GAME INFORMATION: VEHICLES

MOTORBIKES, CARS, TRUCKS

Willys MB

Allied
Car/Truck

Light off-road vehicles for the army were developed within short time by three companies Willys, Ford and Bantam in 1940. The production started in June 1941, but in July 1941 the American military department decided to make one vehicle of these three. The Willys MA was taken as a basis for it, it was modified from the operation experience. A new model received the index MB.

"Kubelwagen" Kfz.1 (VW82)

German
Car/Truck

From the early thirties, the German Army used a lot of "Kubelwagen" field vehicles. They were designed in 1939 by F. Porsche, a military variant of the excellent VW Käfer (Beetle). These cars were simple, light and reliable, its air-cooled engine worked perfectly both in Russian frost and African heat. Its only failure was 4x2 drive. Though due to its lightness, its off-road capabilities were satisfactory, and it was easy to pull the car out of Russian mud. Definitely, "Kubel" became one of the symbols of the Wehrmacht.

"Horch"

German
Car/Truck

Horch 830-B initially was designed for civil purposes, but it was reequipped for the army in 1937. The vehicle was in manufacture from 1935 up to 1938.

GAZ-67B (with command car modification)

Soviet
Car/Truck

GAZ-67B was produced in 1944 after numerous modifications of early 4x4 jeeps GAZ-61-40 and GAZ-61-73. It was the Soviet response to Willys jeep, however Soviet-made jeeps didn't play a very important role in the war, because only about 5,000 were built in 1943-1945 (most of GAZ-67s were postwar production). The GAZ-67 had a 4-seat open body, its engine had 54 HP, its maximum speed was 90 km/h. Although perhaps it didn't have such an excellent design as the Willys, it was just as tough and uncompromising vehicle with very fine off-road characteristics, better than most of today's cars.

Harley Davidson

Allied
Motorbike

During World War II all of the Harleys produced went to the war needs. As factories were forced to translate the motorcycle production into production of tanks and planes, Harley's motorcycles were also shipped overseas to U.S. allies. Some of the motorcycles were equipped with a sidecar and a mounted Browning machine-gun on it.

BMW R12

German
Motorbike

The BMW plant produced powerful motorcycles for the motorcycle division of the Wehrmacht. The model BMW R12 was especially successful. 36,000 machines were produced from 1934 up to 1941. The accelerative engine allowed to use the motorcycle as a two-wheeler and to mount a side-car. The machine-gun MG 34 was installed on the machine that made the motorcycle extremely dangerous for the infantry.

M-72

Soviet
Motorbike

The production of M-72 was launched in 1941, first of all this machine was to satisfy the transport needs of motorcycle units of the Red Army. The high mobility of these units on highways and off-roads provided the freedom of maneuver for the army. The model with a side-car was equipped with a machine-gun DP. M-72 won good glory for well-balanced engine, for soft suspension, for high reliability and durability.

GMC CCKW-353 (with modifications)

Allied
Car/Truck

The ACKWX-353 evolved from the commercial ACX-353 truck, with military requirements like brush-guards and towing eyes added. In February 1941, split-type rear axles was supplemented by the stronger GMC banjo-type axles, which meant re-designing most of the rear drive-line. The vacuum-boosted brakes were replaced by the Bendix "Hydro-Vac" early in 1942. From April 1943 onwards all cargo trucks had wood cargo body instead of the initially used steel one. The majority of CCKW-353s were cargo trucks, with numerous body modifications like compressor truck, petrol tanker and water tanker.

Opel Blitz 3.6-36 (with modifications)

German
Car/Truck

Owing to its durability and reliability these trucks were used in all war theatres. If you try to characterize this vehicle with several words, it will sound like "Blitz" is a vehicle for reliable work in difficult conditions". "Blitz" has a steel cabin and a wooden cage; it was operated as a medical field vehicle, mobile workshop and a command vehicle. Like other army trucks it was useful for quick and massive deployment of troops in short times, for towing of light canons and field guns.

ZIS-5

Soviet
Car/Truck

ZIS-5 was one of the two standard Soviet trucks in the 30's and the most numerous one in the late stage of the war. It was a 3-ton 4x2 truck produced since 1933 in Moscow. The engine had 73 HP, maximum speed: 60 km/h. In June 1941 the Red Army had 104,200 ZIS-5 trucks. During the war this trucks were equipped with wooden doors, a single headlight, etc. While the GAZ-AA lost its importance for the front needs due to the intensive growth of Lend Lease truck shipments in 1943-1944, the ZIS-5 remained one of the main war transports. The overall production was about 1 million units, and they were also delivered to Soviet allies.

ZIS-42

Soviet
Car/Truck

ZiS-42 is the half-track based on ZiS-5 truck. The forthcoming of this truck to the plant production line was stipulated by the lack of artillery tractors in the Red Army and by the lack of trucks with high cross-country ability. The pre-war ZIS-22 was taken as a basis, its track width was expanded, the engine torque was transmitted by the gearing, and not but by friction.

APC, AFV

M3

Allied, Soviet (under Lend lease program)
APC

The M3 Scout Car was one of the most important, although less famous vehicles in U.S. Army during the World War II. The M3 could carry up to 8 infantrymen, had a top speed of 50 miles per hour, a range of 250 miles, and 13 mm armor on all sides. In the front of the vehicle there was a M49 ring mount and a pulpit for a .50 cal MG. It had an open top, as well as an anti-ditching mechanism. The vehicle was rarely used in front line action and was mostly operated behind the front lines where it could be hardly shot to shreds by the enemy.

M20

Allied
APC

The M20 Armored Utility Car, also known as the M20 Scout Car, was a derivative of the U.S. M8 Light Armored Car Greyhound with the turret removed. This was replaced by a low, armored open-topped superstructure and a ring mounted .50 cal M2 heavy machine gun. The M20 was primarily deployed as a command vehicle and for forward reconnaissance, but many vehicles also served as APC and cargo carriers. It offered high speed and excellent mobility, along with a degree of protection against small arms fire and shrapnel.

SdKfz-223

German
AFV
SdKfz-223 is a modification of a light armored vehicle SdKfz-221. Its production was launched in 1935. By January 1944 four companies Weserhütte, MNH и Buessing-NAG manufactured 550 vehicles. From May 1942 SdKfz-222 was taken as a basis for the product. SdKfz-223 was used by squads related to tank and motorized infantry units. It had very poor armour and one machine gun, and its open top made it vulnerable to HE attacks. Its only advantage was its high speed.

SdKfz-251/1 and 251/10

German
APC / AFV

There were four main models (A - D), with many modifications. The initial idea was to make a vehicle that could transport a squad of troops to the battlefield protected from enemy fire. The open top suggested that the crew was still vulnerable. Although designed for cross country work, it had some limitations as the front wheels were not driven. The standard version carried up to 10 soldiers, not including driver and gunner, and was equipped with a 7.92mm MG34 or MG42 machine gun mounted at the front of the open compartment, above and behind the driver. Sdkfz-251/10 model was equipped with a 37mm Pak 36 anti-tank gun mount.

BA-64

Soviet
AFV

In the 30s of the XX century Soviet engineers decided to manufacture a light armored car on the basis of GAZ-64 with a machine-gun. The following application spheres were assumed for it: command reconnaissance, battle management, fighting against airborne assault troops, transport convoy and air defense of tank armadas on the move. The vehicle layout was influenced by the captured Nazi armored car, allegedly SdKfz-221.

M8 "Greyhound"

Allied
AFV

The light weight and 6x6 drive of M8 'Greyhound' gave it excellent speed and cross-country mobility. Despite of thin armour and poor arms, when confronting serious enemy, it was favoured in troops. It was equipped with a 37mm M6 gun, a .30-cal MG mounted coaxially with the main gun and an M2 machine gun on a pintle mount against aircraft attacks. Its official designation was the M8 Armored Car; it was the British who gave it the name 'Greyhound' due to its high speed and thin armour.

SdKfz-234/2 "Puma"

German
AFV

The SdKfz 234 series had an 8-wheel drive, similar dimensions and the appearance of SdKfz 232/3 series, which they replaced. Model SdKfz 234/2 "Puma", which some historical sources rank as the best armoured car of World War II, was armed with a 50mm anti-tank gun, weighed nearly 12 tons, however it was able to make 85 km/h. Its covered turret also provided protection against HE shells. Despite of a large AT-gun, the primary mission of this armoured car was reconnaissance.

BA-11

Soviet
AFV

BA-11 is a heavy armored vehicle on the chassis of ZIS-6K: with an enforced engine dismounted downwards on the carriage and with an additional steering wheel. The main military task of a new vehicle was maneuvering fire support of the assaulting infantry and cavalry, qualitative enforcement of the armored units of Red Army, which were equipped with middle-class vehicles, as well as fighting against armored forces and emplacements.

Mk VII "Tetrarch"

Allied
Light Tank

The Mk VII “Tetrarch” was a British light tank produced during the Second World War. Its prototype was designed by Vickers-Armstrong in 1938, its production started in 1940. It had light armor (16mm max.) and a 40mm AT-gun. Its production halted, caused by poor performance of light tanks in battle, it was resumed in 1941, when the tank was adopted for airborne forces.

M8 "Scott"

Allied
Light Tank

The M8 was developed as a light vehicle for close operation support within tank battalions. Its prototype is the light tank M5 fitted with a 75mm howitzer in a larger, open topped fully traversable turret. 1,778 machines were produced between September 1942 and January 1944. The M8 proved to be a highly serviceable fire support vehicle. All of them were used only by the US Army served mainly in North-West Europe from June 1944 onwards. The M8 drawbacks were its open top, making crew vulnerable and the small internal ammunition stowage space, which was limited due to small size of M8.

LVT(A)-4

Allied
Light (Amphibious) Tank

The LVT(A)-1 was the first amphibious tank deployed in the Pacific Theater of Operations by US forces. Designed in late 1943, it was first used in early 1944. The LVT(A)-4 was a later version of the LVT(A)-1. This amphibious tank carried the turret from the M8 "Scott" with a more powerful 75mm gun, which replaced the earlier M3 turret and the 37mm gun.

PzKpfw-I Ausf. B

German
Light Tank

The Panzer I was a light tank produced by Germans in 1930s, its was designed as a training tank, but also deployed extensively during the Spanish Civil War and early World War II. The "Ausf. B" was the most widely built and used Panzer I version. It had the larger hull developed for the “kleiner Panzerbefehlswagen (SdKfz 265)”, and a more powerful and reliable engine. "Ausf. B" armament consisted of twin turret-mounted coaxial MG13 7.92mm machine guns.

PzKpfw-II Ausf. L "Luchs"

German
Light Tank

A light reconnaissance tank the Ausf. L was the only tank, which design with the overlapping road wheels entered the serial production. Originally it received the experimental designation VK1303, it was adopted under the alternate name Panzerspähwagen II and finally baptized to Luchs (Lynx). The Lynx was larger than the Ausf G in most dimensions, and was equipped with a six speed transmission (plus reverse), so Lynx could develop the speed of 60 km/h with a range of 290 km.

T-70

Soviet
Light Tank

T-70 was belonged to the military inventory of tank brigades together with T-34. Its production ceased in the autumn of 1943 and it was deployed in artillery divisions, regiments and brigades mainly as command vehicles. Its main armament was a 45mm gun with secondary armament of a single 7.62mm DT machine gun. Armour rate varied from 10mm to 60mm maximum, thus its frontal armor was comparable to an average of T-34 tank.

BT-7a

Soviet
Light Tank

The Bystrokhodniy Tank (Fast Tank), was a family of Soviet light tanks, which were produced between 1932 and 1941. The BT tanks were 'convertible tanks': in about thirty minutes the crew could remove the tracks and engage a chain drive to the road wheels, allowing the tank to travel quickly on roads. Late BT-7a model with 76.2mm howitzer served as artillery support vehicle.

M4A2 "Sherman" (DD amphibian and Mine Clearer "Flail" model)

Allied
Medium Tank

M4 Medium Tank was comparatively fast and maneuverable, reliable, and easy for production and service. In the UK lend-lease M4s were dubbed M4 General Sherman after Union General William Sherman. The M4A2 model was diesel-powered and, unlike M4A1, had welded hull. In the Normandy campaign it could take five Shermans to knock out a Tiger tank, but the majority of losses of Shermans were not in battle with other tanks, but from mines, aircraft, infantry anti-tank weapons and, on occasion, friendly fire.

Mk IV "Churchill" VII

Allied
Medium Tank

The main task of this tank was to navigate in the shell cratered ground and demolish infantry obstacles such as barbed wire. Its exceptionally heavy armour, low silhouette and good climbing abilities gave it a reasonable degree of success. The main complaints against it were the very low speed and poor armament, two weaknesses that would haunt it throughout its entire life. That's why later modifications of "Churchill" (VI, VII and so on) were upgunned with 75mm 6-pdr gun.

Mk VIII "Cromwell"

Allied
Medium Tank

The A27M Cruiser Tank VIII "Cromwell" named after the English Civil War leader Oliver Cromwell, was one of the most successful series of cruiser tanks fielded by Britain in World War II. The Cromwell was designed as the replacement for the Crusader tank, which was fast becoming obsolete. The most produced variant of Mk VIII "Cromwell", the "Cromwell IV", had a riveted hull and OQF 75mm gun. It was faster and had a lower profile than the Sherman tank. However, while its armour was of equivalent thickness, it was less sloped and therefore less effective than the Sherman.

M4A4 "Sherman VC Firefly"

Allied
Medium Tank

Shermans retrofitted with the British 17-pounder (76.2 mm) gun were known as Fireflies and were used by British and British-supplied Allied forces (Canada, Poland). Some were supplied to US units at the end of the war, but not in time for combat usage. British 17-pounder, a very high-velocity gun capable of defeating the heavier German tanks, was the best anti-armor weapon mounted on the Sherman.

PzKpfw-III Ausf. G (Mine Clearer – Minenraumpanzer)

German
Medium Tank

The Panzer III was intended as the main battle tank of the German forces. The unusually heavy rear armor of the Panzer III meant that it could engage enemy tanks while either advancing or retreating, whereas most tanks had to be careful while maneuvering to keep their thin rear armor away from the enemy. Later Panzer III models (from Ausf. G through Ausf. M) were also equipped with 50mm gun, instead of 37mm that early models had. But still, even its heavier gun proved unable to penetrate the heavy armor of the T-34 tank of the Soviet Union.

PzKpfw-IV Ausf. G

German
Medium Tank

Panzer III, which struggled against M4 Shermans and T-34s (both with 75/76mm guns), was considered undergunned and soon was replaced by Ausf. F2 (renamed to Ausf. G) model of the Panzer IV, which could carry a high-velocity 75mm gun. Production of Panzer IV continued even while the more effective Panther medium tank was in service, because of the Panzer IV's low cost and higher reliability. Panzer IVs frequently had armor skirting or additional layers of armor added in the field.

PzKpfw-V Ausf. G

German
Medium Tank

The "Panther" tank served from mid-1943 till the war end in Europe in 1945. The Panzer-V was based on Soviet T-34 tank design and intended as a contender to the T-34s. In contrast to other "Panthers" the Ausf. G had 75mm overhanging gun with more penetrating power than the 88mm gun of the Panzer VI "Tiger". Altogether, it was the best Axis tank in WWII, mainly due to the fact that the Tiger limitations were overcome by the introduction of sloped armor and the outstanding performance of its main gun.

T-34/57

Soviet
Medium Tank

Soviet T-34 medium tank was the backbone of Soviet armored forces throughout WWII, and widely exported afterwards. There were two major models of this tank used in WWII: the one fitted with 76.2mm and another with 85mm gun. But there were also small number of the T-34/57, fitted with the ZIS-4 high-velocity 57mm gun, which was used as tank hunters. This gun had better penetration qualities than the 76.2mm (140mm of steel at 500m, as opposed to 90mm), but the small projectile couldn't carry an adequate high explosive charge to use against unarmored targets.

T-34/76 (Mine Clearer model)

Soviet
Medium Tank

The ‘main three elements’ of tank design have always been armour, firepower, and mobility. The T-34 was an outstanding balance of all three throughout its WWII lifecycle. In 1941 its thick, sloped armor could defeat all German armor-piercing weapons at normal ranges. On the other hand, 76.2mm gun could pene-

trate any German tank in 1941 with ease. The T-34 was among most important weapon systems in the Red Army in the Second World War. Since the Soviet-German front was the decisive war theatre of the WWII, the importance of the T-34 can hardly be exaggerated.

T-34/85

Soviet
Medium Tank

The T-34 is often used as a symbol for the effectiveness of Soviet counterattacks against the Germans. The appearance of the T-34 in the summer of 1941 was a psychological shock to the Germans. In the late 1943 – early 1944, T-34 was modified with 85mm gun and enlarged, cast three-man turret with thicker armour. The upgunned T-34/85 stayed the standard Soviet medium tank until the end of the war in an uninterrupted production run, allowing to replace most light, medium, and heavy tanks in the Soviet Army.

KV-85

Soviet
Medium Tank

The KV-85 was a KV-1S tank with the 85mm gun in an IS-1 turret. Generally, this design was a stopgap between T-34 and IS-2 heavy tank production. Countless examples of the field employment of KV-85 tank demonstrated that the 85mm gun was an effective weapon against German heavy tanks (Panther and Tiger) and should have been mounted on the T-34 medium tank, what in fact happened however later. In October 1943 production of KV-85 was suspended in favor of KV-13 prototype, which was renamed and resulted in the production of the IS-2 heavy tank.

M26 "Pershing"

Allied
Heavy Tank

Designed as heavy tank Pershing was a significant upgrade compared to M4 Sherman in terms of firepower and crew protection. But because the development of new tanks was slow, the M26 "Pershing" (named after General “Black Jack” Pershing) only reached the battlefield after the Battle of the Bulge and saw little action in WWII. Overall the Pershing was considered roughly equal in performance to the Panther, but still its 90mm gun had difficulties penetrating Panther faceplate.

PzKpfw-VI Ausf. E "Tiger"

German
Heavy Tank

The Tiger differed from earlier German tanks principally in its size - it weighed over twice as much as the Panzer IV. This was due both to larger size and thicker armor. The 11-ton turret had a hydraulic motor powered by mechanical drive from the engine; even so, a full rotation took about a minute. The 88mm gun was chosen for the Tiger, providing its fearful bite and was along with the Königstiger 88mm gun, the most effective and feared tank gun in WWII. The Tiger is particularly associated with the name of Michael Wittmann who was the most successful tank commander of World War II. One day he destroyed over two dozen allied vehicles including several tanks and on his own held up an entire advance.

PzKpfw-VI Ausf. B "Königstiger" ("King Tiger")

German
Heavy Tank

The Königstiger was partially derived from the Tiger, and was intended to share many components with a planned Panther II, and supplied the basis for the Jagdtiger. It weighed about 68 tons, and was protected by 185mm of frontal armor, and was armed with the 88mm gun. The Königstiger 88mm armament could destroy most all of Allied AFVs at a range far outside the effective-range of the enemy AFV's armament. Although Königstiger had numerous technical failures because these tanks were sent directly from factories into combat without the testing.

IS-2

Soviet
Heavy Tank

The heavy tank IS, named after the Soviet leader Joseph Stalin, was designed with thick armour to counter the German 88mm gun, and a powerful gun that was effective against the new German Tiger and Panther tanks. It also served as a breakthrough tank, firing a heavy high-explosive shell that was useful against entrenchments and bunkers. The IS-2 was used as a spearhead in the battle for Berlin by the Soviet Army, when the war reached its final stage.

SPAAA (Self-Propelled Anti-Aircraft Artillery)

M16

Allied
SPAAA

The M16 was a modified M3 halftrack that carried four .50-cal machine guns in a Maxson mount that was capable of firing 400-500 rounds per minute. Such armament made it dangerous to low flying planes and very effective against infantry. M16 was nicknamed the "meat chopper", due to its deadly firepower.

Flakpanzer-I

German
SPAAA

The most interesting conversion based on the modified PzKpfw-I Ausf. A was Flakpanzer-I (SdKfz-101) armed with 20mm Flak 38 gun. It was most likely based on modified Munitionsschlepper-I Ausf. A (SdKfz-111) - light ammunition carrier. The gun was mounted on the floor in the place of the original turret. The chassis was overloaded and engines were used up leading to poor performance.

SdKfz-7/1

German
SPAAA

SdKfz-7/1 is a standard semitrack transporter SdKfz-7 with a special top-hamper for installation of gun mount Flakvierling 38, which could rotate to 360º. Flakvierling 38 consists of four 20-mm Flak 38 gun, its shooting speed is 1800 shot a minute. Though the vehicle was purposed for used against flying objects, it was rather effective in fighting against surface targets.

Flakpanzer IV Wirbelwind

German
SPAAA
The Flakpanzer IV Wirbelwind (Whirlwind in German) was an anti-aircraft vehicle based on the Panzer IV. It was developed in 1944 as a successor to the earlier AA tank Möbelwagen. The Panzer IV's turret was removed and replaced with an open-top, nine-sided turret which housed a quadruple 20mm Flak 38. A closed-top design would have been preferable, but this was not possible due to the heavy smoke generation of the 4 flak guns.

ZIS-42 with Quad "Maxim"

Soviet
SPAAA

The quadruplicate “Maxim” machine-gun was mounted on the semitracked ZIS-42. It was deployed for hitting of low flying targets, it was also good on the ground. The medium 7,62 mm machine-gun of the Maxim system 1910 – the legendary weapon of the Civil War in Russia and Red Army was improved, and the machine-gun gained the ability to fight against air targets.

Self-propelled Artillery

"Bishop"

Allied
SPA

The Bishop was a British self-propelled artillery vehicle based on the Valentine II chassis. This conversion was built in hurry with the purpose to create a self-propelled gun armed with the 25-pounder gun-howitzer. As a result the vehicle had numerous problems. A fixed metal box with large rear doors replaced the turret on top of a Valentine hull. In order to limit the 25-pounder mount the resulting vehicle had a very high silhouette. Due to these factors, which were combined with poor Valentine characteristic such as slow speed and thin armor, the Bishop was poorly received in troops and soon was replaced by the M7 'Priest' and 'Sexton'.

M7 "Priest"

Allied
SPA

Witnessing the events of the war, American observers realized that they would need a self-propelled artillery vehicle with sufficient firepower to support infantry operations. Lessons learned with half-tracks (such as the T19) also showed that this vehicle would have to be armored and fully tracked. It was decided to use the M3 Lee chassis as the basis for this new vehicle and a 105mm howitzer.

Sturmgeschütz IV

German
SPA
Due to the demand for more assault guns, the StuG IV was a combination of a slightly modified Sturmgeschütz III assault gun superstructure with a Panzer IV chassis. Due to the low silhouette and thick frontal armor and its 75mm StuK 40 L/48 gun, the StuG turned out to be an effective tank destroyer. Its role was no longer attack to rapidly advance, but rather defense through counter-attacks.

Jagdpanzer 38(t) "Hetzer"

German
SPA

The Jagdpanzer 38(t) was intended to be more cost-effective than the much more ambitious Jagdpanther and Jagdtiger designs of the same period. Using a proven chassis, it avoided the mechanical problems of the larger armoured vehicles. It had a sloped armour front plate of 60 mm (equivalent to about 180 mm), carried a reasonably powerful gun and was mechanically reliable. Also its small size and low profile made it a difficult target and it was easy to hide in an ambush for enemy tanks.

SdKfz-165 "Hummel"

German
SPA

"Hummel" ("Bumble-Bee") was a self-propelled heavy 150mm howitzer based on Geschutzwagen III/IV special chassis (included both Panzer III and Panzer IV ele-

ments). Hummel crews traveled in open-top high silhouette compartment (enclosed on all four sides by armor plates bolted to the hull) with all its weather-related disadvantages. Its relatively thin armor (10-30mm) was not intended to protect crew against AT guns, and its ammo compartment could only hold 18 rounds.

SU-76M

Soviet
SPA

The SU-76 was based on a lengthened version of the T-70 tank chassis with 76mm ZIS-3 gun. The SU-76M (modified; main production model) had light weight and, therefore low ground pressure, giving it good mobility. These armored vehicles proved themselves in both defensive – repulsing infantry and tank attacks and offensive roles – destroying pillboxes and fighting against counterattacking tanks. Its simple construction made it the mass-produced Soviet self-propelled artillery of World War II (almost 60%).

ISU-152

Soviet
SPA

ISU self-propelled artillery series were based on the heavy tank chassis exactly just as SU series, but it had the hull of IS-2 tank instead of the KV-1. It is obvious, that the "152" in its name relates to the 152mm gun that was mounted on its hull. ISU-152s showed themselves perfectly as heavy assault guns, tank destroyers and self-propelled howitzers. Despite the ISU-152 good features it suffered in some other aspect. The greatest disadvantage was that internal stowage was limited to only 20 rounds of ammunition. Further to replenish the vehicle with 20 more shells took over 40 minutes, due to the large and heavy shells.

M4A3 "Calliope"

Allied
SPA (Multiple Rocket Launcher)

"Calliope" was a Multiple Rocket Launcher System that once was mounted on M4 Sherman tank. All MRL systems had relatively low accuracy and used as defensive or suppressive fire at dug-in or formed infantry, concentrations of vehicles. The one thing that significantly differed this system from other WWII MRLs – is that it was mounted on a fully functioning M4 tank, which was armored and could enter the battle against 75mm gun and 2 machine-guns. Also, when not needed the entire "Calliope" launcher system could be quickly removed from the tank by the crew.

SdKfz-4/1 "Panzerwerfer"

German
SPA (Multiple Rocket Launcher)

Conspicuous smoke trails which resulted from the firing of a Nebelwerfer made it imperative for the battery to change position frequently. So mounting a 10-barreled Nebelwerfer on a half-track was the way out. In early 1944 small numbers of SdKfz-4 were equipped with 150mm Nebelwerfer 42 rocket launcher. The Panzerwerfers were much less vulnerable than Soviet "Katyushas", and its caterpillar drive provided good mobility.

BM-13 "Katyusha"

Soviet
SPA (Multiple Rocket Launcher)

Soviet "Katyushas" were the first MRLs used on a substantial scale. After T-34 tank it's the most remarkable symbol of Soviet WWII weaponry. The BM-13 "Katyusha" was designed and passed field tests the same year the War started, so this powerful 16-charge 130mm MRL was available since the very beginning of the WWII. Mounting a rocket launcher on a ZIS-6 truck had its own disadvantages, like vulnerability of the truck itself and the fact it had relatively low cross-country mobility. But still it was cheap and simple in production.

Aircraft

P-51 Mustang

Allied
Fighter

The P-51 Mustang was a successful long range fighter aircraft which entered the service in the middle years of World War II. The definitive version of the single-seat fighter was powered by a single two-stage supercharged V-12 Merlin engine and armed with six .50 cal (12.7 mm) M2 machine guns. The P-51D was the most produced of all Mustangs by far. The new version began to arrive in Europe in March 1944, just in time to deploy for D-Day combat.

Waco CG-4A Hadrian

Allied
Troop/Cargo Glider

The Waco CG-4 Hadrian was the most widely used US troop/cargo glider of World War II. The CG-4A was constructed of fabric-covered wood and metal and was crewed by a pilot and copilot. It could carry 13 troops and their equipment or either a jeep, a quarter-ton truck, or a 75mm howitzer loaded through the upward-hinged nose section. CG-4As participated in the D-Day assault in France on June 6, 1944 and in other important airborne operations in Europe.

G.A.L. 49 Hamilcar

Allied
Troop/Cargo Glider

The General Aircraft G.A.L. 49 Hamilcar or Hamilcar Mk I was a large British military glider of World War II, which was capable of carrying 7 tons of cargo or a light tank such as the Tetrarch or Locust. One squadron of the Airborne Armored Reconnaissance Regiment was sent in by Hamilcar glider on June 6, 1944 with 6th Airborne Division at the River Orne.

Fi-156 "Storch"

German
Monoplane

It had a crew of three, and with extensive windows surrounding the occupants, made an excellent observation and liaison aircraft. In a light breeze the Storch could take off in just 60 meters and land in about 20 meters. The only armament it could have was the defensive rear-firing 7.93mm machine gun on pivot mount. The Storch proved to be a rugged Short Take Off and Landing (STOL) airplane that gained the respect of all its pilots.

Messerschmitt Bf-109 G-16

German
Fighter

The Bf 109 was the standard fighter of the Luftwaffe from just before the start of the war, the first truly modern fighter of the era combining the features of all-metal monocoque construction, a closed canopy and a retractable landing gear. The G-6 model, the most produced Bf 109 version, had very heavy armament. For example, the G-6/U4 variant had 30 mm MK 108 cannon shooting through the propeller axis and one 20mm MG 151/20 in each wing. Its following modifications, the G-14 (R6 and U4) and G-16 had even more armament and heavier armor.

Ju-87 A-1

German
Bomber

The Junkers Ju 87 or Stuka was the most famous German dive bomber in the World War II, instantly recognizable by its inverted gull wings and fixed undercarriage. The Stuka design featured some innovative elements, including an automatic pull-up system to ensure that the plane recovered from its attack dive even if the pilot blacked out from the high acceleration, and wind-powered sirens on the wheel covers that wailed during dives to scare its victims. Ju-87 had 1-2 7.92mm MG-17 in front and 7.92mm MG-15 for rear gunner. Depending on modification, it could carry up to 4x 50kg and one 250/500/1000kg bomb.

IL-2 (M3) Shturmovik

Soviet
Heavy Fighter

The Ilyushin IL-2 Shturmovik was a ground attack aircraft of World War II, and was produced by the Soviet Union in huge amounts. IL-2 M3 had rear gunner's position under a lengthened canopy and wings that were swept back 15 degrees on the outer ends. Performance and handling were much improved, and this became the most common version of the IL-2. Armament of the IL-2 in different variants included 2x 20-37mm guns, 2x 7.62mm machine-guns, 12.7mm machine-gun for rear gunner, 6-8 rocket charges and up to 400-600kg of bombs.

Naval

LCVP

Allied
Landing Craft

The Landing Craft, Vehicle, Personnel (LCVP) or Higgins boat was a landing craft used extensively in World War II. LCVPs carried 36 troops or up to 3.7 tons of general cargo, and was armed with two 7.62mm machine guns for support fire. "Andrew Higgins ... is the man who won the war for us. ... If Higgins had not designed and built those LCVPs, we never could have landed over an open beach. The whole strategy of the war would have been different." – General Dwight Eisenhower.

LCI (L)

Allied
Landing Craft

Landing Craft Infantry (LCI) was capable of making serious voyages using its own power. LCIs were about 160 feet long and 23 feet wide and carried around 250 troops. There were several sub-types of the craft, with the LCI(L) (large) infantry carrier dominating. While still intended to run up on the beach, these tended to have a normal type bow with stepped ramps each side for the troops to disembark. LCI(L)s did the work of bringing invasion troops right up to the fighting, providing close-in fire support with 20mm machine guns.

S-100 "Schnellboot"

German
Heavy (Torpedo) Boat

German Schnellboot (S-boat) was a small, fast torpedo boat a little larger than the American PT boat and the British MTB. The S-boats trace their lineage back to a private motor yacht called Oheka II. In 1943 the S-100 class was designed from

the start to incorporate the early S-boat variants and additional armament including a twin 2cm amidships and a 3.7cm gun aft. The torpedo tubes were enclosed in a decked-over forecastle, increasing interior space and reserve buoyancy. The S-100 design also eliminated a number of unnecessary details such as skylights over the engine rooms.

Type VIIC U-Boat

German
U-Boat

The Type VIIA boats were designed in 1933 and 1934 as the first models of a new generation of attack U-boats. They were popular with their crews and were much more powerful than the smaller Type II U-boats, they replaced, with four bow and one stern torpedo tubes. They were very agile on the surface, and mounted the 88 mm fast-firing deck gun with about 160 shells, and carried 14 torpedoes on board. The VIIC was larger and heavier than previous variants, which made them slightly slower. Perhaps the most famous VIIC boat was U-96.

PG-117

Soviet
Light Boat

Semi-glider PG-117 was based on the serial tourist motor boat and was armed with 7,62mm “Maxim” machine-gun on tripod. PG-117 was deployed for reconnaissance of coasts, measurement of depths, grounding of raiding and intelligence forces in the enemy rear, evacuation of injured from the damaged ships, for assault landing. The important advantages of gliders are their relatively small weight and external dimensions, which allowed the Soviet sailors to participate in the Battle of Berlin.

YA-5 "Yaroslavets"

Soviet
Medium Boat

The need in sweep-capable boats was felt from the first war days especially on the Baltic. The reequipped civil-purpose boats and specially reequipped boats were used, among them motor boats of YA-class (“Yaroslavets”). The line dispatch boat YA-5 with deadweight 23,4 tones was widely deployed on rivers. Its engine power was 65 h.p., speed – 10 knots, weapons: two – 45mm and 37mm cannons and two 12,7 mm machine guns. It was YA-5 motor boats, which advanced to Berlin within the Dnepr Flotilla in May 1945.

BK-1124

Soviet
Heavy Ship

BK-1124 deployed during the war, was a modification of the motor boat built in 1936. These motor boats were purposed for reconnaissance, grounding of troops and firing against enemy targets lying close to the coast line. The armament of BK-1124 model of the year 1943: two turrets of T-34 with 76mm guns a dual 12,7mm machine-gun in a small turret on the roof of the conning tower. This armament and own armor made BK-1124 to real water tanks.

Inflatable Boat

All
Light Boat

Light inflatable boats were always of great help while troops landing, transportation of wounded and small cargos. The boat could be equipped with a motor, but it was very often deployed without it, in the heat of night silence the troops used oars. One inflatable boat can take up to five persons on board.