

Test of

Boeing AH-64D Apache Longbow

Produced by Area-51 Simulations

The Apache AH-64 is a four-bladed, twin-engine attack helicopter built by Boeing, featuring a tail wheel type landing gear arrangement, a two crew tandem cockpit, a nose mounted sensor suite for target acquisition and night vision systems. As armament the Apache carries a 30mm (1.2 in) M230 Chain Gun below the cockpit and has four hard points mounted on stub-wing pylons that typically carries a mixture of AGM-114 Hellfire missiles and Hydra 70 rocket pods. Originally the Apache was developed by Hughes Helicopters as model 77 to replace the aging AH-1 Cobra, and had its first flight back in September 1975.

The D-model, also known as the Longbow, entered production in the mid 1990's and was delivered to the US Army in March 1997. Boeing Defense, Space & Security continued the production and there are delivered more than one thousand AH-64s in various versions to date. To improve the combat survivability, the AH-64 has a large amount of systems redundancy and can actually fly for more than 30 minutes without engine oil to make sure it can return to base safely.

Specs:

- Produced by *Boeing*
- First flight *A-model 1975 / D-model 1997*
- Introduction *A-model 1986 / D-model 1997*
- Role *Attack Helicopter*
- Status *In active service*
- Built *+1174 (Feb 2010)*
- Unit cost *US\$ 18-20 million (2007)*
- Primary users *US Army*



I received this add-on directly from Area-51 Simulations and the download went as usual, very quick and easy and without any issues. The connection to the server in use was superb and I could download the file in no time.

Installation was very user friendly – just apply the wizard and then everything is done automatically and the installation did not take more than maximum a minute, so this was also very good.

After installation I opened FSX to check if everything was installed properly and of course it was. I found the helicopter in the file together with other add-ons from Area-51, so this was perfect. There are actually quite a lot of liveries for this very beautiful attack helicopter and the mini pictures are showing the exact versions that the liveries represent, which I think is really nice. I have previously seen that the mini pictures are just one picture used for all liveries, and then you kind of lose the general overview, so I was indeed very pleased with this.

I started my test by taking an external tour around the helicopter, viewing all the magnificent details this model has. I quickly noticed that Area-51 Simulations has put in a lot of time to create a helicopter to a perfection as this one. The model is really well made and resembles the real AH-64 Apache. The helicopter is covered in high quality textures and has a really superb finish with clean and realistic edges.

You have a huge number of awesome details that are all carefully placed with an extreme accuracy. The lighting is good and very realistic and the helicopter furthermore features very well made animations as e.g. wheels turning, suspension, canopy + tail and main rotor including animation of rotor blades being impacted when e.g. taking off – here you can see them bending upwards which is really a cool detail and this tells me much about the complete quality level of this helicopter. Also the rotor blades are bending downwards when the rotor is at a standstill, and this is also a great detail, because that resembles the real thing perfectly.



The model is very realistic made and when I compared this model to images of the real world Apache the similarity was stunning. This is indeed a model of pure eye candy, and I was now very excited to see what the rest of the helicopter would be like.

After the view around the external part of this model I decided to go into the cockpit(s). Here I found two extremely well made virtual cockpits – the pilots' virtual cockpit and the gunners' virtual cockpit, and both cockpits were exceptionally well made. High quality textures, superb depth and a perfect finish. All instruments, gauges and systems are very nicely placed and according to the images I found on the internet, then they were also placed with precision. The gauges are all good quality and both cockpits features very nice animations as controls and clickable buttons, switches and so on. However I would like to have more clickable buttons and switches, but the overall view of the cockpits are superb.

Both cockpits are created with an enormous amount of details which all contributes to added realism and when sitting in the cockpits on a mission, they do give you the special feeling of how it would be to actually fly this bird in real life. The atmosphere created here is really awesome and indeed very realistic and combining this with e.g. a night mission flight with switched on cockpit lighting just makes these two virtual cockpits perfect.



Next step in my review phase was the sound. The sound set included in this helicopter is very good and quite realistic both heard from the virtual cockpits, but also from the outside or the tower. The

Apache has a quite unique sound in real life which probably comes from the special shaped rotor blades, and I think that Area-51 has done a very good job by twisting the sound set to be as realistic as possible. I tested the sound set in both stereo and 7.1 surround sound and both selections worked perfectly.

To taxi this helicopter was easy – it reacted very quickly on all my control inputs and was very steady when taxiing from the parking spot to the active runway. The wheel brakes are very efficient and combining that with the brake effect you can gain from the main rotor, equal the possibility to stop the helicopter within a few seconds almost no matter which speed you taxi with. You could almost say that the brake effect from the main rotor could be compared to the reverse thrusters on a jet airliner.

The tail rotor (rudder effect) is also very efficient, both used in flight but also when used during taxi, so here you have to be careful and use it with ease. The main rotor tilt up/down and left/right is indeed also quite sensitive, but not as much as the tail rotor. To fly this helicopter requires a lot of skills and “getting used to”, and this helicopter is for certain not a helicopter for beginners.



I flew the Apache on several flights to get used to the characteristics that this helicopter has, and on one of these flights I just had to test the maneuverability of the Apache doing aerobatics. I have seen the real Apache doing a loop and a roll, so this I of course just had to try out.

I started with the loop where I climbed to 2500', leveled out and gained airspeed to just below maximum. Then I pulled the stick backwards and the nose went quickly upwards. A few seconds later I was inverted and beginning to come out of the loop. This feature is very well animated, and the loss of altitude is almost nothing.

I now wanted to test the roll, and again I climbed to 2500', leveled out and gained airspeed to just below maximum. I raised the nose up by 5 degrees, moved the controls to the left and started rolling to the left. It was actually really easy doing these aerobatics in the Apache – much like a normal fixed wing aerobatic airplane.

On another test flight I flew a mission, coming in low and invisible between the trees towards the fictional enemy positions. This mission was setup to be an early summer morning mission at 04:30, taking off from Karup AFB, Denmark and attacking Tirsstrup Airport, which in this mission had been overtaken by an invading force. The flight from Karup AFB to Tirsstrup Airport is not that long, so just after take-off I climbed to radio altitude +150' to keep below potential enemy radar. The Apache is a fast helicopter and it was a great thrill to fly at max airspeed at this very low altitude.

Coming close to Tirsstrup I slowed down and descended down between the trees, using my Mass-Mounted-Radar to detect hostiles and preparing for attack. After circling around the airport I climbed just above the tree line and started the physical attack on various fictive enemy vehicles and buildings before I returned back to base.

That flight was extremely realistic and exhilarating and it was truly a great experience to use the Area-51 Simulations AH-64D Apache Longbow for this very realistic mission.

Overall you here have a helicopter add-on that are top of the line, high quality in both textures, realism, details an animation etc. You have two superb modeled virtual cockpits that really exceeded my expectations by far, and a very good sound set to complete the model. This is without a doubt, the very best Boeing AH-64D Apache Longbow helicopter add-on for flightsimulator to date.

I rate this add-on with 5/5-Stars and thank Area-51 for this extremely well made helicopter add-on. It is truly a superb quality add-on and I will of course advise fellow simmers to try out this helicopter. If you are a fan of military aviation or just simply of high-tech helicopters, then this is a must have in your virtual hangar.

Rays Aviation



Variants

AH-64A

This was the original production version equipped with two GE T700-701 turboshaft engines. This model was also exported to Japan and was designated AH-64DJP with the possibility to be equipped with the AIM-92 Stinger air-to-air missiles

AH-64B

Was a planned upgrade to the AH-64A that was canceled back in 1992. The upgrade was proposed to include new rotor blades, a GPS, improved navigation systems and new radios

AH-64C

This is the AH-64D version including all additional upgrades that the D-version has, but without the mast mounted radar (can be moved from helicopter to helicopter)

AH-64D

The D-model is also known as the Apache Longbow and features a mast mounted radar, glass cockpit, an advanced sensor suite and upgraded engines to the T700-GE-701C engine – compared to the A-model.

WAH-64D

The successor of the AH-64D with major differences as the folding rotor blades mechanism and new engines – the Rolls Royce Turbomeca RTM322 that can produce app. 25% more power than the original GE engines

Specifications (AH-64A/D)

General characteristics

- Crew: 2 (pilot, and co-pilot/gunner)
- Length: 58.17 ft (17.73 m) (with both rotors turning)
- Rotor diameter: 48 ft 0 in (14.63 m)
- Height: 12.7 ft (3.87 m)
- Disc area: 1,809.5 ft² (168.11 m²)
- Empty weight: 11,387 lb (5,165 kg)
- Loaded weight: 17,650 lb (8,000 kg)
- MTOW: 23,000 lb (10,433 kg)
- Power plant: 2 × General Electric T700-GE-701 and later upgraded to T700-GE-701C (1990–present) & T700-GE-701D (AH-64D block III) turboshafts, -701: 1,690 shp, -701C: 1,890 shp, -701D: 2,000 shp (-701: 1,260 kW, -701C: 1,490 kW, -701D: 1,490 kW) each
- Fuselage length: 49 ft 5 in (15.06 m)
- Rotor systems: 4 blade main rotor, 4 blade tail rotor in non-orthogonal alignment

Performance

- Never exceed speed: 197 knots (227 mph, 365 km/h)
- Max. speed: 158 knots (182 mph, 293 km/h)
- Cruise speed: 143 knots (165 mph, 265 km/h)
- Range: 257 nmi (295 mi, 476 km) with Longbow radar mast
- Combat radius: 260 nmi (300 mi, 480 km)
- Ferry range: 1,024 nmi (1,180 mi, 1,900 km)
- Service ceiling: 21,000 ft (6,400 m) minimum loaded
- Rate of climb: 2,500 ft/min (12.7 m/s)
- Disc loading: 9.80 lb/ft² (47.9 kg/m²)
- Power/mass: 0.18 hp/lb (0.31 kW/kg)