

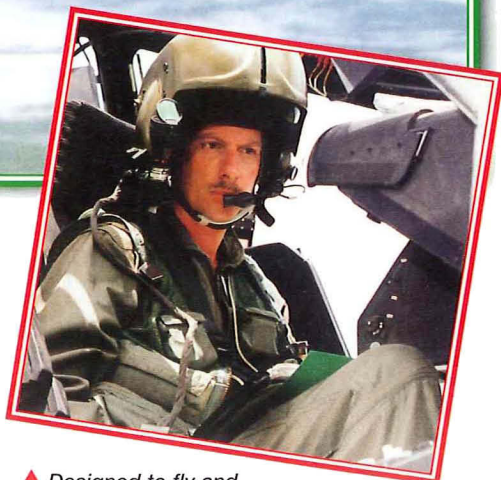
MCDONNELL DOUGLAS HELICOPTERS

AH-64 APACHE

● Armoured gunship ● Tank destroyer ● Infantry close-support



HELICOPTERS
AND VERTIPLANES



Equipped with video-style electronic aiming devices, Hellfire missiles and rapid-fire cannon, the AH-64 Apache is a new kind of warrior bringing a powerful punch to the battlefield. When a ground commander wants support he summons the Apache, a miracle helicopter which can rush into the fray in any weather, day or night, to pin down the foe and help friendly troops to fight and win.

▲ Designed to fly and fight in the hostile airspace over a modern battlefield, the AH-64 is a potent weapons platform.

PROFILE

Battlefield destroyer

When a battle is unfolding, it is important to hit hard and disrupt the enemy's forces. The helicopter is the new knight in shining armour to ground troops, who need the flexibility and striking power of their own aircraft overhead, and the AH-64 Apache is the undisputed champion of battlefield helicopters.

The Apache uses electronic wizardry to find its way and to aim its hi-tech missiles and cannon. The two pilots of the slender, mantis-like Apache can



hug the earth when they need to, or navigate through smoke and rough weather to seek out enemy troops and tanks using night-vision equipment and hi-tech sensors.

Assisted by observation helicopters and staying in close contact with troops on the ground, the Apache can shoot with remarkable accuracy from a greater distance than most other

In high-threat environments Apaches operate at low level, usually attacking from among the trees.

combat helicopters. With its speed, durability, and accuracy, the Apache brings a new dimension to the ground commander's task of outsmarting and outfighting his adversary.

AH-64A APACHE

Israel's Defence Force was the first organisation to acquire the Apache after the US Army.

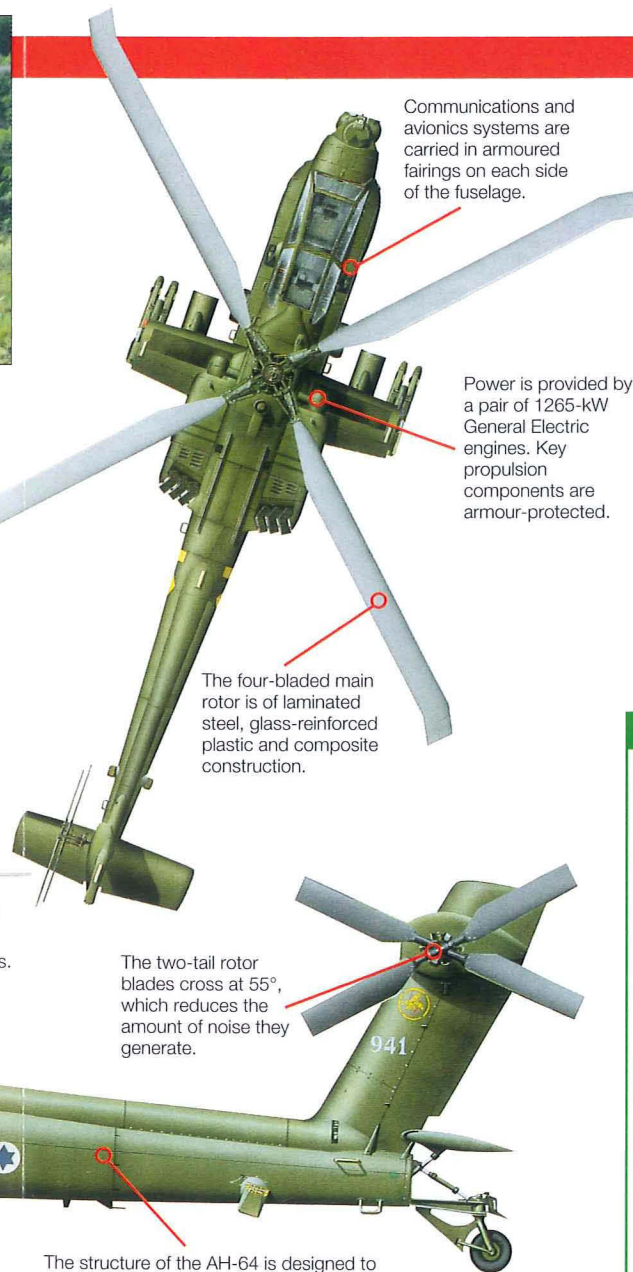
Passive Night Vision (PNV) sensors in the nose include infra-red and TV cameras and a laser designation system.

Apaches carry up to 1,200 rounds of 30-mm ammunition for the Chain Gun. It can fire at up to 65 rounds per minute.

The Israelis have a lot of combat experience with gunships, and consider the AH-64 the best of its kind. It has the standard gunship layout of gunner in front and pilot behind.

The engines are fitted with 'Black Hole' infra-red suppression systems as protection against heat-seeking missiles.

Stub wings carry up to 16 missiles or four pods containing 76 folding-fin 70-mm high-explosive rockets.



Communications and avionics systems are carried in armoured fairings on each side of the fuselage.

Power is provided by a pair of 1265-kW General Electric engines. Key propulsion components are armour-protected.

The four-bladed main rotor is of laminated steel, glass-reinforced plastic and composite construction.

The two-tail rotor blades cross at 55°, which reduces the amount of noise they generate.

The structure of the AH-64 is designed to allow it to withstand hits from high-explosive rounds of up to 23-mm calibre.

SPECIFICATION AH-64A Apache

Type: two-seat all-weather attack helicopter

Powerplant: two 1265-kW General Electric T700-GE-701 turboshaft engines

Maximum speed: never-exceed speed 365 km/h; maximum cruise speed 297 km/h

Initial climb rate: 428 km

Weights: empty 5165 kg; normal mission weight 8000 kg; maximum take-off 9525 kg; maximum internal fuel weight 1157 kg

Armament: one 30-mm M230 Chain Gun cannon with 1,200 rounds, up to 16 AGM-114 Hellfire laser-guided missiles or up to 76 folding-fin rockets

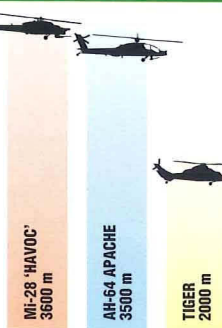
Dimensions:

rotor diameter	19.55 m
fuselage length	14.97 m
height to top of rotor head	4.66 m
rotor area	168.11 m ²

COMBAT DATA

HOVER CEILING

Both the Apache and the Havoc have more power than the Tiger, and can hover a kilometre higher than the Franco-German machine. This is not the absolute ceiling; sometimes, the terrain and air temperature bounce the air from the rotors straight back up in what is called ground effect, and the extra air cushion can add one or two thousand metres to the hover limits.



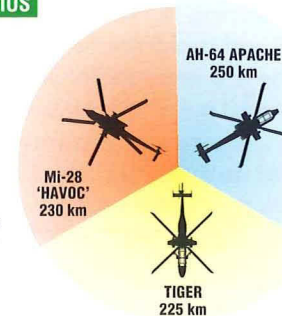
MAXIMUM SPEED

All three helicopters have a good turn of speed, with the Mil Mi-28 having a very slight edge.



COMBAT RADIUS

Attack helicopters operate from forward bases very close to the fighting, so they do not need very long range. Fighting at close quarters means that being able to refuel and re-arm quickly is more important than being able to fly great distances.



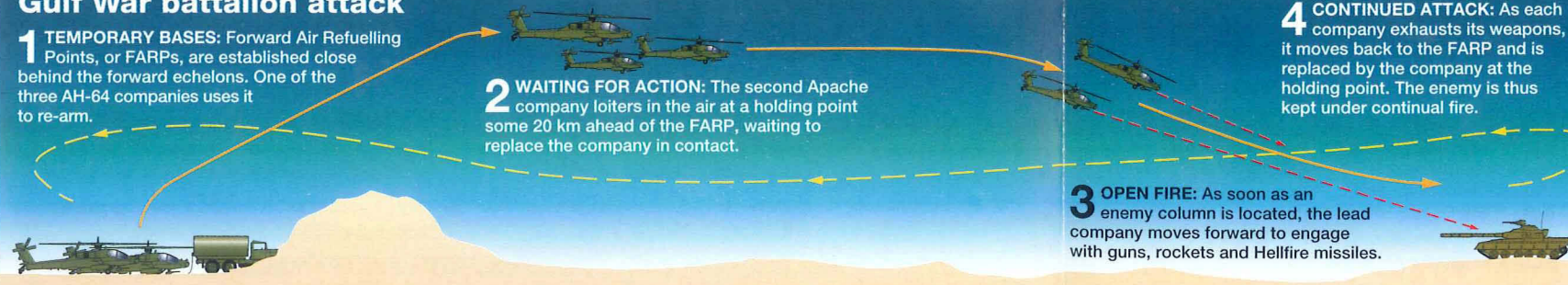
Gulf War battalion attack

1 TEMPORARY BASES: Forward Air Refuelling Points, or FARP, are established close behind the forward echelons. One of the three AH-64 companies uses it to re-arm.

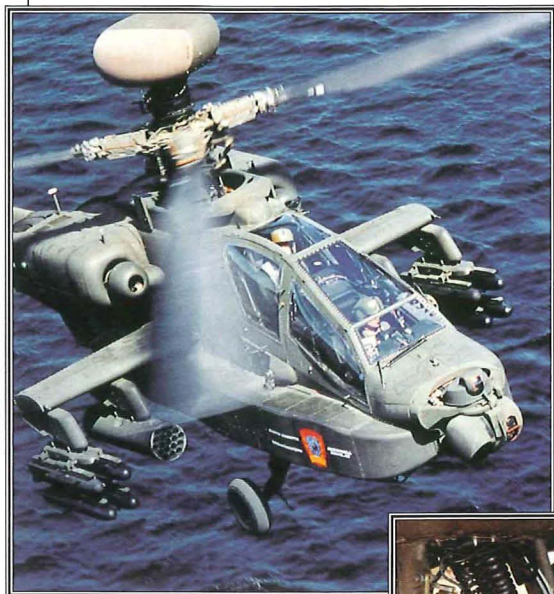
2 WAITING FOR ACTION: The second Apache company loiters in the air at a holding point some 20 km ahead of the FARP, waiting to replace the company in contact.

3 OPEN FIRE: As soon as an enemy column is located, the lead company moves forward to engage with guns, rockets and Hellfire missiles.

4 CONTINUED ATTACK: As each company exhausts its weapons, it moves back to the FARP and is replaced by the company at the holding point. The enemy is thus kept under continual fire.



MCDONNELL DOUGLAS HELICOPTERS AH-64 APACHE



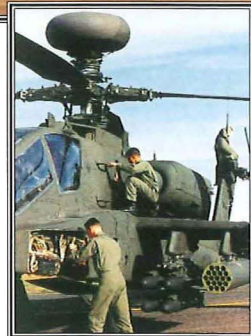
Tank killer

The Apache's primary weapon is the laser-guided Hellfire missile. It can destroy any known tank.



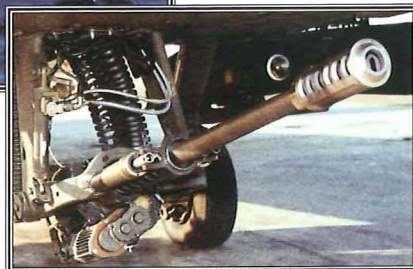
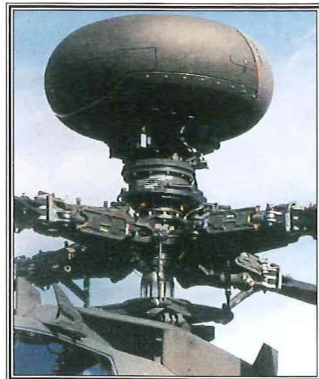
Combat reliability

Apaches are complex machines, but they are designed to be serviced easily in the field.



All-weather attacker

Fast, agile and very tough, the AH-64 uses its advanced sensors to fly and fight in all light conditions.



Chain Gun

The helicopter's powerful 30-mm cannon is linked to the crew's helmets, aiming where the pilot or gunner is looking.

See through fog

The Longbow Apache is equipped with millimetric radar which can see through rain, fog and snow.

Into action

The Apache was one of the stars in the Gulf War, its high-tech weaponry proving lethal to a wide range of Iraqi targets.



FACTS AND FIGURES

- The Apache is designed to survive hits from 23-mm cannon, and the cockpit to withstand hitting the ground at 13 metres per second.
- The Apache uses a super-heated ceramic block to deceive heat-seeking missiles.
- Apache operators include the USA, Egypt, Greece, Israel, Saudi Arabia and the UAE.
- The Apache's 16 laser-guided Hellfire missiles can destroy a tank 20 km away.
- The Apache uses digital technology to pinpoint targets for commanders, other helicopters, tanks and vehicles.
- The Apache's Chain Gun weighs 56 kg and fires 625 shots per minute.