

AMPS Atlanta 2023 Club Project

M113 Series History

- The M113 armored personnel carrier was developed by the FMC (Food Machinery Corp.) based on M59 and M75 armored personnel carriers from the 1950s. The first prototype of M113 was produced in 1957. The US Army adopted the vehicle in 1960. Kaiser Aluminum and Chemical produced the aluminum required for the development of M113.
- FMC transferred the production of M113 vehicles to its new subsidiary, the United Defense in 1994. United Defense was acquired by BAE Systems in 2005.
- More than 80,000 M113 vehicles were produced in different variants. The vehicle is operational in more than 44 countries. The majority of the M113 vehicles used by the US Army have been upgraded to the M113A3 variant. The M113s serving the US Army are expected to remain in service until 2030.

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Design of the M113 armored personnel carrier

- The M113 armored personnel carrier was designed by FMC. The main design features of the vehicle include fully enclosed armor made with 5083 aircraft-quality aluminum alloy.
- Most of the components of the vehicle are made of light alloys. The vehicle is designed to provide safety from small firearms to big artillery shell splinters.
- The 12.3t vehicle has a length of 4,863mm, width of 2,686mm, and height of 2.5m. It can accommodate two crew members and 11 passengers.

Variations of M113 APC

- The vehicle has more than 40 variants. The basic variants include the M113A1, M113A2, M113A3 and M113 ACAV. M113A1 was introduced in 1964. It has a 215 hp (160 kW) diesel engine equipped with M106 mortar carrier.
- M113A2 was produced in 1979. It features cooling and suspension improvements. M113A3 was introduced in 1987. It features battlefield survival enhancements, a more powerful engine, external fuel tank and better protection than the basic model. The A3 fleet feature vehicles with high-speed digital networks and data transfer systems under a digitization program that seeks to integrate appliqué hardware, software, and installation kits in the M113A3s.
- M113 armored cavalry assault vehicle (ACAV) variant was introduced during the Vietnam War in 1966. It is equipped with additional 7.62mm M60 machine guns apart from the M2 .50 cal. machine gun. It is also fitted with additional armor, such as a mine protective kit under the hull.

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Armaments and weaponry on M113 APC

• The M113 is commonly fitted with a single .50 cal. M2 Browning machine gun as the main armament. The armored vehicle can also be fitted with a 40mm Mk 19 automatic grenade launcher, anti-tank weapons, 7.62mm M60 machine guns and cannon 20mm to 105mm high explosives. It can also be mounted with M47 Dragon missile system.

• The M113A2 configuration can be equipped with a range of combat arms for increased lethality and soldier survivability.

• Engine and mobility

• The M113 is equipped with a 6V53 Detroit two-stroke six-cylinder diesel engine with Allison TX100-1 three-speed automatic transmission. In 1964, the gasoline engine was replaced with a 215 hp (160 kW) 6V-53 Detroit Diesel engine, to take advantage of the better fuel economy and the reduced fire hazard of the diesel engine

• The vehicle is capable of amphibious operation, on land and in water. The light weight of the vehicle makes it easy to transport the vehicle by a fixed rotary wing aircraft. The vehicle is propelled in water by its tracks. The top speed of the vehicle is 45 mph on land and 3.5 mph in water.

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M113A1 ACAV (Armored Cavalry Assault Vehicle)

The Vietnam-era M113A1 ACAV (Armored Cavalry Assault Vehicle) version is a very important chapter in the long and proud history of the M113. Following lessons learned, the loss of 14 ARVN .50cal gunners at the Battle of Ap Bac in January 1963, the standard M113 was upgraded both in armament and armor protection to the M113A1. An additional upgrade was the changing of the gasoline engine to a diesel engine

Two M60 GPMG's were mounted, one either side of the rear hatch, and fitted with protective gun shields. An FMC-designed armored gun shield/turret combination was also added to the commander's cupola to afford him protection when manning the .50cal machine gun. This vehicle was designated the M113A1 Armored Cavalry vehicle (ACAV).

As a result of lessons learned, when the 11th ACR shipped to RVN their M113A1's were fitted with the new FMC gun shields and had additional M-60's mounted either side of the rear top hatch. The 11th ACR coined the term ACAV which soon became the 'official' designation of this modified M113A1.

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After Market Kits:

Legend:

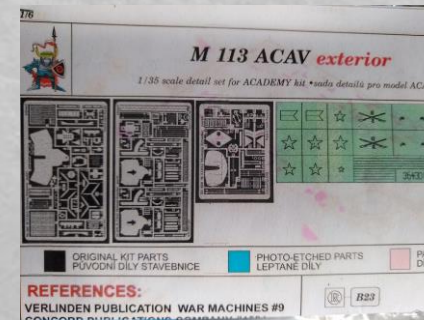


LF1011



LF1076

Eduard:



35 430

AFV Club:



AF35306

Other 1/35 M113A1 ACAV Kits:



Some Decal Sets:



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Book References

A History of American Fighting and Support Vehicles: Hunnicutt

M113 Armored Personnel Carrier: Doyle #5715

M113 in Action: Squadron/Signal #17

M113 A1/A2 - M106 A1/A2 – M577 A1/A2: Verlinden WarMachines #2

Mechanized Infantry: Vanguard #38

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Tentative Build Sequence:

- Part 1 – **July**: Steps 1 - 3: Lower Hull & Running Gear
- Part 2 – **August**: 4 – 11: Interior
- Part 3 – **September**: 12 - 18 : Top and Rear (Less armaments)
- Part 4 – **October**: 19 – 29: Armaments and other exterior details
- Part 5 – **November**: Wrap-up