**Mi-28 Russian Gunship**

From Wikipedia, the free encyclopedia

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| **Mi-28** |
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| Mil Mi-28N in flight |
| **Role** | [Attack helicopter](http://en.wikipedia.org/wiki/Attack_helicopter) |
| **Manufacturer** | [Mil](http://en.wikipedia.org/wiki/Mil_Moscow_Helicopter_Plant) |
| **First flight** | 10 November 1982 |
| **Introduction** | 15 October 2009 (Mi-28N)  |
| **Status** | In production, in service |
| **Primary users** | [Russian Air Force](http://en.wikipedia.org/wiki/Russian_Air_Force)[Venezuelan Army](http://en.wikipedia.org/wiki/Venezuelan_Army)[Kenyan Air Force](http://en.wikipedia.org/wiki/Kenya_Air_Force) |
| **Produced** | 1982–present |
| **Unit cost** | € 12 million |

The [**Mil**](http://en.wikipedia.org/wiki/Mil_Moscow_Helicopter_Plant) **Mi-28** ([NATO reporting name](http://en.wikipedia.org/wiki/NATO_reporting_name) 'Havoc') is a Russian all-weather, day-night, military tandem, two-seat anti-armor [attack helicopter](http://en.wikipedia.org/wiki/Attack_helicopter). It is a dedicated attack helicopter with no intended secondary transport capability, better optimized than the [Mil Mi-24](http://en.wikipedia.org/wiki/Mil_Mi-24) for the role. It carries a single gun in an undernose [barbette](http://en.wikipedia.org/wiki/Barbette), plus external loads carried on pylons beneath stub wings.

**Development**

In 1972, following completion of the [Mil Mi-24](http://en.wikipedia.org/wiki/Mil_Mi-24), development began on a unique attack helicopter with transport capability. The new design had a reduced transport capability (3 troops instead of 8) and omitted the cabin, to provide better overall performance and higher top speed. Improved performance was important for its intended role fighting against tanks and enemy helicopters and covering helicopter landing operations. Initially, many different designs were considered, including an unconventional project with two main rotors, placed with engines on tips of wings (in perpendicular layout), and with an additional [pusher](http://en.wikipedia.org/wiki/Pusher_configuration) propeller on the tail. In 1977, a preliminary design was chosen, in a classic single-rotor layout. It lost its similarity to the Mi-24, and even the canopies were smaller, with flat surfaces.

Design work on the Mi-28 began under Marat Tishchenko in 1980. In 1981, a design and a mock-up were accepted. The prototype (no. 012) was first flown on 10 November 1982. The second prototype (no. 022) was completed in 1983. In 1984, the Mi-28 completed the first stage of state trials, but in October 1984 the [Soviet Air Force](http://en.wikipedia.org/wiki/Soviet_Air_Force) chose the more advanced [Kamov Ka-50](http://en.wikipedia.org/wiki/Kamov_Ka-50) as the new anti-tank helicopter. The Mi-28 development was continued, but given lower priority. In December 1987 Mi-28 production in Rosvertol in [Rostov on Don](http://en.wikipedia.org/wiki/Rostov_on_Don) was approved.

A Mil Mi-28N on display

In January 1988 the first *Mi-28A* prototype (no. 032) flew. It was fitted with more powerful engines and an "X" type tail rotor instead of the three-blade version. The Mi-28A debuted at the [Paris Air Show](http://en.wikipedia.org/wiki/Paris_Air_Show) in June 1989. In 1991 the second Mi-28A (no. 042) was completed. The Mi-28A program was cancelled in 1993 because it was deemed uncompetitive with the Ka-50, and in particular, it was not all-weather capable.

Mil Mi-28 nose sensors

The *Mi-28N* was unveiled in 1995, the *N* designation meaning "night". The prototype (no. 014) first flew on 14 November 1996. The most significant feature is a [radar](http://en.wikipedia.org/wiki/Radar) in a round cover above the main rotor, similar to that of the American [AH-64D Apache Longbow](http://en.wikipedia.org/wiki/Boeing_AH-64_Apache). Mi-28N also has improved Tor vision and an aiming device under the nose, including a TV camera and [FLIR](http://en.wikipedia.org/wiki/FLIR). Due to funding problems, development was interrupted. A second prototype with an improved rotor design was unveiled in March 2004 at Rosvertol.

Changes in the military situation after the [Cold War](http://en.wikipedia.org/wiki/Cold_War) made specialized anti-tank helicopters less useful. The advantages of the Mi-28N, like all-weather action ability, lower cost, and similarity to the Mi-24, have become important. In 2003, the head of Russian Air Forces stated that the Mi-28N and [Ka-50](http://en.wikipedia.org/wiki/Ka-50) attack helicopters will become the standard Russian attack helicopter.

Mil Mi-28 gun mounting

The first serial Mi-28N was delivered to the Army in 2006. By 2015, 67 Mi-28Ns are planned to be purchased, when the Mi-24 is to be completely replaced.

An export variant of the Mi-28N, designated *Mi-28NE*, and a simpler day-helicopter variant, the *Mi-28D*, based on the Mi-28N design, but lacking radar and FLIR have also been developed.

**Design**

The Mi-28 has two heavily [armored](http://en.wikipedia.org/wiki/Armor) cockpits, a windshield able to withstand hits from 12.7–14.5 mm caliber bullets, a nose equipped with electronics, and a narrow-X tail rotor (55 deg) with reduced noise characteristics. It is powered by two 2,200 hp Isotov TV-3-117VM (t/n 014) [turboshaft](http://en.wikipedia.org/wiki/Turboshaft) engines.

While the Mi-28 is not intended for use as a transport, it does have a small passenger compartment capable of carrying three people. The planned purpose of this is to enable the rescue of downed helicopter crews.

The Mi-28N features a [helmet mounted display](http://en.wikipedia.org/wiki/Helmet_mounted_display) for the pilot. The pilot would designate targets for the Navigator/Weapons Officer, who proceeds to fire the weapons required to fulfill that particular task.

**Armament**

One armament that is commonly seen amongst Mi-28s are a pair of 8 [Ataka](http://en.wikipedia.org/wiki/9M120_Ataka-V) missile racks along with 2 [B-13L](http://en.wikipedia.org/wiki/S-13_rocket#Launcher_specifications) rocket pods, each able to carry 5 [S-13 rockets](http://en.wikipedia.org/wiki/S-13_rocket). Other rocket options include two B-8 rocket pods, each able to carry up to 20 [S-8 rockets](http://en.wikipedia.org/wiki/S-8_rocket). The 30 mm chain gun is a staple amongst all Mi-28 combat loads.

The Atakas used have 4 variants for different tasks. The 9M120 [Tandem](http://en.wikipedia.org/wiki/Tandem-charge) [High Explosive Anti-Tank (HEAT) warhead](http://en.wikipedia.org/wiki/High_explosive_anti-tank_warhead) variant is used against [tanks](http://en.wikipedia.org/wiki/Tank) fitted with [Explosive Reactive Armor (ERA)](http://en.wikipedia.org/wiki/Reactive_armour), its penetrative ability is stated at 800 mm [Rolled Homogeneous Armour (RHA)](http://en.wikipedia.org/wiki/Rolled_homogeneous_armour). The 9M120F [Thermobaric](http://en.wikipedia.org/wiki/Thermobaric) variant is used against [infantry](http://en.wikipedia.org/wiki/Infantry), buildings, bunkers, and caves. The 9M120O [expanding rod](http://en.wikipedia.org/wiki/Continuous-rod_warhead) warhead variant is used against other helicopters. All the variants have a range of 6 km. The 9M120M improved version has a longer range (8 km) and better penetration (900 mm of RHA). All of the variants use [SACLOS](http://en.wikipedia.org/wiki/SACLOS) missile guidance.

The S-8 and S-13 rockets used by the Mi-28 are usually unguided. In the most common configuration, one can expect 40 S-8 rockets or 10 S-13 rockets. Both rockets have their variants, from HEAT warheads to a Thermobaric warhead. The S-8 has a shorter range and smaller warhead than the S-13, but compensates with numbers. Currently, the [Russian Air Force](http://en.wikipedia.org/wiki/Russian_Air_Force) are upgrading their S-8 and S-13 rockets to [laser guided](http://en.wikipedia.org/wiki/Laser_guided) missiles with the proposed [*Ugroza*](http://en.wikipedia.org/wiki/Ugroza) ("Menace") system. Rockets upgraded under Ugroza would receive designations S-8Kor and S-13Kor, respectively.

The gun armament of the Mi-28 is the [30 x 165 mm](http://en.wikipedia.org/wiki/30_mm_caliber) [Shipunov 2A42](http://en.wikipedia.org/wiki/30_mm_automatic_cannon_2A42) [Autocannon](http://en.wikipedia.org/wiki/Autocannon). It is a select fire, dual-feed gun, which allows for a cyclic rate of fire between 200 rounds per minute to 550 rounds per minute. Its effective range varies from 1500 meters for ground vehicles to 2500 meters for air targets. Rounds from [High Explosive Incendiary (HEI)](http://en.wikipedia.org/wiki/High_explosive_incendiary) to [Armour-Piercing Discarding Sabot (APDS)](http://en.wikipedia.org/wiki/Armour-piercing_discarding_sabot) can be used. Stated penetration for the [3UBR8](http://en.wikipedia.org/wiki/30_mm_automatic_cannon_2A42#Ammunition) is 25 mm of RHA at 1,500 meters.

**Operational history**

The Russian Army received the first Mi-28 prototypes for testing in 2004. It received the first serial production Mi-28N in 2006, which then joined two prototype helicopters for army trials. The aircraft entered service in 2006. A total of 24 Mi-28s were in service with the Russian Air Force as of February 2011.

On 15 February 2011 a Mi-28 crashed in the southern Russian region of Stavropol. One of the pilots later died in the hospital.

**Export interest**

The [Indian Military](http://en.wikipedia.org/wiki/Indian_Military) asked for a modified prototype of Mi-28 fitted with [French](http://en.wikipedia.org/wiki/France) and [Belgian](http://en.wikipedia.org/wiki/Belgian) avionics. Russian manufacturers were discussing how to meet these requirements. In late October 2011, it was reported that the American [AH-64D](http://en.wikipedia.org/wiki/Boeing_AH-64_Apache) had emerged as the front-runner ahead of the Mi-28N to fill a requirement for 22 attack helicopters.

[Algeria](http://en.wikipedia.org/wiki/Algeria) was expected to place an order for 42 Mi-28NE helicopters as of June 2010.

In October 2012, it was reported that Russia may sign a contract for a $5 billion weapons deal to [Iraq](http://en.wikipedia.org/wiki/Iraq). 30 Mi-28N helicopters are part of the deal. The deal was confirmed on October 9 but has since been cancelled due to stated Iraqi concerns of corruption.

**Variants**

Mil Mi-28 weapons load

* **Mi-28** first flight in 1982
* **Mi-28A** – Original production anti-tank helicopter. Development done in 1998, first flight in 2003.
* **Mi-28N**/MMW Havoc – All weather day-and-night combat helicopter. It is equipped with a top-mounted millimeter wave radar station, IR-TV, and laser ranger. Serial Mi-28N will have two Russian Klimov TV3-117V MA-SB3 engines (2,500 hp each), made in production by the Ukrainian [Motor-Sich](http://en.wikipedia.org/wiki/Motor-Sich). Max takeoff weight of 11500 kg, max payload weight of 2,350 kg.
	+ Mi-28N has entered service under the name of "Night Hunter" ([Russian](http://en.wikipedia.org/wiki/Russian_language): Ночной охотник). A squadron of Mi-28N from [Torzhok](http://en.wikipedia.org/wiki/Torzhok) took part in a joint army exercise in Belarus in June 2006.
* **Mi-28D** – simplified daylight operation version. Similar to Mi-28N, but without top-mounted radar and TV-channel in sight.
* **Mi-28NAe** – export version offered to [North Korea](http://en.wikipedia.org/wiki/North_Korea).
* [**Mi-40**](http://en.wikipedia.org/wiki/Mil_Mi-40) – armed transport version.

**Operators**

[Kenya](http://en.wikipedia.org/wiki/Kenya)

* [Kenya Army](http://en.wikipedia.org/wiki/Kenya_Army) ordered 16 Mi-28N helicopters.
	+ 50th Air Cavalry Battalion [Embakasi](http://en.wikipedia.org/wiki/Embakasi)

[Russia](http://en.wikipedia.org/wiki/Russia)

* [Russian Air Force](http://en.wikipedia.org/wiki/Russian_Air_Force) 52 helicopters in use
	+ 344th Centre for Combat Training and Flight Personnel Training, [Torzhok](http://en.wikipedia.org/wiki/Torzhok) – 12 units.
	+ 55th Independent Helicopter Regiment, [Korenovsk](http://en.wikipedia.org/wiki/Korenovsk) – 12 units.
	+ 387th Independent Helicopter Regiment [Budenovsk](http://en.wikipedia.org/wiki/Budenovsk) – 16 units.
	+ 378th Independent Helicopter Regiment [Vyazma](http://en.wikipedia.org/wiki/Vyazma) – planned to receive up to 12 Mi-28Ns in 2012.

[Venezuela](http://en.wikipedia.org/wiki/Venezuela)

* [Venezuelan Army](http://en.wikipedia.org/wiki/Venezuelan_Army) had 10 Mi-28N/MMW on order in April 2010. Contract may have not been signed.

[Soviet Union](http://en.wikipedia.org/wiki/Soviet_Union)

* [Soviet Air Force](http://en.wikipedia.org/wiki/Soviet_Air_Force) – Mi-28s passed onto [Russian Air Force](http://en.wikipedia.org/wiki/Russian_Air_Force)

**Specifications (Mi-28N)**

*Data from* Jane's

**General characteristics**

* Crew: 1 pilot (rear), 1 navigator/weapons operator (front)
* Length: 17.01 m (55 ft 10 in)
* Rotor diameter: 17.20 m (56 ft 5 in)
* Height: 4.70 m (15 ft 5 in)
* Disc area: 232.35 m² (2,501 ft²)
* [Empty weight](http://en.wikipedia.org/wiki/Manufacturer%27s_Weight_Empty): 8,600 kg (18,960 lb)
* Loaded weight: 10,700 kg (23,590 lb)
* [Max. takeoff weight](http://en.wikipedia.org/wiki/Maximum_takeoff_weight): 11,500 kg (25,350 lb)
* [Powerplant](http://en.wikipedia.org/wiki/Aircraft_engine): 2 × [Klimov TV3](http://en.wikipedia.org/wiki/Klimov_TV3)-117VMA [turboshaft](http://en.wikipedia.org/wiki/Turboshaft), 1,636 kW (2,194 shp) each

**Performance**

* [Maximum speed](http://en.wikipedia.org/wiki/V_speeds#Regulatory_V-speeds): 320 km/h (172 knots, 199 mph)
* [Cruise speed](http://en.wikipedia.org/wiki/V_speeds#Vc): 270 km/h (145 knots, 168 mph)
* [Range](http://en.wikipedia.org/wiki/Range_%28aircraft%29): 435 km (234 nmi, 270 mi)
* [Combat radius](http://en.wikipedia.org/wiki/Combat_radius): 200 km (108 nmi, 124 mi) ; with 10 min loiter and 5% reserves
* [Ferry range](http://en.wikipedia.org/wiki/Range_%28aircraft%29): 1,100 km (593 nmi, 683 mi)
* [Service ceiling](http://en.wikipedia.org/wiki/Ceiling_%28aircraft%29): 5,700 m (19,000 ft)
* [Rate of climb](http://en.wikipedia.org/wiki/Rate_of_climb): 13.6 m/s (2,677 ft/min)

**Armament**

* **Guns:** 1× chin-mounted [30 mm](http://en.wikipedia.org/wiki/30_mm_caliber) [Shipunov 2A42](http://en.wikipedia.org/wiki/Shipunov_2A42) cannon with 250 rounds (±110° horizontal fire)
* [Hardpoints](http://en.wikipedia.org/wiki/Hardpoint)**:** Two pylons under each stub wing to mount bombs, rockets, missiles, and gun pods. Main armament configurations include:
	+ 16 [Ataka-V](http://en.wikipedia.org/wiki/9M120_Ataka-V) anti-tank missiles and 40 [S-8 rockets](http://en.wikipedia.org/wiki/S-8_rocket), Or
	+ 16 Ataka-V anti-tank missiles, and 10 [S-13 rocket](http://en.wikipedia.org/wiki/S-13_rocket), Or
	+ 16 Ataka-V anti-tank missiles, and two 23 mm [Gsh-23L](http://en.wikipedia.org/wiki/Gryazev-Shipunov_GSh-23) gun pods with 250 rounds each.
	+ Other ordnance: [9K118 Sheksna](http://en.wikipedia.org/wiki/9K118_Sheksna) and 9A-2200 anti-tank missiles, 8 [Igla-V](http://en.wikipedia.org/wiki/9K38_Igla) and [Vympel R-73](http://en.wikipedia.org/wiki/Vympel_R-73) air-to-air missiles, 2 [KMGU-2](http://en.wikipedia.org/wiki/KMGU) mine dispensers

**See also**

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|  | [***Aviation portal***](http://en.wikipedia.org/wiki/Portal%3AAviation) |

Related development

* [Mil Mi-24](http://en.wikipedia.org/wiki/Mil_Mi-24)

Aircraft of comparable role, configuration and era

* [Agusta A129 Mangusta](http://en.wikipedia.org/wiki/Agusta_A129_Mangusta)
* [AH-64 Apache](http://en.wikipedia.org/wiki/AH-64_Apache)
* [AH-1Z Viper](http://en.wikipedia.org/wiki/AH-1Z_Viper)
* [Denel AH-2 Rooivalk](http://en.wikipedia.org/wiki/Denel_AH-2_Rooivalk)
* [Eurocopter Tiger](http://en.wikipedia.org/wiki/Eurocopter_Tiger)
* [HAL Light Combat Helicopter](http://en.wikipedia.org/wiki/HAL_Light_Combat_Helicopter)
* [Kamov Ka-50/Ka-52](http://en.wikipedia.org/wiki/Kamov_Ka-50)
* [TAI/AgustaWestland T-129](http://en.wikipedia.org/wiki/TAI/AgustaWestland_T-129)
* [WZ-10](http://en.wikipedia.org/wiki/WZ-10)