



Hungarian Rhapsody Campaign in Photos

Compiled by Chip Saltsman



This is a compilation of images and descriptions related to the OCS Game *Hungarian Rhapsody*, which covers the Soviet advance into Hungary in the fall of 1944, battle of Debrecen, siege of Budapest and the Axis Konrad counterattacks in early 1945. It covers four main sections: aircraft, armored fighting vehicles, artillery, and photos from the campaign. As much as possible, I have used photos were taken during the fighting unless none were available. Verifying that a specific photo was taken in Hungary was more difficult than I anticipated, as many images purporting to be taken in Budapest are actually from Berlin, Vienna, Prague or other battles.

Aircraft

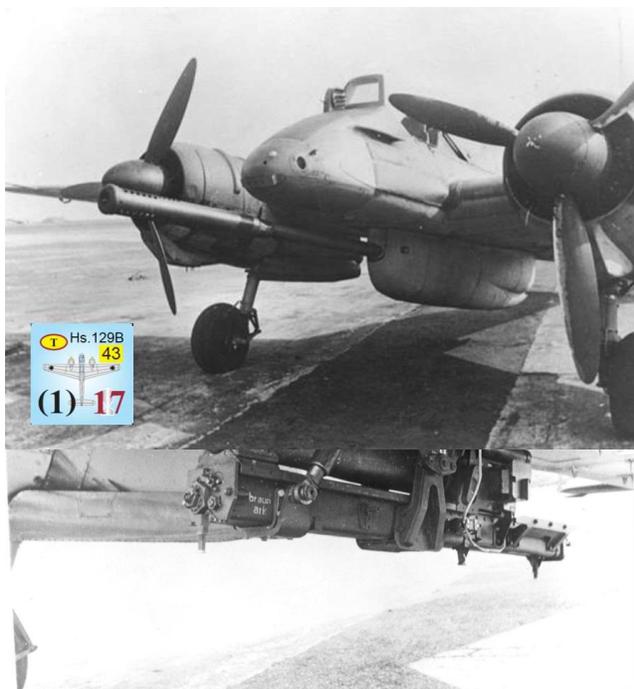


Bundesarchiv, Bild 1011-669-7340-27
Foto: Blaschka | 1944 Anfang

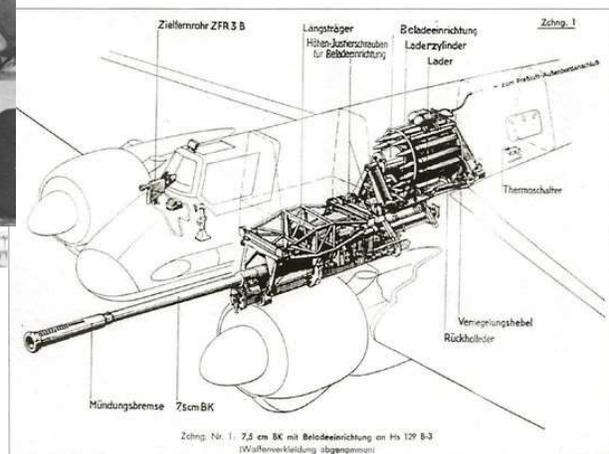
The **Bf-110** was a twin-engine heavy fighter (Zerstörer – German for "Destroyer") in the service of the Luftwaffe throughout World War II. By this point in the war, it was primarily used as a night fighter against the Allied heavy bombers. It was also used as a ground attack aircraft, starting with the C-4/B model, and as a day bomber interceptor, where its heavy firepower was particularly useful. During the Hungarian Rhapsody campaign, there were dedicated

ground attack versions which proved reasonably successful. Over 6,000 were built, though only one survives, and this aircraft is on display at the Deutsches Technikmuseum in Berlin. (photo: Bf-110's flying over Budapest, early 1944, Bundesarchiv Bild 1011-669-7340-27)

The **He-111** is perhaps the best-recognized German bomber due to the distinctive, extensively glazed "greenhouse" nose of later versions. It fared well as a fast, medium bomber until the Battle of Britain, when its weak defensive armament was exposed. Nevertheless, it proved capable of sustaining heavy damage and remaining airborne. As the war progressed, the He-111 was used in a variety of roles on every front in the European theatre. It was used as a strategic bomber during the Battle of Britain, a torpedo bomber in the Atlantic and Arctic, and a medium bomber and a transport aircraft on the Western, Eastern, Mediterranean, Middle Eastern, and North African Front theatres. The He-111 was constantly upgraded and modified but became obsolete during the latter part of the war. The German Bomber B project was not realized, which forced the Luftwaffe to continue operating the He-111 in combat roles. More than 6500 were built during the war, but only four German-built He-111 aircraft still exist (at the Museo del Aire in Spain, Royal Norwegian Air Force Museum, the RAF Museum in the UK, and one recovered from a Norwegian lake in 2005 and moved to Germany for restoration). Spain built 236 CASA 2.111 aircraft, which was derived from the Heinkel He 111 design and produced under license. These were on active service into the 1970's and hired to appear in the films *Patton* and *Battle of Britain* (32 of them!). The He-111 in the 2017 movie *Dunkirk* was a scale model. (Photo: <http://www.warbirdphotographs.com/luftwaffephotos/lhe1112.htm>)



The **Hs-129B** was developed as a ground attack aircraft. Development was delayed as the Germans dealt with the aircraft being underpowered and by the need to add additional firepower. By 1943, it was



decided to add the Bordkanone 7,5, the heaviest and most powerful forward-firing weapon fitted to a production military aircraft during World War II. The only other aircraft to be factory-equipped with similar-caliber guns were the 1,420 examples of the North American B-25G and B-25H Mitchell, which mounted either a 75 mm (2.95 in) M4 cannon, or lightweight T13E1 or M5 versions of the same gun. From June 1944, only 25 examples of the Hs 129 B-3 arrived at frontline units before the production line was shut down in September (a small number were reportedly also created by converting B-2 aircraft). In the field the B-3 proved effective, but its small numbers had little effect on the war effort. Although deployed in limited numbers, the Panzerknacker (“safe cracker”) could destroy any tank on the battlefield. One HS-129 ace, Rudolf-Heinz Ruffer, was responsible for 80 Soviet tank kills. (Photos: <http://ww2live.com/sites/default/files/images> numbers 20161802001013 and 20161802001020, and <https://www.pinterest.com/pin/478648266619675109/>)

Nicknamed the Würger (Butcher Bird), the **Fw 190** entered service in 1941 and flew throughout World War II on all fronts. It was the only German single-seat fighter powered by a radial engine and the only fighter of the war with electrically operated landing gear and flaps. While the Fw 190 is best known for defending against Allied daylight bombing attacks, some served as



fighter-bombers with ground attack units (as represented in *Hungarian Rhapsody*). The F-8 fighter-bomber was armed with two 20mm cannon, two 13mm machine guns and several bomb racks. These were organized into specialized ground attack units called Schlachtgeschwader (Battle Wings or Strike Wings), abbreviated SG. The FW 190F-8 in this wartime image belongs to SG2 during operations in Hungary (photo: [https://www.asisbiz.com/il2/Fw-190A/SG2/pages/Focke-Wulf-Fw-190F8-Stab-II.SG2-\(2+-Hungary-1944-45-01.html\)](https://www.asisbiz.com/il2/Fw-190A/SG2/pages/Focke-Wulf-Fw-190F8-Stab-II.SG2-(2+-Hungary-1944-45-01.html)))



Some 28 original Fw 190s are in museums or in the hands of private collectors around the world, out of the 20,000+ built. The Fw 190 F-8 in this image was originally manufactured as an Fw 190 A-7 fighter. During 1944 it was remanufactured as a fighter-bomber and issued to ground attack unit SG 2, where it operated in Hungary during the Hungarian Rhapsody campaign. After Germany's surrender it was shipped to Freeman Field,

Indiana, then transferred to the Smithsonian in 1949. Its 1980-83 restoration revealed a succession of color schemes. It now appears as it did while serving with SG 2 in 1944. It is on display at the Steven F. Udvar-Hazy Center of the Air & Space Museum near Washington, DC. (photo: <https://airandspace.si.edu/collection-objects/focke-wulf-fw-190-f-8r1>)

The Messerschmitt **Bf 109** was a German World War II fighter aircraft that was the backbone of the Luftwaffe's fighter force. The Bf 109 first saw operational service in 1937 during the Spanish Civil War and



was still in service at the dawn of the jet age at the end of World War II in 1945. It was one of the most advanced fighters of the era, including such features as all-metal construction, a closed canopy, and retractable landing gear. Through constant development, the Bf 109 remained competitive with the latest Allied fighter aircraft until the end of the war. The Bf 109G was armed with two 13mm machine guns and a 20mm centerline mounted cannon, though some were modified to carry different armament. (photo:

<http://www.warbirdphotographs.com/LCBW15/Me109G6-JG51-White9-EasternFront-March1944-114f-s.jpg>)



The top German fighter ace, Erich Hartmann flew Bf 109 aircraft for all his 352 victories. He was a member of Jagdgeschwader 52 (JG 52), the most successful fighter wing of all time, along with other top aces such as Gerhard Barkhorn and Günther Rall. JG 52 is represented by the 6-strength fighter unit in Hungarian Rhapsody. This photo is of Hartmann and Barkhorn in Hungary during 1944. These two pilots have 653 victories between them. Both survived the war and became General officers in West German Air Force. Barkhorn retired in 1975 and was killed in an automobile accident in 1983. Hartmann, nicknamed "Bubi" ("The Kid") by his German comrades and "The Black Devil"

by his Soviet adversaries, was turned over to the Soviets and imprisoned for over 10 years. After his return, Hartmann rejoined the Luftwaffe and commanded JG 71, the first all-jet air unit. He was forced to retire over a dispute about adopting the F-104 Starfighter, which he considered unsafe. Hartmann died in 1993 of natural causes. Hartmann was the subject of a biography by the American authors Trevor J. Constable and Raymond F. Toliver, under the title *The Blond Knight of Germany*. The book was immensely popular, but has come under criticism as being influential in promoting the myth of the "clean Wehrmacht". (photo: <https://www.pinterest.com/pin/365284219753293572/>)

Many Axis allies flew Bf 109s during the war, such as this Hungarian aircraft. Nearly 34,000 were built for the Luftwaffe during the war, and several countries produced them under contract even after the war. Spain retired the last of its operational HA-1112 in 1967. The Bf 109 aircraft used in movies such as *Battle of Britain*, *Memphis Belle*, *The Tuskegee Airmen* and *Piece of Cake* were all Spanish HA-1112s. More than 65 original airframes exist in museums or under restoration around the world, and at least two are still airworthy. (photo: <http://www.wv2incolor.com/hungary/ahj.jpg.html>)





The Junkers **Ju 87** or Stuka (from Sturzkampfflugzeug, "dive bomber") was a German dive bomber and ground-attack aircraft. The Ju 87 made its combat debut in 1937 with the Luftwaffe's Condor Legion during the Spanish Civil War and served the Axis forces in World War II. The aircraft was easily recognizable by its inverted gull wings and fixed undercarriage. Once the Luftwaffe lost air superiority, the Stuka became an easy target for enemy fighter

aircraft on all fronts. It was produced until 1944 for lack of a better replacement. Towards the end of the war, as the Allies gained air supremacy, the Stuka was being replaced by ground-attack versions of the Fw 190. By 31 January 1945, only 104 Ju 87s remained operational with their units. Chronic fuel shortages kept the Stukas grounded and sorties decreased until the end of the war in May 1945. (photo: [http://www.ww2incolor.com/german-air-force/Junkers Ju 87 D-3 of III-StG 1 Eastern Front 1942-43.html](http://www.ww2incolor.com/german-air-force/Junkers_Ju_87_D-3_of_III-StG_1_Eastern_Front_1942-43.html))

With the G variant, the aging airframe of the Ju 87 found new life as an anti-tank aircraft. This was the final operational version of the Stuka, and was deployed on the Eastern Front. Hans-Ulrich Rudel, a Stuka ace, had suggested using 37 mm guns. In April 1943, the first production Ju 87 G-1s were



delivered to front line units. The two 37 mm (1.46 in) Bordkanone BK 3,7 cannons were mounted in under-wing gun pods, each loaded with two six-round magazines of armor-piercing tungsten carbide-cored ammunition. With these weapons, the Kanonenvogel ("cannon-bird"), as it was nicknamed, proved very successful in the hands of Stuka aces such as Rudel. The G-1 later influenced the design of the Fairchild Republic A-10 Thunderbolt II, with Hans Rudel's book, *Stuka Pilot* being required reading for all project members. (photo: <http://www.warbirdphotographs.com/LCBW2/Ju87-G1-EasternFront-1943-48.jpg>)

An estimated 6,500 Ju 87s of all versions were built between 1936 and August 1944. Two intact aircraft survive (at the RAF Museum in London and the Chicago Museum of Science and Industry), as well as several other wrecks.



The U.S. supplied 862 B-25s (B, D, G, and J types) to the Soviet Union under Lend-Lease during World War II via the Alaska–Siberia ALSIB ferry route. The B-25 was operated as a ground-support and tactical daylight bomber (as similar Douglas A-20 Havocs were used). It saw action in fights from Stalingrad (with B/D models) to the German surrender during May 1945 (with G/J types). B-25s that remained in Soviet Air Force service after the war were assigned the NATO reporting

name "Bank," and remained in service until the mid-1950s. (photo: <http://alternathistory.livejournal.com/1284566.html>) . Nearly 10,000 B-25s were built during the war, of which more than a hundred still exist in museums and approximately 45 are still airworthy.

The **Ilyushin Il-2** was a ground-attack aircraft produced by the Soviet Union in large numbers during the Second World War. With 36,183 units of the Il-2 produced during the war, and in combination with its successor, the Ilyushin Il-10, a total of 42,330 were built, making it the single most produced military aircraft design in aviation history. To Il-2 pilots, the aircraft was



simply the diminutive “Ilyusha”. To the soldiers on the ground, it was the “Hunchback”, the “Flying Tank” or the “Flying Infantryman”. The Il-2 aircraft played a crucial role on the Eastern Front. Joseph Stalin paid the Il-2 a great tribute in his own inimitable manner: when a particular production factory fell behind on its deliveries, Stalin sent an angrily worded cable to the factory manager, stating “They are as essential to the Red Army as air and bread. I demand more machines. This is my final warning!”

Thanks to the heavy armor protection, the Il-2 could take a great deal of punishment and proved difficult for both ground and aircraft fire to shoot down. Unfortunately, the rear gunners did not have the benefit of all-around armor protection, especially from the rear and to the sides, and suffered about four times the casualties of pilots. Added casualties resulted from the Soviet policy of not returning home with unused ammunition which typically resulted in repeated passes on the target. Soviet troops often requested additional passes even after the aircraft were

out of ammunition to exploit the intimidating effect Il-2s had on German ground troops, who gave it the nickname “The Flying Tank”. Luftwaffe pilots called it *Zementbomber* (Concrete bomber). The Il-2 was armed with two 23mm cannons, 2 7.62mm machine guns, and could be equipped with a variety of bombs or rockets. 2 × fixed forward-firing 23×152mm VYa-23 cannons, 150 rounds per gun. Approximately a dozen aircraft exist on displays in museums, mostly in Eastern Europe. Two flyable Il-2s exist as of July 2017, both restored at Novosibirsk, Russia. (photo: <http://www.warbirdphotographs.com/VVS1/Il-2m3-2.jpg>)



The Ilyushin Il-4 was a design evolved from the earlier Ilyushin DB-3 aircraft. It could carry up to 6,000 pounds of bombs, and had a range over 2300 miles. Often overshadowed by the U.S.-built B-25 Mitchells and A-20

Bostons featured in western histories, the Soviet-built Ilyushin Il-4 was a reliable workhorse throughout the war on the Eastern Front. With over 5,000 built over the course of the war, the Il-4 was used in a variety of roles, from medium-range and long-range bombers to torpedo bomber. While the twin-engined Ilyushin would not go on to achieve the legendary status of its little brother, the Il-2 Sturmovik, the Il-4 did make a significant contribution to the war, as the VVS had an acute shortage of bombers capable of carrying heavy payloads over vast distances. Despite numerous shortcomings, Soviet bomber crews generally thought the Ilyushin was a tough and quality aircraft. (photo: <http://www.warbirdphotographs.com/VVS1/Il-4-1.jpg>)

The Lavochkin **La-5** was one of the Soviet Air Force's most capable types of warplane, able to fight German designs on an equal footing. Soviet pilots appreciated the La-5 for its effective qualities. “That was an excellent fighter with two cannons and a powerful air-cooled engine”, recalled pilot Viktor M. Sinaisky. “At first we received regular La-5s, but then we got



new ones containing the ASh-82FN engine with direct injection of fuel into the cylinders. It was perfected and had better maneuverability, acceleration, speed and climb rate compared to the early variants. Everyone was in love with the La-5. It was easy to maintain, too.” Nearly 10,000 were made, but the only known La-5 in existence is a wreck in storage at the Military Aviation Museum in Virginia, United States.



The Lisunov **Li-2**, originally designated PS-84, was a license-built version of the Douglas DC-3. It was produced by Factory #84 in Moscow-Khimki and, after evacuation in 1941, at TAPO in Tashkent. The aircraft were used for transport, partisan supply, bombing, and as ambulance aircraft. A version designated Li-2VV had a

redesigned nose for extra defensive armament and could carry up to four 250 kg (551 lb) bombs under the wings. Smaller bombs could be carried inside the fuselage and thrown out of the freight hatch by the crew. A total of 4,937 aircraft were produced of all Li-2 variants between 1940 and 1954 and it saw extensive use in Eastern Europe until the 1960s. The last survivors in use were noted in China and Vietnam during the 1980s. There were many versions, including airliner, cargo, military transport, reconnaissance, aerial photography, parachute drop, bomber and high-altitude variants. Only one Li-2 restored to airworthy condition exists in Europe. Appropriately, it is a Hungarian registered aircraft and still flies sightseeing tours and regularly participates at air shows. The North Korean Air Force is known to still use a number of Li-2s for transport, although they may have been decommissioned despite their continued presence on certain airbases. (photo: <http://www.wv2incolor.com/soviet-union/li2snow.html>)

The Yakovlev **Yak-9** was a single-engine fighter aircraft used by the Soviet Union in World War II and after. Fundamentally a lighter development of the Yak-7 with the same armament, it arrived at the front at the end of 1942. The Yak-9 had a lowered rear fuselage decking and all-around vision canopy. Its lighter airframe gave the new fighter a flexibility that previous models had lacked. The Yak-9 was the most mass-produced Soviet fighter of all time. It remained in production from 1942 to 1948, with 16,769 built (14,579 during the war). Towards the end of the war, the Yak-9 was the first Soviet aircraft to shoot down a Messerschmitt Me 262 jet. Following World War II, it was used by the North Korean Air Force during the Korean War.



Soviet pilots regarded the Yak-9's performance as on the same level as the Bf 109G and Fw 190A-3/A-4. However, it was much more lightly armed, normally with only one 20mm cannon and one 12.7mm machine gun, though many variants had other configurations. Nine original

aircraft still exist in museums. (photo: <http://www.warbirdphotographs.com/VVS1/Yak-9D0-2.jpg>)



The Douglas A-20 Havoc (company designation DB-7) was an United States attack, light bomber, intruder and reconnaissance aircraft of World War II. It served with several Allied air forces, principally the United States Army Air Forces (USAAF), the Soviet Air Forces (VVS), Soviet Naval Aviation (AVMF), and the Royal Air Force (RAF) of the United Kingdom. Soviet units received more than one

in three (2,908 aircraft) of the DB-7s ultimately built. The A-20 was the most numerous foreign aircraft in the Soviet bomber inventory. The Soviet Air Force had more A-20s than the USAAF. (photo: http://www.airpages.ru/eng/img/a20_4.shtml. This is an A-20B with a Soviet UTK-1 upper turret. Many bombers were modified with Soviet armament installation.)

The general opinion was that the aircraft was overpowered and therefore fast and agile. It could make steep turns of up to 65° angle, while the tricycle landing gear made for easier take-offs and landings. The type could be flown even by crews with minimal training. The engines were reliable but sensitive to low temperatures, so the Soviet engineers developed special covers for keeping propeller hubs from freezing (see photo for A-20 in winter conditions:



<http://www.aviation-history.com/douglas/a20.html>). It had six forward-firing machine guns and could carry 4,000 pounds (1,800 kg) of bombs. Some 17 A-20 aircraft are in museums or undergoing restoration.



The Romanian Air Force (ARR) had intended to replace its light strike and dive bomber aircraft for some time when the war opened in 1941. The plan was to fill the second role with the Junkers Ju 87, but the Germans deferred and the ARR was left searching for a design. The modification of the existing IAR 80 as a dive bomber was seen as a reasonable option, easier than designing an entirely

new aircraft; as well as having obvious production benefits.

The result was the **IAR 81**, a minor change to the IAR 80A models that were then in production, adding a hinged bomb cradle under the centerline to throw a 225 kg (496 lb) bomb clear of the propeller (many dive bombers used a similar system). Delivery consisted of a shallow dive from about 3,000 to 1,000 m (9,800 to 3,300 ft) with the speed around 470 km/h (290 mph). Pilots disliked the aircraft, as the drag from the bomb cradle seriously hampered performance. The aircraft went through several versions, and approximately 175 were built during the war (plus the same number of IAR 80's). After World War II, the Soviets shipped home the entire I.A.R. factory and all existing aircraft as war reparations. The only surviving IAR 80 can be found at the National Military Museum in Bucharest, which was rebuilt from IAR 80DC two-seat trainer parts. (photo: <http://www.airwar.ru/image/idop/fww2/iar81c/iar81c-1.jpg>)

The Junkers **Ju 88** was a German World War II Luftwaffe twin-engined multirole combat aircraft. Junkers designed the plane in the mid-1930s as a so-called Schnellbomber (fast bomber) that would be too fast for fighters of its era to intercept. It suffered from a number of technical problems during its development and early operational periods but became one of the most versatile combat aircraft of the war. Like a number of other Luftwaffe bombers, it served as a bomber, dive bomber, night fighter, torpedo bomber, reconnaissance aircraft, heavy fighter and at the end of the war, as a flying bomb.



Despite protracted development, it became one of the Luftwaffe's most important aircraft. The assembly line ran constantly from 1936 to 1945 and more than 16,000 Ju 88s were built in dozens of variants, more than any other twin-engine German aircraft of the period. Throughout

production the basic structure of the aircraft remained unchanged. The Ju 88 normally carried 3,100 pounds (1,400 kg) of bombs. Germany transferred approximately 1,000 aircraft to allied countries and one of the surviving ones is Romanian. It was part of the ARR when in July 1943 its pilot flew it to Cyprus to defect to the Allies. After extensive testing, it ended up in the United States and is on display at the National Museum of the United States Air Force in Dayton, Ohio. (photo is of this aircraft: By Kogo - Own work, GFDL 1.2, <https://commons.wikimedia.org/w/index.php?curid=3534889>). The other existing Ju 88, also flown to an Allied airbase by a surrendering crew, is at the RAF Museum in London, though several wrecks have been recovered from lakes and remote crash sites in Norway.

Armored Fighting Vehicles



The **SU-76** (Samokhodnaya Ustanovka 76) was a Soviet self-propelled gun used during and after World War II. The SU-76 was based on a lengthened and widened version of the T-70 light tank chassis. Its simple construction made it the second most produced Soviet armored vehicle of World War II, after the T-34 tank. Crews liked the vehicle for its simplicity, reliability, and ease of use. However, the steering was also sometimes regarded as difficult, leading

crews to also refer to the vehicle as suka ("bitch") or suchka ("little bitch").

The SU-76M combined three main battlefield roles: light assault gun, mobile anti-tank weapon and mobile gun for indirect fire. With its 76mm gun, it virtually replaced infantry tanks in the close support role. The SU-76M was well-regarded by Soviet infantrymen (in contrast with their own crews). It had more powerful weapons than any previous light tank for close support and communication between infantry and the SU-76M crew was simple due to the open crew compartment. This was extremely useful in urban combat where good teamwork between infantry and AFVs was a key to success. Although the open compartment was highly vulnerable to small arms fire and hand grenades, it very often saved the crew's lives in the case of a hit by a Panzerfaust, whose concussion blast would mean death in an enclosed vehicle. The SU-76M was effective against any medium or light German tank. It could also knock out the Panther tank with a flank shot, but the ZiS-3 gun was not effective against Tiger tanks.



Over 14,000 SU-76 vehicles were produced during the war. Some 130 of these saw service with the North Korean army in the Korean War, and 30 of them were with the North Vietnamese army in the 1960's. There are surviving vehicles in many Russian museums, several in Poland, and one in the Tank Museum in Bovington, UK and another in the Australian Armour and Artillery Museum in Cairns. (photos: <http://www.ww2incolor.com/soviet-union/ea47ff0b-c461-44eb-85a6-5954306fc63b.html> and <http://www.ww2incolor.com/soviet-union/ea47ff0b-c461-44eb-85a6-5954306fc63b.html>)



The **SU-85** (Samohodnaya ustanovka 85) was a Soviet self-propelled gun, based on the chassis of the T-34 medium tank. Compared with the SU-76 which was meant to serve as an assault gun, the SU-85 was a tank destroyer. The designation "85" signifies the bore of the vehicle's armament, the 85 mm D-5S gun. The SU-85 was a modification of the earlier SU-122 self-propelled howitzer, essentially replacing the 122 mm M-30S howitzer of the SU-122 with a D-5T high-velocity 85 mm antitank gun. The vehicle had a low profile and excellent mobility. The SU-85 entered combat in August 1943. It saw active service across the Eastern Front until the end of the war. Though a capable weapon, it was found that its 85mm weapon was not adequate to penetrate the armor of the larger German armored fighting vehicles. After 2,000 were produced, it was replaced by the SU-100.

The SU-85 was withdrawn from Soviet service soon after the war, and was exported to many Soviet client states in Europe and elsewhere. Some SU-85s were converted to use as command and recovery vehicles. In places such as North Korea and Vietnam, it remained in service for many years. (photo: <http://beutepanzer.ru/Beutepanzer/su/su-85/su-85-1.html>)

The **SU-100** (Samokhodnaya Ustanovka 100) was a Soviet tank destroyer armed with a powerful 100 mm anti-tank gun in a casemate superstructure. It was used extensively during the last year of World War II and saw service for many years afterwards with the armies of Soviet allies around the world. The SU-100 quickly proved itself to be able to penetrate around 125 mm (4.9 in) of



vertical armor from a range of 2,000 m (1.2 mi) and the sloped 80 mm (3.1 in) front armor of the German Panther from 1,500 m (0.93 mi). Mass production began in September 1944 and the SU-100 saw extensive service during the last year of the war. It was used en masse in Hungary in March 1945, when Soviet forces defeated the German Operation Frühlingserwachen offensive at Lake Balaton. The photo is of SU-100 vehicles in Vienna. By July 1945, 2,335 SU-100s had been built.



After the war, Warsaw Pact countries used the SU-100, as did Soviet allies such as Egypt, Angola and Cuba. The SU-100 saw service in the fighting that accompanied the 1956 Suez Crisis, in which the Egyptians used SU-100s against Israel's M4 Sherman tanks. The vehicle was also utilized in the 1967 Six-Day War and the 1973 Yom Kippur War. The SU-100 remains in use by the Vietnam

People's Army and the Korean People's Army Ground Force. In April 2015, an SU-100 self-propelled gun was photographed being used in Yemen as part of the ongoing conflict. (photos: <http://www.wv2incolor.com/soviet-union/SU-100.html> and http://www.o5m6.de/redarmy/su_100.php).



The **JSU-122** (from Samokhodnaya Ustanovka 122 mm) was a Soviet self-propelled howitzer or assault gun used during World War II. The number "122" in the designation represents the caliber of the main armament—a 122 mm M-30S howitzer. The chassis was that of the T-34. The Soviet High Command became interested in assault guns following the success of German Sturmgeschütz IIIs. Assault guns had some advantages over tanks with turrets. The lack of a turret

made them cheaper to produce. They could be built with a larger fighting compartment and could be fitted with bigger and more powerful weapons on a given chassis. However, assault guns generally aim by orienting the entire vehicle, and were thus less suited for close combat than

tanks with turrets. The JSU-122 proved effective in its intended role of direct fire on strongholds. The massive concussion of the 122mm high explosive round was reportedly enough to blow the turret off even a Tiger I if a direct hit was scored, a trait shared with the larger 152 mm howitzers.

Production continued until the summer of 1944, by which time a total of about 1,150 JSU-122s had

been built. Few JSU-122s survived the war. Currently only one exists and is on display in the Kubinka Tank Museum near Moscow. The JSU-122 was built on a JS chassis instead of the earlier SU-122, which was built on a KV-1 chassis. (Photo is of an JSU-122 of the 3rd Ukrainian Front moving through Romania, September 1944.) (photo: <http://www.ww2incolor.com/soviet-union/ISU-122.html> and <http://www.ww2incolor.com/soviet-union/aTransylvania.html>).



The **JSU-152** (Samokhodnaya Ustanovka-152) was a Soviet self-propelled heavy howitzer used during World War II. It mounted a 152mm gun-howitzer on the chassis of a KV-1S heavy tank. Later production used an JS tank chassis and was re-designated JSU-152, and these were the vehicles present in the campaign. Because of its adopted role as an impromptu heavy tank destroyer, capable of knocking out the heaviest German

armored vehicles—Tiger and Panther tanks, and Elefant tank destroyers—it was nicknamed Zveroboy ("Beast Slayer"). When the necessity for a new heavy breakthrough vehicle became apparent in the Soviet offensives, a new anti-fortification vehicle was designed with the same purpose in mind, but with higher mobility, heavier armor, reduced production cost, and the more powerful and accurate ML-20 152mm gun. Mounting the ML-20 in a turret was impossible due to its length and recoil, and it was eventually decided that the new vehicle should have a non-rotating gun mounted in a fixed casemate-style superstructure.

Although designed with no consideration for the anti-tank role, the JSU-152 proved to have surprisingly good anti-tank capabilities due to the ML-20S's extremely heavy HE projectiles. Standard doctrine for purpose-built AT guns of the period universally relied on small, dense solid projectiles propelled to high velocities, optimized for punching through armor. Since the JSU-152, like all SU-series self-propelled guns was not designed with tank killing in mind, no AP projectiles were issued to crews and no initial tests against



armor were conducted. However, tests performed on captured Tiger tanks in early 1943 showed that the JSU-152 was able to destroy them at any range with a fair degree of reliability (the only vehicle then in Russian service capable of doing so) by simply blowing the turret off the vehicle through sheer blast effect. This fortuitous discovery spurred massive JSU-152 production and the formation of self-propelled artillery units, which then functioned as ersatz heavy tank destroyer battalions. (The photo is of a Panther turret blown apart by an JSU-152 using direct fire in combat.)



The exact number of JSU-152s produced differs even in Russian sources, with the most common figures being 670 or 704. The JSU-152s that survived World War II were withdrawn from Soviet Army service in 1954. (photos:

http://www.ww2incolor.com/soviet-union/Su-152_12.html, http://www.ww2incolor.com/soviet-union/Bundesarchiv_Bild_101I-154-1964-28_Russland_russischer_Panzer.html and http://www.ww2incolor.com/soviet-union/image_002.html).

The **T-34** is a Soviet medium tank that had a profound and lasting effect on the field of tank design. At its introduction, the T-34 possessed an unprecedented combination of firepower, mobility, protection and ruggedness. Its 76.2 mm (3 in) high-velocity tank gun provided a substantial increase in firepower over any of its contemporaries; its well-sloped armor was difficult to penetrate by most contemporary anti-tank weapons. When first



encountered in 1941, the German tank general von Kleist called it "the finest tank in the world" and Heinz Guderian affirmed the T-34's "vast superiority" over existing German armor of the period. Although its armor and armament were surpassed later in the war, it has often been credited as the most effective, efficient and influential tank design of the Second World War. (Photo is of a T-34 in Budapest just after its capture by the Russians.)



The T-34 was the mainstay of Soviet armored forces throughout the Second World War. Its design allowed it to be continuously refined to meet the constantly evolving needs of the Eastern Front: as the war went on it became more capable, but also quicker and cheaper to produce. Soviet industry would eventually produce over 80,000 T-34s of all variants, allowing steadily greater numbers to be fielded as the war progressed

despite the loss of thousands in combat against the German Wehrmacht. Replacing many light and medium tanks in Red Army service, it was the most-produced tank of the war, as well as the second most produced tank of all time (after its successor, the T-54/55 series). Its development led directly to the T-54 and T-55 series of tanks, which in turn evolved into the later T-62, T-72, and T-90 that form the armored mainstay of many modern armies. T-34 variants were widely exported after World War II, and, as of 2017, the tank remains in limited frontline service in many developing countries. (Photo of a T-34-85 with ventilating hatches open for the driver under breech-block and on the turret. Even in combat, these were often opened a palms-breadth for better vision.)

When new German tanks types with thicker armor began appearing in mid-1942, the T-34's 76.2 mm cannon had to fire at their flanks to assure penetration. As a result, the T-34 was upgraded to

the T-34-85 model. This model, with its 85 mm (3.35 in) ZiS gun, provided greatly increased firepower compared to the previous T-34's 76.2mm gun. The 85mm gun could penetrate the turret front of a Tiger I tank from 500 m (550 yd) and the driver's front plate from 300 m (330 yd) at the side angle of 30 degrees, and the larger turret enabled the addition of another crew member,



allowing the roles of commander and gunner to be separated and increasing the rate of fire and overall effectiveness. Against the frontal armor of the Panther at 30-degree angle, the T-34-85 could not penetrate the non-mantlet of its turret at 500 m (550 yd), meaning that even upgraded models of the T-34 usually needed tungsten rounds or had to flank a Panther to destroy it. (Photo: Street fighting in the suburbs of Budapest, January 1945. Note the non-typical winter camouflage on the T-34/85)

The greater length of the 85mm gun barrel (4.645 meters) made it necessary for crews to be careful not to plough it into the ground on bumpy roads or in combat. Tank commander A.K. Rodkin commented: "the tank could have dug the ground with it in the smallest ditch [filling the barrel with dirt]. If you fired it after that, the barrel would open up at the end like the petals of a flower", destroying the barrel. Standard practice when moving the T-34-85 cross-country in non-combat situations was to fully elevate the gun, or reverse the turret.

The OT-34 was created from various models of the T-34-76 and had an internally mounted flame-thrower ATO-41 (ATO-42 later) replacing the hull machine gun. (Photos of this particular vehicle are difficult to find. This was the best I have. photo:



<http://www.aviapress.com/viewonekit.htm?EST-72052>)



There are hundreds of T-34 tanks in museums around the world. In Budapest on 23 October 2006, protests in Hungary climaxed during the 50th anniversary of the Hungarian Revolution of 1956. Protesters managed to start an unarmed T-34 tank which was part

of a memorial exhibit, and used it in riots against police forces. The tank drove a few hundred meters, then stopped in front of the police, causing no personal injury. (Photo is a size comparison of a T-34/85 and JS-2.) (photos: http://www.ww2incolor.com/soviet-union/voennij-fotograf-Evgenij-Haldej-49-foto_35.html, <http://www.ww2incolor.com/soviet-union/aal.html>, http://www.ww2incolor.com/soviet-union/1_003.html, and http://www.ww2incolor.com/soviet-union/image_003.html).



The **M4 Sherman**, officially Medium Tank, M4, was the most widely used medium tank by the United States and Western Allies in World War II. The M4 Sherman proved to be reliable, relatively cheap to produce, and available in great numbers. Thousands were distributed through the Lend-Lease program to the British Commonwealth and Soviet Union. Even by 1944, most M4 Shermans kept their dual purpose 75mm gun. By 1944, the M4 was inferior in firepower and armor to increasing

numbers of German heavy tanks, but was able to fight on with numerical superiority and mutual support from growing numbers of fighter-bombers and artillery pieces. (The photo is of a Sherman of the 46th Guards Tank Brigade, 9 Guards Mechanized Corps. The inscription on the side translates as, "Russian Prussian always beaten!")

Nearly 50,000 were produced, and under Lend-Lease, 4,102 M4A2 medium tanks were sent to the Soviet Union. Of these, 2,007 were equipped with the 75mm gun, and 2,095 carried the 76mm gun. The Soviet Union's nickname for the M4 medium tank was Emcha because the open-topped figure 4 resembled the Cyrillic letter che or cha. The M4A2s used by the Red Army were considered much less prone to blow up due to ammunition detonation than the T-34 (T-34-76), but tended to overturn in road collisions because of their much higher center of gravity. Shermans were used in combat as late as the 1973 Arab-Israeli war by the Israeli Defense Forces. (Photo is of bodies of dead Red Army soldiers strewn around the knocked-out hulk of a Soviet Sherman in the town of Székesfehérvár in central Hungary. The soldiers were killed during the fight to recapture the town from the Germans.) (photos: <http://www.ww2incolor.com/soviet-union/20160124.html>).



Sherman tanks of the 9th Tank Brigade, 1st Mech Corps in Vienna, shortly after the action in Hungarian Rhapsody. (Photo:

https://www.facebook.com/groups/138092303427607/?multi_permaLinks=266611607242342¬if_id=1541522561741245¬if_t=group_highlights)



The IS (or JS) Tank was a series of heavy tanks developed as a successor to the KV-series by the Soviet Union during World War II. The heavy tank was designed with thick armor to counter German 88 mm guns and carried a main gun capable of defeating Tiger and Panther tanks. It was mainly a breakthrough tank, firing a heavy high-explosive shell that was useful against entrenchments and bunkers. The **JS-2** went into service in April 1944 and was

used as a spearhead by the Red Army in the final stage of the Battles of Budapest and Berlin. The large 122mm cannon was very effective against the heavy German tanks, and its HE shell was also a major asset, proving highly useful and destructive as an infantry-killer. The JS-2 and Tiger I could knock each other out in normal combat distances below 1,000 m (1,100 yd). At any range, the performance of each tank against each other was dependent on the crew and combat situation. Approximately 4,000 were built, and at least a dozen JS-2's survive in museums including Liberty Park in the Netherlands and the Imperial War Museum in England.



The **Tiger II** was a German “heavy” tank. The final official German designation was Panzerkampfwagen Tiger Ausf. B, often shortened to Tiger B. It is also known under the informal name Königstiger (the German name for the Bengal tiger), often translated literally as Royal Tiger, or somewhat incorrectly as King Tiger by Allied soldiers, especially by American forces. The photo is of Crew members

posing with their King Tiger while serving with the 3rd Schwere Panzer Abteilung 503.

The Tiger II was the successor to the Tiger I, combining the latter's thick armor with the armor sloping used on the Panther medium tank. The tank weighed almost 70 tons, and was protected by 100 to 185 mm (3.9 to 7.3 in) of armor to the front. It was armed with the long barreled 8.8 cm KwK 43 L/71 anti-tank cannon. Notwithstanding its initial reliability problems, the Tiger II was remarkably agile for such a heavy vehicle. Contemporary German records and testing results indicate that its tactical mobility was as good as or better than most German or Allied tanks.

On 15 October 1944, Tiger IIs of 503rd Heavy Panzer Battalion played a crucial role during Operation Panzerfaust, supporting Otto Skorzeny's troops in taking the Hungarian capital of Budapest, which ensured that the country remained with the Axis until the end of the war. (This photo is of a Tiger II in Budapest just after the coup. The marching soldiers are Hungarian, wearing white



Bundesarchiv, Bild 1011-980-9283A-12A
Foto: Faupel | Oktober 1944

armbands to signal their loyalty the Arrow Cross party.) The 503rd then took part in the Battle of Debrecen. The 503rd remained in the Hungarian theater of operations for 166 days, during which it accounted for at least 121 Soviet tanks, 244 anti-tank guns and artillery pieces, five aircraft and a train. This was set against the loss of 25 Tiger IIs; ten were knocked out by Soviet troops and burned out, two were sent back to Vienna for a factory overhaul, while thirteen were blown up by their crews for various reasons, usually to prevent them from falling into enemy hands. Kurt Knispel, the highest scoring tank ace of all time (162 enemy AFVs destroyed), also served with the 503rd, and was killed in action on 29 April 1945 in his Tiger II.



This photo is of two King Tigers from the 503rd in the vicinity of Gyöngyös, Hungary, November 15, 1944. Nearly 500 Tiger IIs were produced, of which about 10 still exist. One is in running condition, displayed at the Musée des Blindés,

Saumur, France. (Photos: <https://www.pinterest.com/pin/358106607860329192/> and https://vignette.wikia.nocookie.net/ruse/images/4/4b/King_Tiger_march.jpg/revision/latest?cb=20120614010532 and <https://www.pinterest.com/pin/747175394404228926/>)

The **Tiger I** entered the war starting in 1942 in Africa. Its final designation was Panzerkampfwagen VI Tiger Ausf. E often shortened to Tiger. The Tiger I gave the Wehrmacht its first armored fighting vehicle that mounted the 8.8 cm KwK 36 gun. 1,347 were built between August 1942 and August 1944. After August 1944, production of the Tiger I was phased out in favor of the Tiger II. (Photo is of a Tiger I belonging to SS Totenkopf Division in the Lake Balaton region, Spring 1945.



While the Tiger I has been called an outstanding design for its time, it was over-engineered, using expensive materials and labor-intensive production methods. The Tiger was prone to certain types of track failures and breakdowns, and was limited in range by its high fuel consumption. It was expensive to maintain, but generally mechanically reliable. It was difficult to transport, and vulnerable to immobilization when mud, ice and snow froze between its overlapping and interleaved road wheels, often jamming them solid. The main problem with the Tiger was that its production required considerable resources in terms of manpower and material, which led to it being expensive: the Tiger I cost over twice as much as a Panzer IV and four times as much as a StuG III assault gun. Tigers were usually employed in separate heavy tank battalions (schwere Panzer-Abteilung) under army command. These battalions would be deployed to critical sectors, either for breakthrough operations or, more typically, counter-attacks. A few favored divisions, such as the Grossdeutschland, and the 1st SS Leibstandarte Adolf Hitler, 2nd SS Das Reich, and 3rd SS Totenkopf Panzergrenadier Divisions, had a Tiger company in their tank regiments. 3rd SS Totenkopf retained its Tiger I company through the entire war.

The Tiger was originally designed to be an offensive breakthrough weapon, but by the time it went into action, the military situation had changed dramatically, and its main use was on the defensive, as a mobile anti-tank and infantry gun support weapon. Tactically, this also meant



moving the Tiger units constantly to parry breakthroughs, causing excessive mechanical wear. As a result, there are almost no instances where a Tiger battalion went into combat at anything close to full strength.

Six tanks survive in museums in Russia, France, Germany and the US. In addition, "Tiger 131," captured by the British in Tunisia, has been restored to running order and is at the Bovington Tank Museum in the UK.

Tiger 131 was used in the movie *Fury*, the only time an original, operational Tiger has been used in a film since World War II. (The photos is of Tiger 131 in Bovington Tank Museum. photo: <http://www.network54.com/Forum/47207/thread/1109157112/Totenkopf+Tiger-I+question> and By Hohum - Own work, CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=5074710>).



Nashorn (German "rhinoceros"), initially known as Hornisse (German "hornet"), was a German tank destroyer of World War II. It was developed as an interim solution in 1942 by equipping a light turretless chassis with the Pak 43 heavy anti-tank gun. Though only lightly armored and displaying a high profile, it could frontally penetrate any Allied tank at long range, and its

relatively low cost and superior mobility to heavier vehicles ensured it remained in production until the war's end. The Nashorn's 88mm gun was a variant of Pak 43, one of the most effective anti-tank guns deployed during the war and closely related to guns used later for the Ferdinand/Elefant, Tiger II, and Jagdpanther. Its tungsten carbide–cored round, Pzgr. 40/43, was capable of penetrating 190 mm of rolled steel armor at a 30° angle of impact at a distance of 1,000m. The gun's performance enabled a Nashorn to penetrate the front plating of any Allied armored vehicle and to engage enemy units while staying out of range themselves. While the gun was effective, Nashorns were found to be small and underpowered.

Nashorns usually were assigned to independent combat units, are were not part of the organizational structure of Panzer divisions. Approximately 475 were build, and two complete vehicles remain—one at the US Army Military History Storage Facility in Anniston, Alabama, and the other at Patriot Park, Kubinka, Russia. (Photo is of Nashorn in combat in Russia. photo: <http://survincity.com/2011/07/german-tank-destroyer-of-the-war-part-7-nashorn/>).



The **Jagdpanther** (German: "hunting panther"), SdKfz 173, was a tank destroyer built by Nazi Germany during World War II based on the chassis of the Panther tank. It entered service in 1944 during the later stages of the war on the Eastern and Western Fronts. The Jagdpanther combined the 8.8 cm KwK 43 cannon of the Tiger II and the armor and suspension of the Panther chassis, although it suffered from the general poor state of German ordnance production, maintenance and training in the

later part of the war, which resulted in small production numbers, shortage of spare parts and poor crew readiness. The Jagdpanther had been preceded by two attempts at mounting an 8.8 cm gun as a self-propelled anti-tank weapon; Ferdinand using the 91 leftover Porsche-built VK 45.01 (P) chassis from the Tiger tank competition it had lost to Henschel in 1942, and the Nashorn using a Panzer III/IV chassis. Ferdinand proved to be too heavy and Nashorn small and underpowered. Jagdpanther equipped heavy antitank battalions (schwere Panzerjäger-Abteilungen) and served mainly on the Eastern Front.

A total of 415 were built, and three have actually been restored to running condition (Two German museums, the Deutsches Panzermuseum at Munster and the Wehrtechnische Studiensammlung (WTS) at Koblenz, each have a running Jagdpanther. The SDKFZ Foundation in the UK has restored one Jagdpanther to running condition, using two wrecked Jagdpanthers to complete one.) Seven more are in museums. (Top photo is of Jagdpanther of 560th Schwere Panzerjäger Abteilung knocked out in the vicinity of Lake Balaton, March 1945. Photo: <https://www.pinterest.com/pin/541065342713646332/>. The second photo is of a Jagdpanther knocked out on the Western Front, with an 8.8 cm projectile and casing.)





The **Jagdpanzer IV**, Sd.Kfz. 162, was a German tank destroyer based on the Panzer IV chassis and built in three main variants. As one of the casemate-style turretless Jagdpanzer (tank destroyer, literally "hunting tank") designs, it was developed against the wishes of Heinz Guderian, the inspector general of the Panzertruppen, as a replacement for the Sturmgeschütz III (StuG III). Guderian objected against the needless, in his eyes, diversion of

resources from Panzer IV tank production, as the Sturmgeschütz III was still more than adequate for its role. Installing the much heavier Pak 42 meant that the Jagdpanzer IV was nose heavy, especially with the heavy frontal armor. This made them less mobile and more difficult to operate in rough terrain, leading their crews to nickname them Guderian-Ente ("Guderian's duck"). To prevent the rubber rims of the roadwheels being dislocated by the weight of the vehicle, some later versions had steel roadwheels installed on the front. They were very successful tank destroyers but performed poorly when used out of role as substitutes for tanks or assault guns. In the later stages of the war however, they were increasingly used as tank substitutes, because there was often nothing else available.



(First photo is of a Jagdpanzer IV with infantry support in Hungary, 1944. Second photo is a Jagdpanzer IV/70 late (Alkett) in Budapest. photo: Bundesarchiv_Bild_146-1976-039-09, Ungarn,_Jagdpanzer_und_Grenadiere_auf_dem_Marsch.jpg and <https://www.pinterest.com/pin/334814553521513967/>).

Marder III was the name for a series of World War II German tank destroyers. They mounted either Soviet 76.2 mm F-22 Model 1936 divisional field guns, or a German 7.5 cm PaK 40, in an open-topped fighting compartment on top of the chassis of the Panzer 38(t). They were in production from 1942 to 1944 and served on all fronts until the end of the war, along with the similar Marder II. Approximately 1750 were built or converted from Panzer 38(t) tanks, and there were 350 still in service in February 1945. The German word Marder translates to "marten" in English.



The Marder IIIs were mechanically reliable, as with all vehicles based on the Czechoslovak LT-38 chassis. Their firepower was sufficient to destroy most Soviet tanks on the battlefield at combat range. The Marder' IIIs weaknesses were mainly related to survivability. The combination of a high silhouette and open-top armor protection made them vulnerable to indirect artillery fire. The armor was also quite thin, making them

highly vulnerable to enemy tanks and to close-range machinegun fire. The Marders were not assault vehicles or tank substitutes; the open top meant that operations in urban areas or other close-combat situations were very risky. They were best employed in defensive or overwatch roles. Despite their mobility, they did not replace towed antitank guns. (Photo: Marder III in Hungary, March 1945. <https://www.flickr.com/photos/kruegerrossi/11999985254>)

The **Sturmpanzer** (also known as Sturmpanzer 43 or Sd.Kfz. 166) was a German armoured infantry support gun based on the Panzer IV chassis used in the Second World War. It was known by the nickname **Brummbär** (German: "grouchy" or "grumbling" bear) by Allied intelligence, a name which was not used by the Germans (German soldiers nicknamed it the "Stupa", a contraction of the term



Sturmpanzer). Just over 300 vehicles were built, and they were assigned to four independent battalions. The Sturmpanzer was a development of the Panzer IV tank designed to provide a vehicle offering direct infantry fire support, especially in urban areas. It used a Panzer IV chassis with the upper hull and turret replaced by a new casemate-style armored superstructure housing a new gun, the 15 cm (5.9 in) Sturmhaubitze (StuH) 43 L/12 developed by Skoda. Four vehicles survive in museums. (Photo: Sturmpanzer at the Deutsches Panzermuseum in Munster, Germany, http://www.tanks-encyclopedia.com/ww2/nazi_germany/Sturmpanzer-IV_Brummbar.php)



Sturmpanzer-Abteilung 219, the unit depicted in *Hungarian Rhapsody*, was formed and equipped in September 1944 at the Döllersheim Training Area. Only ten Sturmpanzers had been received when the battalion was alerted on 15 October to participate in the German coup to forestall Hungary's attempt to surrender to the Allies. All the vehicles were given to the First Company and it departed for Budapest on the following day. Bomb damage to the rails delayed its

arrival until 19 October, by which time it was no longer needed as a pro-German government had been installed. It was moved by rail to St. Martin, Slovakia for more training. The battalion was transferred to the vicinity of Stuhlweißenburg to relieve trapped German forces in Budapest. It remained in action near Budapest until forced to retreat by advancing Soviet forces. (Photo: Two vehicles of Sturmpanzer-Abteilung 219 which have been stripped for parts by the Germans before retreating from the Budapest area,

http://www.militarymodelling.com/sites/1/images/member_albums/159755/715756.jpg)



The **Panther** was a German medium tank deployed during World War II on the Eastern and Western Fronts in Europe from mid-1943 to its end in 1945. The Panther was intended to counter the Soviet T-34 and to replace the Panzer III and Panzer IV. Nevertheless, it served alongside the Panzer IV and the heavier Tiger I until the end of the war. It is considered one of the best tanks of World War II for its excellent firepower and protection, although

its reliability was less impressive. (Photo: Panthers from 23rd Panzer Division in Debrecen, October 1944. Bundesarchiv, Bild 101I-244-2324-09 / Momber / CC-BY-SA 3.0, CC BY-SA 3.0 de, <https://commons.wikimedia.org/w/index.php?curid=5410529>)

The Panther was a compromise. While having essentially the same engine as the Tiger I, it had more efficient frontal hull armor, better gun penetration, was lighter and faster, and could

traverse rough terrain better than the Tiger I. The trade-off was weaker side armor, which made it vulnerable to flanking fire. The Panther proved to be effective in open country and long range engagements, but did not provide enough high explosive firepower against infantry. The main gun was a Rheinmetall-Borsig 7.5 cm KwK 42 (L/70) with semi-automatic shell ejection and a supply of 79 rounds (82 on Ausf. G). While it was of a caliber common on Allied tanks, the Panther's gun was one of the most powerful of World War II, due to the large propellant charge and the long barrel, which gave it a very high muzzle velocity and excellent armor-piercing qualities.

The Panther was far cheaper to produce than the Tiger I, and only slightly more expensive than the Panzer IV. Key elements of the Panther design, such as its armor, transmission, and final drive, were simplifications made to improve production rates and address raw material shortages. Albert Speer recounts in his autobiography *Inside the Third Reich*, “Since the Tiger had originally been designed to weigh fifty tons but as a result of Hitler's demands

had gone up to fifty-seven tons, we decided to develop a new thirty-ton tank whose very name, Panther, was to signify greater agility. Though light in weight, its motor was to be the same as the Tiger's, which meant it could develop superior speed. But in the course of a year Hitler once again insisted on clapping so much armor on it, as well as larger guns, that it ultimately reached forty-eight tons, the original weight of the Tiger.” (Photo: Panther of SS Wiking division moving in combat in Hungary, <https://www.pinterest.com/pin/494199759092809600/>).

Approximately 6,000 Panthers were built, of which more than 20 survive. Six have been restored to working order (two of these were built at the German factory after the war under Allied supervision, and subsequently used for testing).



The **Panzer IV** was the most widely manufactured German tank of the Second World War, with some 8,500 built. The Panzer IV was used as the base for many other fighting vehicles, including the Sturmgeschütz IV assault gun, Jagdpanzer IV tank destroyer, the Wirbelwind self-propelled anti-aircraft gun, and the Brummbär self-propelled gun. (Photo:



Tanks of Totenkopf Division during their attack on the village of Szomor (approximately hex 32.14) during Konrad I, January 5, 1945.

<https://www.pinterest.com/pin/381257924696829654/>).

The Panzer IV saw service in all combat theaters involving Germany and was the only German tank to remain in continuous production throughout the war. Upgrades and design modifications, intended to counter new threats, extended its service life. Generally, these involved increasing the Panzer IV's armor protection or upgrading its weapons, although during the last months of the war, with Germany's pressing need for rapid replacement of losses, design changes also included simplifications to speed up the manufacturing process.



The Panzer IV was partially succeeded by the Panther medium tank, which was introduced to counter the Soviet T-34, although the Panzer IV continued as a significant component of German armored formations to the end of the war. The Panzer IV was the most widely exported tank in German service, with around 300 sold to Finland, Romania, Spain and Bulgaria. 8,553 Panzer IVs of all versions were built during World War II, with only the StuG

III assault-gun/tank destroyer's 10,086 vehicle production run exceeding the Panzer IV's total among Axis armored forces. (Panzer IV tanks abandoned for lack of fuel. Székesfehérvár, Hungary, March 1945. <https://www.pinterest.com/pin/234398355585678015/>).

In keeping with the wartime German design philosophy of mounting an existing anti-tank gun on a convenient chassis to give mobility, several tank destroyers and infantry support guns were built around the Panzer IV hull. Several are profiled elsewhere in this article. Four different self-propelled anti-aircraft vehicles were built on the Panzer IV hull. The Flakpanzer IV Möbelwagen was armed with a 37-millimetre



(1.46 in) anti-aircraft cannon; 240 were built between 1944 and 1945. In late 1944 a new Flakpanzer, the Wirbelwind ("Whirlwind"), was designed, with enough armor to protect the gun's crew and a rotating turret, armed with the quadruple 20 mm Flakvierling anti-aircraft cannon system; at least 100 were manufactured. Sixty-five similar vehicles were built, named Ostwind ("East wind"), but with a single 37-millimetre (1.46 in) anti-aircraft cannon instead. This vehicle was designed to replace the Wirbelwind. The final model was the Flakpanzer IV Kugelblitz, of which only five pilot vehicles were built. This vehicle featured an enclosed turret armed with twin 30-millimetre (1.18 in) Rheinmetall-Borsig MK 103 aircraft autocannon. (Photo: Wirbelwind belonging to Panzer-Brigade 109, in the streets of Budapest in October 1944. <https://www.pinterest.de/pin/447404544216213739/>).



After the war, Syria procured Panzer IVs from France and Czechoslovakia, which saw combat in the 1967 Six-Day War. This photo is of a Panzer IV captured by Israeli forces. Behind it is a Syrian Stug III. Syria also procured some Jadgpanzer IV vehicles. These are now either rusting on the Golan Heights or in Israeli museums. (Photo:

<https://wwiiafterwwii.wordpress.com/2016/09/04/panzers-in-the-golan-heights/>)



The Panzerkampfwagen III, commonly known as the **Panzer III**, was a medium tank developed in the 1930s by Germany, and was used extensively in World War II. The official German ordnance designation was Sd.Kfz. 141. It was intended to fight other armored fighting vehicles and serve alongside and support the Panzer IV; however, as the Germans faced the formidable T-34, more powerful anti-tank guns were needed, and since the Panzer IV had more development potential, it

was redesigned to mount the long-barrelled 7.5 cm KwK 40 gun. The Panzer III effectively became obsolete in the anti-tank role and was supplanted by the Panzer IV. After 1942, the last version of Panzer III mounted the 7.5 cm KwK 37 L/24, better suited for infantry support. Production of the Panzer III ceased in 1943. Nevertheless, the Panzer III's capable chassis provided hulls for the Sturmgeschütz III assault gun until the end of the war. (Photo: Panzer III at the Deutsches Panzermuseum, By baku13 - photo taken by baku13, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=646724>).

By the time of the *Hungarian Rhapsody* campaign, Panzer III's were obsolete and many vehicles had been returned to the factories for conversion into StuG assault guns, which were in high demand due to the defensive warfare style adopted by the German Army. Panzer Division Tatra had some 28 tanks in its Panzer battalion (predominantly Panzer III's with some Panzer IV's and a few Tigers) when it was sent to the front. The Panzer III's which belonged to the Tatra Panzer Division were used for training. They were sent to the front very late as the Germans did not want to lose their training vehicles.



The Sturmgeschütz III (**StuG III**) assault gun was Germany's most-produced armored fighting vehicle during World War II. It was built on the chassis of the proven Panzer III tank, replacing the turret with an armored, fixed superstructure mounting a more powerful gun. Initially intended as a mobile assault gun for direct-fire support for infantry, the StuG III was continually modified, and much like the later Jagdpanzer, was employed as a tank destroyer. It was equipped with a 75mm gun in various sizes/configurations. Overall, the Sturmgeschütz III series assault guns proved very successful and served on all fronts as

assault guns and tank destroyers. Because of their low silhouette, StuG IIIs were easy to camouflage and were difficult targets. As of 10 April 1945, there were 1,053 StuG IIIs and 277

StuH 42s in service. Approximately 25 still exist in museums and collections around the world (including one in Israel which was captured from the Syrian army). (Photo: StuG III in Budapest, <https://i.pinimg.com/236x/e4/f7/85/e4f785b91639f068232dbb80b479e004--krieg-budapest.jpg>).



The StuG assault guns were cost-effective compared to the heavier German tanks, though in the anti-tank role they were best used defensively, as the lack of a traversable turret was a severe disadvantage in the assault role. As the German military situation deteriorated later in the war, more StuG guns were built compared to tanks, to replace losses and bolster defenses against the Allied forces. A number of these vehicles were supplied to Axis allied countries, including Hungary. (Photo: Hungarian StuG

III's, <https://www.pinterest.com/pin/438538082440240004/>).



The Carro Armato **M15/42** was the last Italian medium tank produced during World War II. It was based on the earlier M13/40 and M14/41 medium tanks, and was built with the lessons from the North African Campaign in mind. The tank was meant to be a stopgap until the heavier P26/40 tank could be produced in numbers. It did not serve in North Africa, the theatre in which it was intended to operate, but served in Italy and in Yugoslavia with the German Wehrmacht.

After the Italian surrender the Germans seized all the Italian Army Carro Armato M15/42 tanks and made Fiat build a further 28 tanks for the German Army. They were already under production at the time of the Armistice. The Germans renamed these captured tanks as Panzerkampfwagen M15/42 738(i). The main armament consisted of an improved version of the 47 mm/L32 main gun, known as the 47 mm/L40. They were used in a combat, policing, reconnaissance and training role. They saw action in the German Army in Serbia and Croatia in 1944. The Germans used them in Budapest in Hungary in 1945 with the 22nd SS Freiwilligen-Kavallerie-Division Maria Theresa. The vehicles which participated in the Budapest Siege were something of a hodgepodge of whatever was available at the time. (Photo: Germans M15/42 panzer from 12 Pz. Pol. Co. with Hungarian infantry near Budapest, December 1944, http://beutepanzer.ru/Beutepanzer/italy/tanks/M13-15/M15_42-1.htm).



The Jagdpanzer 38 (Sd.Kfz. 138/2), later known as **Hetzer** ("pursuer/hunter"), was a German light tank destroyer of the Second World War based on a modified Czechoslovakian Panzer 38(t) chassis. The name Hetzer was at the time not commonly used for this vehicle. It was the designation for a related prototype, the E-10. The Škoda factory for a very short period confused the two names in its documentation and the very first unit equipped with the vehicle thus for a few

weeks applied the incorrect name until matters were clarified. However, there exists a briefing paper from Heinz Guderian to Hitler claiming that an unofficial name, Hetzer, had spontaneously been coined by the troops. Post-war historians basing themselves on this statement made the name popular in their works, though the vehicle was never named as such in official documents. The Jagdpanzer 38 fit into the lighter category of German tank destroyers that began with the Panzerjäger I, continued with the Marder series and ended with the Jagdpanzer 38. The 75 mm Pak 39 L/48 gun of the Jagdpanzer 38 was a modified version of the 75 mm StuK 40 L/48 used in the StuG III and StuG IV assault guns. With this gun the Jagdpanzer 38 was able to destroy nearly all Allied or Soviet tank types in service at long ranges (except heavy tanks) and its fully enclosed armor protection made it a safer vehicle to crew than the open-topped Marder II or Marder III series. (Photo: Knocked out Hetzer with mantlet penetration near Budapest, February 1945, <http://i.imgur.com/CmJ141R.jpg>).

The vehicle's small size made it easier to conceal than larger vehicles. A self-propelled gun such as this was not intended for a mobile, meeting engagement or the typical Wehrmacht blitzkrieg style of warfare. Instead, a light self-propelled gun like the Jagdpanzer 38 excelled when emplaced along pre-determined lines of sight where the enemy was expected to approach and when used in defensive positions to support a prepared ambush. The Jagdpanzer 38 is similar in its dimensions and vertical profile to the minuscule and undergunned Panzer II, a prewar tank. However, by 1944, the majority of tanks were much larger and heavier; a Jagdpanzer 38 waiting motionless in an ambush position was a much smaller target to detect and hit than many other armored fighting vehicles of the time. Its main failings were comparatively thin side armor, limited ammunition storage, poor gun traverse, poor internal layout that made operating the vehicle difficult, as well as leaf springs and drive wheels that were prone to failure due to the increased weight. Using the Jagdpanzer 38 and similar vehicles according to a defensive doctrine would offset some of the disadvantages of poor side armor and limited gun traverse.

Due to the large number produced (approximately 2800), the Jagdpanzer 38 is probably the most abundant World War II German tank destroyer remaining today, though many survivors are actually post-war Swiss G-13 variants. In addition to numerous examples in museums, there are Jagdpanzer 38 in various conditions in private collections. In *Hungarian Rhapsody*, we have counters for the Hungarian units, as the German ones are incorporated into other unit strengths.



The **Turán** was a Hungarian medium tank of World War II. Based on the design of the Czechoslovak Škoda T-21 medium tank prototype, it was produced in two main variants: the 40M Turán (or Turán I) with a 40mm gun and the 41M Turán (or Turán II) with a 75mm gun. A total of 424 were made. After the disastrous Stalingrad offensive, the army realized that they needed a more powerful weapon than the Turán I to counter the more effective Soviet tanks, especially the T-34. A variant was ordered which

utilized a short 75 mm gun in an enlarged turret. Known as the Turán II, this vehicle otherwise remained virtually unchanged from the original vehicle. Despite the improvement, the relatively low velocity of the projectile was unable to pierce the frontal armor of a T-34, except at point blank range. The T-34's main gun could penetrate the Turán's 50 mm of armor at a much greater distance. Hungarian manufacturers built a total of 139 vehicles in 1943 and 1944 before the Soviet occupation of Hungary. The Hungarian tank battalions in *Hungarian Rhapsody* are of mixed composition, with both Turán II and Panzer IV's. (Photo: Turán II in Hungary, 1944. <https://www.pinterest.com/pin/399764904400496087/>).

There is only one known surviving Turán tank. It is a Turán II on display at the Kubinka Tank Museum in Russia.

The Guns

Rough estimates (no precise ones are available) are that the Soviets possess a 4:1 advantage in troop numbers, 4:1 in guns, 2.5:1 in tanks, and 3:1 in aircraft. The Soviets had more than 5000 artillery pieces. The Soviet independent artillery units in *Hungarian Rhapsody* have nearly 1800 Barrage Strength. It would cost 49 SP to fire it all, supply that the Soviets during the month of December.

By late World War II, the Soviet Army had developed artillery divisions, with a mixture of calibers, to deliver concentrated barrages in support of offensive operations. Stalin's comment that "Quantity has a quality all its own" certainly applied to artillery. Here are some of the most common pieces that took part in the campaign.

ZiS-3 76mm Divisional Gun. ZiS was a factory designation and stood for *Zavod imeni Stalina* ("factory named after Stalin"), the honorific title of Artillery Factory No. 92, which first constructed this gun. Soviet soldiers liked the ZiS-3 for its extreme reliability, durability, and accuracy. The gun was easy to maintain and use by novice crews. The light carriage

allowed the ZiS-3 to be towed by trucks, heavy jeeps, or even hauled by the crew. In addition, it had good anti-armor capabilities, with an armor-piercing round that could knock out any early German light and medium tank. More than 103,000 ZiS-3s were produced by the end of the war, making it the most numerous Soviet field gun during the war. (Photo: Soviet ZiS-3 76mm guns near Berlin, April 1945. http://www.ww2incolor.com/soviet-union/Bundesarchiv_Bild_183-E0406-0022-012_Sowjetische_Artillerie_vor_Berlin.html).



M-30 122mm Howitzer. M-30 howitzers were primarily employed for indirect fire against enemy personnel. They were also used against field fortifications, for clearing minefields and for breaching barbed wire. Their HE-fragmentation shells presented a danger to armored vehicles. Fragments created by the explosion could penetrate up to 20 mm of armor, - enough against thinly armored vehicles. The shells could also damage chassis, sights or other elements of heavier armored vehicles. For self-defense against enemy tanks a HEAT shell was developed in



1943. Before 1943, crews were required to rely on the high-explosive action of their regular ammunition, with some degree of success. According to a German report from 1943, even a Tiger was once heavily damaged by SU-122 assault guns firing high-explosive shells.

M-30 howitzers were towed by a variety of

means: horses, oxen, Soviet and lend-lease trucks, purpose-built light artillery tractors, and occasionally manhandled by Soviet artillerymen themselves.

The gun was eventually replaced by the 122-mm howitzer D-30 after the latter was adopted for service in 1960. A small number of operational M-30 howitzers are still present in Russian Army ordnance depots. Nearly 20,000 were produced. Slightly modified, the M-30 was the cannon used in SU-122 assault guns. (Photo: Gun crew of the Red Army's 1st Battery, 208th howitzer artillery regiment firing at the enemy from 122 mm M-30 howitzer.)



ML-20 M1937 152mm. Gun-Howitzer. This was originally intended as a corps-level cannon. Starting in 1943 the gun was employed by artillery regiments of armies. Such regiments had 18 ML-20s. Guard armies from early 1945 had artillery brigades with 36 ML-20s. The ML-20 also used by artillery regiments (24 pieces) and brigades (36 pieces) of the Reserve of the Main Command.

The ML-20 was primarily used for indirect fire against enemy

personnel, fortifications and key objects in the near rear. Heavy fragments of the OF-540 HE-Fragmentation shell were capable of piercing armor up to 20–30 mm thick, making a barrage dangerous to thinly armored vehicles and to some extent to heavier armored ones as the fragments could damage chassis, sights or other elements; sometimes a close explosion caused damage inside a vehicle even though the armor remained intact. Direct hit of a shell often resulted in tearing away a turret of a medium tank or jamming it in case of a heavy tank. Excellent characteristics of the gun, including reliability and ease of maintenance, allowed it to remain in service with the Soviet Army for a long time after the war. The range was 17,265 meters, and approximately 7000 were built. This weapon was also used in the JSU-152 assault gun. (Photo: Soviet artillery firing a 152-mm howitzer ML-20 in Budapest, in the area of Kalvaria ter. The building in the background with the towers was rebuilt after the war, minus the towers. <http://www.ww2incolor.com/soviet-union/aBpestKt.html>).



The **Katyusha** multiple rocket launcher is a type of rocket artillery first built and fielded by the Soviet Union in World War II. Multiple rocket launchers such as these deliver explosives to a target area more quickly than conventional artillery, but with lower accuracy and requiring a longer time to reload. They are fragile compared to artillery guns, but are inexpensive, easy to produce, and usable on any chassis. Katyushas of World War II were

usually mounted on ordinary trucks. This mobility gave the Katyusha another advantage: being able to deliver a large blow all at once, and then move before being located and attacked with counter-battery fire. Because they were marked with the letter K (for Voronezh Komintern Factory), Red Army troops adopted a nickname from Mikhail Isakovsky's popular wartime song, "Katyusha", about a girl longing for her absent beloved, who has gone away on military service. Katyusha is the Russian equivalent of Katie, an endearing diminutive form of the name Katherine. (Photo: (<http://www.ww2incolor.com/soviet-union/Katy.html>)).

German troops coined the nickname "Stalin's organ" (German: Stalinorgel), comparing the visual resemblance of the launch array to a pipe organ, and the sound of the weapon's rocket motors, a distinctive howling sound which terrified the German troops, adding a psychological warfare aspect to their use.

The weapon is less accurate than conventional artillery guns, but is extremely effective in saturation bombardment. A battery of four BM-13 launchers could fire a salvo in 7–10 seconds that delivered 4.35 tons of high explosives over a 400,000-square-metre (4,300,000 sq ft) impact zone, making its power roughly equivalent to that of 72 conventional artillery guns. By the end of the war, the equivalent of 518 batteries were in service. The 144-Barrage Strength unit is the pool of all independent regiments attached to the 2nd Ukrainian Front.



The success and economy of multiple rocket launchers (MRL) have led them to continue to be developed. During the Cold War, the Soviet Union fielded several models of Katyusha-like MRL, notably the BM-21 launchers somewhat inspired by the earlier weapon, and the larger BM-27. Advances in artillery munitions have been applied to some Katyusha-type multiple launch rocket systems, including bomblet submunitions, remotely deployed land mines, and chemical warheads. With the

breakup of the Soviet Union, Russia inherited most of its military arsenal including its large complement of MRLs. In recent history, they have been used by Russian forces during the First and Second Chechen Wars and by Armenian and Azerbaijani forces during the Nagorno-Karabakh War. Georgian government forces are reported to have used BM-21 or similar rocket artillery in fighting in the 2008 South Ossetia war. (Photo: Soviet truck mounted BM-13 multiple rocket launchers deliver a volley of fire in Berlin. <http://www.ww2incolor.com/soviet-union/aKatyusha.html>).

The 85 mm air defense gun M1939 (52-K) was an 85-mm Soviet air defense gun, developed under guidance of leading Soviet designers M. N. Loginov and G. D. Dorokhin. This gun was successfully used throughout the German-Soviet War against level bombers and other high- and medium-altitude targets. In emergencies they were utilized as powerful anti-tank weapons. The barrel of the



52-K was the basis for the family of 85-mm Soviet tank guns. After the war some 52-Ks were refitted for peaceful purposes as anti-avalanche guns in mountainous terrain. The number and effectiveness of air defense weapons increased throughout the war. (Photo: Soviet 85-mm air defense gun M1939 (52-K) on one of the streets of Budapest. 1945.

http://www.ww2incolor.com/soviet-union/aBudapest+soviet_85_mm_1945.html).



The **Zis-2 57mm anti-tank gun** served throughout the war. Several versions were made, and the late-war Soviet army used a more powerful model 1943. Approximately 10,000 units were produced. Like much of the Soviet WW2 equipment, it saw service with a number of countries long after the war. On July 15, 2013, a North Korean ship was intercepted smuggling weapons from Cuba; it was discovered to be carrying ZiS-2

ammunition among other old weaponry, indicating that some examples remain active in North Korean forces. (Photo: Soviet soldiers with a 57-mm anti-tank gun model 1943 ZIS-2 are setting up firing position on the street in Kecskemét, Hungary. Some of the men are wearing captured German boots. http://www.ww2incolor.com/soviet-union/aKecskemet_001.html).

Axis Artillery

The Axis forces had a multiplicity of weapons, too many to catalogue here. We have profiled some of the main ones that were used during the campaign. Axis artillery units in *Hungarian Rhapsody* are generally a mix of available artillery.



The **10.5 cm leFH 18** (German: leichte Feldhaubitze "light field howitzer") was a German light howitzer used in World War II and the standard artillery piece of the Wehrmacht, adopted for service in 1935 and used by all divisions and artillery battalions. Designed in the late 1920s, it represented a major advance on its predecessor the 10.5 cm leFH 16. It was superior in caliber to its early opponents in the war, with adequate range and

firepower, but the modern split trail gun carriage that provided it with more stability and traverse also rendered it too heavy for a mobile role in the largely horse-drawn artillery battalions of the German army, particularly in the mud and snow of the Eastern Front. There were several versions of this howitzer, all essentially similar. It was designed and developed by Rheinmetall after the war broke out in an effort to get more range from the basic leFH 18 design. It was fitted with a muzzle brake and the recoil system adjusted to allow the use of a more powerful charge and new long-range shell. It was also used to equip German allies and neutral countries in Europe prior to and during the war. Nearly 12,000 were produced. It could fire a 32-pound (14.8 kg) to a range of 7.5 miles (12.3 km). The 10.5 cm leFH 18M was also in service with the Syrian Army, one example being preserved in the Military Museum in Damascus. The type has seen occasional service with rebel groups during the Syrian Civil War, in July 2013 and May 2015. (Photo: Red Army soldier on Kálvária tér in Budapest looks at an abandoned German 105 mm howitzer leFH18. <http://www.ww2incolor.com/soviet-union/aBicycle.html>).

The **Sd. Kfz. 124 Wespe** (German for "wasp"), was a German self-propelled gun developed and used during the Second World War. It was based on a modified Panzer II chassis. During the Battle of France in 1940 it became apparent the Panzer II, was unsuitable as a main battle tank. Though mechanically sound, it was both under-gunned and under-armored. The chassis, however, proved serviceable for providing mobility to the 10.5 cm field howitzer. Existing chassis were converted to self-propelled artillery vehicles, such as the Marder II conversion

providing mobility to the PaK 40/7.5 cm anti-tank gun. The superstructure was lightly armored, with 10 mm armor plate (enough to stop small arms fire) left open at the top and rear. The vehicles were produced by FAMO's Ursus plant in Warsaw. (Photo: Wespe on the Eastern Front in winter. http://www.tanks-encyclopedia.com/ww2/nazi_germany/SdKfz-124_Wespe.php).

The Wespe was in production from February 1943 until June 1944, when Soviet forces approached the frontier. By that time, 676 had been produced. An additional 159 were modified to serve as mobile artillery ammunition carriers. The Wespe first saw combat in 1943 on the Eastern Front. It proved very successful, and Hitler ordered all Panzer II chassis



production be dedicated to the Wespe alone, at the expense of other projects, including the Marder II self-propelled anti-tank gun. The Wespe proved reliable and highly maneuverable, providing greater mobility to the artillery formations of the panzer divisions, but provided an excellent target and had inadequate gun crew protection. The vehicles were allocated to the armored artillery battalions (Panzerartillerie Abteilungen) of Panzer divisions along with heavier Hummel self-propelled artillery. 23rd Panzer Division, for example, had 14 of them at the start of the Hungarian Rhapsody campaign.



Bundesarchiv, Bild 1011-023-3496-29
Foto: Wolff, Paul | 1944 März - April

The **15 cm schwere Feldhaubitze 18 or sFH 18** (German: "heavy field howitzer, model 18"), nicknamed Immergrün ("Evergreen"), was the basic German division-level heavy howitzer during the Second World War, serving alongside the smaller but more numerous 10.5 cm leFH 18. It was based on the earlier, First World War-era design of the 15 cm sFH 13, and while improved over

that weapon, it was generally outdated compared to the weapons it faced. It was, however, the first artillery weapon equipped with rocket-assisted ammunition to increase range. The sFH 18 was also used in the self-propelled artillery piece schwere Panzerhaubitze 18/1 (more commonly known as Hummel). The sFH 18 was one of Germany's three main 15 cm caliber weapons, the others being the 15 cm Kanone 18, a corps-level heavy gun, and the 15 cm sIG 33, a short-barreled infantry gun. (Photo: sFH 18 crew slogging through "Mud" conditions in Army Group South, April 1944. Bundesarchiv, Bild 101I-023-3496-29 / Wolff, Paul / CC-BY-SA 3.0).

Against the Soviet Union however, the sFH 18 proved to be greatly inferior to the Red Army corps artillery 122 mm gun (A-19) and 152 mm ML-20 gun-howitzer, whose maximum range of 20.4 kilometers (22,300 yd) and 17.3 kilometers (18,900 yd) allowed it to fire counter-battery against the sFH 18 with a 7 kilometers (7,700 yd) and 4 kilometers (4,400 yd) advantage respectively. This led to numerous efforts to introduce new guns with even better performance than the ML-20, while various experiments were also carried out on the sFH 18 to improve its range. These led to the 15 cm sFH 18M version with a removable barrel liner and a muzzle brake that allowed a larger "special 7" or 8 charge to be used. The 18M increased range to 15,100 meters (16,500 yd), but it was found that the liners suffered increased wear and the recoil system could not handle the increased loads in spite of the brake. This led to a more interesting modification, the introduction of the 15 cm R. Gr. 19 FES ammunition, which used a rocket-assisted round that could reach 18,200 meters (19,900 yd) and give it some level of parity with the A-19 and ML-20.

Hummel (German: "bumblebee") was a self-propelled gun based on the Geschützwagen III/IV chassis and armed with a 15cm howitzer. It was used by the German Wehrmacht during the Second World War from early 1943 until the end of the war. The full name was Panzerfeldhaubitze 18M auf Geschützwagen III/IV (Sf) Hummel, Sd.Kfz. 165. On February 27, 1944, Hitler ordered the name



Hummel to be dropped as it was deemed inappropriate for a fighting vehicle. By the end of the war, 714 Hummel vehicles had been built together with 150 ammunition carriers using the same design. Hummels were issued to Heavy Self-Propelled Artillery Battery of Panzerartillerie Abteilung of both Wehrmacht and Waffen SS panzer divisions. (Photo: Hummel in Budapest after its capture by the Soviets. <https://www.pinterest.com/pin/399624166910413977/>).

The **7.5 cm Pak 40** (7,5 cm Panzerabwehrkanone 40) was a German 75-millimeter anti-tank gun developed in 1939-1941 by Rheinmetall and used during the Second World War. The Pak 40 formed the backbone of German anti-tank guns for the latter part of World War II, mostly in towed form, but also on a number of tank destroyers such as the Marder series. Approximately 20,000 Pak 40s were produced, and



Bundesarchiv, Bild 146-1982-090-11
Foto: Faupel | 1044/1045 Dezember - Januar

about 3,500 more were used to arm tank destroyers. The Pak 40 was the standard German anti-tank gun until the end of the war, and was supplied by Germany to its allies. Some captured guns were used by the Red Army. After the war, the Pak 40 remained in service in several European armies, including Albania, Bulgaria, Czechoslovakia, Finland, Norway, Hungary and Romania. (Photo: Disguised between the rubbish of a farmstead, German Pak stands ready to ward off Soviet attacks on the outskirts of the Hungarian capital, January 10, 1945.

(https://commons.wikimedia.org/wiki/File:Bundesarchiv_Bild_146-1982-090-11,_Budapest,_Pak_am_Stadtrand_in_Stellung.jpg).



The **8.8 cm Flak 18/36/37/41** was a German 88 mm anti-aircraft and anti-tank artillery gun from World War II. The name applies to a series of related guns, the first one officially called the 8.8 cm Flak 18, the improved 8.8 cm Flak 36, and later the 8.8 cm Flak 37. Flak is a contraction of German Flugzeugabwehrkanone meaning "aircraft-defense cannon", the original purpose of the eighty-eight.

In English, "flak" became a generic term for ground anti-aircraft fire. In informal German use, the guns were universally known as the Acht-acht ("eight-eight"). It was widely used by

Germany throughout the war, and was one of the most recognized German weapons of that conflict. Development of the original model led to a wide variety of guns. All versions were able to penetrate about 200 mm (7.9 inches) of armor at 1,000 m (3280 feet), allowing it to defeat the armor of any contemporary tank. By February 1945, there were 327 heavy anti-aircraft batteries facing the Red Army, which was 21 percent of those used for anti-aircraft defense. (Photo: German 88 fires on Soviet forces near Budapest, 1944. <https://www.pinterest.com/pin/762445411885433363/>).

The versatile carriage allowed the 8.8 cm FlaK to be fired in a limited anti-tank mode when still on its wheels; it could be completely emplaced in only two and a half minutes. Its successful use as an improvised anti-tank gun led to the development of a tank gun based upon it: the 8.8 cm KwK 36, with the "KwK" abbreviation standing for Kampfwagen-Kanone (literally "battle vehicle cannon", or "main battle tank cannon"), meant to be placed in a gun turret as the tank's primary armament. This gun served as the main armament of the Tiger I heavy tank.

The 8.8 cm Flaks performed well in its original role of an anti-aircraft gun and it proved to be a superb anti-tank gun as well. Its success was due to its versatility: the standard anti-aircraft platform allowed gunners to depress the muzzle below the horizontal, unlike most of its contemporaries. As WW2 progressed, it became increasingly clear that existing anti-tank weapons were unable to pierce the armor of heavier enemy tanks and ground commanders began increasingly to use the 8.8 cm Flak against tanks. Similarly, to the anti-aircraft role, as an anti-tank weapon the 8.8 cm Flak was tactically arranged into batteries, usually four guns to each. The higher-level tactical unit was usually a mixed anti-aircraft battalion (gemischte Flak-Abteilung). It totaled 12 such guns on average, supplemented by light guns.

More than 20,000 were produced during the war, and over 30 exist in museums around the world.

The **Nebelwerfer** (smoke mortar) was a World War II German series of weapons. They were initially developed by and assigned to the Wehrmacht's "smoke troops" (Nebeltruppen). This weapon was given its name as a disinformation strategy designed to fool observers from the League of Nations, who were observing any possible infraction of the Treaty of Versailles, into thinking that it was merely a device for creating a smoke screen. They were primarily intended to deliver poison gas and smoke shells, although a high-explosive shell was developed for the Nebelwerfer from the beginning. Initially, two



different mortars were fielded before they were replaced by a variety of rocket launchers ranging in size from 15 to 32 centimetres (5.9 to 12.6 in). The thin walls of the rockets had the great advantage of allowing much larger quantities of gases, fluids or high-explosives to be delivered than artillery or even mortar shells of the same weight. With the exception of the Balkans Campaign, Nebelwerfers were used in every campaign of the German Army during World War II. A version of the 21 cm calibre system was adapted for air-to-air use against Allied bombers.



Bundesarchiv, Bild 1011-990-0426-15
Foto: Leher | 1944 August - September

The most common version was the 15 cm Nebelwerfer 41 in 1940. It, like virtually all German rocket designs, was spin-stabilized to increase accuracy. One very unusual feature was that the rocket motor was in the front, the exhaust venturi being about two-thirds down the body from the nose, with the intent to optimize the blast effect of the rocket as the warhead would still be above the

ground when it detonated. This proved to greatly complicate manufacture for not much extra effect and it was not copied on later rocket designs. It was fired from a six-tube launcher

mounted on a towed carriage adapted from that used by the 3.7 cm PaK 36 and had a range of 6,900 metres (7,500 yd). Almost five and a half million 15 cm rockets and 6,000 launchers were manufactured over the course of the war. After the crew had loaded and aimed the launcher, they had to take cover 10 to 15 metres (11 to 16 yd) away to avoid the exhaust flames and would fire the rockets with an electric switch. After firing, however, a long streak of smoke was visible from a considerable distance, leaving the Nebelwerfer vulnerable to counter-battery fire. It was therefore necessary to relocate the launcher and crew as soon as possible after firing. (Photos: Wrecked 15 cm Nebelwerfer in Budapest, [Bundesarchiv Bild 101I-696-0426-15, Warschauer Aufstand, Raketenwerfer-Einsatz.jpg](#), Nebelwerfer rockets in flight (fired at targets in Warsaw during the Warsaw Uprising), <https://www.pinterest.com/pin/381257924702725367/>)

Images from the Campaign



The Hungarian Rhapsody campaign took place across a variety of terrain. The Tisza River is in the “Hungarian Plain” of flat and rolling hills. But this is bounded to the north and east by the Carpathian Mountains, and to the west by the immense Danube River and much more difficult terrain. (Photo: Soviet artillerymen firing to the enemy positions, Budapest Offensive, Hungary, 1944,

<https://www.pinterest.co.uk/pin/542191242616508365/>).

Below is a modern photo of the “Danube Bend” (hexside 27.18/28.17) with its “Wooded Hills” terrain. The area now is a favorite of tourists. (Photo: <http://visitbudapest.travel/activities/budapest-vicinity/danube-bend/>).



This is Turda Gorge (hex B37.29), with an idea of “Rough Terrain” features. The area around Sibiu (B49.34), Turda (B37.30) and Kolozsvár (B34.27) is Transylvania. This area has a lot of natural beauty and history. Things were not so pleasant during the war. In Kolozsvár, for example, the Germans concentrated 18,000 Jews from the surrounding area in a Ghetto. Even as the Soviet army was approaching, the entire group was sent to Auschwitz in June 1944. Kolozsvár is now Cluj-Napoca, or simply Cluj. (Photo: Uploaded from



<http://flickr.com/photo/79653482@N00/396242434>).



Pzkw V Ausf. (G) Panther at the Garam River bridgehead, 26 February 1945. (Photo: <https://www.pinterest.com/pin/523050944203199858/>).

The Shoes on the Danube Bank is a memorial in Budapest, Hungary. Conceived by film director Can Togay, he created it on the east bank of the Danube River with sculptor Gyula Pauer to honor the people who were killed by fascist Arrow Cross militiamen in Budapest during World War II. They were ordered to take off their shoes, and were shot at the edge of the water so that their bodies fell into the river and were carried away. It represents their shoes left behind on the bank. (Photo:



<https://www.pinterest.com/pin/530932243546372178/>).



Camouflaged against the winter landscape, a trio of German soldiers takes up firing positions in the Hungarian forest. The soldier in the foreground is armed with an MP-40 submachine gun capable of firing up to 500 rounds of 9mm ammunition per minute. Another soldier lies prone, ready to fire an MG-34 machine gun stabilized with a bipod.

The German commanders were very short of infantry formations. Major General Hans Gaedcke, chief-of-staff of the 6th Army, commented: “I have written that our shortage of infantry in Hungary led to our defeat . . . let me explain. Let’s say we were holding a series of strongpoints, as always, with weak forces. Say the Russians attacked on the left flank and our position was only under light attack and holding firm. What was the thing to do then? At night, we would quickly shift the mobile forces across from the right flank position to the left flank, leaving behind two or three armored cars. In the morning we would suddenly drive back the enemy on the left flank with the forces we had shifted earlier in the night. But in the meantime, the Russians with their much larger forces would recognize the opportunity on the right flank. Consequently, we would have to pull back our weak right flank position and then rescue the situation by rapidly returning the mobile forces back to the right flank. So it went, step by step backwards out of the Hungarian lowlands until we had withdrawn all the way to the Tokaj region. This is a typical case of what happens when you lack infantry to hold positions.”

(Photo: <http://warfarehistorynetwork.com/daily/wwii/hitlers-last-offensive-operation-spring-awakening/>).



During the early phase of the German offensive in Hungary in the spring of 1945, Panzer Grenadiers load into half-tracks before advancing toward the Soviet lines. These troops are dressed in heavy winter gear, and snow covers the landscape. (Photo: <http://warfarehistorynetwork.com/daily/wwii/hitlers-last-offensive-operation-spring-awakening/>).



Rolling through the ruins of a Hungarian village, a Waffen SS Mark V Panther medium tank passes a knocked-out Soviet T-34 tank and the remains of a destroyed truck. (Photo: <http://warfarehistorynetwork.com/daily/wwii/hitlers-last-offensive-operation-spring-awakening/>).



A Red Army soldier mans his machine-gun position in Hungary while comrades, weapons at the ready, peer toward the horizon and the oncoming Germans. The machine gun, a Maxim Model 1910, appears anachronistic compared to modern German weapons. The Soviets were challenged by declining manpower during the campaign. Malinovsky's forces, for example, lost 85,000 casualties during the battles at Debrecen in October, and received no substantial replacements. (Photo: <http://warfarehistorynetwork.com/daily/wwii/hitlers-last-offensive-operation-spring-awakening/>).



SS-Panzer Grenadier-Division "Totenkopf" moves out in bleak weather during Operation Konrad II, Hungary 1945. (Photo: <https://www.pinterest.com/pin/485755509787915647/>).

A Totenkopf Division grenadier talking with a Hungarian soldier in Budapest, October 1944. The King Tiger is from the schwere Panzer-Abteilung 503 Heavy Panzer. You may find an Hungarian soldier referred to as a “Honved” online, but not by anyone who speaks Hungarian. (Photo:



<https://i.pinimg.com/736x/48/fc/11/48fc114d39d0f015cc2690bbb8b80ec9--tiger-ii-army-vehicles.jpg>).



The defenders also expected the brunt of the attack to arrive from the east, on the flat terrain of Pest. Therefore, the Attila line was prepared mainly around this eastern city half, while the hilly Buda half in the west was considered less vulnerable behind the wide Danube river. Here Soviet infantry is moving westward cautiously on a street of Pest, whose broad avenues and boulevards enhanced their advance. (Photo:

http://www.wv2incolor.com/rating/3.5%253Fg2_itemId%253D265432%3Fg2_itemId%3D354876?g2_itemId=544279).



This set of photos purport to show street fighting in Budapest but are almost certainly staged. Note the empty shield-shaped street sign and distinctive tree just behind it, which appear in all three photos. The first is identified as “Scouts of Lebed’s regiment. From left to right: Jr. Lt. A. Nebogin, I. Chermoshentsev, G. Shanidze, V. Lisenkov, K. Boyko. Budapest, February 1945”. (First Photo:



http://www.ww2incolor.com/soviet-union/1__005.html, Second Photo: <https://www.pinterest.com/pin/815784919972635188/>, lying down photo: <http://www.on-and-off-the-record.com/wp-content/uploads/2014/07/md1krq.jpg>).



Happy Soviet soldiers marching on street of Budapest after the fall of the city in 1945. Some appear to be carrying loot. The one in the foreground has a parcel addressed in Russian. This picture is often misidentified as an event taking place in Vienna, however the Hungarian Museum of Applied Arts is visible in the background. (Photo: <https://www.strategic-culture.org/pview/2015/03/30/liberation-europe-siege-budapest.html>).



During December 1944, Hungarian Minister of Defense Beregfy is photographed at the first ring of the defensive "Attila line" built around Budapest. This section was held by the 22nd Waffen SS Division. On Beregfy's right stands SS officer Karl-Heinz Keitel, the eldest son of Field-Marshal Keitel, who later would be wounded and evacuated by air from the city. The anti-tank ditches were particularly effective. It wasn't until New Year's Day that Malinovsky's forces breached the last defensive belt. lines (Photo: http://www.ww2incolor.com/hungary/9++Beregfy+and+SS_+Nov.html).



After the Axis had withdrawn to Buda from the Pest side on January 17, 1945, the remaining Danube bridges, such as the venerable Chain Bridge in the photo, were blown up by German sappers. In the meanwhile, the winter cold froze up the Danube, which had several consequences.

The many tons of supplies sent by German forces each day could no longer be floated into the city on heavy barges at night. Red Army units could simply walk over on the ice, for example to fight for the possession of Margit Island. And finally, obtaining water for the population, always a task, became even more difficult. Many residents, while trying to break through the ice for getting water, as in this photo, were shot by snipers. (Photo:

http://www.ww2incolor.com/hungary/b9++Frozen+Danube_+1945.html).



Both Waffen SS cavalry units and Hungarian hussars introduced about 30,000 horses into the defensive ring established at Budapest. Because these soldiers fought as infantry units, many of their horses got loose, roaming the streets even after the siege. But a higher number were consumed by the besieged soldiers and civilians alike. Most soldiers and civilians were starving by the end of the battle. (Photo:

http://www.ww2incolor.com/hungary/99+Bp_+Loose+Horses_+Jan+45.html).



The resupply of the besieged city was partially accomplished by aircraft, including gliders. An open field in Buda was one of the makeshift landing areas, shown here after the siege, with old gliders littering the foreground. (Photo:

<http://www.wv2incolor.com/hungary/13+Buda+Vermezo+repter+Feb.html>).



Particularly on the eastern (Pest) side of the city, the Attila line was a well-defined and prepared defense area established in the fall of 1944. Shown here is a Hungarian MG unit. (Photo:

<http://www.wv2incolor.com/hungary/22+Hung+MG++Bp+Nov.html>).



Anti-tank gun position near Budapest. (Photo: <http://www.ww2incolor.com/hungary/Bild+146-1986-064-15%23.html>).



A Hungarian soldier takes up defensive position with Panzerschreck in central Hungary, 1944. The Panzerschreck (literally “tank fright”, “tank's fright” or “tank's bane”) was the popular name for the Raketenpanzerbüchse (abbreviated to RPzB), an 88 mm caliber reusable anti-tank rocket launcher. Another popular nickname was Ofenrohr ("stove pipe"). The Panzerschreck was designed as a lightweight infantry anti-tank weapon and was an enlarged copy of the American bazooka. The weapon was shoulder-launched and fired a fin-stabilized rocket with a shaped-charge warhead. It was made in smaller numbers than the Panzerfaust, which was a disposable recoilless gun firing an anti-tank warhead. (Photo: http://www.ww2incolor.com/hungary/Magyar+katona+pancelrem-mel_+1944.html).



Hungarian soldiers with Panzerfausts. The low combat effectiveness of the Honvédség (“Homeland defense”) was due to inadequate training, shortage of motor vehicles, outdated armament and a widespread defeatism due to the negative course of the war. Arrogant attitudes on the part of the Germans didn’t help matters. Many of the Hungarian units melted away as winter approached. Nevertheless, several Hungarian units, such as the 1st Armored Division and several infantry regiments were effective throughout the campaign. (Photo: http://www.ww2incolor.com/hungary/Ungarische+Honveds+in+Budapest_11.html).



On one of the squares of occupied Budapest, Hungary, a Soviet military policeman, directing whatever military traffic there is, stands next to a poster, proclaiming "Death to the German invaders". By this point, the Germans were gone from the city. (Photo: http://www.ww2incolor.com/soviet-union/aPoster_.html)



Engineering operations are not glamorous, and it isn't easy to find photos of them. These are two of Soviet engineers ferrying fighting vehicles across a river in Hungary. (Photo: <http://www.o5m6.de/redarmy/battleofvienna.php#Ferrying>).

Particularly in October-November 1944, the Soviets had real difficulties with their supply lines. They employed thousands of trucks to transport military goods over the Carpathian passes. When the autumn rains turn the road into quagmires, they created a number of horse-drawn wagon companies.



A battery of Soviet 76mm ZiS-3 guns towed by lend-lease trucks across the Tisza, autumn 1944
(Photo archive of the Ministry of Defense of Bulgaria)



Romanian Infantry crossing the Tisza on a pontoon bridge, autumn 1944. Note how this unit is primarily horse-drawn, it may be a cavalry unit. (Photo archive of the Ministry of Defense of Bulgaria)



Soviet soldiers of the 37th Rifle Corps march through Szeged, probably on 12 October 1944.
(Photo archive of the Ministry of Defense of Bulgaria)



One of the Soviet soldiers in a street fight in Budapest; 1945

(Photo: http://www.wv2incolor.com/soviet-union/aBudapest_001.html)



Three Soviet officers look over the newly conquered Hungarian capital from the battle-scarred terrace of the Fisherman's Bastion in Budapest. (Photo: <http://www.ww2incolor.com/soviet-union/aFisherman+1945.html>).



A knocked-out JS-2 smolders near Debrecen. (Photo: https://www.reddit.com/r/DestroyedTanks/duplicates/58ga8t/a_knocked_out_is2_smoulders_near_debrecen_romania/).



Soviet soldiers pressing their advance past a brewery in one of the suburbs of Budapest, Hungary. January 1945. (Photo: <http://www.ww2incolor.com/soviet-union/aBudapest.html>)



Red Army soldiers crossing the Danube river in inflatable boats. Location unknown. (Photo: <https://www.pinterest.com/pin/543739354995299254/>).



Soviet soldiers escort a group of captured Hungarian prisoners of war in a street in Budapest. In the background is a destroyed German Panzer IV/70; January/February 1945. (Photo: <http://www.w2incolor.com/soviet-union/aBpest.html>).



Soldiers from the Totenkopf Division during Operation Konrad 2 in Hungary, 1945. Fighting in the wintertime is cold—soldiers in some advanced positions were allocated dogs to help keep them warm. (Photo: <http://uncensoredhistory.blogspot.com/2013/03/elite-waffen-ss-soldiers-totenkopf-3rd.html>).



Photo of Panther tanks in Nyíregyháza during the campaign, along with the same scene taken during current times. (posted on the now-archived Facebook group “Páncélos hadtörténelem élőben” (Military History of Armor, Hungarian language group)).



German soldiers surrender in Budapest, Hungary. February 1945. Like other Axis troops captured by the Soviets, few would ever see home again. The last-gasp breakout effort of the defending units as the city fell was complete chaos and only 700 reached the German lines after crossing miles of winter terrain. One Soviet memoir from the 37th Rifle Corps reads:

“It was a cruel night. The thunder of the guns and the whistle of shells mingled with the frightened yell of the escapees and the death rattle of the wounded, as muzzle flashes lit up groups of people dementedly running to and fro in the deep darkness. To prevent the breakout every able-bodied Soviet soldier took up arms. Positioned in the ditches alongside the road and behind the trees, commanders of every rank, together with all the men from the staffs and the workshops, were decimating the rows of escapees with their submachine guns or rifles.”

Accurate numbers are impossible to obtain, but the Soviet forces suffered at nearly 300,000 casualties during the campaign, and the Axis forces approximately 137,000. (Photo: <https://historyimages.blogspot.com/2012/04/gradual-obliteration-germany-army-1944-45.html>).



A Red Army officer and other Soviet soldiers in newly conquered Budapest amidst the damaged buildings. On the left is the blown-up Elizabeth bridge; January or February 1945. One of the damaged buildings is the Museum of Applied Arts. The officer's shoulder boards suggest he is a lieutenant colonel. (Photos: <http://www.ww2incolor.com/soviet-union/aBudapestElizabethBr.html>, <http://www.ww2incolor.com/soviet-union/berlin-1945-53.html>, https://commons.wikimedia.org/wiki/File:Soviet_soldiers_in_Budapest_1945.jpg).



General Malinovsky's Soviet armies reaching the eastern outskirts of Budapest by December 1944, consisted of infantry, tank, artillery, and even cavalry units. The opposing German forces were composed of both Heer and Waffen SS divisions, while the Hungarians were a mixture of regular Honved units, auxiliary formations, and Arrow-Cross volunteers. Here Soviet infantry, dismounting from T-34 tanks, moves into action in the vicinity of Budapest in the fall of 1944. (Photo: http://www.ww2incolor.com/soviet-union/6+Russian+Advance+by+Bp_+1944.html).



Photo identified as “Battle of Budapest” (Photo: <http://www.ww2incolor.com/soviet-union/buda.html>).



This photo, probably of Soviet origin, often misidentified as having taken place in Vienna. Actually, during the winter of 1944-1945, the red flag is being displayed by Soviet soldiers on a lamp post standing just in front of the Hungarian parliament, located behind their backs, and not visible in the photo. Across the square on the left, stands the ornate Royal Supreme Court of Hungary. (Photo: <http://www.ww2incolor.com/soviet-union/Budapest+Parliament+Square+1944-1945.html>).



During the siege of Budapest, a stubborn Russian infantry unit makes slow advance on a major street of the capital city, 1944-1945. Small Hungary had been bled white by the battles on the Don, at the Carpathians, and in eastern Hungary. At Budapest, General Woehler's Army Group South initially relied a great deal on recently recruited Waffen SS divisions. In contrast to the sometimes-demoralized Hungarian army units, local volunteer detachments often provided an extra fighting spark. Here Soviet infantry is on the move on a Budapest street. (Photo: <http://www.ww2incolor.com/soviet-union/Russians+in+Bp.html>).



Romanian troops in Hungary. The Soviet commanders had a poor opinion of Romanian combat capabilities. To be fair, their morale was low: they were fighting in a hostile environment (Romanians and Magyars had been arch enemies for centuries), their country was war-weary, and their country was Soviet-occupied. (Photo: <http://www.w2incolor.com/Romanian+Forces/in+ungaria.html>).



Assault of Romanian Soldiers from the 3rd Mountain Division, Slovakia 1944. (Photo: http://www.w2incolor.com/Romanian+Forces/Luptatori+din+cadrul+Diviziei+3+Munte+a+generalului+Leonard+Mociulschi_+la+atac.html).



A convoy of Slovakian resistance fighter vehicles near Kelemes, Czechoslovakia (today part of Presov, Slovakia, near hex A5.34), summer 1944. (Photo: https://ww2db.com/image.php?image_id=18373).



Hungary Jews being humiliated by members of the Arrow Cross Party, autumn 1944. Photo: <https://www.pinterest.co.uk/pin/491807221785453234/>).



Jews being rounded up in Budapest (Photo: [Bundesarchiv_Bild_101I-680-8285A-08_Budapest_Festnahme_von_Juden.jpg](https://www.pinterest.co.uk/pin/491807221785453234/))



Arrow Cross Party members preparing to execute Jews along the banks of the Danube River. Budapest, Hungary, 1944. The murders continued throughout the siege, and at least 15,000 were killed. (Photo: <https://www.pinterest.co.uk/pin/522628731749033650/>).



During the war, the Soviets developed the system of forward detachments which spearheaded the main mobile formations. These were led by small reconnaissance parties tasked with the seizure of key bridges and crossroads. This is a group from 4th Guards Mechanized Corps with a Lend Lease M3A1 Scout Car near Budapest. (Photo: <http://wio.ru/tank/oz/3-4gmk-en.htm>)



Budapest suffered massive destruction during the siege. This is the “The Castle”/Royal Palace of Budapest after the fighting (hex A33.18). (Photo: <https://www.pinterest.com/pin/537758011741620258/>).

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