinary, frail men doing a grinding job and bitching about it every step of the way. Only their fatigue-hollowed features drooped more than their grimy battledress, making "dogfaces" one of the more heartfelt nicknames that they used for themselves. They hated every minute of it, but they pushed on, fueled by a red, white, blue, and olive-drab mindset that their neighbors, then and now, only thought they fully understood.

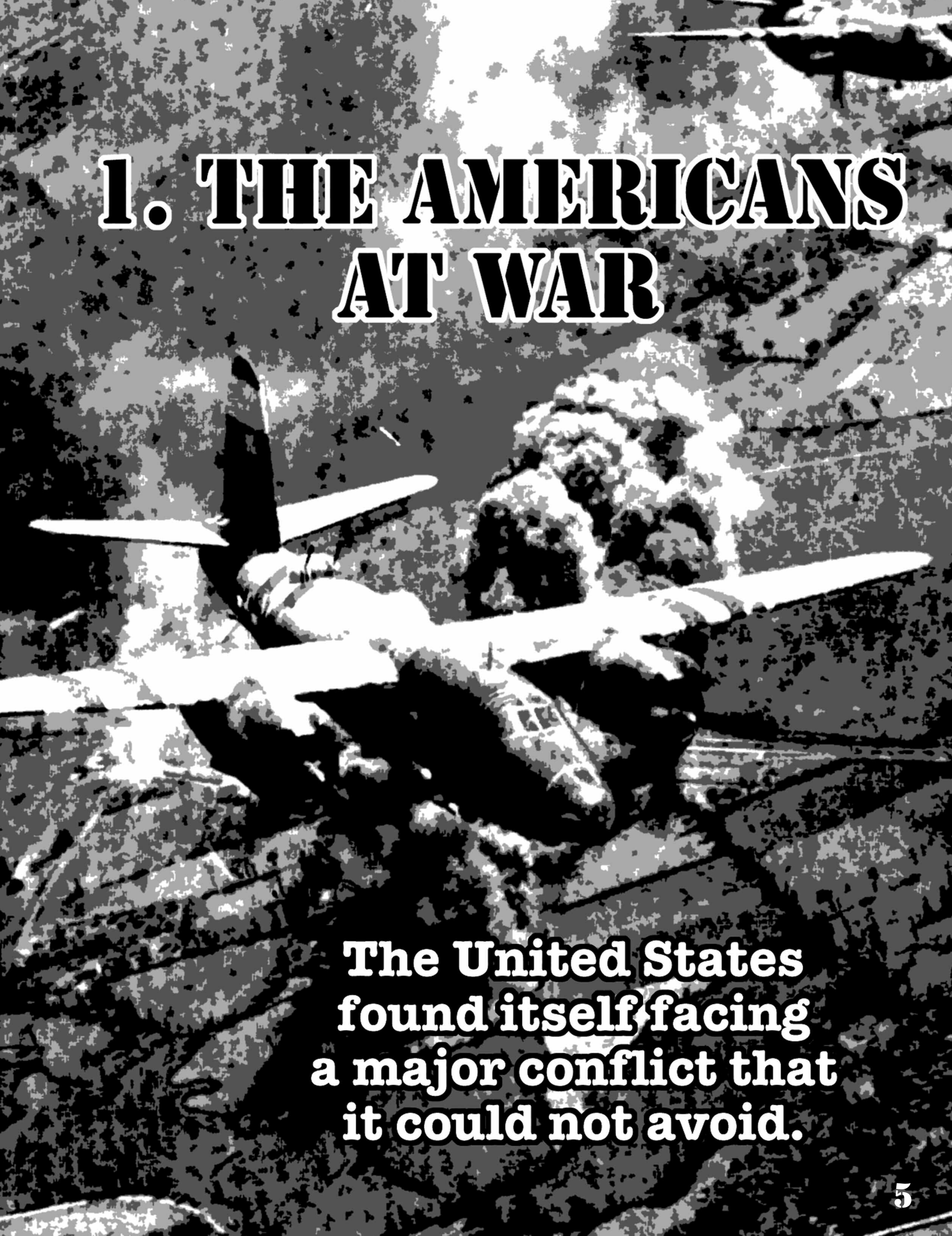
The author would like to dedicate his book to these men. I think he already has, in the clear-eyed yet loving portrait found herein.

– Gene Seabolt

About the Author

The grandson of a D-Day veteran, Shawn Fisher is a former Army infantryman who teaches history while pursuing a graduate degree in history and education. His previous work can be found in *Pyramid* and ***GURPS Best of Pyramid 1***, ***Who's Who 1***, and ***WWII: Hand of Steel***.

When not feeding his obsession with WWII, Shawn devotes his spare time to paintball, wargaming, and recreational shooting. He lives with his wife, Jennifer, and daughter, Elizabeth, in Searcy, Ark.



1. THE AMERICANS AT WAR

The United States found itself facing a major conflict that it could not avoid.

THE RELUCTANT WARRIORS

In the years leading up to the 20th century, the United States had dabbled in its own imperialist fantasies – flexing its muscles in Cuba, the Philippines, Mexico, and elsewhere – but to a large degree maintained a wary isolationism. It did not stick its nose in other people's wars as long as they did not interfere with U.S. interests.

Thus, as Europe transformed itself into a vast killing field in 1914, America watched. The U.S. public gladly took part in Entente propaganda – renaming dachshunds and sauerkraut and all other things German, while vilifying the Kaiser and his "Huns" as murderous sadists – but chided Europeans for their seeming inability to avoid regular, catastrophic descents into armed conflict.

This strong isolationist streak failed to fully recognize that commerce made a European war into American business. The ebb and flow of overseas trade directly impacted U.S. fortunes. Thus, "neutral" U.S. interests had exported more than $3 billion in goods to Entente powers by 1916, not including government loans and other gifts such as pennies collected from school children for the Red Cross.

Gradually, the United States considered more direct aid. In 1916, Congress passed the National Defense Act, which increased the size of the Army and National Guard and created the Reserve Officer Training Corps. In 1917, when Germany resumed unrestricted submarine warfare that targeted neutral and hostile shipping alike, the United States broke diplomatic relations.

Most of the American public still thought that their nation should not join the war. Then, the Zimmerman telegram was unveiled. In it, Germany offered Mexico financial and political backing for an invasion of the United States.

That quieted the naysayers, and after several U.S. merchant ships were sunk by German submarines, Congress declared war in April 1917.

Over There! Over There!

The first elements of the American Expeditionary Force arrived in France two months later. By December 1917, more than 200,000 Americans were serving alongside British and French units, mostly in secondary roles with little fighting involved. A few expatriates who had been fighting in British or French service joined their country's forces, and tried to teach the new men the grim realities of the Great War.

A colonel at the time, George C. Marshall planned the first big U.S. offensive, an assault on the St. Mihiel salient that commenced on Sept. 12, 1918, with the fresh "doughboys" managing to capture 15,000 Germans and 450 guns.

Eventually, U.S. troops on the Continent would number 42 divisions and play a substantial role in the Meuse-Argonne Offensive of September and November 1918, an operation which provided America with two military legends: the Lost Battalion and Sgt. Alvin York.

When the 1st Battalion, 308th Regiment, 77th Infantry Division pushed forward into the Argonne Forest, its flanking units fell behind. After it lost contact with its headquarters, a German counterattack left the battalion surrounded.

Unsure of his exact location, and unwilling to surrender, Maj. Charles W. Whittlesey's only means of communication was by carrier pigeon. A formal request for his surrender was answered with, "Go to hell."

The U.S. command organized the first aerial resupply in history to keep his small force of men alive until nearby units relieved them. Of the nearly 600 doughboys in the battalion at the beginning of the operation, only 200 walked out of the pocket five days later. The ordeal of the Lost Battalion would be acknowledged with five Medals of Honor.

Equally impressive is the story of Alvin York, of Pall Mall, Tenn. Denied conscientious-objector status, Cpl. York had a change of heart during training, and ended up saving his platoon when it was pinned down by German machine-gun fire in the Argonne as it tried to reach the Lost Battalion. In that action, he killed 28 enemy soldiers and captured more than 100. Promoted to sergeant, he was awarded the Medal of Honor, the Distinguished Service Cross, the French *Croix de Guerre*, and the Italian *Groce di Guerra*.

Within a few days, the Americans had moved past the Argonne and were nearing Meuse. The 1st Army was within artillery range of Sedan by early November, shelling German supply lines. The fresh U.S. troops were key in breaking the stalemate in Europe's trenches.

In the skies, U.S. Air Service Lt. Eddie Rickenbacker had earned the moniker "American Ace of Aces" by accumulating 24 kills, for which he received the Medal of Honor. (He would earn yet another nickname, "Iron Man Eddie,"after surviving 24 days afloat following a 1942 B-17 crash in the Pacific.)

When the armistice ended the hostilities on Nov. 11, 1918, more than 115,000 Americans had died in only a few months of fighting.

Wilson and the League

A sincere altruist, Pres. Woodrow Wilson had entered the Great War with the noble goal of "peace without victory." He envisioned a magnanimous Entente ending the balance-of-power equations that had caused the conflict in the first place. His stubborn adherence to these principles made him blind to political realities – his Entente allies intended to slake their deep thirst for vengeance upon Germany.

Though he managed to create the League of Nations – an international body to mediate disputes before they reached the point of war – Wilson failed to get his own isolationist country to join it. He had too many political enemies in Congress and elsewhere, and the treaty was not adopted. In turn, the U.S. refusal to participate greatly weakened the League.

It did not take long for any objective observer to realize that the Great War would not go down in history as Wilson's "War to End All Wars." Few at the time realized, however, how quickly the stage would be set for its ominous sequel.

INTERLUDE OF EXTREMES

Americans had avoided all but a quick, bitter plunge into the war that ravished Europe's powers, but in that brief taste, U.S. veterans and their families came away with a haunting impression of the horrors inherent in modern armed conflict. The country's 17-month foray into the Great War would influence its culture for the following decade. These changes, in turn, would brew an unprecedented socioeconomic crisis.

The Roaring '20s

Americans erased the memory of stinking mud and corpses by drowning in champagne and perfume. The 1920s ushered in an eye-opening era of escapism and pleasure-seeking. Flappers, speak-easies, motion pictures, and radio swept away stuffy Victorian sensibilities and ushered in a new era of pop culture. Millions of Americans began going to the movies every week. Radio was little more than a hobby early in the decade, but by the late '20s millions of Americans tuned in to popular radio shows. Organized sports thrived in the golden decade of Babe Ruth's home runs, Knute Rockne's Fighting Irish, and Jack Dempsey's titanic boxing bouts.

Advances in transportation made the world seem a little smaller, too. Henry Ford's Model T put automobiles within reach of the average family's income, linking American individuality with the freedom of the open road. Automobile ownership jumped from 8 million to 23 million in the decade. Charles A. Lindbergh flew solo across the Atlantic in 1927, and landed in Paris as a legend. His 33½-hour flight fascinated the world, and for the first time aviation was being considered as a serious form of passenger transportation, even though *The Spirit of St. Louis* cost a steep $10,500.

The passage of Prohibition caused organized crime to become powerfully entrenched in the American social landscape. Americans decided privately whether to be "wet" or "dry," regardless of the law. Bathtub "rotgut" fetched as much as $15 a bottle; prolific amounts of homemade booze, and mob violence over the sale of it, simply worsened the alcohol problem. Shootouts between rival gangs, or mobsters and government agents, gained national attention. Prohibition was finally repealed in 1933, a grand failure in social reform.

On the Anvil: The Great Depression

The Roaring Twenties came to a crashing close. The U.S. stock markets had come to reflect the decade's irrational exuberance. Prices grossly inflated by years of rampant speculation on margin plummeted to reality as 16 million shares changed hands on the "Black Thursday" of Oct. 24, 1929.

The sell-off triggered a worldwide depression. By mid-November, the nation's economy had shrunk by some $30 billion. Production fell by 50%, and at its peak unemployment climbed well over 30%. Stockbrokers jumped from windows, and ex-millionaires sold their expensive cars at scrap prices. The country fell into chaos and panic.

Farmers dumped milk in ditches in an effort to drive up the price, and ranchers slaughtered their herds in the field rather than feed them to be sold at a loss. All the while, urban poor fought for scraps in trash cans; one such brawl involved 50 men at the rear of a Chicago restaurant. Bread trucks and grocery stores required police protection, and landlords were murdered when they tried to evict destitute tenants. In at least one case, the tenants were acquitted.

Riots broke out in the nation's capital when a WWI-veteran "Bonus Army" begged for early pensions. Pres. Hoover ordered the Army to run the ex-servicemen out of town. Their shanty towns were attacked by troops with tear gas and tanks under the command of Douglas MacArthur and two other young officers, Dwight Eisenhower and George Patton Jr.

Even Mother Nature seemed to conspire against the United States, when a severe drought turned the central plains into the "Dust Bowl." Topsoil from overworked fields in Oklahoma, Arkansas, and Kansas was blown as far away as the Atlantic Ocean, where it settled on the decks of ships. Dust storms blocked out the sun from New Mexico to Texas, covering streets and highways in drifts of dirt 6' deep, scouring the paint from road signs.

The WWII generation endured a youth forged on this anvil of strife and misery.

Alphabet Soup

With Franklin Roosevelt's election as president in 1932 came the first of many "alphabet soup" programs. So named for their confusing acronyms, each such initiative was created to fight the Depression by creating jobs and jump-starting industry. One of the most successful was the Civilian Conservation Corp. From 1933 to '42, the CCC employed nearly 3 million young men to improve and protect the natural resources of the nation. The CCC boys built bridges and roads, planted trees, cleared land, worked on flood-control projects, and fought forest fires from the Virgin Islands to Hawaii.

Volunteers committed to six-month hitches, with a maximum service of two years. The pay was $30 to $45 a month, most of which was sent home to support their families. A military officer commanded each camp, assisted by a cadre of civilians, a doctor, and a few NCOs. Clothing, food, education, and medical care was provided at no cost. Each 200-man camp contained a few flimsy buildings, including a canteen that sold luxuries such as soda pop, comics, and snacks.

A workday in the camp begin at daybreak, with a bugle call to breakfast, then calisthenics or boxing before the boys went off to their job site. Classes at night taught welding, first aid, automobile mechanics, and carpentry. More than 100,000 boys learned to read in the CCC.

Despite frequent attempts by the Army and Marine Corps to co-opt the camps, no military drill was allowed in the CCC. Eventually, the CCC would be credited with making rapid expansion possible for the U.S. military in the early 1940s, and it was hailed as one of FDR's most successful programs, one quite similar to the Nazi labor service (see p. W:IC34).

Isolationism, Again

Although costly to American interests abroad, U.S. intervention in international affairs was hamstrung by congressional efforts to avoid alliances and treaties that required mutual aid. In the 1920s, the United States not only refused to join the League of Nations, but also failed to join the World Court. Arms-limitation treaties were acceptable, and various neutrality acts prevented exports to belligerents except on a "cash-and-carry" basis. In the 1930s, all forms of aggression (such as seen in Manchuria, Ethiopia, and Spain) were met with displeasure and rhetoric, but also no real action. This was duly noted by the Japanese, Mussolini, and Hitler.

Throughout the 1930s, America ignored the storm brewing in Europe and Asia. The long-standing tradition of American isolationism – going back to George Washington's farewell address, the Monroe Doctrine, and the Roosevelt Corollary – was deeply ingrained. As the war in Europe broke out, the America First Committee – made up of influential figures such as Charles A. Lindbergh and Robert E. Wood of Sears, Roebuck &Co. – cautioned against American involvement. The AFC would claim 600,000 members at its zenith.

Hitler's rise to power and the death of the Weimar Republic barely registered on the American public. By the time that Hitler became chancellor, he was still hardly known, competing against the newly elected FDR for celebrity. Hitler's expansionism, at first aimed at the German economy, won him favor in America. He was viewed as a doer and go-getter, traits generally admired by Americans, and earned a wary 1938 nod as *Time*'s "Man of the Year." His foreign policies did not frighten the man on the street much. Unemployment, food costs, and housing eclipsed the racist rantings of comical strangers in far lands.

When Hitler grabbed land from his neighbors, Americans hardly blinked, except those who applauded the Third Reich's nationalist resurgence. The German-American Bund, with Fritz Kuhn at its head, claimed more than 200,000 members. American Nazis even had their own summer camps across the country; most notable was Camp Siegfried, on Long Island, with nearly 50,000 campers every weekend swilling German beer and goose-stepping to Wagner operettas. Outside this group, Hitler's crafty moves to acquire the Rhineland and Austria generally met with skepticism among those few Americans who took notice. Those were European problems, to be settled by Europeans.

Also a factor in this isolationist thinking was the miniscule U.S. military. The Army was by far weaker than that of any other major power, with fewer than 200,000 men. The Army Air Corps had fewer than 25,000 personnel, and the Marine Corps fewer than 20,000. The backbone of defense policy at the time, the Navy had only 130,000 men and fewer than 180 warships, mostly outdated destroyers.

As the president well knew, America was in no position to dictate to foreign powers.

THE APPROACHING STORM

Following the 1938 bombing of the U.S. gunboat *Panay* by Japanese warplanes in China, Pres. Roosevelt asked Congress for additional funds to build up the armed forces. This did not mean he planned to use them; he still supported Great Britain's "appeasement" policy of the time. Isolationism was so ingrained that Americans even supported appeasement after Hitler sent his war machine to seize the Sudetenland (see p. W11).

Roosevelt personally communicated with Hitler and Mussolini in an effort to guarantee peace, but was ignored. With the German invasion of Poland, WWII began. This gave Roosevelt all the more reason to rapidly improve the armed forces – just in case. As in the last conflict, Americans soon would find it all but impossible to ignore the conflict abroad.

European Entanglements

Eventually, the president informally tied the United States to the democracies of Europe by repealing the arms embargo and providing arms to Britain and the Allies. This transition from neutrality to "non-belligerency" began in the summer of 1940, and was accepted in part because of sympathies gained during the Dunkirk rescue and the Battle of Britain.

U.S. newsmen in Europe, such as Edward R. Murrow and William L. Shirer, were significant contributors in this metamorphosis. Murrow held his radio broadcasts from the streets of London during the Blitz, while Shirer reported the ugly face of fascism from the heart of the Nazi empire. And Americans listened. Radio shows reporting overseas fighting were nightly rituals for most citizens. From the barbershop to the drugstore, war was on everyone's lips.

School kids gave a dime a week to the Red Cross. Nearly 15,000 pints of blood were donated in the Blood for Britain campaign in 1940 alone. The National Rifle Association shipped 7,000 donated guns to answer the British government's pleas to "protect British homes." The guns were met at the docks by special trains and dispatched to Home Guard units.

One of the greatest American contributions at this time was the supply of new 100-octane fuel, which improved engine performance for the Spitfires defending Britain by 130 horsepower – thus adding 25 mph to top speed at 10,000 feet. Leaders of that beleaguered nation later said they would have lost the Battle of Britain without the crucial fuel.

Across the United States, factories were firing up, beginning to produce machine guns, tanks, trucks, and ammunition for the rapidly expanding U.S. armed forces and the Allies – and supplying much-needed jobs for Americans still struggling to escape the Great Depression. (The economy would not entirely free itself from the Depression until 1943, by which time wartime demands essentially eradicated unemployment.)

The Undeclared War

In a near-repeat of WWI, submarine attacks inflamed American resentment against Germany. After a scattering of ships were sunk by mines or U-boats in 1940, outrage heightened with the sinking of the *Robin Moor* on May 21, 1941, off the coast of Brazil. The destroyer *Kearney* on Oct. 17 was soon followed by the destroyer *Reuben James* on the 31st, both sunk off the coast of Iceland while guarding Lend-Lease (p. 15) convoys to Britain. Of the 160 men in the *Reuben James*' crew, only 45 were saved. Americans were angered by the sinkings, but still not committed to another "European war."

"A Matter of Time"

"We look forward to a world founded upon four essential human freedoms. The first is freedom of speech and expression, everywhere in the world. The second is freedom of every person to worship God in his own way, everywhere in the world. The third is freedom from want . . . everywhere in the world. The fourth is freedom from fear . . . anywhere in the world."

– Pres. Roosevelt, speaking to Congress, Jan. 6, 1941

While the nation pondered its role in the war, some Americans already were fighting. The American Field Service and American Volunteer Ambulance Corp served worldwide, starting in 1940 (p. 125). American volunteers joined the RAF; perhaps seven fought in the Battle of Britain. Three "Eagle Squadrons" of volunteer Americans, credited with a total of 73 kills, would be folded into the USAAF in September 1942.

Other Americans flew for Chiang Kai-Shek under the command of retired Air Corps officer "Colonel" Claire Lee Chennault. The American Volunteer Group, known as the Flying Tigers, began arriving in China in the summer of 1941. They trekked across the Pacific war zone in groups of twos and threes aboard tramp freighters, dismantled planes shipped in unmarked boxes in the hold. Sporting the distinctive grinning shark's teeth that would make them famous, the Flying Tigers would claim 286 enemy aircraft before being absorbed by the USAAF in July 1942.

By late 1941, many Americans could see that war against Germany was inevitable (see p. W18), but they hardly considered the Japanese a threat. The Japanese were squinty-eyed and buck-toothed comic-book characters to the Americans of the 1930s and '40s. There was a more or less total failure on the part of the American people to grasp Japanese ambitions, even among politicians and military planners.

The Japanese, however, perceived U.S. meddling in the Pacific as a threat to their sovereignty. When Roosevelt cut off trade with Japan in the fall of '41, especially badly needed oil and metal, and then froze Japanese assets in the states, the die was cast. Diplomats considered the move a calculated risk, expecting at least a formal round of peace talks. Other officials felt a Japanese attack against U.S. Pacific holdings was imminent. To them the question was not *if*, but when and where.

AIR RAID, PEARL HARBOR. THIS IS NOT A DRILL!

"Before we're through with 'em the Japanese language will be spoken only in hell!"

– Vice Adm. William "Bull" Halsey, Dec. 8, 1941, as he entered Pearl Harbor

On Sunday, Dec. 7, 1941, at 7:55 AM, a wave of 183 fighters, dive-bombers, level-bombers, and torpedo-bombers swept in to strike the U.S. Pacific Fleet at anchor in Pearl Harbor. The first wave struck "Battleship Row," Wheeler and Hickam Fields, Kaneohe Naval Air Station, and Ewa Marine Corps Air Station. The second wave hit an hour later, but failed to strike a catastrophic blow at the naval yard because of the smoke and heavy anti-aircraft fire. Two hours after it began, the Pearl Harbor attack was over.

While the fighting at Pearl was one-sided, it was not a total victory for the Japanese. The first shots of the battle had actually been fired by Americans, when the destroyer *Ward* reported it had fired on a submarine near the entrance to the harbor. All five of the Japanese midget subs that had skulked toward Pearl would eventually be sunk.

Most of the men on the ground defended themselves in makeshift fashion, firing on Zeros and Vals with .45 pistols, bolt-action rifles, and BARs. This was not without some success; witnesses state at least one enemy plane was shot down by small-arms fire. Unfortunately, in the confusion, Army personnel knocked down a U.S. plane, too.

Two ships at anchor, the battleship *Nevada* and the light cruiser *St. Louis*, managed to get underway in record time, despite battle damage. Two Army lieutenants, Kenneth Taylor and George Welch, managed to get airborne and shoot down seven bombers. They then landed, in the middle of the fight, and re-armed to go back up again, but they weren't the only ones. As many as 20 other American planes managed to get into the air during the battle. Even more incredibly, American aircraft *landed* at Pearl during the air raid. A dozen SBDs from the carrier *Enterprise* managed to land on Ford Island, in the eye of the storm, and B-17s arrived from California during the attack.

When the smoke cleared, more than 3,500 Americans had been killed or wounded, 21 ships had been sunk or damaged, and 328 aircraft damaged or destroyed. The battleship *Arizona* alone had suffered 1,177 casualties. The Japanese had lost 29 aircraft and the five midget subs.

Despite this success, the attack missed its primary objective, which had been the U.S. aircraft carriers. These were out delivering planes to garrisons on Wake and Midway. Their absence essentially saved the U.S. Pacific fleet from being knocked out of the war for the lengthy period that repairs to the capital ships would take. By war's end, though, all but two of the ships sunk at Pearl had returned to action. Meanwhile, every single vessel that had been in the Japanese strike force rested at the bottom of the sea.

The attack should have surprised no one. Since 1931, Japanese naval-academy students had been required to answer the question, "How would you attack Pearl Harbor?" The real planning for the surprise attack began in January 1941, when a reluctant Adm. Isoroku Yamamoto devised a strike against the U.S. Pacific Fleet. Yamamoto knew well the danger of attacking the United States; he was a Harvard graduate, and had been a naval attaché in Washington, D.C. His feasibility study was turned over to the Japanese Combined Fleet for planning at the end of March, but he attacked unenthusiastically. He predicted any advantage gained would be very short-lived.

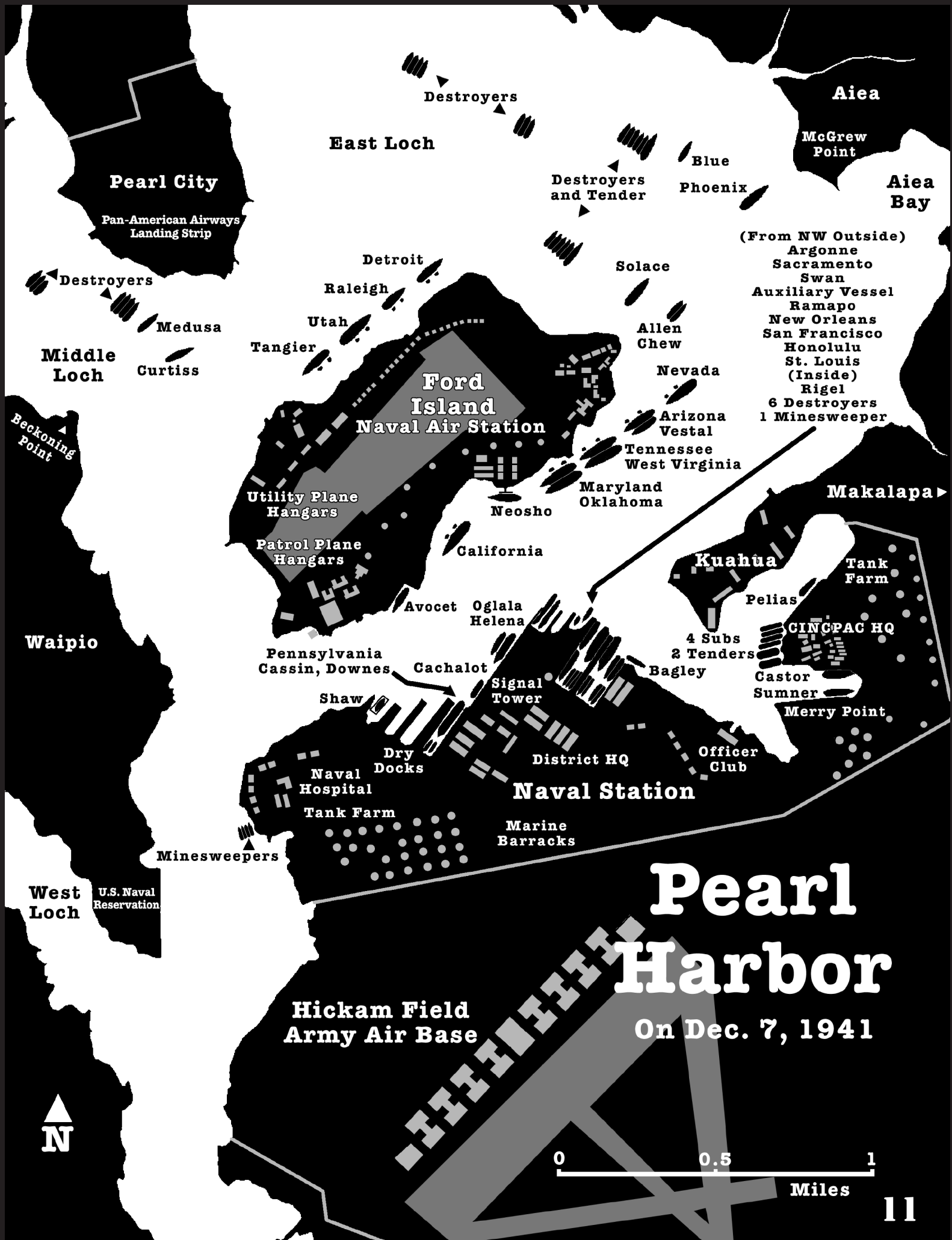
At the same time, on the other side of the Pacific, a U.S. Army major and Navy admiral completed their own joint study of defense efforts in case Oahu was attacked by the Japanese. The study forecast the Japanese plan remarkably, predicting an air attack at dawn – on a Saturday, Sunday, or national holiday – with launch of the attack coming before or very close to a declaration of war.

The Army-Navy plan proposed a 360º air patrol in order to give adequate warning in case of attack, but that was impossible. There were not enough planes and air crews then available in Hawaii.

With 60 years of hindsight, the warning signs surrounding the attack on Pearl Harbor seem impossible to ignore, leading some to believe Roosevelt knew of the attack and allowed it go forward to galvanize the American public toward war. The truth is less dramatic. U.S. planners expected any initial attack to fall on the Philippines, largely blinding them to the possibility of other targets. Though naval intelligence knew the Japanese fleet was underway, they had lost track of its whereabouts. The Japanese had sent their *Kido Butai*, or strike force, up through the rough winter seas to the north, to avoid detection.

Meanwhile, the Hawaiian garrison kept an alert watch for sabotage. They bunched up planes and naval vessels to make it easier for sentries to keep an eye on all of them, a decision that would maximize the impact of aerial bombing. In all other ways, though, the troops were operating under a peacetime routine rather than with any real appreciation of looming war. Radar operators spotted the incoming raiders, but their supervisor assumed they were the B-17 flight from California. When the *Ward* sank the Japanese midget sub just outside Pearl, it took report of the action more than an hour to reach anyone able to act upon its relevance; by then the attack was just minutes away.

In short, though U.S. planners knew an attack on Pearl was feasible, they did not really expect one – and were in no position to react rapidly when the first warnings preceded the attack by mere hours and minutes. Inertia created the surprise at Pearl Harbor far more than did intrigue.



Pearl Harbor

On Dec. 7, 1941

A MASSIVE MOBILIZATION

News of the attack on Hawaii stunned the American public. Grown men wept on the New York subway. Panic broke out at ballgames when the news was announced. Churches across the country held services for standing-room-only crowds. Upon learning of the attack, Roosevelt beat his fist in frustration, railing about American planes being caught "on the ground, by God, on the ground!"

Small crowds gathered around radios nationwide the next day to hear Roosevelt's matter-of-fact request for war. The speech contained no flowery language, and revealed little about the damage at Pearl. It was confirmed within an hour by the House and Senate. On Dec. 11, 1941, Germany foolishly declared war on the United States as a vote of solidarity for its Axis ally. The nation had become embroiled in a world war.

Hundreds of thousands of U.S. men rushed to enlist, most of them motivated by the sudden war fervor (pp. 43-44). A nation which had been grudging in its preparations for war suddenly turned all of its economic might toward transforming itself into a military colossus.

Peril in the Pacific

The Japanese had formally declared war on the United States a full eight hours after the attack on Pearl Harbor. By the next day, Japanese forces had landed in Malaya, Siam, and Shanghai, and had hit U.S. forces in the Philippines and Guam. They also had bombed Hong Kong and Singapore.

After air raids beginning Dec. 8, they also attempted to land on tiny Wake Atoll, a refueling stop, airfield, and seaplane base some 2,000 miles west of Hawaii. There, a few hundred Marines with a dozen Wildcats beat off a Japanese force supported by three cruisers, six destroyers, four transports, and two submarines. Battered and outnumbered, the Marines at Wake held out for 15 days. A relief force was only a bit too far away when the Marines surrendered, after losing fewer than 50 men while inflicting about 1,000 casualties on the Japanese. The defeat proved bittersweet. American newspapers billed Wake as the "Last Stand at the Alamo."

The Philippines were next. Japanese planes destroyed half of Gen. Douglas MacArthur's (p. 64) air force on the ground Dec. 7; the American planes were sitting wingtip to wingtip while the air crews lunched. Japanese troops landed unopposed Dec. 10. As ordered in the U.S. strategic plan for war against the Japanese, MacArthur fell back to the Bataan peninsula with his 80,000 men. The Japanese looted and burned Manila while the defenders dug in at Bataan.

Bataan Death March

"We're the Battling Bastards of Bataan
"No mamma, no papa, no Uncle Sam
"No aunts, no uncles, no nephews, no nieces
"No rifles, no planes, no artillery pieces
"And nobody gives a damn."
– ditty created by war correspondent trapped with the troops at Bataan

When U.S. and Filipino forces surrendered to the Japanese on Luzon, they were subjected to some of the most inhumane treatment experienced in the war. Forced to march 60 miles to a concentration camp, the troops were denied water, food, or rest, and subjected to all manner of cruelty at the hands of their captors. Many were bayoneted, beheaded, buried alive, or ran over by passing Japanese trucks. The weak, injured, and slow were bayoneted, or scourged with barbed-wire whips. Filipino civilians that tried to help, by throwing food at the passing troops, were shot.

Mercy was almost completely missing, but not quite: Mario "Motts" Tonelli, a former Notre Dame football player who had made a game-breaking run against the University of Southern California, gave up his class ring to a Japanese trooper rather than have his finger cut off to fetch it. A Japanese officer who had attended USC and seen the game returned the ring. (Another captive encountered a Japanese soldier wearing a University of Oregon class ring, and both spoke excellent English.)

Of the 12,000 Americans and 66,000 Filipinos that surrendered at Bataan, only some 54,000 survived the march. They entered a hellish system of concentration camps that would kill three of every eight occupants during the course of the war.

Privation gnawed at the troops, leaving less than 25% of them healthy when they were finally overrun by the Japanese on April 9. Despite an epic defense, MacArthur had been ordered to escape to Australia a month earlier.

This left Lt. Gen. Jonathan Wainwright to fight on with some 2,000 men at the fortress "Rock" of Corregidor until they, too finally gave in on May 6, 1942. In only six months, organized military resistance in the Philippines had ceased. The nation had taken a licking in the war's opening stages.

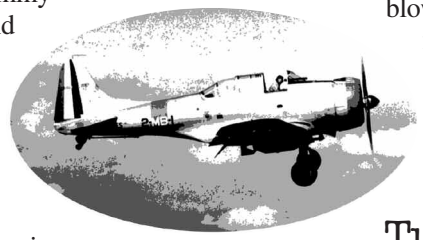
GIVE 'EM HELL, BOYS!

While the U.S. government was officially endorsing the "Europe First" strategy, the majority of Americans wanted vengeance against the conniving Japanese. U.S. Navy destroyers and submarines would have the first taste of revenge in the Pacific, sinking Japanese vessels throughout January 1942. On Feb. 1, the carriers *Yorktown* and *Enterprise* pummeled Japanese forces in the Marshall and Gilbert islands. On Feb. 20, near Rabaul, the fliers of the carrier *Lexington* downed 20 Japanese Navy planes with a loss of only one American plane, foreshadowing the demise of the Japanese navy.

It was the Army, however, that struck the first blow against the Japanese home islands. In a daring raid from the pitching deck of the carrier *Hornet*, 16 B-25 bombers (p. 84) took off on a near-suicidal mission against the Empire of Japan. The bombers were too big to return to the *Hornet*. Instead, the fliers planned to keep going past their target to the Asian mainland, where they hoped to find safety among the Chinese forces resisting their Japanese occupiers. The Army air crews bombed Tokyo and its vicinity on April 18, 1942. The destructiveness of the raid was trivial, but it was a great morale boost to Americans who were told by Roosevelt that the planes had launched from "Shangri-La," a fictional kingdom from James Hilton's then-popular novel *Lost Horizons*. In January 1943, the Navy would name a new *Ticonderoga*-class carrier (see *Essex*-class carrier, p. 93) *Shangri-La*.

The Japanese public hardly noticed the attack – many thought it was an air-raid drill – but the government fretted. The military had bragged that Nippon was untouchable. As reprisal for assisting the raid, 250,000 Chinese would be killed.

Enjoying a healthy measure of luck, 71 of the 80 fliers returned to the United States, including the raid's commanding officer and guiding spirit, James "Jimmy" Doolittle, who was promoted to general and awarded the Medal of Honor. Doolittle would go on to command the American strategic-bombing campaign in Europe.



Island Hopping

The U.S. strategy against Japan was quite simple at its core: punish the Japanese home islands until the populace surrendered. Geography considerably complicated this goal, given that the islands lay some 2,500 miles from U.S. bases, behind a curtain of atolls and islands bristling with defenses. Furthermore, in January 1942 the Japanese fleet outnumbered the U.S. fleet in every category of warship. The U.S. Navy would not reach parity until 1943.

Given their resources, U.S. commanders chose to whittle away at each island stronghold, moving toward the Japanese homeland one step at a time. This stepping-stone or "island-hopping" approach made the best use of the limited Army, Navy, and Marine forces available, and proved to be a successful strategy. This concentration of firepower minimized casualties, though they often would be high despite the advantage. In addition, the plan gave a more-or-less green military establishment some badly needed combat experience.

The natural route for the Navy's island-hopping campaign began in the South Pacific and wheeled north through the Solomons, New Guinea, the Philippines, and finally to Okinawa. This set the stage for the eventual invasion of Nippon itself. This route also had the advantage of providing good protection for Hawaii and Australia, both essential to the support of Allied forces in the Pacific.

Costly Victory at the Coral Sea

Naval and Army intelligence was working around the clock to crack Japanese radio codes, in Project MAGIC. This effort paid handsome dividends, aided in part by the Japanese "victory fever," in which they sloppily handled secure communications. The first windfall from the broken codes revealed the Japanese intent to take Port Moresby (see p. W23).

A U.S. task force centered on the still-precious carriers *Yorktown* and *Lexington* raced to intercept the Japanese invasion force, resulting in the first carrier-vs.-carrier battle in history. After a thrashing of Japanese escort vessels on May 3 by the *Yorktown*'s planes, the Japanese light carrier *Shoho* was sunk on May 7, hit by 20 bombs and torpedoes. That evening, several Japanese planes mistakenly attempted to land on the *Yorktown* well after dark.

The next morning, the two air groups searched for each other. U.S. fliers damaged but failed to sink the *Shokaku*. Japanese air crews found the *Lexington* and sank her, damaging *Yorktown* in the process. The *Yorktown* limped back to Pearl Harbor, its officers expecting to be at dock at least 30 days for repairs. Repair crews worked around the clock and had this ship seaworthy in only three days.

Although the loss of "Lady Lex" was a serious blow, the Battle of the Coral Sea delivered the first Japanese loss of the war, and much more importantly, turned back the planned invasion of New Guinea. For Americans, it also offered a taste of sweet revenge.

Turnaround at Midway

Doolittle's Tokyo raid had a very important side-effect. Since the carrier *Hornet* had approached the Japanese home islands through the Midway "keyhole," Yamamoto pushed for the capture of Midway, sealing off this route and hopefully drawing the U.S. Navy out to annihilation.

Instead, he would sail into an ambush.

Broken codes again tipped off U.S. commanders to the plan. On June 3, a PBY scout plane (see p. W116) found the Japanese force of four carriers and their escorts steaming toward Midway. The next morning, the *Yorktown*, *Enterprise*, and *Hornet* launched a risky strike, outside of their own planes' combat radius, hoping to make up the shortfall by racing the carriers toward the Japanese (and their planes needing retrieval) during the combat. The risk paid off. The "miracle at Midway" (see p. W25) resulted in the destruction of four IJN carriers. Ever after Japan would be on the defensive.

Aleutian Sideshow

In June 1942 the Japanese sent a diversionary fleet to the Aleutians, a chain of islands 1,700 miles east of the Alaskan mainland, in the Bering Sea. This was intended to draw American forces away from Midway, and to protect the northern approach to their home islands.

The diversionary aspect of the operation failed, thanks to yet more American code-breaking. Small Japanese garrisons were landed on Attu and Kiska, where they were left alone until May 1943, when GIs waded ashore on the barren islands and were met with banzai charges in white-out conditions. The fog and snow slowed the pace of combat until August 1943, when the last Japanese retreated from the islands. American forces suffered a few hundred casualties; the Japanese, more than 2,500.

Ending the Solomons Stalemate

Operation Watchtower, the invasion of Guadalcanal, was the first U.S. ground offensive of the war, and the second ringing defeat of the Japanese, coming less than a year after Pearl Harbor. For the Japanese, the end result of the brutal seven-month battle (see p. W25) was a humiliating retreat from the island, with the loss of almost 25,000 men and 25 warships, including two carriers and two battleships. Even worse was the loss of roughly 300,000 tons of critically needed merchant shipping, and 600 aircraft and 2,300 pilots that the Imperial forces desperately needed. After the war, Japanese commanders would cite the loss at Guadalcanal as the benchmark telling them that they had begun a losing fight.

The United States lost 1,500 Marines, mostly in fighting around Bloody Ridge. The Navy would lose 25 warships (including two carriers) and 5,000 sailors, many of whom went down in Ironbottom Sound, between Guadalcanal and Savo Island. Despite these losses, the U.S. high command hailed the victory at Guadalcanal as the confirmation that "island hopping" would work.

Landings at other islands in the Solomon Islands followed, culminating in the capture of Bougainville in November 1943. Two months later, U.S. bombers would be staging raids on the Japanese stronghold at Rabaul from that island. The surging U.S. forces were piercing into the heart of the Japanese defenses.

Nipping Away in New Guinea

As Marines crept through the Solomons, Australian and U.S. Army troops moved to New Guinea, capturing Buna and Lae in New Guinea in late 1942 and early '43. Other Japanese strongpoints, eventually even Rabaul with its garrison of 100,000, were left to "wither on the vine."

As the Army forces flowed around them and cut their supply lines, thousands of the Japanese manning these posts starved to death. Some tried to grow their own food; many of these self-styled farmers fell prey to real-life head-hunters. Angry primitives killed thousands of Japanese for $1 a head. (The bounty was never officially condoned, and is still denied, but veterans of the campaign insist it was back-door policy for Australian and U.S. commanders.)

MacArthur's "hit 'em where they ain't" campaign was working, and it kept the Japanese off balance. After the war, Japanese commanders would say that his leap-frogging was the strategy they most despised. His skillful use of airborne and amphibious forces allowed him to do much with little.

The Gilberts and Marshalls

After MacArthur and the Army secured the southern corridor to Australia, Nimitz and the Navy launched attacks on the northern pathway to Japan, the Central Pacific – hitting Makin and Tarawa (see p. W28) in November 1943.

The U.S. public would get a small taste of "Bloody" Tarawa in the Oscar-winning documentary *With the Marines at Tarawa*. The film galvanized the nation and increased war-bond sales . . . but Marine enlistments dropped by a third.

From the Gilberts, Nimitz struck next at Kwajalien and Enwietok in the Marshalls in early 1944, pressing ever closer to Japan. At Enwietok, U.S. battleships leveled their guns at only 1,500 yards from shore, pulverizing any resistance at point-blank range. The U.S. armed forces were beginning to master the amphibious assault.

China-Burma-India

Lt. Gen. Joseph "Vinegar Joe" Stilwell commanded U.S. forces in the China-Burma-India theater, under British control. The primitive and rugged terrain made this largely a logistical conflict, dominated by the construction of roads and rail lines, and increasingly by flying transport. One of the toughest cargo-hauling jobs in the war went to the pilots who flew "The Hump" over the towering Himalayas.

On the ground, U.S. Army dogfaces in Merrill's Marauders fought behind Japanese lines in Burma, something they learned from the similar British Chindits. Like their counterparts, the American units relied on mules and airdrops for supplies. At all times, disease and exhaustion claimed far more casualties than did battle in this forbidding battleground.

Hard Lessons in Africa

Europe had not come first, after all, because the Japanese had required immediate attention, but once the U.S. military mustered a proper force it launched Operation Torch. On Nov. 8, 1942, an Allied invasion armada of 85 ships, including 12 aircraft carriers, slipped into position off the coast of North Africa. With a force of more than 100,000 men, mostly green U.S. troops, the invasion began.

Generals Eisenhower and Mark Clark had negotiated with the Vichy French in North Africa. Resistance was light and the Allies took Morocco and Algiers. Allied forces soon engaged in a series of battles along the coast toward Tunisia. The Germans fell back against the pressure but consolidated as they received reinforcements from France and Sicily.

German Gen. Erwin Rommel launched his drive Feb. 14, 1943, plowing right into the weak American lines in an effort to blunt the Allied attack and buy time for consolidation in Tunisia. His thrust into Kasserine Pass, a gap in the Atlas Mountains, caused panic among green GIs meeting the fury of more than 200 panzers led by 12 of the new Tiger Is (see p. W104). Stuka dive-bombers harassed the retreating Yanks, and wrecked American morale. American infantry raced to Tebessa to stop the attack, but the Americans had lost more than 250 tanks and 100 self-propelled artillery pieces. Casualties among the troops reached 6,000. Uncle Sam's doughboys had been given a bloody nose in their first encounter against the Nazi supermen.

The green U.S. troops at Kasserine Pass suffered from many shortcomings. The Germans easily outgunned the obsolete M-3 Grants, and even the newly deployed M-4 Shermans. U.S. tank gunnery was poor, and the ground troops had been scattered by their commanders, rather than concentrated for mutual protection and quick counterattack. The corps commander, Lt. Gen. Loyd R. Fredendall, had done a shoddy job of conducting the battle from his bunker 60 miles away. The GI showed a "total lack of aggression," according to one biting appraisal from the British.

Eisenhower tapped his old friend, Lt. Gen. George S. Patton Jr., and placed him in charge. He wasted no time in whipping his troops into shape. His insistence on aggression, discipline, and attention to detail drove the Americans to success after success against the collapsing Axis forces in North Africa. The capture of Hill 609, near Mateur, showed the élan the Americans had gained. Eisenhower would remark that Hill 609 was "final proof that American ground forces had come fully of age."

Three months later, the Allies captured 250,000 Axis troops, one of the largest mass surrenders of the war. U.S losses in the North African campaign were light, with fewer than 4,000 killed and 10,000 wounded.

Success in Sicily

Allied troops waded ashore in Sicily only two months after the North African campaign had ended (see p. W27). Landings for Operation Husky began July 10, 1943, virtually unopposed by the 300,000 Axis troops there. Bitter fighting erupted inland, however, exacerbated by rugged, mountainous terrain, and losses brought on by malaria and 100º heat.

In many ways, Sicily was a preview of things to come, with Patton's brash and rapid advances standing in sharp contrast to British Gen. Bernard Montgomery's more plodding pace. At Gela, the U.S. Navy soundly bested German tanks in a one-sided duel, clearing the way for Patton's 7th Army. The U.S. 1st Infantry Division would enter a week-long struggle for Troina, and Patton would repeatedly hook behind German positions via small-scale amphibious landings.

Allied failure to control the straits of Messina allowed 100,000 Axis troops to escape to mainland Italy, however. Infighting between the two commanders over routes of advance resulted in Patton's "go like hell" drive to beat Montgomery to Messina. This drove the rivalry between the two Allied commanders past anything healthy into something like hatred.

Atlantic Lifeline

Roosevelt began his Lend-Lease program in the fall of 1940, initially trading 50 worn-out destroyers for rights to build bases on British possessions. More trade followed and more goods began flowing east across the Atlantic. This shipping required protection from U-boats, and meeting this need led the U.S. Navy to unofficially enter the fighting well before the nation declared war (p. 9).

After the United States became a combatant, and Roosevelt and Churchill declared a "Europe First" policy, U.S. merchant ships traveled unescorted. U.S. inexperience with the effectiveness of German submarine "wolf packs" – and refusal to take advice from the experienced Canadians and British – led to the loss of 400 ships in just six months. Many of these ships were sunk within sight of shore, easy targets at night when backlit against East Coast cities. Every morning the oil-soaked bodies of mariners washed ashore from Florida to Maine.

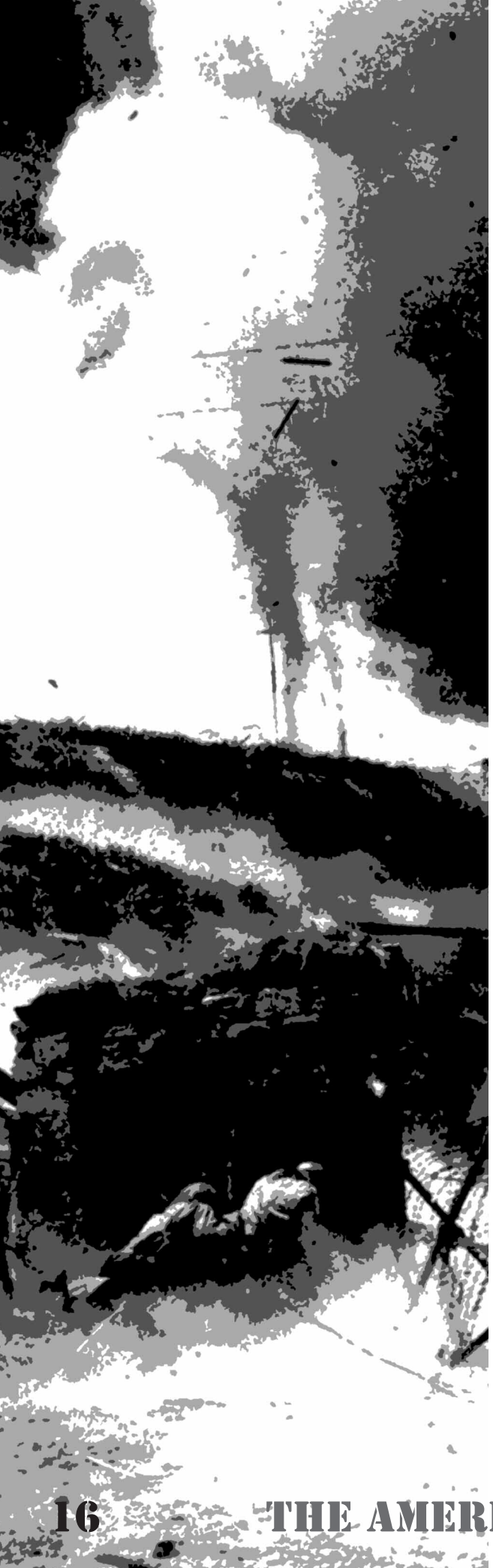
The Americans and other Allies soon turned around the Battle of the North Atlantic, however. Increasingly effective intelligence on U-boat operations and tactics, and the adaptation of the B-24 for long-range anti-submarine patrols, were combined with close-escort carriers for each convoy. Even if the aircraft failed to sink the submarine, they invariably succeeded in pushing the U-boats underwater, where destroyers and escorts could bombard them with depth charges.

By late 1942, the escort vessels were equipped with radio direction-finding gear (called Huff-Duff), sonar, radar, and newer depth charges. With this equipment, the escorts began sinking German subs at a phenomenal rate. Depth-charge launchers, such as the K-Gun (p. 75), were able to fire charges in large patterns around the ship, and were quite successful at sinking subs.

Meanwhile, more than 90 Liberty ships were being built each month, each taking weeks to build rather than the months required in peacetime. In May 1943, the German Adm. Doenitz conceded to Hitler that he had to call off his U-boats. There was no way to stem the unrelenting tide of American war materiel headed to Britain.

By late 1943, the Battle of the Atlantic had been won. Supplies were pouring into Britain so fast that many joked that the island might sink! It almost seemed that every field in the country was clogged with tanks, trucks, and piles of ammunition, a massive buildup setting the stage for a cross-channel attack.

By the end of the war, the United States had poured $50 billion into Lend-Lease, with half going to Britain and one-quarter to the Soviet Union. Britain had imported a full 25% of its wartime food from the United States. (Even so, rationing was strict.) The Soviets kept their vast army alive on U.S. rations, marched them on 13 million pairs of U.S.-made boots, and hauled their supplies in a fleet of U.S.-made trucks. The arsenal of democracy had made an impact on almost every battlefield in the war, even those with no U.S. troops on them.



Inertia in Italy

The invasion of Italy in 1943 was split into two key landings: the British 5th Army across the Straits of Messina on Sept. 3, and the U.S. 5th Army much farther north at Salerno on Sept. 9.

Gen. Clark commanded the U.S. invasion force, which ran headlong into crack German troops under Field Marshall Albert Kesselring (see p. W:IC55). The operation was so close to failure that Clark considered calling it off, but the last-minute arrival of reinforcements, and a perilous and costly parachute operation by 4,000 men of the 82nd Airborne, saved the beachhead. By Sept. 26, the American landing was secure. In the meantime, British troops swept east, rolling up Bari and Brindisi.

The British advanced at breakneck speed as German forces fled northward to get beyond Salerno beachhead. Soon, the Allies faced more rugged terrain, and the first of the defensive lines in Italy, the Gustav Line. Artillery, mines, and a string of interlocked fortresses combined with ridge after ridge of Italian hills promised a bloody campaign – something the Texans of the 36th Infantry Division learned in short order. They lost 2,000 men in less than two days trying to cross the Rapido River under the guns of the Gustav.

To bypass this line, Allied leaders launched a landing in late January at Anzio (p. 124), 35 miles south of Rome. This thrust far behind German lines was intended to take pressure off Allied forces as they attempted to break through the Gustav Line. The landing started brilliantly, but rumbled to a stop only a few miles inland. The ensuing four-month long battle for the Anzio beachhead cost more than 70,000 U.S. casualties. But the news was not all bleak. A new American hero was born on the beachhead at Anzio when then-Staff Sgt. Audie L. Murphy won his first combat decoration, the Bronze Star, by single-handedly destroying a German tank with rifle grenades.

For months, Allied troops faltered against a handful of Germans dug into the high ground. Monte Cassino (see p. W29) was one such strongpoint. American soldiers huddled on the beachhead until May 23, when Maj. Gen. Lucian Truscott linked up with Allied forces who had been broken through the Gustav Line and begin the long bloody drive up the boot.

On June 4, Rome fell to American forces, but this proved to be a controversial decision. Gen. Clark had chosen to liberate Rome, rather than cut off thousands of Germans retreating back to the Gothic Line, where they held out in Italy until the end of the war. After Rome, Allied forces pressed north through the Gothic Line, yet another string of mountain ridges and valleys strewn with fortifications and minefields that would slow the Allied advance to a crawl.

The 442nd Regimental Combat Team, a Japanese-American unit, began accumulating accolades during this ruthless fighting. The all-Nisei unit eventually became one of the most decorated units in U.S. history. With the motto "Go For Broke!" the 442nd earned 21 Medals of Honor, 560 Silver Stars, and 9,500 Purple Hearts. The unit would fight in France and help liberate concentration camps in Germany.

German forces held on, facing the Army's crack 10th Mountain Division in the spring of 1945. The ski troopers and mountaineers sustained 5,000 casualties by May, and claimed the capture of no less than 23 strategic points by assault. Often, these assaults required long climbs; some were accomplished in total darkness.

When hostilities finally ceased in May 1945, the U.S. forces in Italy had sustained nearly a quarter-million casualties, making this one of America's bloodiest campaigns. Churchill's "soft underbelly of Europe" had proved anything but.

THE WESTERN FRONT

With Stalin demanding that the western Allies open a "second front" from 1941, meaningful discussion of the invasion of Europe finally began at the Casablanca conference in the spring of 1943, with talk of a "cross-channel attack" and the development of a planning staff.

Eisenhower was placed in charge of the Allied Expeditionary Force. Montgomery was the ground-force commander of the 21st Army Group. Bradley took charge of the U.S. 1st Army (based on the 1st, 4th, and 29th divisions) and Dempsey the British 2nd Army (with the Canadian 3rd and British 3rd and 50th divisions).

June 6, 1944: The Great Crusade

Overlord was the largest amphibious invasion the world had ever seen, and one of the biggest gambles in history. It would be the most important Anglo-American operation of the entire war.

Operation Fortitude

The deception campaign prior to the Normandy landings – Operation Fortitude – was vital to the success of Overlord. The operation's primary goal was to convince the German high command that the Allies were planning to land at Calais, an obvious landing point because it was the shortest and most-direct path across the English Channel into France.

Fortitude used every trick in the extensive British book. Double-agents planted information on unknowing dupes who were practically handed over to Nazi agents. The highly publicized appointment of Patton as commander of the fictitious 1st U.S. Army Group (FUSAG) kept the German focus there, instead of on other units. The FUSAG deception included a complete headquarters of radio operators and typists who produced a high volume of radio and written communiqués. These messages convinced the Germans that Patton's FUSAG would be the invasion force. The ruse included a military post occupied by empty tents, and inflatable tanks and trucks complete with fictitious unit numbers.

Other efforts for Fortitude included selectively knocking out radars during bombing missions to provide a window in German radar coverage through which the invasion force could pass. At the same time, a small force of escorts and destroyers used reflectors and radio equipment to give the impression that a massive fleet was assembling off Calais.

Fortitude proved to be crucial in delaying the unleashing of the panzer divisions who might have forced the Allies back into the sea (see p. W:IC24).Combined with previous months of misinformation, this initiative left the German high command unconvinced the invasion in Normandy was the full effort, even after it fell upon them.

Out of the Beachhead

Allied soldiers began coming ashore at dawn along a 40-mile front. Confusion and chaos kept the battle a close-run thing, but at the end of the day the soldiers had advanced at most a couple of miles, linking up with Allied paratroopers dropped the night before who were holding bridges and key road junctures. For more on D-Day, see Chapter 6.

The Anglo-American invaders grappled with German forces in the hedgerows for two months, consolidating their hold on the Cotentin peninsula by taking Cherbourg and, finally, Caen. U.S. forces attacked Cherbourg, a well-defended port city at the tip of the Cotentin. Infantry broke through a ring of concrete bunkers, tank traps, and barbed wire. From the harbor, German coastal guns dueled with Allied battleships. The city finally surrendered on June 27, but fanatical Nazis inside held out for three more days, obeying Hitler's orders to die to the last man. The port facilities were demolished, and it would be weeks before they could contribute to logistics buildup. Meanwhile, Montgomery had been ordered to take Caen on D-Day itself, but ended up battering away against the city for a month before its defenders finally yielded.

The next big struggle would be for the crossroads town of St. Lo. Squarely in the middle of hedgerow country, and protected from U.S. airpower by the weather (the wettest French July in memory), St. Lo would cost some 40,000 casualties before falling July 19.

In the meantime, the British under Montgomery were facing the bulk of the German armor at Caen. A series of costly breakout attempts culminated in Operation Goodwood on July 18. It, too, failed, even as U.S. forces rotated south from the sealed-off Cotentin and got on line for their own breakout attempt, which would try to sweep through and clear Brittany.

The Breakout

Operation Cobra, the U.S. breakout at St. Lo, was launched July 25, with 1,500 bombers in a stream stretching some eight miles dropping their munitions right on the enemy front line. Though highly orchestrated and well briefed, a few bombers overshot, killing Lt. Gen. Lesley J. McNair and hundreds of other friendly troops. Most of the explosives landed on the Germans, however, destroying the one armored division facing the Americans and turning the terrain into a lunar landscape.

The surviving German forces hardly put up a fight; they were stunned by the massive bombardment. In just five days, the German front caved in. U.S. troops captured the port city of Avranches and set the stage for the Falaise-Argentan slaughter (see p. W32).

This sharp difference in fortunes created more friction among Allied commanders. In an attempt to save face, Montgomery pointed out that his troops had faced much stiffer resistance. Like many American leaders before and after them, the U.S. generals were less interested in excuses than results.

Amidst the infighting, the real war continued. Patton's 3rd Army broke out of the hedgerow country Aug. 1 and seemed to go willy-nilly, heading in multiple directions, mopping up the whole of Brittany in a few days. Many of the German-held cities were cut off from re-supply but doggedly held on – some until the end of the war. By Aug. 6, all of Brittany was for most purposes in American hands.

The next day, Hitler pushed his commanders into an attack near Mortain. This small but tough German offensive stalled and eventually fell back under the onslaught of U.S. firepower (p. 105).

Rolling West

The U.S. forces swept across France from north of the Loire to the Seine, meeting cheering French crowds at every village. As they did so, Commonwealth units pushed from the north toward Falaise. Bradley ordered the U.S. forces to stop at Argentan, and the Germans who tried to slip through the Falaise Gap (p. 108) were pummeled relentlessly. Bradley was criticized for halting his men short of closing the pocket, but he was under the impression that the Canadians were advancing to eradicate the gap and wanted to avoid any friendly-fire accidents. Late in the war, he would remark that given the same situation again, he would not repeat the mistake.

After the blood-letting at Falaise, Allied troops poured after the retreating Germans. Full-scale retreat for the *boche* meant full-scale pursuit for the Allies. Virtually no large-scale battles took place until Aachen (p. 108).

In between, Allied forces celebrated in Paris (p. 107) and tried desperately to build up reserves and supplies. This was becoming difficult. The 6,000 trucks of the Red Ball Express, which carried supplies around the clock to Patton's 3rd Army, were eating up nearly as much gas as they were carrying. In mid-September, the all-out pursuit by the 3rd Army ground to a jog, and finally a crawl. Thanks to high command's investment in Market-Garden (see below), supply inventories would not reach acceptable levels until January.

On Aug. 15, Allied forces invaded southern France, in Operation Dragoon. Dragoon would use the same invasion template as at Normandy, with airborne troops (including a unit of black glider troops) sealing off the area behind the beaches. Within a month, units that landed on the French Riviera would link up with the northern invasion at Dijon, completing the liberation of France.

Market-Garden

After the heady days of late August 1944, Allied planners seriously entertained the idea that the war would be over by Christmas. Operation Market-Garden (see p. W33), the plan to make that happen, was of Montgomery's crafting.

Gen. Eisenhower had considered and rejected up to 18 separate airborne attack plans before Market-Garden was conceived. By mid-September, however, the green light was given, and the largest airborne assault since D-Day was launched.

On Sept. 17, U.S. paratroops in the 82nd and 101st Airborne divisions jumped to hold the back door; British and Polish forces jumped "a bridge too far" and into the teeth of refitting panzer units. The jump that should have opened a vital corridor into Germany was dead and gone by Sept. 25, only eight days after it had began (p. 108).

American commanders fumed. Patton and Bradley had disapproved of the risky plan, citing Eisenhower's backing as yet another political decision to keep "Monty" happy. The investment of men and materiel in Market-Garden left the American units short on supplies. Patton was furious, claiming "my men can eat their belts, but my tanks have to have gas!"

The West Wall

Anglo-American troops breached the Siegfried Line on Oct. 2, passing minefields, concrete tetrahedron "dragon's teeth," and a 3-mile-deep line of bunkers and machine-gun pits that reached from Holland to Switzerland.

Though initially much feared, the West Wall was more easily overcome than the beaches at D-Day, in no small part because the Germans had stripped their Siegfried defenses to arm their lines on the French coast. Air, armor, and artillery made short work of the Siegfried positions in the open, and engineers blew gaps in the obstacles.

In October, the U.S. 1st Army captured Aachen, the first German city to fall (p. 108). More bloody fighting took place in the Hurtgen Forest (pp. 102-103) south of Aachen.

Farther south, in Metz, France, the 3rd Army tackled the six forts surrounding the city. Protected by 14'-thick concrete walls and bristling with heavy cannon and MGs, the forts slowed Patton for nearly three weeks, before falling Nov. 18.

The Air War

The German minister of armaments, Albert Speer, felt that the western Allies had opened Stalin's "second front" long before D-Day – in the skies over occupied Europe. In response to this aerial onslaught, the Germans had deployed more than 20,000 anti-aircraft guns, firing upwards of 3 million shells a month and demanding upwards of 1 million crewmen. The resources could have been used on the Eastern Front, but according to Speer, they were little more than a "reassuring fireworks display for the population" in their AA role.

Flying from bases in England, and later Italy, U.S. airmen targeted crucial German industries for destruction by daylight pinpoint bombing, which dropped bombs in the "pickle barrel" from 25,000 feet. This daring campaign would claim more than 50,000 American casualties from 1942 to the war's end (see p. W82).

Raids into Germany began in January 1943 with an assault on Wilhelmshaven by the 8th Air Force, based in England. These would step up in number and frequency until 959 planes would take part in a single raid against Berlin in February 1945. The 15th Air Force, based out of Italy, would join the 8th in hitting Hitler's Fortress Europe. German cities became the targets of the air crews. Names such as Dresden, Bremen, Frankfurt, and Hamburg would send as much dread through the crews as their bombs created in those city's populations.

By December 1944, nearly 600,000 tons of bombs had been dropped on Germany by U.S. bombers, yielding handsome results; at least one-third of all German production was shut down. Destroying special targets, such as ball-bearing plants at Schweinfurt, and synthetic-oil refineries, caused a chain reaction that impaired other industries. While not the decisive instrument some pre-war strategists had suggested, the air war proved to be a vital tool in the Allied victory.

Battle of the Bulge

After the bloody Huertgen and the West Wall, the Allies settled down for the winter in mid-November, waiting out the supply situation and bringing in reinforcements. Many of the worn-out divisions were taken out of the line and sent to a quiet sector in Belgium, near the Ardennes.

As explained on p. W33, the area proved to be anything but quiet as a German offensive poured through a hole 50 miles wide in the thin American lines. The defenders were stunned. The Germans captured 20,000 prisoners, including 7,000 men of the 106th Infantry Division – the largest mass surrender in U.S. Army history. Another 60,000 were killed or wounded.

Part of the confusion at the Bulge was caused by Germans disguised as U.S. servicemen (see p. W:HS15). Using captured jeeps and Panther tanks disguised as American armor, the SS men of Operation *Greif* infiltrated the U.S. lines. Most of them were captured or killed. The ruse gained no real strategic result, but it caused untold minor problems as jumpy GIs aggressively questioned every stranger they met. Rumors circulated that Eisenhower had been assassinated by the spies.

American paratroopers of the 101st Airborne were rushed to the battle at night, and ended up in and around Bastogne, Belgium. There, they were surrounded by German divisions and ordered to surrender. Brig. Gen. Anthony C. McAuliffe's reply was classic: "Nuts!" Though poorly equipped and supplied, the paratroops kept up a surprisingly high morale. As one GI in Bastogne remarked, "They've got us surrounded – the poor bastards."

Patton's 3rd Army was whipped around 90º and slammed into the southern shoulder of the German advance. After seven days under siege, the airborne linked up with armored units Dec. 26. (The paratroopers never acknowledged that they were "relieved" from the siege.)

With Montgomery attacking from the north, the Germans retreated against pressure from both shoulders of the salient. Allied airpower, no longer restricted by bad weather, blasted the Wehrmacht as its men crossed back into Germany. The battle dissipated in early January, ending with a press conference by Montgomery. He claimed all the credit for the victory. Eisenhower, Bradley, and Patton were livid.

After the battle, it was discovered that 100 U.S. servicemen captured near Malmedy, Belgium, had been executed by SS troops. Hotheaded GIs would later cite this as their excuse to commit atrocities in kind to any surrendering Germans that they encountered.

Across the Rhine

After taking Cologne, the Allies sniffed around for a way across the Rhine, finding one at Remagen (p. 108). At the end of March, Operation Varsity, the largest Allied airborne operation of the war, got under way. Some 10,000 aircraft helped put 22,000 men across the Rhine in the Wesel region. Enormous amounts of flak met the paratroopers and gliders, but within hours most of the airborne objectives had been taken.

For the most part, German troops, including Hitler Youth (see p. W:IC47), fired a few shots and then surrendered to the advancing American units. But that was not always the case. Gen. Maurice Rose, commander of the 3rd Armored Division, was killed in Paderborn in March 1945. He was the only U.S. division commander killed in Europe.

Once across, American units rumbled toward the Elbe for a planned linkup with the Russians. Instead of advancing to Berlin, Eisenhower decided to capture the Alpine area with its rumored 100,000-man army (see p. W34).

Changing of the Guard

Pres. Roosevelt died on April 12, 1945, in Warm Springs, Ga., moments after complaining of a headache. His body was loaded onto a funeral train that crept slowly back to Washington through towns filled with weeping onlookers. The whole nation wept at the loss; overseas, hardened veterans broke down in tears upon hearing the news.

Harry S Truman was sworn in as president immediately. He leaned heavily on Harry Hopkins, Roosevelt's adviser, for the next several months, but never backed down from his duties. His good health, acerbic attitude, and stubborn personality made up for the initial lack of confidence the public had for the new man. Within weeks he was accepted, and the government that had spent over a decade in FDR's service smoothly made the transition to the Truman administration.

Liberation

As Allied units pushed into Germany, they began liberating POW camps. One of the largest liberations was at Stalag VIIA, which held more than 120,000 inmates. The prisoners cheered and mobbed the soldiers from Patton's 3rd Army as the tanks broke through the wire. Some 95,000 Americans would be freed from captivity in Germany. (Another 15,000 would survive even more brutal internment by the Japanese.)

Other camp liberations were not as celebratory, as the advancing troops discovered the horror of the Final Solution. Allied units began overrunning concentration camps (p. 107) in April, including Buchenwald and Bergen-Belsen. For the victors, the most pitiable situation was watching hundreds of survivors die every day despite the medical attention and nutrition provided for them.

V-E Day

Soviet and U.S. soldiers met at Torgau on April 25, toasting each other with whiskey and vodka. Hitler's suicide on April 30 signaled the end of the war in Europe, and with the German surrender in Reims, France, on May 7, all hostilities officially ceased. May 8 was the celebration many had hoped it would be. Victory Europe had finally materialized.

Along the U.S. East Coast, the lights came on as the blackouts were lifted. In New York City, a street party broke out at noon on May 8 and lasted three days. Mounted police were called in to break it up; Navy security police arrested 150 drunken sailors. In Europe, the Army began the long process of instituting an occupation government in Italy and Germany.

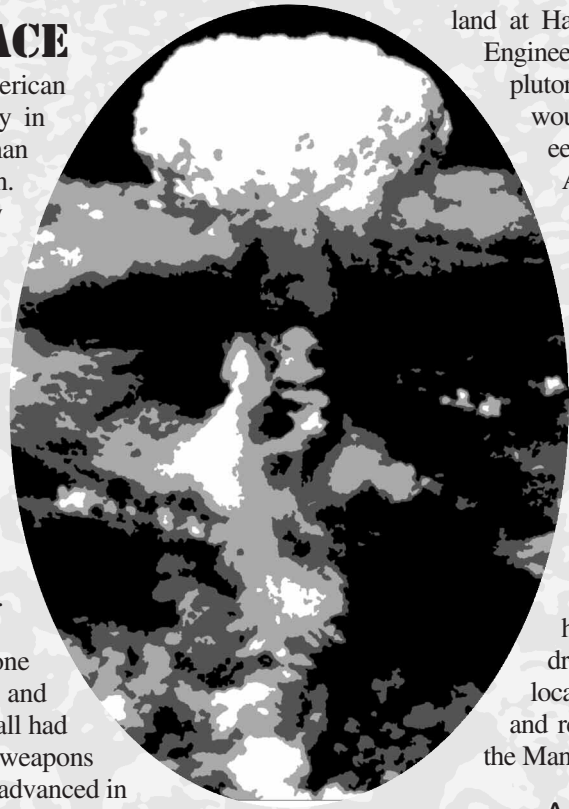
For military leaders, there was considerable relief on the one hand, but a good deal of trepidation on the other. Many infantry and armor units in Europe were slated for movement to the Pacific, where the Japanese were down, but far from out. The proposed plan to amphibiously invade and conquer Japan – Operation Majestic – had some strategists estimating that it would cost yet another 1 million casualties.

THE ATOMIC BOMB

While the men and guns of conventional armies grappled across the globe, the United States was leading the efforts to unveil a new and frightening form of warfare.

A Deadly Race

Albert Einstein awoke American military interest in atomic energy in 1939. The previous year, German scientists had discovered fission. Jewish scientists leaving Germany warned of the Nazi quest for a fission bomb. In a letter to Pres. Roosevelt, Einstein suggested the possibility of constructing "extremely powerful bombs of a new type" and explained that Germany was already working on such a project. Roosevelt formed the Uranium Committee as well as the National Defense Research Council to investigate the possibility of building a U.S. atomic weapon.



The United States was not alone (see p. W28). Britain and France, and later Japan and the Soviet Union, all had taken substantial steps in atomic-weapons research. Germany was both well advanced in atomic theory and advanced enough industrially to attempt the project. The threat of a German bomb effort drove the United States to be first. The Axis powers, in turn, would continue their atomic programs to the end; after V-E Day, a German submarine surrendered to American authorities was found to contain 1,200 pounds of uranium ore intended for Japan's atomic-bomb program.

The Manhattan Project

The Office of Scientific Research and Development was created in June 1941 to research and develop atomic energy. In 1942, Roosevelt created the Manhattan Engineering District, under the control of the U.S. Army Corps of Engineers, and charged it with the mission of building an atomic bomb. This new project was under the direction of Brig. Gen. Leslie R. Groves.

Groves recruited Dr. J. Robert Oppenheimer as the top atomic scientist. Groves and Oppenheimer toured the United States in an effort to persuade other scientists to join the effort. Most enthusiastically volunteered for the task, but some had to be persuaded.

The Manhattan Project challenged the resources of the most industrialized country on Earth. The Clinton Engineering Works, in Oak Ridge, Tenn., handled the separation of uranium 235. Oak Ridge, which had a population of fewer than 1,000 in 1939, would end the war with more than 45,000 inhabitants, and become the fifth-largest city in Tennessee. Some 1,500 civilians were ordered off their land at Hanford, Wash., where the Hanford Engineering Works built reactors to produce plutonium. By 1943, the Hanford works would have more than 50,000 employees, and control over 500,000 acres. All told, the production of nuclear fissionable material would consume 10% of all electricity produced in the United States. Some 15,000 tons of silver, borrowed from the U.S. Treasury, were used in the fabrication of key electrical components for the production facilities.

Even the barren New Mexico desert was not spared. Chosen for its sparse population and privacy, a boy's school would come to host the Los Alamos Laboratory, home to 5,000 employees and hundreds of scientists. Dozens of other locations, including Chicago, Norfolk, and remote sites in Utah, contributed to the Manhattan Project, as well.

A New Sunrise

Scientists detonated 100 tons of TNT at Trinity site on May 7, 1945, to calibrate the instruments for measuring the potency of the full-scale bomb test. By July 1945, both the uranium "gun-weapon" bomb, code-named the "Little Boy," and the plutonium implosion bomb, code-named the "Fat Man," were completed (p. 74). Two other plutonium-implosion bombs were also ready. One of these, nicknamed "the Gadget," was slated for the full-scale Trinity Test, at Jornada Del Muerto (the Journey of Death), near Alamogordo, N.M., on an Army gunnery and bombing range.

At 5:30 a.m., July 16, 1945, the Gadget was detonated. The high-explosive lenses forced the plutonium core to its critical mass, generating the force of nearly 19,000 tons of TNT. The blast created a flash of light bright enough to be seen over the entire state of New Mexico and in parts of neighboring states as well. The mushroom cloud rose to over 38,000 feet. To those that inquired about the spectacle, the Army claimed an ammunition depot had exploded.

The explosion was the culmination of years of all-out effort. The Manhattan Project's sheer size and scope rivaled the U.S. automotive industry, an investment made despite nobody being absolutely certain it would work. According to Pres. Truman, "We have spent $2 billion on the greatest scientific gamble in history – and won."

VICTORY OVER JAPAN

The Pacific War certainly had not stood still while the U.S. military concentrated on Europe. The predominantly American forces in that theater were inexorably shrinking Japan's short-lived empire.

The One-Two Punch

In early 1944, U.S. forces began driving up New Guinea. The Marianas came next, along with landings at Guam, Tinian, and Saipan (see p. W31). Taking these islands would put American air forces within range of mainland Japan, and provide launching pads for the massive B-29 aerial bombings of 1945. The victories also bolstered morale back in the states, as the United States clearly had Japan on the ropes just as assuredly as Japan had put the United States in similar peril in 1941.

On June 19-20, 1944, Japan's armada sought out the U.S. Navy and decisively lost the last major carrier-vs.-carrier battle of the war at the battle of the Philippine Sea (see p. W31). While the battle did not render the Japanese Navy impotent, it did slash Japanese air power to a mere shadow of its former strength. Only the suicide missions of the kamikazes would pose a further aerial threat to U.S. operations.

"I Shall Return"

While the Allied war machine advanced northward, hard-working guerrilla networks kept thousands of Japanese pinned down for several years in the Philippines (and other occupied lands). U.S. Army and OSS officers, native Filipinos, and escaped Army soldiers worked up a system of communication, supply, and armament among the natives estimated to have cost the Japanese perhaps 5,000 men in the Philippines alone.

In October 1944, MacArthur led U.S. troops ashore at Leyte in the Philippines (see p. W32), returning to the territory that he had commanded before the war. The attacks by four Army divisions went well, with MacArthur famously photographed wading ashore with a determined glare. (Actually, he was expressing his displeasure with the intruding photographer.) By Christmas, Leyte was secured, and in late January Army troops were fighting their way into Manila. It would be March before the city fell firmly into American hands. Potentially the most difficult and costly battle was cleaning up the destruction wrought by the Japanese.

Leyte Gulf

Sometimes called the second battle of the Philippine Sea (see p. W32), Leyte Gulf was the backbreaking fight that Adm. Chester W. Nimitz had been seeking for the Imperial Japanese Navy. The Japanese intended to disrupt MacArthur's landings at Leyte by striking and feinting with several forces.

The resulting battle was a helter-skelter affair. The giant battleship *Musashi* was sunk and the rest of its 1st Diversion Attack Force scattered. The Japanese Force C – containing two battleships, one heavy cruiser, and four destroyers – was smashed by a combined PT-boat and destroyer attack in the Surigao Strait. Confused messages and scouting problems allowed the superbattleship *Yamato* to catch a group of escort carriers flat-footed. The group turned tail and ran, but luckily the wind allowed them to launch at the same time.

Behind them, U.S. destroyers laid a smoke screen and fought against the giant Japanese ships in a David-vs.-Goliath matchup (p. 92). When Japanese destroyers launched a spread of torpedoes against the retreating carriers, at least one Navy pilot strafed the weapons as they churned through the water, causing one to explode.

When all was said and done, the Leyte invasion was safe, and the Japanese navy mortally wounded. The narrowly averted disaster with the escort carriers brought some recriminations among the U.S. admirals, but in the end they had created a decisive victory.

Iwo Jima

Though bombardment had begun the previous November, it was in February 1945 that the Marines staged their largest attack to date, hitting the tiny island of Iwo Jima. Only 600 miles from Japan, it was needed for its airfield, which would cut the trip from Saipan and Tinian to Japan in half.

The fighting on Iwo Jima was intense, and as stated on p. W33, the casualty count high. At least 6,800 Marines died in the black sands of the Iwo. Though the island was not declared secure until March 16, nearly a month after the landing, B-29s began diverting to Iwo for emergency landings while fighting was still going on near the airfield. The Marines earned 27 Medals of Honor for actions at Iwo Jima, the largest number ever awarded for a single operation.

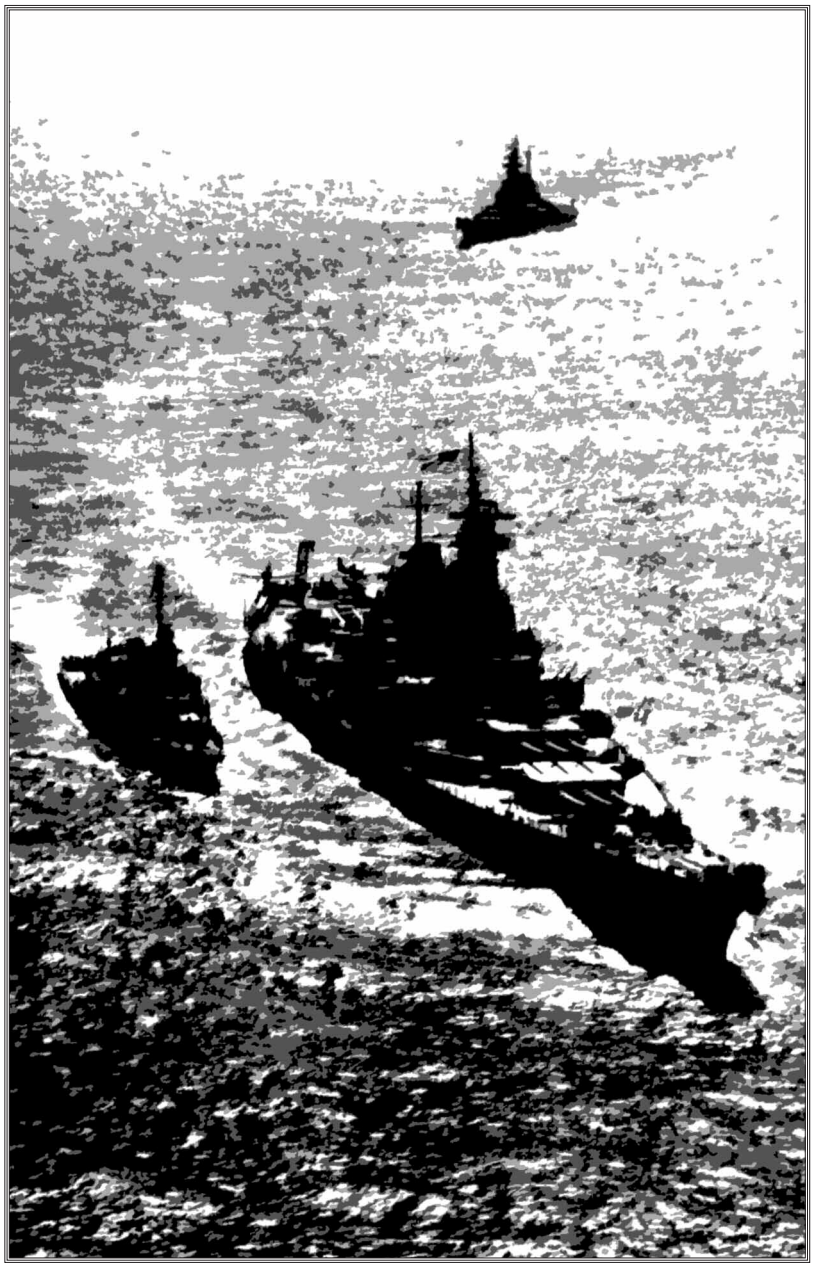
Okinawa

The battle for Okinawa (see p. W33) was a killing field for Japanese and Allies alike. The Allied forces, including a task force of Royal Navy ships, would endure 1,700 kamikaze attacks and shoot down more than 2,000 enemy aircraft. On land, 110,000 Japanese dead, many of them civilians, choked the island with the stench of death. The Allies added another 40,000 killed and wounded, including some 5,000 Navy men killed in attacks on 250 ships.

Rain of Ruin

After the successful test of the A-bomb (p. 21), the U.S.S. *Indianapolis* set sail for Tinian carrying a crate of bomb components and radioactive materials. Other components were shipped by aircraft from Los Alamos to Tinian. (After delivering the components, the *Indianapolis* was sunk by a Japanese submarine, and the survivors mauled by sharks while rescue efforts were delayed by a breakdown in communications. Of the 1,100 who were aboard, fewer than 400 would survive the terrifying ordeal.)

The 509th Composite Group, with 15 B-29 bombers under the command of Lt. Col. Paul W. Tibbets, was assigned



to the small Pacific island of Tinian. About 1,500 miles from Japan, Tinian was the largest airport in the world, with six 2-mile long runways built by Seabees.

Tibbets himself flew Special Bombing Mission 13 in the *Enola Gay* in the early morning hours of Aug. 6. A specially trained crewman flew with each flight. Called a "weaponeer," the bomb engineer was in charge of the bomb and had final approval over whether it was dropped or not. Tibbets flew a text-book mission and at 8:15 a.m. the Little Boy was dropped, killing 75,000 Japanese citizens and soldiers. More than 48,000 buildings were destroyed by the bomb.

Pres. Truman then announced the success of the Trinity Site test and the bombing of Hiroshima to the world. Still, Japan wavered, unable to accept unconditional surrender. The United States did not wait.

After a harrowing and near-disastrous flight, *Bockscar*, piloted by Capt. Charles W. Sweeney, arrived over Nagasaki on Aug. 9. He was dangerously low on fuel after making three ill-advised and unsuccessful bombing runs over Kokura, his primary target. At 11:02 a.m. the "Fat Man" implosion device detonated over the Mitsubishi Steel and Industrial Works in Nagasaki, killing and wounding 80,000 people. The valley walls contained the blast and saved thousands of lives in the city proper, just over the ridge.

Sweeney and his crew rushed to Okinawa, and after a two-hour flight and emergency landing, stopped at the end of the runway with only seven gallons of fuel remaining. Expecting a court martial, Sweeney was instead hailed as a hero. The truth about the many foul-ups in the second mission was officially concealed for many years afterward.

V-J Day

Earlier in 1945, the fire-bombings of Tokyo already had claimed half a million lives, far exceeding the death toll of the A-bombs. The Atomic Age brought the Japanese only a new form – not a new magnitude – of horror, but the spectacular mushroom clouds did, finally, give them a chance to surrender while saving some small portion of face. When the United States dropped its second (and unbeknownst to the world, its last operational) atomic bomb on Nagasaki, it declared itself sole master of this new and unparalleled form of warfare.

After being "scorched and boiled and baked to death," in the words of Air Force Maj. Gen. Curtis E. LeMay, even the most militant Japanese had long seen that the writing was upon the wall. Japanese ambassadors had long been working the back channels through the Soviet Union, signaling for an armistice as early as January 1945, but the Allies would only accept an unconditional surrender. It took the A-bomb to finally wring this concession from the stubborn foe.

Official announcement of the surrender came on Aug. 14, with a wild reception around the world. Atomic-bomb technicians had just finished preparing a third device. Troop convoys heading to Okinawa for final staging of the invasion of Japan turned around.

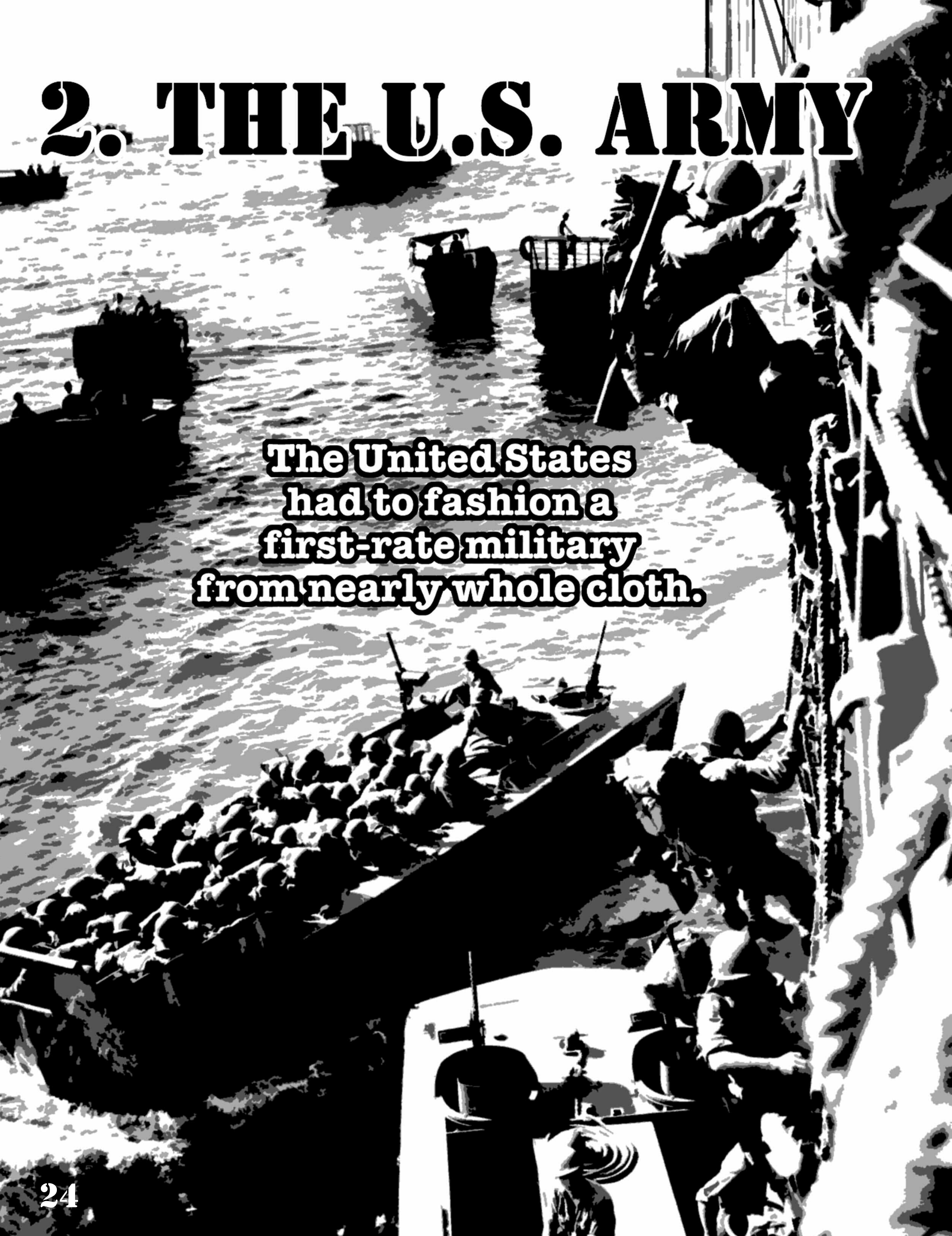
The final surrender came on Sept. 2, 1945, with Japanese government and military envoys signing the documents aboard the U.S.S. *Missouri* in Tokyo Bay.

The Final Cost

Beyond the 407,000 troops and 6,000 civilians that the United States lost in WWII, an additional 670,846 Americans were wounded from the total of 16 million that served. The nation also spent an untold amount of money underwriting much of the Allied war effort.

In exchange, it emerged from the war as a nearly unrivaled superpower, in position to shape much of the growth of western democracy for decades to come. The prominence that the United States enjoys today still has its roots in the trials and battles following that fateful day at Pearl Harbor.

2. THE U.S. ARMY


The United States had to fashion a first-rate military from nearly whole cloth.

"What kind of war do civilians suppose we fought, anyway? We shot prisoners in cold blood, wiped out hospitals, strafed lifeboats, killed or mistreated enemy civilians, finished off the enemy wounded, tossed the dying into a hole with the dead, and in the Pacific boiled the flesh off enemy skulls to make table ornaments for sweethearts, or carved their bones into letter openers."

– Edgar Jones, WWII veteran

BY THE NUMBERS

During WWII, the U.S. military expanded from just 350,000 men to a total of more than 12 million. By the end of the war, the U.S. military would stand as the most powerful war machine in the history of mankind, the lone possessor of the atomic bomb, a 7,000-ship navy, and a strategic air force capable of bombing Moscow from air bases in England.

Chiefs of Staff

While Pres. Roosevelt (and later Truman) was the official commander-in-chief – providing unity, selecting commanders, and building overriding strategies – the Joint Chiefs of Staff (JCS) were, as Chairman of the Joint Chiefs Adm. William Leahy stated, "artisans, building patterns of strategy from the rough blueprints handed us . . ."

The president formed the Joint Chiefs in 1942 to create a counterpart to the British Chiefs of Staff. Both of these organizations would cooperate in the British-American Combined Chiefs of Staff. A Joint Board had been in existence since before WWI, but the essentially powerless committee reported to the secretaries of War and the Navy, not the president directly, as in the case of the JCS. The Joint Chiefs were given sweeping powers and autonomy and greatly streamlined the increasingly complicated military-industrial complex that was threatening to swallow governmental operations.

Although unofficial and never approved by Congress, the Joint Chiefs commanded the traditional branches of service, plus the newly formed Office of Strategic Service (p. 60). The four chiefs included Leahy as chairman, Gen. George C. Marshall as the Army representative, Gen. Henry "Hap" Arnold representing the Army Air Force, and Adm. Ernest J. King the Navy. Millions of dollars and thousands of American lives depended upon the decisions these four men made over lunch.

Five-Star Rank

In December 1944, seven of the nation's senior generals and admirals were promoted to a new rank. In the Army this was called general of the Army; in the Navy, fleet admiral. This new rank distinguished these officers from the other full generals and admirals and recognized their increased responsibility. The Army officers promoted were Marshall, MacArthur, Eisenhower, and Arnold, while the Navy promoted Leahy, King, and Nimitz. Halsey and Bradley would receive the honor after the war.

In game terms, the five-star rank is simply a job title. As shown on p. W63, it is Military Rank 8, just like the previous rank. Arguably, the political nature of this promotion could confer an extra level of Status for a total of +4 (see p. W66). Historically, this would be far more likely for a general than an admiral, given that WWII's five-star generals attained great fame, with Eisenhower becoming a postwar president and MacArthur enjoying almost imperial authority in postwar Japan. (Partly to reflect this discrepancy in real benefits, p. W63 rates a fleet admiral as one rank "lower" than a general of the Army. This also reflects that, during WWII, the U.S. Navy tried to represent its commodore rank as a flag rank, even though as a *strictly* temporary war commission, per p. 56, it blatantly failed the traditional acid test for flag ranks. This led the Army to reasonably argue that Navy flag ranks really began at the two-star rear admiral. After the war, the Navy created upper and lower halves for its rear-admiral rank, correcting its ranks to compare Navy apples with Army apples; in this postwar period, everything from vice admiral up would move up one slot on the ***GURPS WWII*** table.)

All five-stars retained full pay and benefits in retirement, linking Independent Income (see p. W65) to the promotion.

The War Department

The War Department contained the Army and the Army Air Force. The Army was composed of the Regular Army, the Reserves, and the National Guard, in two major components: the Army Ground Forces (AGF) and the Army Service Forces (ASF). The Philippine Scouts, a division of Filipino infantry under Regular Army officers, also fell under Army control, but it was lost in combat against Japan in early 1942.

The AGF provided soldiers and combat units to commanders in theater. All major training commands (Airborne Command, Armored Command, Antiaircraft Command, Tank Command, etc.) answered to AGF.

The ASF handled the logistics of men, materiel, and equipment. Included within ASF were the technical services, such as signals, medical, chemical warfare, quartermaster, ordnance, and transportation.

The Army Air Force (AAF), although under Army control, had its own position in the Chiefs of Staff. The Marines and Coast Guard did not, although they enjoyed similar autonomy within the Navy umbrella. (This special handling only increased. In 1947, the War Department became the Department of the Army, and the independent Department of the Air Force was created. The Department of Defense followed in 1949, unifying these with the Department of the Navy.)

The Pentagon

The War Department began building the largest office building in the world in the summer of 1941. At the time a colonel, Leslie R. Groves ran the project, which was finished in just 16 months. The five-sided, five-story building was constructed of reinforced concrete with large ramps that ran from story to story. This sped up construction time and cut down on the use of steel. The unusual layout was created for efficiency; one could walk between any two points in the building in only seven minutes, despite 17 miles of corridors. Originally estimated at less than $40 million, the final price of the Pentagon was $80 million after cost overruns.

The Pentagon contained nearly 300,000 volumes from the War Department library, making it one of the largest libraries in the world. OSS chief William J. Donovan would call it the source of 95% of U.S. intelligence.

At peak operation during the war, more than 40,000 people worked in the building. Buses ran in shifts around the clock to carry people to and from the 29-acre site.

Most notably absent from this caravan was any sizable number of Marine or Navy personnel. Only those assigned as liaison officers were allowed an office in the Pentagon – this was an Army building. While Army generals enjoyed their spacious and efficient new office building, the Navy high command remained in an ugly, temporary building on Washington Mall.

Many Army staff officers worked, slept, and ate in the building. One lieutenant remarked that he lived at the Pentagon and vacationed at his apartment. Restaurants, cafeterias, and snack bars made finding a meal in the labyrinth of halls easy. A laundry service provided pick-up and delivery right to the office door.

Department of the Navy

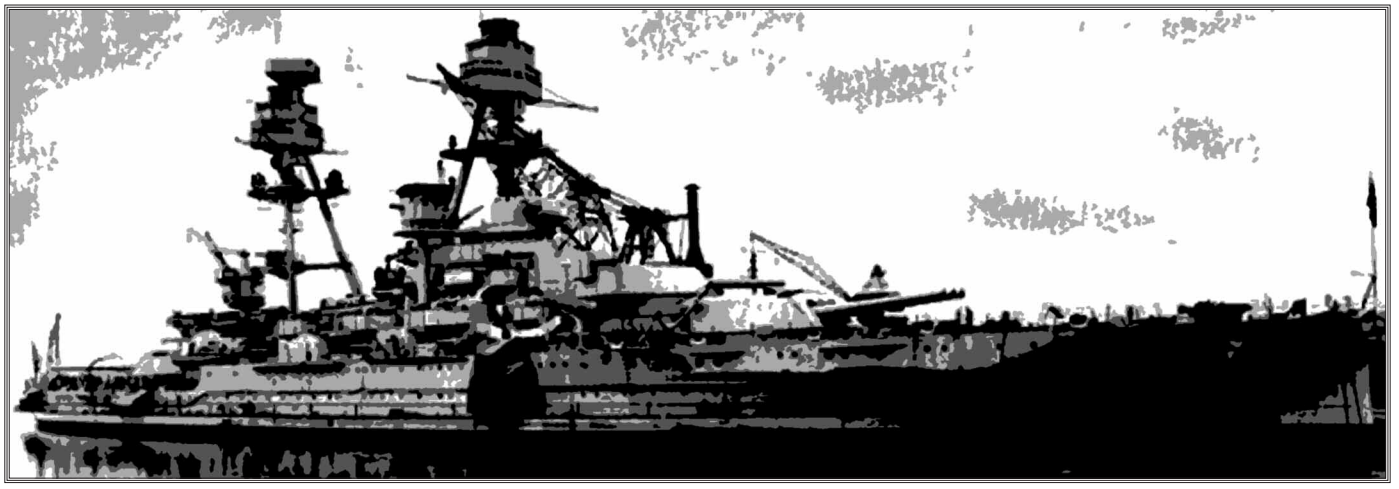
The Department of the Navy contained both the Navy and the Marine Corp, and after 1941 the U.S. Coast Guard, which was assigned to the Treasury Department during peacetime but came under Navy control on orders of the president. All three services maintained reserve components that provided crucial manpower during the war. This was especially true in the Marines, which had a small force to begin with.

Phonetic Alphabet

American GIs were lavishly equipped with radios and field phones. Nearly any platoon, and many squads, had direct communication to headquarters, and could call in artillery and air support in minutes. To avoid confusion – since New Yorkers and Georgians might have a hard time understanding each other – the military developed its own phonetic alphabet used by radio operators. Unfortunately, the Navy, Army, and amateur radio operators used different alphabets. This was not settled until the 1960s. The terms in parentheses are used by the Navy and Marines.

A – Able (Afirm)	N – Nan (Negat)
B – Baker	O – Oboe (Option)
C – Charlie	P – Peter (Prep)
D – Dog	Q – Queen
E – Easy	R – Roger
F – Fox	S – Sail
G – George	T – Tare
H – How	U – Unit
I – Item (Int)	V – Victor
J – Jig	W – William
K – King	X – X-ray
L – Love	Y – Yoke
M – Mike	Z – Zebra

This central administration also included the Office of Naval Intelligence, which took a colorful if inefficient role in espionage and counterespionage. Under Roosevelt, both the ONI and its Army counterpart, the Military Intelligence Division, wielded powers equivalent to those of the FBI, including domestic surveillance. The Navy part-timers cycling between ship and shore assignments tended to get involved in more lurid schemes (p. 61) and hunted mostly phantom Communists with gusto. Only after its complete failure to put together the clues that pointed toward Pearl Harbor did the ONI straighten up its act and concentrate on military matters. For at least the crucial prewar period, British intelligence probably knew everything that the ONI knew, whatever that may have been worth.



ARMS OF THE ARMY

The U.S. Army grew from fewer than 180,000 active-duty troops in 1939 – only the 17th-largest force in the world – to 8.3 million in 1945. More impressive was the transformation from an obsolete and outdated force without even the most basic equipment to, arguably, the most organized and well-supplied army in any war. The Army could lay claim to two of the most skilled infantry divisions of the war (the 82nd and 101st), and to more than a dozen of the finest armored divisions.

Army Ground Forces

"I love the infantry because they are the underdogs. They are the mud-rain-frost-and-wind boys. They have no comforts, and they even learn to live without the necessities. And in the end they are the guys that wars can't be won without."

– Ernie Pyle, war correspondent

Infantry

U.S. Army organizations in WWII were built around the triangular concept – three regiments, battalions, companies, etc. in each organization – allowing commanders to put one unit in reserve and two units on the line (see p. W43). Thus, an infantry battalion in combat would usually put one company in reserve, and the other two would be on the battle line. In theory, in an assault, one line company assaulted while the other flanked, and the reserve remained out of the action. This gave the commander a sorely needed method for getting his men some rest, since the position of reserve could be rotated among the three companies in the battalion, giving men time off the front line to recover their wits.

This was how it worked in theory. The realities of combat often forced the reserve into the flanking role, especially late in the war when infantrymen were in short supply. In other situations, capricious or abusive commanders refused to let a disliked subordinate (and his company) off the line, while their pet officer stayed in the reserve more or less permanently.

The heart of a U.S. Army infantry division, and the men that suffered the bulk of its casualties, was the 27 rifle companies. A rifle company contained 193 men, plus three aid men (one for each platoon). Each rifle company contained an HQ section, a weapons platoon, and three rifle platoons.

The HQ section included the company commander (the CO, or "old man") who was usually a captain, although attrition often meant that second lieutenants and even senior sergeants were serving as company commanders for weeks at a time. The commander was issued a case of hard liquor each month, and often turned it over to the first sergeant as a way to keep morale up. A first lieutenant acted as his assistant commander, the executive officer or XO. The ranking NCO of the company was the first sergeant (also referred to as "top"), who would fill in as commander in the absence of the company officers, who were often away for briefings or reconnaissance. A corporal served as company clerk, doing paperwork for the officers. The clerk was regarded as having substantial power, and could make opportune suggestions or paperwork requests if properly bribed. This could yield anything from a transfer to a few days of leave if the CO was not especially watchful. Also, the clerk usually held the unofficial company "pool," which was a supply of cash spent on anything from women to movies, and even timely burials.

Also in the HQ section was a mess section with a sergeant and seven privates; many of these men would be turned out to the line platoons as a matter of necessity, adding to the workload of those few who remained. It also had a supply section with a sergeant and a corporal, who served as the company armorer. The mess sergeant and supply sergeant were seen either as gracious and generous, or as hateful and despicable. Mess sergeants who struggled to provide hot meals were loved almost as much as medics, while those who served food on the front by throwing ration boxes from speeding jeeps were universally hated. The best mess sergeants collected donations at the chow tent, using their own pay if necessary to bring fresh local food to the troops, and pushed their small crew to produce and transport hot meals at all hours under all conditions.

Supply sergeants, considered "goldbricks" and "get-over artists" by most, seldom got much respect no matter how hard they worked. Dogfaces knew that supply men in the rear were lifting supplies from the supply trains and shorting the combat men on the line. This usually surfaced as anger with all supply personnel. The only occasion to brighten this perception was when the unit was low on ammunition. Then, the timely arrival of the supply sergeant carrying ammo saw him hailed as a hero.

The communication section included the communication sergeant and bugler, as well as five other privates that acted as runners or messengers. The bugler was a radio operator in combat, but those with musical talent were greatly appreciated at reveille and retreat when in garrison. Runners from the HQ had a high turnover due to casualties, but often enjoyed better food and sleeping billets.

The whole of the HQ often acted as a company reserve in tight spots, with mess sergeants in aprons and helmets manning bazookas if the occasion required. More often, the company HQ was a couple of hundred yards from the foxholes on the line, in communication with the platoons by runners, radio, or field phone. Food, ammunition, information, and even replacements moved from the HQ to the platoons as needed, mostly at dawn and dusk.

Each of the three platoons was led by a second lieutenant and a platoon sergeant. Both of these men had compasses and maps of the current operational area. As suggested in the *Skills Required for Higher Ranks* table on p. W70, it was not uncommon for the platoon sergeant, a seasoned man who rose through the ranks, to have better Tactics, Leadership, and Orienteering skills than the lieutenant in charge of the platoon, often a youngster fresh out of a hasty officer-training program. Two runners and five riflemen formed a platoon reserve if losses were great. A scoped Springfield M1903A4 (p. 72) was issued to each platoon for sniping purposes.

Each of the three 12-man squads was led by a staff sergeant, armed with a rifle, although many discarded this for an M-1 carbine or SMG if they could get one. The squad contained a BAR team, which was reduced from three to two men by 1944. One of them was the BAR gunner, and the other the assistant BAR gunner and ammo bearer, who carried as many BAR magazines as he could find. The grenadier was originally armed with an '03 Springfield fitted with a rifle-grenade launcher, but this was swapped out for an M-1 rifle by 1943, when grenade launchers became available for them.

The rest of the squad included an assistant squad leader, who often acquired a Thompson SMG from the six held at company HQ; two scouts, who usually teamed up with the squad or assistant squad leader; and six riflemen, who were usually formed into a rifle team and acted as the maneuvering element that rushed objectives under the fire of the BAR and the rest of the squad. By 1944, two of these riflemen carried rifle-grenade launchers, as well.

U.S. squads enjoyed an unprecedented wealth of backup weaponry, and some permission to adjust their tactics according to circumstance. Thus, in urban combat, the M-1s often would be replaced by carbines and SMGs, while the Garands would be retained in open country. At all times, the BAR (pronounced B-A-R by the GIs, never "bar") was protected and nurtured by all in the squad, and it would instantly be picked up if the gunner was hit. Many BARs were "lost," only to have the squad "find" it again *after* signing for a replacement. Combined with battlefield scrounging, this often resulted in some squads having two or more BARs.

The heavy-weapons platoon in the rifle company contained a light MG section with two light machine guns, and a mortar section with three 60mm tubes. A squad serviced each weapon, with a gunner, assistant gunner, and 2-4 ammo bearers. Each section was commanded by a sergeant and the whole platoon was led by a second lieutenant. Depending on the specific mission, these squads might be parceled out to each rifle platoon, or they might be massed to support from a distance. In many cases, the machine guns were more or less permanently attached to the individual platoons, greatly augmenting their firepower, but complicating the platoon leader's job by adding yet another special team to command.

Other weapons, such as extra SMGs and BARs, as well as bazookas and a .50-caliber HMG, were held at the company HQ and doled out to the respective platoons as needed.

Airborne

Generally considered among the best U.S. fighting units, paratroopers were all volunteers. The troopers received extra pay (+$50 a month for enlisted, +$100 for officers), and the best equipment and clothing, and often the most harrowing missions. Jumping behind enemy lines without heavy firepower was not for the faint of heart, and paratroopers were cultivated to be aggressive and independent-minded.

Enticed to join the airborne by sharp-looking paratroopers posted at the recruiting stations, would-be paratroops endured 13 weeks of basic training and five weeks of Jump School at Ft. Benning, Ga. Those that survived the grueling training could claim the jump boots and silver wings of the paratroop infantry. From there, recruits were assigned to a "cadre" unit made up of experienced officers and NCOs and filled out with trainees. The unit trained together for many months in field problems, night exercises, live-fire drills, and long marches under full packs.

In organization, the parachute rifle company was much the same as the regular infantry company. Rather than a separate MG section in each company, each 12-man paratrooper squad had a .30-caliber LMG, and usually a BAR or two as well. This gave airborne squads more organic firepower than a standard rifle squad, and explains a lot about their relative success in battle. In addition, each platoon had two officers: a first lieutenant as platoon leader and a second lieutenant as assistant platoon leader. This also proved important to airborne unit success, since each platoon had a "spare" officer to lead flanking maneuvers and step in as commander if needed.

Each trooper jumped with his personal weapon in a cloth case strapped to his body. Early on, every paratrooper was issued a .45 pistol, but by 1943 this practice was discarded. Troopers carried on the tradition by buying the pistols with their own cash. Heavy equipment (mortars, radios, and machine guns) was packed into parachute containers and strapped beneath the wings of the planes. Airborne parachute battalions jumped with their M8 75mm howitzers broken up into seven bundles. The bundles usually were tied together, and often were marked by blinking lights or luminous paint.

On an airborne operation, each company was broken up into 12- to 18-man "sticks" with each assigned an aircraft. The transports flew in nine-ship Vs. Five such Vs formed a larger arrowhead "serial" of 45 planes, carrying a battalion of paratroops. Each serial was timed to hit its assigned DZ at a certain direction and speed, a careful ballet necessary to concentrate the troops and maximize firepower.

As the aircraft approached the drop zone, a red warning light was turned on inside the craft. At this four-minute warning, everyone stood and hooked their static line to a cable running down the center of the aisle above their heads. The soldiers then checked their buddy's equipment and counted off from back to front. Once everyone was safely in place, the

men waited for the green light to come on. This signaled the time to jump. The first man out the door was always an officer or leading NCO, because the paratroops rigorously adhered to the "Follow Me" spirit of leadership. It was his job to "salvo," or release, the heavy equipment containers. A whole planeload of troops could exit in under 10 seconds.

Those that survived the landing began the next job, called "rolling up the stick." Paratroopers were trained to note the direction of the stick as they left the plane. Those in the middle stayed put while those at either end moved toward the middle. In principle, a paratrooper unit could gather minutes after hitting the ground, but winds, misdrops, and the chaos of battle seldom bore that out. Flare guns, whistles, and colored flashlights were used to help assemble the troopers.

The paratroops weren't the only airborne men in the Army. Out of the three infantry regiments in an airborne division, one was a glider regiment. This regiment contained the lion's share of the division's heavy firepower. A glider battalion would add 81mm mortars, .50-caliber HMGs, and an antitank platoon with light AT guns in its weapons company.

The gliderborne soldiers were never truly appreciated; WWII-era paratroopers *never* called themselves airborne, to set themselves apart from these men, who often were not volunteers. That didn't change the fact that their jobs were just as dangerous; the flimsy wooden gliders ended their flights in controlled crashes that could kill or injure everyone aboard. Glider troops were not given the extra pay or the privilege of wearing the wings and jump boots until late 1944.

More detail on parachute and glider drops can be found in ***GURPS WWII: Hand of Steel***.

Armored Infantry

Armored infantry battalions were assigned to armored divisions. Grunts favored these units because they rarely marched *anywhere*. Unlike the Germans, they had plenty of gasoline, spare parts, and extra vehicles. Most rode in crowded halftracks and cargo trucks, eating the dust of the tanks ahead of them. While the halftracks were liked for their ruggedness and protection, they tended to draw enemy fire, since they were loud and sounded similar to a tank. Armored infantry referred to the halftracks as "purple-heart boxes" throughout the war.

In combat, armored infantry approached as close as possible to the enemy before dismounting. Then, with their vehicles providing suppressive fire, the infantry closed with the enemy. Supported by tanks, self-propelled artillery, and a larger ratio of combat engineers, armored infantry had a comparatively easy time of it. Plenty of vehicles usually meant more creature comforts such as hot meals, daily mail call, and fast evacuation. This was especially beneficial during defensive fighting, because the halftracks were loaded down with barbed wire and mines, providing more defensive bite than standard infantry enjoyed.

Reconnaissance

U.S. Army reconnaissance units operated at the tip of the spear, scouting the enemy and reporting back to HQ. Infantry battalions had Intelligence and Reconnaissance platoons of about 40 men for this task. The most skilled and aggressive soldiers usually ended up in this "I & R" platoon. Casualties were high, because the units were in constant combat when on the line. Much work was done at night, and the platoons became skilled at stealthy patrol and observation, mapping minefields, and dealing with local civilians and partisans for information.

Larger mechanized recon units worked in company-sized "troops." Each troop had three platoons, with three M-8 armored cars and six 1/4-ton jeeps each. This 29-man platoon usually operated as three recon teams of one armored car and two jeeps each. Three jeeps had .30-caliber machine guns (or .50-caliber machine guns if they could find them) and three had 60mm mortars. The mortars could be used from the bed of the jeep, or dismounted and fired from the ground. All the armored cars and three of the jeeps had radios. The HQ platoon included a halftrack, $2^1/_2$-ton truck, and reserve vehicles (two extra armored cars and several extra jeeps).

Typical mechanized reconnaissance tactics put these units ahead or on the flanks of armored units. Advancing by bounds, the recon teams would cover the advancing vehicle from one point of cover or concealment to the next, leap-frogging forward as they went. If the enemy was sighted, the recon troops engaged and tried to determine the type and number of units present. If things got too hairy, the recon units called in artillery and air support and high-tailed to the rear. The mortar jeeps were used to provide smoke screens across open areas. Both sorts of jeep crew frequently dismounted their troops for sneaking-and-peeking over hills, and in urban or forested terrain.

Reconnaissance units developed new river-crossing techniques for the jeep. A section of canvas, such as a large tent, would be laid out and then a jeep driven onto the center of it. The edges of the canvas were then wrapped up onto the jeep and tied together with rope, creating a boat-like hull (treat it as a jury-rigged version of the wading kit on p. W141). Several men would then carry it to the water on poles and paddle it across the river. This would be ill-advised in heavy currents or during combat, but was used with some success in Italy and Burma. Equally ambitious was the technique of sliding a jeep across a river while suspended beneath a rope on a pulley. The driver in this case would guide the jeep across while teams on each side pulled or played out line. There is no record that this was ever used on a combat mission, but there's no reason that PCs couldn't try it!

Assume this sort of crossing requires a roll against the Soldier or Tactics (Armored) skill. The trick works on a normal success, but a failure causes some danger (taking on water, slipping ropes, slight injury, etc.). Critical failure causes loss of the jeep and a wet or possibly injured crew.

BADGES AND DECORATIONS

GIs were awarded medals and decorations for their accomplishments in training and in combat (see pp. W42, W63). Soldiers were usually humble about decorations for bravery, but they enjoyed the recognition and especially the extra pay that was associated with their training.

Expert Infantry Badge: A silver musket on blue rectangle authorized in 1943. Infantry undertook a stringent test to receive this medal. It included a 25-mile road march, weapon qualification, a grenade-throwing test, and other challenges. The testing took 48 hours, rain or shine. Half of those that attempted to earn the distinction failed. PCs that wish to attain the badge must make a successful roll against Soldier -4. Enlisted men received an extra $5 a month; officers were allotted no extra pay for the EIB.

Combat Infantry Badge: This added a silver wreath to the EIB, above. This was awarded to infantrymen that had been in ground combat. They did not have to undergo the EIB test, however. Bearers received an extra $10 a month; additionally, they may take a +1 Reputation bonus good among non-combat troops only. (The value of this advantage depends on the campaign setting, and in a front-line campaign would be effectively zero.) It was authorized in 1943.

Combat Medic Badge: This silver badge featured a stretcher and cross over an oak wreath and outstretched wings. The equivalent to the EIB/CIB, it was created in 1945. It added to pay and Reputation as for the CIB.

Jump and Glider Wings: Individuals who passed airborne or glider training were awarded silver wings with a parachute or glider device in the middle. Unofficially, troopers adopted gold stars that represented the number of combat jumps they had survived. (This became official policy in the 1980s.) Beginning in 1941, enlisted men assigned to an airborne unit received $50 a month jump pay, officers $100. Glider troops got half the extra pay of the parachutists starting in June 1944.

Weapons Qualification Badges: Virtually every weapon in the nation's arsenal had a corresponding marksmanship badge. A soldier could conceivably have a badge for every weapon from bayonet and grenade to field artillery and naval guns. Each level of proficiency had a corresponding title and extra pay. In descending order they were: marksman (skill 10), sharpshooter (skill 12, +$3), and expert (skill 15, +$5). Artillery crewmen ranked as Gunner Third, Second, or First Class, with the same pay bonuses. All of these badges resembled a target cross with qualification bars hanging underneath. Only one qualification rating was paid out. Thus, a soldier qualified as an expert on five different weapons would only be paid $5 extra per month.

Aviator Wings: Many different types of wings were awarded to those associated or involved in flying. The Women's Airforce Service Pilots had their own wings. Navigators and bombardiers did, as well. All wings were silver with distinctive devices in the middle, except for the flying instructors, who wore gold wings. Those on flight duty received a 50% pay increase.

Mechanic, Driver, and Technician Badges: Those that passed a qualification test (skill 12) were allowed to wear special badges denoting their skill. Hard-Hat Diving (p. CCI152), Mechanic, Electronics Operation, Armoury, Meteorology, Photography, and Driving skills all had their own badges. No extra pay was authorized, however.

Submariner Badge: After six months aboard a submarine, and careful tutelage under the watchful eye of seasoned petty officers, a sailor could test for his submarine badge. This was a silver device with dolphins flanking the outline of a sub. It granted an extra $20, with petty officers and chiefs getting an extra $25 on top of that.

Service Stripes: Enlisted men received one service stripe for each three years of honorable duty in uniform. Overseas service stripes were awarded for each six months overseas. Veterans of WWI wore chevron-shaped stripes to denote overseas service in that war. All of these stripes were worn on the sleeve. Army draftees were unimpressed by them, but Marine and Navy sailors with several "hash marks" were respected.

Meritorious Decorations: The following medals from p. W42 entitled the soldier to an extra $2 a month each: the Medal of Honor, the Distinguished Flying Cross, Distinguished Service Cross, and Distinguished Service Medal. Multiple decorations counted for extra pay.

This extra money added up, but since soldiers sent most of their pay home to their parents or dependents, they seldom enjoyed it while overseas. Extra pay should be added to the monthly pay as described on p. W63.

Unofficial Badges and Decorations: U.S. servicemen of all branches wore other distinctive badges when they could get away with it – even those that were not approved in the regulation book.

The Goldfish Club Badge was one such device. It was awarded to RAF and USAAF servicemen that had survived a crash landing at sea and been rescued. It was issued by one of the military life-raft contractors, and featured an outline of a winged goldfish. The patches had a distinctive black background, and were fashioned from party dresses donated by socialites in Britain and America. The recipients of the Goldfish Club Badge often wore it under the pocket flap of their uniform jacket, which allowed them to wear the badge and not break regulations (it wasn't visible unless the pocket was opened).

Old sea dogs from the pre-war Asiatic Fleet had elaborate dragons or other Oriental designs embroidered or sewn under the cuffs of their dress uniforms. Though the modification was not visible to the casual observer, when a suitable occasion arose (such as when meeting another old salt in private for the first time) the cuffs were rolled up to show off the exquisite needlework.

Artillery

"I don't have to tell you who won the war; you know you did."
– Gen. Patton, addressing U.S. artillerymen

U.S. artillery was considered the best artillery in the war, as discussed on pp. W43-44. U.S. artillery worked with a speed and precision unheard of in other armies. This was due to an efficient fire-control system, which grouped artillery into company-sized batteries under the control of a single battalion-level fire-direction center. Such proficiency caused many commanders to remark "never send a soldier to do something an artillery shell can do."

Artillery battalions consisted of three firing batteries (A-C batteries) and one service battery (D battery). Each battery of four guns was commanded by a captain. The type of guns in each battery depended upon the organization: light battalions used 75-105mm howitzers, medium battalions used 155mm howitzers, and heavy battalions used a 155mm "Long Tom." Some heavy battalions used large 8-inch guns or 240mm howitzers, the latter firing 350-lb. shells out to nearly 15 miles.

Armored artillery battalions used self-propelled guns, usually the 105mm M-7 Priest, but a few had the 155mm M-12, nicknamed "King Kong." During the house-to-house fighting in Aachen (p. 108), the M-12 artillery gunners were ordered up front. A small contingent of Germans had held up all day in a sturdy building. The gunners bore-sighted the King Kong on the building and blasted away at a distance of only a couple of hundred yards. The Germans soon surrendered, but cried foul – they thought the use of point-blank heavy artillery unsportsmanlike. (By that time, the Wehrmacht was fielding several armored vehicles designed expressly for the same purpose.)

U.S. artillery used pre-figured data compiled into a slide-rule type device called a graphical firing table (GFT). Men using the GFTs were called *computers*. Previously, the job had required highly skilled mathematicians, but after a National Guard captain invented the GFT in 1940, someone with basic math skills could use the tool to compute firing solutions in record time. Each battalion would have a computer per battery, further accelerating the calculation of firing solutions.

In use, the battalion fire-direction center simply selected the correct GFT according to gun and ammunition type from a storage trunk, slid the indicator to the appropriate markings on the tape for the selected range, and then sent the firing solution out to the gun crews by field phone or runner. This allowed U.S. artillery to rapidly put a large volume of concentrated fire on a tiny target. Treat the U.S. fire-control system as a FDC and a mainframe targeting computer from p. W140, for a total of +7 to Gunner (Cannon) skill in ideal conditions.

U.S. artillery enjoyed other benefits that other countries did not provide. Virtually every piece was mechanized. German and Russian units still relied on a large proportion of horse-drawn artillery. Highly trained artillery units could limber up their guns, displace to positions prepared by engineers, and fire from a totally new location within 30 minutes.

Often, copious supply allowed U.S. artillery to fire for extended periods. Axis units rarely enjoyed such unlimited artillery fire. A U.S. forward observer had his choice of ammunition to boot, rather than the limited stocks on hand. Artillery ammunition was high-quality, unlike the spotty workmanship of some German, and especially Japanese, shells. U.S. counter-battery fire benefited from the comprehensive U.S. radio network, which could call in strikes against Axis guns while they were still firing!

Each field-artillery battalion was also equipped with two light airplanes that served as air-observation posts. With direct communications to battalion artillery commanders, the planes, flown by enlisted men and accompanied by a skilled artillery observer, could direct artillery onto enemy targets with deadly accuracy.

When the air-observation post was first created, commanders feared massive losses among the "Grasshopper" aircraft, since they would be flying low and slow into enemy territory. Combat experience proved otherwise. Axis units quickly realized that firing on the AOP was a *bad* idea: It brought down a rain of steel on any unit foolhardy enough to show itself. The tiny Grasshoppers became the most feared aircraft of the war!

The Grasshoppers often performed extra duties as well, picking up seriously wounded men from cow pastures, dropping badly needed supplies, scouting ahead of armored columns, or flying around commanders in preparation for an attack was all in a day's work for the little L-4s and their sergeant pilots.

Secret Weapons

Dogfaces benefited from several "secret weapons" during the war. Their wealth caused soldiers from other armies to say that every GI had his own jeep and a radio.

Radios: Dogfaces enjoyed a plentiful supply of high-quality FM radios, batteries, field phones, and communication wire. Skilled radio operators were available at the platoon level up. The U.S. radio net was wide open, rather than compartmentalized like other combatants. This meant that a lonely private could call in a whole division worth of artillery by himself, rather than the time-consuming chain of query in other armies.

Transportation: While Soviet and German forces were still relying on horses, U.S. troops had the best trucks and light vehicles in the world. Liberty and Victory ships brought supplies, reinforcements, and ammunition in such large quantities that Americans could claim to have better supply lines than the Germans when *inside* Germany!

Maps: The U.S. military consumed a phenomenal quantity of maps. On an average day, a single division would consume a ton, most of these going to artillery and other combat units. As the Army moved forward, old maps were discarded and new ones issued. U.S. maps, made from photos taken just days before, had multiple colors and were detailed enough to show individual houses and streams. This required a Herculean effort in logistics that other countries simply couldn't pull off. British commanders routinely showed up at American HQs to trade tea and marmalade for U.S. maps.

Armor

As explained on p. W43, tank battalions included three companies of medium tanks (called Able, Baker, and Charlie), each with three platoons of five tanks (working in a light section of two tanks and a heavy section of three tanks), plus an HQ section, an AM&S (ammunition, mess, and supply) section, and a maintenance section. The HQ included a jeep, two medium tanks (one for the CO and one for the XO), and one support tank fitted with a 105mm howitzer used as artillery or for bunker-busting (p. 75). A fourth company (Dog) was equipped with light tanks, such as the M-3 Stuart or, late in the war, the M-24 Chaffee.

The standard Sherman tank crew consisted of a sergeant as tank commander, a corporal as tank gunner, and three privates in the other positions. In some units, the platoon leader took over the role as tank commander in his tank or "track." In other units, the platoon leader displaced the loader, who would be relegated to HQ duties. The tank commander then added the loading duties to his own while the platoon leader busied himself with commanding the unit.

Tankers usually named their mounts, depending on the tastes of the crew and the tolerance of their commander. Tank names ranged from the macho, such as *Hellhound*, *Fightin' Joe*, or *Battleaxe*, to the humorous – *Galloping Gertrude*, *Jumping Jalopy* – or even defeatist, *Bullseye*, *Graveyard*, *Mr. Bones*. In some battalions, the commander required these names to be used as tactical call signs, in which case the tank names had to follow the company designation: All tanks in Able company started with an A (*Arthur*, *Anvil*, *Annie*, etc.), all tanks in Baker company with a B (*Bravo*, *Beanstalk*, *Big Ben*, etc.).

The AM&S section in a tank company included a $2\frac{1}{2}$-ton truck with trailer, a jeep, a halftrack, and a modified Sherman called an M-32 armored recovery vehicle, or ARV. The ARV was a Sherman with its gun and turret replaced with a 30-ton winch and boom for towing disabled tanks. It was fitted with a welder, cutting torch, a heavy mechanics toolkit, and other tools needed for heavy vehicle repair. ARV crews often worked right behind the lines, trying to extract crippled tanks back to battalion or division maintenance depots.

U.S. tank mechanics (called ordnance maintenance men) were so skilled that their units tended to increase, rather than decrease, in the number of combat vehicles held by each division as the war progressed. Knocked-out vehicles were sometimes back in running condition about the same time that replacement vehicles arrived at the front line. No commander worth his salt would refuse extra equipment, so the new machines stayed and the old ones soldiered on as a kind of moving spare-parts bin. Some tanks were given to infantry units as "mascots," permanently traded in exchange for gear or favors. Mascot armor was seldom as well-maintained as "real" armor, but commanders lucky enough to have a mascot tried to keep it running by trading under the table for trained crews and replacement parts.

While the Mechanic (Tank) or (Gasoline Engine) skill among U.S. tankers was higher than those of most other nations, Gunner skills were typically lower. Only toward the end of 1944 did U.S. tankers fire enough ammunition in training to even qualify as trained gunners in the British and German systems! They still fared better than the Soviets or Italians, but not by much.

Per p. W43, tank battalions often operated together in armored divisions, but also were frequently found as independent battalions attached to infantry units, sometimes on a fairly permanent basis. Tank-infantry cooperation took considerable skill, and frequently one of the two would straggle too far behind or get too far ahead to be of much use to the other. GMs should consider requiring experienced commanders to take Operations (Land) to master coordination of tanks and infantry rather than relying upon Tactics (Armored).

Despite all the difficulties in coordinating armor into infantry operations, the dogface rested easier with the big iron around. One blast from the main gun could clear a forward observer out of a church steeple or knock out a machine-gun nest. It would take some time to clear up the doctrinal problems, but by the end of the war, GIs had worked out a pretty good system of mutual support (p. 102).

Army Service Forces

The ASF consisted of the technical services. Many ASF soldiers were attached to the combat units of the AGF, and often deeply involved in the fighting. Medics, signal men, and engineers might have been ASF personnel, but they were on the front lines day in and day out, just like the infantry.

Chemical warfare units often *were* fighting, once the value of the 4.2-inch mortar (see p. W97) was discovered. The big HE shells delivered a lot of firepower, rivaling that of the 105mm howitzer. Commanders with such mortar units attached considered them "hip-pocket artillery."

The fortitude of the service forces was legendary. Army engineers built air fields in impossible places, bridges over impassable rivers. The Red Ball Express' trucks drove fuel and supplies to Patton's overextended 3rd Army around the clock through horrible weather. A similar feat was accomplished in the Burma-China-India theater. And when the front line was pushed back at the Bulge, the services men pitched in to hold back the Germans.

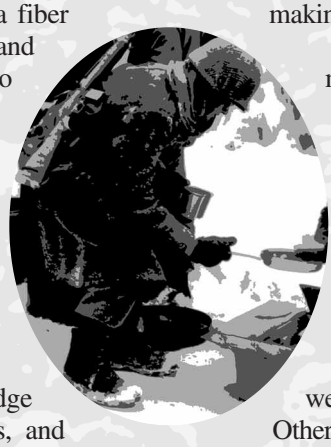
The logistical demands of a division were gargantuan. Gasoline was by far the largest challenge, since an armored division needed 150,000 gallons to move only 100 miles. Depots were set up a few miles behind the lines, choked with 5-gallon jerry cans filled and unloaded by hand from cargo trucks. Unavoidably, this process involved a lot of spillage. Petroleum lines stretched alongside the roads, if possible, and even under the English Channel.

Other needs were pressing, too. Ammunition for an infantry division might exceed 500 tons a day, and was expected to average at least 150 tons. Food, clothing, water, laundry, and other needs also had to be met. In mail alone, the ASF handled some 30 tons a month for each division. All this was accomplished by hard-working soldiers enduring long hours and tough weather conditions.

STANDARD INFANTRY KIT

Army infantry wore a brown or olive-drab (OD) wool shirt, a khaki field jacket, and wool pants in a dark brown "mustard" color. Variations in patterns, commercial dyes, and wear could make these colors differ considerably. Brown leather ankle boots were worn with canvas leggings to keep out the mud. Calf-height combat boots were first issued in mid-1944, replacing the low boots and leggings.

Infantrymen wore a steel helmet with a fiber liner (see p. W87). Toilet paper, extra socks, and maps or other articles were often packed into the helmet for cushioning and safekeeping. The steel shell also routinely served as a stool, kettle, and shaving bowl. Some dogfaces swore they could climb completely inside it during a barrage!



A field cap was worn for night or recon operations. In the Pacific, some troops wore floppy "boonie hats" that were more comfortable in the searing heat than a helmet.

Web gear consisted of a canvas cartridge belt and suspenders with pouches, holsters, and other gear hooked into metal eyelets on the belt. The cartridge belt held 10-12 clips of M-1 rifle ammunition in separate pouches around the soldier's waist. The pouches were hard to reach when the wearer was prone, so the cartridge belt ended up carrying cigarettes, loose ammunition, and other odds and ends. Rifle ammunition was then carried in a light cotton OD bandolier that held eight clips.

Carbines and SMGs had their own special pouches. The typical SMG pouch had room for three to eight magazines. Some GIs preferred smaller pouches, which had space for four magazines, but were much easier to use when prone. Carbine pouches only had space for two magazines. Veterans that carried the carbine often used BAR pouches to carry up to seven carbine magazines, instead. BAR gunners usually wore six pouches that held two BAR magazines each. BAR bandoliers held six spare magazines. All of these pouches were made of a canvas material that became incredibly stiff after only a few days in the field. Recon troops often soaked their web gear pouches in oil before a patrol to keep them from scraping loudly against the undergrowth.

An aluminum canteen in khaki cover hooked to the web belt and hung from the GI's hip. A steel canteen cup nested into the bottom of the canteen. The canteen cup was one of the soldier's most functional pieces of equipment, pulling duty as a cup, stove, food container, and as bailing device for flooded foxholes. The U.S. version had one serious drawback, though: The rolled-metal rim trapped heat, so that the user scalded his lips unless his drink was tepid or cold. Some veterans filed away a section of the rim to drink hot coffee in comfort.

Other gear on the belt might include a fighting knife or a compass pouch. An aid kit, containing a metal can with one large compress bandage, was always carried. The kit's metal can contained a wax-paper packet of sulfur powder (see p. W90), which was sprinkled on wounds to cut down on infections. Veterans also used the aid-kit can for carrying shaving powder, cigarettes, or a bar of soap. Bandages were packed in the bottom of BAR or SMG ammo pouches to reduce noise and raise the height of the magazines, making them a little easier to reach in a hurry.

The standard infantry backpack was called a musette bag. It held personal items, rations, and extra socks. It was a fiddly device of folded canvas replaced midway through the war by a special-purpose rucksack. Made of better waterproof material, the rucksacks had wide straps that were easier on the soldier and came in many varieties (jungle, mountain, pack, etc.). They were hot commodities in the trading between GIs.

The entrenching tool, raincoat, and bayonet were attached to the musette bag or rucksack. Other items, such as machetes, skis and ski poles, ice axes, and so on were strapped here, as well. Extra weapons (the handy M-1 carbine was often carried by machine-gun crews), or a sniper's scope case might also be kept here. Rucksacks seldom carried anything but extra socks, souvenirs, a book or Bible, and the soldier's letters, writing material, and shaving kit. Extra clothes and gear were kept in duffle bags in the company supply trucks during marches and long movements. They were often lost or misplaced, but then few other armies even offered this sort of support.

Fighting men utilized a lot of condoms. They used them to waterproof their wallets, keep letters and matches dry, and even to protect demolition igniters during amphibious landings. They were slipped over gun barrels to keep the sand out, and tapped as storage baggies for sand samples by Underwater Demolition Teams when they surveyed beachheads before an invasion. Every so often, the dogface even used them for their original purpose.

Officers and NCOs wore a pistol belt with a Colt .45 in a leather holster, a pouch for two pistol magazines, and a compass pouch. Officers carried a map case and binoculars, and often a carbine or rifle.

Officers often had their rank insignia painted on their helmets. Patton demanded this of all his officers, and in addition ordered men to salute in the combat zone; failure to comply was a $25 fine. It is an oft-cited and greatly exaggerated claim that enemy snipers shot officers because of the insignias on their helmets.

Other helmet markings included unit or objective markings, such as a sequence of colored shapes used on helmets in D-Day; spades, clubs, and hearts were used to identify U.S. paratroop units. Many Allies thought the U.S. helmet resembled the German one, so these marks might help prevent a "friendly fire" accident, as well.

THE ARMY AIR FORCE

In June 1941, the Army Air Corps was redesignated the Army Air Force. The AAF eventually would expand from just 24,000 personnel in 1939 to a total of nearly 2.5 million at the end of the war.

Silver Wings and Grease Monkeys

The major tactical advantages of the USAAF were the large number of well-trained pilots available to it, and the high-quality maintenance its machines received. With more training available to more numerous U.S. fliers than for the Axis, the slow attrition of the German and Japanese aces meant certain victory. By the end of the war, green U.S. pilots had over five times the number of flight hours of their Axis counterparts. With plentiful amounts of aviation fuel, spare parts, and combat-experienced instructors coming back to the training schools, the U.S. combat pilot enjoyed superiority in both quality and numbers.

Pilots were the most highly selected personnel in the military, as p. W83 suggests. All had to be physically perfect, have excellent eyesight, and score high on the Army General Classification Test. Those that passed these requirements attended preflight training and primary flight school, where attrition rates were as high as 70%. Ground school was integrated into 75-100 hours of flight time. From there, a pilot progressed to basic flight school, battling against washout and accumulating another 100 hours in the air. This stage was intended to take a civilian pilot and turn him into a military pilot, introducing formation flying, blind navigation, and basic aerobatics.

At that point, the pilot's performance was carefully studied. Most pilot trainees wanted to be in fighters. If the AAF needed fighter pilots, then the best scores went off to single-engine training (and a further 100 hours), and probably a fighter cockpit. If not, it was twin-engine training and most likely bombers or transports. U.S. pilots averaged between 200-300 hours of flight time before reaching a combat unit. Some attended ACTG, an advanced tactical school similar to the present-day Navy "Top Gun" course.

USAAF aircraft mechanics completed the standard 11-week basic airplane-mechanic course plus a specialized course, depending on their exact job. Specialized courses were in either aircraft types (B-17, B-24, P-51, etc.) or in special skills, such as electrical systems, hydraulics, instruments, or power plants. Other courses, such as parachute rigger, radar mechanic, and arctic maintenance, prepared the airman for critical jobs. Courses ranged from 3-12 weeks in length, occasionally even longer.

Each aircraft had ground-crew personnel assigned to it. Depending on the aircraft, this crew might number from four to 10 men, led by an NCO or warrant officer called the crew chief. The crew chief and pilot worked together closely to keep the ships in good shape (p. 109). As planes returned from missions, crew chiefs lined up near the tarmac and sweated out the return of their aircraft and crew. Field modifications, some from factory upgrade kits, others designed on the spot, were the responsibility of the ground crews.

Heavies and Little Friends

The Army Air Force Combat Command consisted of the bomber and fighter commands, each broken into groups and then squadrons (see p.W37-38). The basic tactical unit of the Air Force was the squadron. This unit was tight-knit, and often competitive with other squadrons. Squadrons almost always had the same aircraft, whether that was a fighter or bomber, and deployed in total for missions. A major or captain commanded each squadron, with a total of 300-400 men under his command. He was assisted by a staff of regular officers (adjutant, intelligence, operations, and supply/engineering) and a group of special officers (finance, surgeon, provost marshal, weather, etc.).

Fighter pilots in the USAAF were viewed as the ultimate warriors, the clean-shaven "knights of the air" battling with the enemy in solo duels, the same mystique and endearment that the Mercury astronauts would enjoy in the 1960s. This holdover from WWI was mostly a myth based on the legend of men like Eddie Rickenbacker, Jimmy Doolittle, and Charles Lindbergh. While the white-hat image was encouraged officially, the reality was different. Few fighter pilots shot down enemy planes, and those few that did actually shot down the lion's share – they either shot down more than one enemy plane, or none at all. As one fighter pilot put it, "air combat is no place for the meek."

The best combat pilots were marksmen that killed from behind in close-range sneak attacks. Flashy flying was no replacement for murderous instincts. Surveys of Air Force aces after the war showed that most were short, aggressive, and methodical. The hell-raisers died too quickly; the "thinking men" were the ones that survived. Cockiness and arrogance were usually only a facade, but confidence and self-reliance were mandatory. A fighter pilot was his own navigator, radioman, and engineer. He had to be confident because he was all on his own.

Fighter pilots flew between 200 and 300 hours on combat missions for their tour of duty. This tended toward the low end of the scale in Northwest Europe early in the war, and might exceed 400 hours in the Pacific in 1945.

Like the fighter pilots, USAAF bomber crews were highly skilled units. Most of the flight crews were washouts from primary flight training, so a high proportion had some degree of piloting skill. This caused problems because some men, notably the navigator and bombardier, might still harbor some anger over being cut from flight training and take it out on the pilot; however, this was rare. Most crews worked seamlessly, depending on each man to do his job.

Even with officers and enlisted men in traditional roles, it was the rare bomber crew that didn't have a democratic vote when it came to important decisions. Few pilots ran the show like dictators. It was usually the crew's decision whether to bail out or try and nurse a damaged plane home. Most crews respected their pilots immensely, partially because the pilot knew everyone aboard would see his failures. He could not conceal them like his counterparts in the ground forces.

None of the crews wanted to be known as "abortioners." Crews that turned back with maintenance problems were looked upon as cowards. Those that did this too often were shunned even if no official sanctions were brought against them.

Bomber crews were required to fly a variable number of missions. In some cases, the mission limit was only 25; in others, it was as high as 50. Crews that survived returned to the states as instructors, or, in the case of the *Memphis Belle*'s crew, to tour the country selling war bonds. After the war, some air crews went "cowboy," buying up perfectly functional surplus aircraft for as little as $500 and starting fly-by-night mercenary outfits in the Far East.

Least Glamorous, Most Important: Transports

The Combat Cargo, Troop Carrier, and Liaison squadrons carried millions of tons of men and materiel around the world. Army units survived on the daring and guts of cargo pilots dropping supplies to them in Burma. Transport pilots flew "The Hump," over the Himalayas, to deliver supplies to troops in China. At D-Day and Market-Garden, the transports dropped men and gliders miles behind enemy lines, risking mid-air collisions, flak, and enemy fighters to deliver on time and on target.

Transport pilots often led surprisingly interesting lives. The three-man crew of most transports could be asked to carry anything from mail or propaganda leaflets to livestock, to OSS agents on secret missions. Aerial resupply by parachute or free-drops was a common technique, but a quick "touch-and-go" landing in or near a contested airstrip was also used. To retrieve wounded men, no-landing extractions performed by cargo craft snatching a glider or troops from the ground were also attempted on a few occasions by courageous transport crews. Ad-hoc attempts to arm the C-47 (p. 86) resulted in machine guns mounted in the doorway of the aircraft. When one Japanese plane attempted to take a C-47 captive, cruising alongside and motioning for it to follow, the crew chief flipped open the doors and blew the Zero out of the sky! Other unofficial modifications included a scratch-built cooling device that could chill 10 cases of beer during a 30-minute flight.

After the war, transport pilots found jobs in the growing airline industry, which was purchasing C-47s for under $2,000 apiece.

The Wild Blue Yonder

The many popular images of the U.S. air war in WWII don't tell all of the story.

The Raccoons

Life in the cockpit of a fighter, or the "vibrating casket," was far from glorious. The necessity for oxygen masks and goggles, in addition to the harsh sunlight above the clouds, gave fliers the "bandit" or "raccoon" look, with a dark suntan around their eyes. The crude rubber used in the masks burned and rubbed their faces, leaving them red and sore for hours after the end of the mission. Many pilots complained of the foul smell of sweat, urine, and aviation fuel in the planes. The noise was deafening, with all communication accomplished by screaming and hand signals. The threat of oxygen deprivation (p. 109) also haunted air crews.

What Cost

While many GIs felt that the Air Force was preferable to the Army and especially the infantry, casualty rates among bomber crews were quite high (see p. W82). Once the casualty rate became well-known, most men were still happy with their plight. Clean sheets, hot chow, and other niceties were worth the risk. Men in England could get a weekend pass to London, or a weeklong stay at quiet country homes that served as rest centers for exhausted air crews. Weekend dances and USO shows provided an almost normal lifestyle.

Flyboy Gear

The USAAF was extremely worried about the welfare of its fliers. Air crews – especially the pilots – were expensive personnel, in which considerable training was invested. No expense was spared in giving them top-of-the-line personal equipment, such as g-suits (p. 67) and flak vests (see p. W87).

The standard equipment for bomber crews in Europe included woolen underwear, cotton coveralls or military uniform, a sheepskin leather flight suit with gloves, and crash helmet. Most wore a life jacket, and a shoulder holster with .45 pistol or .38 revolver. Waist gunners on the B-17 wore a heated suit (see p. W87). All crew members were equipped with flak vests and flight helmets (treat as the U.S. M-1 helmet). Crewmen often traded for an extra flak vest, which they sat on for protection from flak that might come through the floor. A parachute with a survival kit (p. 68) rounded out their gear.

Most fliers in other theaters could do without the bulky leather flight suits. They often wore cotton coveralls or their uniform, and perhaps a leather jacket if the flight was to take place at high altitude. A life jacket might be used if the flight went over water, and sidearm was carried as well. Sunglasses and a silk scarf were necessary equipment; the glasses allowed the pilot to peer into potentially fatal blind spots, and the scarf prevented the pilot from chafing his neck against the leather collar of his jacket, an occupational hazard from "keeping his neck on a swivel" in a constant search for enemy aircraft.

Air crews in large aircraft were issued rations for long missions, either a sack lunch with a sandwich, a piece of fruit, and a hard-boiled egg or the less palatable K-ration. Included in the air rations was a cardboard tube that contained pellets of chocolate that would later be sold to civilians as M&Ms. The tiny candies were easier to chew than a bar of frozen chocolate at 30,000 feet, and they didn't easily melt in the tropical heat of the Pacific.

Most crews brought along a thermos of coffee or soup, too, and some had a flask of brandy, whiskey, or gin to steady the nerves or soothe the wounded. Fighter pilots had at most a thermos of coffee and a sandwich.

Survival kits in larger aircraft included an inflatable raft, six flares, a solar water still (p. 68), and fishing tackle. A hand-cranked "Gibson Girl" survival radio also was issued (p. 69).

Ratings and Flight Time

Pilots keep track of their experience with a logbook that tracks their flight time. Allowing characters to speak in terms of flight time is an important bit of "color" that shouldn't be overlooked.

To figure a pilot's flight time, assume that he received 50 hours for the first character point in the Piloting skill. Additional hours are awarded at a rate of 50 hours per point for flying in a combat theater, or 100 hours per point for flying in a non-combat theater (training, stateside ferrying and transport flying, pre-war airline experience, etc.). Thus, a pilot with 8 character points in Piloting could be fresh out of training with plenty of combat time (400 hours), or an old timer with mostly non-combat flying (800 hours). By the end of the war, it was not uncommon to find pilots with more than 2,000 total hours, usually in several aircraft. Note that this system assumes that the pilot is spending a great deal of time "on the job" but not actually flying; see pp. B82-83 for more information on improving skills while working.

Aircraft familiarity takes 8 hours per aircraft, at the end of which the pilot must perform a takeoff and landing with an instructor. This "check ride" qualifies the pilot on the aircraft, which is noted in his logbook. U.S. pilots had flown several different planes (usually of the training variety) before reaching a combat theater. Assume that each pilot has familiarity in one type of aircraft if skill 13 or less, with two additional aircraft per point of skill thereafter.

Adding another type of aircraft rating (Twin-Engine Prop, Multi-Engine Prop, Single-Engine Prop, or Amphibious/Floatplane) requires at least a feverish week of training and check rides under an instructor. At the end of this time, the pilot has 50 hours and half a character point in the new Piloting skill. This type of training was fairly frequent in combat theaters, especially the Pacific.

THE NAVY

As former assistant secretary of the Navy (from 1913 to 1920), Pres. Roosevelt held some bias toward the Navy, much to the frustration of the Army. In addition, Roosevelt's chief of staff was Adm. William D. Leahy, an appointment that served the Navy well during the war years. The Navy had fewer than 400,000 men in 1941, a number that would reach almost 3.5 million in 1945.

The Surface Fleet

In December 1941, the U.S. Navy had three fleets: the tiny Asiatic Fleet in the Philippines (deactivated in February 1942), the Pacific Fleet in Pearl Harbor, and the Norfolk-based Atlantic Fleet. Total vessels then numbered fewer than 1,000, including 225 surface warships. By the end of the war, the Navy had grown to 833 surface warships, including 23 battleships and 99 aircraft carriers.

The battleship (Navy designation BB) was the premier appointment in the days of the pre-war Navy. Battleships had better food and quarters, and a much smoother ride than the smaller "tins cans" and "torpedo traps," such as destroyers and escorts. Officers bucked for battleship assignments. All the top admirals had been battleship commanders. One exuberant Annapolis student even predicted that battleships would sink aircraft carriers before any aircraft could be launched. The Navy seemed to agree. Plans were under way for a 65,000-ton *Montana*-class battleship with a dozen 16" guns. This was never built, so the apogee of the American battleship remained the *Iowa* class, possibly the most powerful warship of the conflict.

Unfortunately, many examples of the pride of the Navy were sunk at Pearl – and with them, the mythic character of the battlewagons. Ever after, the battleship was relegated to carrier-escort duty and shore bombardment, a sitting duck without air cover. Interestingly enough, no U.S. battleships were sunk after the attack on Pearl Harbor – but no U.S. battleships were built after WWII, either. Battleships usually formed the backbone of task forces, but were occasionally formed into a BATDIV of two to four ships.

U.S. cruisers eclipsed the battlewagons in number and importance. Capable surface combatants, cruisers were used in the Pacific to provide anti-aircraft fire and screen against submarine attack. Japanese cruisers consistently bested U.S. cruisers until better designs were made available. These later cruisers, such as the *Cleveland*- and *Baltimore*-class ships, proved to be the equal of any in the war. The Navy began the war with 17 cruisers and ended with 72. U.S. cruisers were either armed with 6" guns (a light cruiser, or CL) or 8" guns (a heavy cruiser, or CA). Two or four cruisers might be assigned to a CRUDIV, but often worked singly within a task force of other ships.

Destroyers (DD) were the workhorses of the Navy. Hundreds of destroyers carried out the toughest jobs as anti-submarine escorts, close fire-support ships, and anti-aircraft pickets. The *Fletcher*-class (p. 92) is often referred to as the best destroyer of the war. Smaller destroyers, called destroyer escorts (DE), performed similar roles, but lacked the firepower to handle serious surface actions, being better suited to anti-submarine warfare. DDs and DEs operated in squadrons of 8-12 ships. Each destroyer squadron or DESRON was further divided into divisions, or DESDIV, of three or four ships. Each DESRON or DESDIV was assigned a certain task, such as escorting a convoy, scouting a channel, or patrolling an island.

Smaller combatants also served in the navy, including frigates (PF), Coast Guard cutters (WPG), gun boats (PG), and the tiny motor torpedo boats (PT). These small combatants managed to get in their own licks, especially in the Pacific against submarines and coastal shipping.

PT boats sunk four destroyers, two submarines, and hundreds of barges and coastal craft, while losing 27 PT boats and 300 sailors. Operating mostly at night, the PTs served as raider platforms, search-and-rescue craft, even couriers and transports. Formed into numbered Motor Torpedo Squadrons (for instance, RON 41) of 12-16 boats, the PTs operated from bases or modified LSTs and destroyers called PT tenders (APG). The APGs carried fuel, ammunition, and spare parts, rendezvousing with the PTs when needed.

The Air Arm

The Navy and Marines began the war with fewer than 4,000 aircraft and ended it with more than 40,000. Navy pilots served for a set amount of time that varied from unit to unit. This was similar to the Air Force mission limit, but might track combat hours (250 was a common number) rather than missions. Like their Air Force brethren, Navy pilots returned to the states after their tour to act as instructors and aviation staff officers.

The general skill and performance of the Navy and Marine fliers was excellent. Their organization and service culture was based upon the squadron (see pp. W37-38), with each one maintaining a distinctive culture and reputation. Fighter, bomber, night-fighter, and torpedo squadrons all served aboard carriers. ASW squadrons were land-based B-24s or flying boats such as the PBY. Some of the fighter squadrons could claim more than 200 kills, and many bagged at least 100. The more boisterous Navy aviators would claim credit for the decisive results gained in the Pacific, and in many ways they were right. Few could argue that they had not applied the lessons of Pearl Harbor to its architects, compounded many times over.

Landing on the carrier deck was a demanding task, since the aviator had to anticipate the pitch of the deck. Bad timing could find the deck moving up to meet the plane, which could produce a destructive collision. In addition to the penalties on p. W150, apply the modifiers for seas, air, and vision (see p. W151) to any Piloting rolls when landing. A pilot trying to land at night during choppy seas and a light rain was in a sticky situation. As often as not, the pilot simply ditched the plane, rather than risk his life and those of the deck gang.

During a landing attempt, the pilot watched the paddles of the LSO, or landing signal officer. The LSO, a pilot himself, acted as a primitive glidescope. Landing without an LSO would be much more difficult (a -2, or worse in rough conditions). At night, carrier landings used aircraft lights, carrier deck lights, and lighted panels for the LSO.

Below the Waves

U.S. Navy submarines sank more than 1,300 Japanese ships during the war, including a battleship, eight aircraft carriers, 15 cruisers, 42 destroyers, and 23 submarines. The submariners could lay claim to sinking 60% of the total Japanese merchant fleet as well. For all of this, only 52 U.S. submarines were lost, at a cost of 3,500 submariners.

Submarines operated in squadrons (SUBRON) with two divisions of six subs each. The boats (submarines were not referred to as ships) went on patrols lasting about 60 days, patrolling some 10-15,000 miles. Submarines were overhauled every five patrols.

Submariners enjoyed a few days of leave after each patrol. In the Pacific, this was usually in Hawaii at the luxurious Royal Hawaiian Hotel. Extra pay, the best chow in the Navy (including ice cream, fresh eggs, and steak), and lax shipboard rules made the submarine force a tempting choice. Only submariners could grow a beard and get away with it (not shaving saved fresh water).

There were hazards aboard, not the least of which was the head; if a sailor failed to pressurize the toilet before flushing, it could backfire violently, giving the sailor what submariners called a "chocolate chip." A more serious danger was the batteries, which released a poisonous gas if exposed to salt water. More dangerous yet was the simple truth that routine shiphandling errors shrugged off on the surface could prove fatal while in the crushing pressure hundreds of feet below it. As the submariners themselves said, "There is room for everything aboard a submarine but a mistake."

Gedunk and Horsemeat

Life in the Navy revolved around the sailor's ship. Each crew was divided into departments (navigation, gunnery, engineering, medical, etc.). Within each department was one or more sections or divisions, each given a letter designation (I, R, C, etc.). Each section or division was further split into starboard and port watches, indicating which half of the division was on duty at a given time. Thus, a sailor might belong to port watch, I division, gunnery. Most watches were 12 hours, with no days off until docking. Then the sailor might enjoy a few days' liberty (or only a few hours!) before going back to sea.

Navy food ranged from very good to very bad, depending on the ship and mess men. Larger ships had all-electric galleys and served hot meals around the clock. PT-boat crews lived on C-rations and coffee. Small ships subsisted on Spam, beans, and chunks of greasy, low-quality beef the sailors called "horse meat." "Red lead" (ketchup) was poured on everything. Food was served in compartmentalized stainless-steel trays.

More consistently praised was the *gedunk*, a Navy word for ice cream. (Modern sailors use the name for snacks, patches, and other odds and ends). The gedunk line was long around meal time, and the tradition was that everyone waited in line, even admirals. Ships as small as destroyers had gedunk, but older and smaller ships did not. It was a common custom for these ships to trade rescued sailors or downed pilots from larger ships for the man's weight in ice cream!

Battle Stations!

The U.S. sailor's most common uniform was referred to as dungarees. This was a light-blue shirt and jeans. Black "boondocker" boots and a white hat called a "Dixie cup" completed the uniform. Most sailors had a pocket knife clipped to their belt. Captains sometimes ordered the hats dyed blue, or even in colors that would easily identify men from a given department. The engine-room crew, called the "black gang," worked nearly naked in the sweltering heat below decks.

During combat, sailors on deck wore M-1 helmets. Most had life jackets on, or at least nearby. Inflatable rafts were mounted all around the ship and could be put to sea in seconds by flipping a lever. Small-arms lockers aboard each ship were equipped to provide for a landing party of at least 30-40 men, and often many more. Most of the weapons in these lockers consisted of Springfield rifles, a few BARs, and .45 pistols. The 50-100 Marines aboard cruisers, carriers, and battleships were fully equipped for battle. Under normal conditions, they served as anti-aircraft gunners. On smaller ships, such as PT boats and LCTs, the small arms might be limited to what the men carried aboard themselves.

Naval aviators in the Pacific wore an inflatable life vest, a pistol or revolver, and a knife. They didn't have to worry about the cold as much as their counterparts in Europe, so a leather jacket was the heaviest clothing they needed in most cases. Flak protection was seldom worn.

THE MARINES

The Marine Corps held fewer than 20,000 men in 1939. By the time that the flag was raised on Iwo Jima, the Marines had grown to almost 700,000 men and nigh legendary status.

On the Beaches

Marines served as shipboard gunners and embassy guards during the war, but their most vital contribution was to the Pacific theater. Some 20,000 of their brethren would die there, and another 70,000 would be wounded.

The Marines brought several skills to the table as the war began. First, they had the most recent combat experience in the U.S. military. Marines had been engaged in "banana wars" in the late '20s and early '30s. The resulting *Small Wars* manual would be the basis for training Marine and Army troops in jungle fighting. Second, Marines brought extensive experience in amphibious tactics. With Army planners, the Marines worked out the substantial logistical and organizational challenges necessary to land troops over an open beach. As a result, not a single U.S. amphibious operation failed at the beachhead.

For the average "gyrene," though, it was blood and guts that made these operations possible. At Tarawa, Peleliu, Iwo Jima, and Okinawa, the Corps waded ashore against a fanatical enemy that had been preparing its positions for months. Marines closed with and conquered them time after time, and usually gave more than they got. Figures vary, but in most cases the Marines killed the Japanese at a 10:1 ratio. Navy gunfire helped, but in most cases the Japanese were in heavy bunkers or caves and suffered few casualties from the barrages. More useful was the close air support from flying leathernecks.

In the Skies

Every Marine pilot had to complete basic training and infantry training before being allowed to undergo pilot training in the Navy. Pilots never forgot their roots; if a Marine called for air support he got it, even if it meant ditching the plane on the return flight because the weather was too rough.

Marine squadrons worked from carriers or airfields. The most famous was the "Black Sheep," VMF-214, under former Flying Tiger (p. 9) pilot Lt. Col. Gregory "Pappy" Boyington. (There were actually three incarnations of VMF-214, each under different commanders.) Formed in August 1943, the Black Sheep claimed 94 kills and sported eight aces. The team was broken up in January 1944 when Boyington was shot down and made a POW. He survived and won the Medal of Honor.

Leathernecks

Marines spent days and weeks at sea, sweating out the unbearable heat and stench of the ships' holds. Every day was boring, broken only by exercises on the deck and rifle inspections. Food was typical Navy fare, often eaten on the same tables that would be used for temporary surgeries during the battle. The best troop ships had movies and perhaps a ping-pong table, but little else. Well-intentioned officers gave courses on map reading, radio operation, and other skills, but even this was barely possible on overcrowded ships. Mostly the Marines sweated and cursed in the heat.

As one would expect, invasion days were much more exciting. They usually began just after midnight, with last-minute briefings and the boarding of amtracs and landing craft. Marines were often given a last meal that consisted of a pork-chop sandwich and a cup of black coffee. New recruits seldom ate it, or if they did they couldn't keep it down. Veterans ate all they could get; they knew their diet for the next few weeks would be limited to cold food from cans.

Troop ships dropped anchor 5,000 to 7,000 yards from shore. Once in the landing craft, the men "circled up" a couple of thousand yards out until the wave was assembled. Then it was time for the heart-stopping run to the beach. Once ashore, the Marines pushed inland as fast as they could. This was tough on the first wave, but made it easier to get in reinforcement and supplies later. Most beachheads were secure by late afternoon, and wounded could then be taken out.

On the islands, the Marines were concerned about the risk of English-speaking Japanese infiltrators sowing confusion. To deter them, they devised passwords that used the letters L and R, both difficult to pronounce correctly for native Japanese speakers. Examples include "hallelujah," "rolling thunder," and "roaring lion."

The next several weeks would be made up of squad or platoon patrols sent out to locate the enemy. Once their location was fixed, the Marines assaulted the strongpoint and wiped them out. Then, the gyrenes enjoyed a few days of rest before being shipped off to the next fight.

Other Naval Missions

The Coast Guard and Merchant Marine provided essential services to the war effort. Coast Guard men were tapped as landing-craft sailors, steaming right into the thick of it. At sea, the Coasties manned their cutters, sinking submarines and rescuing downed airmen. On shore, they provided beach patrols and taught basic sailing skills at swamped Navy training centers.

Merchant marines braved the same dangerous waters as their Navy counterparts. The supplies they carried made the war possible, but they paid dearly. One of every 26 mariners was killed, the highest loss rate of any U.S. service in the war. The men were all volunteers, ages 16 to 80, and they did a thankless job with little pay and no retirement benefits. They piloted the Liberty and Victory ships across the globe, but were denied veteran status.

Navy men were assigned to merchant-marine ships to man the guns. More than 2,000 of these armed guards died in combat. A typical Liberty ship had an armed guard of 25 men and one officer to man the ship's nine guns. In hot times, these men worked 24 hours protecting their ships, fulfilling their motto: "We aim to deliver."

SPIRIT OF THE GI

The American serviceman was something different than all other soldiers during WWII. This was evidenced not so much by his uniform, his weapons, and his language, but by his mannerisms, his customs, and his personal views.

In all things, he was citizen first, and soldier second.

Hardworking

To foreigners, the average American was always in a hurry. In turn, the perceived "laziness" of the GI's allies riled him up as well. British tea time infuriated dogfaces. While GIs were charging forward, it seemed like the British were brewing up at the most inopportune moments (which was simply the characteristic British panache . . . maintaining order and custom, even in the heat of combat). But often, Americans did work harder and longer than their counterparts. This was not just a matter of personal work ethic, but a national identity.

The industrious Americans pulled off one miracle after another. When it came to the cherished "can-do" attitude – erecting bridges in record time, clearing airfields in impossible locales, transporting gasoline around the clock by truck, or just grunting through jungle terrain thought impassable by conventional wisdom – the GI was rarely outdone when he set his mind to it. The energetic, hardworking American was real, tied directly to his blue-collar, protestant "rugged individualism." After all, back home the dogface had dammed the Colorado river, built the Golden Gate Bridge, and erected the Empire State Building.

Fun-Loving

The American GI was noted for his excitement and exuberance, and his carefree manner. Jokes and smiles were the rule of the day, even on sinking ships and among POWs. Captured Americans paraded through Rome were seen smiling and waving, an air of cockiness that disturbed Axis troops. The dogface was full of humor and personality. He was famous for his graffiti. Monikers and slogans were written on helmets, tanks, ships, and anything else they could lay a hand on.

The most common caricature was of a face peering over a wall, inscribed with "Kilroy Was Here." The origin of Kilroy is uncertain – the face possibly came from an English cartoonist and the slogan might have originated with a U.S. ship inspector named Kilroy, who said he wrote "Kilroy Was Here" on bulkheads to indicate he already had counted their rivets. Whatever the inspiration, the drawing was everywhere: inside Patton's helmet, under the Eiffel Tower, on the hands of Big Ben, and on the sides of ships, bombs, planes, and buildings from one corner of the globe to the other. Legend has it that Hitler himself became paranoid about the super-spy Kilroy, who even left his calling card on German equipment!

Gambling was a favorite pastime, principally cards and dice. One airborne soldier jumped into Normandy with $1,200 won in a craps game the night before. Officially, gambling was outlawed, but even officers had regular card games.

GI "fun" wasn't always appreciated, however. In rear areas, townsfolk winced when Americans moved in. Ancient stained-glass windows were smashed in more than one French town by drunken GIs. To his British and Commonwealth allies, the GI talked too loud, drove too fast, spent too much money, smiled too often, and drank too much. The British were especially appalled by the GI lack of restraint when consuming alcohol in public. Loud, obnoxious dogfaces were common on British streets, something the Brits did not much relish. As with everything else, the GI overdid it.

Pinups and suggestive airplane nose art were outward signs of the GIs' idea of fun behind closed doors. Pin-up girls Rita Hayworth, Jane Russell, and Betty Grable were everywhere, a taste of the sexual revolution that ex-servicemen would embrace in the '50s. A sign outside Ft. Benning, Ga., during WWII read, "Prostitution is an Institution." Three million babies a year were born in the United States during 1942, a 30% increase from the previous year. GIs liked women; they would court primitive islanders in New Guinea or *frauleins* in Germany just to meet a "nice girl."

Thousands of war brides were taken from Germany and Japan in the months following the war.

As one Australian woman put it, "They possessed an 'Oh boy' attitude towards everything, and it wasn't just beer and blondes, or candy and Coca-Cola. Nothing represented trouble to them, nothing augured of the impossible."

Independent

The Allied armies seldom saw the GI as a real "stand-up" soldier. Some considered the GI completely undisciplined. He could fight, they might allow, but he could not march or perform close-order drill to suit any foreign commander. Attempts at spit and polish were lampooned. When U.S. troops marched through one recently liberated town, they were noted for their loose manner. As one observer stated, "They walk like free men."

The poor discipline of the GI was legendary. Orders only mattered if he agreed with them, and that was not often. The draftees especially despised officers, whom they considered pompous and privileged. And nothing more enraged the common Joe than seeing officers exercise those rights. Good officers seldom flaunted their extra pay, nicer uniforms, or O-clubs in front of their men. Those that did ran the risk of flagrant malingering, or even outright revolt.

America's egalitarian society gave the average Joe little reason to respect authority for authority's sake. The GI appreciated laws and rules when they made sense, and griped to high heaven when they didn't. Officers fit this mold. Well-liked officers, and there were many, were focused on winning the war, not on Army regulations. If this meant creating a solution on the spot, no one batted an eye. This fact alone set the GIs apart from their comrades. In nearly all other armies, any sense of ingenuity and initiative was squelched or nurtured only in very limited form. In the U.S. service culture, a man was expected to think on his feet, anywhere and all the time.

Rich

Americans were paid twice as much as their British comrades, and many times more than their Soviet counterparts. GIs on liberty brought out the local vendors who preyed on the naive Americans. Local women entertained Americans in preference to most other troops; they had more money and less sense, and seldom could hold their liquor as well as other Allied troops.

The rich GI was not always appreciated. The British citizens widely proclaimed that GIs were "overpaid, oversexed, and over here," and this was reflected throughout all the countries that U.S. troops visited. The GI's free manner with his money ruined local economies and damaged fragile work agreements with civilian laborers. On one Pacific island, the Navy forbade shore leave. Sailors were paying more for a grass skirt than the Navy was paying the locals for a week's work.

Looting

Like every army throughout history, the GIs helped themselves to a little "luxury" wherever they went. A bit of "liberated" wine or cheese from the cellar of a bombed-out village was not the only larceny in which the dogfaces indulged. They scraped gold filling from statues and frames, swiped famous artwork and shipped it home to the wife, stole from churches and banks, and stripped the dead of watches. Most gruesome was the Pacific-theater practice of prying gold teeth from the skulls of dead Japanese soldiers.

Not all of this was technically criminal – there was hardly anyone around to raise questions about rightful ownership – but more often than not, the dogface knew his appropriations came at a cost.

The rapid loss of gasoline, cigarettes, clothing, and luxuries such as chocolate and hard liquor (intended for officer clubs) was so overwhelming that armed guards were assigned to depots in France in late 1944, with orders to shoot on sight anyone that attempted to steal from the boxcars. Rear-echelon troops pilfered so much combat clothing, in an effort to look like hardened combat men, that those at the front were without supplies for several weeks in the fall.

Booze

Like their counterparts, American troops were extremely skilled at finding alcohol. Even though it was issued to officers monthly, and they dutifully issued down to their own troops, GIs were constantly on the prowl for more booze. Wine would be liberated from bombed-out village basements in Italy as fast as captured *sake* would be gulped down in the Philippines. Company commanders in Italy were known to send out "b-patrols" to search nearby villages for alcohol before an assault.

If the GI couldn't find it, he could make it. Nearly every GI could lay their hands on a bottle of the homemade booze called "hootch" or "moonshine" for the right price, as much as $50 for a fifth if supplies were low. Coconut hootch, made by pouring sugar into holes in the coconut and sealing it up for a week, was popular in the Pacific. "Raisin jack," usually made in batches of 1 gallon of raisins and 5 lbs. of sugar, was a common tonic aboard Navy ships. Army dogfaces made do with Aqua Velva filtered through their socks. Leathernecks bought bootlegged whiskey from Seabees for an exorbitant price, or drank "jungle juice" made from local fruits and C-ration sugar packets fermented in stills made from canteens and surgical tubing. Navy men were skilled at using the fuel of alcohol-powered torpedoes to make a high-grade concoction called "torpedo juice."

Animals

American troops always seemed to have pets and mascots. The average GI was crazy about animals. One C-47 transport crew took their dog on every mission; so did a B-17 bomber crew. Marines in the Pacific had pet monkeys, lizards, and snakes. Army troops in Australia adopted kangaroos, and in Italy one tank company kept a mule named Archie, which they had shipped over with them from North Africa.

Not all animals were pets; some were fellow soldiers. American paratroopers jumped into Normandy with messenger pigeons. Army and Marine troops used dogs to track the Japanese in the Pacific. In Burma, the men of Merrill's Marauders looked upon their mules and pack horses as fellow troopers, addressing them by name.

3. UNCLE SAM NEEDS YOU!

ENLISTMENT/CLASSIFICATION

Creating an enormous, and capable, military out of American boys was a daunting task, but one made substantially easier by the grim conditions that the nation was enduring.

The Raw Material

The soldiers, sailors, airmen, and Marines who made up the rank and file of the U.S. military during WWII were a tough and diverse group. Common backgrounds included construction jobs (bricklayer, iron worker, carpenter, heavy equipment operator, etc.), outdoor laborers (coal miner, migrant worker, lumberjack, longshoreman, etc.), or CCC boys (p. 8). The Depression left the nation's young men desperate for work and the tough jobs were the easiest ones to get. Many of these roughnecks already would have the Fit advantage, included in the templates in ***GURPS WWII***.

Early on, when these laborers went off to camp as draftees, they wrote home with genuine excitement about good food, warm clothes, and comfortable barracks. As one recruit said of his fellows, "They can't seem to find the day long enough." By the end of the war, inductees were less impressed. They had experienced wartime prosperity at home. Military life had little appeal in comparison.

Early standards were high. The Depression had made both proper diets and schooling rare, so a third of the boys were initially turned away, though the Army only required a fourth-grade education. The Army responded by lowering selection criteria, eventually even accepting more than 100,000 felons. Men unfit for service in 1941 and early '42 were recalled in 1944 and hurried off to the infantry. One in five draftees was functionally illiterate, so the Army taught more than half a million of them to read during basic training.

Men such as welders, mechanics, and electricians could escape the military by working in defense-plant jobs. Draftees were picked over by the Army Air Force and Navy first; the Army, and especially the infantry, was given what was left over. Historian Paul Fussell, a WWII veteran and infantry officer, has called this an "unintended form of eugenics," with the uneducated and unskilled bearing the brunt of the casualties in the infantry because all others had rejected them.

The average Army serviceman was 5'8" and 144 lbs. Servicewomen averaged 5'4" and 128 lbs. Historically minded GMs may reduce average height by 1" (p. 55) to reflect the lean times that many U.S. soldiers endured as youths.

The Selective Service

The draft began in October 1940. The first 900,000 were selected in November for one-year terms. These men expected to be released from service in 1941 – OHIO, or Over the Hill in October, was the early draftee motto – but as war with Japan threatened, their hitch was extended "the duration plus six months." Eventually, more than 10 million men would be drafted, with a high tide of 3.3 million in 1943. The first group selected for the draft was ages 21-36, but this was reduced to 21-27 by 1942. In 1944, the draft age was reduced to 18.

Selective Service guidelines created four categories:

I: Fit for Service.
II: Professional deferment for critical occupation.
III: Dependent deferment for married men or fathers.
IV: Physically or mentally unqualified.

Each of these categories had a letter code, as well. A registrant who was I-A was ripe for the draft, but IV-F was not fit for military duty.

The 6,500 local draft boards did a generally fair and even job of picking men for service. Many were initially rejected from service because of strict induction requirements, but the rules for eligibility gradually slackened to include illiterates, felons, those infected with venereal disease, and even men with only one eye. Draft boards insisted that these "marginal" types be admitted. They felt it only fair that men of all fortunes and abilities serve, even those the military did not prefer. In most cases, these men were given non-combat jobs, such as with general service companies that loaded supply ships.

Millions of Americans received a deferment from service. Professional deferment aggravated many. In one county, 50% of those eligible had received professional deferments for being farmers. In another, virtually no one was available; everyone already had been drafted, or had deferments. Doctors, defense-plant workers, and merchant mariners also got special treatment. Bartenders, musicians, and actors were usually the first to go, along with the unemployed, troublemakers, and womanizers. Fathers with a job usually were not drafted early on, but they were seen as fair game if unemployed. By 1944, a million of them (one of every five fathers ages 18-37) would be at war.

Those who couldn't get a deferment tried to get medical disqualifications. Venereal disease was a sure way out, and large number of men purposely infected themselves with syphilis and gonorrhea. Others ate soap or aspirin in the hopes that their heart rate would increase and disqualify them. Some claimed to be conscientious objectors, but reneged at the last minute and went off to war, anyway.

The Army took them all, treating hundreds of thousands of cases of venereal disease over the course of the war. It also admitted many men who had serious heart conditions and were genuinely unfit for service.

Volunteers

Shortly after Pearl Harbor, the recruiting stations were swamped with volunteers. Those that had sought to avoid the draft the year before were waiting in lines several blocks long to sign up. War fever was infecting the whole nation. Hillbillies in Arkansas and Kentucky "donated" three or four sons per family to Uncle Sam. Boys as young as 15 years old faked their date of birth and joined up, often with a wink and a nod from approving neighbors and recruiters.

Some of the volunteers were more calculating in their enthusiasm, reasoning that it was better to volunteer now than wait for the draft to find them. The choice and comparably safe assignments, preferably in the National Guard, might be available in December 1941 but filled up in 1942.

The Navy and the Marines were services of choice for the volunteers. The Army benefited from those souls that joined the National Guard, whether as a dodge or not. They would later be activated and inducted into the Regular Army.

If one counts potential draftees who asked the draft board to select them, the volunteer rate remained fairly constant for a year or so after Pearl Harbor. It never exceeded the draft rate, but as late as 1943 the Navy and Marines were still filling some of their slots with volunteers. By 1944, volunteerism was slackening, partly because of Allied successes, but mostly because of the seemingly endless flow of grim Western Union telegraphs.

The Old Hands

In 1940, fewer than 350,000 men served in the U.S. armed forces. By 1945, 33 newcomers were in uniform for every old hand. To a large degree, the tiny cadre of longtime professionals would lead and train them.

Navy sea dogs taught the new men the traditions of their service, while Marine combat veterans passed on the *esprit de corps* that formed the heart of the Marines during the dark days in the Pacific. In the Army, however, the old hands were less pleasant. New men were seen as threats, lesser beings incapable of meeting the standards of the "regulars." Fifteen-year corporals and lifelong sergeants were delighted to deny weekend passes for the smallest transgression. Most new men disliked the regulars, and avoided them whenever possible.

The Army Air Force, being so new, was quite different. The high selection requirements of the AAF guaranteed that new recruits were the cream of the crop, and the old hands (such as they were) took them in greedily. Air crews and service technicians were treated with kid gloves – initially there were so few trained men available that commanders traded gifts (from "lost" and "stolen" equipment to cases of liquor) to get enough men to fill the slots they needed.

Classification

One of the first tasks for a new recruit was a test. The Navy and Marines gave the General Classification Test, while Army recruits took the similar Army General Classification Test, or AGCT. The Army called this a "usable intelligence test," the equivalent of a modern mechanical-aptitude exam. The 40 minutes and 150 multiple-choice questions of the AGCT represented a very critical period in the recruit's service.

The test results were tabulated by machine and the recruit was assigned a classification from I to V. Class I and II troops were the top selections, and heavily fought over; each arm of service in the Army received a portion of these recruits that varied throughout the war. Generally, the Air Force received the most, but artillery, armored, and service branches such as the signal corps also received a certain percentage. Early in the war, the bottom-rung recruits from the IV and V classes went exclusively to the combat units, but by late 1943 this practice had been abolished, with each branch of service receiving an equal percentage of high and low scorers.

While no single intelligence test encompasses the IQ attribute in ***GURPS***, AGCT results could be interpreted in the game as follows:

Class I (130 or higher) requires IQ 11 or above. This rank was the preferred classification for cryptanalysts, radar operators, navigators, and OSS operatives.

Class II (110-130) would require IQ 10 or 11. This is the minimum for the officer candidate school and pilot training.

Class III (90-109) would usually have IQ 9 or 10. The average score on the AGCT was 107, and soldiers in this category were placed in combat or engineer units.

Class IV (89-70) would have IQ 9.

Class V (69 or less) was IQ 8 or below, and considered slow or mentally retarded. Late in the war, this category placed the soldier in a non-combat general-service company, most likely as a stevedore.

Certain advantages, such as Mathematical Ability and Lightning Calculator, might boost the PC into the next category, while some disadvantages, namely Confused and Innumerate, may reduce the category. Of course, Luck or Unluckiness might come into play in the selection process, as well.

After the AGCT was completed, the recruit was interviewed by a classification specialist who would try to synchronize the recruit's preference, background, AGCT score, and most importantly the Army's needs. A former backhoe operator could land a job as tank crewman, an electrician as an engineer, a store clerk in supply. Those with civilian flight experience had an easier time gaining access to pilot training.

College education also helped GIs get desirable positions during the interview. Physical abilities, such as Acute Vision for aspiring pilots, were crucial as well. Short men were sought after for piloting or tanker jobs, due to the confines of the working environment. Color-blind recruits were limited to non-combat jobs, as were those with flat feet or bad backs.

If played out during a game session, this interview certainly should include a reaction roll. A good reaction roll would help gain the recruit's preferred classification, or at least keep him out of a horrid job; a bad reaction roll would have the opposite effect.

Depending on the role assigned to the GI, more tests were given, either at the induction station or in the first week at basic training. Here, recruits competed against each other for specialist roles, and they knew it. Conniving troops resorted to getting their competition drunk or sick, and even misdirected them. ("Hey Mac, the shrink is in on the other side of the base . . .") in order to improve their own odds.

All Army personnel received a formal job title, called a Military Occupational Specialty or MOS, which had a corresponding number. Overtime, many soldiers acquired multiple specialties. Thus a pilot might find his MOS listed as Bomber Pilot, Twin-Engine (1022), Fighter Pilot, Single-Engine (1055), and Flight Control Officer (2159). In the infantry one might encounter Rifleman (745), Ammunition Carrier (504), Armorer (011), Cook (060), or Gunner, Light Machine-Gun (604). By the end of the war, an experienced soldier could have all of these listed on his Qualification Record.

BOOT CAMP: BASIC TRAINING

Boot camp was the beginning of the war for most Americans. And for the first few weeks of their military career, it *was* the war. This was the first challenge of their life.

Basic training figures prominently in American film and literature, and would be a good place to start a campaign.

General Issue

Heading off to boot camp, the new recruit traveled from the recruiting station in or near his hometown to his basic-training camp by bus or train. After two or three days, the recruit arrived at the training camp's reception station. This usually occurred either late at night or early in the morning, which served to disorient the recruit. A screaming drill sergeant ushered him off the bus and into the military world.

The recruits were first held at the reception station for about a week for processing. Heads were shaved to prevent lice. They were then sized for and issued their clothing allowance (shirts, coat, trousers, skivvies, boots, etc.) and given their shots. Paperwork followed. Dog tags and identification cards were given out. Each recruit was given a service number, with a prefix describing his branch of service (RA was Regular Army, NG National Guard, O for Officer, N for Navy, etc.), and told to "forget your name, but remember your number."

A will and testament had to be drawn up. Number of dependents, marital status, next of kin, and other pay issues had to be determined. All GIs were encouraged to take out a life insurance policy. Cost was $6.50 a month, but it paid $10,000 to the beneficiary.

A Home Away From Home

After processing at the reception station, the recruits were divided into platoons of 30-50 men. Each platoon was controlled by one or two drill sergeants for the duration of training. A recruit leader was also appointed. This GI marched the group to and from the mess and training halls in the absence of the drill sergeant. Other duties for the recruit leader included pre-inspection of the barracks, organization of work details, and gathering mail from the other recruits. He was relieved on the spot for any contravention, and the title and duties bestowed on another recruit. (This is simply a title and does not qualify as Military Rank.)

Recruits were then introduced to their barracks, their home for the next several weeks. Barracks were usually drafty wooden buildings with only a pot-belly stove for heat. A shiny linoleum floor would demand much attention from the fledgling GIs in the time to come – that attention might be rendered with mop or a toothbrush, depending on the GI's attitude.

The drill sergeant's office was in the front of the barracks, along with a shower room. A room at the rear of the building housed the latrine (*head* in the Marines and Navy). Sinks and mirrors ran along one wall and toilets, without privacy stalls, along the other. Beds and wall lockers lined each wall in the main area or *squad bay*, with wooden footlockers at the end of the bunks. Recruits slept head-to-toe in the bunks to reduce disease. Tin cans from the mess hall were lined up next to the beds. They were filled with sand and used as butt cans and ad-hoc fire extinguishers. Unlike today, recruits were allowed to smoke during training. "Smoke 'em if you got 'em" was heard at nearly every rest break.

The Drill Sergeant

This man's job was to turn civilians into soldiers. He was chosen for strength, physical stamina, and soldierly prowess. Drill sergeants were masters of profanity, able to form linguistically questionable phrases into statements capable of stunning the most rebellious recruit into submission. Virtually every tool from heartfelt counseling to psychological terrorism (see p. W42) was at his disposal.

He ate little, slept less, and changed uniforms as much as five times a day to portray that perfect image that was essential to modeling the military life. As mother and teacher, he counseled soldiers about a wide array of topics. He might touch upon religion, husband-wife relationships, and the proper employment of the M-3 fighting knife in the same lecture.

His gruff demeanor often disguised a man heavily burdened by his role as teacher and mentor. He knew that any failure to pass on essential skills would cause deaths in combat. This often surfaced as frustration and anger at rookie soldiers unaccustomed to the military lifestyle. Beating and torture of recruits was not uncommon, and seldom punished. A swift kick in the backside or punch in the gut was considered "motivational training." This was seldom abused, but could be used throughout the training to illustrate a point. Drill sergeants used embarrassment and "verbal counseling" more liberally, however

An ideal drill sergeant or drill instructor will be a Seasoned or Veteran individual based off the Rifleman, Marine, or Sailor templates in ***GURPS WWII***, modified for Military Rank 2 (see p. W70). Add Teaching, Psychology, and Intimidation at 12 or higher. Teaching is optional though – some drill sergeants had no idea how to teach, especially early in the war. They just winged it.

Later in the war, many drill sergeants had acquired extensive combat experience, and perhaps some psychological damage, before returning home as an instructor.

Blood, Sweat, and Tears

After settling into the barracks, the recruits began the process of learning the military life. Training in the Army and Marines lasted 8-13 weeks on average, and for a short time was reduced to as little as 6-8 weeks. Navy boot camp was reduced to only 3 weeks, but settled at 6 weeks by late 1942.

Training came in two varieties: cadre or replacement. The cadre system was used early in the war (1941-43) to build new divisions. Replacement training centers were used to feed men to divisions being formed up without the cadre system, or to divisions that were already in combat.

In the cadre system, new recruits were shipped directly from the induction station to a stateside division or regimental camp. The training was not conducted by instructors, but by the officers and experienced enlisted men of the unit being formed (about 10% of the unit's target strength). These experienced men (the cadre) organized and trained the rest of the division, made up of new recruits.

Replacement training centers were set up all over the country as specialized centers for training one specific group, such as armor, infantry, field artillery, signal corps, or engineers. Trainees at a replacement center learned basic training and their specialty at the same base.

Each system taught more or less the same curriculum, which varied during the war, but settled on about six weeks of basic (or "branch immaterial training"), eight weeks of "technical and tactical" training, and three weeks of field exercises and bivouac. They were also required to teach what the Army called "common specialty training" for cooks, supply clerks, truck drivers, and mechanics.

Cadre training camps normally added their own twist. Armored divisions had easier access to tanks, for instance, and spent time familiarizing their recruits with their capabilities. An infantry regiment cadre, on the other hand, might focus on infantry patrol techniques. Cadre training was a little tougher, too; instructors knew they would directly work with the recruits in battles to come. This had the advantage of forming a close bond among the men. This *esprit de corps*, and the one to two years of tool-up time needed to create a new division, improved morale and combat performance.

The Training Roster

Basic training was challenging for America's citizen soldiers. Both physical and mental tests were designed to break down and build up the recruit. The wartime training tempo and intensity was severe enough to cause a loss rate as high as 10% from injury or mental problems.

In the first week, recruits learned chain of command, military courtesy, marching, and close-order drill. The next couple of weeks saw the men introduced to bayonet fighting, grenades, and operation of the basic infantry weapons.

Army and Marine trainees studied Soldier, Brawling (or Judo in the Marines), Guns (Rifle), Spear, First Aid, Climbing, and Hiking. Sailors learned the basic skills listed on p. W84, plus Brawling and Guns (Rifle). During training, the recruit gained about half a character point a week in each of the skills being taught, but every skill got at least two weeks of training.

The following provides some guidelines for GMs wishing to feature training in their WWII games. These suggestions are intended to add drama to the game, not to replace standard ***GURPS*** rules. Pick one or two different challenges for the end of each week's training. Skills will be at least at the half-point level by then. Remember that the PCs' fellow trainees will have average attributes.

If units are competing against each other (say, in mock combat between platoons), roll once for each unit, handling it as a Quick Contest. Follow the guidelines for *SNAFU* on p. W159, but apply the penalty to the roll in question.

Running and Road Marching: Recruits in the Army and Marines seemed to run everywhere with full packs. Runs were a favorite early-morning activity, with boots and pack in tight formation. Most runs were 2-5 miles with 20-30 lbs. of gear at a grueling 7-minute-mile pace (Move of 4).

Roll against the higher of Running+2 or HT, modified by encumbrance, every mile. Fit adds +1 to either sort of roll. Success costs 1 fatigue (see p. W205) except that success by 3 or more results in no loss. Failure costs a number of fatigue points equal to the margin of failure. When down to only 3 fatigue, the soldier "falls out" at half move. He may be beaten, sentenced to KP, or forced to repeat the run after a rest period. Occasionally, a recruit may be permitted to "grind along" at reduced speed, but only if he keeps chugging!

Recruits marched to ranges and training facilities all over the post, but long road marches were done in full equipment and pack (between 50 and 65 lbs.), hustling along at 3-4 miles per hour (Move 1-2). Road marches gradually crept up from only a few miles to as much as 50 or more. Often these marches were attempting to break some kind of division or regimental record. One parachute battalion marched 118 miles in less than 75 hours to beat a *Japanese* army marching record.

For these marches, roll once per *hour* using the above rules for running, except roll against the higher of Hiking+2 or HT. A 15-minute break every two hours was customary.

Calisthenics: For this morning ritual of push-ups, pull-ups, sit-ups, and jumping jacks, use the rules for running, above, but roll against ST every 15 minutes, instead. A typical PT session lasted an hour. Recruits who performed poorly might be given an impromptu session of calisthenics at any time. This was always the case outside the chow hall, where recruits exercised while waiting in line to enter the building.

Drill sergeants knew that exercise and conditioning was the key to recruit survival at the front. Few experiences would drain them like the endless weeks without sleep and proper nourishment. Constant exercise and a hearty diet were deemed absolutely essential in preparing troops for combat. The Fit advantage in the templates in ***GURPS WWII*** is the hard-earned result of this "toughening up."

Tests: Hands-on and written tests were given for radio procedures, map reading, and other skills, usually at the rate of one per week. This was most common in the Navy and in technical specialty fields. Tests are based on the appropriate skill, usually with a bonus of +1 for the hardest to +5 for the easiest. A common test was weapon disassembly and reassembly (at +1 to Guns skill if blind-folded). Roll a Quick Contest to see who's fastest in a competition.

Obstacle Courses: Usually 500 yards long, a standard obstacle course presented a series of challenges, each requiring a roll against HT, DX, ST, Climbing, or Jumping. Each failure would apply a -1 to a final HT roll; each success provides a +1. In company competitions, the final roll should be considered a Contest of HT, modified as described. The company winner usually got a weekend pass.

Weapon Qualification: The WWII-era target was a red and white bull's-eye at a specific distance, called known distance, or KD. The KD range emphasized marksmanship, but was not

very realistic. In battle, GIs tended to hold their fire until they had a clear target. Combat units had to teach the concept of covering fire to new recruits! After the war, the Army switched to small green silhouettes and a more realistic training regimen.

Roll against weapon skill. Success by 5 or more qualifies as expert, by 2-4 as sharpshooter. A simple success merits a marksman designation. Failure means remedial training. Critical failure causes an injury to someone – and not necessarily the shooter! Troops seldom qualified on any weapon but the rifle during boot camp.

Live Fire Training: Once recruits had qualified with their weapons, they would be taught how to maneuver on the battlefield as a member of a squad. Pop-up targets allowed new soldiers to fire real bullets as they moved up the training lanes. Roll against Soldier skill; failure results in a bad showing. A critical failure results in someone getting shot.

Bayonet Training: During WWII this was taught with a "live" blade, meaning real steel. The first lessons were taught at the gallows, a wooden frame with straw-filled dummies hanging from it. Paratroopers and Marines had a *serious* emphasis on bayonet training, often against dummies that had been stuffed with blood and pig intestines rather than straw. Troops were expected to be covered in blood by the end of the day.

Afterward, the recruits advanced to live targets – each other! Each trainee was assigned a sparring buddy to practice the maneuvers against. Watchful instructors insisted on aggressive attacks and blood-curdling screams; those who did not play along were punished. Nicks and scratches were common. More serious injuries tended to occur late in the day when the soldiers were weary and less alert.

Bayonet practice can be resolved with a DX or Spear roll. Success means a good showing. Critical success means selection for the company championship (roll a Quick Contest to determine the winner). Critical failure causes an injury to the sparring partner.

Hand-to-Hand Combat: This training was important in building up a recruit's aggression and self-confidence. GMs may choose to play out important matches normally, or handle each bout as a simple Quick Contest. Recruits normally spent a week in hand-to-hand training. The Marines trained particularly hard in hand-to-hand due to the Japanese preference for close-combat fighting. Army training was spotty, with only Rangers and Airborne troops receiving training equivalent to the Marines. GMs should treat this training as Judo, not Brawling. Advanced courses taught the Karate skill.

Knife Fighting: Infantry, Marines, and paratroopers were taught the rudiments of knife fighting during training. As with bayonet training, this was live steel and someone always got cut. Handle this just like bayonet fighting, above.

Parade: After weeks of learning close-order drill, recruits marched in review for the company officer. Winners might get a night at the enlisted men's club as a reward (a place normally off-limits to recruits). Roll a Quick Contest against the average Soldier skill for the competing units.

Inspection: Every couple of weeks, recruits were inspected by company officers. The GI laid his gear out on his bunk and in his locker in the prescribed manner. The barracks was cleaned and polished to a high sheen. His boots and dress shoes were likewise buffed and cleaned, and his uniform prepared for the 30-second once-over by a company officer. Failure meant a chewing-out by the drill sergeant and physical punishment on the drill field. Preparation for another inspection was sure to follow. A second failure could result in fines or worse. Roll against Soldier +3 to pass an inspection.

The inspections had a purpose. They caused soldiers to become detail-oriented, to work as a team, and to get organized. Self-discipline and knowledge of his equipment were essential for the new serviceman, traits he would need in the months to come. Arguments over who would clean the toilets, for instance, identified bad soldiers, and gave their bunkmates a chance to do a little educating of their own.

Battlefield Indoctrination Training: In this night exercise, recruits crawled under barbed wire while demolition charges exploded nearby and bullets passed overhead. Parachute flares lit up the sky. Deaths did occur during these maneuvers, causing many trainees to remark that combat was "just like training, only worse." This requires a Fright Check (see p. W197) with a +2 bonus. Freezing or panicking was common.

Bivouac: The culmination of basic training was a series of field problems that tested the recruit's abilities. These usually included long road marches, night fighting, and at least one gas attack (see *Tear Gas*, p. B132). The recruits dug fighting positions, patrolled, and fought in mock battles. They ate C-rations like "real soldiers" and stalked other trainees in carefully graded exercises. Roll vs. Soldier and HT+2 to pass bivouac.

After the bivouac, the recruit had a few days to prepare for his graduation parade. Upon graduation, he would receive the designation Basic Training (521) as his MOS, and a few days' leave. Then he was required to report to his unit, or advanced training appropriate for his specialty.

PT and KP: Barracks Life

Life as a GI was a step up for many of the nation's young men. For sharecroppers living on hog and hominy, military chow was their first experience with a balanced diet. Fresh milk, fruits, and vegetables were wolfed down with gusto. Chow halls were all-you-could-eat, and included the luxuries that many at home couldn't afford – meat and desert at every meal, soda pop, and ice cream. The Army reported that recruits gained an average of 16 lbs. in their first year of service.

Salisbury steaks, ham, and fried chicken were served every week at the training camps. Mashed potatoes, lima beans, and carrots were common sides. The food was often bland, but at least it was plentiful. Breakfast sometimes was SOS, "shit on a shingle," which was day-old gravy and sausage poured over stale toast. Meat-and-beans was another culinary delight made from leftovers. Breakfast also could be fresh eggs, pancakes, hash browns, and even made-to-order omelets. Coffee was a rationed item for civilians, but the military got all it wanted. It seemed every building and ship in the U.S. military had coffee brewing around the clock.

All this chow had a purpose. With good fuel, the recruits were ready to be pushed on the PT field. Companies competed for push-up and sit-up records. Trainees endured some silly but well-intentioned exercises too, such as the 100-yard duck waddle and two-man wheelbarrow races. With motivation from the drill sergeant, the well-fed troops built muscles and endurance.

Those troops who weren't sufficiently motivated ended up scrubbing toilets with toothbrushes, digging the refuse out from under an outhouse, or spit-shining the commander's staff car. These tedious jobs were to convince the GI that training was more exciting and less disgusting than his current job, whether that was clipping the barrack's lawn with scissors or digging a foxhole with a spoon.

All GIs hated KP duty. As "kitchen police," the weary dogface had to be in the chow hall hours before his fellow soldiers crawled out of bed. Once there, he scrubbed pots and pans and prepared food in industrial-sized quantities. The job was made even worse by grumpy, overworked mess sergeants. Thankless GI customers might complain about runny eggs or burnt pancakes. And there always seemed to be more work than helpers. The labor was hot and tiring and ended only when the last meal was served at the end of the day.

Buddies and Pals

The most critical component in the creation of a combat unit was the formation of what the modern military calls *primary groups*. This was a group of at most a dozen men who had known each other well enough and long enough to form a social bond. This bond kept men focusing on group pressure (duty, loyalty, status) rather than internal pressure (fear). When in combat, the men of a primary group spurred each other to action, conscious that failure to do one's job would be noticed by the others. Religion, patriotism, or moral issues were a very distant second to duty in the dynamics of a primary group.

WWII cadre training succeeded, coincidentally, in creating primary groups with lasting bonds, while replacement centers made the creation of such bonds more difficult. In game terms, those within a primary group have what p. W69 calls Sense of Duty (Buddies in the Unit). British and German military planning, and the U.S. Marine Corps, did a much better job of creating primary groups than the U.S. Army.

During training, every platoon seemed to have a sad sack, a slacker or cut-up who couldn't get things right. Fellow recruits were normally sympathetic at first, but began resenting the fellow when he cost the platoon any privileges. Revenge came in the form of the traditional "GI party." The most mild, reserved for those with hygiene or uniform issues, was a fierce scrubbing in the shower with a bristle brush. Serious discipline issues were handled by draping a towel or blanket over the offender as he slept, holding him down and muffling his cries. Men in the platoon then lined up and each took turns beating him with a makeshift flail created by dropping a bar of soap inside a sock (perhaps 2d damage for the whole attack). These corrective actions usually had their intended effect.

90-Day Wonders and Ring-Knockers

The Army needed officers to lead its men, and there never seemed to be enough qualified men for the job. Infantry companies frequently had fewer than half of the allotted number of officers. American military leaders were taught to set an example by "leading from the front," a management style that would see officers replaced almost daily during the heaviest fighting.

The Army searched in several places to find qualified leaders. First, it looked within. Good enlisted men were sometimes promoted on the spot. Those who wished to be officers, but weren't promoted in battle, could request a slot at Officer Candidate School. If reactions were good, and the soldier had some college education and a clean record, his chances were high. Those enlisted men who completed training and became commissioned officers were called "mustangs." Probably the most famous WWII mustang was Sgt. Charles "Chuck" Yeager, who worked his way up from mechanic to general. Medal of Honor winner Audie Murphy also was a mustang.

New mustangs are best represented by picking an appropriate template and applying the suggestions on p. W71 for Seasoned or Veteran troops. Lastly, add in the skills necessary for Rank 2 (*not* Rank 3) on p. W70. This will create, as in real life, a junior leader more qualified than his rank would suggest.

A second method of finding qualified officers was to recruit from colleges through the ROTC. The Reserve Officer's Training Corps kept men in college at the height of the draft, allowing them to finish their degree with the understanding that they would become officers. The men filled out the bulk of the slots as new officers. They had the least amount of experience and training; it took only 12-17 weeks from college graduation to commissioning as a second lieutenant and posting to a front-line unit. Veteran troops were not pleased to be saddled with such a "90-day wonder" and often made their displeasure quite clear. Young officers learned to listen to their NCOs; those who didn't died quickly, and frequently took a lot of their men with them.

Create 90-day wonders by selecting the appropriate template, modified by the suggestions for Green troops on p. W71, and then adding the skills for Rank 3 on p. W70. These officers will have a few skills related to their college degree to compensate for their lack of military experience.

The final, and usually preferred, method was to rely upon the service academy. Graduates of West Point (or Annapolis for the Navy and Marines) were known as ring-knockers, because they wore their class ring with pride and formed an elite "boys' club" within their service. Each academy only graduated a few hundred men each year, however, far too few to fill demand. West Point cut its curriculum to three years in 1943 to help meet demand.

Casualty rates ran about 5-10% in the 1940-44 classes of West Point and Annapolis. Annapolis graduates went to a warship on their first two-year assignment, but West Pointers sometimes spent little time on the front line before taking a staff position.

Fresh academy graduates are created as for the 90-day wonders, but as Average rather than Green soldiers. Additionally, even though Military Rank 3, their education should be reflected by taking the skill recommendations for Rank 4 on p. W70.

Advanced Training

Most advanced training was conducted concurrently with the primary training period, but some troops received advanced training at special schools, or with their new unit.

Doggies and Leathernecks

Infantrymen, or dogfaces (often shortened to *doggie*), had several weeks of advanced training after basic training. Cadre units trained all together at the same time, but replacements were sent off to school. This might be at infantry-training schools stateside, or at an overseas divisional training center right behind the front. The men that hit the beaches at D-Day trained for months in England at the Assault Training Center.

The standard rifleman learned patrolling techniques and city-fighting from those that had survived it. Skills such as Stealth, Orienteering, and Traps were reinforced in a weeklong combat-patrol class. Reconnaissance units attended classes that taught Stealth, Intelligence Analysis, Forward Observer, Survival (Urban), Traps, and Demolition. Street-fighting was taught in a mock-up city named Hitlerville that included pop-up targets and GIs dressed in enemy uniforms firing Axis weapons. Troops attending such an urban-combat course might learn Fast-Draw (Magazine or Pistol) and Demolition. Of course, brief lessons in a wide variety of topics might not give the GI any new skills. It takes in-depth study to do that. Short-format lectures can qualify as study in improving the Soldier skill, however. Assume that one month of peacetime training is equal to 1 character point that can be spent on job-specific skills.

New skills might be picked up if the soldier were being trained for a specific position in his unit of assignment. A soldier destined to be part of a machine-gun team might pick up Speed-Load (Belt-Fed) and Armoury (Small Arms) during his advanced training. A few men attended assault courses that taught Guns (Flamethrower), Guns (LAW), and Guns (Grenade Launcher) over a two-week period. Divisional training centers held classes on Packing, Forward Observer, and various hand-to-hand combat techniques. The Fairbairn Close Combat style was common (see p. W:HS10).

After boot camp, Marines attended a 12-week school of infantry that focused on their job, be that rifleman, BAR man, mortar man, or machine-gunner. Weapons skills, Soldier, and Survival (Island/Beach) were the order of the day. Guns (LAW) and (Flamethrower) were also taught. Marines trained for many hours with bayonets and hand-to-hand combat. They might have extra points in these skills.

Medics

Medics (corpsmen to the Marines) were attached at the company level, and in infantry units one medic was attached to each platoon. The platoon-level medic attended basic at a Medical Corps replacement center, where his training included eight weeks in general preventative health measures and emergency life-saving techniques, such as administering tourniquets, plasma, and morphine. Real-life training was used as much as possible. Medics-in-training worked in civilian and military hospitals to prepare for combat. Some recruits were given a goat to shoot then keep alive as part of their training, a practice revived in the 1960s for Special Forces medics.

As suggested on p. W54, a medic will have First Aid-14, Diagnosis-10, and Physician-10. He should otherwise be based on the Rifleman, Paratrooper, or Marine templates on pp. W72-85. Other enlisted men trained as medical technicians, surgical technicians (First Aid-14 and Surgery-10), or in other specialties, such as X-ray technician and dentistry.

A battalion surgeon (a captain with First Aid-14, Diagnosis-12, Physician-10, and Surgery-12) worked at the battalion aid station just behind friendly lines. Surgery at the aid station was limited to suturing up arteries and other efforts at stabilization. Pp. 124-125 discuss an aid-station-based campaign.

Tankers

Fort Knox, Ky., hosted the Armored Forces Replacement Training Center, which taught basic repairs, driving, and rudimentary gunnery. Accidents and serious injuries were common. After driver training, the recruits learned the complicated job of estimating range and aiming the tank gun. Other lessons included how to climb in and out of the tank (which was practiced constantly), and how to use the escape hatches and periscopes.

Those who seemed particularly adept at gunnery might be sent to the Tank Gunnery School afterward. This lasted 4-5 weeks, during which the tankers fired about 30 rounds a day. This was great training, but due to the high demand for gunners, only a small percentage attended the school.

Sailors

Promising seamen attended technical schools that lasted a couple of weeks to several months. These granted a rating in Mechanic, Engineer (Vehicle), Meteorology, or Gunner, for instance. About half of sailors had no special training; they had to "strike" for a rating through on-the-job training. A petty officer would oversee their training and administer tests over several months. A rating requires a skill of 12.

Field Problems

Field problems were real-life maneuvers used to train troops in military skills. The field problem featured a specific task (i.e., capture a bridge) that had to be accomplished within certain parameters (i.e., one infantry platoon in the next two hours). Troops were accompanied by observers that graded their performance during the field problem. These referees could rule that careless soldiers became casualties and judged the outcome of battles between opposing forces. Referees often took equipment as well: "Let me see your compass, lieutenant. Suppose you lost this during the battle. What will you do now? Carry on, sir."

The field problems were not supposed to be easy, and in fact most observers overburdened the men with casualties from imaginary mines, strafing aircraft, artillery barrages, and so on. Once the unit reached its objective, the exercise was over and all involved attended a briefing that critiqued the men and offered suggestions for future situations.

MOVE OUT!

After attending boot camp and advanced training, Army troops went one of two routes. For cadre units, the GI was already at his unit. He simply continued training with his unit (mostly field problems and weapons training) until it was time for the unit to be shipped overseas. Replacements were shipped directly to a theater, and eventually into units on the battlefield.

Transport

After a train ride to the port of departure, and perhaps a short pass to see the sights, the troops were herded like cattle on the ships. Trips on transports were seldom pleasant. The best accommodations were aboard fast troop ships that had been converted from luxury liners, such as the *Queen Mary*. These liners could steam at 30 knots or more and were able to outrun enemy submarines, so they didn't have to travel in the slower convoys. These normally luxurious ships were packed with upward of 10,000 men crammed into bunks stacked five or six high. Seasickness caused vomiting, which added to the stench of the hold. The heat and boredom below decks caused most GIs to spend their time topside, playing cards and smoking, whenever allowed on deck. Some ships had a library for the troops to use. In calm weather a movie might be shown, projected on a makeshift screen on the deck. The galley on these ships ran around the clock, with troops standing in line for hours to receive a Spam sandwich and hard-boiled egg.

The passengers entertained themselves by talking with the sailors and exploring the ship. A lucky GI might make acquaintances with a sailor and gain access to areas otherwise off limits, such as the bridge or pilothouse.

Time at sea varied greatly. It took only 4-5 days to cross the Atlantic in a fast troop ship. A normal crossing in a convoy in the Atlantic spent three weeks at sea, perhaps two if it was a fast convoy. Trips from the West Coast to New Guinea took about a month. Army planners assumed a convoy would make 240-360 miles a day, but added 10% to account for zigzagging, time lost during forming the convoy, etc.

At the end of the trip, the cadre units marched off the dock and into a vehicle convoy, or train station. They would be quartered together, training and preparing for combat. Replacements were not so lucky.

The Repple Depple

In its replacement plan, the U.S. Army treated the soldier as a spare part, like spark plugs for a tank or a bolt for a rifle. This system of individually replacing casualties was meant to efficiently use manpower and keep experienced combat units on the line. It was thought that the new men would keep the unit fresh while the veterans kept it highly skilled. While the intentions were good, the system failed miserably (see p. W42).

Compounding the problem, the Army bureaucracy forbade divisions from requesting replacements in advance of actual casualties. This meant the division commanders usually needed to throw replacements into combat immediately, without any indoctrination period. Some divisions were able to pull shot-up companies to the rear and refit with replacements properly, but this was not policy.

Men shipping to a combat theater as replacements arrived at a reception depot, usually a large tent city. After a few days, the soldier would move to yet another collection of tents that the Army called a stockage depot, where he would be issued a rifle and any field gear he needed (cold weather clothing, sleeping bag, etc.). Some training would be conducted at this point – on orientation, personal hygiene, venereal disease, etc. This might include some time at the range to sight-in weapons. If the soldier was lucky, he would be sent to a division with a training center ready to receive him. If not, he could expect to languish in a replacement depot.

At replacement depots, called "repple depples," new men waited for weeks or months before being assigned to a unit. The time should have been used in training, but seldom was. Even routine exercise was overlooked. There was nothing to do but read magazines, smoke, and go to chow. Eager and highly trained men simply wasted away in depots, worrying about their future. Here they encountered veterans coming back to duty after being released from the hospital. These men terrified the replacements with stories of combat. As one GI reported, "I expected confidently that I would be blown to bits within 15 minutes after my arrival at the front."

When replacements were called up, a corporal or sergeant showed up with a list, found the men, and ushered them into a truck. They seldom received any information, even the name of the unit they were being assigned to. Eventually, they were dumped in twos and threes at command posts near the front lines. From there, the replacements waited until dark, then made their way out to a front-line company with the supply sergeant. If they were lucky, the replacements stayed at the company-command post for a few days, staying alive until they figured things out. They might get briefed by the company first sergeant or the company commander on the current situation. But, if the company was really low on manpower, they would take the replacements straight out to the platoons and put them in a foxhole.

Veterans avoided these new men for a couple of reasons. First, the new guys tended to make stupid mistakes. They might build a fire to keep warm, light a cigarette, or otherwise draw attention to themselves, which often resulted in an artillery or mortar attack. Second, the veterans were cautious about making friends. They had already lost many buddies, and the new guys were not part of the primary group, the close-knit band with which the veterans were familiar. The new guys were strangers, and it took some time for the two groups to get to know each other.

If the new troops survived for a few days, by watching the old men and keeping their mouths shut, then the veterans would eventually loosen up, perhaps even share a foxhole with the new guy for a night and whisper advice to him while they stood guard. If the recruit survived a major battle and did well, he could expect to be brought into the circle.

Combat: Up Front

Entering combat for the first time, the new recruits put away the child's play ideas of mom, America, and apple pie. In short order, their perspective shifted from what one veteran described as the "sanitized and Norman Rockwellized, not to mention Disneyfied" image of combat, to the numbingly brutal reality of a kill-or-be-killed business.

Despite his relative wealth of support and supply, the U.S. soldier suffered as much of combat's grinding exhaustion and nerve-shattering terror as any other WWII combatant. The small number of divisions in battle (roughly 90 in total) meant that units that should have been pulled off the line and revitalized were held in combat for as long as possible. Battle fatigue, disease, and casualties took their toll. Some divisions suffered higher than 200% casualties, and endured up to 300 consecutive days in combat.

Defense

Troops lived in the dirt, digging as deep as they could, holding ground. A platoon usually occupied an area some 50 to 150 yards wide, spread out in a line or semi-circle facing the enemy. Squads put two or three men in each foxhole, with 5-10 yards between each one. Two squads were side by side, with one slightly to the rear, in reserve. The platoon leader and sergeant stayed in the center, at the platoon command post, or CP, which usually had a radio or field phone to talk to the company CP, and a medic. A bazooka was usually assigned to the squad most likely to face tanks, such as the one nearest a road or path. The men camouflaged their positions, put logs and dirt over the tops to provide more protection, and emplaced mines, barbed wire, and trip flares. If possible, this work was done at night to reduce the odds of drawing fire.

Companies put two platoons up front, with the center platoon a bit back in "reserve" but still holding part of the 500-600 yard line. A couple of hundred yards would be left between each company. The company CP was 100-200 yards behind the front line. Here a radio or phone connected to battalion HQ. The company HQ (mess and supply) was here if possible, but often they stayed a half mile or so back at battalion HQ, running food and supplies up at dusk. Day and night, the company stayed alert for enemy movement, calling the battalion for artillery and air strikes if good targets were visible.

If occupying a village the principles were much the same, but the living conditions were better. Basements took the place of foxholes, but work still had to be done. Windows were busted out and walls reinforced with sandbags. Furniture was piled up in unused doorways. Shutters were closed and locked to prevent grenades from being thrown in, wire ran from house to house for the field phones, etc.

Patrolling

Patrols served to provide the commanders with an idea of what was going on directly in front of the lines. They also kept the enemy pinned down, forcing him to keep men in contact with the unit.

Patrols were conducted day and night. Sometimes the patrols were conducted as squads, and at other times as a platoon. Their purpose was to find the enemy, or scout the area ahead. Patrols talked with the locals to find out about enemy movement, watched roads, and otherwise did a lot of sneaking about. The typical patrol went no more than a mile in front of the lines, but this mile was covered very slowly and deliberately. A fast pace on a patrol was a mile an hour; more reasonable was a mile in two or three hours. A patrol could easily take all day or night, and the men had to be careful not to alert enemy observers on the return trip.

Combat during patrols was a tense situation. Often, both sides might hold their fire, being afraid to bring fire on themselves. When German and U.S. patrols encountered each other in Normandy and in Belgium, they usually froze. If neither side fired, each would slowly withdraw, sometimes with a wave or salute. At other times, the patrols met and immediately began firing. Once everyone dived for cover, it was a toss-up: Would the other side rush forward and attack, or would they slink away? The latter was the normal course for both sides.

Patrols sometimes stumbled upon juicy targets. Staking out roads was a low-risk way to stop a passing German vehicle and capture prisoners. Sneaking up on a lunching mortar crew, or a sentry answering the call of nature, were also favored tactics.

In most units the patrolling duties were rotated, so that one group of soldiers wouldn't have to bear the burden alone. But this wasn't always the case. The situation could dictate that Able company was in the best place to send out patrols, while Baker and Charlie were too exposed. Within a company, squads and platoons shared the duty equally.

Attack

The GI dreaded attacking the most. With an attack, the whole unit advanced toward the enemy to capture an objective. This could be a company assault on a village or hamlet, or a division moving toward a vital railhead or road juncture.

U.S. attacks were usually combined-arms affairs, preceded by air strike and artillery, with close infantry and tank cooperation. Infantry were instructed to follow a few hundred yards behind the armor as it moved forward. Commanders were taught to put fire on the enemy from a strong position, then send men around the side to attack the weak flanks. When the enemy became distracted by the flanking force, the rest of the unit moved forward, firing as they went.

If a flanking unit couldn't get forward, the unit advanced by bounds, with one part shooting and the other crawling forward to a new position. Once the crawling unit was in place, it opened fire and kept the enemy's heads down while the others moved forward. This leap-frogging system was sometimes replaced with walking or marching fire (see p. W44).

Rest and Relaxation

For combat men, there was little respite from death on the front. In the best static situations, infantry could expect a week on the line and a week in reserve (a few hundred yards to the rear). Perhaps once or twice a month, a battalion or regiment would be pulled completely back to the division rear, where it could rest for a few days. These rear areas were still relatively austere camps, but a weary GI could find a few nights' rest and a hot shower without worrying about getting knifed while he slept. Hot meals and frequent mail were other luxuries. Often, though, this large scale R&R was not possible, and men were sent back a squad at a time for an overnight stay at best. Companies tried to send two or three men on leave for a week or more, but even this was hit and miss. Mostly, the dogface looked forward to nothing but wounds or death.

In the rear areas, things were much different. It was not uncommon for men to have a scheduled day off each week, perhaps two. In the European Com Z, or communications zone, trucks shuttled men to big cities on the weekends. It was relatively easy for a few soldiers to go on a scheduled R&R together. This disparity between the dogface at the front and the rear-echelon troops caused a lot of resentment among the former, while troops in the rear resented that all the glory was going to the front line. They were working hard, too. Inevitably, fights broke out. Divisions began sending their own MPs with the men when a large-scale R&R was planned. Whereas the troops would fight with MPs from another division, they seldom put up a struggle against men from their own.

On R&R, the troops acted like tourists, visiting the local sites and taking in movies or shows. The United Service Organization, or USO, provided most of these shows. The USO was created in 1941 by several service organizations, including the Young Men's Christian Associations, the National Catholic Community Service, The Salvation Army, and the National Jewish Welfare Board.

GIs could attend a USO show and listen to Bing Crosby, Bob Hope, or the Andrew Sisters in rear areas – sometimes even just a few miles behind the lines. Acrobats, animal tricks, and GI comedians warmed up the audience. Combat troops seldom got to see the shows, but those who did never forgot them. At one show, the crowd parted as a tank nosed its way up to the stage. The hatch opened and a tanker crawled out, telling a nervous Bob Hope, "Make me laugh."

The Red Cross provided food and rest in safe areas for troops, but it wasn't free. Some GIs bitterly resented being forced to pay for coffee and donuts at Red Cross centers, especially since so much fund-raising back home was conducted in the name of the Red Cross.

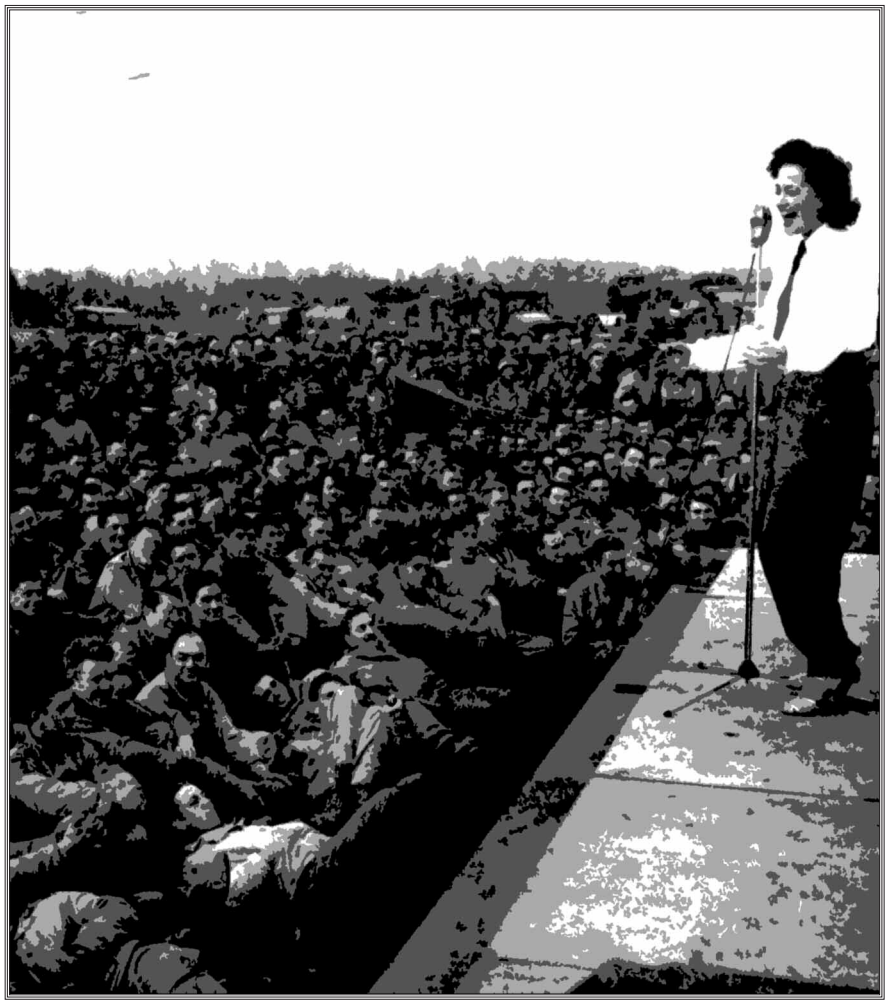
If the situation allowed, sooner or later a GI on R&R would attempt to find a woman. In Paris and Rome, partners were easy to come by. A GI could find a prostitute for $1 or less. The hunting was tougher, but cheaper, in the villages, where an offer of chocolate, cigarettes, or even a K-ration achieved better results than cash. The economy in these areas was shattered, and there was little to buy even if one had the money.

V-Mail and Letters on a Record

In 1943, the United States began using a system pioneered by the British. Using special letter sheets, the user would write the letter and send it normally. Before going overseas, the V-mail was photographed onto microfilm. The film was then sent overseas, blown up to regular size, and mimeographed before being sent to the recipient. In this manner, 2,500 pounds of mail would be reduced to 45 lbs. of film, greatly increasing shipping efficiency. V-mail was popular because it was free, but it never replaced regular first-class mail, even though V-mail was fast enough that it could be reliably sent worldwide in 6-10 days. Perhaps 20-30% of all mail correspondence overseas was by V-mail.

If V-mail was not satisfying, those back home could record a letter on a cardboard record and ship it overseas. The GI could then listen to the voices of folks back home. The dogface on the front lines might have a hard time finding a record player, but those in the rear usually had no problem. A few locations in each theater could produce such a "letter on a record" for GIs to send home. Cost was about $0.50.

GI SLANG



The GIs' language would be foreign to modern civilians, if not in part to modern soldiers. His expletives, though, would not need explaining. The typical GI was a heavy user of profanity, especially the *f*-word. One could find soldiers and sailors using it as a noun, adjective, or verb. While swearing was generally accepted as soldier talk, it was not universal. General of the Army George C. Marshall never cursed. Patton did, like a proverbial sailor; one educated GI listener described it as "vile, monotonous, and unimaginative."

The following briefly describes a few of the more common period terms:

Ack-Ack: Flak, or anti-aircraft fire.

Armored Cow: A can of evaporated milk, also called a "tin teat."

Army: When draftees called something "Army," as in, "Our new top is all Army," it was not a compliment. This meant the subject was boring, nitpicky, and monotonous.

AWOL: Absent without leave, also called "over the hill."

Barracks Lawyer: A know-it-all concerning military regulations and protocol, also called a "guardhouse lawyer."

Battlewagon: A battleship, also sometimes used for a tank.

Broads: Attractive women, also called "birds" and "dames."

Bulldogs: The military police.

Burp Gun: A submachine gun.

Busted: Reduced in enlisted grade.

Chairborne: A soldier who is not combat material; incompetent or cowardly.

Chicken shit: A term *widely* used to denote something as insignificant nonsense, unnecessarily "Army."

CO: The commanding officer, or "old man."

Dear John: A letter from a sweetheart or wife breaking off the relationship or seeking divorce. A dismaying number of dogfaces received these, as the strain of worrying about a loved one in combat led some women to seek solace that was most easily found in another man's arms.

Detail: A job, or a group assembled for a job. "Get a detail over here on the double!"

Dogface: Doggies, doughboys, doughs – the infantry.

Fat Cat: A GI with a safe or luxurious job.

Fish: Torpedo.

Four-O: Feeling fine; the highest efficiency rating an officer could achieve was "Outstanding" in each of the four areas of evaluation.

Frat: Fraternizing with the women.

Heine: Germans – also called Fritz, Jerry, kraut.

Hershey Bar: A cheap prostitute.

Garritrooper: A soldier that looks good in uniform, but lacks combat credentials.

GI: A U.S. serviceman. Also means to labor or work, as in "GI the barracks, on the double!" The initials initially stood for "galvanized iron" on WWI-era trash cans. Eventually, they came to be understood to mean "government issue," and were applied to all sorts of Army gear, then the soldiers themselves.

Jap: Japanese, also called "gook" and "nip."

Louie: A lieutenant, also called LT, "butter bar," "shavetail."

Milk Run: Easy.

Night maneuvers: Fooling around with a woman.

Noncom: Noncommissioned officer or NCO.

90-Day Wonder: A new second lieutenant that graduated from Officer Candidate School.

OD: Olive drab, the flat brownish-green Army color.

On the Beam: Air Force term for navigating by radio beacon.

Padre: A priest or chaplain.

Police: To clean up or fix.

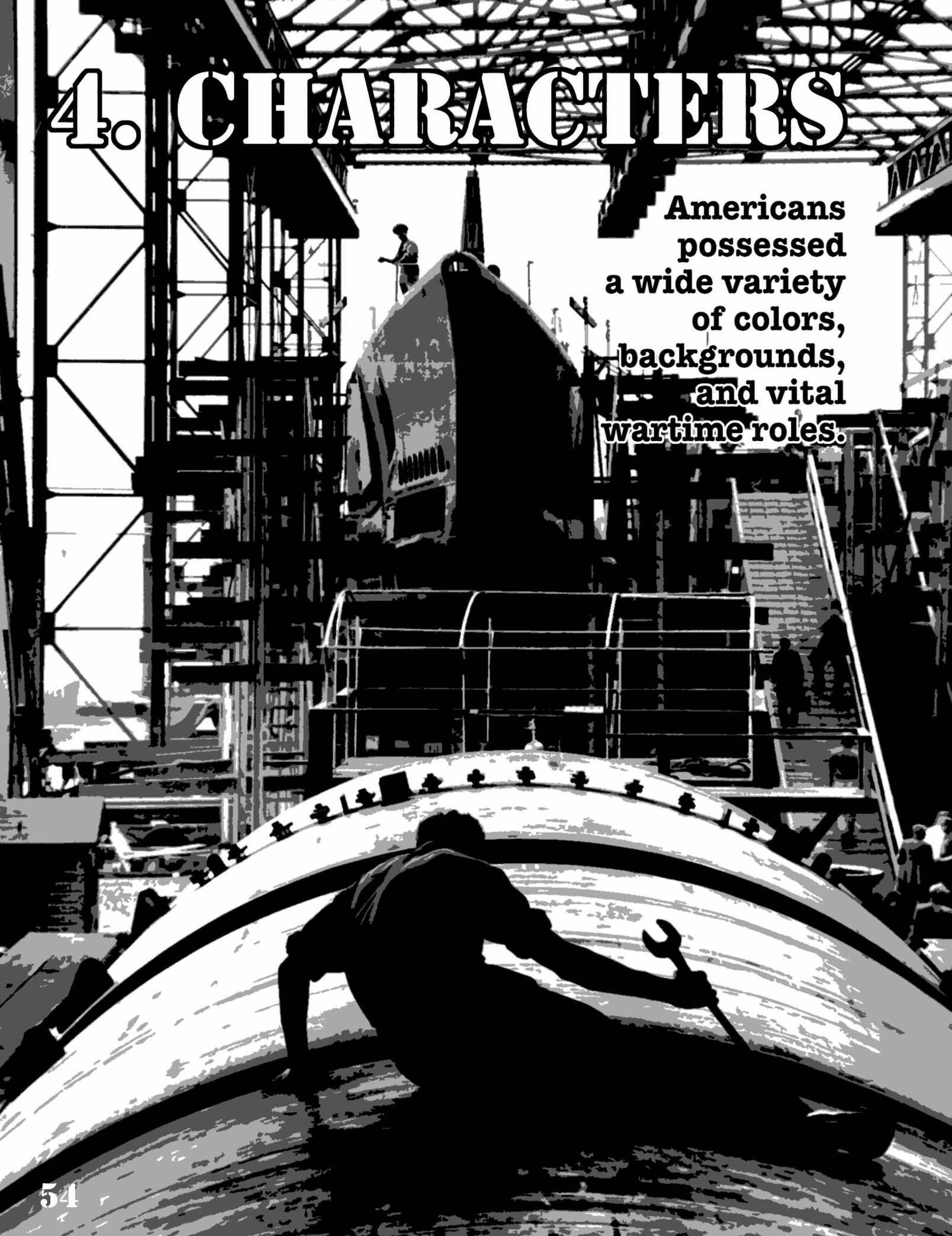
Poop: Information, the scoop.

Scuttlebutt: Rumors or gossip.

Short-arm Inspection: A check for venereal disease conducted weekly by the company medics.

Sugar Report: A racy, perfumed letter from a sweetheart. GIs normally shared these with men in their squad.

Wolf: An attractive or lecherous male. Women went *wolfing* to find guys.



4. CHARACTERS

Americans possessed a wide variety of colors, backgrounds, and vital wartime roles.

CREATING A CHARACTER

This chapter provides information and advice for creating distinctly American characters. The new military and civilian templates should be useful for either a campaign at the front or one based back in the states.

Starting Points

For military adventuring, a very realistic enlisted campaign would begin with 50-point characters, one based among officers or veteran enlisted men would allot 75 points, one representing top-notch troops 100 points, or a cinematic soldier could be built on 150 points or more.

The GM of a homefront campaign might want to consider subtracting 25 points from each of the above thresholds. That is, 25 points would represent an ordinary, non-adventuring sort of person, while 75 should be plenty to portray a professional near the top of his field who doesn't dodge bullets for a living.

Height and Weight

Some U.S. citizens may use the table on p. W177 without modification, but those who suffered from a limited diet during the Depression should subtract 1" from the results.

Race and Racism

While the nation as a whole condemned Hitler's practices, many Americans exhibited their own virulent racism, and most retained at least a low-key sense of racial superiority. Even "well-meaning" sorts believed that minorities were racially inferior, mentally in most cases except perhaps the Jews, physically as well in the case of the "buck-toothed, nearsighted, and scrawny" Japanese.

U.S. minorities suffered greatly as a result.

In most campaigns, Americans of Japanese descent should take the -10-point version of Social Stigma on p. W180, or the -15-point version if on the West Coast in 1941-42. This applies to Nisei soldiers in uniform, as well. From 1944 on, this may be partially or completely bought off if the soldier has been decorated in combat, which was common for these men who often made first-rate troops.

Properly (but rarely) called "Negroes" at the time, Americans of African descent suffer the same -10 Social Stigma, or the -15-point version in the southern United States. Some "all-Negro" units earned a healthy measure of respect for their combat records, such as the Tuskegee Airmen of the 332nd Fighter Group, who never lost a bomber under their escort. Patton would tell the 761st tank battalion, "I don't care what color you are as long as you go up there and kill those Kraut sons of bitches."

Other minorities – notably Jews, Hispanics, and American Indians – also could qualify for a -10-point Social Stigma. Alternately, the GM may rule that they don't have this disadvantage, but that many NPCs they encounter will have Intolerance (see p. W185).

GURPS U.S. Ranks

The table on p. W63 provides the standard ranks for the Army and Navy. The Army Air Force and Marine Corps used Army ranks; the Coast Guard mirrored the Navy. Some alternative Army and Marine grades included:

Master or First Sergeant: Master Gunnery, Master Technical, Quartermaster, or Paymaster Sergeant (all Marines only); Sergeant Major.

Technical Sergeant: First Sergeant (before 1942 in the Army or 1943 in the Marines), Gunnery Sergeant (Marines only).

Staff Sergeant: Technician Third Grade (Army only), Platoon Sergeant.

Sergeant: Technician Fourth Grade (Army only)

Corporal: Technician Fifth Grade (Army only).

Female Roles

American women during WWII experienced some advances in status. More women worked outside the home. Many had important jobs with good pay, but just as many were relegated to menial labor. In a civilian campaign, GMs may choose not to require female characters to take Social Stigma (Second-class citizen) as described on p. W180; however, U.S. culture retained a strong vein of sexism. Women were expected to submit to a certain social propriety, whether openly regarded as "the weaker sex" or not. The FBI, for instance, refused to hire female archivists. It insisted that men would look up their skirts when they climbed up the ladders to fetch documents.

In the military, the Social Stigma should be taken. Military occupations that were held in high esteem when filled by men were seen as "cute" when handled by women. The Army had the WACs (Women's Army Corps), the Navy the WAVES (Women Accepted for Volunteer Emergency Services), and the Coast Guard the SPARs (from the USCG motto, *Semper Paratus*, always ready). The Marines, too, had a Women's Marines, WM, but with no cute title. Leathernecks referred to them unofficially as "wide-assed Marines." That name stuck.

The "fly girls" of the WASPs, the Women's Airforce Service Pilots, provided female pilots to ferry Army Air Corp planes around the country. These women flew the same hot-rod planes as the men, yet their pay, respect, and opportunities were limited in comparison. Some even acted as test pilots, yet they did not receive veteran status, and were prohibited by Congress from flying outside the continental United States.

Only the Army Nursing Corp routinely got near the fighting. More than 59,000 women served in the Corp; 16 were killed in action and nearly 100 became POWs. Sixty-seven survived three years in a prison camp at the hands of the brutal Japanese. A total of 1,100 nurses received decorations, including the Purple Heart, Bronze Star, Silver Star, and Distinguished Flying Cross.

ADVANTAGES, DISADVANTAGES, AND SKILLS

The following expands upon the information in the ***WWII*** corebook specifically for use in creating American characters.

Advantages

U.S. military and civilian personnel can be further embellished with the following new or refined advantages.

Military Rank see p. W62

All U.S. wartime promotions applied to the Army of the United States, or AUS, *not* to the Regular Army, National Guard, or Reserves, which made up the AUS. Thus, a soldier held an AUS rank during the war but could revert to a lower rank in one of the suborganizations afterward. In practice, those of Military Rank 2 or less, or 7 or higher, often avoided this reduction, but officers of Ranks 3-6 usually did not. In a campaign that extends past the war's end in 1945, the GM might reduce ranks by as much as 2; officers would not descend past second lieutenant, however. The Navy worked the same way.

Security Clearance p. CI29

Espionage or top-secret-research campaigns might find this advantage useful. Note that no American knew everything that was going on; even the vice president knew nothing of the Manhattan Project. The FBI, OSS, etc. should be modeled as having 3 levels of Security Clearance each at 2 points per level.

Level 1: This allows the typical "non-essential" employee to go about their day-to-day work within the agency. A janitor, secretary, security guard, or laborer would have this clearance. It gets them on the base or facility and allows them to come and go without undue questioning in most areas.

Level 2: This is the project insider, the person that knows essential information about the task at hand. Rank-and-file agents, scientists, researchers, or other essential people would have this level of clearance. Senior support personnel, such as a key scientist's secretary, might have this level as well.

Level 3: The project administration had the highest security clearance. They have access to all project reports and other valuable information created by the team. Even on something as large as the Manhattan Project, only a handful of key personnel would qualify for this level.

Violating security procedures could result in an employee or serviceman being fired, fined, or even imprisoned. Violators seldom were given trials, due to the nature of the offense. Gross lapses, such as handing over documents to the enemy, could result in execution for treason.

Most military personnel in the field – including OSS agents – do *not* require Security Clearance. They will certainly know things meant to be kept secret from the enemy, and the higher their Military Rank the more they'll know, but this localized military data differs from the general intelligence and groundbreaking research that this advantage covers.

Versatile p. CI31

This is listed among the *National Advantages* for Americans on p. W68 for a couple of reasons.

With their egalitarian culture, Americans respected no man solely for his birth. Whether good ideas came from the bottom, as in the case of Sgt. Culin's hedgerow cutter, or the top, all were viewed equally. This encouraged U.S. servicemen to be creative, knowing their ideas would be considered. Additionally, the U.S. haste to get a job done required immediate results. Troops were not content to sit and wait on the high command. Platoon leaders and company commanders changed tactics on the spot, discarding Army doctrine for whatever worked.

Also, U.S. servicemen loved to tinker with their gear. Men in the field jury-rigged many modifications to their vehicles; the factory kits only came later. Whether adding 75mm cannons to B-25s or flamethrowers to Shermans, the more fantastic the retrofit, the more it appealed to these self-appointed mechanic-engineers.

Disadvantages

The following describes some of the disadvantages from ***GURPS WWII*** in more detail, and adds some new ones.

Addiction (Tobacco) p. B30

The WWII generation was a nation of smokers. The Army planned to issue at least a carton of cigarettes a week, in some cases two, in addition to the four cigarettes in each C-ration. Smoking was allowed in training and aircraft, and more than a few paratroops jumped with a cigar in their teeth. Non-smokers were noticeable, and certainly uncomfortable from all the smoke around them. When one rookie paratrooper on his way to Normandy refused his weekly carton of cigarettes, claiming that he didn't smoke, the supply sergeant shoved them in his arms saying, "You will soon enough." GIs got the best cigarettes, Lucky Strikes and Camels, while the folks at home were stuck with the third-rate Wings. The Chesterfields that came in the rations were equally despised.

Code of Honor p. W64

Many Americans held an ingrained sense of fair play, even in war, that sometimes bordered upon the naive. For instance, despite its great success, the Army's WWI sniper program was abolished because snipers weren't perceived as "stand-up fighters." In WWII, the Marines set up their own sniper school and Army Rangers learned from British Commandos, but many American participants still balked at this form of warfare.

Non-combatants were another sore spot for many Americans at war. Many Axis combatants could ignore the women and children caught on the battlefront, but many Americans thought it unfair that these people were caught up in the nasty

business. Outside every Army camp in Europe was a collection of pots and tins into which GIs scraped their leftovers for the locals to salvage. (To be fair, other troops often helped out locals when they possessed the luxury of excess that GIs routinely enjoyed.) Many GI units adopted orphans as they moved through Europe; French teens picked up in this fashion sometimes scouted ahead for their new guardians.

This fair play even extended to the enemy. A surrendering German might well be shot in the heat of battle, but those that survived the first few minutes were given medical care and usually adequate food and housing, and were even paid for their work in U.S. camps. When the war was over, thousands of those Germans chose to stay, and sent for their families.

U.S. troops certainly committed their share of atrocities, but many tried to uphold this sense of fair play no matter how grim their circumstances. The GM might allow a small Code of Honor to reflect this mindset, provided it *truly* represents a disadvantage to the combatant. For instance, refusing to commit atrocities does not qualify; refusing to deploy snipers might deserve a -1-point Quirk; a mix of similar reservations could justify a -5-point Code of Honor.

Lecherousness

If the GI had one vice above all, it was women. His "oversexed" libido was unquenched throughout the war. Pin-ups, nose art, and nudie playing cards simply fed the flame. Brothels overseas were inspected by Army doctors on a regular basis, but even so, venereal disease struck 49 out of 1,000 men every year in Europe. The rate was much lower in the Pacific, where the remote locales restricted access to women.

Youth p. W187

Just after Pearl Harbor, the services were flooded with volunteers. Many of them were far too young. Army recruiters joked that they should be provided with lollipops to give out to the school kids. One sergeant in the Marines complained that he couldn't get any work done; the school kids kept coming by, day after day, asking if they were old enough yet.

Some boys faked their age. Others joined the Merchant Marines, which took boys as young as 16, and then after a few months argued, conned, or lied their way into the other services. Stories disagree, but Audie Murphy was most likely 16 or 17 when he joined. He had gained 4" and 40 lbs. by the time he left the Army. The Army maintains that he was 18 when he joined, but his recruiting papers cite a 90-day-old birth certificate and a letter from his sister as verification of his age. Underage boys frequently used both of those tricks.

Skills

This section discusses additional specializations for existing skills that could arise in a U.S.-based WWII campaign.

Engineer (Nuclear Weapons) see p. W189

This is the skill needed to test, construct, and deploy an atomic weapon at TL6. It includes knowledge of the basic physics of the bomb as well as construction of its components. The B-29s on both A-bomb missions carried weaponeers, the official term for those with this skill. A roll is required to arm a bomb correctly; failure means it will not go off as planned.

Nuclear Physics see p. W190

This is the study of nuclear processes. Nuclear physicists, such as Enrico Fermi and Edward Teller, carried out groundbreaking work during the war, researching and developing theories and knowledge needed to build the atomic bomb. The work sometimes proved fatal, as scientists "tickled the dragon's tail" a bit too much and exposed themselves to harmful dosages of radiation.

Operations (Covert) see p. W66

This specialization, unlike the others on p. W66, focuses on planning and executing large-scale espionage and propaganda operations. Intelligence commanders roll against this skill when carrying out a large-scale intelligence operation to achieve strategic goals.

Status

Status in wartime America focused on work, power, and wealth – never simply a title. People in small towns deferred to the mayor because he was the mayor, but if he lost the next election, he became one of the guys again.

The comments on p. W66 regarding the increased costs of Status due to rank certainly applied for the American military. Officers were expected to pay for uniforms, rations, and other niceties out of their own pocket. They were allotted a sum to care for their dependents, but otherwise missed out on a lot of extra pay that enlisted men received.

Use the Status/Cost of Living table on p. W66. Examples are given below.

Status/Cost of Living Table

Level	*Example*	*Monthly Cost of Living*
7	Presidents Roosevelt and Truman	$2,000+
6	Governor, senator, agency head	$1,000+
5	Ford, Kaiser	$800+
4	Einstein, Oppenheimer, Hemingway	$600
3	Eisenhower, Hopkins, La Guardia, NY mayor	$400
2	Patton, mayor of big city other than New York	$240
1	Doctor, small-town mayor, police chief	$120
0	Ordinary citizen	$60
-1	Poor, unemployed	$30
-2	Hobo, criminal	$5

Military Policeman — 60 points

When combat troops encountered surrendering soldiers, they turned them over to the military police. MPs – or "snowdrops" as the GIs called them in reference to their white helmets, belt, and leggings – also served aboard troop ships to keep the men in line, and patrolled the streets wherever GIs might be behind the front lines to keep an eye out for rowdies, looters, and deserters. They escorted visitors to the front, such as at USO shows, and guarded the Army paymaster. The most dangerous task for the military police was to patrol the area between the combat units and the supply units, called "the void." These roads were frequently scenes of ambushes by a few stubborn Germans. The MPs had to track them down.

In Normandy, the MPs directed traffic on eight-hour shifts, finishing up the day covered in dust from the passing vehicles. Several dozen were killed directing traffic on the Red Ball Express (p. 18). When not directing traffic or arresting drunken GIs, Army MPs resembled the "Rat Patrol," with 12-man squads, four jeeps to a squad. The jeeps were normally fitted with a .30-caliber machine gun and a radio. Stateside, military police guarded the Pentagon, and the New York plant that produced the Norden bombsight. A company of military police provided a mounted horse patrol at Los Alamos and the Alamagordo Test Site.

Navy Shore Patrol (SPs) wore the normal navy uniform with a khaki pistol belt and leggings. Like the Army, they patrolled areas frequented by rowdy GIs, arresting those that got too out of line. Both services issued cudgels, and MPs used them liberally. Military police were chosen for their size, and often suffered a good bit of verbal abuse from the troops. The best military police were the big, slow-to-anger types.

Many of the MPs had been police officers in civilian life; this template assumes just such a background.

Attributes: ST 12 [20]; DX 11 [10]; IQ 11 [10]; HT 11 [10].

Advantages: Fit [5], Legal Enforcement Powers [10], and 10 points in *National Advantages* (see p. W68).

Disadvantages: Extremely Hazardous Duty [-20], Reputation -1 (Rear Echelon Bruiser) [-5], and -25 points in *National Disadvantages* (see p. W69).

Basic Skills: Brawling (P/E) DX+1 [2]-12; Criminology (M/A) IQ [2]-11; Detect Lies (M/H) IQ-2 [1]-9; Driving (Automobile) (P/A) DX [2]-11; Electronics Operation (Communications) (M/A) IQ-2 [1/2]-9; First Aid (M/E) IQ-1 [1/2]-10; Gunner (Machine Gun) (P/A) DX-2 [1/2]-10*; Guns (Rifle) (P/E) DX [1]-12*; Guns (Pistol) (P/E) DX [1]-12*; Guns (Shotgun) (P/E) DX-1 [1/2]-11*; Interrogation (M/A) IQ [2]-11; Intimidation (M/A) IQ [2]-11; Leadership (M/A) IQ [2]-11; Savoir-Faire (Military) (M/E) IQ [1]-11; Shortsword (P/A) DX [2]-11; Soldier *or* Sailor (M/A) IQ+1 [4]-12; Stealth (P/A) DX-2 [1/2]-9; Streetwise (M/A) IQ [2]-11.

Secondary Skills: Camouflage (M/E) IQ-1 [1/2]-10; Climbing (P/A) DX-2 [1/2]-9; Hiking (P/A – HT) HT-2 [1/2]-9; NBC Warfare (M/A) IQ-2 [1/2]-9; Orienteering (M/A) IQ-1 [1]-10; Throwing (P/H) DX-3 [1/2]-8.

Optional Skill: Spend 5 points on any of Guns (Pistol) or Motorcycle (both P/E); Boating or Riding (Horse) (both P/A); Area Knowledge (any), Savoir-Faire (Military), or Seamanship (all M/E); Administration, Mechanic (Gasoline Engine), or Photography (all M/A); and Forensics, Law, or Tactics (Police) (all M/H).

* Includes +1 for IQ.

Customization Notes: Many Navy SPs were not trained for the job, but rather assigned to it as temporary duty; these should be built off the regular Sailor template on p. W84.

Legal Enforcement Powers were fairly wide-ranging, compared to both current MPs and civilian law enforcement at the time. MPs working guard duty could shoot on sight anyone crossing the secure zone, search people at a whim, or use their clubs on drunken GIs with impunity. If an MP got in trouble for this, it was most always an issue of *who* was complaining rather than *what* they were complaining about.

Note that the job requires no real skill in Law. Military law was taught as part of basic indoctrination, and left soldiers few constitutional rights under the Articles of War. MPs did not need to know the fine points of these rights, as do civilian police, because there were few fine points. If questions arise, use the Soldier skill, or contact a provost marshal or adjutant general.

An experienced military-police officer filled the role as the provost marshal, the head military policeman of a military police company. Such an officer would need Military Rank 4 and the skills required for that rank on p. W70. A provost marshal needs Law skill at 12 or better, as well.

Scientist/Engineer — 70 points

Allied scientists and engineers worked overtime during the war, producing weapons to match Hitler's *Wunderwaffen* (see pp. W:IC121-122). The computing visionary Vannevar Bush and the atomic pioneer Robert J. Oppenheimer both contributed greatly to the war effort, though in Bush's case it was in several different fields over the course of the war. This was essential, but often rather boring, rear-area work.

Other scientists worked closer to the action. Five died in 1942 in a collision between two blimps off the East Coast. They were trying to perfect underwater flares used to track submarines. One British scientist joined Commandos on a raid to steal a German radar set on the French coast.

These men weren't the Bushes and Oppenheimers; most were young, bright, and more action-oriented than their bosses. Many were military officers in the Army Corps of Engineers. National Bureau of Standards scientists helped develop and then deploy "the Bat," a radar-guided missile. Other scientists went to New Georgia in Pacific to observe the first use of the proximity fuse (known as VT, or variable timed) in 1943.

One of the most dangerous, if not the most exciting, scientific field missions involved the first combat deployment of the atomic bomb. Capt. William S. "Deke" Parsons rode along on the *Enola Gay* to ensure the bomb was armed correctly. Parsons was an Annapolis graduate and a noted ordnance engineer. He had designed and built the uranium gun inside it. Before going to the Manhattan Project, he had also worked with Bush, field-testing the proximity fuse.

Attributes: ST 10 [0]; DX 10 [0]; IQ 14 [45]; HT 10 [0].

Advantages: A total of 30 points chosen from *National Advantages* (see p. W68) or any of Eidetic Memory [30], Less Sleep [3/level], Lightning Calculator [5], Mathematical Ability [10], Patron (University or Government Agency, 6 or less) [10] or (9 or less) [20], Reputation (Noted Scientist or Engineer) [Varies], Security Clearance 2 or 3 [2/level].

Disadvantages: A total of -30 points chosen from *National Disadvantages* (see p. W69) or Age [-3 per year over 50], Bad Back [-10], Bad Sight [-10], Hard of Hearing [-10], and Curious [-5].

Basic Skills: Research (M/A) IQ [2]-14 and *two* of Chemistry, Electronics (any), Engineer (any), Geology, Physician, or Physics, all (M/H) IQ+1 [6]-15; *or* Mathematics (M/H) IQ+1 [6]-15, Physics (M/H) IQ+1 [6]-15, and Nuclear Physics (M/VH) IQ-2 [2]-12; *or* Armoury (any) (M/A) IQ+1 [4]-15, Metallurgy (M/H) IQ+1 [6]-15, and Machinist (a professional skill) (M/A) IQ+1 [4]-15.

Secondary Skills: Select *two* of Bard, Teaching, or Writing, all (M/A) IQ-1 [1]-13; and *two* of Computer Programming (M/H) IQ-2 [1]-12, Language (Latin, French, or German) (M/A) IQ-1 [1]-13, Literature (M/H) IQ-2 [1]-12, Mathematics (M/H) IQ-2 [1]-12, Mechanic (any) (M/A) IQ-1 [1]-13, Metallurgy (M/H) IQ-2 [1]-12, Physiology (M/VH) IQ-3 [1]-11, Psychology (M/H) IQ-2 [1]-12, or Research (M/A) IQ-1 [1]-13.

Optional Skills: Spend 7 points on any of Motorcycle or Swimming (both P/E); Driving (Automobile), Piloting (Single-Engine Prop), or Riding (Horse) (all P/A); Area Knowledge (any), Seamanship, or Savoir-Faire (all M/E); Administration, Photography, or Scrounging (all M/A).

Customization Notes: Military officers should spend these points on skills appropriate to their branch of service (see the Rifleman template for the Army, Sailor for the Navy, or Bomber Crew for the Army Air Force, pp. W72-85).

Scientists working on the Manhattan Project underwent extensive background checks, psychological screening, and polygraph tests. Security for other projects was equally tight, particularly for the Norden bombsight and the proximity fuse.

This need not disqualify anyone, but will make their life more difficult. Oppenheimer's Communist background was well-known during the war, so he was carefully watched. Atomic scientist Leo Szilard's penchant for breaking chain of command and disobeying security procedures found him at odds with Gen. Groves, and the subject of several lengthy covert investigations. Nonetheless, both of these men received security clearances.

This template also illustrates lesser lights, from second-tier researchers to some of the skilled workers crafting these devices, and historically these were the very men that U.S. counter-intelligence needed to keep under watch, but often failed to catch. Manhattan Project scientist and German national Klaus Fuchs was a spy for the Soviets. A Nazi sympathizer named Herman Lang who worked in the Norden plant had turned over the complete plans to the Germans.

Others scientists and engineers were threatened or discredited in the postwar heyday of McCarthyism after Julius Rosenberg was executed for stealing atomic secrets for the Soviets. (His wife, who at most had a minor role in the affair, was executed, too. Though Soviet officials have said that Rosenberg was of great help in their atomic research, most recently, ex-Soviets who handled Rosenberg said he was too technically ignorant for his work, and the content that he provided was all but useless.)

OSS Agent

70 points

The Office of Strategic Services was created in 1942 as the counterpart of the British Special Operations Executive. Gen. William J. "Wild Bill" Donovan was selected by Roosevelt as its leader. Donovan was a WWI Medal of Honor winner and a successful New York lawyer.

Donovan heavily recruited from the military and Ivy League to form his eclectic group of spies, but eventually resorted to anyone he could find, including Chinese opium merchants, former Nazis, bootleggers, military officers, and advertising executives. For those in the Secret Operations division, training was conducted by instructors on loan from the British, but eventually U.S. instructors would come to light, Col. Rex Applegate foremost among them. Early on, these agents were trained at Camp X, in Canada. Later, the OSS would build training camps worldwide, including what is now Camp David.

OSS operatives were prohibited from working in Europe without SOE cooperation, but their solo work in North Africa and the China-Burma-India theater was highly successful. Missions ranged from propaganda and counter-intelligence to research and development. Only a few of them resulted in agents skulking about behind enemy lines, but these episodes did occur. More common was the OSS agent who read local newspapers, chatted up the locals, and wrote reports on the local scene back to Washington. Other agents worked with the criminal underground to develop a means of smuggling equipment and troops into enemy territory. In Vichy France and Spain, this worked in reverse, as agents smuggled Allied fliers and other VIPs out of Europe.

A good many of the field agents were conventional military personnel that volunteered for the job. Those enlisted men who did so stood a 50/50 chance of becoming an officer on the spot. This was Donovan's reward to those that "stepped up to bat." Himself a Columbia University graduate, Donovan also favored recruiting in the Ivy League, because he saw the blue bloods as natural agents – they had the contacts through family and friends that would ease setting up operations overseas, a natural globetrotting cover identity, and the personal finances to make up any shortfalls in government financing.

Nevertheless, the impression of an organization made up of millionaire's sons, noted writers, and college professors resulted in the OSS being referred to in certain circles as "Oh, So Social," rather than Donovan's preferred "Oh, So Secret."

Attributes: ST 10 [0]; DX 12 [20]; IQ 13 [30]; HT 11 [10].

Advantages: Fit [5], Security Clearance 2 [4], and 15 points chosen from *National Advantages* (see p. W68) or Contacts (Any; skill-15, on 9 or less, somewhat reliable) [2/contact]; Fashion Sense [5]; Patron (Family) [Varies]; Status [5/level]; and Wealth [Varies].

Disadvantages: Extremely Hazardous Duty [-20] and -30 points chosen from the *National Disadvantages* (see p. W69).

Basic Skills: Acting (M/A) IQ-1 [1]-12; Area Knowledge (target country) (M/E) IQ-1 [1/2]-12; Camouflage (M/E) IQ [1]-13; Cartography (M/A) IQ-2 [1/2]-11; Detect Lies (M/H) IQ-2 [1]-11; Disguise (M/A) IQ-2 [1/2]-10; Electronics Operations (Communications) (M/A) IQ-2 [1/2]-11; Escape (P/H) DX-2 [1]-10; Fast-Talk (M/A) IQ [2]-13; First Aid (M/E) IQ-1 [1/2]-12; Guns (Pistol) (P/E) DX+1 [1/2]-13*; Holdout (M/A) IQ-2 [1/2]-11; Intelligence Analysis (M/H) IQ-2 [1]-11; Interrogation (M/A) IQ-1 [1]-12; Language (French, German, Chinese, or Japanese) (M/A) IQ [2]-13; Psychology (M/H) IQ-1 [2]-12; Scrounging (M/E) IQ+1 [2]-14; Shadowing (M/A) IQ [2]-13; Stealth (P/A) DX-1 [1]-11; Swimming (P/E) DX-1 [1/2]-11; Teaching (M/A) IQ-2 [1/2]-11; Throwing (P/H) DX-2 [1]-10.

Secondary Skills: Brawling (P/E) DX [1]-13; Demolition (M/A) IQ-1 [1]-12; Guns (Light Automatic) (P/E) DX+1 [1/2]-13*; Orienteering (M/A) IQ-1 [1]-12; Survival (any) (M/A) IQ-2 [1/2]-11; Tactics (Guerrilla) (M/H) IQ-1 [2]-12; Telegraphy (M/E) IQ-1 [1/2]-12; Traps (M/A) IQ-1 [1]-12.

Optional Skill: Spend 6 points on any of Motorcycle (P/E); Boating, Driving (Automobile), Powerboat, Riding (Horse), or Sport (Golf, Polo, or Tennis) (all P/A); Carousing (P/A – HT); Cooking, or Savoir-Faire (both M/E); Gambling, Intimidation, Leadership, Photography, or Tracking (all M/A); Economics, History, Literature, or Physician (all M/H).

* Includes +2 for IQ.

Customization Notes: This template represents Donovan's "troublemakers," his case officers and field agents. The men had some paramilitary training, but most of them relied on their intelligence and education. It can easily be modified to represent Naval Intelligence operatives, U.S. State Department "spooks," or British or Commonwealth SOE agents. (Many operatives will enjoy free Savoir-Faire skill for having purchased extra Status; British operatives without extra Status should consider buying Savoir-Faire, regardless!)

Naval Intelligence or ex-military sorts should spend extra points on skills appropriate to their branch of service; use the Rifleman template for the Army, Sailor for the Navy, or Bomber Crew for the Air Force, see pp. W72-85.

The Fairbairn Close Combat style on p. W:HS10 was taught to advanced field agents, starting in 1943. Other training might include mission-specific professional skills; printing, machinist, and cargo-handling were good cover jobs.

Mobster

55 points

One of the most unlikely counter-intelligence alliances of the war occurred between the Office of Naval Intelligence and the Mafia. Reportedly, Naval Intelligence officers, worried about the possibility of German saboteurs, began contacting the Mafia in December 1941. Coincidentally, the *Normandie* – a French luxury liner being converted to a troop transport – caught on fire and capsized in February. (Investigations of the incident were inconclusive, but some researchers now suspect Mafia involvement.) After the incident, the Navy stepped up talks with key mafiosos Meyer Lansky and Charles "Lucky" Luciano (see pp. WWii116-117).

Lucky was in jail for running a prostitution ring in New York City, but promised to help the Navy if they got him out of prison. That, the Navy couldn't do, but they did succeed in moving him to a minimum-security prison where he could run his criminal operation all but unhindered. The deal made, the Mafia began protecting shipyards from Norfolk to Chicago. The Navy's "Operation Underworld" had begun.

There was other reported assistance from the Mafia, too. In June 1942, eight German saboteurs (p. 123) were reportedly handed over to the FBI by the Mafia. Murder Inc. also handled strike negotiations with Italian longshoremen, and occasionally "talked" to rabble-rousers and suspected Navy deserters.

The collaboration showed some real benefits in the summer of 1943. Sicilian mobsters met at Navy headquarters to help plan the invasion of Sicily. They provided essential information about port capacity and depth, and even family and friends that would be valuable contacts ashore. Gangsters in Sicily let it be known that surrendering Italian soldiers could seek them out for assistance, an offer to which thousands gratefully responded.

The Navy had Lucky released from jail in 1946, and shipped him directly to Sicily, just as they'd promised, and continued using the Mafia in the postwar era. When asked about his "service" to his country during the war, Lansky responded, "I was glad to handle the contract."

Attributes: ST 11 [10]; DX 12 [20]; IQ 10 [0]; HT 11 [10].

Advantages: A total of 20 points chosen from Alertness [5/level]; Charisma [5/level]; Contacts (Street; skill-18, on 9 or less, somewhat reliable) [3/contact]; High Pain Threshold [10]; Patron (Crime boss; Reasonably powerful, on 9 or less) [15]; Toughness [10]; Wealth [10 or 20].

Disadvantages: Callous [-6]; Social Stigma (Outlaw) [-15]; and a total of -15 points chosen from Bad Temper [-10]; Berserk [-15]; Bloodlust [-10]; Bully [-10]; Code of Honor (Never betray the family) [-5]; Enemy (Law Enforcement Agency; on 6 or less) [-15]; Greed [-15]; Illiteracy [-10]; Light Sleeper [-5]; Overconfidence [-10]; Reputation [Varies]; Secret (any) [-5 to -15]; and Semi-Literacy [-10].

Basic Skills: Area Knowledge (Neighborhood or City) (M/E) IQ+1 [2]-11; Brawling (P/E) DX+1 [2]-13; Detect Lies (M/H) IQ-1 [2]-9; Guns (Light Auto) (P/E) DX [1/2]-12*; Guns (Pistol) (P/E) DX [1/2]-12*; Holdout (M/A) IQ-2 [1/2]-8; Interrogation (M/A) IQ-1 [1]-9; Law (M/H) IQ-3 [1/2]-7; Shadowing (M/A) IQ [2]-10; Stealth (P/A) DX [2]-12; Streetwise (M/A) IQ+3 [8]-13; and one of Fast-Talk or Intimidation (both M/A) IQ+1 [4]-11.

Secondary Skills: Carousing (P/A – HT) HT [2]-11; Driving (Automobile) (P/A) DX-1 [1]-11.

Optional Skill: Spend 3 points on any of Fast-Draw (any), Guns (any), or Knife (all P/E); Powerboat (P/A); Cooking or Savoir-Faire (both M/E); Gambling or Leadership (both M/A); Lockpicking (M/A); Accounting or Physician (both M/H).

* Includes +1 for IQ.

Customization Notes: This represents the middle management of Murder Inc., such as a mob lieutenant or hit man. It would be appropriate for either American or Sicilian members of La Cosa Nostra working with Naval Intelligence to ferret out Nazi sympathizers and saboteurs. Sicilian mafiosos might be able to buy off the Social Stigma, depending on circumstances around their home village or town, but U.S. mafioso generally can't be in the life without word getting around the neighborhood – and eventually into the ears of the police . . .

A senior member would have Status 1-2, Filthy Rich (and probably Multimillionaire), and a pricey Ally Group representing the thugs and bruisers that protected him. Given the dog-eat-dog nature of the business, he probably also would have a higher IQ to have survived long enough to climb the ladder. This wasn't universal, however; plenty of upper-level crime lords took the *Scarface* route to success and simply proved quicker to use violence than their rivals. In real life, succeeding at organized crime didn't necessarily take brains; it simply required the Callous disadvantage, in spades.

The most militant members of the Mafia in Sicily would be better created using the Resistance Fighter template on p. W85. Many of these men became mayors and headmen of the towns as the Allies liberated them. This resulted from an at-least tacit, if not formal, agreement. The Mafia kept the area firmly anti-Communist, which made the U.S. government prone to sponsor its political power.

FBI Agent

70 points

In 1943, the FBI employed some 4,000 special agents, and a total of 13,000 people. The Federal Bureau of Investigation was the primary government agency investigating espionage and sabotage in the continental United States.

FBI Director J. Edgar Hoover was a reluctant participant in the counterespionage game. He was much more comfortable – and competent – at tracking down bank robbers and investigating suspected American Communists than snagging saboteurs. Luckily, such Axis efforts in the United States usually bordered upon the laughable.

One German spy working in the states was actually a British double-agent, a Yugoslavian named Dusko Popov, codenamed Tricycle. When it was explained to Hoover in the summer of 1941 that Popov needed fake information to pass along to his German handlers, Hoover fumbled the operation. Eventually, Popov was expelled from the country; Hoover considered him a playboy, anyway, despite the fact that he demonstrated the use of microdots to the agency.

Eventually, it would be discovered that the FBI had ignored evidence that the Japanese were requesting information about Pearl Harbor in June 1941. Hoover's men had judged for themselves that the Japanese inquiries were routine, and to some extent they were, in that the Japanese had been aggressively prying into all sorts of military secrets, like a wary country preparing itself for whatever might develop. Still, the mishandling did not speak well of the FBI's insight into foreign affairs and the counterespionage business.

The FBI spent a good deal of time trying to locate spies that it suspected of passing U.S. shipping schedules to German submarines off the East Coast. Though it was widely presumed that this was the case, postwar investigations revealed that no Nazi spies or sympathizers were doing so.

Not all operations were so fruitless. A total of 10 German agents (p. 123) were captured by the FBI. All of them had infiltrated into the United States by submarine, but none were successful. A spy ring of 33 sailors and businessmen in New York was discovered before the war. All were convicted for various crimes of espionage.

The FBI's work also extended to Latin America, where its Special Intelligence Service (SIS) helped root out German influence in Central and South America. More than 2,000 Germans were deported and handed over to the United States. These agents usually worked undercover, often moving among high society and nightlife, performing a job that the OSS's successor, the CIA,would take over after the war.

Any FBI-based campaign should keep in mind Hoover's heavy handling of his agency. Agents had to present a clean-cut, professional image, wearing suits and properly polished shoes when on duty. On the other hand, the director was no stickler for the finer points of the law. Wartime FBI agents probably engaged in illegal phone taps and similar measures on a routine basis. The procedural limitations and "chain of evidence" concerns of today did not exist at the time. Of course, even in the middle of the war, Hoover was Hoover. Agents might find themselves assigned to gather dirt on some prominent American, solely to score some points in the director's constant political infighting.

Attributes: ST 10 [0]; DX 12 [20]; IQ 13 [30]; HT 11 [10].

Advantages: Legal Enforcement Powers [10] and 15 points from any of *National Advantages* (see p. W68); Alertness [5/level]; or Contacts [Varies].

Disadvantages: Duty [-15] and a total of -30 points chosen from any of *National Disadvantages* (see p. W69); Enemy [Varies]; Intolerance (Criminals) [-5]; or No Sense of Humor [-10].

Basic Skills: Criminology (M/A) IQ+1 [4]-14; Detect Lies (M/H) IQ [4]-13; Fast-Talk (M/A) IQ [2]-13; First Aid (M/E) IQ-1 [1/2]-12; Guns (Pistol) (P/E) DX [1]-14*; Holdout (M/A) IQ-1 [1]-12; Interrogation (M/A) IQ [2]-13; Law (M/H) IQ-1 [2]-12; Law Enforcement (M/A) IQ [2]-13.

Secondary Skills: Brawling (P/E) DX-1 [1/2]-11; Driving (Automobile) (P/A) DX-1 [1]-11; Streetwise (M/A) IQ-1 [1]-12; Shadowing (M/A) IQ-1 [1]-12; Stealth (P/A) DX [2]-12; and *one* of Accounting (M/H) IQ-1 [2]-12, Tactics (Police) (M/H) IQ-1 [2]-12, *or* the combination of Intelligence Analysis (M/H) IQ-2 [1]-11 and Language (usually French, German, Chinese, or Japanese) (M/A) IQ-1 [1]-12.

Optional Skills: Spend 4 points on any of Fast-Draw (Magazine) or Guns (any) (both P/E); Leadership, Photography, or Tracking (all M/A); Forensics (M/H); or any basic or secondary skills.

* Includes +2 for IQ.

Customization Notes: This template represents the seasoned FBI agent trained in counterintelligence. The skill list assumes an agent proficient in interrogations and on one of the FBI special teams: White Collar Crime (Accounting), Fugitive Raids (Tactics), or Special Intelligence Service (Intelligence Analysis and Language).

During the war years, FBI agents carried .45 pistols, shotguns, and Thompson SMGs. The Raid team was issued BARs and even .30-caliber machine guns during the late 1930s. They were not limited by the gas or tire rationing, but Hoover ensured they didn't unduly benefit: The gasoline was accounted for and automobiles locked up every night, lest an agent try to run personal errands or pleasure drive on company time.

MAJOR PERSONALITIES

The following men held the reins of power in the wartime United States. Where attribute or skill levels are given, they are intended for a realistic campaign. In a cinematic setting, the GM should feel free to raise attributes by 1-3 and skills by 5 or more.

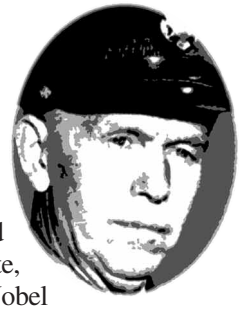
Dwight Eisenhower

General of the Army, 1890-1969, dressed in a tailored uniform, with an infectious grin. A 1915 West Point graduate, 61st in a class of 164, Dwight David Eisenhower began the war on Gen. George C. Marshall's staff. He had served with Patton in the fledgling Tank Corps in the '20s, and with MacArthur in the Philippines in the '30s. His capability on a command staff was second to none, but his résumé lacked one thing – combat experience – until the '42 North Africa landings.

This would haunt Eisenhower throughout his career, especially when dealing with the critical Montgomery, who repeatedly dug at him for this "failing." His critics also questioned his operational abilities, even his strategy, with many U.S. commanders believing that he was promoted to Allied supreme commander for his diplomatic skills rather than military acumen. After he supported Operation Market-Garden over Patton's push toward the Rhine, some called him "more British than the British."

Regardless, "Ike" *was* a world-class diplomat and leader. His easy manner put the troops at ease, throughout and after the war. A nation of former GIs elected him president in 1952.

He would have IQ 12, Charisma +2, Military Rank 8, and Administration-15, Soldier-12, Tactics (Armored)-13, Operations (Land)-11, Strategy-15, Leadership-17, Piloting (Single-Engine Prop)-11, and Diplomacy-15.



George C. Marshall

General of the Army, 1880-1959, a dour and nearly humorless man. George Catlett Marshall served as Army chief of staff throughout WWII, making him the chief U.S. strategist, and would later become Secretary of State, Secretary of Defense, and the 1953 Nobel Peace Prize winner for the "Marshall Plan"of relief for Europe. The unsmiling Marshall was the only man to ever graduate from the Virginia Military Institute (in 1901 with a degree in civil engineering) without ever earning a single demerit.

Marshall intimidated everyone, even Roosevelt, with his stoic personality, frank-but-polite speech, and stern gaze. He intended it that way, vowing to never laugh at the president's jokes. He rarely socialized. Most everyone called Eisenhower "Ike," but Marshall never stooped to that informality.

To foreign commanders, Marshall was the epitome of professionalism, a quality that would lead the Secretary of War to refer to him as "the finest man to ever wear an American uniform." Roosevelt respected Marshall, too, and was relieved that Marshall did not actively pursue command of the Overlord operation, saying, "I didn't feel I could sleep at ease if you were out of Washington."

Saving Private Ryan depicts Marshall as cherishing the famous letter to the widow Bixby that is considered one of Lincoln's finest writings. (Some evidence suggests one of Lincoln's secretaries actually wrote it.) Nothing suggests this was accurate; Marshall did not indulge in sentimentality.

Marshall would have IQ 13, Strong Will +3, and Military Rank 8. Skills include Administration-15, Soldier-13, Strategy-18, Diplomacy-16, and Tactics (Infantry)-14. The GM might give him Intimidation-14, as well.

George S. Patton

General of the Army, 1885-1945, with ramrod straight posture, a two-gun cowboy holster, and a high-pitched, squeaky voice. The American Rommel, George "Blood and Guts" Patton was an outstanding military leader in war and a dubious commander in peace. Patton's many critics have railed upon his brutal failings and over-the-top manner, but he remains the iconic U.S. general of WWII.

Patton was the first U.S. tank officer in WWI and its greatest armor commander in WWII. After graduating 46th of 103 at West Point in 1909, he placed fifth in the 1912 Olympic pentathlon, which included contests in horsemanship, swimming, running, fencing, and marksmanship. (He was in contention for the gold, but he used a service .38 pistol instead of the handier .22 used by other competitors. The resulting decline in his marksmanship dropped the young officer to 21st in the pistol competition.) He designed the last combat sword issued to U.S. troops, the M-1913 saber, and wore the title "master of the sword" at the Army's cavalry school. Later, he would be instrumental in developing the Army Tank Corps and its tactics.

His promotion to Army command in Africa strengthened the U.S. forces – Patton invariably attacked hard, fast, and cleverly. He ever after worried the Germans, who always pointed their reserves toward his portion of the front. Despite this hard-driving zeal, Patton demanded that his men maintain a high formality, shirt collars buttoned and ties in place. This and his other antics often caused his troops to despair of him – they would say his success relied on "*our* blood and *his* guts" – but Patton came across as an undefiable winner and they always, ultimately, rallied to that quality. The hard-working and highly skilled commander once quipped, "You can't run an army without profanity," but he was charming and urbane in social settings, the delight of high-class gatherings. His white bull terrier, Willie, was a constant companion.

Patton is well remembered for having brutally handled a couple of hospitalized soldiers, in a harsh attempt to handle combat fatigue in a manner akin to scaring someone with hiccups. The fact that he frequently visited casualties in the first place – a leadership mission that many of his contemporaries lacked the stomach to endure – is usually overlooked.

Patton would have ST 12, DX 12, IQ 13, HT 12, and Military Rank 7 early or 8 later. Add Strong Will +3, Callous, Glory Hound, Workaholic, and Overconfidence. His beliefs in reincarnation might be regarded as a quirk or a mild Delusion. His Reputation would be high in some quarters, but generally low among his superiors. His key skills might include Administration-11, Engineer (Vehicle)-10, Fencing-15, French-15, Guns (Pistol)-13, History (Military)-15, Intimidation-13, Leadership-15, Mechanic (Gasoline Engine)-12, Operations (Land)-16, Piloting (Single-Engine Prop)-11, Riding-14, Running-10, Soldier-15, Sport (Polo)-15, Strategy-14, and Tactics (Armored)-16.

Douglas MacArthur

General of the Army, 1880-1964, a hawk-faced man sporting crush cap, sunglasses, and corncob pipe, and prone to temper tantrums. Douglas MacArthur was the foremost *prima donna* in U.S. service – even Patton paled in comparison – but in many ways he'd earned the privilege. He graduated from West Point in 1903, first in his class. He was twice nominated for the Medal of Honor, finally receiving the award in 1942. He frequently commanded from the front line in WWI, earning seven Silver Stars and two Distinguished Service Crosses.

MacArthur was the youngest general officer in Army history, the youngest commandant of West Point, and in 1930 the youngest Army chief of staff. A few years later, he retired from active duty and took command of the Philippines Army until recalled in 1941. He would inexplicably dither while his air force was destroyed, but would skillfully resist in the Philippines long enough to delay Japanese plans for conquest in New Guinea and Australia. The U.S. command would have left the already revered MacArthur to die at Corregidor, but Churchill desperately needed a symbol that the United States would more than replace the three divisions that the Australians wanted to recall from the African desert. That symbol was MacArthur. A daring PT-boat foray slipped him away to take charge of the southwestern Pacific campaign.

Despite the sheer difficulty that sometimes attended dealing with such an ego, the Australians profited from this transaction. MacArthur masterfully led a mostly U.S. force that cut away Japanese outpost after outpost, often starving the enemy to death rather than fighting him. U.S. policymakers initially wanted to bypass a reconquest of the Philippines, but ultimately decided they had to undertake the campaign. MacArthur's famous promise to return did not factor into this decision, but he capitalized on the opportunity to make good on it. This campaign proved to be the longest and one of the costliest of the Pacific war, despite the general's expert handling.

After the war, MacArthur molded a democratic Japan while essentially wielding total authority over the nation. Although blind to his own faults, MacArthur had an unparalleled ability to discern the needs and motives of whole peoples.

MacArthur would have IQ 15 and Military Rank 8. His towering intellect was offset by his trademark Fanaticism (Self), which also incorporates Glory Hound and Selfishness. He was fearless well past foolishness, but ironically had a Reputation -2 among his troops for lack of bravery. He also had a Reputation -3 among many fellow officers for being insufferable, offset by his overall positive Reputation +3 for being one of the sharpest military leaders alive. He demanded utter loyalty from subordinates – this could be modeled as an Odious Personal Habit or limited version of Paranoia – but like most such men did not always show the same loyalty in return. (When he did remain loyal to a subordinate, which was usual, he did so to the hilt. Many aides would have him as a Patron.) His skills include Administration-15, Soldier-15, Tactics (Infantry)-18, Operations (Sea-Land)-19, Strategy-21, and Leadership-14.

Franklin Roosevelt

President of the United States, 1882-1945, a jaunty man privately wheelchair-bound, with a blanket across his lap when sick. Franklin Delano Roosevelt wielded record power as president, and generally is thought to have used it well. He served as president longer than anyone, dying in his fourth term, and won all four elections handily, with his 1936 landslide ranking second all-time. His speeches are famous and familiar, from his first inaugural "fear itself" speech, through the "four freedoms" speech to Congress that powerfully nudged a nation out of isolationism, to the "day of infamy" speech after Pearl Harbor.

Born into an elite New York family, Roosevelt entered politics early. In 1921, he contracted polio, and his battle with the crippling disease transformed Roosevelt into a caring, empathic man who made the effort to finely hone his people skills. He concealed his ailment from the public, often campaigning from open cars where he could shake hands while sitting. Aides and a 20-lb. set of leg braces helped him walk to podiums when need existed, but he could make it no farther than 20' – a feat that would drain his strength for the day.

FDR had a bright and beaming personality. Free with praise, he was a crafty diplomat in matters both foreign and domestic. His open manner gained him the devotion of the media, and in the Depression the man on the street seldom criticized a president who was obviously putting the people's welfare first. His mostly conservative detractors argued that his diplomacy was too guileful by half and his '30s foreign policy often a step late. They also said he was arrogant and undemocratic, as witnessed by his constant battles with Congress and the Supreme Court. Roosevelt considered both to be nuisances.

He also lacked great management skills. He did not fire poor performers; instead he gave them "assistants" that quietly took over the job, or created new organizations that poached upon it. (This partially explains the bewildering array of similar agencies in his administration.) As former assistant secretary of the Navy, Roosevelt favored that service, and contributed greatly to its rivalry with the Army. In the end, however, he left a legacy of competence, vision, and determination.

FDR would have IQ 14, HT 9, Status 7, and Strong Will +2. Skills would include Administration-14, Bard-16, Diplomacy-15, Leadership-14, Politics-17, and Strategy-13. His Charisma +2 and outward confidence led to his +4 Reputation among most Americans.

Other Leaders

Some other notable Americans in the war effort included:

Henry H. "Hap" Arnold

General of the Army, 1886-1950, well-spoken, slightly stooping and easily winded from four heart attacks. As one of the first U.S. military pilots, Arnold learned to fly from the Wright brothers. His skill and aptitude allowed him to set early altitude and speed records, and resulted in him winning the Mackay Trophy for aviation twice. He was appointed chief of the Air Corps in the mid-1930s, where he was instrumental in getting designers and aircraft companies to build the large bombers that he envisioned winning the next war. When the war did come, he grew frustrated with the lack of success of the strategic bombers in Europe, but the B-29s that bombed Japan into submission performed just as he had hoped.

Omar N. Bradley

General of the Army, 1893-1981, a soft-spoken and pleasant man with a dapper expression. Brad, as his friends called him, finished West Point in the same class as Eisenhower, and both were protégés of Marshall. His solid skill and ability on the battlefield were often overshadowed by others' more flamboyant success. He commanded U.S. forces throughout European operations. His major crisis came when he threatened to resign if U.S. units were transferred under British command during the Battle of the Bulge.

Eisenhower referred to Bradley as "Old Dependable." Others called him the "GI General," though Patton, who blustered under Bradley's command, made less congenial references.

Vannevar Bush

Director of the Office of Scientific Research and Development, 1890-1974, distinguished looking with graying temples and a double-breasted suit. Bush directed both the National Defense Research Council and its successor, the OSRD, having formerly been an MIT vice president and Carnegie Institution president. Some claimed he may "win or lose the war." Most of his work was top secret, including U.S research into atomic weaponry. Experimentation with radar would yield the proximity fuse for artillery. His interest in calculating machines would produce the differential analyzer, used to calculate artillery tables, and from it the ENIAC of the postwar era.

Among the OSRD's more unusual projects was the development of gadgets for the OSS. Few of these were successful. Many were comical, or at least questionable, but a few, such as the limpet mines and timing devices, delivered mayhem at the hands of a few resistance fighters in Nazi-held Europe. Bush would claim later that this was more exciting to him than his work on the A-bomb. His ground-breaking article, "As We May Think," predicted the personal computer and Internet.

William F. "Bull" Halsey

Fleet admiral, 1882-1959, loud and profane, dressed in crumpled khakis. Historians often consider Halsey the naval equivalent of Patton; his impulsiveness and aggression were characterized by the sign he had erected on a hillside in the Pacific: "Kill Japs. Kill Japs. Kill More Japs." This would be his motto throughout the war.

An old salt who never seemed to quite fit in with the New Navy, Halsey left the day-to-day details to his staff (and gave them credit for their work). He was most comfortable as a battleship captain, and disdained the carrier and sub war. His controversial decision to chase empty Japanese carriers at Leyte Gulf nearly cashiered him, as did two incidents in which typhoons damaged U.S. ships. His leadership of the Third Fleet would earn him fame as "the fightingest salt in the Navy."

Ernest J. King

Fleet admiral, 1878-1956, a tall, bald man with a piercing gaze but quick to laugh. King was a complete sailor, having served in ships, subs, and aviation. His tactless, hot-tempered personality did not make him popular, but it did make people respect him. King served as both CINCUS (commander in chief U.S. fleet) and CNO (chief of naval operations) for the largest navy in the world. His major success would be the foundation of an aircraft-carrier force in the late 1930s.

William D. Leahy

Fleet admiral, 1875-1959, a balding, bright-eyed academic with impeccable manners. The former chief of naval operations, Leahy was a perfect fit as both Roosevelt's and Truman's chief of staff. Quiet, well-spoken, and wary of the Soviets, Leahy had served as ambassador to Vichy France before accepting the staff position from Roosevelt. As chairman, he was more an observer and peacemaker than commander. His position would prove useful enough that in 1949, the year he retired, the Department of Defense was created, with a single cabinet-level position for all the armed services.

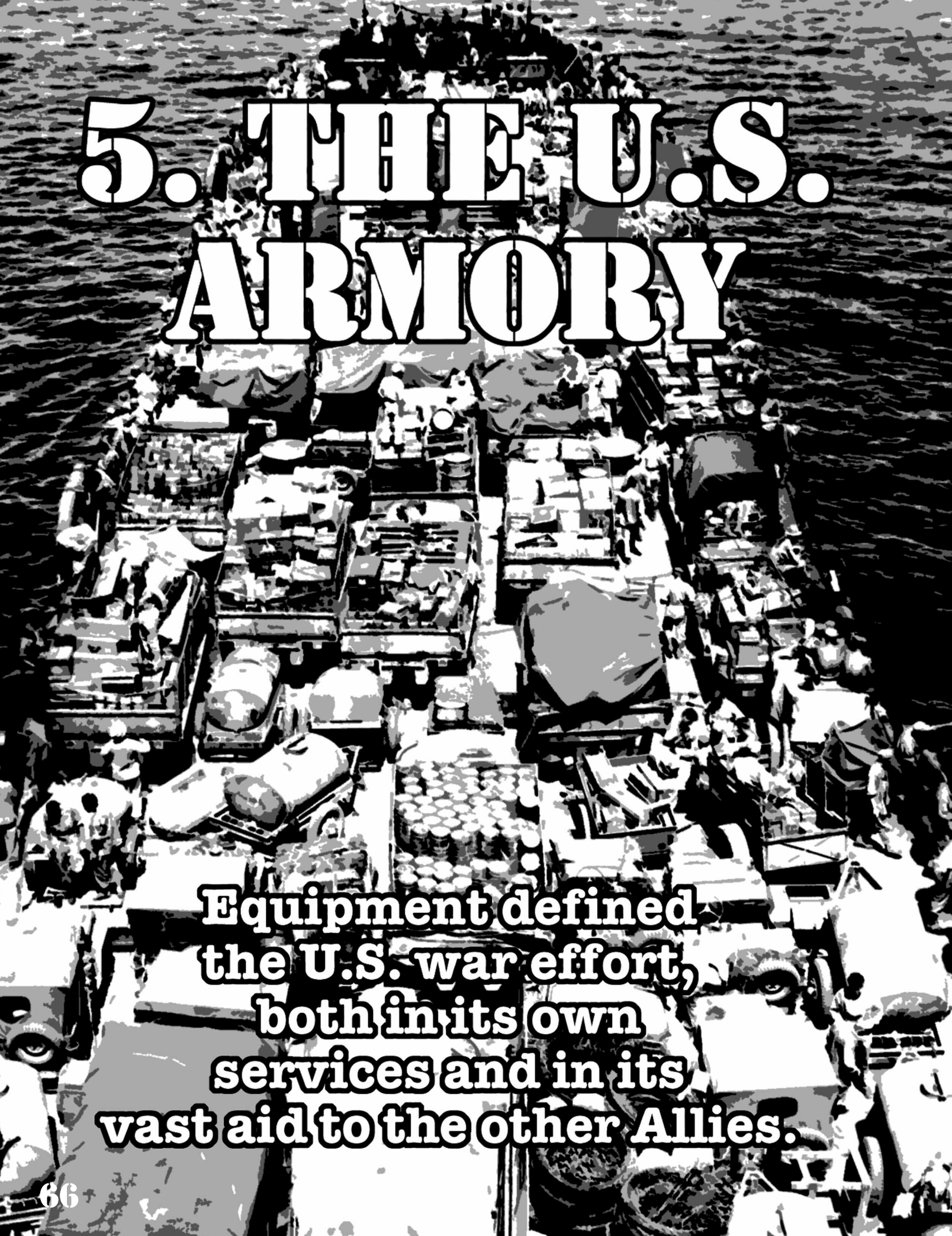
Joseph W. Stilwell

General, 1883-1946, a thin older man with a severe mouth and glasses. The WWI veteran Stilwell had plenty of experience in China before serving as Chiang Kai-Shek's chief of staff and commanding all U.S. Army troops in China, Burma, and India from 1942-44. The candid Stilwell earned the nickname "Vinegar Joe" by arguing with everyone, especially his British contemporaries, in the dark days when the Japanese were pushing everyone back. Chiang forced the Army to recall Stilwell in October 1944.

Harry S Truman

Vice president and later president of the United States, 1884-1972, taciturn and bespectacled. Truman was aggressive and fierce despite his bookish appearance. An ex-Army artillery captain and legendary conservative, Truman would man the helm at the end of the war. His major decision, to use the atomic bomb, was built more on information he didn't have than on what he did know. Roosevelt had never let his vice president in on many things, including the bomb itself.

While a competent administrator, Truman was a common man with only a high-school education. Plain, hard-working, and honest were terms his admirers used; however, the "Little Jockey" from Missouri had a temper and stubborn streak that fit his Protestant preacher image.


5. THE U.S. ARMORY
Equipment defined the U.S. war effort, both in its own services and in its vast aid to the other Allies.

PERSONAL GEAR

See pp. W87-90 for basic gear. Additional and less-generic items available to U.S. troops include:

Clothing

Boots – The standard-issue infantry boot until 1944 was a low, rough ankle boot worn with canvas leggings. These "brogans" or "boondockers" were universally hated. PD 1, DR 1. $6, 3 lbs.

Boots, Combat – The first useful combat footwear, these calf-high, rough leather boots with rubber soles had two buckles at the ankles. They were well-received by the average dogface, since they did not need leggings. PD 2, DR 2. $10, 4 lbs.

Boots, Jungle – With soft rubber soles and canvas uppers, these were far better than boondockers for jungle fighting, but they wore out within a couple of weeks until the rubber compound was improved in late '43. DR 1. $5, 2 lbs.

Boots, Paratrooper – These were similar to the combat boot, but laced higher, deleted the buckles (which might catch on deploying parachute lines) and had a high-shine, reinforced toe cap. A regular dogface wearing them might be pummeled by paratroopers for wearing "their" uniform, but officers and Rangers routinely obtained a pair. PD 2, DR 2. $15, 4 lbs.

Cap, Jeep – Usually worn under the M-1 helmet to give a little extra padding, the woolen "beanie" was loved by the dogfaces and loathed by Patton. The little cap had a small bill and side flaps that could be turned down to warm the ears. $1, neg.

Coveralls – These heavy olive-drab cotton garments were long-wearing and comfortable, but slow to take off when a soldier had to answer nature's call. Often referred to as HBTs, they were worn by virtually everyone, from front-line Marines and Army tankers to Air Force mechanics. $8, 3 lbs.

Dog Tags – Two metal rectangles embossed with the soldier's name, eight-digit serial number, religion, year of tetanus shot, and blood group (A, B, AB, or O only) were kept on a chain around his neck. A notch in the left-hand side held the tags in the marking machine – not in the dead soldier's mouth, as some claimed. Early in the war, the soldier's next of kin and address were listed on the tags, but after 1943 this practice was stopped. Rumors persist that some families received Nazi propaganda during the war, presumably from addresses taken from their son's dog tags. $0.05, neg.

G-Suit – The 1943 version had a water bladder that was placed beneath the pilot as a seat cushion. As the G-force pushed the pilot into the seat, the water was pressed out into constricting bands around the pilot's legs. This reduced felt forces by 1 G. The suit added electro-pneumatic air-filled bladders in 1944 and was much more effective. It reduced felt force by 2 Gs. $100, 10 lbs.

Hat, Boonie – A wide-brimmed cotton hat that was popular among Army and Marine troops in the Pacific and Burma, this could be rolled up and stuffed in a pocket without damaging it, and the wide brim offset -1 in vision penalties for rain or bright light. $2, 1/2 lb.

Leggings – Made of khaki or olive-drab canvas, these covered boot laces and extended up to mid-calf. They were slow to put on and slow to dry, which contributed greatly to trench foot. GMs may require a -1 to HT rolls to avoid trench foot for those wearing leggings. Also, properly cleaning muddy leggings took forever. $1, 0.5 lbs.

Uniform, Jungle – Camouflage jump suit or two-piece fatigues in lightweight cotton twill, these grant a +1 to Camouflage skill. $8, 2 lbs.

Uniform, Temperate – This was an olive-drab wool shirt and trousers, with field jacket. Increase weight by 50% if wet, and being wool, it was seldom dry. No winter clothing, as such, was issued to U.S. troops. Instead, soldiers were encouraged to layer their garments. Assume that two layers of this uniform acts as winter clothing (p. W87). $10, 4 lbs.

Uniform, Paratrooper – The khaki paratrooper jacket had four large pockets on the chest, and occasionally riggers added sleeve pockets as well. The khaki trousers had reinforced knees and an oversized cargo pocket on each thigh. Both were somewhat waterproof, and quick-drying. A special knife pocket was sewed into the lapel, intended to help paratroopers escape from fouled parachute lines. Germans referred to U.S. paratroops in this uniform as "butchers in baggy pants." Sartorial elegance aside, it was probably the best all-around combat clothing of the war. $6, 4 lbs.

Armor and Related

Goggles, Flash – The air crews dropping the A-bombs wore these. They give a -3 to Vision rolls but +3 to HT to avoid vision problems from looking at an explosion (either atomic or conventional). See p. 101. $5, 1 lb.

Helmet, Aircrew (3-4) – Standard U.S. aviation helmets incorporated steel plates into the leather lining. Also includes goggles, headphones, fittings for an oxygen mask, and a throat mike. PD 3, DR 4. $55, 4 lbs.

Field Gear

Anti-Gas Dubbing – A greasy chemical applied to normal clothing to protect against mustard gas. U.S. troops at D-Day suffered for days in clothes coated in this smelly substance. Assume this protects against gas attacks for 3d seconds before the gas permeates the dubbing. With luck, this is enough time for the soldier to escape the gas. One tin has enough dubbing to cover one person's clothing and boots. $1, 1/2 lb.

Assault Jacket – Issued prior to D-Day. It had four large front pockets (the lower ones could hold two BAR magazines each) and two large rear pockets, which were intended to replace the backpack. Quick-release tabs allowed the soldier to drop the jacket in 1 second with a successful DX roll. Despised for being too hot, it was discarded by most troops within a few days. $3, 3 lbs.

P-38 – A can-opener, named for the 38 punctures it took to open a C-ration can. Considered the best Army invention by the GIs, it never rusted or needed re-sharpening. $0.05, neg.

Escape Kit – This was issued to every fighting man before D-Day. It contained a silk map of France, a razor blade for cutting bindings, and 200 francs ($2). $4, neg.

Gas Brassard – A paper chemical detector worn on the arm, this changes colors when it comes in contact with a certain type of chemical (mustard gas, nerve gas, etc.). $0.50, neg.

Gas Mask Case – The gas mask itself (p. W87) was seldom used by GIs, but the black rubberized carrier served as a waterproof bag for cigarettes and letters long after the mask was discarded. $1, 1/2 lb.

Invasion Belt – A heavy web belt with two rubber tubes inside. When activated, two CO^2 cylinders gave the belt about 75 lbs. of flotation. It could also be inflated by mouth in about 1 minute. During amphibious operations, these belts were strapped to bazookas, flamethrowers, bangalore torpedoes, LMGs, etc. to keep them from sinking. $1, 2 lbs.

Parachute – The U.S.-issue chute had "quick-release" buckles that often failed to release. This worried paratroops, and caused them to carry multiple knives and shroud cutters in case they were entangled on landing. Additionally, the chute was not equipped with a single-point release buckle. GMs may require a DX roll, at -2 to -4, to get out in 1d seconds for parachutists in a hurry. All U.S. paratroop chutes had a reserve, but aircrew chutes did not. Paratrooper main chutes were olive-drab or camouflaged nylon by 1943. All others were white silk or nylon. $100, 30 lbs. with reserve, $70, 25 lbs. without.

Personal Items – The Army issued toothbrushes, safety razors, and shaving cream every week, in theory. The new "brushless" shaving cream came in either new-fangled aerosol cans or a toothpaste tube. $3, 1 lb.

Pliofilm – This transparent rubber sheeting was used to wrap up and waterproof GI weapons for amphibious attacks. Enough to wrap a single rifle or SMG cost $0.50, neg.

Rocket Bag – Men in a bazooka team carried a large "rocket bag" with three rockets in it. The bag was also used to store mines and other demolitions. $2, 1 lb.

Solar Water Still – This was simply a rubber bag with a sponge inside. The sponge absorbed seawater poured into the bag, then the bag was left in direct sunlight, which evaporated the water in the sponge. The evaporated water condensed within the bag, creating up to 2 pints of potable water a day. $3, 2 lbs. (empty), 6 lbs. (full).

Survival Kit – Strapped to aircrew parachutes, this "B-4" kit contained: a quart-sized plastic bag for water; gloves; mosquito headnet; machete; goggles; tiny frying pan; first-aid kit; sewing kit; fishing kit; two 5-minute signal flares; pocket knife; whetstone; mirror; 100 matches in waterproof box; and 40 rounds of .45 ammunition. A similar kit was issued in an OD vest late in the war. $20, 13 lbs.

Water Filter – This pump-operated canister used paper filters to clean 1 gallon of water in 4 minutes. Comes with 3' of rubber hose. One GI could operate it. It was used extensively in the Pacific, replacing iodine tablets in some units. $8, 7 lbs.

Foodstuffs

Candy – Seemingly every GI had a sweet tooth, and his endless supply of goodies was offered to everyone he met. Army PXs and Navy ships had wide selections: Charms, Hershey's Kisses, Tootsie Rolls, Baby Ruth, Reese's Peanut Butter Cups, Milk Duds, Milky Way, Mr. Goodbar, Snickers, Krackel, and M&Ms. Each package was $0.05, neg.

Soda Pop – Available in 8- or 10-ounce glass bottles, the most popular included Coca-Cola, Pepsi, Nu-Grape, Orange Crush, and Dr. Pepper. Coca-Cola was by far the easiest to acquire: The company built almost 100 bottling plants worldwide during the war. $0.05, 1.5 lbs.

Beer – GIs drank their beer from steel "motor oil" cans, with a cone-top spout, sometimes painted olive drab. The men could select from Schlitz Vitamin-D Beer, Budweiser, and Old Tap, among others. Bottles were also used. $0.05-0.10, 1 lb. or more.

10-in-1 Ration, Crate – A wooden crate with two rations, each consisting of two cardboard boxes holding cans of food, this was issued mostly to armor, supply, and artillery units, since the cases were too bulky for the infantry. Each can held green beans, corn, potatoes, etc. and was meant to be prepared for a whole squad, but in tough conditions the poor dogface was sometimes issued one can and nothing else. Total of 10 man-days of rations. Five such cases take up one VSP. $35, 45 lbs.

C-Ration, Crate – This thin wood crate held 24 entrees, 24 side-orders or snacks, and eight accessory packs for C-rations (p. W88), for a total of eight man-days of rations. Five cases take up a VSP. $40, 40 lbs.

K-Ration, Crate – This case held 12 each of supper, dinner, and breakfast rations, for a total of 12 man-days of rations. Five such cases take up one VSP. $80, 45 lbs.

D-Rations, Crate – Included 144 Hershey's "D-Ration" or (from 1944) "Tropical" bars in a thin wood crate. The D-Ration intentionally tasted bad; the Army hoped that the GI would only eat it in an emergency. Along with cigarettes, both of these bars were a form of currency in Allied-occupied countries. Both sorts of bar did not melt like normal chocolate in hot locales. They also contained vitamin B1, to prevent beriberi (see p. CII167) outbreaks in tropical theaters. $8, 38 lbs.

Spam – Canned spiced ham was a staple in many Army units. Some troops lived for weeks on fried-Spam sandwiches and little else. Monotonous as it was, it had plenty of calories and kept well, even in the Pacific. $0.50, 1 lb.

Weapon Accessories

Cleaning Kit, M-1 Garand – This consisted of a small, folding "combo" tool with screwdrivers, bore brush, and other specialty tools for disassembling the weapon. A cotton cord with a weight at one end and a brush on the other was used instead of a ramrod until mid-war. This whole kit fit in the buttstock of the rifle. If carried alone, it was $3, 1/2 lb.

Storage

Parachute Container – This can hold 120 lbs. or 1 VSP of gear. With parachute deployed, it descends at 6 yards per second, drifting with the wind. Paratroops called them "coffin bombs," because they usually were strapped to fittings on transports or deployed in a bomb bay. The chutes were available in red, green, blue, yellow, or natural, and a pre-set code designated each type of cargo (blue for mail, green for ammunition, red for medical supplies, etc.). For more information, see pp. W:HS25-26. $50, 25 lbs.

Explosives and Related

Bomb, Gammon – Issued to paratroops for D-Day, this was basically the explosive composition-B in a bag equipped with a 5-second pull-fuse. Does 6d□6. $20, 3 lbs.

Flare, Parachute – Available in white, green, amber, and red, this device flies up to 600' then burns for 30 seconds to illuminate a 100-yard radius. $3, 1 lb.

Flare, Star-Cluster – Available in white, green, amber, and red, this also climbs up to 600' and is used for signaling. $3, 1 lb.

Flare, Trip – This illuminates a 300-yard radius for 20 seconds, and was often attached to a trip wire and used as a trap. Soldiers were trained to freeze when these went off, and to look for the movement of those that did not. The GM may require a Fright Check and a Soldier roll the first time that a new recruit experiences a trip flare in real combat conditions – stopping in one's tracks definitely is *not* the first instinct when a trip flare is set off. $10, 5 lbs.

Fuse Igniter – A pencil-sized device that ignites a fuse, even underwater. Simply crimp to the fuse, then pull to ignite it. $1, neg.

Primacord – A very fast-burning explosive used to initiate other explosive devices, this resembles clothes line. It does 6d□2 damage per pound if used while spooled or bundled up, or 1d-1 explosive damage per hex that it passes through if strung out. A 1,000' spool is $50, 23 lbs.

Tools & Heavy Gear

Air Compressor – A large compressor for filling tires, hard-hat diving, or operating air-impact tools. Burns 1 gallon of gas per hour. $100, 125 lbs.

Hard-Hat Diving Rig – A suit with weights and helmet ($300, 75 lbs.), and a reel with 200' of hose ($100, 25 lbs.). The suit works from most any ship, since most have an air compressor. Hard-hat divers worked around the clock to rescue survivors trapped in ships at Pearl Harbor. $350, 100 lbs.

Quonset Hut – A pre-fabricated shelter, 20'□48' – one could be assembled by 10 men in one day. As many as 30 men were crammed into these, but 8-10 was typical. The majority of structures on any U.S. base will be Quonset huts. One takes up 54 VSPs and 4 tons as cargo. $2,500.

Melee Weapons

Fighting Knife – The M-3 and Mark 2 "Ka-Bar" fighting knives were widely issued in the Army and Marines, respectively. Both are large knives (see p. W193). $5, 1 lb.

M1918 Mark 1 Trench Knife – This large knife had built-in brass knuckles, adding +2 to punches. Takes a -5 to any Fast-Draw attempt. $7, 1 lb.

Medical

APC Pills – These were "All Purpose Capsules" with aspirin, caffeine, and other ingredients. GMs may give bonuses to Will rolls for troops that are using APCs to ignore pain penalties. 50 pills per bottle. $1, neg.

Anesthetic Cart – This provided the tools to keep patients unconscious; roll vs. Physician to use. One tank of anesthetic ($50, 25 lbs.) lasts 4 hours. $150, 100 lbs.

Motion Sickness Pills – This is a bottle of 50 pills that give a +2 to HT rolls to avoid air or seasickness, but a failed HT roll also gives -1 to any Sense rolls. Users must roll at -3 if trying to stay awake. All effects last 1d hours. $1, neg.

Stretcher – This was made of wood and canvas, with metal legs that kept it off the ground. $8, 12 lbs.

X-Ray Machine – This was usually mounted in an enclosed 2½-ton truck. It grants +3 to Diagnosis (plates and film are $5, 1 lb. each) when appropriate, and needs 2 kWs of power, provided by the truck engine. Roll vs. Electronics Operations (Medical) to use it correctly. $1,500, 1 ton.

Aid Kits

First Aid Kit, Parachutist's – This kit contained a tourniquet, a bandage, sulfa powder, and a syrette of morphine. Despite the name, other troops were sometimes issued these. It was usually attached to the helmet. It gives a +1 to First Aid. $3, 1/2 lb.

Communications and Electronics

Aircrew Survival Radio – This was strapped between the legs and cranked while the operator tapped out his Morse-code message. The early antenna was flown aloft by a kite. Later in the war, a hydrogen balloon, filled by a chemical reaction that occurred when adding water, carried the antenna up to 200'. Treat this as a waterproof medium-range transmitter and short-range receiver. It can only transmit and receive in Morse code, however. $20, 18 lbs.

Police and Spy Tools

Paper, Nitrated – Used when typing up special orders, this paper completely burns to ash in 1-2 seconds; 500 sheets are $30, 6 lbs.

Paper, Water-Soluble – This completely dissolves in water in seconds; 500 sheets are $10, 5 lbs.

Polygraph Machine – This measures the pulse rate and other body functions, and records the results on graph paper. It can strongly suggest when the subject is lying. The operator rolls a Quick Contest of his Electronics Operations (Medical) skill +3 vs. the highest of the subject's IQ, or Acting or Meditation skills, modified by any Strong or Weak Will. The subject gets a +5 if he knows any of several polygraph-evading tricks. If the subject fails his roll by 5 or more, he appears to be lying when telling the truth. The GM should roll in secret for both parties. See ***GURPS Cops*** for more information. $150, 15 lbs.

SMALL ARMS

The standard arms issued to U.S. troops (as well to other major combatants) are described on pp. W91-99. That chapter also explains the game mechanics for these various weapons and how they work in play.

The following provides information on weapons that were not issued as frequently, and are not as well-known. The GM can use these to add color to an American campaign, and options to the PCs' arsenal.

Ammo Table

Also see p. W91 for the most commonly used ammunition.

Common Name	Modern Name
.22 LR	5.6×16mmR
.25 ACP	6.35×16mmSR
.38 Super Auto	9×23mm
.38 Special	9×29mmR
.357 Magnum	9×33mmR
.35 Remington	9×49mm
.45 Long Colt	11.43×33mmR
1.5-inch	40mm

U.S. Small Arms Table

Pistols – Use Guns (Pistol) Skill

Weapon	*Malf*	*Dam*	*SS*	*Acc*	*1/2D*	*Max*	*Wt.*	*AWt.*	*RoF*	*Shots*	*ST*	*Rcl*	*Hold*	*Cost*
Colt-Browning M-1908, .380 ACP	Crit.	2d	10	1	125	1,500	1.3	0.3	3~	7+1	8	-1	+1	$30
Colt-Br. M-1908 Vest Pocket, .25 ACP	16	1d-	10	0	50	1,000	0.5	0.2	3~	6+1	7	-1	+2	$10
Colt .38 Super Auto, .38 Super Auto	Crit.	2d+2	10	3	150	2,000	2.7	0.5	3~	9+1	10	-1	-1	$50

Revolvers – Use Guns (Pistol) Skill

Weapon	*Malf*	*Dam*	*SS*	*Acc*	*1/2D*	*Max*	*Wt.*	*AWt.*	*RoF*	*Shots*	*ST*	*Rcl*	*Hold*	*Cost*
Colt M-1873, .45 Long Colt	Crit.	2d+1+	11	2	150	1,700	2.7	0.3	1	6	11	-2	-1	$50
Colt Official Police, .38 Special	Crit.	2d-1	10	2	120	1,700	2.6	0.2	3~	6	8	-1	-1	$25
S&W Magnum, .357 Magnum	Crit.	3d-1	10	3	180	2,000	2.8	0.2	3~	6	10	-2	-1	$60
S&W Military & Police, .38 Special	Crit.	2d-1	10	2	120	1,700	2	0.2	3~	6	8	-1	-1	$20

Flare Pistols – Use Guns (Pistol) Skill

Weapon	*Malf*	*Dam*	*SS*	*Acc*	*1/2D*	*Max*	*Wt.*	*AWt.*	*RoF*	*Shots*	*ST*	*Rcl*	*Hold*	*Cost*
M-8, 1.5-inch	Crit.	Special	10	1	–	150	2.4	03	1/2	1	10	-1	-3	$30

Shotguns – Use Guns (Shotgun) Skill

Weapon	*Malf*	*Dam*	*SS*	*Acc*	*1/2D*	*Max*	*Wt.*	*AWt.*	*RoF*	*Shots*	*ST*	*Rcl*	*Hold*	*Cost*
Ithaca M-37, 12g	Crit.	4d	11	5	25	150	6.7	0.7	2~	4+1	13	-3	-6	$45
Stevens M-620A, 12g	Crit.	4d	11	5	25	150	7.85	0.85	2~	5+1	13	-3	-6	$45
Winchester M-12, 12g	Crit.	4d	11	5	25	150	7.35	0.85	2~	5+1	13	-3	-6	$45

Rifles – Use Guns (Rifle) or (Light Auto) Skill

Weapon	*Malf*	*Dam*	*SS*	*Acc*	*1/2D*	*Max*	*Wt.*	*AWt.*	*RoF*	*Shots*	*ST*	*Rcl*	*Hold*	*Cost*
Remington Model 8A, .35 Rem.	Crit.	5d+2	12	8	450	3,000	8.25	0.2	3~	5	10	-1	-6	$55
Springfield M-1903A4, .30-06	Crit.	7d+1	15	12+1	1,000	4,600	9.7	0.3	1/2	5+1	12	-3	-6	$120
Springfield M-1C Garand, .30-06	Crit.	7d+1	15	12+1	1,000	4,600	11.7	0.5	3~	8	12	-3	-6	$120
Springfield M-2,. 22 LR	Crit.	1d+2-	14	9	75	1,200	9.5	0.2	1/2	5+1	8	-1/2	-6	$30
Springfield T-20, .30-06	Crit.	7d+1	14	11	1,000	4,600	13.1	1.6	10*	20+1	12B	-3	-6	$100
Springfield M-1E5, .30-06	Crit.	7d+1	13	10	700	4000	7	0.5	3~	8	12	-3	-5	$150
Springfield T-26, .30-06	Crit.	7d+1	13	10	700	4000	8	0.5	3~	8	12	-3	-5	$15
Winchester M-1A1,.30 Carbine	Crit.	3d+2-	12	8	300	2,100	5.7	0.5	3~	15+	9	-1	-4	$55

Submachine Guns – Use Guns (Light Auto) or (Rifle) Skill

Weapon	*Malf*	*Dam*	*SS*	*Acc*	*1/2D*	*Max*	*Wt.*	*AWt.*	*RoF*	*Shots*	*ST*	*Rcl*	*Hold*	*Cost*
Hyde-Inland M-2, .45 ACP	Crit.	2d+1+	10	6	190	1,750	10.8	1.6	8*	30	11	-2	-5	$40

Machine Guns – Use Guns (Light Auto) on Bipod or Gunner (Machine Gun) on Tripod

Weapon	*Malf*	*Dam*	*SS*	*Acc*	*1/2D*	*Max*	*Wt.*	*AWt.*	*RoF*	*Shots*	*ST*	*Rcl*	*Cost*
Colt-Browning M-2 WC, .50 BMG	Crit.	13d+1+	20	16	1,500	7,400	153/528	32	10*	110	65T	-1	$1,000
Saginaw T-24, .30-06	Crit.	7d+1	19	10	1,000	4,600	28	3	20	50	13B	-2	$300

Mortars – Use Gunner (Mortar) Skill

Weapon	Malf	Damage	SS	Acc	Ind.	Wt	AWt	RoF	Cost
M-19, 60mm	Crit.	5d [6d]	20	5	2,000	45.2	3	1/3	$900
M-2 Chemical, 4.2"	Crit.	6d×16 [10d]	20	6	4,400	330	32	1/3	$1,000

Light Antitank Weapons – Use Guns (LAW) Skill

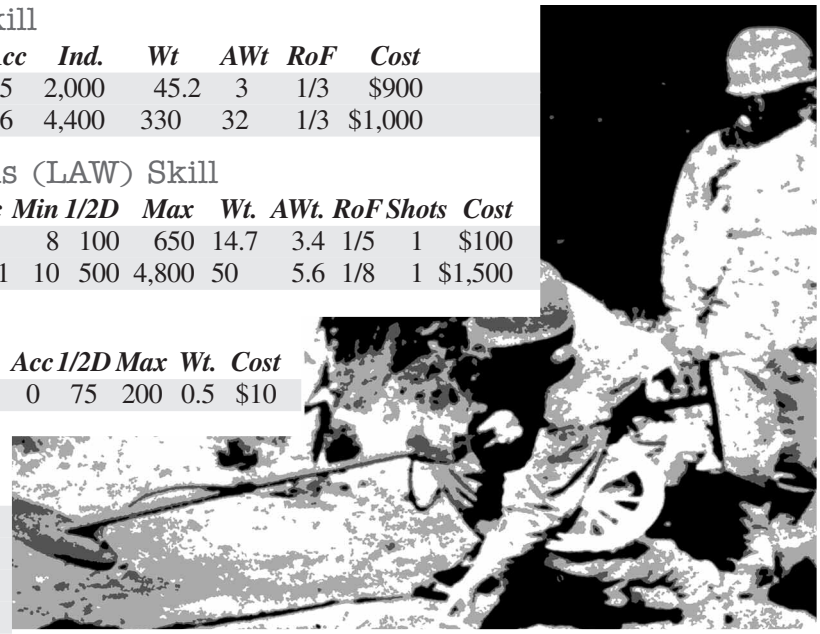
Weapon	Malf	Damage	SS	Acc	Min	1/2D	Max	Wt.	AWt.	RoF	Shots	Cost
M-9 "Bazooka," 60mm	Crit.	6d×2 (10)	16	9	8	100	650	14.7	3.4	1/5	1	$100
M-18, 57mm	Crit.	6d×2 (10)	17	10+1	10	500	4,800	50	5.6	1/8	1	$1,500

Rifle Grenades

Weapon	Malf	Dam	SS	Acc	1/2D	Max	Wt.	Cost
Grenade Projector Adapter M1	Crit.	Special	16	0	75	200	0.5	$10

Mines

Weapon	Damage	Wt.	Cost
M-1 Vehicular	6d×12	10.7	$10
M-2 Bouncing	5d [6d]	5	$20
M-3 Blast	5d×2 [6d]	10.3	$10
M-5 NM Veh.	6d×11	15	$10



Weapon Descriptions

See pp. W94-99 for more commonly used weapons for American and other forces.

Pistols

Colt-Browning M-1908 (1908): This pocket pistol was almost identical to the M-1903 (see p. W94), but was chambered for a larger cartridge and thus held one less round in the magazine. Originally designed for the civilian market as the Model M, the pistol came into U.S. military service for issue to non-combatant personnel such as doctors, nurses, and intelligence agents. It was also issued to generals; even Patton wore one from 1945 in preference to his heavy revolvers. Some soldiers acquired it privately and carried it as a backup weapon. As it was easily concealable in a shoulder holster, the M-1908 was also popular with OSS and SOE agents.

Colt-Browning M-1908 Vest Pocket (1908): A tiny pocket pistol known as the Baby Browning (see p. HT108) or Colt Model N, this was chambered for a puny round. It was so small that it could be easily hidden in a coat pocket, hence its name. While not effective beyond a few yards, it was issued to some non-combatants and privately bought by others.

Colt .38 Super Auto (1929): This M-1911A1 variant (see pp. HT108, W94) chambered the powerful .38 Super Auto cartridge. The FBI and other U.S. and Mexican law enforcers found it superior when dealing with criminals wearing "bullet-proof" vests. So did many gangsters of the 1930s. Small numbers were also used by OSS and SOE agents.

Revolvers

Colt M-1873 Single Action Army (1873): This sidearm became famous as the "Peacemaker" of the Old West (see pp. HT110, OW86), and remained in widespread use with rural sheriffs and the Texas Rangers in the 1930s and '40s. Gen. Patton (pp. 63-64) sometimes wore an ivory-handled Peacemaker in a cowboy-style belt rig.

Colt Official Police (1927): A no-frills double-action police weapon, this was the official FBI service handgun from 1937, and also was issued by many other U.S. police agencies.

S&W Magnum (1935): Advertised at the time as "the most powerful handgun in the world," this weapon was issued by the FBI. Patton owned an ivory-handled example, and sometimes wore it along with his Colt, hence his nickname "Two-Gun Patton."

S&W Military & Police (1902): This basic revolver was popular on the home front with police and security agencies (see pp. C63, HT110). It was also a common aircrew sidearm, preferred over the Colt Model 1911 because it didn't eject hot casings into the aircraft interior.

Flare Pistols

M-8 (1936): This was a single-shot, break-open flare pistol used to fire pyrotechnic signals and illumination rounds. Signals of different types were available, including red, green, or yellow stars visible for about 7 seconds, or red parachute stars that were up in the air for 20-30 seconds. Parachute smoke rounds were also available, usually dispensing red smoke for 20-30 seconds. The M-8 was widely used by all services, as standard equipment for aircraft, ships, and some ground vehicles. Many vehicles had a fixed gun port to allow it to be fired from the enclosed cabin.

Shotguns

The U.S. military procured large numbers of shotguns. While intended for training aerial gunners to fire at moving targets, as well as for MPs to use on guard duty, some units and individuals preferred them for close combat. Only the following models were classified as standard for U.S. service; however, the Winchester M-1897 (see pp. HT111-112, W94) and both the Remington M-11 and Stevens M-720 (both licensed versions of the Browning Auto-5, see pp. HT112, W94), as well as several other patterns, were widely used as substitute standard.

Riot and trench guns were the only ones employed for combat; they had short barrels, perforated metal shrouds that protected the user from the hot barrel when reloading, and a bayonet mount. Special ammo pouches issued with the guns held 12 shells each; a GI typically wore four pouches on his webbing.

Ithaca M-37 (1941): A pump-action weapon that ejected spent shells downward rather than up and to the side, this was rare as a trench gun, but very common in the skeet version.

Stevens M-620A (1927): The most common trench gun.

Winchester M-12 (1918): Similar to the older M-1897, this weapon already had been used in WWI, and more were acquired during WWII. It could be broken down for storage and reassembled in about 30 seconds.

Rifles

Remington Model 8 (1906): This was one of the earliest self-loading rifles to see production, and another one of John Browning's inventions. Originally intended as a hunting weapon, the Model 8 (and the virtually identical Model 81 Woodsmaster of 1936) was a popular choice with U.S. police agencies (including the FBI and Texas Rangers) during the 1930s and '40s. Its fixed internal box magazine was loaded from 5-round stripper clips, and the Peace Officers Equipment Co. offered a number of "police only" magazine extensions for 10, 15, or 20 rounds.

The Model 8 was a takedown weapon that could be broken down into two halves for easy stowage (Holdout -4). It was available in a number of calibers, including .25 Remington (Dam 4d-1) and .30 Remington (Dam 5d).

Springfield M-1903A4 (1943): Actually made by Remington, this was a sniper version of the Springfield M-1903A3 service rifle (see pp. HT114, W95). It featured a 2.5× scope and specially selected action. The poor magnification of the scope and the standard ammunition it fired (match rounds weren't available) limited its effectiveness at longer distances.

Springfield M-1C (1944): There were several sniper weapons based on the basic M-1 Garand (pp. HT114, W95). The M-1C mounted a 2.5× scope and had a leather cheek rest on the stock. From early 1945, it came with a removable flash hider. The poor magnification of the scope and the standard ammunition it fired limited its effectiveness at longer ranges.

The M-1D was adopted in the fall of 1944 as a substitute standard, but was not issued until after the war. It had a different 2.5× scope and mount, but is identical in game terms.

Springfield M-2 (1940): This small-bore training rifle was developed cooperatively by the Ordnance Department and the National Rifle Association, and was used both in military marksmanship courses and by the rifle teams of schools and colleges. It was based on a converted Springfield M-1903 service rifle (see pp. HT114, W95) and used a detachable magazine. Its forerunners, the M-1922 (1922) and M-1922M1 (1927), were virtually identical.

Springfield T-20 (1944): Based on the M-1E3 prototypes, this weapon added a selective-fire capability and adjustable bipod to Garand's M-1 rifle (see pp. HT114, W95). A modified 20-round BAR magazine was used. Essentially, it predicted the postwar M-14 rifle (see p. HT114). As a result of successful tests in early 1945, the Ordnance Committee recommended procurement of 100,000 rifles in May 1945. Since the war was coming to an end, only some 100 were made in all. In an alternate-history WWII campaign, it would probably carry the M-1 Automatic Rifle designation.

Springfield M-1E5 (1944): This was a cut-down M-1 Garand fitted with a folding paratrooper stock and a ventilated barrel shroud. The muzzle blast was incredible; +1 to Vision rolls to locate the firer. It was never officially adopted. Only a couple of hundred test weapons were produced.

Springfield T-26 (1945): This was another modified M-1 Garand with a shorter stock and barrel. Often called the Tanker Garand (a name that originated much later), the original design was intended for jungle fighting. It had the same muzzle-flash problem as the M-1E5. Only a few hundred experimental models were made before the war ended.

Winchester M-1A1 Carbine (1942): The parachutist's version of the M-1 carbine (see pp. HT114, W95), this had a folding wire stock. With stock folded SS is 10, Acc 5, Rcl -2, ST 10, and Holdout -2.

Submachine Guns

Hyde-Inland M-2 (1943): This weapon was adopted in 1942 to replace the Thompson (see pp. HT115-116, W96). It was a conventional submachine gun with a wooden stock and pistol grip, and used the magazines (but not the drums) of the Tommy. The M-2 was to be manufactured by Marlin Firearms (German-born George Hyde being the designer and the Inland Division of General Motors the developer), but Marlin ran into problems getting production under way, and the M-3 (see p. W96) entered service before the M-2 got started. (Ironically, it had been designed by Hyde, as well.) Fewer than 500 M-2s were made, and it is unlikely that any saw combat.

Machine Guns

Colt-Browning M-2 Water-Cooled (1938): The standard U.S. anti-aircraft machine gun was based on the .50-caliber Browning action (same as that of the M-2HB, pp. HT119, W96, and W130) and fitted with a water-cooled barrel. Similar to the earlier M-1921 (1921) and M-1921A1 (1930), it was mainly employed on ships, but also on various ground mounts. It used either the standard 105-round belts or larger chests holding a 210-round belt. The water jacket held 10 quarts of water, which weighed 21 lbs. (included in weight). The 375-lb. M-2A1 anti-aircraft mount was a tripod designed to accept the M-2 that featured two small gunshields (PD 4, DR 20). Roll 1d; on a 1-4, the gunner is protected from any fire coming from the front and slightly above (such as from a strafing aircraft). It had a 360° traverse and +60° elevation.

Saginaw T-24 (1944): The U.S. military was very impressed by the German MG42 (see p. W97). So impressed, in fact, that it tried to build its own version in .30-06, the standard U.S. caliber. The T-24 was an almost exact copy. However, the engineers at Saginaw Steering Gear had made a small error in re-dimensioning the weapon for the .30-06, with the result that it wouldn't work (the Malf in the table assumes a working design; the prototypes had Malf 14). Only two prototypes had been built when this was discovered, and the whole program canceled. Had they been a bit more careful, the U.S. troops might have received a much better light machine gun than the Browning M-1919A6 (see p. W97).

Mortars

M-19 (1942): The M-19 mortar was based on the earlier M-2 (see pp. HT120, W97). For normal indirect fire, it was mounted on a bipod and base, and the bombs dropped down the barrel as usual. With the bipod removed and fitted with the smaller M-1 base plate, it could also be hand-aimed at much lower elevation angles, allowing direct fire. The small plate reduced the weight substantially (to 20.5 lbs.), and allowed the barrel to be aligned horizontally. The bomb was inserted and fired using a lever-trigger. In direct fire, it has SS20, Acc 1, 1/2D 150 (for Acc purposes only) and Max 350. This allowed the weapon to attack targets closer than 100 yards, which was not possible in indirect fire. Ammunition for the M-19 was the same as for the M-2; note that only the HE shell reached the given indirect range; the WP shell had Ind 1,650 and WPS 4, the Illumination round Ind 1,000 and WPS 3.7.

Comparatively few M-19 mortars were made, and most were used by airborne troops. They normally had a crew of five, two of which carried the disassembled weapon, and the others 12 shells each.

M-2 4.2-inch Chemical Mortar (1943): This is the 4.2" "Four Deuce" mentioned on p. W97. It was often mounted on sandbags and fired from halftracks or landing craft. A smoke (21-yard radius) and WP round were also available.

Light Antitank Weapons

M-9 "Bazooka" (1944): The M-9 was an improved version of the earlier M-1 and M-1A1 anti-tank grenade launchers (see pp. HT122, W98). Instead of the two batteries required by the old design, it used a magneto generator (essentially a huge trigger that the gunner squeezed with his entire hand) to provide enough current to trigger the rocket. The sights were also improved, and the tube broke down into two parts, vastly improving stowage (assembled, it was over 4.5' long). The rockets fired were the same ones, however. Aside from the HEAT rocket, there was a WP rocket (5d [6d], plus continuing burn damage per the M-15 WP grenade, p. W98).

M-18 (1945): This light recoilless rifle came into service late in the war, being used in Europe and the Pacific theaters. It could be fired from the shoulder, from the integral bipod and monopod (+1 Acc if used for bracing), or from the same tripod as used by the M-1917A1 MMG (+3 Acc, 53 lbs.). A 3× optical sight was integral.

Available ammunition included HEAT, HE (6d [6d], Max 4,900, WPS 5.3), and WP (5d [6d], plus continuing burn damage per the M-15 WP grenade, p. W98, Max 4,600, WPS 5.7). It was more accurate and had a much better range than the comparable rocket launchers. In combat, it required a two-man crew, a gunner and a loader.

Rifle Grenades

Rifle Grenade Projector M1 (1943): This was not a rifle grenade per se, but rather a rifle grenade tail assembly with fittings on the end. Any U.S. hand grenade could be attached to the end, which took about a minute. (Critical failure could set the grenade off in the soldier's lap!) When fired, the grenade was carried down-range, and detonated normally. GIs created many uses for these; see *Field Expedients*, p. 105.

Mines

M-1: This small vehicular mine (see p. W99) was the most common U.S. type; 24 were carried in racks on each side of the M-3A1 half-track, p. W109. Its trigger required a pressure of 250 lbs. to be set off.

M-2: A bouncing mine (see p. W99) for use against personnel, this required 20-40 lbs. to be set off, using a pressure trigger or a trip wire. The warhead was made up of a cut-down 60mm mortar shell.

M-3: An antipersonnel mine using a conventional blast, this also required 20-40 lbs. to be set off, using a pressure trigger or a trip wire.

M-5: A non-metallic vehicular mine (see p. W99) made of china or glass, this was waterproof and could be laid under water or in swampy ground. It required 250 lbs. to be set off.

VEHICLE DESIGN

The following section adds new weapon options and features to the vehicle-design system from ***GURPS WWII***.

The Atomic Bombs

While technically not a vehicle component, the atomic bomb was a heavy weapon that required a bomber for delivery, and thus falls into this category.

The Manhattan Project developed two basic designs for an atomic bomb. One would use uranium from Oak Ridge, Tenn., while the other would use plutonium from Hanford, Wash. Cost for each has been estimated at about $25 million. For more on nuclear weapons, see pp. HT29-30. Rules for radiation exposure can be found on pp. CII145-148.

The Gun Weapon

The uranium "gun weapon," nicknamed "Little Boy," used a charge of cordite gunpowder to fire a 55-lb. bullet of uranium down a half-ton, 6' barrel into three rings of uranium totaling 85 lbs. Wrapped around the rings was a 2.5-ton shield of tungsten steel, which reflected any neutrons back into the fissionable material. This design was considered "simple" and reliable, to the point that it was not tested before Little Boy was dropped on Hiroshima.

Little Boy was temperamental, though. If accidentally dropped into the ocean, water could leak into its core and possibly trigger a nuclear detonation. Jettisoning the bomb over land could cause the U235 bullet to collide with the target core and detonate the bomb, as well. Removal of the powder from the gun system, followed by a crash-landing of the aircraft, was the recommended method for avoiding a catastrophe if the delivery plane ran into trouble.

The Little Boy weapon was 10½' long and 29" in diameter (taking up 13 VSPs in a bomb bay) and weighed 9,700 lbs. It would deliver a 12.5-kiloton explosion (with an efficiency of only 1.5%). Concussion damage is 12d□25 million. At 250 yards from the impact site, the damage drops to 12d□6.25 million. At 500 yards, it drops to 12d□1.6 million, and at 750 yards it drops to 12d□390,000. At 1,000 yards, damage has dwindled to only 12d□97,000. One mile from the impact point, damage is 12d□6,000. Two miles from the impact point, the concussion damage is 4d.

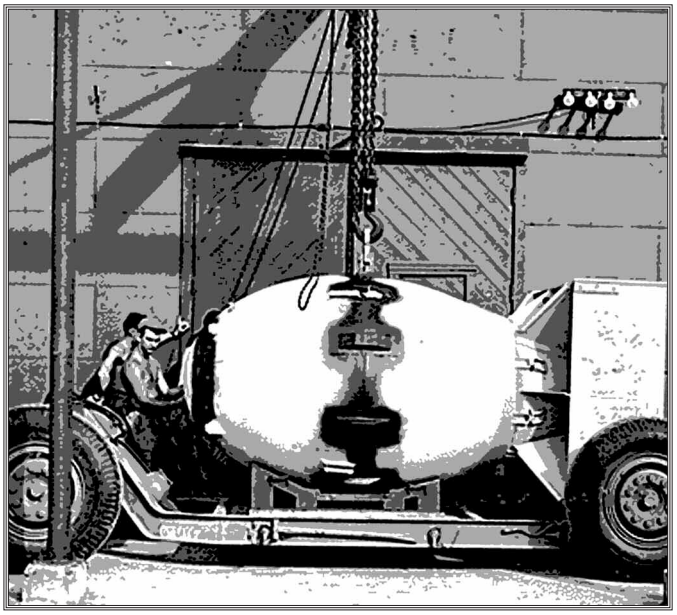
The Implosion Bomb

The plutonium-implosion bomb, nicknamed "Fat Man," was much more complex than the uranium bomb. It used a sphere of plutonium inside a concentric "lens" of conventional explosives which, upon detonation, forced the 14 lbs. of plutonium and its initiator into itself, thus reaching critical mass. At the height of experimentation, scientists were using over a ton of plastic explosives a day in their efforts to perfect the explosive lenses, which were poured into molds as a molten slurry and then carefully cooled to reduce imperfections. Large air bubbles in the castings could unbalance the implosion and ruin the bomb.

A 500-lb. device called the X-unit connected the electrical supply (good for about 2 hours) to the 32 wires attached to the lens detonator, setting off all the charges at the same instant. Any loss in timing would turn the 5,000 lbs. of composition-B into a very radioactive conventional bomb (6d□15,000), rather than an atomic weapon.

If the Fat Man had to be jettisoned, it could survive water or land recovery since there was no "bullet" to worry about. By 1950, some 100 Fat Man-type bombs were produced. The implosion bomb was 10' 8" long and 5' in diameter (taking up 54 VSPs in a bomb bay) and weighed just over 10,800 lbs. The Fat Man exploded with a force equivalent to 22 kilotons (an efficiency of 17%).

Concussion damage is 12d□42 million. At 250 yards from the impact site, the damage drops to 12d□10.5 million. At 500 yards, it drops to12d□2.7 million, and at 750 yards it drops to 12d□655,000. At 1,000 yards, damage has dwindled to only 12d□163,000. One mile form the impact point, damage is 12d□10,000. Two miles from the impact point, the concussion damage is 6d.



The Details

Both bombs had a DR 40 metal casing to protect the weapons against anti-aircraft fire. In addition, the casing had a lead lining (PF5), which served to protect the people and the electrical devices that worked around the bomb.

Each bomb was equipped with four 1-mile radar altimeters, called Archies, and an electrical firing device. The Archies could be set to initiate the explosion at any altitude selected from 100 yards to 1,700 yards. In case the Archies failed, old-fashioned barometric altimeters and impact fuses also were mounted in the nose.

Both bombs were not fully armed until the strike aircraft was in the air. This sequence took about 15 minutes in the unheated and unpressurized bomb bay of the B-29.

New Weapons

105mm Short Howitzer: This is the 105mm M-2, M-2A1, and M-3, staples of U.S. artillery, or the 105mm M-4, used as close support in tank units. Usually, a company command tank would mount the 105mm M-4 instead of a 75mm (p. 32). Other than the usual HE rounds, the 105mm Short could fire an early, spin-degraded HEAT round doing only 11d (10) damage. It also had a WP round that did 3d+1 [4d] (with the fragments burning per the M-15 WP grenade on p. W98), and created a smoke effect in a 40-yard radius.

K-Gun Depth-Charge Projector: The K-gun launches a medium-sized Mk 6 depth charge (doing 6d×480 but otherwise like the Mk 7 on p. W132) 50-120 yards; varying the charge determines range. If a depth-charge rack is next to the gun, reloading takes 1 minute; otherwise, it takes 5. (Buy racks as hardpoints, p. W138.) Ships often mounted 4-6 K-guns to each side, linking them to be fired at once from the bridge. Combined with normal racks dropping from the fantail, a dense pattern of charges could be laid. A K-gun requires 5 square feet of deck space, in addition to its cost and weight.

A heavier version, the Squid, fired a pattern of three depth charges directly ahead of the ship to a distance of 300 yards. This produced a triangular pattern roughly 120' on a side.

No to-hit roll is necessary, simply roll against Gunner (Depth Charge) skill to see if the devices malfunction. Proper deployment is determined by Tactics and Shiphandling rolls.

Hedgehog: This weapon fired antisubmarine bombs 200 yards ahead of a ship. The projectiles were launched so that all hit the water at once in a circular pattern 130' in diameter. The bombs only exploded upon hitting a sub's hull, to avoid ruining the sonar contact and as sure sign of a hit, doing 6d×60 explosive damage (note that DR is *not* squared against contact explosions!). The projectiles sink at 8 yards per turn. Reloading takes 30 seconds per bomb; up to four loaders can work at once.

The device had a base chance of 4 or less to hit any sub within its pattern with four launchers fired. Add a +1 to hit for each extra four launchers, and add one hit for every 3 points by which the attack roll is made. The historical 24 launchers gives a 9 or less to hit. A version called Mousetrap, which had some minor difference in design, had only four or eight launchers.

Listed cost and weight is for the fire director and first four launchers. Additional launchers are purchased in units of four. Hedgehogs require 5 square feet of deck space per launcher.

Weapon Module Table

Weapon	*VSPs*	*Weight*	*Cost*	*Power*
105mm Short Howitzer	4.4	1,100	$3.3K	–
7 rounds of HE or WP	1	[230]	[$100]	–
7 rounds of HEAT	1	[230]	[$150]	–
K-gun	(5 sf)	200	$100	–
Squid	(20 sf)	800	$500	–
K-Gun Depth Charge	1.2	[300]	[$600]	–
Hedgehog	(5 sf)	2,500	$1,000	0.01
+4 Launchers	(5 sf)	+2,000	+$100	–
3 Hedgehog Bombs	1	[225]	[$450]	–

New Ammunition

This ammo was used in addition to that on pp. W134-135. All other statistics are the same as in the corebook.

37mm Medium Tank Gun: This gun could fire a canister round that Marines called "buckshot." The round contained 122 8.5mm lead balls, much like a giant shotgun shell. The balls began spreading as soon as they left the muzzle (which was the point of dispersion, or POD, in ***GURPS High-Tech*** terms). The balls attack a cone-shaped *area* that is 1 yard wide at the muzzle and expands its width by 1 yard for every 10 yards further from the gun (2 yards wide at 10 yards away, 6 yards wide at 50 yards away, etc.) out to 150 yards from the muzzle.

Anything in this cone and not behind cover is hit with a base skill of 11, minus the range modifier from the gun and plus any size modifiers. On any success by as much as 4, one attack hits per point by which the attack roll was made (minimum 1). On a success by 5 or more, 3d attacks hit. Each attack does 5d damage. The shotgun effect of this weapon, particularly when aimed at closely packed ranks of charging Japanese, very much impressed the Americans that used it.

75mm Medium Tank Gun: The 75mm could fire an early, spin-destabilized HEAT round doing only 8d (10) and a smoke shell with a 21-yard radius. A white-phosphorus smoke shell did 2d-1 [4d] HE damage plus the above smoke effect, with the fragments burning as per the M-15 WP grenade on p. W98. Tank units rarely bothered with the HEAT rounds, but artillery and airborne units sometimes used them.

75mm Long Tank Gun: The 76mm HVAP, or High-Velocity Armor Piercing shell, debuted in June 1944, but was in very short supply, and often only issued to tank destroyers. It does 6d×12 (2). Historically, no more than 5% of a tank's loadout should be HVAP. Cost is at least triple normal.

88mm Medium Tank Gun: The 90mm also fired the HVAP (see above), doing 6d×15 (2).

76.2mm Medium Dual Purpose Gun: The 3" gun fired starshells eliminating darkness penalties in a 450-yard radius for 1 minute, APEX doing 6d×8 (2) plus 3d [6d], and smoke shells with a 22-yard radius of effect.

Weapon Type	*Malf*	*Type*	*Damage*	*SS*	*Acc*	*1/2D*	*Max*	*Ind.*	*RoF*	*Ldrs*
105mm Short Howitzer	Crit.	HE	5d×8 [10d]	25	13	900	5,000	12,200	1/5	1

New Components

Amphibious Track: This tracked-chassis option replaces the usual steel links in its motive tracks with a chain track fitted with grousers. Usually made of rubber, grousers were shaped like a paddle. They folded fairly flat in ground travel but stuck up and improved speed in the water. They usually had much lower DR than equivalent normal tracks, and for each mile traveled on land, roll vs. vehicle HT. On a missed roll, one random track takes 1d of damage ignoring DR. Vehicles with amphibious tracks multiply calculated wSpeed by 1.8 and divide gSpeed by the same value.

Applique Armor: Disheartened by the lack of protection provided by the Sherman, U.S. tankers began adding spare parts, sandbags, logs, and chicken wire to their tanks in late 1944. To model this improvised armor, choose the level of extra protection piled on each vehicle facing, from a minimum DR 10 to maximum DR 30. This is purchased like standard armor, but at twice normal weight and 10% of normal cost. It has all the restrictions of standoff armor, p. W140, but only DR 15 or higher will halve HEAT divisors. Like standoff armor, it often fell off during travel or after a hit from an explosive attack. This was more trouble than it was worth; it added more to the tanker's morale than anything else.

Hedgerow Cutter: Invented by Sgt. Curtis Culin of the 2nd Armored Division, this was built from scrap iron taken from German beach obstacles. Having had experience in busting hedgerows in civilian life, Culin created the device on the spot to help the Allies get through the French bocage. Tanks equipped with the cutter were called "Rhinos."

The short cutting blade adds +1d damage to any collision, and allows the vehicle to dig into the earthen embankment, rather than just roll over it. The cutter will rip a hole in the hedgerow as wide as the vehicle. It does not block weapons fire. It weighs 0.5 lbs. □ body surface area and costs $0.05 per lb.

Navigation Instruments, Precision: This navigation table adds a further +1 to Navigation, for a total of +4 to skill. The module requires a crew station, located next to its map table, chartbooks, and other instruments. Naval vessels and aircraft often use this for long-range navigation.

Tire Inflation System: This system fits a wheeled vehicle with integral pumps, hoses, and other equipment necessary to inflate (or deflate) its tires upon driver command. Using the system requires a combat action. Continuous pressure fed into the tires can keep them from going flat if they are punctured, until they reach 0 hit points, at which point they are too damaged to hold air. Until then, no control rolls are necessary when the tires take damage. The tires can be partially deflated from inside the vehicle (takes 3 seconds), giving the driver a +1 bonus to offset any off-road penalties. Install one module per 250 lbs. (round up) of wheeled or all-wheel-drive transmission.

Component Modules Table

Module Type	*VSPs*	*Weight*	*Cost*	*Power*
Electric Motor*	*	8	$8	1 kW
Bilge	1	280†	–	–
Computer, Prototype	5	1,000	$50K	10 kW
Precision Nav. Instruments	0.1	20	$20	neg.
Tire Inflation System	0.2	25	$20	1 kW
Module Modifier	***VSPs***	***Weight***	***Cost***	***Power***
Limited Access	□2	–	–	–
Full Access	□3	–	–	–

* Weight, cost, and power are per kW of output. Motors take up 1 VSP per 250 lbs., but often add access space.

† Only when filled with seawater.

Previous Components

Iron Cross also introduced components to ***WWII*** vehicle design, some of which will be useful for American concepts. A brief synopsis of those includes:

Electric Motors: Like engines (see p. W128), these provide motive power, but use no fuel; batteries or an engine provide their power. Either 3,600 kWs of battery power per hour or 1 kW of engine output provides 1 kW of motor output (a simplification for game purposes). ***WWII*** vehicles *cannot* use batteries for motive power without motors. Diesel-engined subs use electric motors when underwater. These motors can use the engine's transmission, up to its top kW rating, when the engine isn't running. Transmissions used *solely* for electric motors have *half* normal weight, volume, and cost. Any engine dedicated to run an electric motor cuts fuel usage by 25%.

Bilge: Ships take on water, especially in combat. Bilges store it out of harm's way, so that it is not flooding engines, spoiling powder in ammo rooms, etc., while the bilge pumps work to evacuate it. Each VSP holds 280 lbs. of water. A ship never needs more than 7.15 VSPs of bilge per ton of difference between *empty* weight and flotation rating. Most have far less bilge, but subs often have a large capacity. Bilge space also can store fuel, at 33 gallons per VSP. *All* taken-on water spoils three tons of this fuel per ton of water. This fuel has a +3 fire rating (p. W144) and makes that bilge space worthless for its usual function. Bilges do *not* change a ship's flotation rating; a ship still sinks if loaded weight exceeds flotation rating.

Computer: A cinematic vehicle could employ this vacuum-tubed prototype. It has DX 9, IQ 6, and 2 points in a single skill such as Piloting, Gunner, etc. It needs radar, sound detectors, etc. to interact with its surroundings. A realistic computer was too fragile for vehicular use, but would have similar statistics. They mostly served as *immense* calculating and recordkeeping aids. In the 1930s, the Social Security program was among the pioneers in practical computer usage.

Limited Access: The powertrain rules already provide more access space for long-occupancy vessels, but items on p. W143 also require access space if they are to be repaired from *inside* the vehicle. This rule can be ignored for smaller items, which can be moved to a common work space. Larger equipment can take this volume modifier to allow minor repairs at -2. These take extra time, because the gear is hard to reach.

Full Access: As above, but with no penalties.

Minimal Crew Space: This isn't a component per se, just a design reminder. Some cramped designs, such as WWII subs, don't provide a bunk – and thus, work space – for every member of the crew. These vehicles must install at least 4 VSPs of standing room for everyone not provided either a bunk or work station. Of course, this space can contribute toward the mandatory work-space needs that loaders have (see p. W141).

THE MOTOR POOL

The following pages describe a few of the U.S. vehicles commonly encountered in just about any Allied forces. Additional examples can be found in ***GURPS WWII***.

Vehicles Key

The military vehicles in this section are presented in the following format:

Descriptive Text

Each vehicle writeup begins with general descriptive text, which usually includes some of the finer details of using the vehicle, such as fuel consumption, turret rotation speeds, etc.

Subassemblies

This lists the chassis and each subassembly, with any options applied to each, followed by the size modifier to see or target that particular structure. Note that the remainder of the writeup will use this structure name or an abbreviation in brackets to indicate the placement of other components. For instance, [OM 1] means the item in question is housed in the subassembly designated Open Mount 1 in this passage. If no placement is described, the item is assumed to be in the vehicle's body.

Powertrain

This describes the vehicle's engines, transmission, and electric motors (if any), fuel tankage, and batteries carried either as motive power sources or simply to turn over the engine and to power accessories such as radios.

Occupancy (Occ)

This describes where and how the vehicle seats its occupants. (Again, unless otherwise designated, all crew stations are assumed to be in the body.) A "CS" is a crew station while a "PS" is a passenger station. An "SR" would indicate standing room used as makeshift passenger space. An "X" prefix means the station is exposed, while an "M"prefix means the station is a motorcycle seat. Long-term accommodations such as bunks will be covered in the descriptive text. Note that many vehicles in this chapter assign a crew station to their gun loaders, even though they don't have to (see p. W141), to give them a place to sit when not actually performing their job.

Cargo

This heading includes *all* empty space within the vehicle except bilges and access space, but it almost always will be design "waste" space rather than a true cargo hold of some sort. Unless specific cargo space is assigned under *Equipment* (see below), assume that the largest single item that this space could hold would be just 10% as big as it is. For instance, a vehicle with 27 VSPs of empty space not truly dedicated to a cargo hold could not fit another crew station, because its single largest "nook" would be only 2.7 VSPs in size. The remainder of the space is scattered about the vehicle in other "crannies" of similar size. Unless the vehicle is specifically designed to haul cargo, the GM should feel free to place these restrictions on any empty space.

Armor

This lists the armor values on each face of each vehicular structure as PD value followed by DR value. (Note that motive subassemblies will always have uniform values on all facings unless the GM is using design rules beyond the scope of this setting; that value is still repeated for each facing simply as a convenience.) A"W" following the armor value denotes that it is wooden. An "S"denotes that it includes DR 15 of standoff armor (see pp. W140-141). A"C" indicates cloth armor. Any special notes are below the armor values.

Weaponry

This lists each weapon (or set of identical weapons), its placement, and its ammunition stores. Any special notes are below the listings. See pp. W133-135 (and additionally pp. W:IC66-68) for weapon statistics.

Equipment

This lists each structure with general equipment installed, followed by the equipment within it. See pp. W136-140 and pp. 75-76 for descriptions of general equipment.

Statistics

Size gives the length, width, and height of the vehicle. *Payload* is the weight of a standard load of fuel, personnel, ammunition, and cargo. *Lwt.* is loaded weight. *Volume* is the amount of space the vehicle would take up if stored within another (presumably larger) vehicle. *Maint.* or *MH* describes either the maintenance interval in hours (p. W144) or the number of men required to keep up maintenance working eight-hour shifts on a long-occupancy vehicle. *Cost* is the vehicle cost, rounded. (Note that a "retail" price might be *much* higher; this figure is "cost of production." In addition, conversion rates were highly subjective during the war, so this should not be mistaken for a historical reference. It is of more use for comparing the values of various pieces of equipment.)

HT measures how robust the vehicle is; see p. W144. *HPs* measures the hit points of each structure; see p. W156.

gSpeed, etc. provide the vehicle's performance characteristics in each of its routine modes of travel; see pp. W145-149. Special characteristics for each mode are described under the general statistics line.

Design Notes

To facilitate usage of these vehicles as examples for the ***GURPS WWII*** design process, these notes indicate where components were purchased and then modified to historical values, or where any particularly notable "fudging" of calculated data to historical values had to take place.

Variants

While the description covers the general vehicle type, the statistics are for one particular variant. This section describes some or all of the other subtypes of the vehicle, with appropriate supporting statistics if the variant is much more complex than swapping one component for another.

Medium Tank M-3 Stuart

The M-3 – called the Stuart in British service – was a sturdy and reliable mount for Allied tankers early in the war. The British in particular appreciated its ease of use in comparison to their own armor, nicknaming it the "Honey."

The M-3 first saw action in North Africa, where the limitations of the 37mm main gun clearly exhibited themselves, and the Pacific, where the lack of well-armored Japanese tanks allowed the M-3 to remain effective throughout the war. Large numbers of Stuarts were used by the British, with additional numbers going to Russia and the Free French.

By the end of 1943, the M-3 and M-3A1 were declared obsolete, and the M-3A3 was relegated to secondary duties.

The M-3 has a crew of four. The commander sits in the turret and mans the AA machine gun. Also in the turret is the main gunner, who loads his weapon and fires the coaxial MG. The driver sits in the body. Next to him is the radio operator, who fires the hull MGs.

The gunner manually traverses the turret at 2º per second. The M-3 uses 9.2 gallons of gas per hour at routine usage. Fuel and ammo cost $330.

M-3 (Stuart I)

Subassemblies: Small Tank chassis +3, full-rotation Large Weapon turret [Body:T] +2, fixed Small Weapon cupola [Cup:T] +0; full-rotation Mini Weapon open mount [Tur:T] +0, tracks +3.

Powertrain: 186-kW HP gas engine with 186-kW tracked drivetrain and 56 gallons of aviation gasoline in standard tanks; 8,000-kWs batteries.

Occ: 2 CS Bod; 1 CS Bod/Tur; 1 CS Bod/Tur/Cup **Cargo:** 0

Armor	F	RL	B	T	U
Body:	4/150	4/100	4/100	4/40	4/45
Tracks:	4/35	4/35	4/35	4/35	4/35
Turret:	4/125	4/100	4/100	4/40	–
Cupola:	4/100	4/100	4/100	4/40	–

Weaponry

37mm Medium Tank Gun/M-5 [Tur:F] (108 rounds).*
Ground Light MG/M-1919A4 [OM:F] (500 rounds).
Ground Light MG/M-1919A4 [Tur:F] (2,000 rounds).*
3 Ground Light MGs/M-1919A4 [Body:F] (4,250 rounds).†
* Linked.
† All three linked.

Equipment

Body: Fire extinguisher, medium radio receiver and transmitter. *Turret*: Partial stabilization for turret weapons.

Statistics

Size: 15' 7' 8' *Payload:* 0.9 tons *Lwt.:* 14.2 tons
Volume: 61 *Maint.:* 56 hours *Price:* $12,800

HT: 12. HPs: 1,000 Body, 400 for each Track, 120 Turret, 45 Cupola, 30 Open Mount.

gSpeed: 36 *gAccel:* 3 *gDecel*: 20 *gMR:* 0.25 *gSR:* 5
Ground Pressure Low. 2/3 Off-Road Speed.

Design Notes

The design purchased 57 gallons of fuel tanks, 90 TG rounds and 6,500 rounds of MG ammo. Historical values have been used, instead. This is a very cramped design, using up most of the 4 VSPs of access space normally inherent in the four crew stations (see p. W141). Even at that, it assumes that the commander has at least his head stuck in the cupola atop the turret when the tank is packed full of all of that MG ammo . . .

One of the hull machine guns is in a conventional ball mount just below the radio operator's visor/hatch. The other two are in side sponsons in the upper corners of the tank's front profile. The sponson MGs sometimes were left out of M-3s in the field, to relieve real-life overcrowding.

Variants

Engine shortages required that some M-3s be fitted with diesel engines. The British called this the Stuart II. About 5,800 of the original M3s (Stuart I and II) entered service for about a year after the model's mid-1941 debut.

By June 1942, battle experience led to a M-3A1 (Stuart III) upgrade. The sponson MGs rarely remained in the M-3A1. Main-gun ammo was increased to 116 rounds. Especially in North Africa, many had two 25-gallon jettisonable fuel tanks mounted in back. A new turret omitted the cupola but added powered traverse, at 24º per second. Losing the cupola makes the M-3A1 *really* crowded; in fact, it carries a bit more gear than the design technically holds. It was real crowded in real life, too, such that the driver and radio operator no longer could wriggle through the empty gunner and commander stations to exit via the turret, as in the M-3 and most period tanks. The GM should enforce this to offset the "free" space inside. Some 4,600 M-3A1s were built, with a few hundred still fitting diesel engines. The Marines used those diesels in U.S. service.

The M-3 and M-3A1 often carried lightly armored 5-VSP boxes on the rear deck to stow crew gear and supplies.

The M-3A3 (Stuart V) of December 1942 extended the side sponsons to essentially redesign the tank on a Medium chassis in game terms. The radio gear was relocated to a bulge in the rear of the turret. Fuel tankage was increased to 102 gallons and ammo stowage to 174 TG rounds. Loaded weight increased by 2 tons. Some 3,400 were built.

From March 1942, the M-5 and M-5A1 (both called Stuart VI) used a completely redesigned hull (also Medium in game terms) and twin Cadillac powerplants to replace the Continental engines that were still being diverted to aviation needs. Hull DR increased to 220 frontal and 100 right and left; turret DR became 160 frontal. Fuel tankage was 89 gallons and ammo capacity 147 TG rounds and 6,500 MG rounds. Weight was 16.5 tons. Some 6,800 were built.

The M-8 HMC was an M-5A1 with an open-topped turret with frontal DR 120 and DR 80 elsewhere. It mounted a 75mm Short TG (howitzer) with 46 rounds. All LMGs were removed but a M-2HB HMG with 400 rounds was added. Loaded weight was 18 tons. About 1,800 were built.

Common M-3 variants included a command tank with fixed "turret" and flamethrower tanks. The British removed Stuart turrets and used them as troop carriers or recon vehicles.

M-10 Gun Motor Carriage Wolverine

The U.S. Army began the war with a novel doctrine of not fighting tanks with tanks. American planners decided that tanks would be dedicated to exploiting breaches in the enemy line by rapidly moving through the opposition's rear to shoot up his supplies and artillery. This planning extended to the point that the iconic M-4 Sherman (see p. W102) was designed primarily to move fast and rapidly fire a lot of high-explosive shells – not to face enemy tanks on even terms.

In the meantime, U.S. forces would destroy enemy tanks with specially built tank destroyers. These would mount large, high-velocity guns, but in other ways skimp on the very expensive features that a true tank needed.

The first U.S. tank destroyers to see action were half-tracks (see p. W109) with antitank guns mounted in their beds. These simply cobbled together existing materiel to crudely meet the tank-destroyer concept. Their survival depended on getting off the first shot – which their green crews seldom did – and even then the halftracked tank destroyers never mounted top-quality antitank guns. German armor usually ran roughshod over these thin-skinned vehicles.

The M-10 also cannibalized existing designs – placing a modified antiaircraft cannon in a new open-topped turret atop a modified M-4A2 chassis – but it came far closer to meeting the vision of a purpose-built tank destroyer. As the U.S. entry into the European war against Hitler loomed, it entered production in September 1942, and nearly 5,000 were built in the following four months. By the end of that incredibly rapid production run, the first units were being blooded in North Africa.

There, and in Europe afterward, the M-10 fared better than its halftracked counterparts, primarily because it really did wield a much more powerful gun than most 1942 panzers, whereas the halftracks did not. On the other hand, it still exhibited the concept's many weaknesses. Though better armored than the halftracks, it still could not ignore most Axis tank guns. In addition, the open turret left the crew vulnerable to air attack, infantry assault, and artillery rounds scoring the rare bull's-eye.

The M-10s were organized in tank-destroyer battalions, with some 106 of them formed by early 1943. This proved to be a mistake (see p. W43), albeit one that provides an excellent opportunity for some particularly hard-luck roleplaying. As German armor improved, the M-10's thin skin continued to be an often fatal liability, while its gun lost its performance edge. In the end, U.S. troops came to use the vehicle more often as an assault gun against infantry than as a tank destroyer, with the much faster (and even more lightly armored) M-18 Hellcat and the more heavily armed M-36 Jackson taking over the tank-destroyer role. (These also failed to do the job nearly as well as did the improved M-4 Shermans that were taking the field at the same time.)

The M-10 carries a crew of five. The commander sits in the turret and mans the top antiaircraft machine gun. Also in the turret are the main gunner and two loaders; one of the loaders also acts as the radio operator. The driver sits in the body. The turret manually traverses at 2º per second, operated by the gunner and one loader. The M-10 uses 12.6 gallons of diesel per hour at routine usage. A full load of fuel and ammo costs $1,100.

M-10 Wolverine (Achilles)

Subassemblies: Very Large Tank chassis w/ advanced slope +4, full-rotation Small TD turret with mild slope [Body:T] +3, full-rotation Mini Weapon open mount [Tur:T] +0.

Powertrain: Twin 140-kW HP diesel engines with 280-kW tracked drivetrain and 198 gallons of diesel in standard tanks; 16,000-kWs battery.

Occ: 1 CS Body, 1 Tur, 3 Both **Cargo:** 0.7 Body, 8.6 Tur

Armor	F	RL	B	T	U
Body:	5/255	5/85	5/85	4/55	4/50
Tracks:	4/45	4/45	4/45	4/45	4/45
Turret:	5/275	4/100	4/100	0/0	–

Weaponry

75mm Long Tank Gun/3" M-7 [Tur:F] (54 rounds).
Very Long Ground Heavy MG/M-2 [OM:F] (300 rounds).

Equipment

Body: Fire extinguisher, medium radio receiver and transmitter.

Statistics

Size: 23'×10'×9' *Payload:* 1.4 tons *Lwt.:* 32.6 tons
Volume: 188 *Maint.:* 43 hours *Price:* $22,100

HT: 12. HPs: 2,300 Body, 285 Turret, 800 each Track, 30 OM.

gSpeed: 29 *gAccel:* 2 *gDecel*: 20 *gMR:* 0.25 *gSR:* 6
Ground Pressure Low. 2/3 Off-Road Speed.

Design Notes

The design purchased 60 rounds of main-gun ammo. The historical value has been used, instead. The M-10 did indeed use the chassis of the M-4 Sherman, but it fitted on top of it a much wider, more sloped upper hull. To model this, the chassis has been made one size larger than the Sherman's, but 5 DR has been removed from the treads to give them the same armor value as on the original tank. Also, the 60º slope that advanced slope gives the front face has been split between the front and rear faces at 30º each. This is a perfectly legal design option.

As for the turret, its sides present a very smooth 15º angle, which would provide great benefit in real life, but is too little slope for the design system to emulate. To model this regardless, the design increases the DR 80 that their armor thickness would provide to DR 100. The M-10 certainly can use the help, and the design was coming in some 9% underweight, anyway. The turret rear also receives the same DR bonus, because it generally provides a sloped target, though not consistently.

The machine gun on the turret is mounted to the rear; in order to fire forward, the operator must exit the turret.

Variants

The M-10A1 was based on the M-4A3 tank chassis; in U.S. service it was only used for training. A number had their turrets removed and were converted to the M-35 prime mover.

The British designation for the M-10 was Achilles. In late 1944, the robust British 17-pounder (75mm Very Long Tank Gun) was fitted, creating the IC version.

M-7 HMC Priest

When the war started in Europe, the U.S. Army had no self-propelled artillery except for field guns mounted in the cargo beds of trucks or halftracks; these were a generally unsatisfactory arrangement for lack of space to properly handle ammunition or carry enough of it. The decision was made to place the current 105mm howitzer in an open-topped superstructure on the top of a modified M-3 Lee medium tank chassis (later iterations were based off the M-4 Sherman).

A pulpit-like structure with an antiaircraft machine gun was placed to the right front of the superstructure; this unusual design led the British to call it the Priest. The M-7 fired its first shots in anger at El Alamein in 1942, but eventually was replaced in British service by the similar Canadian-built Sextons, mounting the British 25-pounder field gun. (The Priest had been the only 105mm piece in British front-line service, and they had found it very bothersome to add its ammunition to their chain of logistics.)

In U.S. service, the M-7 soldiered throughout the war, gradually being replaced by the smaller M-37 (based on the M-24 Chaffee chassis) starting in 1945. Some 2,000 M-7s were built. A U.S. armored division contained 54 of the self-propelled guns, with a battery of six operating together under a single fire-control section (p. 31). The armored trailer normally towed behind the Priest could carry another 42 rounds for the main gun if necessary, but as often as not carried the crew's belongings. Two M-3 halftracks (see p. W109) with trailers carried the ammunition for the battery of guns, but heavy firing could quickly outstrip the unit's own hauling capacity. M-7 battalions fired in excess of 5,000 rounds a day during the Battle of the Bulge. This forced artillery officers to scrape together all their vehicles, and even commandeer abandoned trucks, to haul the extra ammunition.

The Priest had an open top for its crew of five. The commander was stationed in the superstructure, along with the gun crew (gunner and two loaders), while the driver sat in the body. One of the loaders fired the M-2HB when required. No armor protected the top of the vehicle, but a canvas cover could be erected to keep out the weather.

To the crew, the M-7 was not a vehicle, per se, but an artillery piece. It was referred to as a gun, or "tube" first, and a vehicle second. Three SMGs were issued with the vehicle, for use in self-defense, but these were often traded under the table to nearby units for amenities such as a tent and heater, or a portable shower unit.

The M-7 was sometimes brought up to the front lines and used to reduce enemy works by direct fire; it was also occasionally pressed into service as an ad-hoc antitank gun. Attempts to ape the German practice of using their SP guns as AFVs failed miserably; its high silhouette combined with light armor made it an easy target in these roles. If hit, the large amount of ammunition stored on board the M-7 invariably resulted in its quick demise. Commanders had to learn the hard way that the Priest was a better artillery piece than it was an antitank or assault gun.

The main gun traversed 30º to the left, but only 15º to the right. The vehicle burned 12.6 gallons of fuel per hour at routine usage. Fuel and ammo costs $1,050.

M-7 (Priest)

Subassemblies: Large Tank chassis with mild slope +4, Medium TD superstructure [Body:T] +3, full-rotation Mini Weapon open mount [Sup:T] +0, two tracks +3.

Powertrain: 280-kW standard gas engine with 280-kW tracked transmission and 179-gallon standard fuel tank; 16,000-kWs battery.

Occ: 1 CS Body, 4 CS Both **Cargo:** 15 Body, 22.8 Sup

Armor	F	RL	B	T	U
Body:	5/300	4/150	4/150	4/50	4/50
Sup:	4/45	4/45	4/45	0/0	–
Tracks:	4/45	4/45	4/45	4/45	4/45

Weaponry

105mm Short Howitzer/105mm M-2A1 [Sup:F] (69 rounds).
Very Long Ground HMG/M-2HB [OM:F] (300 rounds).

Equipment

Body: Fire extinguisher, medium radio receiver and transmitter. *Open Mount*: Universal mount.

Statistics

Size: 20'×9'×8' *Payload:* 2.2 tons *Lwt.:* 25.3 tons
Volume: 163 *Maint.:* 44 hours *Price:* $21K

HT: 12. HPs: 1,800 Body, 360 Sup, 600 each Track, 30 OM.

gSpeed: 29 *gAccel:* 3 *gDecel*: 20 *gMR:* 0.25 *gSR:* 6
Ground Pressure Low. 2/3 Off-Road Speed.

Design Notes

The 105mm ammo allotment and gSpeed have been reduced by 1 and 4 respectively, in line with historical values.

Variants

The Sherman-based M-7B1 had nearly identical statistics.

The Marines on Okinawa and Canadians in Europe converted M-7s into APCs for up to 13 riflemen by removing the gun and ammo bins then welding DR 45 steel plate atop the superstructure. The Canadians called these Kangaroos.

Grumman F4F Wildcat

The original F4F concept offered the U.S. Navy a biplane fighter, but that lost out to the single-wing Brewster Buffalo. Grumman completely redesigned the F4F, which then entered production. It soon proved itself considerably superior to the Buffalo, and formed the backbone of U.S. naval aviation during the desperate carrier battles against the Japanese in 1942.

While not as maneuverable as its main foe, the Zero, the stubby and rugged Wildcat could take more damage while dishing out comparable firepower. Its six .50-caliber machine guns could rip a Zero out of the sky with a single burst, as Lt. John S. "Jimmy" Thach discovered. From the Battle of Midway on, his "Thach Weave" called for two scissoring Wildcats to catch the more agile Zeros in their collective sights, scoring more kills than the fragile Japanese fighter.

Early models lacked folding wings to optimize stowage on carriers. Together with operational doctrine, this limited fleet carriers to about 20 Wildcats each. These planes were primitive in other ways, too; they possessed an annoying hand-cranked landing gear, which required taking the stick with the left hand while working it. They also lacked night-vision interior lighting. As displeased as Navy and Marine pilots were with this model, some preferred it to the more sluggish later models. Regardless of what they thought of the F4F in the air, it was a relatively easy plane to land on a pitching carrier deck (effective +1 to Piloting rolls for this purpose).

After being replaced on the fleet carriers in mid-war, primarily by the F6F Hellcat, Wildcats soldiered on with escort carriers in all theaters. They performed so admirably from these tiny flight decks that General Motors' Eastern Aircraft would take over production and continue making Wildcats until the end of the war. Overall, nearly 7,900 Wildcats were built, the vast majority by GM rather than Grumman.

Eighty Wildcats were ordered by the French, but not delivered by the fall of France; this order was taken over by the British, who called the planes Martlets. In December 1940, two Royal Navy Martlets became the first U.S.-built planes to shoot down a Luftwaffe plane.

The Wildcat burns 45 gallons of fuel per hour at routine usage. Fuel and ammo cost $100.

F4F-4 Wildcat

Subassemblies: Heavy Fighter chassis with good streamlining +3, folding Medium Fighter Wings with STOL option +2, three retractable wheels +0.

Powertrain: 895-kW aerial turbocharged HP gas engine with 895-kW prop and 144-gallon self-sealing tanks.

Occ: 1 CS **Cargo:** 5.5 Body

Armor	F	RL	B	T	U
Body:	2/4	2/4	2/4	2/4	2/4
Wings:	2/4	2/4	2/4	2/4	2/4
Wheels:	2/4	2/4	2/4	2/4	2/4
Cockpit:	0/0	0/+10	0/+20	0/+10	0/+10

Weaponry

6×Long Aircraft HMG/M-2 [Wings:F] (240 rounds each).*

* Linked in pairs, plus additional link can fire all six at once.

Equipment

Body: Medium range radio transmitter and receiver, arrestor hook, navigation instruments, autopilot, bombsight. *Wings*: 100-lb. and 500-lb. hardpoint each.

Statistics

Size: 29'×38'×12' *Payload:* 0.9 tons *Lwt.:* 3.8 tons
Volume: 112 *Maint.:* 33 hours *Price:* $36,600

HT: 12. HPs: 260 Body, 105 each Wing, 24 each Wheel.

aSpeed: 319 *aAccel:* 7 *aDecel*: 20 *aMR:* 5 *aSR:* 2
Stall speed 63. –4 aSpeed per loaded hardpoint.
gSpeed: 234 *gAccel:* 11 *gDecel*: 10 *gMR:* 0.5 *gSR:* 2
Ground Pressure Extremely High. No Off-Road Speed.

Design Notes

Design aSpeed is 327 mph; the historical speed, as well as actual wing area (260 sf), has been used. The design purchases 1,400 MG rounds but lists the historical loadout.

The large wing hardpoints can only mount 50- or 58-gallon drop tanks of fuel.The small hardpoints mount bombs.

Variants

Debuting in August 1940 and entering service three months later, the F4F-3 (Martlet Mk I and II in British service) carried only four .50-caliber guns (usually 450 rounds each) and lacked folding wings. Most of the F4F-3s (and some Martlets) had no self-sealing fuel tanks or cockpit armor, either. This lighter version did feature aSpeed 330, aAccel 8, aDecel 22, and aMR 5.5. The plane had been designed to mount two LMGs in the body, but these were installed only in the first two produced. The F4F-3A had a slightly different supercharger on its engine.

Entering service beginning in November 1941, the F4F-4 did not entirely replace the earlier model for some time thereafter. The U.S. Navy's pilots were still getting used to its heavier, slower performance at the Battle of Midway in June 1942.

The General Motors production planes were called the FM-1 and FM-2. Beginning in August 1942, the FM-1 (or Martlet Mk III through V in British service) basically had the same performance as the F4F-4, but mounted only four guns with 430 rounds each. (The F4F-4 loadout had left pilots with empty guns and fighting still to be done too many times . . .)

The lightened FM-2 (or Martlet Mk VI) of September 1943 boasted a 1,007-kW engine giving aSpeed 332 and was even handier in reaching a carrier's deck (+2 to land). Later FM-2s mounted 250-lb. hardpoints designed for the equivalent of six 4.5" HE rockets or a 250-lb. bomb each.

In December 1941, the first of 21 F4F-7s was built, mounting reconnaissance cameras and introducing fuel tankage in the wings, at the cost of all weapons. With 695 gallons of gas, this plane theoretically could travel 3,700 miles in 25 hours – far more endurance than most pilots have. (These real-life terms almost exactly match those on p. W148; this would be 45% of top speed – halfway between "patrol" and "cruising" speeds – at 60% of routine fuel usage, or 27 gallons per hour.)

In February 1943, a single F4F-3S two-float seaplane – the colorfully named "Wildcatfish" – was manufactured.

Lockheed P-38 Lightning

The P-38 was America's fastest and most heavily armed fighter when the United States entered the war, and served in most theaters throughout the fighting. Known to the Germans as the "Forked-Tailed Devil," it is most famous for the mission in which P-38s sought out and shot down the G4M Betty carrying Japanese Adm. Yamamoto (see p. W28).

The Lightning was unconventional in several respects beyond its famous twin-tailboom construction. A fighter with two engines, it used a tricycle landing gear, and carried a mixed armament. (Other nations routinely armed their fighters with mixed arms, but U.S. planners had decided their fighters would carry all .30- or .50-caliber machine guns. Only toward the end of the war did the authorities realize that even the .50 HMG was underpowered for air combat, and start looking at heavier weaponry on fighters other than the Lightning.)

At three times the weight of a Zero, the Lightning should have been able to dive to safety, but a design fluke caused the pilot to lose control in steep dives. Later models, such as the one depicted here, fixed the problem by adding dive brakes. The Lightning's superior climbing ability, heavy armament, and safety margin provided by the twin engines meant that it could put up a fight against any plane that it encountered.

Aside from its role as a long-range fighter, the P-38 saw a great deal of use as a light bomber and ground-attack plane.

The P-38L uses 110 gallons of aviation gas per hour at routine usage. Fuel and ammo cost $125.

P-38L Lightning

Subassemblies: Light Fighter-Bomber chassis with good streamlining +3, high-agility Heavy Fighter wings +3, two Small AFV pods [Wings:F], three retractable wheels +1.

Powertrain: two 1,100-kW aerial supercharged HP gas engines with two 1,100-kW props [Pods] and 410-gallon self-sealing fuel tanks [306 Body and 104 Wings].

Occ: 1 CS Cargo: 15.6 Body, 3.9 each Pod, 0.9 Wings

Armor	F	RL	B	T	U
Body:	3/6	3/6	3/6	3/6	3/6
Wings:	3/6	3/6	3/6	3/6	3/6
Pods:	3/6	3/6	–	3/6	3/6
Wheels:	2/3	2/3	2/3	2/3	2/3
Cockpit:	0/+10	0/+10	0/+20	0/0	0/+10

Weaponry

4□ Long Aircraft HMG/M-2 [Body:F] (500 rounds each).*
20mm Long Aircraft AC/M-2 [Body:F] (150 rounds).**
* Linked in pairs, plus additional link can fire all four at once.
** Linked to machine guns.

Equipment

Body: Medium range radio transmitter and receiver, IFF, navigation instruments, bombsight, autopilot. *Wings*: 2,000-lb. hardpoint each.

Statistics

Size: 38'□52'□13' *Payload:* 1.7 tons *Lwt.:* 8.2 tons
Volume: 312 *Maint.:* 23 hours *Price:* $76,600
HT: 7. HPs: 165 Body, 240 per Wing, 150 per Pod, 15 per Wheel.

aSpeed: 414 *aAccel:* 8 *aDecel*: 25 *aMR:* 6.25 *aSR:* 2
Stall 95. -4 aSpeed per hardpoint load. aSpeed 301 on one engine.
gSpeed: 250 *gAccel:* 11 *gDecel*: 10 *gMR:* 0.5 *gSR:* 2
Ground Pressure Extremely High. No Off-Road Speed.

Design Notes

Design aSpeed was 446; the historical value has been used along with historical wing area of 328 sf. The design purchases 180 rounds of 20mm ammo but uses the historical loadout.

The body has lots of extra space, most of it in the twin tail booms. It can fit one more 5-VSP item (in the body proper), but after that no one component larger than 1 VSP, per p. 77.

The P-38L could carry up to seven 5" HVAR rockets under each wing, with a reduction in total bomb load. The hardpoints also could carry extra fuel tankage.

Variants

The P-38D was the first production version, entering service in 1941 just before Pearl Harbor. The 36 planes of this model carried an M-4 autocannon (37mm Medium Aircraft AC) with 30 rounds in place of the 20mm gun and only carried 200 rounds for each HMG. Its engines were rated at 914 kW each (aSpeed 390 and aMR 4.25 because of the agility issues) mounted in Large Weapon pods, and it lacked the wing fuel tanks (306 gallons total).

The 210 P-38Es built replaced the 37mm cannon with a 20mm weapon and increased HMG ammunition loadouts.

Debuting in late 1942, the 527 P-38 Fs built introduced the wing hardpoints for fuel or bombs, rated at 1,000 lbs. apiece, and corrected some combat-agility issues (aMR 5.25). The P-38G (1,082 built) was basically the same plane with 988-kW engines (aSpeed 400).

The P-38H (601 built) upgraded to 1,600-lb. hardpoints and 1,063-kW engines (aSpeed 402); however, lack of sufficient air flow for cooling effectively made these 925-kW engines at low altitude (aAccel 7 below 27,000').

The 2,970 P-38Js built introduced the wing fuel tanks and chin radiators for the engines (these use up all that extra space in the Small AFV pods), to allow full-throttle 1,063-kW usage at all altitudes. In this production run, further improvements cleaned up the last of the agility and diving issues.

The most produced version at 3,923 built, the P-38L also had a "Droop Snoot" subvariant with all guns replaced with a bombardier seat, and a glass nose and bombsight. These would lead standard P-38s on bombing missions.

About 75 night-fighting P-38Ms added a second crewman and radar while keeping a full set of arms and upgrading to 1,194-kW engines. They debuted shortly before war's end.

The XP-49 was an attempt to improve the performance of the P-38. The project met with repeated failures and was cancelled. The XP-58 Chain Lightning was a failed attempt to make a larger P-38 capable of escorting long-range bombers. The final prototype was as large and heavy as the B-25.

P-38s were favored for photo-reconnaissance conversions. These generally deleted all weapons, added several cameras, and used drop tanks to fly very long patrols.

Republic P-47 Thunderbolt

The largest production single-engine fighter of WWII was a lightweight concept in mid-1939. When reports on Europe's air war indicated a much heavier fighter would be needed, Republic redesigned it as a monstrous radial-engined fighter with 12'-diameter propeller.

The big plane did not see action until April 1943, but quickly established a reputation for toughness, leading to its unofficial nickname of "Juggernaut," or often just "Jug," since it resembled a milk jug. Japanese pilots shook their fists in rage after uselessly emptying their guns at Jugs. One dogfight resulted in a mid-air collision between a P-47 and a Zero. The Jug's wing sliced the lightweight Zero in half; the Thunderbolt returned to base with little more than scratches and dents.

The heavy P-47 could dive as well as any fighter. As its pilots put it, "It ought to dive; it sure as hell can't climb!" Some pilots claimed to have neared Mach 1 power-diving a Jug, shaking loose bolts and rivets and cracking the plane's skin.

The rugged plane increasingly drew ground-attack assignments after the Normandy invasion. A stellar performer in this role, the Jug averaged more than 100 ground-attack sorties for each plane lost in action. The P-47 was one of the first U.S. planes to use rockets in ground attack, originally with three bazooka tubes jury-rigged under each wing. A skilled pilot could knock out German armor with the factory mounts for 4.5" rockets that soon followed. Other tank-killing stunts included "skip-bombing," or dropping time-delayed ordnance from very low altitude. The bomb would skip along the ground and strike the target's side.

The Jug would claim nearly 4,000 enemy fighters during the war, and thousands more ground victims. The -D model was the most numerous, with more than 12,000 built. Overall, some 15,677 P-47s were built, more than any other U.S. fighter.

The P-47D uses 75 gallons of aviation fuel per hour at routine usage (but see *Design Notes*). Fuel and ammo cost $235.

P-47D Thunderbolt

Subassemblies: Heavy Fighter chassis with good streamlining +3, Light Fighter-Bomber wings +3, Large Weapon pod [Body:F] +2, three retractable wheels +1.

Powertrain: 1,492-kW aerial supercharged HP gasoline engine with 1,715-kW prop [Body and Pod], 305-gallon self-sealing fuel tanks, 15-gallon standard tank for methanol-water with feed to engine.

Occ: 1 CS **Cargo:** 5 Body, 2 Wings

Armor	F	RL	B	T	U
All:	3/10	3/10	3/10	3/10	3/10
Cockpit:	0/+10	0/+20	0/+40	0/+10	0/+20

Weaponry

8□ Long Aircraft HMG/M-2 [Wing:F] (425 rounds each).*

* Linked in pairs, plus additional link can fire all eight at once.

Equipment

Body: Medium range radio transmitter and receiver, IFF, navigation instruments, bombsight, autopilot, 500-lb. hardpoint. *Wings*: 1,000-lb. hardpoint each.

Statistics

Size: 36'□41'□14' *Payload:* 1.6 tons *Lwt.:* 6.9 tons
Volume: 224 *Maint.:* 27 hours *Price:* $61,000

HT: 9. HPs: 260 Body, 240 each Wing, 120 Pod, 24 each Wheel.

aSpeed: 428 *aAccel:* 6 *aDecel*: 25 *aMR:* 6.25 *aSR:* 2
Stall speed 97. -5 aSpeed per loaded hardpoint.
gSpeed: 224 *gAccel:* 10 *gDecel*: 10 *gMR:* 0.5 *gSR:* 2
Ground Pressure Extremely High. No Off-Road Speed.

Design Notes

Historical wing area was used (300 sf).

The Thunderbolt is so large for a fighter that it wants to break the assumptions behind the ***GURPS WWII*** design system. Because the Thunderbolt doesn't quite fit into the Heavy Fighter chassis, a pod has been added, representing the engine cowling at the plane's nose. Its only purpose is to provide the design enough space. (Historically, the first production chassis was lengthened in much the same fashion.) It also adds a bit more toughness to the plane, as some shots aimed at the body will hit the pod instead, spreading out the damage. Also, the weight, cost, and HPs of its wings have been doubled; this is a perfectly legal alteration to any set of wings in the design system, as long as all three values are changed by the same amount.

The plane employs a 1,492-kW powerplant but uses methanol-water injection to boost performance to 1,715 kW in short bursts. The statistics above are for unboosted performance (design aSpeed 426 was increased to the historical figure). With the alcohol feed on, the P-47D would have aAccel 7; theoretically, it could a higher aSpeed, but the mix would not have been used for this. The 15-gallon tank of methanol-water has a 44-minute endurance, during which fuel usage increases sixfold. Each minute that it is on, roll vs. a modified vehicle HT of 14. On a failure, base powerplant output decreases by 1%. On a critical failure, the engine quits working. Usage for less than a minute requires no roll. See pp. W:IC65-66 for more details.

Overall aircraft DR was increased to help represent the plane's legendary toughness. Aside from bombs and fuel tanks, the P-47 often carried up to five rockets under its wings.

If the P-47 carried any load on the wing hardpoints, MG ammo was reduced to 267 per gun.

Variants

The P-47B and -C had a spine extending from cockpit rear, giving the pilot a Fair view. They had half the cockpit armor and lacked the wing hardpoints and methanol-water system.

Most P-47Ds had a bubble canopy with Good view. Not all of them had wing hardpoints, and only later -Ds could mount rockets. Later -Ds also increased fuel tankage to 370 gallons.

The experimental XP-47J "Superman" was the fastest P-47. A few hundred pounds were cut from its highly modified airframe, including two of its guns. One -J reached 504 mph with its 2,089-kW engine in mid-1944. The P-47M used the same engine as the -J; they were used to chase down V-1 rockets (see p. W:IC123) over England. The -M could reach 490 mph.

The P-47N had a larger wing with another 126 gallons of fuel tanks, for long-range missions in the Pacific.

North American B-25 Mitchell

Most famous for the Doolittle raid (p. 13), the well-liked and reliable B-25 fought the entire war in just about every theater, filling a variety of roles. The small bomber expanded from its original concept to antishipping runs in the Pacific – where the heavily armed B-25G and -H could sink a tramp freighter in one pass – and even to close support at Normandy.

Although not the most numerous B-25 model, the -H was the most impressive. With 14 .50-caliber machine guns, a 75mm cannon, up to 3,200 pounds of bombs, and sometimes carrying depth charges or rockets under the wings, the B-25H was, pound for pound, the most potent U.S. plane in service.

The B-25H has a crew of five, with stations for six. The pilot fires all forward guns and dropped ordnance. The navigator also operates the radio and loads the cannon. The flight engineer mans the dorsal turret. One gunner mans both waist guns (and any cameras) and another serves the rear guns. (Both could fire the waist guns at once if need existed.)

The powered turret rotates at 75º per second. The plane burns 127 gallons of fuel per hour at routine usage. A full load of fuel and ammo (including bombs) costs $4,800.

B-25H Mitchell

Subassemblies: Heavy Fighter-Bomber chassis +4, Heavy Fighter-Bomber wings +3, two Medium AFV pods [Wings:F] +2, full-rotation Medium Weapon turret [Body:T] +1, three retractable wheels +1.

Powertrain: two 1,268-kW aerial turbo/supercharged HP gas engines with two 1,268-kW props [Pods] and 974-gallon self-sealing tanks [Wings and Pods]; 8,000-kWs batteries.

Occ: 6 CS **Cargo:** 14.9 Body

Armor	F	RL	B	T	U
All:	2/4	2/4	2/4	2/4	2/4
Pilot, Navigator:	0/+35	0/+35	0/+35	0/+0	0/+0
Turret Gunner:	0/+35	0/+0	0/+23	0/+0	0/+0
Tail Gunner:	0/+0	0/+0	0/+35	0/+0	0/+0
Waist Gunner(s):	0/+0	0/+0	0/+23	0/+0	0/+0

Weaponry

2□Long Aircraft HMGs/M-2 [Tur:F] (400 rounds each).*
4□Long Aircraft HMGs/M-2 [Body:F] (400 rounds each).**
4□Long Aircraft HMGs/M-2 [Body:F] (300 rounds each).**
2□Long Aircraft HMGs/M-2 [Body:B] (600 rounds each).*
2□Long Aircraft HMG/M-2 [Body:R, L] (200 rounds each).
75mm Short TG/T-13E1 [Body:F] (21 rounds).†
2□1,000-lb Bombs [Body:U].
* Linked to fire in pairs.
** Linked to fire in pairs. Additional link fires all four.
† Linked to all eight forward MGs and two turret MGs.

Equipment

Body: Large radio receiver and transmitter, IFF, autopilot, advanced navigation instruments, 3,200-lb. bomb bay, fire extinguisher, improved bombsight. *Turret:* Universal mount.

Statistics

Size: 53'□68'□16' *Payload:* 5.6 tons *Lwt.:* 15.4 tons
Volume: 640 *Maint.:* 19 hours *Price:* $106,000
HT: 8. HPs: 525 Body, 450 each Wing, 50 each Wheel, 200 each Pod, 75 Turret.

aSpeed: 275 *aAccel:* 5 *aDecel*: 21 *aMR:* 5.25 *aSR:* 2
Stall speed 97 mph. -1 aSpeed per loaded hardpoint.
gSpeed: 187 *gAccel:* 9 *gDecel*: 10 *gMR:* 0.25 *gSR:* 3
Ground Pressure Extremely High. No Off-Road Speed.

Design Notes

Design aSpeed is 300. The historical value was used, as well as the actual 610-sf wing area.

Technically, four of the forward-facing machine guns were in pods located on the sides of the cockpit, with their ammo located in the body. For simplicity, the volume of the gun pods has been subsumed in body volume. Some B-25Hs lacked one of these pods, thus fielding two fewer HMGs.

Also, technically, all of the plane's fuel was carried in the wings, which considerably exceeds these wings' carrying capacity. (U.S. plane designers were nothing short of amazing in their ability to cram gear into wings.) Since the real-life B-25H had huge pods for its engines, this design uses slightly oversized pods and shifts the excess wing tankage over to them.

The plane also had an elaborate system of crew protection. This design mildly breaks a rule by buying seven armored-station modules then applying them unevenly across the six stations to accurately portray real-life protection. (Not modeled is a thin band of DR 45 armor that protected the tail gunner's head from an overzealous turret gunner . . .)

Bomb load was normally two 1,000-lb bombs. A third could be added for short-range missions. Alternately, a pair of 1,600-lb. armor-piercing bombs could be carried.

The dorsal turret could be locked forward, allowing the pilot to fire 10 MGs and the cannon with one button. Contrary to legend, the cannon could barely be felt when it was fired.

Variants

The B-25A had no top turret and only two .50-caliber and two .30-caliber MGs. The planes were mainly used in coastal patrol work, due to poor defensive armament; 40 were built. Like most B-25s except the -H, it had a crew station with backup-driver controls for a co-pilot.

The B-25B added dorsal and ventral turrets, with .50-caliber MGs, behind the bomb bay, but the tail gunner was replaced with an observer's position. The Doolittle raid used specially lightened -Bs.

The B-25C and -D were identical but built at different plants. The top turret was located behind the bomb bay and on some planes a retractable underside turret (same stats) was installed. More than 1,600 were built. The B-25E and F were test models, with only a single example of each built.

The B-25G was much like the H, except it mounted the heavier M-4 cannon and two fewer nose M-2s. It had the dorsal turret behind the bomb bay and a ventral turret, but lacked the two waist and two rear M-2s. Some 1,400 were built.

The B-25J was the most common model, at some 4,200 built. It reverted to the pure bomber role with a glass nose with two M-2s and a bombardier. A few were built with solid noses mounting eight M-2s.

Boeing B-17 Flying Fortress

The B-17 was designed as a long-range bomber capable of fighting to and from its target without escort during daylight. By the time that it entered combat, such tactics resulted in appalling losses over Europe. The B-17s fared much better when escorted by P-51 (see p. W110) or P-47 (p. 83) fighters.

By war's end, the Flying Fortress had dropped 640,000 tons of bombs on Nazi Germany, more than any other plane.

The B-17G has a crew of nine or 10: pilot, co-pilot, bombardier (who fires the chin turret and two nose guns), navigator and/or radio operator (sometimes one man did both jobs), top-turret gunner, ball-turret gunner, two waist gunners, and tail gunner. These men lived as dangerously as any soldiers, the ball gunner most dangerously of all. His cramped station prohibited wearing flak vest or parachute. If battle damage pinned him in the turret, someone handed him a parachute then unhooked the turret at altitude. The gunner squirmed out during freefall . . .

The B-17 carried one or two life rafts. Fire extinguishers were placed throughout. The tail gunner had to crawl back to his isolated station from the main aft crew area. The radio operator and waist and ball gunners could reach the front crew area via a narrow walkway over the bomb bay. From the walkway, a crewman could pull the bombs' arming pins or try to kick loose a "hitchhiker" hung up in its shackles.

Surprisingly, Germany salvaged perhaps 40 B-17s. The Luftwaffe mostly used them to train pilots on attacking the Fort, but some were flown as stalking horses (see p. W:IC116).

More than 8,600 B-17Gs were built. The plane burned 180 gallons of fuel per hour at routine usage. A standard load of aviation gas and ammo (including bombs) costs $8,700.

B-17G Flying Fortress

Subassemblies: Heavy Bomber chassis with good streamlining +5, Huge Bomber wings +4, four Small AFV pods [Wings:F] +2, two full-rotation Medium Weapon turrets 1 and 2 [Body:T, U] +1, one partial-rotation Medium Weapon turret 3 [Body:F] +1, three retractable wheels +2.

Powertrain: four 895-kW aerial supercharged HP engines with four 895-kW props [Pods] and 2,780-gallon self-sealing fuel tanks [Wings and Pods]; 32,000-kWs batteries.

Occ: 10 CS Body, 1 CS Tur 2 Cargo: 21.5 Body

Armor	F	RL	B	T	U
All:	3/5	3/5	3/5	3/5	3/5
Six Crew Stations:*	0/+0	0/+0	0/+35	0/+0	0/+0
Top-Turret Gunner:	0/+35	0/+0	0/+35	0/+0	0/+0
Waist Gunners:	0/+0	0/+35	0/+35	0/+0	0/+0

* Both pilots, bombardier, navigator, radio operator, tail gunner.

Weaponry

2×Long Aircraft HMGs/M-2 [Tur1:F] (400 rounds each).*
2×Long Aircraft HMGs/M-2 [Tur2:F] (400 rounds each).*
2×Long Aircraft HMGs/M-2 [Body:B] (400 rounds each).*
2×Long Aircraft HMGs/M-2 [Tur3:F] (300 rounds each).*
2×Long Aircraft HMGs/M-2 [Body:R, L] (300 rounds each).
2×Long Aircraft HMGs/M-2 [Body:F] (300 rounds each).
8×500-lb Bombs [Body:U].
* Linked to fire in pairs.

Equipment

Body: Autopilot, backup driver option, 9,600-lb. bomb bay with limited access, two 3.5-VSP cargo holds (usually hold two deflated life rafts; 10.4 VSPs each inflated), IFF, improved bombsight, precision navigation instruments, large radio transmitter and receiver, toilet. *Turrets 1-2:* Universal mounts. *Wings:* 4,000-lb. hardpoint each.

Statistics

Size: 75'×104'×19' *Payload:* 11.6 tons *Lwt.:* 29.7 tons
*Volume:*1,840 *Maint.:* 15 hours *Price:* $177,700

HT: 9. HPs: 1,100 Body, 1,000 each Wing, 75 each Turret, 150 each Pod, 100 each wheel.

aSpeed: 287 *aAccel:* 4 *aDecel*: 24 *aMR:* 6 *aSR:* 3
Stall speed 93. -1 aSpeed per loaded hardpoint.
aSpeed on 3 engines: 248. On 2 engines: 202. On 1 engine: 143.
gSpeed: 167 *gAccel:* 8 *gDecel*: 10 *gMR:* 0.25 *gSR:* 3
Extremely High Ground Pressure. No Off-Road Speed.

Design Notes

The design aSpeed 300 has been replaced with the historical value. So has wing area (1,420 sf historical).

The toilet is purchased as two crew stations dedicated to this function. Long-term quarters would already include toilets.

As with the B-25, the B-17's designers crammed more fuel tanks in its wings than the system will model. Excess tankage was placed in the weapon pods. Even so, 2.2 VSPs of tankage had to be placed in the body, though it belongs in the wings. Though the plane had 2,780 gallons of tankage (and could add extra fuel tanks in the bomb bay), it usually only loaded 2,520 gallons (the figure assumed in payload weight and cost). Similarly, the B-17G could carry 17,600 lbs. of bombs on very short missions, but usually only carried the 4,000-lb. load given.

The two nose guns are offset to left and right, which left the B-17 vulnerable from head-on, prompting the chin turret to be fitted. The -G *still* lacks proper armor from in front. The Germans estimated that five 20mm rounds usually would disable a B-17 from in front; from behind it usually took at least 40.

Variants

Some B-17Gs mounted an M-2 firing upward, operated by the navigator. Earlier models usually had this gun, too.

The B-17B of '39 with 746-kW engines never saw action.

The B-17C first saw combat on July 8, 1941, in British hands. It introduced the 895-kW engines, self-sealing tanks, and crew armor. Lighter than later models, it had aSpeed 323.

The B-17D of 1941 made only minor changes to the -C.

The B-17E first flew in late 1941. It introduced the tail guns, top turret, and bottom turret (remote controlled on early -Es). It had aSpeed 317 but mounted only one gun in the nose.

The B-17F was similar to the -E, with more than 3,400 made after its May 1942 first flight. The chin turret was introduced late in the production series.

The CB-17s were B-17s of various models converted to be used as VIP transports. Each was a custom job, usually with most of the armor and arms removed.

Douglas C-47 Skytrain

While not as sexy as other American planes, the transport known as the "Gooney Bird" can make a case for having been the single most-important aircraft flown by the U.S. forces.

The C-47 was based on the civilian DC-3, which dominated commercial air service from shortly after its inception in late 1935. At the time, the DC-3 was state of the art, with dual pilot controls, the first autopilot installed in an airliner, and even electric-shaver sockets for the passenger seats. Special long-route DC-3s made coast-to-coast flights taking "only" 20 hours, and had special sleeping berths for 14 wealthy passengers who could get their rest while flying through the night. Their trip ended with breakfast in bed.

For the GIs bumping along in a wartime C-47, that was a bygone era. The military version was stripped of soundproofing, grooming aids, and other amenities. This bare-bones transport filled a variety of roles, including transporting cargo and passengers, medical evacuation, dropping paratroops, and towing gliders. More than 10,000 C-47s of all models were built. Russia put 2,000 in the air, and Japan flew another 500, thanks to a prewar license with Douglas.

The C-47 has a crew of three: pilot, co-pilot, and navigator. In cargo or parachute drops, a crew chief was added to handle the off-loading. With a reputation for being able to carry *anything* that could be stuffed in them, C-47s found their 3-ton payload filled with jeeps, trailers, artillery, aircraft engines, cans of fuel – even a couple of baby elephants flown out of Japanese-occupied China to relative safety in India. After the war, the C-47 would become a crucial player in the "Berlin Airlift," in which an average of 5,000 tons of goods was delivered daily for 462 days to break the 1948 Soviet blockade of the city.

Even when bigger and nominally better transports came into service, many pilots continued to prefer the C-47. Most of them found it a forgiving plane, easily managed even in foul weather or at its gross weight limits. This did not change the fact that it was *not* properly equipped for combat flying, lacking any sort of armor or self-sealing fuel tanks.

For passengers, 28 crude seats were fitted. This was a cramped arrangement taking up all space and leaving only a narrow aisle (7 VSPs) for access space. Carrying cargo required carrying fewer passengers, to meet both volume and weight limits. Assume a cargo payload of 400 lbs. plus 200 lbs. for each passenger left behind, with 4¼ VSPs available for said cargo per passenger omitted.

Typical paratrooper loads ranged from eight to 18, with the low number corresponding to paratroop-artillery units equipped with a 1,000-lb. "pack" howitzer. The navigator often was left out of the crew in the big airdrop operations, to fit one more paratrooper in the plane. As a glider tug, the C-47 could pull up to two Waco gliders, each holding 15 men, a jeep, or an artillery piece. An intercom cable allowed the glider pilots and the C-47 crew to communicate in flight.

The passenger area also could be filled with up to 14 stretchers in an air-ambulance role. As a VIP aircraft, the C-47 was fitted with 14 swivel chairs and a galley, which United Airlines called "the sky lounge."

The plane burns 90 gallons of aviation gas per hour at routine usage. A full load of fuel costs $160.

C-47A Skytrain

Subassemblies: Light Bomber chassis +4, Heavy Bomber Wings +4, two Large Weapon pods [Wings:F] +2, three retractable wheels +2.

Powertrain: two 895-kW aerial supercharged HP gas engines with two 895-kW props [Pods] and 804-gallon standard fuel tanks [Wings]; 16,000-kWs batteries.

Occ: 3 CS, 28 PS **Cargo:** 23.4 Wings and see above.

Armor	F	RL	B	T	U
All:	2/3	2/3	2/3	2/3	2/3

Equipment

Body: autopilot; navigation instruments; large radio transmitter and receiver.

Statistics

Size: 64'×96'×17' *Payload:* 5.7 tons. *Lwt.:* 14.4 tons
Volume: 1,080 *Maint.:* 22 hours *Price:* $83,000

HT: 8. HPs: 375 Body, 825 each Wing, 120 each Pod, 35 each Wheel.

aSpeed: 230 *aAccel:* 4 *aDecel*: 41 *aMR:* 10.25 *aSR:* 2
Stall speed 74.
gSpeed: 162 *gAccel:* 8 *gDecel*: 10 *gMR:* 0.25 *gSR:* 3
Extremely High Ground Pressure. No Off-Road Speed.

Design Notes

Design air speed is 221 mph; the historical value has been used for this and wing area (987 sf).

With no armor or heavy components on its sturdy frame, the C-47 has an almost unreal agility; however, this would certainly make it deserve its reputation for shrugging off the worst flying conditions and it offers C-47 pilots some small chance of escaping a fiery end at the guns of Axis fighters . . .

Variants

The C-47 traded the DC-3's civilian comforts for a cargo door. The C-47A replaced its 12-volt electrical system with a 24-volt version; more than 5,200 C-47As were built.

The C-47B (later C-47D) was modified for the Chinese-Burma-India theater with better heaters and engines rated for Himalayas-crossing altitudes. Some 3,200 were built.

The Lisonev Li-2 was the Soviet designation for the C-47, with some 700 acquired via Lend-Lease and another 2,000 built in the U.S.S.R. The Li-2 cargo door was on the right, rather than on the left side as on the C-47.

Appearing 20 years later and in another war, the AC-47D was a gunship model. Tests of the side-firing concept were conducted with .50-caliber machine guns in 1945 at a Florida air base; enterprising players may wish to improvise something similar with WWII weapons. The Vietnam-era gunship would perform tight patterns around a ground target, while the door gunner pasted it with a withering stream of fire.

Postwar, C-47s often served as fire-bombing tankers or search-and-rescue planes. Some remain in service to this day, usually with improved avionics and turboprop engines.

DUKW Amphibious Truck

The DUKW first entered combat in 1943, the unlikely brainchild of an America's Cup-winning yacht designer. Working for the OSRD (p. 65), Rod Stephens conceived his seagoing truck then produced a prototype in only 38 days. Basically a GMC 6×6 truck (see p. W107) married to a boat hull, the design entered regular production shortly after. A part of its vehicle-identification number included the passage D (for model year 1942), U (for amphibious), K (all-wheel drive), and W (twin rear axles). Naturally, the DUKW was born.

The DUKW was greatly favored by the many Allied troops using it. It could motor out to a cargo ship anchored off-shore, load a moderate amount of materiel, putter back into shore, then drive past the port facilities to offload its cargo inland.

The Navy considered the DUKW a boat, while the Army reasoned it was a truck that happened to float. This spawned a feud until the Navy admitted it couldn't possibly train all the drivers that the Army needed. The Army, too, struggled to put men in the trucks, eventually steering a large number of "negro" troops into the fairly hazardous job of Driver, Amphibious Truck. (The Marines refused to have anything to do with the DUKW, preferring the LVT on p. 89 instead.)

Maintenance and operation were fairly easy, given it was basically a very familiar truck. It did have a reputation for burning copious amounts of motor oil, and crews had to be trained as both truck drivers and sailors. Sea-keeping also was an issue. Even light chop could swamp a fully laden DUKW. The bilge pumps tended to run flat-out on well-used DUKWs; its seals leaked steadily after only a few hundred road miles.

The truck's main limitations were that it had no proper cargo ramp – men and cargo had to be loaded over the sides – and it could not carry a large payload. Still, the Soviets were so impressed with their Lend-Lease samples that they created their own version with a proper cargo ramp. One could even argue that the DUKW inspired their postwar armored personnel carriers that formed the backbone of their Cold War doctrine.

The DUKW was operated by a driver and assistant driver. They usually attended a five-week course to learn both the Powerboat and Driving (Automobile) skills. It used 3.2 gallons of gas per hour at routine usage. Fuel and ammo cost $30.

DUKW

Subassemblies: Medium Wheeled chassis +4; Medium Weapon open mount 1 [Body:F] +1; full-rotation Mini open mount 2 [Body:T] +0; three waterproofed Small AFV sections [Body:F,R,L] and waterproofed Medium AFV section [Body:B] forming boat hull; 10 large wheels +3.

Powertrain: 70-kW standard gas engine with 70-kW all-wheeled transmission and 70-kW screw [Medium AFV section]; 40-gallon standard tanks; 4,000-kWs batteries.

Occ: 1 XCS, 20 XPS **Cargo:** 75.2 Body

Armor	F	RL	B	T	U
All Except OMs:	3/5	3/5	3/5	3/5	3/5
OM 1:	4/20	–	–	–	–

Weaponry

Very Long Ground HMG/M-2HB [OM 2:F] (500 rounds).

Equipment

Body: 75 exposed cargo, 125-sf canvas cover for cab top and sides and cargo area, medium radio receiver and transmitter. *OM 1:* 2,000-lb. winch. *Hull:* bilge pump.

Statistics

Size: 32'×8'×9'	*Payload:* 2.9 tons	*Lwt:* 10 tons
Volume: 221	*Maint:* 117 hours	*Cost:* $2,950

HT: 8. HPs: 330 Body, 22 each Wheel, 75 OM 1, 30 OM 2, 150 each three front Hull sections, 200 rear Hull section.

gSpeed: 47 *gAccel:* 2 *gDecel:* 10 *gMR:* 0.5 *gSR:* 4
Ground Pressure High. 1/4 Off-Road Speed.
wSpeed: 6 *wAccel:* 1 *wDecel:* 10 (10.5) *wMR:* 0.1 *wSR:* 4
Draft 2. Flotation Rating 10.2 tons.

Design Notes

Design wSpeed is 7 and fuel tankage is 42; historical values have been used, instead. Design gSpeed varies from 49 with just fuel and crew to 42 fully laden with 5,175-lb. rated cargo capacity. Interestingly, various sources cite a top speed of 50 or 55 mph, although the original 6×6 truck is not often quoted as reaching those speeds. The top speed given for the 6×6 is listed here, instead.

Four subassemblies are used to represent the bulky boat hull built around the truck. They give the DUKW its flotation rating without the truck itself adding anything to this value. The empty space within these is not listed; historically, nothing was placed in them. The vehicle already weighs too much.

As with the original 6×6, only one in four DUKWs included the ring mount (OM 2) for the .50 M-2HB. Open mount 1 represents the bulky front bumper presumably still on the truck; the winch mounted on it should be considered usable despite the intervening boat hull. The cab has a canvas top and doors, thus counts as exposed positions for the up to three people in it. The truck bed provides bench seating for another 18, but several more people could be crammed within it or ride on the hull.

Historical cost was $10,800, suggesting a healthy markup and/or expensive customization procedures.

Several sources suggest that the DUKW had poor sea-handling qualities; however, there were some instances of DUKWs performing better than boats of a similar size. The vehicle probably was no better or worse at staying afloat than most amphibious vehicles.

Variants

Some DUKWs, called Scorpions, were loaded with rocket launchers for bombardments during amphibious assaults. They were almost never used offensively on land. The British sometimes fired cannons mounted in the back of DUKWs; countless other field modifications were made to individual DUKWs, as well. Nine DUKWs were equipped with firefighting extension ladders for use in scaling cliffs on D-Day (p. 100).

Those wishing to get a good look at an operating DUKW might find one of the vehicles surviving today as a tourist ride. Several of the 21,147 built during the war have survived, testimony to the fascination that this vehicle holds for many.

LCVP Higgins Boat

The Higgins boat was another of the wonder weapons developed by U.S. military, though to the soldiers using their helmets to bail water out of one of these overloaded landing crafts, it may have seemed more of a curse. Regardless, the very plans for D-Day hinged upon its availability, and Eisenhower credited it with being instrumental for winning the war.

The boat's seemingly crude design deceives; its chassis incorporates a host of subtle reinforcements and planing effects that allow the LCVP to ground itself on anything unharmed, get back in the water and turned about afterward, and surge at full speed through debris-filled water with little risk to the prop.

The Higgins Boat Co. of New Orleans designed the original boat to navigate Louisiana's treacherous bayous. The military began buying the little boats in the late 1930s, but only in 1941 did Higgins get the big Navy contract that it sought. Some 15,000 LCVPs would be delivered from that point.

The little craft became a fundamental of the U.S. military's most important WWII innovation, the amphibious assault. Since each LCVP could land a platoon on a rough shoreline that most boats had no business getting near, U.S. commanders could largely ignore any need for ports or harbors.

Ships often carried LCVPs on davits. During loading, the boat was lowered into the water and the troops clambered down a cargo net into it, requiring a Climbing roll at +9 minus any penalties for rough seas (generally -0 for calm to -8 in a storm) and encumbrance (usually -2 or -3). A trooper could suffer a wicked fall onto the rifle barrels and helmets of the men below. A crane could also load any jeeps, artillery pieces, or cargo.

The LCVP employs one helmsman (who can lower or raise the ramp remotely) and two gunners (who manually rotate their stations at 21° per second). It burns 6.7 gallons of diesel per hour in routine usage. Fuel and ammo cost $37.

LCVP Higgins Boat

Subassemblies: Large Boat chassis with mediocre lines +4; two full-rotation Medium Weapon OMs [Body:T] +1.
Powertrain: 168-kW diesel engine with 168-kW screw and 180-gallon standard fuel tanks; 8,000-kWs batteries.
Occ: 1 XCS Body, 2 XCS OMs. **Cargo:** 72X and 16 Body.

Armor	F	RL	B	T	U
Body:	4/20	4/20	3/8W	0/0	3/8W
OMs:	4/25	–	–	–	–

Weaponry

2□Ground LMGs/M-1919 [OMs:F] (500 rounds each).

Equipment

Body: Bilge pumps; cargo ramp; 2,000-lb. winch.

Statistics

Size: 36'□10'□8' *Payload:* 4.9 tons *Lwt.:* 13 tons
Volume: 166 *Maint.:* 110 hours *Price:* $3,320

HT: 11. HPs: 750 Body, 75 each Open Mount.

wSpeed: 14 *wAccel:* 2 *wDecel*: 2 (3) *wMR:* 0.1 *wSR:* 4
Draft 2.2. Flotation Rating 20 tons.

Design Notes

This boat was largely wood, but the DR 20 elements are armor-plated. It's simplest to design it all as metal. A W, for wood, has been added to armor values where appropriate.

Design wSpeed was 15. Various accounts credit the LCVP with a top speed of 9 to 12 knots (10.4-14 mph). Probably this depended greatly on load and water conditions.

The design Draft value, as shown, is accurate for the forward part of the boat. The aft section drew 3' of draft. In most beaching situations, only the bow draft matters, but in other scenarios (such as crossing a very shallow lagoon) the GM will want to keep in mind the aft value.

The open-mount armor varied. Some LCVP gun positions seemed to have no armor; others traded the front plate for a curved shield protecting the *back* of the gunner.

The LCVP was rated to carry 8,100 lbs. of cargo. (The additional weight in the payload figure is, as always, the fuel, crew, and ammunition.) Both in this design and real life, this would come nowhere near to capsizing it. Undoubtedly, this high-in-the-water limit was necessary for the boat to perform its crucial function of running onto any sort of beach without significant damage. An LCVP could carry up to an additional 7 tons but risk foundering as well as damage upon landfall.

The forward cargo space is exposed, but the GM may rule that smaller cargo loads (and crouching troops) are completely beneath the side walls of the hold. (This still leaves them exposed to fire from above, of course.) This is a bit tricky, though. With 36 troopers completely filling the hold, there will not be room for everybody to duck at once. The GM might require that troops in a full LCVP make a ST-2 roll to be one of the successful duckers, while making it clear that success means that you have left a buddy hanging out to dry.

Additionally, these boats leaked, and photos strongly suggest that many of their crews installed raised flooring in the cargo hold to keep feet dry. Even raising the floor a few inches will make it *markedly* harder for a full platoon to get their heads down (as in, next to impossible for all but a handful). The GM should allow any veterans a Soldier roll to remember to check the flooring of the LCVP they'll be riding into the assault. If it's been raised, they'll want to have words with the crew chief or perhaps arrange some midnight renovations of their own. At assault speeds, feet are going to get wet, anyway.

Reducing troop load by even a few soldiers would markedly improve this situation. Usually, 30 men were carried (p. 97).

The forward ramp was 7' high and thus shielded any troops and most cargo from all *forward* fire only. (Consider this a free special effect of the design.) The winch raised and lowered the ramp, and could be used for other jobs, as well.

The boat has an aft hold with overhead cover, a free special effect common to most vehicles with "no" top armor. This contains the fuel tanks, but has room (16 VSPs) for the crew of three to huddle there in a pinch, perhaps to get out of the rain.

Variants

Some LCVPs used a 186-kW gasoline engine instead of the diesel. This doesn't increase performance enough to make any difference in game terms.

LVT Amtrac

The amtrac (amphibious tracked) series of vehicles was developed from a tracked civilian amphibian used for Everglades rescues in the 1930s. They eventually became a mainstay of Marine amphibious assaults. Unlike the LCVP (p. 88) or other boats, an LVT could deliver troops to shore and *through* the deadly beaten zone on the beach. Since those first 100 or so yards were by far the toughest in a beach landing, and the Japanese in particular depended on light machine guns for this defense, troops riding LVTs usually held a marked survival advantage over their brethren fighting forward on foot.

LVTs entered service at Guadalcanal, but these early versions were not suitable for combat and remained in rear areas hauling supplies. They first entered combat at Tarawa, where they quickly showed off their fighting form. Most of the landing crafts got caught on the reef, but the 125 LVTs in the first wave just trundled along as if on the ground. This proved to be a mixed blessing in this case, as it left the first wave pinned at the seawall while the following waves waded in through lethal crossfire, but the Marines would continue to mount the first waves of their assaults in the amphibian tractors.

The Army also used LVTs – a few more than the Marines, in fact – but did not trust them as much. They mostly carried supplies from ships anchored off the French coast or across wide European rivers where no bridge could be had.

The LVT (A) 2 was the first combatworthy version offering a little armor. Like the DUKW (p. 87), it suffered from not having a cargo ramp, forcing men and materials to go over the sides. The cargo area has room enough for 24 troops and/or just about any cargo load that would not swamp it.

The LVT (A) 2 has a crew of three: a driver, commander, and gunner/engineer. Gunners for the other machine guns were recruited from any carried troops. As with the DUKW, an operator needs two skills: Powerboat while in the water and Driving (Tracked) while on land.

The LVT suffered from few mechanical problems, although the amphibious track (p. 76) did get its predictable share of complaints. Damaged tracks often reduced wSpeed to less than 2 mph in extreme cases. Frequent inspection, and replacement of each worn grouser, was the best solution.

The LVT (A) 2 uses 9.3 gallons of aviation gasoline per hour. Fuel and ammo cost $57.

LVT (A) 2 "Water Buffalo"

Subassemblies: waterproofed Medium Tank chassis with mild slope +3, waterproofed Medium TD superstructure with mild slope +3; three partial-rotation Mini Weapon open mounts 1-3 +0, two amphibious tracks +3.

Powertrain: 186-kW HP gas engine with 186-kW tracked drivetrain and 106 gallons of aviation gasoline in standard tanks; 16,000-kWs batteries.

Occ: 2 CS Body; 1 XCS, 24 XPS Both **Cargo:** 12X Sup

Armor	F	RL	B	T	U
Body:	5/30	4/20	4/20	4/20	4/20
Sup:	5/30	4/20	4/20	0/0	–
Tracks:	4/30	4/30	4/30	4/30	4/30

Weaponry

Very Long Ground HMG/M-2HB [OM 1:F] (300 rounds).
2 Ground LMGs/M-1919A4s [OMs 2-3:F] (500 each).

Equipment

Body: Small radio transmitter and receiver; bilge pump; fire extinguisher. *Open Mounts*: Universal mounts.

Statistics

Size: 22' 11' 8' *Payload:* 5.1 tons *Lwt.:* 14.8 tons
Volume: 141 *Maint.:* 74 hours *Price:* $7,300

HT: 12. HPs: 1,500 Body, 360 Sup, 30 each OM, 270 each Track.

gSpeed: 20 *gAccel:* 3 *gDecel*: 20 *gMR:* 0.25 *gSR:* 5
Very Low Ground Pressure. 4/5 Off-Road Speed.
wSpeed: 7.5 *wAccel:* 0.3 *wDecel*: 10 (10.2) *wMR:* 0.1 *wSR:* 4
Draft 2.1. Flotation Rating 15 tons.

Design Notes

Design gSpeed is 19, wSpeed 7.2, fuel tankage 108 gallons, and flotation rating 14.84 tons. Historical values have been substituted for all but the last, which is not generally cited. Though the LVT has a "one piece" look to it, because it's light compared to a tank of comparable size, it is best designed as a tank chassis with a big cargo superstructure nestled in and atop it. This makes it lighter and gives it properly low tread HPs for its size. Normally, a superstructure of this sort would not have its flotation rating added to the hull's (unless it's a sealed subassembly on a submarine), but for this unusual case both flotation ratings are added together then bumped up a touch to an even 15 tons. This allows the LVT (A) 2 to barely carry 24 troops without swamping. Alternate sources say it only carried 18 passengers; that would be a considerably safer number.

Track DR is decreased by 10 to reflect amphibious option.

Note that all the passengers stood, with no top armor, and could not really duck behind side armor (as they could in the LCVP) unless they had room to completely hit the deck.

The LVT 2 and 4 series used the powertrain from the M-3 tank (p. 78), thus ensuring a good supply of parts.

Variants

The LVT 1 had only DR 5, but was otherwise similar. The (A) 1 used a new engine, decked over the cargo area, and installed an M-3 (p. 78) turret, with manholes in back for two gunners firing open-mount .30 LMGs with DR 25 gunshields.

The LVT 2 was identical except DR 5 and fewer MGs.

The LVT 3 "Bushmaster" was a different design with twin engines, a Small TD superstructure, and two Large Weapon sponsons all improving flotation. It had the same armor as the (A) 2 but could used detachable panels to add +15 DR. These also fit the (A) 2 and the 4s. Its LMGs had DR 25 gunshields available. It also came with a kit of different-sized wooden plugs to fill bullet holes on the fly. (An enterprising LVT 2 commander may want to create his own . . .)

The LVT 4 moved the engine of the (A) 2 to install a rear cargo ramp. The (A) 4 decked over the cargo area as for the (A) 1 but installed an M-8 GMC turret with a 75mm Short TG.

PT Boat

After WWI, the Royal Navy toyed with using small, fast boats armed with torpedoes as "giant killers" attacking warships in hit-and-run raids. This high-risk, high-reward innovation appealed to U.S. Navy planners looking for stopgap measures as they modernized the "real" fleet prior to WWII.

Thus, the Patrol Torpedo boat was born, more as a manned round of ammunition than a proper vessel. The "Mosquito Fleet" found it tough to sneak up on wary Japanese warships, so its usual mission changed to nighttime patrols of dangerous shorelines, where the PTs attacked more easily surprised but still heavily armed Japanese coastal barges. (In the Mediterranean, the PTs found the German "F-lighter" barges to be even tougher targets.) In addition, PT boats rescued downed airmen and often inserted commando parties. Though it was tiny, a PT boat *could* cross open ocean at some risk. Whenever U.S. commanders needed a small payload moved beyond aircraft range into Japanese waters, a PT crew got the call.

PT boats had a crew of nine to 17, generally 12. Skipper, XO, and helmsman stood in the cockpit (bridge) at exposed stations. Two mechanics and a radio operator worked below. One gunner each manned the 20mm and two twin-.50 setups, and one of them doubled as cook. The 20mm gunner stood on deck while the HMG gunners stood in gun baskets (like the lower half of a steel barrel) that offered partial protection (exposed crew stations). Any additional crew handled the torpedoes or manned the extra weapons that most PT boats obtained.

PTs carried an armory with .45 pistols, SMGs, grenades, and the occasional BAR. Grenades mostly helped catch fish, but on a strafing run idle hands would grab an SMG and add to the boat's firepower. The pistols loaded special tracer rounds for signaling aircraft (handy for igniting fuel depots, too). A rubber raft (see p. W125) was carried on deck, sometimes a rowboat, too. In combat, the crews wore life vests and M-1 helmets; some North Atlantic crews wore quick-release flak vests.

PT sailors tended to be a ragged lot, often overlooked and underappreciated. The boats were not meant to last, so spare parts could be hard to find. As in *McHale's Navy*, PT crews usually lived more like pirates than the "knights of the sea" giving "hell on keels" that the Navy portrayed to the public.

The boat below burned 150 gallons of aviation gas per hour. Fuel and ammo costs $1,360 plus $28,000 for torpedoes.

80' Elco, PT 103 Class

Subassemblies: Medium Cutter with mediocre lines +6, Small TD cockpit [Body:T] +3, two Medium Weapon gun baskets [Wheel:T and Body:T] +1, three full-rotation Small Weapon open mounts [1-2 Baskets:T and 3 Body:T] +0, four Small AFV open mounts [5-8 Body:T] +2.

Powertrain: three 1,007-kW HP gas engines with three 1,007-kW screws and 3,000-gallon self-sealing fuel tanks; 20,000-kWs batteries.

Occ: See above. **Cargo:** 20 Body, 28.5 Cockpit

Armor	F	RL	B	T	U
Body:	3/5W	3/5W	3/5W	3/5W	3/5W
Cockpit:	3/5	3/5	3/5	0/0	–
Gun Baskets:	4/25	4/25	4/25	0/0	–

Weaponry

4×VL Gr. HMGs/M-2HB [OMs 1-2:F] (2,500 rounds each).*
20mm Long Ground AC/Mk 4 [OM 3:F] (1,200 rounds).
4×533mm Torpedoes [OMs 5-8:F].*
* Each pair linked, plus link firing all four torpedoes at once.

Equipment

Body: 43.8 bilge; 3 bilge pumps; 12 bunks and 2 cabins; 20 cargo hold; environmental control; 3 fire extinguishers; navigation instruments; 120 man-days provisions; medium (air) and large (naval) radio receivers and transmitters. *Wheelhouse:* autopilot; navigation instruments; searchlight. *OMs 1-3:* Universal mounts.

Statistics

Size: 80'×20'×12' *Payload:* 19 tons *Lwt.:* 60 tons
Volume: 1,342 *Maint.:* 34 hours *Price:* $33,000

HT: 12. HPs: 5,400 Body, 285 Wheelhouse, 75 each Gun Basket, 45 each Open Mount 1-3, 150 each Open Mount 4-7.

wSpeed: 47 *wAccel:* 8 *wDecel*: 1 (5) *wMR:* 0.05 *wSR:* 5
Draft 5.3 or 3.6 (see below). Flotation Rating 135 tons.

Design Notes

The design purchases 1,170 20mm rounds; the historical value is given, instead. Design weight has been reduced 10%.

The Elco was made of wood but had substantial metal bracing. To plane above the water (see p. W147) at high speed, it also had mediocre lines, an option which the design system does not offer with a wooden hull. Given these facts, the boat combines a "metal" hull with the wooden hull's armor option.

Design wSpeed is 54 with torpedoes or 56 without. Historical wSpeed is much lower, but this was an early planing design. Late in the war, an "Elcoplane" could be installed, giving wSpeed 57 (55 with torpedoes). This made the rough ride rougher (wSR 3) until the planing effect kicked in at 25 mph.

Historical Draft while at rest or low speed was 5.3 feet. The design value of 3.6 represents Draft while planing.

Variants

This is a mid-war Elco boat, with new roll-off torpedoes riding essentially naked on open mounts. Earlier boats mounted torpedo tubes. By 1943, many PT crews were deleting two or all torpedoes, because they tended to slide underneath the minimal-draft barges that made up their main prey. (One has to suspect that the thought of a 25mm round pinging one of these naked fish on the nose contributed to this decision, as well . . .)

Almost all PT crews added weapons. Some boats had two pods of eight 5" (treat as 4.5") rockets installed; 37mm and 40mm cannons were common. Some crews stripped cannons from aircraft wrecks, even using 25mm Japanese pieces. Some carried depth charges to deter pursuing destroyers.

In 1943, the PT 314 class introduced 1,119-kW engines. A rowboat was added amidships and radar installed.

Other PT designs were tried, most of them smaller (Light Cutters). Only the 78' Higgins version was used in large numbers. It was slower (wSpeed 38) but more agile (a bonus wMR of 0.1) than the Elco. Its ride was smoother but wetter.

Gato-Class Submarine

The Navy's first true fleet sub, the *Gato* began to enter service just as the nation entered the war. The new boats fanned out across the Pacific, striking at Japanese shipping and gathering intelligence. In 1943, better subs joined the fleet, but the older classes and a few *Gatos* endured the most harrowing days.

The usual crew of 80 could be increased to 100 on some boats. Only the captain had a cabin, though it had a fold-down second bunk. Officers had quarters forward with private mess. Ratings shared 36 bunks in their aft quarters; some preferred the 27 bunks in the relatively cool and quiet torpedo rooms. The enlisted galley seated 24, and served as lounge, theater, and meeting hall. It included an ice-cream machine (p. 38).

The first *Gatos* had a large conning tower, but later boats reduced its size and increased its armor. Each *Gato* was unique: Some mounted an array of AA guns up to 40mm, while some had two deck guns or a larger gun of 4" or 5" bore. Most mounted the deck gun on the main deck to aft, a few on the main deck forward, and others on a subplatform of the conning tower.

The radars had periscope antennae, allowing submerged use, though not on the few *Gatos* active before 1943 (nor is their sea-search radar targeting). The search periscope left a considerable wake, but the 1.4"-thick attack periscope did not.

The subs carried an assortment of small arms; at least one skipper took a bazooka on patrol. This armory tended to grow as Japanese "steel" (deep-water shipping) became scarce and the subs began hunting junks and sampans along occupied coasts. The subs surfaced near them to search for military cargo.

U.S. subs only hit with 10% of torpedoes (compared to 25% for U-boats), largely due to flawed fish. Early on, the magnetic detonators did not work right and trim was miscalculated. Assume Malf 7 in 1941, 8 in '42, 9 in '43, or 15 from 1944. On a critical failure, the weapon circles and attacks the firing boat!

A routine patrol lasted 50-60 days, after which the sub steamed into harbor with a broom lashed to its periscope, symbolizing a "clean sweep of the seas."

At routine usage, the sub travels at 16 mph (14 knots) and uses 164 gallons of fuel oil per hour, for a range of 9,210 miles. Real practice was to cruise at 11.5 mph (10 knots) for a range of 17,500 miles. (In practice, this was more like 13,300 miles given bursts of high speed.) Underwater, *Gatos* could dash at 10 mph (8.7 knots) for 2¼ hours. They could stay under for two days, which requires turning on the life support, while maintaining 3 mph (2.6 knots). (Captains can opt to halve life-support drain on the batteries by turning off the air conditioning.)

Food, fuel, and ammo cost $180,000.

U.S.S. Ray SS-271

Subassemblies: Light Destroyer chassis with sub option +8; sealed Large Conning tower [Body:T] +5; two sealed Large Naval pods [Body:R, L] +6; Large Weapon open mount [Tower:F] +2; four Mini open mounts [Tower:T] +0.

Powertrain: four 1,007-kW marine diesels or four 511-kW electric motors† with two 2,014-kW screws; 94,400-gallon standard fuel tanks [Body and Pods]; 16.64 million kWs batteries.† A 450-kW standard diesel provided electricity.

Occ: Usually 80; see above. **Cargo:** 90 Body, 50 Tower

Armor	F	RL	B	T	U
Body, Pods:	4/56	4/56	4/56	4/56	4/56
Tower:	4/120	4/120	4/120	4/120	–

Weaponry

2 Ground LMGs/M-1919 [Mini OMs:F] (5,000 each).
2 VL Ground HMGs/M-2HB [Mini OMs:F] (2,500 each).
76.2mm Medium DP Gun/Mk 10 [Large OM:F] (90).
6 553mm Torpedo Tubes [Body:F].*
4 553mm Torpedo Tubes [Body:B].*
* 24 553mm Torpedoes/Mk 18 *total* for all tubes.

Equipment

Body: Autopilot; three backup driver controls; 5,335 bilge; 15 bilge pumps†; 77 bunks and one cabin; 90-VSP cargo hold; 25 crew stations; 15 fire extinguishers; 200 man-days of life support†; 6,000 man-days of provisions; precision navigation instruments; very large radio receiver, transmitter, and direction finder; mechanical workshop. *Tower:* 235 bilge; 50-VSP cargo hold; eight crew stations; fire direction center with mainframe targeting computer (+7 to hit); precision navigation instruments; two 15 50' periscopes; 5-mile surface targeting and 6-mile air nontargeting radar; radar detector; two searchlights; 5-mile active/passive sonar. *Mini OMs:* Universal mounts.

† Includes limited access space.

Statistics

Size: 312' 27' 40' *Payload:* 335 tons *Lwt.:* 1,526 tons
Volume: 22,314 *Maint.:* 7 hours *Price:* $716K

HT: 10. HPs: 75,000 Body, 1,500 Tower, 3,000 each Pod, 120 Large Weapon OM, 30 each Mini OM.

wSpeed: 23 *wAccel:* 0.4 *wDecel:* 0.3 (0.5) *wMR:* 0.05 *wSR:* 4
Draft 15. Flotation Rating 2,312 tons.
uSpeed: 10 *uAccel:* 0.2 *uDecel:* 0.3 (0.5) *uMR:* 0.05 *uSR:* 4
uDraft 40. Crush Depth 198 yards.

Design Notes

The design has wSpeed 21, uSpeed 11, and Draft 12.6. Historical values were used, instead. The two pods represent nothing more than the "saddle" bulges at the sub's sides, used simply to more closely approximate historical size.

Gatos could load 21,600 more gallons of fuel in bilges.

The "thin-skinned" Gato had an official maximum depth of 300' but skippers routinely dove deeper. Whether it really could survive to 594' as the design implies is conjecture; some crucial pumps would be failing, even if the hull did not.

Variants

The "thick-skinned" follow-on *Balao* class replaced the *Gato*'s mild-steel hull with a thicker, high-tensile DR 85 skin. This officially increased maximum depth to 400' with engineers theorizing hull integrity to 925' (design maximum 855'). It was essentially the same sub, otherwise. Some old salts preferred the *Gato*, anyway, arguing that depth charges would bend but not break its boiler plate, where the *Balao*'s "brittle" hull would snap and let in the sea. Nothing suggests this was the case.

Fletcher-Class Destroyer

The *Fletcher* class was one of the finest destroyer types of the war, capable of fighting ships, subs, or planes thanks to its remarkable speed and heavy armament.

The *U.S.S. Fletcher* itself was commissioned in June 1942 and entered combat off Guadalcanal four months later. With a hull number of 445 (the digits add up to 13), the ship was considered "lucky" after surviving a battle off Savo Island on Friday the 13th of November 1942. Many *Fletchers* – including the ship described here – did not share this good fortune. Of the 175 built during WWII, more than 20 would be sunk in action, eight by kamikazes. Sixteen earned Presidential Unit Citations.

The *Fletchers* were outfitted with state-of-the-art sonar and hydrophones. In addition, a radar system for night-fighting and aircraft search was fitted. The five 5" gun turrets could be fired and targeted singly, or slaved to the control of the FDC, sitting above the bridge. The smaller 20mm and 28mm guns provided close-in support against small craft and planes.

Fletchers usually had a crew of nine officers and 264 enlisted, feeding them in three shifts. Some carried well over 300 hands; in this case the crew had to "hot bunk," usually rotating two bunks among three men in U.S. practice. Two 25-man whaleboats were carried on davits, as well as four life rafts.

Most crew stations are in the superstructure, on the bridge. A few are in the body proper, primarily in the radio room, and the 5" gunners have a crew station in each turret (with standing room left over for loaders). The other gunners, and torpedo and depth-charge crews, stood on the deck or superstructure. Limited access space is provided for the appropriate equipment, leaving only about 25 VSPs of extra access per crewman, assuming the smaller crew. This isn't submarine-level coziness, but it's awfully tight compared to most warships.

The ship portrayed here fought in one of the most one-sided engagements in U.S. Navy history. On Oct. 25, 1944, at Leyte Gulf, the *Fletcher*-class DDs *Johnston, Hoel,* and *Heermann* with four destroyer escorts attacked a Japanese armada of four battleships, eight cruisers, and 11 destroyers to cover the retreat of six U.S. escort carriers. The *Fletchers* drove off the superbattleship *Yamato* with their torpedoes, and pounded away at the enemy while enduring terrible damage. All but one carrier was saved, but at considerable cost. The *Hoel* and *Johnston* sank. The survivors spent two days in shark-filled waters.

The ship burns 2,700 gallons of fuel oil an hour at routine usage. Fuel, food, and ammunition cost $213,000.

U.S.S. Johnston DD-557

Subassemblies: Heavy Destroyer chassis +9; waterproofed Large Conning superstructure [Body:T] +5; five waterproofed full-rotation Large TD turrets 1-5 with mild slope [2 Body:T and 3 Sup:T] +4; two waterproofed full-rotation Medium Secondary turrets 6-7 [Sup:T] +4; eight Small Weapon open mounts [2 Body:T and 6 Sup:T] +0.

Powertrain: two 22,380-kW steam turbines with two 22,380-kW screw propellers; 164,000-gallon standard fuel tanks; 40,000-kWs batteries. One 100-kW marine diesel engine provides emergency electrical power.

Occ: See above. **Cargo:** 300 Body, 100 Sup.

Armor	F	RL	B	T	U
Body:	4/180	4/60	4/60	4/40	4/60
Turs 1-5:	5/90	4/60	4/60	4/60	–
Sup, Turs 6-7:	4/60	4/60	4/60	4/40	–
OMs:	4/25	–	–	–	–

Weaponry

5×127mm DP Guns/Mk 12 [Turs 1-5:F] (328 rounds each).
4×28mm Long Gr. ACs/Mk 1 [OMs:F] (340 rounds each).
4×20mm Long Ground ACs/M-1 [OMs:F] (540 rounds each).
10×553mm Torpedo Tubes [Turs 6-7:F] (10 torpedoes total).
6×K-Guns [Body:T facing R, L] (5 Mk 6 depth charges each).
26×Mk 7 750-lb. Depth Charges [Body:T facing toward B].

Equipment

Body: 1,500 bilge; 15 bilge pumps; 300 cargo; 2 2-ton cranes (for torpedoes); 275 bunks, 18 cabins, 10 crew stations, and 2 hospital beds; 300-person environmental control; 8 fire extinguishers; 2 6.25-ton external cradles (for whaleboats); 14.25 tons of hardpoints for both Mk 6 and Mk 7 depth charges; 16,380 man-days of provisions; precision navigation instruments; very large radio receiver and transmitter; large radio direction finder; 5-mile active/passive sonar; 2.5-ton winch (alternates between two 2-ton anchors and general use); 3 workshops (each type except electronics); 9-kW traverse gears for 2 5" turrets (15° per second). *Super:* autopilot; 100 cargo; 25 crew stations and 2 cabins; 2 fire direction centers (one for 5" guns, one for AA guns); IFF; precision navigation instruments; 360° 10-mile sea-search radar and 30-mile nontargeting air-search radar; large radio receiver and transmitter; 2 searchlights; 1 workshop (electronics); 9-kW traverse gears for 3 5" turrets (15° per second) and 10-kW traverse gears for both torpedo turrets (5°). *OMs:* Universal mounts for 20mm guns.

Statistics

Size: 376'×40'×102' *Payload:* 752 tons *Lwt.:* 2,650 tons
Volume: 55,656 *Maint.:* 6.5 hours *Price:* $964,000

HT: 11. HPs: 150,000 Body, 1,500 Super, 450 each 5" Turret, 750 each Torpedo Turret, 45 each Open Mount.

wSpeed: 43 *wAccel:* 2.5 *wDecel:* 0.1 (1.4) *wMR:* 0.02 *wSR:* 5
Draft 14'. Flotation Rating 5,040 tons.

Design Notes

Design wSpeed is 42 and Draft 15.1; historical values have been used, instead. The design arbitrarily triples body front DR to represent a nose full of structural steel, ideal for ramming subs and far tougher than the other sides for all purposes.

The weapons loadout shown is "stock." *Fletchers* usually upgraded to as many as seven 20mm and 14 40mm AA guns, sometimes losing one torpedo turret to fit them all. Adding guns and crew raised late-war displacement to as high as 2,950 tons.

Variants

Three *Fletchers* were modified to carry a seaplane catapult, losing one 5" turret to fit it. These proved disappointing and reverted in October 1943 to normal configuration.

Essex-Class Aircraft Carrier

The U.S.S. *Essex* and its sister ships were not the largest carriers of the war, but one could argue that they were the best of the breed, pound for pound. Their huge stores of fuel oil, aviation fuel, and ammunition made them particularly suited for long combat tours in the vast Pacific Ocean.

The *Essex* did not enter combat until May 1943, despite being built in a rapid 20 months. (Future *Essex*-class ships would average 17½ months.) The carrier thus missed much of the crucial early fighting, but took active part through VJ Day.

Other *Essex*-class carriers included the *Yorktown, Intrepid, Hornet, Franklin, Lexington, Bunker Hill, Wasp, Bennington*, and *Bon Homme Richard*. Several carried the names of earlier carriers that already had been lost in the fighting. Many authorities consider the ships of the very similar *Ticonderoga* class to be part of this class, as well, which would make this the most common carrier in U.S. service.

As with most carriers, the *Essex*'s long stretches at sea required it to be a small city, one with a busy airport on the roof. A full 40 VSPs per crewman has been added to ease living conditions; this includes limited access space for all appropriate equipment. Crew services included a barbershop, cobbler, dentist, etc. The only thing that the sailors really lacked was news. Mimeographed newsletters provided only basic war updates, though sometimes the ship picked up shore radio stations.

An *Essex* deployed about 340 officers and 2,900 enlisted, including ship's crew and air group. The 183 crew stations are mostly in the weapons stations, the bridge and backup bridge in the island, and the combat information center in the hull (originally in the island). The hull has 3,790 VSPs of holds used as ammo lockers, with 220 tons of aircraft munitions. Another 20,000 VSPs of holds contained the countless stores a carrier needed: paint, rope, clothing, spare parts for ship and planes, metal stock for making parts, paper, medical supplies, etc.

The *Essex* carried 36 F6F Hellcats, 36 SB2C Helldiver bombers, and 18 TBF Avenger torpedo bombers. Late in the war, the complement changed to 72 F6Fs and 18 TBFs.

The four twin-5" turrets hydraulically rotated at 24° per second or six men turned them at 6.2°. The four solo-5" open mounts rotated at 18° or four men turned them at 7.7°. The 17 quad-40mm mounts rotated at 24° per second or manually at 16.8°. Two men rotated each of the 52 20mm mounts at 25.5°.

The Essex burns 6,700 gallons of fuel oil per hour of routine usage. Fuel, ammo, and food cost about $1.6 million.

U.S.S. Essex CV-9

Subassemblies: Medium Battleship chassis +11; waterproofed Medium Capital superstructure +8; four waterproofed full-rotation Large TD turrets [Body:T] +4; four full-rotation Medium TD open mounts 1-4 [Body:T] +3; 17 full-rotation Medium AFV open mounts 5-21 [12 Body:T, 5 Sup:T] +2; 52 full-rotation Medium Weapon open mounts 22-73 [46 Body:T, 6 Sup:T] +1.

Powertrain: four 27,975-kW steam turbines with four 27,975-kW screws and 6,300-ton (2.08-million gallon) standard tanks; 80,000-kws batteries.

Occ: See above. **Cargo:** See above.

Armor	F	RL	B	T	U
Body:	4/280	4/280	4/280	4/105*	4/280
Sup:	4/195	4/80	4/80	4/120	–
Turs:	4/120	4/120	4/120	4/120	–
OMs:	4/25	–	–	–	–

* See *Design Notes* for an additional DR 210 and DR 105.

Weaponry

8□127mm Short DP Guns/Mk 12 [Turs:F] (9 rounds each).*
4□127mm Short DP Guns/Mk 12 [OMs 1-4:F] (18 each).
68□40mm Med. Gr. ACs/M-1 [OMs 5-21:F] (25 each).*
52□20mm Long Gr. ACs/M-2 [OMs 22-73:F] (180 rounds).
Ammo is ready rounds only. Ship carries 20□ ready rounds.
* All guns in each turret or open mount linked.

Equipment

Body: 3,000 bunks and 200 cabins; 15K cargo; 2 launch catapults; 6 18' cranes; 130 environmental control; FDC (used as CDC); 82,560-sf flight deck; 212,310-gallon self-sealing fuel tanks for aviation gas; 3 hangar bays of 40-VSP capacity each with 16,000 VSPs capacity to divide among them (modular); 2 immense and 2 very large radio receivers and transmitters; 4 searchlights; 15 surgery; 3 mechanical, 8 engineering, 7 electrical, and 7 armoury workshops; 4 8.51-kW turning gears for turrets. *Superstructure:* 5K cargo; 20 halls; 6 luxury cabins; 2 IFF; 6 small, 6 medium, 4 large, and 2 very large radio receivers and transmitters; very large radio direction finder; 2 each 360º 8-mile and 10-mile radars (one each air- and sea-search); 360º 100-mile nontargeting air radar; 4 searchlights; 1 workshop of each type. *OMs 1-4:* 2.45-kW turning gear each. *OMs 5-21:* 1.71-kW turning gear each.

Statistics

Size: 877'□148'□170' *Payload:* 11K tons *Lwt.:* 32K tons
Volume: 580K *Maint.:* 2.4 hours *Price:* $6.9M

HT: 7. HPs: 720,000 Body, 20,000 Superstructure, 450 each Large TD turret, 360 each Medium TD OM, 200 each Medium AFV OM, 75 each Medium Weapon OM.

wSpeed: 38 w*Accel:* 0.5 w*Decel*: 0.1 (0.35) w*MR:* 0.02 *wSR:* 6
Draft 28.5. Flotation Rating 51 tons.

Design Notes

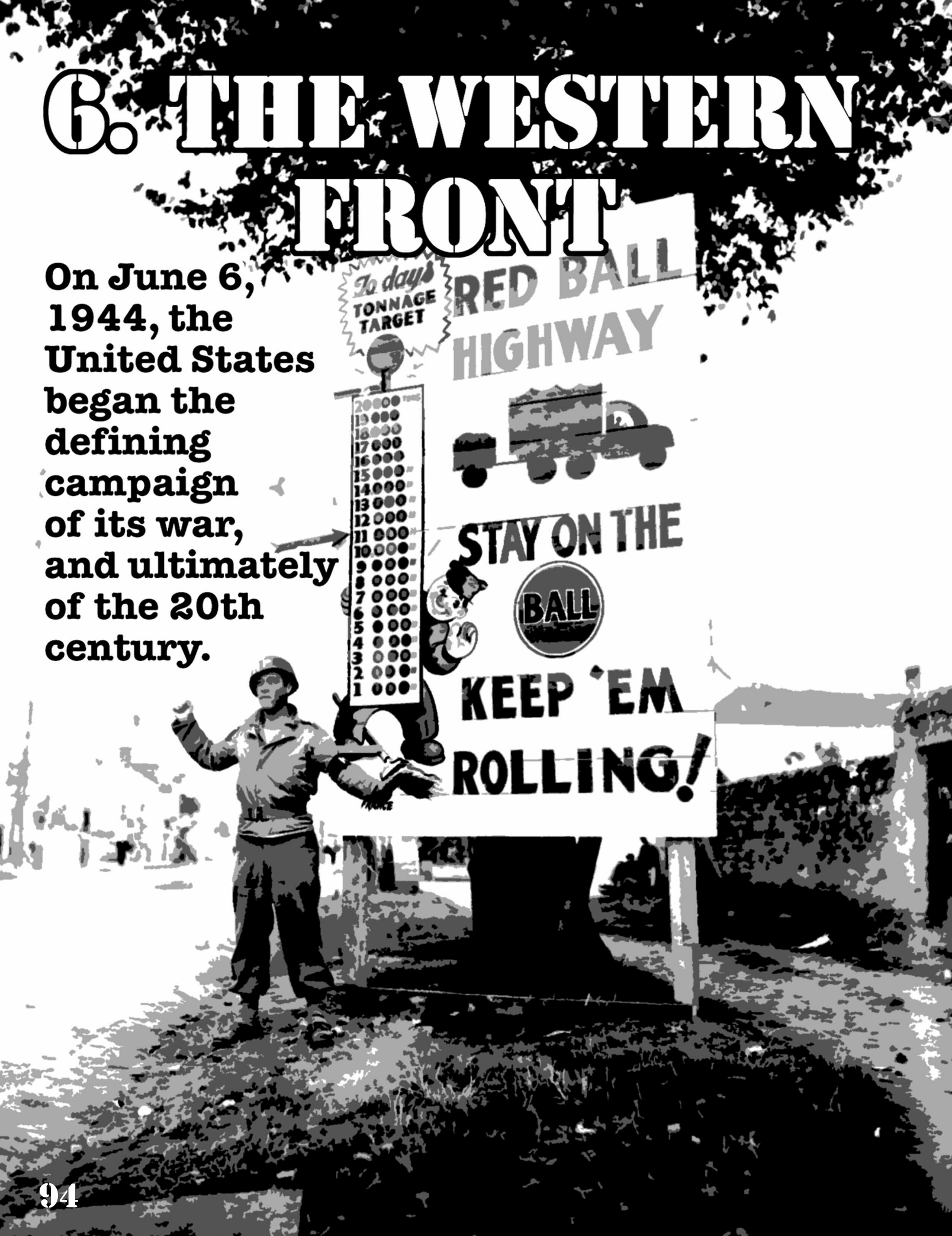
Design wSpeed is 32 and Draft 34.7; historical values have been used, instead. Weight has been increased 10%. Payload weight includes 435.5 tons of airplanes (normal complement).

U.S. carrier designers used two or three layers of top armor; this kept the center of gravity low and simplified hull construction. The DR 105 flight deck protects the hangar and triggers most bombs, rendering explosion damage *non-contact* for lower decks. The DR 210 hangar deck is the main armor layer. Below it, the main deck holding personnel areas also has DR 105 protecting the machinery, fuel, and ammo stores below it.

The open-air hangar deck was not protected by the ship's side armor, either. Doctrine demanded that every plane be in the air and fighting, so this deck should be empty, anyway.

6. THE WESTERN FRONT

On June 6, 1944, the United States began the defining campaign of its war, and ultimately of the 20th century.



While Chapter 1 provides a succinct history of the war, including the Western Front, this chapter takes a much closer look at the battlefield that figured so prominently in the American vision of the war. It is not intended as a thorough history, but as a "look and feel" guide to help GMs immerse U.S. characters into a Europe-based campaign.

OPERATION OVERLORD

Back then, as now, the Anglo-American invasion of mainland Europe – or "Second Front" – loomed as the first note in the death knell of Nazi Germany. Almost every part of the U.S. war effort in Europe steered toward the invasion; almost every facet of the GI's training prepared him for his role in that epic step.

At the time, "D-Day" was the standard terminology for the day of launch of any offensive, but the term shortly would become forever linked with this world-shaping offensive on the fateful day of June 6, 1944.

Operation Neptune: The Fleet

The fleet of ships used in Overlord dwarfed any that had ever been assembled, with six battleships, 23 cruisers, 135 destroyers and other escorts, nearly 900 merchant ships, and more than 1,100 landing boats. Minesweepers steamed ahead of the armada to clear lanes through the channel. Escorts patrolled the channel to protect the cargo and troop ships. Submarines scouted the coasts and gave weather reports from Newfoundland to Bermuda. Prior to the arrival of the armada, several subs and guide ships were in position with radar reflectors and radio beacons to direct the air and sea operations.

The most critical part of the fleet was the LST landing ships that carried vehicles; the invasion had been planned around their availability. Not a single LST was left in England.

The invasion fleet was largely a Royal Navy endeavor in both command and numbers, with the U.S. Navy a distant second. French, Norwegian, and Polish vessels also participated.

During the operation, mines and coastal guns took their toll on the ships, but losses were lighter than expected. Several destroyers and escorts were sunk, as well as four LSTs. More disturbing was the loss of 55 landing boats on Omaha Beach, a telling sign of the fighting there.

Weather caused problems, too. The seas were choppy (see p. W151 for effects) and caused some of the overloaded small craft to sink. A light mist early in the morning obscured landmarks as the first wave hit the beach (-1 to -2 to Vision rolls). Currents near the shoreline were as fast as 3 knots, pushing many landing craft off target. This caused serious problems for the infantry, as they tried to assemble their scattered units.

Throughout D-Day, landing craft ran to the beaches with men, vehicles, and supplies. Returning craft served as ambulances, delivering the injured to ships with medical facilities.

Germans watching the fleet would praise its discipline during the assault. Throughout its preinvasion assembly, the fleet maintained strict radio silence, and even forbade the use of signal lights. German sentries reported hearing the flotilla about 2 a.m., but could not confirm a visual sighting until the Allied naval guns started firing just before H-hour. (The awe-inspiring armada spread out before them might force green troops among the German defenders to make a Fright Check.)

The Resistance

Unconventional forces played a role in Overlord, as well. French resistance fighters, using materiel air-dropped to them during dangerous nighttime flights by the OSS and SOE, managed to destroy hundreds of locomotives and freight cars in the weeks and days prior to Overlord. On June 5, the Maquis launched more than 1,000 attacks, cutting rails and telephone lines all across Normandy. Frenchmen, resistance or not, aided the invaders with medical care, food, and information. This aid put the civilians in great peril if the invasion failed; the Germans had already shown a capacity for ruthlessness against "collaborators" in the months before the landings. In the days following the invasion, more than one French village was razed to the ground for aiding the Allied invaders.

This campaign, coordinated through special-forces teams called Jedburghs, would contribute greatly to the confusion and communications problems that slowed the German response. Eisenhower would later credit the Resistance as having the effect of 100 divisions; others would claim the Resistance did little of value. For more information on the French Resistance, see ***GURPS WWII: Return to Honor***.

The Air Force

The might of the Allied armies extended beyond the land and sea. In the skies above Normandy, thousands of aircraft – including 5,000 fighters – pummeled German targets. British and U.S. bombers dropped thousands of tons of ordnance on Northern France in the days before the landing craft touched the shoreline; however, this attack did not concentrate on Normandy, to avoid tipping off the Germans to the landing site.

Allied planners had hoped to knock out the defenses with air strikes at dawn, but few of the bombs hit their targets. German bunkers and trenches, built to protect the defenders against such attacks, were resistant to damage. (They had at least DR 325 *squared* against all but direct hits, per p. W202, for effective DR 106,000!) They also were far too small to be targeted by level bombers (+4 to +8 size modifier); an ace bombardier at 3,000 yards up would still miss by several hundred yards. High-level clouds threw off the aim of B-24s targeting Omaha; they dropped their loads several thousand yards inland.

B-26s achieved the best results of the day, screaming 50 yards above Utah Beach minutes before H-hour. Their bombs left deep craters that would soon shelter U.S. troops.

Allied *jabos* had better luck than the level bombers, managing to destroy hundreds of vehicles that tried to move to the assistance of their comrades near the beaches. Their rocket and machine-gun fire made short work of any Wehrmacht vehicles caught in the open. Typical firing range for guns and rockets was 300-500 yards. Dive-bombing runs, started at 3,000-5,000 yards with bomb release at 600 yards, returned much better results than level bombing on targets of this size.

The fighters kept up the pace throughout the campaign, working closely with Allied ground forces. USAAF pilots rode along with ground troops in special jeeps or tanks equipped with air-to-ground radios, directing the planes with a high precision. German casualties were high, including Field Marshall Erwin Rommel, shot up by a British Hurricane on July 17 while riding in his staff car. So complete was the air superiority that Eisenhower told his troops, "Don't worry about the planes overhead. They will be ours."

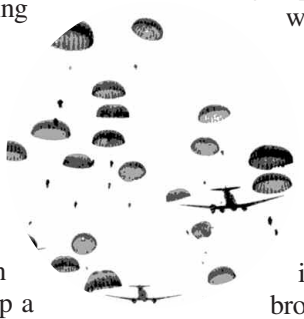
This wasn't entirely true. Under constant attack at their airfields, the Luftwaffe struggled to put up 300 sorties over France on D-Day, to the Allies 15,000. Two German fighters even broke through the air cover late in the day and strafed the invasion beaches. The Luftwaffe struck just enough to keep Allied anti-aircraft gunners jumpy, but not enough to do any real damage.

Airborne Invasion

On June 5, as the fleet crossed the English Channel and assembled for the beach assault the next morning, another equally impressive fleet passed above them carrying the airborne troops. More than 1,000 transports began taking off at midnight, preceded an hour earlier by planes ferrying pathfinders to their landing sites.

The Paratroopers

Earlier that evening, Eisenhower had personally visited the U.S. airborne units that dropped into Normandy. Their macho attitudes, Mohawk haircuts, and war paint raised his spirits about the looming invasion . . . and would terrify sleepy German sentries a few hours later. Their mission was to jump a few miles beyond Utah beach, on the Cotentin Peninsula. There, they would screen the flanks of the invasion force and hold certain key objectives (mostly crossroads and bridges) until they were joined by the U.S. units fighting inland from Utah. British paratroopers would perform the same role near British and Canadian beaches.



The paratroops, weighted down with over 100 lbs. of equipment, packed into the transports after a hearty last meal (p. 98). After gearing up, the troops literally crawled aboard the transports for the two-hour flight to France.

The transport pilots delivering the paratroops had to contend with clouds and intense flak. Some pilots dropped to treetop level and hit the gas in an effort to avoid the flak. These problems, plus high winds and overloaded planes, resulted in troops being dropped directly in the sea, while others landed in trees, gardens, and cow pastures all across the Cotentin, some as far as 20 miles from their assigned DZ. The low altitude and high speed at which some men jumped caused hundreds of casualties. GMs may require Parachuting rolls at -4 or more in these extreme conditions, with failure resulting in lost equipment and injuries.

Troopers that remained in good shape beginning the jump still had to end it. Gen. Rommel had ordered the local hay fields flooded with seawater to limit their use as DZs. Many troopers that landed in them drowned while trying to get free of their chute and equipment. (PCs unlucky enough to land in the flooded fields should roll against DX-3 every 10 seconds until struggling free of the chute per p. 68, with failure requiring a Swimming roll to avoid drowning damage.)

The widely scattered paratroops began sneaking around in the dark, trying to find each other while avoiding German patrols. The men formed up as best they could; twos and threes became groups of a dozen or more after a few hours. An energetic leader would then round up all the men he could find and bust out across hedgerow country, cutting communication wire and shooting up Germans while heading for his objective.

By the end of D-Day, their mission objectives were mostly fulfilled, and the confusion and mayhem was just enough to prevent the Germans from formulating an organized response in the Utah area. The misdrops actually aided in this regard. Troops scattered far and wide kept the enemy from guessing the strength and location of the airborne units.

Glider Riders

British gliderborne troops accomplished one of D-Day's most daring and successful attacks by seizing the Caen Canal bridge, 5,000 yards inland from the British beaches. In what was described as "the finest feat of flying in World War II," a group of three gliders landed just after midnight within 50 yards of the bridge. (Replicating this landing would include modifiers for darkness, and the narrow confines of the landing zone, for at least a -6 penalty to Piloting rolls.) The bridge would soon be called Pegasus Bridge, in honor of the Pegasus emblem on the daring paratroopers' divisional patch.

U.S. gliders began landing on the morning of June 6, just after daylight. These men brought heavy mortars, antitank guns, and jeeps. They had to brave sharpened telephone poles that had been planted in the pastures near the beaches. "Rommel's Asparagus," as they were called, ripped the thin plywood-and-cloth gliders to shreds. Landing on the wet grass increased the landing run, which was further exacerbated by deep trenches running across the fields. As a result of these defenses, the first wave of gliders suffered many casualties.

Challenge and Password

The system used for identification during troop link-up was simple. The pre-planned words were commonly associated with each other. If the password was, say "Mickey," then the appropriate response was "Mouse." Thunder and Flash were the challenge and passwords for June 6. Often the words were chosen so that they would be difficult for native Germans-speakers to pronounce, such as those beginning with V and W. An alert soldier that heard someone approaching would "challenge" the approaching person. If the right response wasn't given, then the orders were to take them captive or shoot them. Most troops might give the stranger a chance, but a few might not be so forgiving. Ideally the words were changed every day at dawn, but in some operations a particular set stayed in use for as long as three days.

D-Day

The invasion on the beaches was on a tight schedule. Not only were the transports sitting ducks, but the tide was rising quickly. In two hours, the water moved 80' up the beach. On average, there was 200-300 yards difference between high and low tide, forcing the men forward and into the German guns. The strong currents prevented men adrift in the water from swimming ashore (-2 to Swimming). Mist, smoke, and choppy seas added to the confusion. H-hour was set at 0630 hours for the U.S. beaches and 0725 or later for the British.

The Germans had planned an intricate network of defenses to meet any invasion force. Belts of beach obstacles, wire, mines, trenches, and concrete bunkers dominated the landscape. Each strongpoint included phone lines to the coastal artillery. Many aiming points were pre-plotted and marked on a map mounted on the bunker walls. (Use the better of Soldier skill or Forward Observer +5 to call in this pre-plotted fire.)

The Allies had their own fire support. Throughout the day, naval gunfire and self-propelled artillery on landing craft pummeled the beaches and inland targets. The U.S.S. *Texas*, an old battlewagon with 10 14" guns (see p. W135) fired more than 450 of its big shells, closing within 3,000 yards from shore. Destroyers and other warships plowed gunfire into stubborn defenses. Under the direction of naval shore parties, destroyers moved to within 700 yards of the beach in an effort to knock out strongpoints with 5" guns. Spotter planes above the beaches directed the shelling far inland once assault troops hit the beach, taking out artillery positions and troop concentrations.

All this shelling had a side effect that many assault troops credited with their survival. The grass on the bluffs and cliffs, particularly at Omaha, was set ablaze by the firing, giving a -1 to -3 to Vision rolls and partially concealing the attackers.

The Assault Troops

In each 30-man landing boat (p. 88) was a self-sufficient team, trained to a sharp edge and capable of exiting the craft in less than 10 seconds. Each company was packed into seven LCVPs; six of them were assault boats, the seventh a HQ boat. Assault boats hit the beach in the first wave, followed shortly by a smaller wave of support boats. The layout below should be considered the standard, but there was much variation between units, such as substituting LMGs for BARs.

At the bow ramp was the boat leader, an officer or senior NCO, followed by a five-man rifle team. Next was a four-man wire-cutting team, two two-man BAR teams, a four-man 60mm mortar team, a four-man bazooka team, and a two-man flamethrower team. The last off the assault boat was the assistant boat leader, an NCO, and a five-man demolition team. Usually, two assault boats per company included a medic.

The heavy weapons company (see p. W43) of an infantry battalion was packed into five "support" boats plus a HQ boat. The support-boat team leader stood at the ramp with a five-man rifle team. Behind them was a six-man M1919 MMG team and a four-man wire-cutting team. They were followed by eight troops manning an 81mm mortar, and then the assistant boat-team leader and a five-man demolition team.

The HQ boats contained the commanding officer and HQ section (pp. 27-28) plus supporting personnel, such as engineers, medics, and naval shore parties that directed naval artillery. Some battalion and regimental HQs also went ashore in the assault waves, including at least three U.S. generals.

The team leader in each landing boat carried an M-1 carbine, colored smoke grenades, and a walkie-talkie (see p. W90) for boat-to-boat communication. The assistant team leader carried an M-1 rifle and smoke grenades. Each of the Garand-equipped rifle teams had a bangalore torpedo, a set of wire cutters, and a grenade launcher and rifle grenades, in addition to their more routine gear.

The wire-cutting teams carried M-1 rifles, two bangalore torpedoes, and two sets of wire cutters. The BAR team carried more than a dozen magazines per man, plus spare clips of M1 ammunition that could later be loaded up in BAR magazines. The demolition team carried rifles, pole charges (p. 101), satchel charges, TNT, and various demolition tools. The 60mm mortar team carried nearly 50 mortar rounds, the bazooka team five rockets each. The 81mm mortar team had 3-5 mortar rounds per man, plus two field phones, and wire; the observer and his assistant were to move far forward.

Some of the landing craft were so overloaded in the choppy seas that soldiers had to bail water the entire trip. Even then some boats sank, casting heavily laden men into the water. Those that did not keep the invasion belt (p. 68) high on their chest ran a good risk of turning upside down, with their legs pointing skyward as they drowned. (GMs may secretly roll vs. Soldier skill to prevent this.) Soldiers that lost their invasion belt, refused to wear it, or didn't remember to activate it usually went right under. (Swimming rolls are at -2 plus a penalty equal to *twice* current encumbrance; see p. W196.) Others still had to drop most of their gear, including heavily laden assault vests, BARs, LMGs, and flamethrowers.

The Funnies

Many armored vehicles were modified to meet the challenges expected at the water line. Most of these were based on the ubiquitous Sherman tank (see p. W102), although the Churchill tank was widely used for British modifications. British Maj. Gen. Sir Percy Hobart, former commander of the Desert Rats in North Africa, thought up many of these concepts. His active imagination, and skilled design engineers, proved to be of great value to the British invasion forces. Unfortunately, U.S. commanders were skeptical of most of Hobart's concepts, and did not take advantage of them.

Of those "funnies" that the Americans did deploy, the simplest modification was to "waterproof" a standard Sherman, allowing tanks to rumble along the sea bottom with only the turret exposed. This would ensure that landing craft could put the tanks ashore, even in rough seas or when halted by beach obstacles. The characteristic fording vents are treated as a mini superstructure with DR 2. With sealing, the cost is $1,824. This adds 184 lbs. to the standard Sherman, but allows it to operate in 12' of water. All but the top turret hatch must remain closed. This blinded the driver when his vision slit was underwater, and he was forced to follow the directions of the tank commander, who could see from his turret vision block.

The most ambitious Sherman modification was the DD, or duplex drive. A "Donald Duck," as the GIs called them, adds sealing, three modules of wading screen from p. W141, and twin 65-kW screws. A single periscope module, split between the driver and commander, barely peeked over the top of the screen; it had no magnification. A bilge pump was also added. Flotation rating is 42.6 tons. Performance in the water is the historical 4 mph (design is 6 mph), running both tracks and screws. Historically, the awkward nature of the "boat" made it difficult to manage; double all control-roll penalties while afloat. Crews were supplied with rescue-breathing devices (see p. W:HS23), life vests, and rubber rafts. The DD increases cost by $2,700 and weight by 1,050 lbs.

Another common variation was to add a bulldozer blade to the front of the tank. Two such modules (representing a single large blade) would add 1,200 lbs. and $240; this represents a heavy-duty blade suitable for clearing mines. It could clear a path about 9' wide. The tank dozers proved crucial in virtually every amphibious operation.

The "Calliope" was the nickname for a Sherman fitted with a 60-tube 4.5" rocket launcher mounted right above the top turret hatch. Although it probably wasn't used at D-Day, it was being used in Italy at the time. The M2 .50 caliber and its mount must be removed to use this modification. This is treated as a Large Weapon pod (size +2, HP 120) with PD3, DR5 mounted on a 2-ton-capacity hardpoint. The rocket launcher can be jettisoned from inside the tank. The top turret hatch can open, but getting in and out takes a good bit of wiggling. Add 1,300 lbs., $175 for the Calliope modification. Total weight with 60 rockets is 3,550 lbs. A full load of rockets costs $975.

The Crab was a Sherman modified to use the mine flail, while the Bobbin was a Churchill equipped with a mat layer (both described on p. W137). Many of these modified tanks were used with great success in the British sectors on D-Day.

Historically, these modifications weren't combined, but there is no reason that enterprising soldiers with the right connections couldn't have a dozer tank or Crab fitted with a Calliope. Engineer or maintenance units would have more luck at pulling this off, but such a contraption might not raise many eyebrows. GIs often passed off such shenanigans as official Army programs to newly assigned officers.

Omaha

Like the other beaches, Omaha was divided into sectors. The main three sectors, each several thousand yards long, were Dog (Green, White, and Red sections), Easy (Green and Red), and Fox (Green and White). In addition, a Ranger attack was launched on Pointe Du Hoc in Charlie sector (see below). Rather than stumble over bothersome coordinates, a commander could simply request reinforcements at Dog Green or Easy Red sectors, quickly describing the intended location.

The mission at Omaha was to capture five roads or "exits" leading inland – Dog One and Two, Easy One and Three, and Fox One. Each exit provided a path for vehicles to get beyond the bluffs, but had to be cleared of mines and obstacles by engineers, first.

These exits were guarded by concrete pillboxes with MG42s and 75mm or 88mm guns. Trenches and sandbagged machine-gun pits connected the bunkers, and the whole area was seeded with wire and mines (mostly Tellermine 42s and Schumine 42s at a 1:5 ratio; see p. W:IC65). German mine fields were 80' deep and 100' long, with a density of 1-3 mines per square yard. Multiple fields were combined to protect large areas. The bombardment had blown many of these apart, but some remained as partial or complete fields.

The Last Meal

The last meal before an invasion was always supreme. All-you-can-eat steak and eggs was staple fare, with mashed potatoes, white bread, and ice cream. Hot coffee and fresh milk was also served. Sometimes, the troops got pork chops instead of steak, or beer instead of milk, but the intention was to crank up morale with a suitable last meal. On small ships, this was not always possible, so the Army compensated by feeding their last meal before boarding, and then sometimes giving out porkchop sandwiches before the boat rides.

The Army's surgeons often cursed this policy hours after an assault, as they tried to flush all that undigested red meat out of the abdomens of injured soldiers . . .

After a nauseous two-hour ride in a bobbing landing craft (see Seasickness, p. CII136), the first wave of nine companies of assault troops hit Omaha at H-hour, right behind a heavy naval barrage. German bunkers dotted the bluffs above the beaches, some 600-700 yards away from the low-water mark. Beach obstacles held the landing craft back as far as possible, and forced the infantry to cover the killing ground as best they could until reaching the "shingle," a bank of small stones 3-5' high; this was the high-water mark, with 300-400 yards difference between it and the low-water mark. Beyond the relative cover of the shingle was a 2'-thick concrete seawall which would have to be blown to allow vehicles beyond the beach. Behind it was a 10'-30'-deep apron of concertina wire, a road, a 10'-by-10' tank ditch, and then the base of the 100-200' bluffs some 200 yards away. Most of the bluffs could be negotiated relatively easily. (Only the steepest required Climbing rolls.)

The undulating surface of the bluffs allowed plenty of cover for troops crawling up to the bunkers. Combined with the tall grass and smoke, soldiers were eventually able to flank the bunkers and systematically take them out.

Some troops encountered only light fire. Four boat teams were able to walk ashore and scramble up the bluffs at Omaha without taking *any* enemy fire. Those GMs wishing to randomly recreate this disparity may roll 1d, with a 6 indicating heavy fire and a roll of 1 representing no fire. All other rolls result in the occasional mortar or artillery attack, and MG grazing fire every 3d seconds (see *Under Fire!*).

Omaha's defenses were manned by five battalions from a seasoned German infantry division with some veteran-quality units. The beach defenders held their fire until the landing crafts opened, then shot directly into the boats when possible. Smoke and heavy covering fire averted this on occasion, but casualties were high until these guns were knocked out. U.S. armor was intended to help, but much of it was sunk when the DD Shermans (p. 98) were released too far from shore. Only four made it to the beach, and the Germans quickly dispatched them.

Once the bluff defenses were gone, the Axis troops tended to break rather easily. Throughout the day, firefights broke out until the Germans retreated. Allied troops pushed forward cautiously, only to be fired on as the enemy made another stand in a new position. Mine fields, MG pits, and reinforced houses almost completely stopped inland movement in the early afternoon. Exhausted and disorganized, the survivors received reinforcements so that U.S. fighting men could claim a couple of thousands yards of inland soil by dark.

Utah

Unlike Omaha, Utah had a wide-open sandy beach. Bunkers dotted it here and there, but overall the beach was only lightly defended. Utah had only two sectors: Uncle Red and Tare Green. Beach obstacles were not as dense here, but the sea was shallow and less useful as a temporary port. Shoals and sandbars caused problems throughout the day, as boats missed the narrows and hit the bars themselves. Some troops waded over 500' to shore.

Once on dry land, the men had to go only a couple of hundred feet over grassy dunes before reaching the concrete seawall. Inland, coastal villages provided the Germans with many opportunities for defensive fighting, but this was not done. They thought a landing in these shallows was unlikely.

As at Omaha, these troops usually landed several thousand yards from their intended spot. Brig. Gen. Theodore Roosevelt Jr., son of the Rough Rider himself, waded ashore with them. With cane in hand, he walked into the dunes and looked over his map. He noted the position, then said, "We start the war from right here." He won the Medal of Honor for his action that day, but died a few days later of a heart attack.

Resistance at Utah was surprisingly light. It was defended by a low-quality unit of Germans and Georgians. (Treat them as green troops.) They had been blasted by the only successful bombing attack of the day, and many fled the beach into the jaws of the airborne troops. Heavy coastal bombardment and the Axis knowledge that they were cut off from reinforcement saw Utah claim the least casualties and the most POWs.

All but four of 32 DD Shermans made it ashore after being launched some 3,000 yards out. They rushed ahead to link up with the paratroops a mile or so inland by day's end.

Under Fire!

In D-Day's worst moments, small arms and artillery fire pounded the dogface. To simplify this barrage, GMs might simply roll 3d for each soldier each second; on a 3 during relatively light fire up to a 7 during murderous fire, the soldier takes one hit from an MG42, with one additional hit for each point by which the roll succeeds. These chances to hit should be modified by target position and cover, but active defenses are not allowed. Beach obstacles provide partial cover at best, giving the gunner a -2 to -4 to hit those GIs sheltering behind the hedgehogs, log ramps, and Belgian gates.

At the shelling's worst, assume that every 3d seconds an artillery round lands within 5d yards of the assault party. Determine the direction by using the rules for grenades on p. W201. The GM should lift this fire as dramatically appropriate to give the troops a fighting chance. This is realistic; caissons must be refilled, hot MG barrels swapped, gunners replaced, etc. Varying the frequency of checks can make these rules suitable for any battle.

GMs may also choose to interpret hits dramatically. A Bible in a shirt pocket might stop a bullet; iterations of this story have been told in almost every U.S. war. Hits on canteens, rifle stocks, etc. could ruin the item but save the GI. Soldiers hit in the helmet occasionally survived with nothing more than a good scare and a nice souvenir.

At other times, the GM may prefer to handle enemy fire in detailed ***GURPS*** fashion. It's important to remember that most soldiers will be crouching and behind cover, for a -2 to -4 on rolls to hit them. Realistically, only in rare circumstances would a soldier get a full body view of the enemy. Bullets kicking up dust around the target also can obscure it from view (see p. W154). Smoke would have the same effect. In a truly realistic combat, most battlefield weapon skill rolls will take a hefty penalty, lengthening the fight considerably.

Bunkers

German bunkers had several rooms, usually at least two; some had 10 or more. The largest had crew quarters, kitchens, radio rooms, and plotting rooms with large maps of the area. The fortifications were normally split level, with fighting compartments in the top, and stairs leading down to the living areas. Some were fitted with escape tunnels. Many had a stove and a small sealed room for protection against gas attacks. Intercoms, phones to nearby bunkers, and electric power were standard features.

Older concrete bunkers in Normandy were 1-2' thick (DR 325 to 650). Newer ones were a standard 78" thick, for DR 2,100, usually only on the front and possibly the sides. For non-standard bunkers, assume that concrete has DR 27 per inch. The rear was usually of the older, thinner construction. Bunkers were usually covered by a layer of grass-covered earth on the side and top, and camouflage netting on the front.

Most bunkers had an open pit in the top, called a "Tobruk," which served as an observation post or MG- or mortar-firing position. Troops could climb stairs inside the bunker up to the weapon, only exposing their heads to enemy fire. Ammunition was stored in the complex below, within easy reach. The opening was about 6' across, a juicy target for a GI close enough to throw (use DX or Throwing) a grenade or satchel charge. This would not take out the whole bunker, since each room was separated by thick concrete walls and armored doors.

The front of the bunker came in a wide variety of forms, based on function and location. The most common along the Normandy beach was the observation bunker, which had a dome-shaped front with a slit 2' tall that ran across the front of the bunker (DX-3 or Throwing skill to get a grenade or charge through the slit). From here, officers could direct troop movements and call in artillery fire. Though not officially a fighting bunker, many added MGs as an ad-hoc defense. GIs shooting at observers or gunners suffer a -4 penalty.

Fighting bunkers had an opening with a stepped front designed to reduce ricochets. An armored plate (DR 200) covered the guns inside, typically 75mm or 88mm. Most also had a Tobruk pit. Multiple MG ports flanked the main gun, spaced about 2' apart and each with a 45º arc of fire. Vision through the narrow armored viewing ports (DR 20) was at -2. Snipers may shoot through the window at a -7 to hit the gunner.

The rear of the bunker usually opened onto a set of stairs leading up to a trench. The door at the rear was at least DR 100, and was covered by a MG port to one side.

Smaller bunkers, such as the mobile one on p. W:IC59, dotted the coast as well. Some mounted turrets from French, Czech, and German tanks, and even naval ships. Sandbagged MG pits and simple foxholes also were used to protect the flanks of the bunkers. GIs may have to defeat three or four such emplacements before getting within range of the bunker itself.

Point Du Hoc

Three companies of 5th Ranger Battalion were assigned to take out a battery of six 155mm guns that overlooked Utah and Omaha beaches at Point Du Hoc. The guns and their concrete bunkers on top of a sheer 100' cliff had been called "the most dangerous guns in France." A bombardment had hit the area hard, but the only way to make sure the guns were knocked out was to put men ashore.

The Rangers approached the cliffs in 10 landing boats and a few DUKWs (p. 87). They were issued rocket-propelled grapnels and a variety of ladders. Also, some DUKWs used at the point were equipped with a 100' fireman's ladder (10 modules of the extendible ladder, p. W137). Two MGs were mounted atop the ladders. At least one Ranger used the device in combat, swaying about as bullets zipped by.

Much of the special equipment was lost or malfunctioned, and the landing delayed by poor navigation and bad weather. Regardless, the Rangers began the climb they had been practicing for months (adding a couple of points to their Climbing skill in the process). Despite fierce opposition the stubborn Rangers made it up, and the cliff was secure by 8 a.m.

The Rangers were stunned to discover that the guns had been replaced by wooden poles (which need not be the case in a slightly alternate-history campaign). The real battery was quickly located a half-mile inland. The German artillerymen were completing breakfast and had just formed up when a couple of Rangers with incendiary grenades sabotaged the pieces and escaped.

Atop "the Point," the Rangers dug in, expecting to be relieved in a few hours by troops coming overland from Omaha. Instead, the small force repulsed several counterattacks; they would not link up with other units for two more days. A few misdropped paratroops did join them, however; at least three had climbed the Point in the dark (Climbing -2, plus darkness penalties), having been dropped on the beach below!

Sword

Sword Beach had four sectors (Oboe, Queen, Peter, and Roger, each with Green, White, and Red sections) that stretched over five miles of French coast. This and the other Commonwealth beaches were home to posh villas, seaside vacation houses, quaint shops, and fiercely dug-in panzer-grenadiers. The beach was flat and open, strewn with mines and wire and

covered by reinforced houses that mounted machine guns and mortars. Batteries of artillery were pre-registered on it. Only a seawall offered cover to the British assault troops.

The British fought hard and managed to push off the beach early on. Once they reached the coastal towns, the fighting was much tougher. Concrete walls had been erected during the spring to block the streets. The British had to fight at point-blank range to blow the walls and bring up tanks.

Through this tough going, the troops managed to bear forward through several hamlets. By the afternoon, the force of British and French Commandos had made it 3 1/2 miles into France, at which point they linked up with the paratroopers at Pegasus Bridge (p. 96).

The most dangerous point of the entire invasion occurred when nearly 100 tanks from 21st Panzer counterattacked at the weak joint between Juno and Sword. They were stopped just short of pushing the whole force there into the sea, but had created a two-mile gap that would take days to close.

Juno

This six-mile beach was similar to Sword, but with shoals and sandbars offshore that forced the invading Canadians to delay their landing until almost 8 a.m. The landing-craft pilots still had to do some tricky navigating to avoid the obstacles, just underwater. The beach had two sectors: Nan (with White, Red, and Green sections) and Mike (Red and White). After breaching the seawall, the Canadians broke through the villages and tried to link up on both sides of their area with Sword to the east and Gold to the west. The linkup with Gold went as planned, but Sword was another matter (see above).

Gold

This was the center beach, with Omaha to the west and Juno to the east. Its sectors included Item, Jig (Green and Red sections), and King (Green and Red). The British troops at Gold had a rocky start on the beaches. Firmly entrenched Germans stubbornly defended the coastline, but by noon the troops had cleared it and pushed inland. By the evening, they were six miles into the French countryside, controlling the beachside villages of La Hamel and La Riviere, and had linked up with Juno. They failed to link up with Omaha, because the resistance there (the fiercest of all five beaches) had delayed the U.S. assault troops by several hours.

Bunker Busting

GIs preferred to knock out bunkers with artillery fire (APEX rounds were best) or fighter-bombers. The next option was to direct tanks to fire on the strongpoint; their shells could penetrate viewing or gun slits or even burst thin bunker walls. The last and most-dreaded option was to get in close and knock it out with infantry weapons.

Bazookas and rifle grenades generally were not accurate enough to hit the slits and ports, nor did they have enough bang to disable the crew. Rifle fire might hit the crew. Flamethrowers worked well, but were heavy and awkward. Grenades and satchel charges (p. W89) also had some utility, but required closing to point-blank range through the defenders' wire, mines, and overlapping fire.

Other close-range tools were also developed. Demolition experts designed the pole charge, a swiveling wooden platform carrying 12 pounds of TNT (6d×24) attached to a pole. A time-delayed pull-fuse at the pole's other end set off the charge. Placed flat against light bunkers, this would create a breach and shower fragments inside [5d]. Against heavier bunkers, the pole charge could be propped against doors or firing apertures. A pole charge weighs 16 lbs. and requires a Demolition roll to make.

Setting off an explosive in a bunker could blind, deafen, or stun any survivors. Everyone inside rolls vs. HT for both hearing and vision. Apply a -1 for each 5 points of damage *after* armor for hearing and -1 for every 10 points *before* armor for vision. Earplugs give a +1, good ear muffs a +3, sunglasses a +1, and welding or flash goggles (p. 67) a +3 to the appropriate roll. If either roll fails, the appropriate sense takes a -1 per point by which the roll failed, or the victim is deaf or blind on a failure by 10 or more or critical failure. Regardless, any failure on either roll stuns the victim; roll vs. HT each turn to recover. After 20-HT minutes (minimum 1), roll vs. HT to regain hearing or vision. On a failure by 3 or less, the effect lasts 1d months. On a failure by 4 or more, it's *permanent*. These rules will add detail to *any* use of explosives, not just in bunkers, but these effects were particularly relied upon by those unfortunate dogfaces taking on Axis fortifications.

TERRAIN AND THE WEATHER

The GI in Europe faced a variety of tough conditions as he fought his way across the continent.

The Bocage

Aside from the intense fighting, Normandy was like scenes from a picture book. Green meadows and forests surrounded small, picturesque villages. Cows grazed contentedly on green grass and geese roamed about the yards.

The hedgerow country, however, offered a tactical nightmare that Allied planners had not foreseen. The area looked amiable enough from the air, but once troops began moving down the narrow and sunken lanes their real nature revealed itself. The hedgerows were earthen embankments lining these Normandy roads, each 3-5' high and topped by another 5-10' of intertwined small trees and large shrubs. The foliage's roots held the earthen wall together like concrete. Since the vegetation atop the embankment on each side often touched overhead, walking these roads often felt like traveling down a darkened tunnel. Behind the embankments were fields, typically some 250 by 450 yards but irregularly shaped, used as either a cow pasture or (far less commonly) an apple orchard.

Hedgerow country, called the bocage, made excellent defensive terrain for the Germans. Their tanks and guns presighted down the roads, holding their fire until three or four Allied tanks crept down the lane, then smashing them quickly. German infantry dug into the corners of the fields and turned the hedgerows into MG positions. Holes were cut in the brush for firing ports. The Germans poured water on towels and placed them beneath their guns to keep down the dust that would reveal their position. Mortars were set up in the next field back, with phone wire running forward. Any natural openings were covered by heavy weapons.

They allowed Allied infantry to reach the open ground of a field before cutting them down in an MG crossfire laced with mortar rounds. Green U.S. troops often froze in the open, rather than rush the Germans, and were often pinned down or systematically wiped out by a single sniper. These casualties cut companies down to half strength or less within a month.

Different tactics were tried, but the hedgerows foiled the usual U.S. reliance on overwhelming firepower. Artillery ran a high risk of hitting friendly troops. Tanks could not exploit their mobility in the choked terrain, and climbing over hedgerows exposed their thin belly to close-range antitank weapons.

Doctrine was thrown out the window and enterprising commanders developed new tactics on the spot. The Allies fitted one or more tanks in each platoon with a hedgerow cutter (p. 76). These tanks would create gaps in the hedgerows by ramming them, then nose in and fire their cannons to suppress the German infantry in the far corners. Infantrymen fitted a standard field phone in a metal ammunition box on the rear deck of the tank. With it, they could ring up the crew inside and direct their fire more accurately. Dogfaces cut their own holes in the hedges and set up mortars and LMGs. Observers often stood on the backs of the tanks to direct the mortar fire. Once the riflemen made it out into the field, they began walking fire (p. W44), keeping the enemy pinned down while the tanks roared through the gaps and finished off the defenders. Unless pinned down ruthlessly, the Germans simply fell back from one position into prepared positions at the next hedge line, forcing the doggies to fight the same group all over again.

Normandy's many villages also slowed down progress. The stone houses were ready-made bunkers, and the church steeples provided excellent perches for artillery observers. The narrow streets, garden walls, and thick shrubbery typical in the villages made any movement through them slow and tedious. Tanks bulled their way through the lanes, knocking the fronts off of houses as they prowled around seeking the enemy.

The Sporting Life

"Tank hunting is best regarded as a sport – big-game hunting at its best. A thrilling, albeit a dangerous sport, which if skillfully played is about as hazardous as shooting tiger on foot, and in which the same principles of stalk and ambush are followed."
– Allied training pamphlet on tank hunting

The bocage could be hard on the defending Germans, too. It offered Allied infantry an excellent opportunity to stalk and destroy their precious remaining panzers.

Anglo-American airborne units included infantry tank-hunting teams, armed with bazookas and rifle grenades. While not as effective as AT guns or other tanks, such teams had some success against their prey. The easiest way to kill a tank was to find a safe place to hide near a road or path and hit it when it passed by. Flank or rear attacks offered much better odds against the heavy panzers. Unfortunately, tank-hunter teams had to contend with panzer grenadiers moving with the tanks; they used hit-and-run tactics to counter this. Teams would fire their antitank weapons, then fall back to the next ambush spot, covered by riflemen and machine guns. The cycle could be repeated if the enemy was in a hurry and could not wait for the infantry to scout the way. If the tank hunters were lucky, they could position themselves near a bridge or narrow hedgerow lane and plug it up, stopping all forward progress until the disabled vehicle was moved out of the way.

These hunts depended on an iron will. Discipline was necessary to hold fire until the tank was at close range. (GMs may rely on Soldier rolls to set up the ambush, and Will rolls to steel the hunters against the rumble of oncoming panzers.)

Death in the Firs

Farther from the coast, the bocage opened up into a rolling, pastoral French countryside – through which the Allied troops advanced almost too quickly to take any notice as Hitler's troops retreated rapidly in front of them.

At and just beyond the Siegfried Line, the terrain changed again, and not for the better. The dark fir forests of western Germany proved to be a hellish setting for fighting, particularly in the 50 square miles of the Hurtgen forest. GIs began moving into those thick woods in mid-September 1944, and emerged in mid-December having lost one of every four men.

More than 30,000 dogfaces became casualties as the Germans regrouped in the "Witches Lair" of the Hurtgen.

These firs had grown together into a dense maze of trunks. The limbs intertwined a few feet off the ground, so that the 75-100' trees blocked out the sunlight (-1 to -2 to Vision, even on bright days). As the GIs said, "In the Huertgen, it was always dark." Movement through the woods usually was at a stoop, thanks to the low-hanging branches.

Most of the West Wall stood in miserable disrepair, but here the Germans had been building it up for months. Concrete and log bunkers were connected by slit trenches. Each bunker covered the one ahead of it, and they were laid out to give crisscrossing fire. Snipers hid in the treetops, concealed in the boughs. Fields of bouncing s-mines laced with vehicular mines (see pp. W98-99) and barbed wire were placed in depressions and along trails, where infantry might seek cover.

The forest floor became mired in deep mud under any but the lightest traffic conditions. These conditions slowed the evacuation of wounded and the movement of supplies. Stuck tanks often could not be removed because the only path to them simply sucked in any would-be rescuer; drivers roll at Driving -2 or more to navigate through these bogs.

GIs loathed taking artillery fire in trees. Some of the shells would detonate in the treetops, sending their fragments cascading much more effectively downward, rather than the sideways path of a ground burst's fragmentation (only overhead protection provides cover from these tree bursts). Plus, the trees added their own splinters to the mix, adding +1d or more to fragmentation damage. Veterans took to taking cover by pressing their bodies against a tall tree, rather than present a larger target to these air bursts by lying prone in the usual fashion.

While there's no arguing that the GIs took heavy losses many times under these conditions, they may have overestimated the trees' role. Soviet infantry, with more experience in enduring German barrages, purposely headed for the trees – the shells quickly denuded them of the upper branches that trigger air bursts, and the fallen limbs and trunks soaked up the fragments from ground bursts. Regardless, the tangle of shattered limbs and trunks left on the ground was very difficult for the GIs to pass through once they resumed their advance.

A White Christmas

When Hitler's Operation *Watch Am Rhien* slammed into the quiet American sector in the Ardennes (p. 20), Europe was in the grips of the coldest winter in years. The weather that hit the area mid-December caused a thick cloud cover and a miserable mix of snow, sleet, and rain. Throughout most of the fighting, temperatures plummeted below zero at night, reaching only the low 20s during the day. This weather front kept combat planes on the ground during the crucial opening days of the German offensive, just as the Wehrmacht had intended.

Before the Germans struck, the cold and snow kept Allied patrols to a minimum. For those that did venture out, their senses were muted by fog and mist, which also reduced the effectiveness of listening posts. At times visibility was less than 20 yards. Sounds that would normally carry half a mile or more could barely be heard a few yards away in the blizzard-like conditions (Hearing -3 or more). With the U.S. troops huddling under shelter, and the USAAF grounded, the Germans were able to sneak their forces into position virtually undetected. This lulled commanders into calling the area the "Ghost Front."

At 5:30 a.m., an hour-long barrage began, and just minutes after SS units steamrolled the American lines. Some of the troops were so dumfounded by the sight of panzers rolling forward (rather than backward, as they had grown accustomed to in the previous months) that they simply abandoned their weapons and fled to the rear. GMs should certainly require Fright Checks with stiff penalties (-3 to -5) for any troops unlucky enough to be in the path of the Nazi juggernaut during the first day of the fighting. Not all would flee, however. One platoon, holding a critical road, would fight all day against a German battalion, causing 50% casualties to the attackers. A Wehrmacht officer told the captured and wounded platoon leader, "*Ami*, you and your comrades are brave men."

The conditions found unprepared GIs sticking newspaper in their clothing as insulation. Men in foxholes converted their sleeping bags into ponchos. Towels were used as mufflers, and draped over the head to protect it from the helmet; GIs reported that their hands stuck to the steel shell if they touched it ungloved. White sheets were used as snow suits. Frostbite took a high toll (see p. W205 for general weather effects).

Trenchfoot, caused by perpetually wet and cold feet, also claimed a high number of casualties. Arctic overshoes, called shoepacks or "Mickey Mouse" boots (see p. W87), were issued to relieve this problem, but less than one-third of the troops on the front lines had received them by December '44.

Bastogne

When the battle began, the 101st Airborne was refitting in France. As American units panicked and fell back against the onslaught, the paratroopers moved forward to Bastogne. Some of the troopers moved out so quick that they weren't even issued weapons and ammunition; they acquired both from retreating dogfaces, however.

On Dec. 19-20, the Screaming Eagles moved into Bastogne just as German panzer units converged there. The paratroopers and a hodgepodge of scraped-together armor and artillery would fight for the next six days. German commanders would launch a series of uncoordinated attacks, which allowed the lightly armed defenders inside to concentrate their resources then wheel around just in time to face the next onslaught.

Inside the encirclement, supplies were low. Scrounging made ends meet. A priority was medicine; the morphine supply was exhausted on the third day, and a direct hit on the makeshift hospital only amplified the problems in treating the wounded.

On Christmas Eve, the fighting continued, but that night a heavy snow blanketed the area. As British and German troops had done in 1914, American and German troops sang *Silent Night* within earshot of each other. The American commanding officer, Gen. Anthony C. McAuliffe personally visited the POW cages and ensured that the men were fed and warm.

TACTICS AND TECHNIQUES

The GI dealt with his enemy as best he could, often at a disadvantage in training and equipment. This section will describe some of the means by which he improved his odds.

I See You!

Identifying the enemy's position by looking for muzzle flashes is easy at night. During the day, flashes are less noticeable, but smoke can still reveal the location of the firer. U.S.-made small arms powder during WWII was substantially brighter, and produced more smoke, than German powder. British and French forces used the U.S.-style powder, too.

Normal muzzle flash and smoke gives a +1 to Vision rolls to detect non-automatic fire and a +4 for automatic fire. At night, the bonus becomes +2/+8. Allied muzzle flashes are detected at an additional +1.

Firing at a muzzle flash is inaccurate; -10 to skill or a maximum skill of 9, whichever is lower. Of course, if the shooter himself can be seen, he can be aimed at normally.

Fighting the Krauts

Infantrymen in combat rapidly learned several crucial lessons in fighting the Germans, including training the senses and familiarizing themselves with enemy tricks.

Smell: The tidy German army liberally used a leather polish with a distinct odor on their suspenders, jackboots, and other hardware. This leather equipment used by German infantry gave off an odor of sweat and leather polish that GIs could detect up to 50 yards away. A good many of the Germans smoked pipes, and their pungent tobacco was easily detected as far away as a couple of hundred yards. Rolls to detect Germans by smell should get a bonus of +1 or more.

Sight: The German penchant for orderliness caused a column of infantry to glint in the sun much more readily than its GI counterpart. Polished helmets, rifle barrels, dust goggles, and other equipment sometimes gave away enemy positions (+1 to Vision in the right conditions).

Hearing: Some German equipment was pretty noisy, especially the metal gas-mask carrier. A German squad jogging down a lane could be heard before they were seen by dogfaces. Inexperienced German units should get a penalty to Stealth equal to twice their encumbrance level due to the rattling buckles, squeaking leather, and clanging gas-mask carriers. The battlewise German soldier learned to arrange his equipment to avoid making this extra noise (roll against Soldier skill).

Tactics: The veteran GI learned as much about the Germans as he could, including their SOP, or *s*tandard *o*perating *p*rocedure. German doctrine emphasized immediate counterattacks after being pushed off an objective. They always sighted artillery on their own positions so that they could shell Allied troops advancing into them as they retreated. The dogfaces learned to dig in as soon as possible after taking a hill or village.

Tank Fighting

The U.S. Army had asked for, and received, tanks intended to attack the enemy rear areas, not his armor. Even the Sherman sacrificed armor protection for speed and modest weight, while its usual gun lobbed HE shells more effectively than it fired armor-piercing rounds. Antitank guns and tank destroyers (see p. 79) were supposed to fight German armor. First-rate panzers simply slaughtered Army tank units; veteran U.S. tankers reckoned they lost 10 Shermans in defeating each Panther or Tiger, perhaps only five tanks if the crews were sharp. In one case, a single Panther killed 15 out of 17 attacking Shermans. The failing wasn't in the men, or even the Sherman. The failing was in an Army doctrine that fielded a cruiserweight tank in a heavyweight bout.

U.S. tankers learned to flank the German heavies, relying on their high speed, quick-pivoting turrets, and advantage in numbers. Often, three Shermans would roll into a good firing position and alternate firing at the German behemoths. After each one fired, it reversed into a safe position, and the next tank rolled up and fired, and so on.

Most of these rounds were out of effective range and simply bounced off the thick hide of a Panther or Tiger. While this barrage was under way, a couple of tanks from the platoon would sneak around the flanks and try to get a shot at the weaker side or rear armor; the Panther, in particular, had much thinner armor away from its front side. If the panzer tried to slew its turret onto the flankers, the supporting trio would roll out from their protected position and close in for the kill. This usually worked. As one tanker put it, "In a quick-draw contest, the Sherman always won." It should be noted that these heavies made up only a small portion of the German panzer force. Against the more-common Panzer IV or a StuG, the Sherman could fight on roughly even terms; however, inexperienced U.S. tank crews thought *every* panzer was a Tiger. (Make a Soldier roll with any Vision modifiers to ID a panzer. On any failure, the result is "Tiger" or possibly "Panther.")

When they could, the tankers liked to fire WP rounds at panzers. These produced an acrid smoke that was hard on the lungs (see the tear-gas effects on p. B132). The panzer's engine sucked the smoke into the crew compartment. Along with the resulting coughing and choking, this sometimes convinced the crews (which were getting younger by the month) that their panzer was on fire.

The "Ace of American Tankers," according to *Yank* magazine, was Staff Sgt. Lafayette G. Pool, a Texan in the 3rd Armored Division. Pool named his tank "In the Mood," which went through three incarnations before he was wounded in combat, losing his leg. By that time, Pool and his crew had claimed more than 1,200 enemy soldiers killed or captured, and knocked out 258 enemy vehicles, including Panthers and Tigers. A former Golden Gloves boxing champ, Pool was tenacious and aggressive, wearing his signature cowboy boots while in combat. He was twice nominated for the Medal of Honor.

Air-Ground Teams

As the tank columns started piling up in Normandy in July and August, new techniques were created to integrate air power at the tactical level for ground commanders. Because air units used different radios than ground units, tanks could not talk to aircraft without a special radio. To solve this, commanders started putting aircraft radios in tanks, and assigning a forward air controller, or FAC, to the tanks. When opposition was met, the FAC stationed at the head of the column called in the fighter-bombers. His expertise in directing the air strikes allowed the Army to forgo adopting a new heavy tank.

Assignment to armored column cover, or ACC, went mostly to the P-47. As an armored column advanced, it was in constant contact with its assigned ACC, usually a flight of four. When the planes ran out of ammunition or got low on gasoline, they were replaced by another flight. These airborne sentries flew ahead of the column, looking for targets and communicating with the tankers about what to expect. Any roadblocks were pounded to dust. If taken under fire, the tankers could call for strafing or bombing runs that would either knock out the target or keep it occupied until a tank could do the job. Often, the job of controlling the ACC was given to the Grasshoppers (p. 31) of the U.S. artillery battalions. The observer in these spotting planes could both call in fire from local artillery and coordinate air strikes.

Forward airfields housed the men and machines of the tactical air command that performed these missions. Unlike the bomber crews who slept in linen sheets in England, the TAC boys lived in tents like the dogfaces, sometimes just a few miles behind the front. On a moment's notice, a close-air-support mission could be called and the pilots were in action.

To distinguish friend from foe, the armored forces placed fluorescent orange panels on the rear tank deck – but they had to quickly remove them when the attack run was over, or the panel would give their position away to enemy observers. Colored smoke grenades and signal flares also were used.

Mortain: Hill 314

Hill 314 overlooked the vital crossroads at the French town of Mortain, and in one of the finest examples of U.S. combined arms a single infantry battalion held it against a division of SS panzers. Some 700 men and one company of antitank guns dug in there Aug. 7, 1944, in the middle of a German push. The SS men soon ran headlong into the roadblock set up by the antitank gunners, and tried to bypass it, but were shut down by infantry with bazookas. About 40 vehicles were destroyed. Allied fighter-bombers worked over the persistent enemy throughout the battle.

The Germans surrounded the U.S. troops for five days. During this time, the crucial hill was under constant attack. Forward observers on it dominated the battlefield, calling in almost 200 fire missions from artillery and aircraft. With this awesome firepower supporting them, the GIs kept the Germans at bay until relieved Aug. 12, at the cost of some 300 men.

The siege had left them desperate for supplies. The Army tried airdrops, but these missed the hill and fell into enemy hands. Artillery men even tried unsuccessfully to send morphine via artillery shells, by removing the HE and placing the medicine inside.

House to House

Street fighting was slow and meticulous work, with progress measured in city blocks per day. As in hedgerow fighting, urban combat removed many U.S. advantages. Artillery and air support were difficult to coordinate in close terrain. Given that armor was vulnerable in towns, the bulk of house-to-house fighting became the dogface's problem.

Infantry learned to never move on the street. MGs, mines, and snipers covered the streets; tanks with *big* guns covered the street. Anything that reduced time in the open was good – which meant using sewers and rooftops as much as alleyways.

Field Expedients

GI ingenuity managed to modify virtually everything in the Army inventory. Some of this was even taught in field manuals. A few of the more useful field expedients:

60mm Mortars: By removing the safety pin and smacking the mortar shell on a hard object, the shell could be thrown by hand. This was one of the tricks used by Medal of Honor winner Cpl. Charles E. "Commando" Kelly to kill 20 Germans in Altavilla, Italy. Another trick was to use the rifle-grenade projector M-1 (p. 73) to launch mortar shells. This reduced the range by half, but was a very common practice.

Bazooka: The rockets were shipped in a cardboard tube. This tube could be fastened to a fixed object and a flashlight battery set up to trigger the electrically activated weapon. This trick was used to create tripwire or command-activated ambushes, or as diversions. Signalmen used it to launch phone wire across rivers.

.50-caliber brass: A single spent cartridge case could be turned into a flash-hider that slipped over the muzzle of the M-1 Garand rifle. This negated the usual +1 to spot Allied small-arms fire (p. 104).

C-ration can: A C-ration can made a perfect cook stove. GIs filled the can half-full with dirt and then added gasoline. The little stove could boil a canteen cup of water in 5 minutes.

50-gallon drums: A drum half-filled with sawdust and gasoline was placed over a 5-lb. charge of Comp-B and the contact wire ran back to the firer's position. If set at the proper angle this apparatus, called a *fougasse*, would propel the flaming mass 100 yards, igniting an area 10 yards in radius. Roll against Demolition skill to set up properly. This was a favorite of the Marines and Seabees, but saw some use in Italy, as well.

Barbed wire: A coil of barbed wire (p. 107) adds +3d to fragmentation damage to any explosive device that does more than 6d damage. (It must shatter the wire.) GIs simply placed a few sticks of TNT or Comp-B inside the coil of wire and ran contact wire back to their foxhole. When the enemy got close to it, boom.

The typical U.S. squad broke down into a searching party and a covering party. The searching party consisted of men with carbines and SMGs, while the covering party used BARs, bazookas, and LMGs. Flamethrower and demolition teams worked hand in hand with the infantrymen.

Often, the only safe way to advance was "mouse-holing." The troops entered a building, then blew a hole through the wall into the next building. The charge had to be calculated so that it didn't bring down the whole house. At the hole, the GIs pitched in grenades, and then darted in with carbines and SMGs. From there, it was up through the building, blasting and shooting until it was cleared, then back down to the first floor, and into the basement to start it all over again. The covering party stayed on the first floor until the assault party cleared the building.

If adjacent walls could not be blown, men would cross alleys, proceeding up a block, but never crossing a street. To make sure the door across the alley was unlocked, either the lock was shot open, or the door was hit with rifle grenades or bazooka fire. Generous use of smoke grenades prevented the enemy from picking off men as they dashed across.

Buildings

Street fighting was hard on people and property, alike. Tanks, airplanes, and artillery made a mess of towns in short order. Infantry fighting in the rubble often risked being crushed from falling debris and collapsing structures. GMs may want to determine the features of a few key buildings for sessions featuring soon-to-be-ruined urban settings.

Building Types and Materials

There are three basic types of building that GIs may encounter during their house-to-house fighting.

The weakest is the *frameless* building, which has load-bearing brick or stone walls with no support. This is common construction for French fieldstone houses, barns, and churches. Cathedrals often have this construction, as well.

Framed buildings have a strong skeleton that supports the walls. Banks, governmental buildings, and large hotels are usually framed structures.

Fortress buildings have a frame and thick walls. They are highly resistant to damage. Besides proper fortresses, such as bunkers and castles, Italian villas with thick granite or marble walls commonly have this construction. Monasteries, such as Monte Cassino, and old medieval walled cities may qualify as fortress structures, too.

Once the building type has been determined, the material must be chosen, too. Wood (DR 4, HP 20), brick (DR 6-8, HP 40-60), and stone (DR 8, HP 90-180) are the most common. Concrete (DR 4-10, HP 60-90) and thick reinforced concrete (DR 50, HP 100-1,000+) might be encountered in newer construction. DR works just like normal DR, while HP represents the hit points of a single square yard of wall. If an attack defeats the DR and HPs, a 3'-by-3' *breach* opens.

Determine the building's breach capacity by multiplying length times width (both in yards), and dividing by four. Multiply this by the number of stories to determine *breach capacity*. Frameless buildings only figure the breach capacity for the first story, and have half the breach capacity of other buildings. Minimum breach capacity is always 1.

Bringing Them Down

A building's ability to withstand damage is based on its type, frame, and breach capacity. Attacks that cause a breach "blow through" causing no more breaches, except in the case of explosions. Explosions never blow through. People inside the structure take damage normally. If the building takes enough damage to exceed its breach capacity, it will collapse.

A collapsing building takes three seconds per story to fall. Those inside take damage equal to (HP + DR)/4 per story of building height. The GM may determine whether those in adjoining hexes take damage, as well.

A successful DX roll will avoid this damage; people in basements get a +4, while those in frameless buildings get a -4. Survivors are trapped in the rubble. GMs may decide that a building falls sideways, crushing nearby people and vehicles.

Vehicles crashing into a structure do normal collision damage, per p. W154. If this creates a number of breaches equal to its Size Modifier, then the vehicle can drive right into the structure, possibly right out the other side (which counts as another collision).

Fire attacks are treated like vehicle fires (see p. W156). Fire damage accumulates every turn until another breach is created. People inside burning buildings take damage per p. W204.

Bunkers

For ease of play, ***GURPS WWII*** provides a high "all-or-nothing" DR for bunkers and other highly armored sites (p. 100). This is simple, but not quite realistic, particularly if GI engineers are carefully placing second and third pole charges in the crater created by previous charges. If using the above rules, convert bunkers' DR to a split DR/HPs. Start by making the DR 50, then set HP equal to 75% of original DR. *Example:* A DR 2,100 bunker has DR 50 and HP 1,600. Bunkers always possess a *fortress* construction type.

Night-Fighting

Night-fighting was common among all infantry units. Night patrols were usually the most terrifying, but often they yielded valuable intelligence.

The First Special Service Force (see p. W:HS32), an elite Canadian-American unit, took great delight in nighttime infiltrations of the German lines at Anzio. Their signature death card, the ace of spades, was left on each victim. The Germans called them "The Devil Brigade."

Usually, patrols sent across the lines at night were tasked with reconnaissance or harassment, but many of them were able to knock out heavy weapons or occupy new positions that might give an advantage.

Because of the close range of night-fighting, men left their rifles behind and drew carbines or SMGs, instead. Knives and bayonets were taken along, too, but grenades were the best weapon once the fighting started. A few grenades lobbed at the enemy were hard for him to see, but damaged

flesh and morale alike. The flash could blind any onlookers, too (p. 101).

One of the most common methods of communicating on night patrols was to strap a military wrist watch or compass with a luminous dial across the palm of the hand. By opening and closing the hand, the wearer could communicate by code. This could be simple enough that a Soldier skill roll could interpret it, or it might require the full-blown Telegraphy skill. Colored flashlights were used to communicate to the rear without alerting the enemy. Parachute flares and other pyrotechnics signaled everyone in the area, something that most patrols wanted to avoid.

Night-fighting wasn't just for infantry, though. Tanks and jeeps were used in some night-fighting battles. U.S. units experimented with naval searchlights on one tank in the platoon; the others fired wherever the light was shining. The Germans used a few IR searchlights mounted on halftracks attached to Panther units late in the war (pp. W139, W:IC81).

For even larger operations, C-47 transports dropped parachute flares over the battlefield. These burned for 5 minutes and lit up an area a mile across. The pilots timed their crossing of the battlefield so that they could have these flares burning one after another throughout the shooting.

Foxholes and Field Defenses

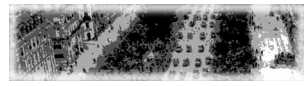
As the GI moved into late 1944 and the borders of Germany itself, his supply lines dwindled and the offensive stalled. Sandbags and barbed wire were brought up, and the dogface dug in for the winter.

Sandbags: The standard-issue burlap sandbag was khaki in color, 14" wide by 26" long, and filled with 40-50 lbs. of dirt or sand. Two sandbags stacked side to side provided 28" of protection, or DR 196. It took 175 sandbags to provide 100 square feet of protection (a wall 5' high and 20' long), or about 217 cubic feet total. Building such a wall took at least 16 man-hours, assuming a ready supply of sand or dirt. If carried as a load, four empty sandbags weighed 1 lb.

Barbed wire: A coil of barbed wire weighed 55 lbs. and stretched about 45', standing about 3' tall as a coil strung out along the ground. Anyone crossing the wire must make 1d DX-5 rolls, each roll representing 1 second of progress. (If an infiltrator moves very slowly, at one roll per minute, the roll is at DX.) A failure means the soldier is hung up for 2d seconds. A critical failure also causes 1d-2 cutting damage, and a Will roll or the victim cries out in pain.

Foxholes: The Army had worked out many intricate holes for the dogface to dig, but he seldom had the energy or the time to dig them according to regulations. His goal was to dig deep and narrow. The narrower the hole, the less chance a shell would land inside it. The normal one-man foxhole took about an hour to dig in soft ground. More often, two troops dug together, creating a hole big enough for the two of them in about 2-3 hours. Once the hole was dug, the brush had to be cleared and the hole camouflaged. Troops with an axe might cut down small trees to the rear to use for logs to cover the top of the hole. Most were so tired that they simply dug a hole, crawled in, and went to sleep.

Sights and Sounds



A lot took place outside of combat during the Allied drive across Europe. A few examples include:

War Correspondents

Throughout WWII, reporters accompanied the fighting man to the four corners of the globe. The newspaper, radio, and magazine men ate, drank, slept, and suffered like the soldiers they reported on, and gave their lives in many cases.

Some of the correspondents already were famous, such as Steinbeck and Hemingway. Others, such as Walter Cronkite, became stars in their own right: Covering the war for United Press, Cronkite went to North Africa and took part in the D-Day invasion and Operation Market Garden with the 101st Airborne, then reported on the Battle of the Bulge. Soldiers might meet up with these news hounds at any time.

Paris Triumphs

Many GIs took part in the Paris victory parades. It was a heady experience. Flowers were thrown on the tanks. GIs were hosed down with perfume and kissed by beautiful girls. Impromptu street parties broke out all over the city, with frustrated commanders detouring around dancing Parisians.

Most of these troops were told to keep right on marching out of town. A few spent a few days camped in the city parks, where jubilant civilians swarmed them; eventually, barbed wire isolated these camps. Those sent marching usually were camped just outside the city, from where, almost to the man, they slipped back into town. The soldiers brought chocolate and Spam, the Parisians supplied everything else, including women and long-hidden wine. MPs rounded up hundreds of drunken dogfaces and carried them back to their units.

The Death Camps

U.S. troops freed their first concentration camp in early April 1945. After seeing the piano-wire nooses, the ghastly skeletal remains of thousands of victims, and the emaciated survivors, Eisenhower was furious. He ordered the occupants of nearby villages marched into the camps, where they were forced to bury the dead at gunpoint. Allied units also were directed to visit the camps as they were liberated. Ike wanted the GI to go home with a clear vision of what he had fought.

The camps' wretched smell could be detected miles away. When U.S. troops discovered the Dachau camp, they became so incensed that they killed the guards on the spot. Even for veterans, the grisly charnel houses went far beyond the horrors of war. Many of the joyous survivors would die in the days following their liberation; a few were killed when the guards fired into them even as U.S. tanks burst through the wire.

The GI Gourmet

The waxy cardboard of the K-ration box provided just enough fuel to heat a cup of coffee – or the latest foxhole concoction that delirious doggies had dreamed up. The Army had intended for C- and K-rations to be issued only for three or four days during combat operations, with fresh food prepared by the mess sections filling the GIs' stomach the rest of the time. Practical realities, however, left the poor dogface eating the rations for weeks and months at a time. As a result, soldiers and Marines became quite adept at making the most out of the limited variety of food provided them.

Delicacies included rolling the cheese and pork loaf into toasted crackers to make a cheese ball, or fudge made from D-rations and condensed milk. Bread pudding could be made from crackers, sugar packets, and whatever alcohol was handy. Ration fruit bars mixed with sugar and crackers could make a passable cobbler. With some time and ingenuity, the contents of the tiresome rations could yield palatable food. In heavy combat, these foxhole victuals were choked down cold whenever there was an opportunity. Complaints about food tended to fade in the presence of enemy fire.

Outside of combat, troops were often successful in trading the rations to the locals for a chicken, goat, dried fish, or even a home-cooked meal. If the situation presented itself, the cigarettes and Hershey's bars in the rations were traded for something more tempting than food from the local women . . .

News Flash!!!

The Western Front began with its highest drama, D-Day, but these events took center stage in their turn, both for the GIs involved and those elsewhere seeking news of the war.

Falaise Gap

Aug. 30, 1944 – Argentan, France. Advancing Allies trap German troops. After the failed counterattack at Mortain (p. 105), the Germans found themselves in a bad situation. The Canadians were rumbling south toward Falaise and the U.S. troops sprinted north from Le Mans. As these two pincers closed, the Germans caught in the west began retreating pell-mell. The battle lasted from Aug. 13-20, with some 25,000 German troops escaping east as the trap closed. Heavy bombers cruised the gap, dropping tons of bombs. They left behind 10,000 dead and 50,000 captured. More troubling to the German command was the 600 panzers and self-propelled guns, 1,000 artillery pieces, and 8,000 vehicles left behind.

For those inside, it was hell punctuated by around-the-clock bombardment. It was every man for himself. Wounded were left to rot. The corpses of animals and men clogged the roads, greasing the gears of fleeing panzers. The trapped soldiers wore gas masks to escape the stench. Eisenhower said it was "literally possible to walk for hundreds of yards at a time stepping on nothing but dead and decaying flesh."

Market-Garden

Sept. 17, 1944 – Holland. Operation Market-Garden is launched to capture a route into Germany. The 101st Airborne used about 1,300 planes and 800 gliders to transport nearly 11,000 men to the Eindhoven area. The 82nd Airborne had a nearly identical mission in the Graves-Groesbeek-Nijmigen area. The British 1st Airborne was to capture Arnhem, supported by 750 men of the Polish Independent Airborne Brigade.

The U.S. troops controlled "Hell's Highway," the single road that led to Arnhem, but the Germans blew up several bridges. Pockets of resistance and artillery fire also slowed the British XXX Armored Corps relieving Arnhem. The British 1st struggled, too. Two full SS panzer divisions had been refitting near Arnhem. After three days of bitter urban fighting, the paratroops had to fight their way across the Lower Rhine. Only some 2,500 troops made it, leaving behind nearly 1,300 dead and 6,500 POWs in the western Allies' most spectacular failure.

Aachen

Oct. 16, 1944 – Aachen, Germany. U.S. troops capture the Allies' first German city. They had poured around it as German reinforcements built up inside. Then the 1st Division, or "Big Red One," began five days of fierce fighting, using heavy artillery at point-blank range. Each attacking company had three tanks or tank destroyers at hand, and two antitank guns. German troops in the city surrendered Oct. 21. The 1st Division lost fewer than 500 men, the Germans more than 5,000. About 80% of the buildings in the city were destroyed.

Remagen

March 7, 1944 – Remagen, Germany. The Ludendorff railroad bridge into Germany is captured. A spotter plane noticed the bridge still standing, and troops were sent to take it. They fought through the city to the bridge, just in time to see it shudder from explosions, but when the smoke cleared, the bridge was still there. Infantry dashed across the bridge, and by late afternoon had a toehold on the eastern side.

Huge traffic jams broke out as every unit in the area tried to cross at once. By the next evening, almost 10,000 Americans had made it across. Barrage balloons ringed the bridge. Some 13 battalions of antiaircraft guns moved into position. All the while U.S. units spewed across the Rhine.

On March 17, the bridge collapsed, but two floating bridges had been built at the site in the meantime. As the Allies crossed the Rhine, they engaged in a little fun by urinating in the river. The British general staff, led by Churchill, did it, and so did Patton. When finished, he's reported to have buttoned and said, "Ah, the pause which refreshes!"

Berlin Falls!

May 2, 1945 – Berlin, Germany. The capital of Germany is sacked by the Russians. Allied leadership had contingency plans for Operation Eclipse, a massive airborne drop of three divisions onto Berlin's Tempelhof airfield, but never went through with the operation. Instead, the Russians surrounded the city on April 25, and then began fighting inward. Hitler and his mistress committed suicide on April 30.

THE AIR WAR

While the dogfaces toiled in the mud and dust, the air crews fought a far different, but no less vital, war.

The Heavies

Eighth AAF flight crews began their business day at 0400 hours. Breakfast was usually steak and eggs, or real omelets instead of the green chalkiness of "dehydrated egg protein." A briefing was held with all hands in an empty hangar, showing recon films and target landmarks. The officers (pilot, copilot, navigator, and bombardier) sometimes had separate briefings.

The ground crews had already been up for hours. Guns were loaded, machinery checked and prepped. Ordnance men fitted fuses and fins to bombs and loaded them. The whole ship was "pre-flighted" from top to bottom, including at least three checks of the bomb-bay doors – the fuel margin was too thin to allow a fully laden bomber to return home.

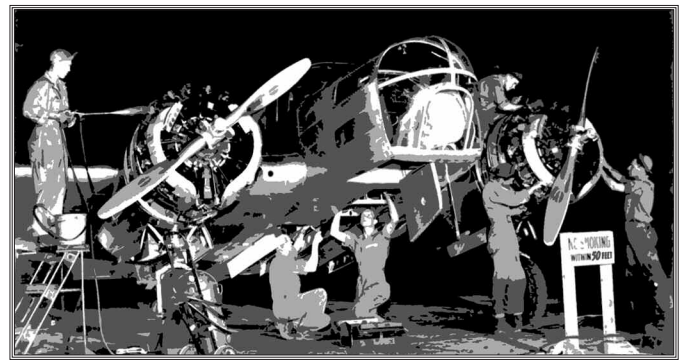
As pre-flight finished, the flight crews arrived by jeep and began their own checks. Once the crew checked in via throat mikes, the plane taxied to its designated runway, and began taking off at 1-minute intervals. Once airborne, they moved into formations of six-plane squadrons and three-squadron groups. Wings of three or more groups hit the target at 5- to 10-minute intervals so that dust and smoke could clear out between runs.

Flying at 20,000' to 30,000' the air temperature was -20º and ungloved hands would freeze to metal. Spittle in oxygen masks frequently froze the outlets shut, causing crewmen to gradually fall asleep. (Roll against Aviation skill every mission to prevent this; a failure requires a HT roll to stay conscious every minute. Or see p. CII136.) Frequent checks via intercom helped keep the men awake, but no talking on the radio was allowed. Some planes did tune in to civilian stations.

Once past the English coast, the gunners test-fired their weapons, and the bombardier climbed back to the bombs and pulled the pins that prevented the fuses' tiny arming propellers from spinning. At the French shore, the crew donned helmets and flak armor; ball-turret gunners climbed into their plexiglass domes without armor or chute. For the next several hours, the crew nervously searched for "bandits" and gritted their teeth through flak bursts. All turrets and guns kept moving, doing the "Messerschmitt Shuffle." A few rounds fired far out of range often did cause German pilots to turn back and seek other prey.

Ten miles from the target, the bombers hit their initial point and the bombardier stood ready at his switch. Squadron leaders were the only ships that used bombsights; the rest simply dumped their bombs when he dumped his. Many bombardiers complained about the waste of their skill, but with attrition rates so high on the approach, planes took over the lead from stricken craft on a routine basis. Every ship needed that bombsight and bombardier, just in case.

After the bombs were dropped, the ships turned for home. If they were lucky, they could stay in formation and protect each other. If they had been hit and couldn't keep up, it was a dicey situation. Flak was no longer the worry; it was enemy fighters. They pounced on wounded bombers flying alone like hungry wolves.



The flight back took several hours; wounded crew members could die before the plane landed. Planes with perforated fuel tanks stood a decent chance of igniting themselves during landing, particularly if the plane bounced hard on touchdown.

On the ground, the officers typed their reports and the whole crew underwent debriefing. If the run had been a short one, it was customary to go out and paint the town. English girls were often trucked into air bases for USO-chaperoned dances.

Most bomber units flew one mission a week. Two per week was unusual. With 25-30 missions to accumulate, and 8-14 hours per mission, the bomber crews had many hours in combat before they rotated home to be an instructor. Each mission flown allowed the crew to paint a bomb on the side; each Hun shot down rated a Nazi flag on the aluminum skin.

The Fighters

Fighter pilots in the European theater could lay claim to two different lifestyles. Each sort tried to gig the other about their predicament. In reality, both stood an even chance of being killed within six months.

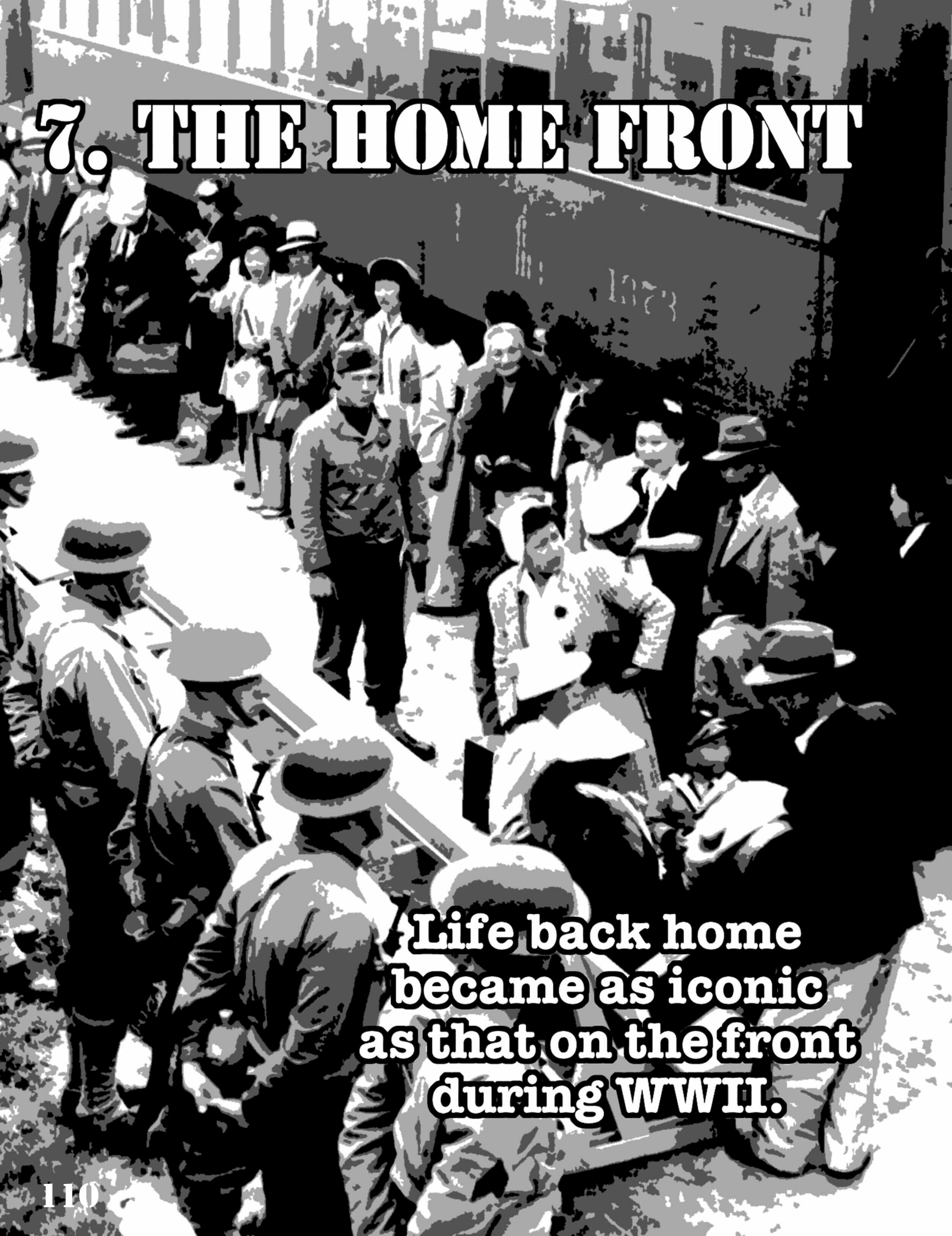
Those based out of England (or in Italy near Rome) had what the other pilots called the "easy life." They partied on the weekends, had their own jeep, and probably a maid to clean their barracks. They flew 1-3 missions per week, and only a few of these each month were the long-range escort missions that they all dreaded. Many were simple combat air patrol, or CAP, missions over the English Channel.

The pilots that had it "bad" were deployed to forward air bases. They didn't have maids, and might even live in tents. Their food was sometimes C- or K-rations. They only got passes if a friendly town was in close proximity, and then it was probably only a small town with one or two theaters. Aviators headquartered in the rear gigged these forward sorts over beers in officers' clubs all across Europe, usually in good fun, but sometimes the discussion ended in black eyes.

The most feared missions for most fighter pilots were ground-attack assignments. Strafing and bombing put them within reach of small-caliber flak and machine-gun fire, and there was little they could do about it.

For those assigned close air support, it was a classic Army "hurry up and wait" affair. The crew sat around the hangars waiting for the call. Then they sprinted to their planes and roared off, guided to the area by a FAC on the ground or in an observation plane. He gave them the correct route and heading and pointed out the exact spot to dump the ordnance if the pilots hadn't already spotted it.

7. THE HOME FRONT



Life back home became as iconic as that on the front during WWII.

THE WAR AT HOME

While the troops fought a world away, the home front was struggling just as desperately to keep the war machine supplied. Wartime America is a rich background for adventure.

An Overview

The 1940s were not as idyllic as some nostalgic memoirs have suggested, but compared with the wartime experiences of other nations, the United States had it relatively easy.

In fact, the nation prospered. Overall crime rates dropped, unemployment ceased to exist as the Depression disappeared, and consumer buying power was the highest that it had been in 20 years. The gross national product nearly tripled from 1939 to 1945.

Those statistics don't quite reveal the truth about America 60 years ago. Half the country was still classified as rural. Only one home in three had running water. One-quarter of the population lived on small farms, and many of them had no electricity, despite Roosevelt's power projects. Most farms still used horses and plows; tractors would not outnumber horses until the 1950s. Most of the country had only an eighth-grade education. As much as 30-50% of the nation's children were born at home.

Despite this still-modest lifestyle, everyone pitched in for the war effort. Children joined the Junior Commandos, a youth organization that bought war stamps and conducted scrap drives for rubber and scrap iron. The Boy Scouts fought forest fires and acted as sheriff's deputies when the manpower shortage hit small towns in the Midwest. Women rolled millions of bandages for the Red Cross and tended "victory" gardens. Old men became air wardens and plane spotters. Everyone bought war stamps and war bonds; the total exceeded $150 billion by 1945.

All the hard work did not completely alleviate the guilt that many Americans felt about their relative prosperity. A common story circulated the country in 1942: A woman on a bus loudly remarked that her husband had a great job in a defense plant and that in a few years they would be rich. She hoped the war would last a long time. Another woman stood up and slapped her. "That's for my son at Pearl Harbor!" A second slap followed. "And that's for my boy at Guadalcanal!" The story illustrates the double-edged nature of the U.S. home front in WWII. On one hand, the Depression had finally been chased away. On the other, the prosperity was at the expense of young men's lives, and the public understood that on an elementary level. If a civilian complained about the rationing, the common response was, "Don't you know there's a war on?"

A Different Age

Contemporary Americans would consider the 1940s prim and proper, perhaps even formal. Middle-class men wore hats, overcoats, and leather wingtips to work, or chinos and leather loafers when hanging around the house. Only laborers and rebellious teenagers wore blue jeans, or "dungarees" as they were called. Canvas shoes with rubber soles were worn for tennis or basketball only. Solids, tweeds, and plaids were in. Flashy colors were not. Men walked or caught a bus to work, or a street car if they lived in town. Few families had an automobile, and those that did drove little due to gas rationing.

Women wore calf-length dresses of cotton, wool, velvet, silk, and even new-fangled rayon or polyester. High school and college girls wore oversized "sloppy joe" sweaters and skirts. Trousers were worn only in the garden. Ladies wore white gloves and flowery hats with a veil to all social functions. Pantyhose were mandatory – only flirtatious young ladies bared their legs. All others covered them in hosiery, and when that became difficult because of war shortages, they painted them on with "hose in a bottle." Nylons, normally $1 a pair, cost as much as $20 a pair on the black market.

U.S. neighborhoods of the 1940s consisted of row houses with side alleys and tiny back yards. Inside, only one-third of them had telephones, but most everyone had a radio in the house. The suburbs were peopled by croquet players and country club-goers. The neon lights of Wurlitzer jukeboxes glowed in the corner of drugstore soda shops. The postman walked his route, and the milkman with his horse-drawn wagon delivered milk to the door every morning in pints and quarts. Yards were trimmed with rotary push-mowers, and ice cream turned by hand in buckets of ice and rock salt. Air-conditioning was unheard of in the average home, though movie theaters and the local library probably had it. Wood or gas stoves were the only way to cook at home. Few people had $150 for a refrigerator – most used simple ice boxes, the precursor to the electric refrigerator that would gain popularity in the prosperous postwar era. Shopping was a daily ritual for the middle and lower classes.

Culture

Modern America was born in the '40s. The decade spawned several cultural icons: Norman Rockwell paintings; wartime films by John Wayne, Robert Mitchum, Gregory Peck, Gary Cooper, and Henry Fonda; pop music. The name brands of the 1940s – from RCA, Ray-Ban, Levi's, and Coca-Cola to Ford and Chevrolet – are still all-American today. Fashions just becoming vogue then remain in style now: leather jackets, blue jeans, sunglasses, and T-shirts.

Music

Only recently has Bing Crosby's *White Christmas* been bested as the top-selling record of all time. Frank Sinatra got his start late in the war, loved by the girls and hated by the GIs. Jazz, swing, and blues permeated the era, and birthed the combination of Southern gospel and boogie-woogie rhythm that in the early '50s would become rock 'n' roll.

Big Band greats like Jimmy Dorsey, Duke Ellington, Count Basie, and of course Glen Miller, dazzled audiences in live performances and on the radio. Kate Smith's version of *God Bless America*, an Irving Berlin hit, is still considered the definitive rendition of that tune. The Andrews Sisters upbeat songs had girl-next-door appeal. Marlene Dietrich and her sultry voice had a very different magnetism.

Film

The 1940s was the heyday of the movie industry, and with good reason. Cinema had been declared a priority war effort, necessary for morale and propaganda. Many period films remain classics: *Casablanca*, *Citizen Kane*, *The Wizard of Oz*, *The Grapes of Wrath*, *The Maltese Falcon*, *National Velvet*, and *Gone With the Wind*. Walt Disney masterpieces such as *Bambi*, *Dumbo*, and *Fantasia* were also big hits. Popular actors included Humphrey Bogart, John Wayne, Cary Grant, and Jimmy Stewart. Female stars included Ingrid Bergman, Bette Davis, Jane Russell, and Lana Turner.

Hollywood waged a PR war against the apathetic, the lazy, and the doomsayers among the U.S. public. Every film had to answer to the War Information Office, and the question was always, "What will this film do for the war effort?" The films were simply caricatures of the progress of the war, with defeats ending on positive notes that forecast certain victory, and victories reflective about the losses suffered to get there.

While big-name actors donned uniforms to make their movies, kids went to Saturday matinees to watch their favorite serials, including *Captain America*, *Flash Gordon*, *Batman*, and *Jungle Raiders*. With a five-cent admission, and another nickel for a soda and popcorn, kids flocked to the silver screen every week. Adults attended more movies than ever, too, partly to see the newsreels.

Industry

"To American production, without which this war would have been lost."

– toast by Joseph Stalin, Teheran, 1943.

With America just barely out of the Depression, the industries were led by frugal survivors, men who had worked to keep their factory afloat in the thin times. When the boom times of the war came on, few were ready for the changes.

Production

Before Pearl Harbor shook the country, the president shook the war industries. Roosevelt's clamoring for ships, planes, and tanks had industry leaders shaking their heads in denial. What he wanted could not be done. Roosevelt cajoled, berated, and bribed them into submission. Those that refused were pushed aside, and their companies put under government control for the duration. Called GOCO, "government owned and contract operated," the plan worked, while stepping on some principles of U.S. governance. Utilization of plant, a figure representing how much time a factory was actually working, climbed throughout the war. Production soared. As one Harvard-trained executive put it, "We didn't know we had it in us."

In 1941, the United States produced only 26,000 aircraft. Annual production would peak at more than 96,000 in 1944, thanks to industrial innovations. At the end of the war, the nation would produce more aircraft than all the other Allies combined. Even more staggering was the naval construction. Henry Kaiser would revolutionize ship construction, working out the bottlenecks and inventing new ways of fitting ship components, including the use of welding instead of rivets. His charge to produce ships would drive him to eventually produce 113 cargo vessels a month by late 1943. Total U.S. ship production would exceed 75% of all ship tonnage built during the war, a colossal 34 million gross tons. This was nearly nine times that of the Japanese. The United States built 141 aircraft carriers during the war, for example, while only 16 were built by Japan, the next largest producer.

While aircraft and ship building ramped up, so did production of military trucks and jeeps, which exceeded *twice* the total produced by the rest of the world. In production of raw materials such as petroleum, steel, aluminum, and iron, U.S. output was also unmatched. High-powered 100-octane fuel, for instance, was produced at the rate of 450,000 barrels a day in 1945 at 34 different plants.

The materials were shipped worldwide to aid the Allies, providing desperately needed supplies and making wartime production possible in other nations. U.S. aviation gas fueled the Russian air force, and U.S. aluminum the British aircraft industry. More than 100 American locomotives pulled Russian troop trains, and U.S. coal and lumber fed the hungry British production needs.

Workers

Life in a WWII plant was one of constant motion. Idle machines simply were not found. People worked in shifts around the clock in most plants. Awards were given for safety and attendance. Plant workers were often lined up and forced to give blood, or money for war bonds, and sometimes both in the same day. Plant workers were visited by war heroes, politicians – including the president – and Hollywood movie stars. All urged them to work harder.

Those in vital war plants would be searched by military police as they began and ended their shifts. Plants close to the coast were darkened with curtains. Barbed-wire and chain-link fences circled every facility. Jumpy security guards searched workers who looked "German," while other factories deployed guard dogs and installed watch towers. Journalists were likely to have their cameras smashed if caught taking pictures of war plants.

Women turned out in droves to answer their country's call. Before the war, the average American wife was a homemaker. Only one out of five married women had a job. By 1945, women in the work force had increased by 50%, to comprise 20% of the nation's labor. Chauvinism ensured that men had the best and most high-paying employment; in 1943, a man was bringing home $57 a week, a woman only $43. The War Department officially referred to these women as "replacements, like plastic for metal." Nearly half the aircraft industry was staffed by women, and in some factories this was as high as two-thirds. Studies showed that women riveters were generally faster and more accurate at punching rivets than men, a good thing since a plane the size of a C-47 required 500,000 hand-punched rivets! Even so, women made up less than 5% of the defense-plant skilled labor. Most were unskilled laborers, performing very unromantic work for long hours.

The Coast Guard and Navy patrolled shipyards night and day. Early on, the work was interrupted by erroneous sightings of enemy subs, until Kaiser himself forbade workers from being evacuated from ships during such "nuisances."

Military plants were virtual cities during the war. Factories often provided food, baby sitters, and buses for weary workers. Some had their own police and hospitals.

Armed trains, ran by the U.S. Army, transported military equipment and munitions across the country, including freight cars full of bombs, grenades, and other explosives. Some 33 million bombs would be carried along U.S. rails, ranging in size from 4-lb. cluster bombs to 11-ton Grand Slams used by the RAF. Half of them would be the standard 500-lb. bomb. By war's end, the Pentagon would record over 700 instances of explosions from munitions in transit, the most spectacular of which occurred in Port Chicago, Calif. (see p. W172).

Plant life was not all tragedy and nuisance, however. Women workers in the aircraft industry made a game out of writing suggestive and often lurid comments in aircraft as they were built. Fliers, paratroopers, and mechanics in the war zones found the enticing messages most pleasing. Aircraft parts with the juiciest messages were often removed and kept in hangars and soldier's clubs all over the world. Servicemen went to great lengths to contact the flirtatious ladies in hopes of romance.

Wages

In 1938, the minimum wage was instituted at $0.25 an hour. This increased to $0.30 in 1940 and $0.40 in 1945. Until 1941 this was reasonable, but starting that year war industries increased pay substantially more for skilled labor. Workers could expect $0.70 to $1 an hour in most skilled jobs, with the unskilled receiving slightly less. Wages continued to increase throughout the war, with average peak wages for shipyard and automotive plant workers reaching $2-3 an hour.

The Government

When the war came on, few people would realize the impact it would have on the size of the government. The Depression had seen the government grow at an unprecedented rate due to Roosevelt's multitude of acronymed programs – of which there were at least 3,000 during the war years, some lasting only weeks before being replaced. So long were the acronyms, and so unintelligible the agency jargon, that the word *gobbledygook* was coined to describe the nonsense. Hardly anyone could keep up with propagation of agencies and offices such as OUSW, PASO, OCO, JANASB, ACF, MCA, and OWMR.

Washington at War

Washington, D.C., was not well-equipped to handle the the largest war in history. Its tiny airfield actually ran across a country road, which was fitted with a stoplight to halt traffic during takeoffs and landings. At the outbreak of the war, the military establishment resided in broken-down wooden barracks built during WWI, with sagging floors and moldy walls.

When war finally came, the city seemed to explode overnight. The Army and Navy raced to take over the most attractive buildings in the city. The Navy's first bid in the contest was a girl's seminary, with its lush lawns and Georgian-style dormitories, for use as the Office of Naval Intelligence. The Army responded by taking 35 other buildings, most of them architectural masterpieces with gardens and manicured shrubs. In most cases, the owners and residents had no warning until surveyors appeared, or military trucks pulled up to unload office supplies. Prices given for recompense were generally only 20% of market value.

The U.S. military built thousands of sprawling temporary buildings all across the nation. Most were ugly tar-paper shacks built in public parks. In Washington, the Navy built rows of office buildings within a stone's throw of the Reflecting Pool at the Lincoln Memorial. The War Department would ultimately win the competition by building the Pentagon (p. 26).

Visitors to Washington during the war were unimpressed, describing it as having "the charm of the North and the efficiency of the South." There were not enough restaurants, living quarters, cabs, or other public services available. Laundries and retailers turned away customers. Taxis were so badly needed that government employees would act as taxi drivers during their off time. Traffic was horrendous at all hours of the day, despite the gas rationing and tire shortage. Washington's Union Station was overwhelmed with customers, as nearly 100,000 a day moved through its marbled halls. The city's antiquated trolley system was simply overrun.

The plight of Washington D.C. was not unique. All across the nation, cities bustled as soldiers and government employees moved from one coast to the other. Los Angeles doubled its traffic cops, New York its mounted police, to patrol the parks for vagrants and frisky sailors. Chicago had new rail lines and switching stations installed to handle the increased freight traffic. Many cities along the coast watched their population explode as shipyards brought in workers by the thousands.

Government Employees

The government also needed people. The number of government employees doubled by 1942. More than 30,000 people a month were moved into Washington D.C. to take jobs with the various agencies. Some were barely qualified; civil-service tests were suspended during the war. Others were political appointees enjoying the graft from Congress prevalent throughout the war.

Yet some were eminently qualified businessmen and Ivy League professors who answered Roosevelt's call. As explained on p. W172, his "dollar-a-year" men received no pay to speak of, but donated their skills and energy at the president's request. Talented men, such as General Motors executive William Knudsen, or Donald Nelson of Sears, Roebuck & Co., toiled with no pay and little appreciation, organizing and analyzing logistical problems, and running U.S. agencies such as the Office of Production Management and the War Production Board. Generally considered "boring tightwads," they were despised by government employees who were passed over for the new agency positions, and ignored by the Washington socialites because they seldom attended parties.

Hundreds of thousands of single women worked in Washington, as typists handling government paperwork and living four to a room in tar-paper housing. Posters across the nation urged citizens to donate typewriters, for "an idle typewriter is a help to Hitler." Efficiency experts tried in vain to make the government operate as tidily and productively as industry.

For the agencies, idle employees and redundant equipment used up their budgets, guaranteeing Congressional increases the next year. The dollar-a-year men groaned in protest, but could do little against the entrenched lax work ethic and Congressional pork-barreling.

The Price of War

All this expansion had a price. Government debt rocketed from $50 billion in 1940 to $260 billion in 1945. The war's total cost has been estimated at $321 billion, financed mostly by war bonds and greatly increased personal taxes. The Treasury Department introduced the "pay-as-you-go" system of paycheck tax withholding in 1943, resulting in a *twenty-fold* increase in revenues. With tax rates reaching 98% in the highest brackets, wealth was seriously redistributed. The middle class doubled in size while the upper class shrank. The lower class managed to nearly double its average income, resulting in a richer, healthier, and better-educated postwar nation.

Crime

While the American people were building everything from bullets to battleships, and contributing billions of dollars to governmental bonds, criminal activity did not simply evaporate. Bank robberies, the darling crime of the Depression, shrank dramatically, as did overall homicide rates with the decline of both mobsters and the hobo lifestyle. Middle-class America may not have noticed. For the first time, young women were living on their own, giving rise to sex-related violence, and various scam artists continued to enthusiastically ply their trade.

Juvenile Delinquency

Kids were left at home in unprecedented numbers. With mother at the plant and father off to war, the "latch-key children" or "eight-hour orphans" had ample time to cause mischief. Gangs of kids, much more ruthless than the Little Rascals, swarmed neighborhoods, theaters, and even construction sites. Petty crimes were the norm, but extortion of the elderly and ration-card theft also took place.

Scams

Common scams focused on selling air-raid protection products door to door, acting as agents of the government. This might be as simple as a fire extinguisher, or as complicated as "furnace protection systems" that would keep a furnace from blowing up if punctured by shrapnel. Charity scams also were used against the unwary, as were men acting as government agents demanding high-value goods be sent to federal depositories for safekeeping. The victim was duped by badges, marked cars, and receipt books with the faux agency letterhead and mailing address.

One scam involved the obituaries of dead soldiers. The criminal would send a letter to the family of a dead serviceman, claiming to have some personal effects, but needing cash for the shipping. The family would send the cash, but receive nothing.

One widely known form of crime involved the illegal production and selling of ration stamps. Shoe and gas rations were the most commonly abused. The FBI shut down a Mafia ring in New York for ration counterfeiting in 1944. The OPA estimated that the ring had made some $25 million a year from the racket, but it wasn't just the Mafia that was getting rich off such illegal practices. Thousands of gas stations would lose their business licenses during the war for accepting forged gas-ration cards, and more than 1,000 drivers would be prosecuted for ration forgery.

Theft and graft saw boxes of military property for sale across the country, ranging from boots to booze. Stolen military trucks, staff cars, and ultimately tires and spare parts, were filched from military trains, convoys, and bases. Aircraft were stolen from airfields in broad daylight, and joy-riding "borrowed" Army jeeps was a common thrill for teens close to military bases.

Prison

For criminals incarcerated in the 1940s, the prison system was harsh and ruthless. Alcatraz, chain gangs, and privatized work-lease farms were brutal to prisoners. Chain gangs, popular in the South and Midwest, had an average survival rate of only 10 years. Most inmates died from infections caused by the shackles, or from injuries resulting from beatings at the hands of guards. Lack of medical attention, proper sanitation, clothing, or shelter kept many inmates in constant sickness. Long work days and mental abuse took its toll on the mostly black population of chain gangs.

The most famous prison in world was the island jailhouse called Alcatraz. Ninety guards kept the 200-300 men in the ex-Army fortress in line. In 1945, one man, John Giles, cleaned Army uniforms shipped to the prison laundry. He managed to steal a complete uniform and wore it to board the ship that brought the laundry to the island, but was quickly recaptured.

Some 6,000 men in the federal prisons were conscientious objectors, or COs. While the COs could have chosen to join the 43,000 in Civilian Public Service Camps, an organization much like the CCC, those that denied any service to the government were sent to prison for 4-5 years. Many of these men were Jehovah's Witnesses and Quakers, whom endured brutal treatment by both guards and prisoners for their pacifist beliefs. Some men serving in CPSC camps were not released until 1948.

Strife

While the 1940s was certainly a time of unity, there were still hiccups along the way. Racial tension, mass migration, and cultural change resulted in conflict at home that added to the worries of the dogface hiding in a foxhole 3,000 miles away.

Migration

Americans moved all across the country during wartime. Annual interstate migration during WWII was twice the rate of the previous two decades, as families moved to new jobs or women moved home with the parents while a husband was off to war. Some 6 million families moved from the farms to the cities, and nearly 2 million left the South. Two million more moved to California in a migration that one reporter called, "*The Grapes of Wrath*, minus the poverty and hopelessness."

A major part of migration included African-Americans heading to the Midwest and East in search of lucrative defense-plant jobs. All this movement and overcrowding caused stress on families already suffering from the absence or loss of loved ones, and the lack of familiar routines. Housing shortages saw the first trailer parks, as well as the use of converted garages and tent cities for workers. Private homeowners rented rooms to total strangers, and government housing projects created asinine problems such as bringing in workers to build houses for the builders of houses!

V-Girls

Prostitution laws simply were not enforced during the war. Between the bona-fide hookers charging $1 for a "date," to exuberant "V-girls" who pried the GIs away from their checks and patrolled military gates at month's end like a pack of sharks, there was little anyone could, or would, do about it. The military's response was to issue prophylactics and show films on venereal disease. The GIs certainly weren't going to complain, unless they were shanghaied by a V-girl and her "husband." In this scam, the "husband" would interrupt the pair and threaten to pulverize the hapless soldier and report him to the base commander if he didn't hand over some cash. The victim was picked for his small size and large wallet, and usually complied.

Most of the V-girls, however, were simply misguided or delinquent teenagers, and though many would not consider themselves prostitutes, society looked down upon girls that "gave their all for the boys in uniform." Compensation for "cuddle bunnies" was never a straight cash payment, but often a nice meal, a movie, and dancing or other entertainment. To young girls cooped up without young men, it was a perfect trade, and the soldiers felt likewise.

Civil Liberties

The House Select Committee on Un-American Activities, first chaired by Rep. Martin Dies, D-Texas, began the long road of abusive witch hunts that would reach its climax in postwar McCarthyism. Dies' tactics included contempt charges for failing to answer questions before Congress, and the ever-popular "guilt-by-association" accusations. The committee's charges were vague and baseless, but it was successful in terrifying congressional enemies. Just as distasteful was the Smith Act of 1940, which made it a crime to advocate the overthrow of government through words alone. In addition, the act required the registration of millions of aliens and immigrants. Those that failed to register were imprisoned.

The issue of racism began to boil during the war, as well. African-American soldiers were forbidden to use German POW latrines and were forced to sit at the back of the building during prison-camp concerts. While the military experimented with integrating units, the South was the solid home of segregation. African-American soldiers home on leave could not eat in a white's-only restaurant, or drink from a white man's water fountain. There were more than 100 lynchings in the South during WWII.

The Nisei internment camps, described on p. W172, were equally disturbing. Nisei soldiers, recruited from tar-paper internment camps, went off to fight for a country that had confiscated the property of its own native-born citizens because they "looked like Japs." The young men were eager to prove their patriotism, and would fight heroically in the 442nd Regimental Combat Team and other units. Some served as interpreters to commanders and intelligence officers in the Pacific, although they were initially forbidden to serve in the campaign against Japan.

Their folks back home erected bulletin boards in the camp chow halls, detailing the medals and awards their sons had been awarded. In a few cases, the camp guards, shamed by their country's actions, simply quit carrying weapons in the camps – an act strictly against orders. They refused to bear arms against the families of men who had won so many medals. By mid-1944, approximately one-quarter of the interred people had been released, following a humiliating "repatriation" pledge that had Japanese-Americans discarding their assumed oaths to the emperor of Japan.

Interred Japanese made the best of their situation, attending classes in English and American history, sewing U.S. flags by hand, and writing letters by the thousands. Every camp hoisted their own flag each morning and the whole population turned out to sing the national anthem. The whole ritual was repeated in the evening, often at the amazement of camp officials.

While this internment was a national embarrassment, they were not the only ones to suffer for their "race." More than 5,000 Italian- and German-Americans were also imprisoned. In Britain and Australia, the situation was much the same, with thousands of "enemies and aliens" imprisoned throughout the war in the supposedly "free" countries of the Allies.

Riots

Race and civil liberties combined in several notable riots during the war. The most horrific of these took place in 1943 in Detroit, where 34 people were killed in racial fighting brought on by rumors. A similar incident took place in New York, where another six were killed in race riots.

The most famous domestic disturbance of the '40s, the Zoot Suit Riot, took place in Los Angeles during June 3-7 1943. Without any Japanese-Americans around to suspect of ill conduct, white Angelenos had returned to blaming Hispanics for whatever they felt was wrong with their city. Teens in this Latino community had taken to wearing "zoot suits," with extra-wide lapels and oversized coat and pants, to express their independence and figuratively thumb their noses at white America's war rationing.

This choice in wardrobe also made them easy to identify, even on a darkened street. After a handful of sailors claimed to have been assaulted by these "pachucos" the evening of June 3, hundreds of sailors sallied forth onto the Los Angeles streets to beat up any zoot-suiters that they encountered. The police generally trailed behind and arrested the victims afterward. Finally, after several nights of this, and wary that a real mutiny was brewing, the Navy stepped in and declared Los Angeles off limits, though no substantial charges were filed against anyone except the Latino youths themselves.

Rationing

"Use it up, wear it out, make it do, or do without!"
– wartime slogan

As referred to on p. W170, rationing began almost immediately after Pearl Harbor. First, it was rubber. The Far East, cut off by the Japanese, was the source for 90% of U.S. rubber. Tires and other rubber objects, like water bottles, were strictly limited, or even prohibited from sale to civilians. To conserve rubber, the government rationed gasoline as well, even though gas was not in short supply. Folks adapted by making tires last longer. Some traded rubber tires for wooden ones (good for 500 miles) or for tires studded with old shoe soles.

Next came radios and record players; virtually no radios were made for civilians throughout the war, as all production was focused on providing radios to the Allies. Once people bought up those remaining in stock, people either learned to repair them, or they did without. Some cheated, and bought them on the black market, or stole them from military depots.

Scrap Drives

In response to a dire need for rubber in June 1942 (some estimated the nation had less than six months' supply remaining), the president called for a national effort to recycle and conserve rubber. Within a month, the total amount of donated rubber had exceeded 450,000 tons! Unfortunately, rubber reclamation was difficult, and less than one-third of rubber netted could be used. The problem would be solved by scientists, however, and not by hard-working Boy Scouts. The solution was synthetic rubber. By 1944, the U.S. government had 51 synthetic-rubber factories churning out 800,000 tons a year, but early on rubber recycling was critical.

Less useful was aluminum recycling. Scrap drives for Britain had gathered 700,000 tons of aluminum pots and pans, but most of it was worthless – only pure aluminum was used in aircraft, and recycling scrap was time-consuming and expensive. It was easier, faster, and less costly to simply ship finished goods from aluminum manufacturers. The U.S. government ended up purchasing the scrap and donating the new material to the United Kingdom. Much of the scrap was melted down and used, however – in pots and pans for military mess kits.

Iron, steel, and tin were also used in scrap drives, providing low-quality material for shipyards and tank manufacturers. Again, large piles of the scrap adorned the collection points. At most, half of the 5 million tons of scrap metal was utilized, purchased by the government at $18.75 a ton. After the war, some of this scrap was sold to Europe and Japan.

Paper was another common scrap-drive item. Children towed wagons around their neighborhoods until the scrap drive for paper was finally called off. The paper, too, was hard to use at first, but eventually recycled paper provided half of the more than 20 tons a month used in each Army infantry division.

Other recycling projects were also in place. Women were asked to donate their stockings for Navy artillery gunpowder bags. Toothpaste tubes were collected for their lead content, and housewives faithfully collected meat-fat drippings and turned them over to the butcher. The fats were used for glycerin, a vital component in production of explosives.

Gas Rationing

Gas rationing was accomplished by issuing cardboard ration stamps, which were glued to a car's windshield – and were inscribed with the owner's name, address, and license number. Each month, the driver was required to show up in person at the ration board (usually a school or government building) and get their allotment of stamps, which were then redeemed when the gas was purchased.

Class A stamps were issued to "non-essential personnel." They allowed 4 gallons of gas a week, later reduced to only 3 gallons. This was the most common stamp issued.

Class B stamps were issued to essential personnel, such as defense-plant workers, who were allotted 5-10 gallons a week. These people were required to car pool, however, and often sold their extra gas on the black market.

Class C stamps were issued to people who had priority need for gasoline, such as country doctors, farmers, and government officials. The number of gallons handed out depended on the distance being driven and the scope of the job. A typical recipient might get three or four 5-gallon stamps a week. Congressmen and FBI agents would be given books of stamps, which they seldom bothered with, anyway. No gas-station attendant was going to hassle them.

Class T was for truckers only, who had unlimited gas stamps if they were hauling government loads. They, too, contributed to the illegal gas market by filling their truck tanks, then siphoning off the remainder whenever they could. Class T also gave better access to tires and auto parts.

Class X was originally intended as an unlimited stamp for members of Congress, among others, but public outcry ended that quickly, and the X was phased out.

In addition to all this, drivers were limited to 35-mph speed limits, and only five tires, due to the rubber ration. Possessing any more could land a person in jail. Replacement tires had to be requested through the local ration board, and then one had to find a tire, and pay an exorbitant price for it. Extra cash could smooth the transaction . . .

Food Rationing

Americans tolerated the rationing of most goods gracefully, even if only with lip service. But food rationing caused great distress. Here, the complaint was not always about the lack of certain items, but more about the confusing, contradictory, and ever-changing ration books, stamps, tokens, and cards required for every man, woman, and child by the Office of Price Administration.

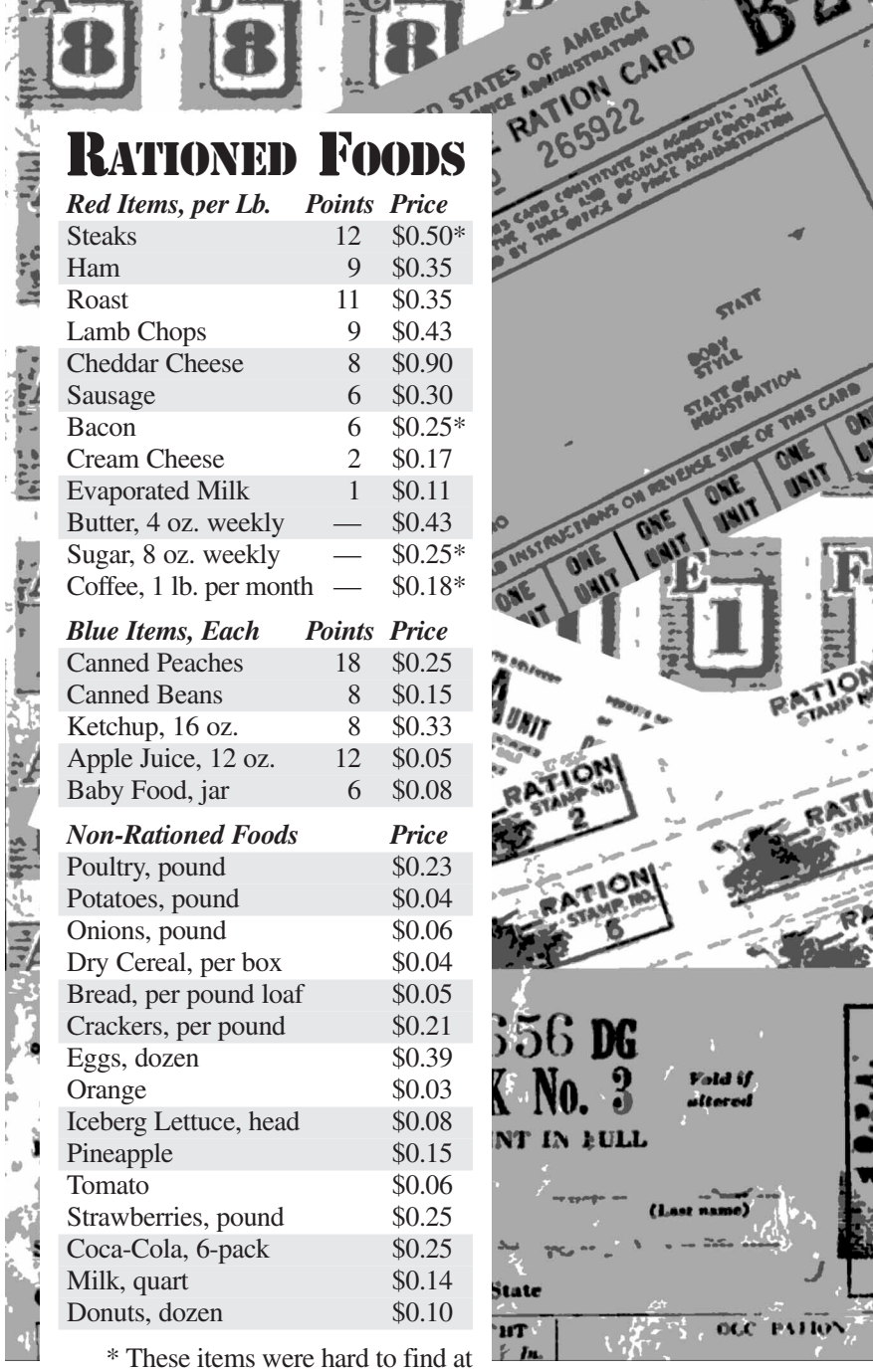
The rationing system was meant to ensure equality for consumers and provide for Britain, which depended on the United States for at least 25% of its food. Grocers were forbidden to accept any sales without ration stamps, and would not be given more food stocks until the previous month's stamps and sales had been accounted for. Grocers hated the system more than the customer, but usually took the time to help explain it to bewildered shoppers.

Government regulations also set price ceilings to prevent food prices from going up. This helped the grocers stay honest, and prevented the rich from hoarding scarce items. Overall, some one-third to one-half of all foods were either rationed or controlled by cost-fixing.

Each item in the store that was rationed had a point value. If the shopper had the points available in his ration book, and the cash (and sometimes the shopper had one or the other, but often neither), then the purchase was allowed. This system was adopted to prevent hoarding and ensure that everyone had "their fair share." Those without ration books could not legally purchase rationed goods, for any price. Grocers displayed signs affirming that they would not break price or ration controls and would abide by government policies. Folks usually shopped at those stores the most, since these were small stores with the time to help untangle the ration mess. WWII actually caused a growth in the "mom and pop" grocery store, within walking distance of any neighborhood in America, reducing the need to use precious gas.

Every person in the nation was issued two coupon books a month. One book had red stamps (64) for dairy, meat, and fish, while the other contained blue stamps (48) for canned and dry goods. Each book was filled out with the owner's name, address, age, etc. The book was turned in at the end of the month and a new one issued.

A list of sample prices and ration points is given. The ration points fluctuated widely from month to month and year to year, but the list should provide some guidelines. Early in the war, prices should be halved, while late in 1945 they may increase 50%. For comparison, the official U.S. Army allotment for food was $0.50 a day per person throughout the war.



Rationed Foods

Red Items, per Lb.	*Points*	*Price*
Steaks	12	$0.50*
Ham	9	$0.35
Roast	11	$0.35
Lamb Chops	9	$0.43
Cheddar Cheese	8	$0.90
Sausage	6	$0.30
Bacon	6	$0.25*
Cream Cheese	2	$0.17
Evaporated Milk	1	$0.11
Butter, 4 oz. weekly	—	$0.43
Sugar, 8 oz. weekly	—	$0.25*
Coffee, 1 lb. per month	—	$0.18*

Blue Items, Each	*Points*	*Price*
Canned Peaches	18	$0.25
Canned Beans	8	$0.15
Ketchup, 16 oz.	8	$0.33
Apple Juice, 12 oz.	12	$0.05
Baby Food, jar	6	$0.08

Non-Rationed Foods	*Price*
Poultry, pound	$0.23
Potatoes, pound	$0.04
Onions, pound	$0.06
Dry Cereal, per box	$0.04
Bread, per pound loaf	$0.05
Crackers, per pound	$0.21
Eggs, dozen	$0.39
Orange	$0.03
Iceberg Lettuce, head	$0.08
Pineapple	$0.15
Tomato	$0.06
Strawberries, pound	$0.25
Coca-Cola, 6-pack	$0.25
Milk, quart	$0.14
Donuts, dozen	$0.10

* These items were hard to find at times, even though the price never skyrocketed due to price controls. Purchasers should expect long lines for stores with these items, and they'll quickly sell out.

Other Items

Other items went on the rationing list, as well. At some time during the war, virtually everything was rationed. Flashlights, flashlight batteries, civilian firearms, curling irons, electric toasters, nylon stockings, vacuum cleaners, and eventually shoes were rationed or restricted because the items themselves or their raw materials were critically needed elsewhere for the war effort. The manufacturers did not lose business, because they began filling military orders.

Drinkers suffered through shortages of whiskey and wine. Smokers lost their premium brands as essential war production, and accepted unknown brands and long lines. No civilian automobiles were produced from 1942-1945, and only those with war priority could lay claim to the 500,000 remaining in stock.

Livestock was also in great demand. A decent riding or draft horse cost $40-65, a milk cow $100-120, and beef cattle averaged $60 a head.

Civil Defense

The Office of Civil Defense (see p. W171) was headed by New York Mayor Fiorella LaGuardia. His energy and brashness excited those around him, including the president. While he was a good mayor, he was an utterly useless director of OCD, infuriating nearly everyone with over-the-top remarks and directives, and traveling at breakneck speed from one coast to the next for civil-defense inspections. La Guardia was unofficially replaced by Harvard Law School Dean James M. Landis, and the OCD settled down to become a more low-key, common-sense agency.

The OCD mustered some 5 million volunteers at its peak, managing everything from sandbag-filling to aircraft-spotting. The OCD used Boy and Girl scouts, the elderly, and anyone else that could carry a bucket of sand or wave a flashlight. For those 4-F men left behind, the OCD was the most common way to "get in the war." With flashlights, helmets, and the occasional shotgun or hunting rifle, the OCD patrolled city streets enforcing blackouts, fire safety, and traffic control. Along the coasts, civil-defense workers manned searchlights and barrage balloons, defended bridges against saboteurs, and patrolled the beaches at dawn for the tracks of invading commandos. Professionals in the Coast Guard and fire and police departments appreciated their earnest enthusiasm, but universally considered them incompetent and dangerous. Serious work was seldom turned over to the exuberant amateurs.

Volunteers watched the skies in the Aircraft Warning Corps. Equipped with aircraft ID materials, a thermos of coffee, and a pair of binoculars, more than 600,000 Americans, from ages 10 to 80, watched the skies for the onslaught of enemy aircraft that never came. Patriotic businesses donated their roofs for these "sky-watch commandos" or "sky pilots." Interestingly, there is no record of any successful ID of an enemy plane; the few that did appear were recorded as unknowns, despite countless hours of training.

The fears of the OCD were not unfounded. Japanese efforts to force the U.S. Pacific Fleet closer to the West Coast included attacks by submarines and seaplanes in Washington, Oregon, and California. A seaplane, launched from the submarine *I-35*, performed two raids to drop incendiary bombs in Oregon with hopes of causing a firestorm in the state's wilderness. Both failed due to recent rains. The submarine also shelled a few coastal installations, again without much success. None of these attacks managed to cause the panic that the Japanese high command had predicted. More successful was the *Fugo* balloon bomb (p. 124). A few inept German agents provided fuel for the imagination of jumpy OCD volunteers walking docks or bridges late at night.

Even though the OCD provided needed manpower for civil-defense projects, most importantly, the director of the OCD admitted, civil defense "gave people a way to act important" in the defense of their nation. The hundreds of civilian pilots that flew in the Civil Air Patrol (p. 124) were much more important to the war effort.

Gold Star Mothers

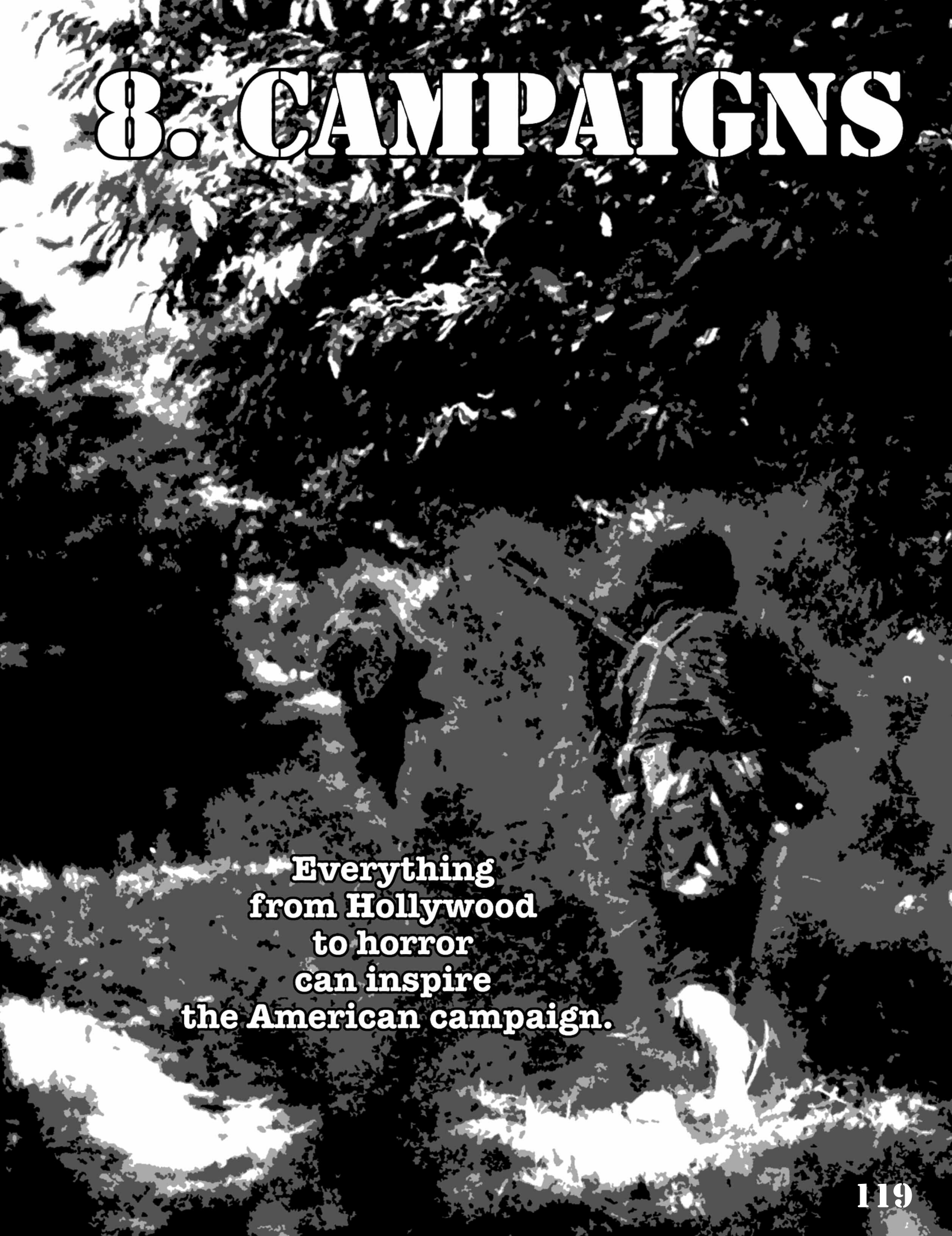
When service men and women went overseas, their families and the Veteran's Office made sure that they weren't forgotten.

Mothers put a red-bordered flag in their window, with a blue star for each member of the family in the service. This was intended to remind the neighborhood of the sacrifice of the family, but was sometimes a marker for would-be thieves. If the serviceman was killed, the blue star became a gold star, and the mother a Gold Star Mother, an organization started shortly after WWI and still in existence today.

Gold Star Mothers marched in parades, wrote letters to parents of fallen servicemen, and volunteered at hospitals to serve the soldiers returning from overseas. Many of them successfully petitioned for better veteran's services, including prosthetics, plastic surgery, and better pensions.

It was not totally altruistic, however. Among neighborhood socialites, the active Gold Star Mother was the first on the party list. She often served as the PTO president and the local Red Cross coordinator, and spoke at schools on patriotic holidays. Special seats were even reserved for her in theaters.

8. CAMPAIGNS



Everything
from Hollywood
to horror
can inspire
the American campaign.

CAMPAIGN STYLES

This section discusses the different tones that a GM can use in crafting an American war story.

The Glory of War

All-American soldiers fight for Truth, Justice, and the American Way. The essential element of this over-the-top campaign is the total lack of moral ambiguity. Right is right and wrong is wrong. The focus is on action and brawn; conflicts are settled with fisticuffs or firefights. Death and serious injury to the heroes is unheard of, or at least very rare. Grenades that cripple a Tiger tank only scratch the heroes who, after at most a bandage, shrug it off and keep fighting for Flag and Freedom.

Characters should be built on 100-300 points, with the balance of points in attributes and advantages. The spotlight is on the archetypical high-action American hero: square-jawed, unflappable, with a Tommy gun in one hand and grenade in the other. He (and in this time period it was almost always a he) is most likely a squeaky-clean small-town boy. He's inexperienced with women and utters "Gee!" and "Yikes" when excited. As he gains experience in combat, he becomes more gruff, perhaps cynical, but still remains soft on the inside. The cliché is so common that it's an interchangeable fixture of film and comics, but there is a grain of truth to it. This is how the government and Hollywood portrayed the war to America.

Cinematic rules, especially Stun Points and Flesh Wounds (p. CII151), should be used to keep the soldiers alive. The Cinematic treatment from pp. CII176-177 will also help.

This style of play is nothing to be ashamed of. It's fun. Having things laid out in black and white lets the players focus on the action, and not the shades-of-gray angst that can sometimes overburden the story. For campaign advice of the pulp variety, ***GURPS Cliffhangers*** offers a wealth of good material.

War Is Hell!

Many American tales of WWII feature new recruits and their first time in combat. This is not high action; it centers on fear and tiny feats of personal bravery. Chapter 3 is a good start for such a campaign, since it focuses on the military experience from day one. This coming-of-age story continues to follow the newbies in their transition to hardened veterans. Beginning the campaign in training allows the PCs to develop relationships, which of course will later be strained, and eventually shattered, by washouts, injury, or death.

Brotherhood

Every PC in the campaign should probably have Sense of Duty (see p. 48 for a discussion of the primary group). In practice, buddies had a devotion to each other that was hard to quantify in civilian terms. They shared their last drop of water, their last box of rations. They suffered for each other's goofy mistakes, but took up for each other at the drop of a hat. Foxhole buddies kept "goodbye" letters for each other in case the other got killed. Willy and Joe, the two GI cartoon characters created by Pulitzer-prize winning Sgt. Bill Mauldin, epitomized the relationship among GI buddies. In the GI-run newspaper *Stars and Stripes,* Willy and Joe swapped canteens, carried each other when their feet were too blistered to walk, and shared their last dry pair of socks.

While the GI did not understand the sociology behind primary groups, he was aware that if he was seriously injured, he probably would not be sent back to his old unit. (This was not the case in Marine and Navy units, which had a better grasp of combat psychology than the Army.) This caused many dogfaces to leave the hospital and make their way back to their unit on their own, even while still recovering from wounds.

Baptism of Fire

GMs intending to run such a campaign should carefully manage character creation so that all the PCs are on equal footing. Advantages that improve combat performance should require GM approval. Usually, Combat Reflexes will be out of the question. Toughness might be. Since the emphasis of the story is on youth and innocence, a GM may require a pricey Unusual Background for macho advantages. Some of these advantages may be purchased in play, and of course the new soldiers will pick up the Fit advantage in training.

Confusion and Decision

Soldiers seldom had the luxury to look around them and leisurely take in the whole battlefield. Terrain, camouflage, smoke, and weather limited vision. Gunfire, explosions, and the cries of the wounded men and horses made verbal communication difficult, if not impossible.

Strange effects were also reported, such as losing track of time, or a sudden need to sleep. Some noted that one of their senses stopped functioning partially or completely. (Tunnel vision during combat is a well-studied experience among both soldiers and police alike, for instance.)

As a result, troops performing actions that require focus – such as shooting, or aiming, or operating a vehicle – should not have full awareness of what's going on around them. GMs should feel free to give incomplete information to a player if the soldier is doing anything besides looking at his surroundings. This is realistic! Commanders traditionally carry few weapons, which forces them to spend more time looking and commanding, and less time shooting. Snipers are successful in part because of the time they spend looking *before* shooting.

In addition to overwhelming the senses, combat frequently required soldiers to make snap life-and-death decisions in a fluid environment with incomplete information. Fog and smoke obscured the enemy. Explosions and gunfire garbled radio messages. Blood, water, or mud, blotted out written instructions. Thus, when soldiers were hard pressed, it wasn't uncommon for them to make poor, or sometimes fatal, decisions.

GMs that want to simulate this experience for the *player* may set an amount of time for each player to make decisions for his character (5-10 seconds is a good starting point for most groups). Failure to make a decision means the character

does nothing that round. The GM may count out loud, or use a stopwatch, or an egg-timer. This technique keeps players from stalling and slowing the pace of the game, which adds drama. GMs should be more generous with time allotments for characters that have Combat Reflexes, Collected, Composed, Cool, Fearlessness, or other similar advantages, and may allow a roll against Tactics to gain even more time.

Brutality

Even hardened veterans were sometimes struck dumb by the violence and brutality that can be seen, heard, and smelled on the battlefield. GMs trying to recreate this should assault the troops' senses. The smell of blood, gunpowder, burning flesh, vomit, and urine, and the sight of wounded, disfigured, and dismembered friends, can cause Fright Checks every second for green troops, at any penalty that seems appropriate. Veteran troops may shrug off some of these horrors, but the sight of mangled friends and innocents may stun even them. GMs are encouraged to use artistic license with Fright Checks to create drama and emotion on the battlefield. It is suggested that the Fright Check table be used as a guideline only.

Pre-planning horrific events to take advantage of a character's quirks or disadvantages is of absolute importance. If Sgt. Barrett, a hardened veteran with nerves of steel, sees a small girl peeking out of a second-story window before it's shattered by artillery fire, it may shake him. If she resembles his daughter back home, it definitely will!

Simple Heroism

The GM should make available many opportunities for heroism, both large and small. Gathering weapons and ammunition under enemy fire, dragging comrades to safety, patching up the wounded, throwing back enemy hand grenades, and so on will add greatly to combat. Endless calculations of Speed/Range modifiers are boring. Instead, give the troops jobs such as carrying dispatches under fire or crawling out through the wire at night to bring back the wounded.

Such actions may be rewarded with medals and commendations, or with the admiration of the unit (an improved Reputation in game terms). Little actions, like giving a comrade your last drink of water or taking an exhausted buddy's backpack, should also garner respect and favors at the platoon or squad level. If Pvt. Johnson notices that Sgt. Taylor's letters from home have fallen from his pack during a retreat, and he retrieves them, his name may stay off the KP list for weeks.

Death

The death of a character should be a dramatic event, or at least one that suits the campaign's purpose. On the other hand, the players should not be allowed to ruin the campaign with total disregard for their soldiers' personal safety.

In ***GURPS***, one or two well-placed shots can instantly kill the toughest combatant. This is a playable abstraction, but in the real world, few people die instantly. Some linger on for minutes or even hours after a fatal wound. Thus, even if a trooper has failed that final HT roll, the GM should not always kill him off instantly. There might be time for a few parting words to the other dogfaces in the campaign.

Walking Wounded

Many Americans found combat to be a living hell of combat fatigue and horror. This is the opposite of high adventure. It focuses on the tortured tales of battered men – brave and glorious in their own way – as they cope with adversity and try to maintain their sanity. Especially given the Army's poor replacement system, some U.S. soldiers endured as many mental and physical stresses as any combatant.

Exhaustion

Combat fatigue, or "exhaustion" as it was called then (air crews used the term "flak happy"), was the product of a brutal mix of physical and mental abuse. It was brought on by physical exhaustion, hunger, sleep depravation, lack of safety, and constant fear, stress, and peer pressure. Modern armies understand that a unit continuously exposed to these conditions for longer than a couple of months will be composed almost completely of psychiatric casualties. Thus, the longer a unit stays in combat, the more casualties it takes, both physical and mental.

The Army sent psychological units into the field to study and treat exhaustion. Psychoneurotic cases occurred at about half the rate of actual battle casualties, and though much less common than disease casualties, they were still a significant drain on manpower and medical resources.

Physical Deprivations

Contributing to exhaustion was the dogfaces' perpetual enemy, the elements. Constant marching, digging, and climbing lowered mental resistance. Combined with harsh weather (see p. B130, pp. CII133-135) and tactical requirements for speed and alertness, labor became an almost unbearable load. Soldiers marched 20 miles a day under full packs weighing 60 lbs. or more, only to dig foxholes at sunset. Often the dogface dug those holes while under fire, with blistered, bleeding hands.

To properly integrate combat fatigue into the campaign the rules for Fatigue loss (p. W205, and see p. CII93 for additional detail) should be closely followed. Remember to reduce the soldier's Move by half when ST drops below 3. GMs that follow these rules closely should allow Fit/Very Fit and Extra Fatigue to be increased as the campaign progresses.

Lack of sleep was another enemy of the GIs (see p. W205 or the more detailed rules on pp. CII173-174). A noisy or awkward situation, such as an artillery bombardment, a heavy rain on a muddy field, or sweltering heat in the back of a truck, denied soldiers the sleep they needed. Aboard ships and aircraft, bad weather can have the same effect. GMs may require a successful Will-3 roll to sleep in noisy or strange environments.

Extreme sleep deprivation was common enough on the battlefield that victory sometimes was determined by the presence of fresh troops. GMs should assume that most troops in continuous combat for more than a day will be at -2 Fatigue, -2 to IQ, and -2 to DX under most front-line conditions. This also applies in any situation where troops lack basic shelter or sleeping gear. Note that these penalties will be overlooked during most combat situations (due to adrenaline, see below), but Tactics and other mental skills will suffer outside of combat, such as when considering plans prior to an attack.

GMs should allow PCs to improve their resistance to sleep deprivation by gaining the Less Sleep or Deep Sleeper advantages during play. The soldier that can sleep through anything is a hallowed military tradition, and not at all uncommon in reality.

As the soldier experienced the drain of physical exhaustion, his ability to resist stress began to flag. To model this, divide Fatigue loss in half (round up) and apply it as a penalty to any IQ-based rolls. For example, if Lt. Jones missed some sleep the night before (-2 Fatigue) and marched an hour to the battlefield in full gear (another -3), he would roll at -3 to resist a Fright Check when his sergeant is blown to pieces right before his eyes.

The most damaging effect of prolonged combat was to the sympathetic and parasympathetic nervous systems. These systems are responsible for the fight-or-flight response, and the resulting jitters and weariness afterward. A soldier in continuous combat existed in a more-or-less permanently aroused state of fight or flight; the roller-coaster ride eventually causes the body to burn out completely. (Studies of soldiers in *simulated* combat have shown that heart rates will jump from 70-80 beats per minute to as much as 300 beats per minute.)

In the initial reaction to combat, the sympathetic nervous system tries to draw energy from every part of the body. This intense need for energy can cause a soldier to urinate or defecate as the body uses the energy from non-essential systems to deal with the threat. As the body experiences threats over and over, it soon runs out of energy, and eventually becomes incapable of a suitable response.

In game turns, the effects of the fight-or-flight response last for 2×HT seconds, allowing the subject to ignore Fatigue-based penalties during that time, as well as any partial injuries per p. CII157. Sleep depravation can also be ignored; this is an adaptation of the rules on p. CII174. After each 2×HT seconds, the soldier rolls vs. HT+Will modifiers to keep ignoring fatigue, at a -1 penalty for each successive roll; for instance, a soldier with Strong Will +2 and HT 11 would roll vs. modified HT 13 after 22 seconds, 12 after 44 seconds, 11 after 66, etc. Eventually, the soldier will burn out and fail a HT roll, and thus feel the full effects of Fatigue loss, plus 1 for every successful roll made. (The longer he keeps moving on adrenaline alone, the larger the impact when the effect wears off.)

Going Over the Edge

Without relief, a soldier eventually cracked up, or as the GIs said, "had no change left." The list below can be used as a guideline for appropriate Disadvantages gained by failing a Fright Check due to combat fatigue or any combat-related horror. The GM should try to work from the lowest to the highest point value, creating drama from the dogface's slow slide toward, and perhaps over, the brink of insanity.

Combat Fatigue Disadvantage List

-5 Points: Callous, Edgy [-6], Flashbacks, Guilt Complex, Light Sleeper, Loner, Post-Combat Shakes, Nightmares, Shyness (Mild), Stubbornness, Workaholic.

-10 Points: Bad Temper, Bloodlust, Bully, Confused, Cowardice, Impulsiveness, Indecisive, Insomniac, Laziness, Overconfidence, Paranoia, Short Attention Span, Weak Will -1 [-8].

-15 Points: Absent Mindedness, Alcoholism, Berserk, Combat Paralysis, On the Edge.

Treatment

Immediacy, proximity, and expectancy were the three most-important treatments for combat fatigue.

The immediate treatment of mental problems prevented the soldier from completely "cracking up," and protected against further combat-fatigue casualties in the unit as others felt the stress of seeing friends break down.

Studies showed that keeping the combat-fatigue casualty near the front actually helped. Removing the troops to the rear simply isolated them from their primary group (p. 48) and caused further stress. Exhaustion-treatment techniques emphasized that troops should stay as close as possible to their unit, but still be removed from actual combat. A rifleman might have been pulled out of his position in the squad and assigned as a stretcher bearer, messenger, or ammo bearer. More serious cases went to the aid station, or a field hospital a few miles back.

This reinforced the third treatment, expectancy. Leaders made it clear to the casualty that they were needed as soon as they could get better. The combination of these three techniques greatly helped men deal with the stress of battle. The same treatments, but on a larger scale, worked for platoons and above. Companies, battalions, and even divisions were occasionally rotated out of the direct front line, to a reserve status.

Hot food, a hot shower, and sleep were the basic ingredients for treatment. Many of these cases slept for 3d+10 hours straight, courtesy of morphine or sodium amytal. In game terms, narcotherapy allows the soldier to recover all missing fatigue, at which point a Will roll can be made to erase each of the newly acquired disadvantages. Failure by 3 or more means a permanent personality change. Also, roll vs. Will to keep Will itself intact if -15 or more points in mental disadvantages were acquired; a failure by 3 or more gives a permanent -1 to Will (either one level of Strong Will is lost or a a level of Weak Will gained), with a 1d-1 loss on a critical failure.

After recovering, eventually these men were put back on the line. Those that refused were classified as malingerers and could be court-martialed. Many were sent to psychiatric hospitals at the army level for evaluation.

CAMPAIGN SETTINGS

Here are some broad ideas for campaigns based on American characters, both at home and abroad.

Target: America

Though historically the war touched only lightly upon the continental United States, everyone was on the lookout for their worst-case fantasies – and in a ***GURPS*** campaign, these nightmare visions can come true . . .

The G-Men

Best set in the pre-Pearl Harbor days, this campaign focuses on agents tracking down Nazi spies and sympathizers. Such a campaign has its roots planted firmly in reality. The FBI did carry out surveillance on and interviews of suspected "belligerents and aliens." Some of these subjects were deported; others were imprisoned or turned over to friendly nations.

Ten different spies did infiltrate the U.S. during wartime. Four of them came ashore on Long Island in a rubber raft on June 13, 1942. They wore German military uniforms (to avoid execution as spies if caught at once), which they buried on the beach. Wooden boxes held explosives, shortwave radios, guns, and large amounts of cash. A Coast Guardsman caught them shortly after they had buried their uniforms. They gave him a lame story, forced him to take $300 as a bribe, and hurried off with their box. The guardsman promptly alerted his superiors and the manhunt was on. On June 17, a second raft with four more infiltrators landed at Ponte Vedra Beach, near Jacksonville, Fla. They were similarly equipped.

While the eight Abwehr men could have done serious damage, trained as they were in sabotage of industrial sites, they did little more than spend the $300,000 they had been given on women and booze. Two of the men got the shakes and turned themselves in. According to reports, the other six were rounded up by the FBI; others claim the Mafia swept them up in Chicago and New York. All but two were executed Aug. 8. In less than two months, the whole group had either been arrested or killed. Two other spies were floated ashore in Maine in 1944, but they, too, were caught in a matter of days.

Adding more paranoia to such a fictional campaign is easier if the scope of the spy network is unknown. One of the most appropriate antagonists in this case could be the real-life German-American Bund. This organization claimed many thousands of members. It officially preached allegiance to Adolf Hitler and predicted he would become the American Führer. Bund meetings included the Nazi salute, songs, and flags emblazoned with the swastika.

The Bund's propaganda wing spilled the Nazi party line onto air waves and into newspapers all over the country. Anti-Semitism, state control, revenge, retribution; these were the foundations of the American Bund platform. Allegedly, members of the Bund bought German state bonds, met with Hitler at the 1936 Olympics, and even volunteered for espionage assignments on behalf of the Abwehr. Three of the eight men that paddled ashore were reportedly former American Bund members.

John L. Spivak, an investigative reporter during the 1930s, published a book in 1939 titled *Secret Armies: The New Technique of Nazi Warfare*. Spivak's book exposed dozens of Nazi sympathizers across the country. Many were professionally embarrassed; some lost their jobs. His book makes an excellent source for the campaign, with its dramatic secret meetings, anonymous letters, and high-placed Nazi backers. The PCs could enlist the help of a freelancer like Spivak to help in the investigation. A full-blown Secret Masters campaign would benefit from ***GURPS Illuminati*** to help plan the Rube Goldberg plot that would of course eventually lead back to Berlin . . . or would it?

Some sources even allege that, in the mid-'30s, the American Legion was involved in plot to overthrow the White House. Such a coup would have been led by legionnaires who hoped to gain power by returning to the gold standard. They approached Marine Gen. Smedley D. Butler, a two-time Medal of Honor recipient, to lead veterans against the government. Butler played along, but told Roosevelt of the plan. The whole thing was allegedly planned by DuPont and GM, which wanted a fascist government in place to protect businesses.

In this conspiracy theory, the DuPonts and a few others financed the Black Legion, a violent, black-robed KKK clone in the Chicago area. The Black Legion consisted mostly of poor, disenfranchised white men, and struck out against foreigners, Negroes, and labor unions. It broke strikes and labor riots, and grew to infiltrate police departments and city government. It eventually died out as the war neared and many of its party members were drafted.

More than 1,600 prisoners of war in the United States escaped between 1942 and 1945. Most of those were recaptured, but some were not. The men in these camps were treated well enough that there was little reason to escape, but that didn't placate everyone. In an alternate-history campaign, escaped fanatical POWs could set out on a spree of terror as the federal agents try to stop them.

A GM could combine any of these elements to craft a chilling alternate-history campaign for players expecting more humdrum fare. Such a hodgepodge may provide the most entertaining plotline for those interested in prewar capers.

Civil Defense

The volunteer pilots of the Civil Air Patrol flew nearly 250,000 hours in single-engine planes armed with bombs or depth charges along the Atlantic Coast and the Gulf of Mexico. Flying over 24 million miles throughout the war, the CAP lost two dozen pilots, bombed almost 100 enemy submarines, and even managed to sink or damage at least two. Several hundred sailors were located in search-and-rescue operations. When the military took over the Coastal Patrol in late 1943, the CAP was credited with ending German U-boat patrols near U.S. shores.

One potentially devastating attack on the United States failed, fortunately. In 1944 and 1945, the Japanese launched nearly 10,000 *Fugo* balloon bombs in an attempt to set fire to the vast forests of the northwest. Luckily, only 300 of the bombs managed to find the continent, landing as far east as Grand Rapids, Michigan. The government suppressed news of the balloons (to prevent panic and deny the Japanese any intelligence) until an Oregon woman and five of her children died tinkering with one. (They were the only mainland Americans to be killed by enemy action in the war.) Had more of the bombs struck the northwestern forests, it's possible that the effort may have been at least partially successful.

The *Fugo* were launched in Japan and carried up into the jet stream. Instrumentation kept the balloon aloft until it finally came down 3-5 days later, dropping its ordnance before finally igniting a self-destruct mechanism that would cause the hydrogen-filled envelope to burst into flames. Some of the bombs were shot down before they could cause damage. A USAAF fighter pilot was credited with an enemy aircraft kill by downing one. A sheriff in Wyoming downed another with his rifle. OCD workers managed to disarm one and turn it over to the Office of Naval Intelligence, which in turn handed it over to the Office of Scientific Research and Development.

Treat the *Fugo* as a hydrogen barrage balloon (see p. W119) with a payload of four 10-lb. incendiary bombs (use the M-15 WP grenade, p. W98, but double damage) and one 30-lb. HE bomb (6d□4 [6d]). A small box contained the equivalent of navigation instruments and an autopilot for the device. Meteorology skill would be crucial in deploying them.

It is rumored that the Japanese planned on using biological weapons in the balloons, such as anthrax, plague, or smallpox. This was not carried out, but would represent a substantial threat in alternate-history campaigns.

In Theater

Of course, the main thrust of ***GURPS WWII*** is war stories, and the U.S. troops had their share of those.

Angels in Olive Drab

The general medical-evacuation procedure is described on p. W54. Once a patient reached a field hospital, he was normally fairly well in the rear – but in the case of Anzio, the "Hell's Half Acre" rear was the last place that anyone wanted to go, which would make it a perfect model for a campaign based on a hospital near the front.

TV series like *M*A*S*H* and *China Beach* have given us the archetype and plenty of source material for this campaign. Helicopters are out (except in an alternate history), but jeeps, ambulances, and even light airplanes can come roaring up to panic the medical staff just as well. As each series portrayed, romance, combat, intrigue, and challenging surgical work can be intermeshed for an entertaining background.

This campaign allows a lot of freedom in a straight historical campaign. Army nurses worked right on the front lines with male and female physicians. Blacks served as integrated medical staff before they did so in combat units. Enemy personnel occasionally worked as orderlies for lengthy periods before being transferred to the rear. Men who would otherwise be disqualified for combat could find themselves in medical units near the front. All this allows the players a wide variety of character concepts, something a straight dogface squad campaign ala *Combat!* would not.

ALSOS

In 1943, scientific-intelligence operatives, working for Gen. Groves, arrived in Europe to determine if the Germans were still working on an atomic weapon, and to disrupt that work if possible. By August 1944, the ALSOS (a Greek word for "grove") mission was in French universities and research facilities. In November, the team reported that they had discovered no atomic weapon, and confirmed that no significant effort was under way.

Lt. Col. Boris T. Pash was the ramrod for the operation, which included scientists, military intelligence and engineering officers, and a team of Rangers and MPs for protection. Pash was a former FBI agent and spoke fluent Russian. ALSOS worked right on the front lines, often sneaking ahead of American units to gain intelligence in no-man's land.

In an effort to lock down all the German uranium ore, something his superiors required, Pash was forced to go deeper behind the lines. His command eventually included armored cars and machine-gun-carrying jeeps. In the meantime, ALSOS had uncovered the German atomic scientists, who were "escorted" to the United States as insurance against them falling into the hands of the Soviets. The ALSOS team, which also included British personnel, eventually discovered 1,100 tons of uranium ore in northern Germany, and raced against time to move it out of the war-torn area before the Soviets arrived. This ore would be used in the Little Boy bomb (p. 74).

Americans Out of Uniform

Those Americans that could not serve in the military (classified 4-F) had another option: volunteer. Numerous civilian organizations served around the world during the war. The American Volunteer Ambulance Corps and the American Field Service worked with the French and British armies ferrying wounded from the front lines as early as 1940. It was a dangerous job for little pay, but for those that could serve in no other way, it was a means to get in on the action.

Ferry pilots were paid on contract to fly bombers to England. American Airlines and Northwest Airlines flight crews were also paid under contract by the USAAF Air Transport Command to carry troops and supplies. Civilian construction workers defended Wake Island, and worked side by side with the Seabees to build bases in the Pacific. Civilian technicians worked near the front lines repairing high-tech equipment such as tank gyro-stabilization gear and telephone switchboards. Others worked in government offices abroad, often in harm's way. Daring State Department employees risked their lives to get Jews and downed Allied pilots out of Vichy France or neutral Spain. OSS agents included civilian volunteers recruited for their special knowledge, be they academics with mastery of obscure Nepalese dialects or advertising executives heading up covert propaganda presses in Poland.

Props and Game Aids

Gaming props can be a wonderful aid for GMs wishing to create an immersive gaming environment. Original radio broadcasts, found on the net in MP3 format, can be used to give a sense of urgency to the setting. They can also be useful as the mouthpiece for the GM if the broadcast features useful game information.

Other sounds, such as "Big Band" music (Glenn Miller, Nat King Cole, and Benny Goldman are old favorites) can be played in the background during lulls. Sound effects, from dive-bombing Stukas to chattering BARs, add a great touch to combat scenes. Longer battle sound-effects compilations can be purchased at music stores for under $10. If the soldiers split up and communicate by radio, investing in a cheap pair of toy walkie-talkies can make radio traffic *much* more interesting (see p. 26 for the WWII-era phonetic alphabet)! Consider separating the gaming group in different rooms to add to the realism.

Other props can enhance the gaming experience, too. Consider making photo IDs for the PCs. Period photographs can be copied from internet sites, or scanned from old yearbooks. Add the photo to a passport-like form with name, rank, and serial number. Put game stats on the back of the ID and it becomes a useful and attractive game aid. Typewriter fonts can be used in word processors to produce dozens of intelligence files, operations orders, and weather reports. A little searching on the net can provide many *real* bits of info for these handouts (1944 sunrise, weather, and tidal data, for instance), if the GM is so inclined.

Period maps can be found at used-book stores, library sales, or on the Internet. Old topographic military maps can be scanned and then modified with photo-editing software to change place names to fit the game. Cheap rubber stamps with SECRET and RESTRICTED can add that little extra bit of atmosphere to any game document. With a little effort and some creativity, GMs can create wonderful props for each gaming session. If players join in and share the job, the whole group can enjoy the props together.

REFERENCES

Along with the references in ***GURPS WWII***, these sources should be useful for those using ***Dogfaces***.

Books

Ambrose, Stephen E. *The Victors* (Simon and Schuster, 1998). Eisenhower's handpicked biographer tells the story of U.S. forces from D- to VE-Day.

Brinkley, David. *Washington At War* (Random House, 1988). This panoramic view of the capital city from the prewar period of peace is required reading for any homefront campaign. Brinkley's priceless depictions of daily life in wartime D.C. make it worth tracking down this hard-to-find book.

Cooper, Belton. *Death Traps* (Presidio, 2000). An insightful look at U.S. armor on the Western Front through the eyes of a maintenance officer. Cooper's verdict on the Sherman, both in combat and the motor pool, rejects the standard arguments in favor of the tank.

D'Este, Carlo. *Patton: A Genuis For War* (Harper Collins, 1995). A balanced and revealing treatment of America's favorite general. Valuable for the letters of Patton's critics and friends.

Ellis, John. *World War II: The Encyclopedia of Facts and Figures* (Military Book Club, 1993). The statistics on production illustrate the unsung battlefield of the war.

Gawne, Jonathan. *Spearheading D-Day: American Special Units In Normandy* (Histoire & Collections). A highly detailed examination of the organization and equipment of the assault troops, Rangers, and engineers.

Grossman, Dave. *On Killing* (Back Bay Books, 1995). Building on S.L.A. Marshall's wartime-inspired *Men Against Fire*, Grossman provides an illuminating examination of combat stress and coping mechanisms.

Keegan, John. *The Second World War* (Penguin, 1989). Though intended as a grand overview of the war, it covers key American successes – and shortcomings. Behind the scenes political wrangling is artfully related to battlefield outcomes.

Kennedy, David M. *Freedom From Fear: The American People in Depression and War, 1929-1945* (Oxford University Press, 1999). This Pulitzer-prize winner is an outstanding one-volume history of the period. Descriptions of Depression-era America and the post-Pearl Harbor panic are great background reading for those running any WWII-era game based in America.

Kennett, Lee. *G.I.: The American Soldier in WWII* (Charles Scribner's Sons, 1987). From sex, politics, and booze, to gripes about the Army, this is a must-read for those interested in the views of the average dogface.

Osgood, Charles. *Kilroy Was Here: The Best American Humor From World War II* (Hyperion, 2001). This provides examples of slapstick comedy, cartoons, and jokes that circulated from the homefront to the trenches.

Prange, Gordon. *At Dawn We Slept* (Penguin, 1981). The classic in-depth history of the Pearl Harbor attack. Notable for its revealing look at both Japanese and American blunders.

Schreier, Konrad. *Standard Guide to U.S. World War II Tanks and Artillery* (Krause Publications, 1994). The data on U.S. vehicles is light reading, but definitely worth a look for the chapter on the U.S. artillery system.

Film

A Walk in the Sun (Lewis Mileston, 1945). Follows an infantry platoon as it attacks a fortified Italian farmhouse. An unusually gritty film for its time.

Casablanca (Michael Curtiz, 1942). Generally regarded as one of the best films of all time. If you haven't seen it, watch it. The movie's timely release allowed the movie studio to capitalize on the Allied capture of the city.

From Here to Eternity (Fred Zinnemann, 1953). The original film about a love triangle in prewar Hawaii, based on novelist James Jones' real experiences. For yet more Pearl Harbor love triangles, see *In Harm's Way* and (if you haven't had enough) the appropriately named *Pearl Harbor*.

Memphis Belle (Michael Caton-Jones, 1990). This high-action story focuses on the relationship between the crewmen of the famous bomber.

Objective Burma! (Raoul Walsh, 1945). Parachutists attempt to knock out a Japanese radar station deep in the jungle. Errol Flynn provides a down-to-earth performance as the paratroop commander.

Patton (Franklin J. Schaffner, 1970). Although the battle scenes are laughable, George C. Scott accurately portrays "Old Blood and Guts," with one exception: Patton's real voice was nasally, not Scott's gravelly bass.

They Were Expendable (John Ford, 1945). John Wayne plays a PT-boat commander during the defense of the Philippines, based on the real-life exploits of these naval officers.

Run Silent, Run Deep (Robert Wise, 1958). Moby Dick meets WWII in this tale of an obsessed skipper chasing the Japanese ship that sunk his previous command.

Internet

The internet is a rich source for game props. Wartime government documents can be downloaded from Southern Methodist University's digital library at **http://worldwar2.smu.edu/**. The collection includes air-raid training pamphlets and instructions on how to fight fire bombs. Most useful, however, are the original "pocket guides" handed out to servicemen as they were shipped out to a new country.

A collection of U.S. Army training manuals can be downloaded from the U.S. Army Military History Institute's online digital library at **http://carlisle-www.army.mil/usamhi/DL/index.htm**. The "Combat Lessons" and "Army Talks" pamphlets are the most useful as props and background reading.

Some WWII-era photos from the National Archives are available in digital format for download as props. See **www.archives.gov/research_room/research_topics/world_war_2_photos/world_war_2_photos.html**.

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