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The BRDM Scout Car



[TRADOC G-2 Intelligence Support Activity \(TRISA\)](#)

Complex Operational Environment and Threat Integration Directorate (CTID)





OEA Team Threat Report



Purpose

- To inform the Army training community of the proliferation of the BRDM (*Bronirovannaya Razvedyvatelnaya Dozornaya Mashina*) Scout Car throughout the world's militaries.
- To describe the specifications, capabilities, and variants of the BRDM.
- To highlight the BRDM's weaknesses.
- To depict ways in which the hybrid threat may use the BRDM.

Executive Summary

- The various BRDM variants have been used by Russia, former Soviet bloc countries, their partners, and currently non-aligned forces for over a half-century.
- Approximately 80 countries use BRDM variants in their armed forces.
- BRDMS are available for purchase—either by a country for military and/or law enforcement purposes, or even by individuals.
- Many countries will willingly sell their obsolete BRDMs to other countries that will still use them.

Cover photos: Top Photo: [BRDM-1 in a parade in Russia](#), 9 May 2010, by Ardianen. Bottom Photo: [Ukrainian BRDM-2](#), 5 June 2010, by Sergio Hoffman.



Map

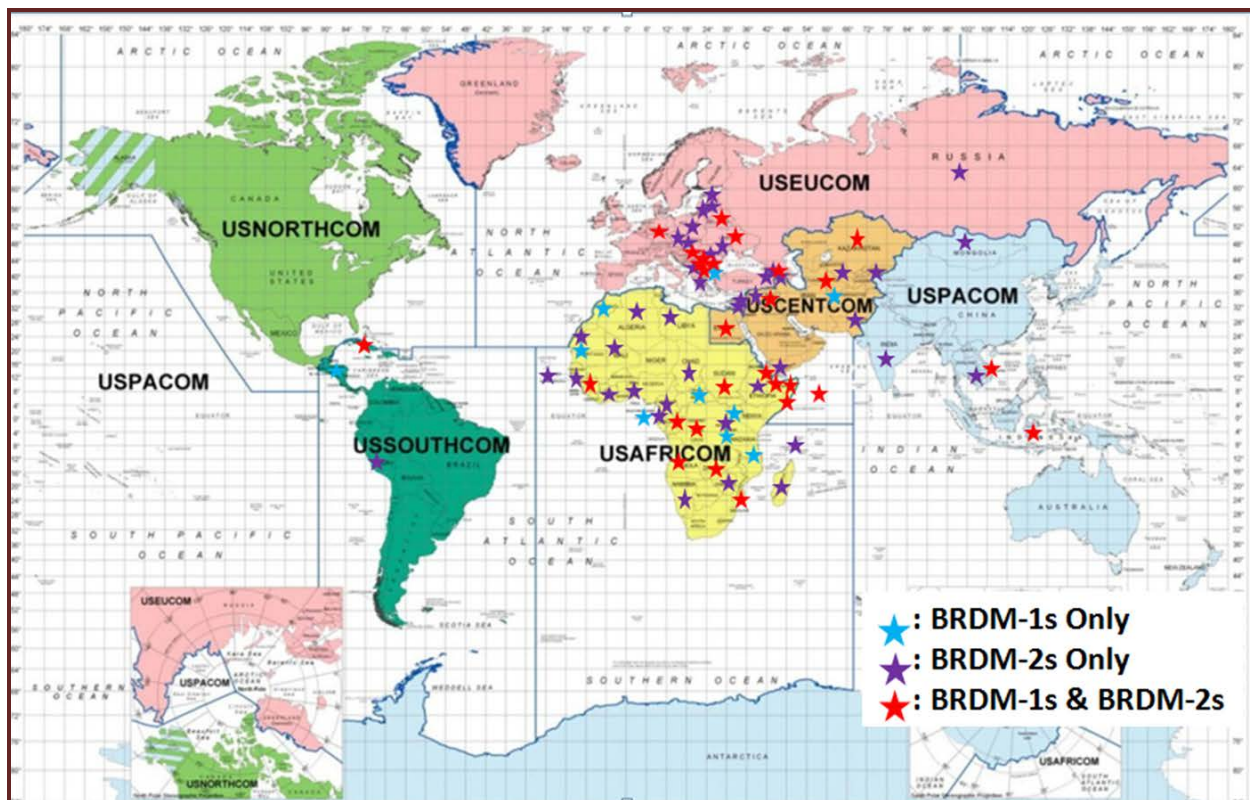


Figure 1. Countries that operate BRDM-1s or BRDM-2s

Introduction

BRDM is an abbreviation for the *Bronirovannaya Razvedyvatelnaya Dozornaya Mashina*, a light armored vehicle first produced in the Soviet Union in 1957. The literal translation of the Russian Разведывательная Дозорная Машина is “Armored Reconnaissance/Patrol Vehicle.” Approximately 80 countries use one of the BRDM variants in their military forces, from Afghanistan to Zimbabwe. Ten countries still operate the very outdated BRDM-1s, 41 countries use only BRDM-2 or its even newer variants, while the remainder use a combination of BRDM-1s and BRDM-2s. There are a minimum of 6,800 BRDMs fielded by world governments today, but the actual number could be much greater—over 10,000. Civilians can also purchase BRDMs, supposedly demilitarized, on the open market for as low as \$6,680.¹

While initially fielded as a scout vehicle for reconnaissance purposes, there are many variants available, including ones that feature anti-tank (AT) weapons such as the AT-3 Sagger, the AT-4 Spigot, or AT-5 Spandrel. Other versions include those for nuclear, biological, and chemical (NBC) detection, command and control purposes, or air defense such as the SA-9 Gaskin surface-to-air missile.



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Wherever American military personnel will deploy, it is likely that the Soldiers will encounter BRDM variants used by the opposing forces or their coalition partners. Knowing the capabilities of the BRDM will help any Soldier to not only survive an enemy attack by forces that use BRDMs, but will also assist in allocating the appropriate mission resources for any assigned coalition forces that are operating a BRDM.

History

The original BRDM (now called the BRDM-1), designed initially to stay up with the PT-76 light tank for reconnaissance missions, first appeared in 1957 as a scout car with 4X4 off-road capability. The vehicle featured four belly wheels that could be lowered from inside the vehicle for better traction and to cross small ditches. In addition, the BRDM could cross water obstacles by means of a rear-mounted water jet. Despite the Soviet Union producing over 10,000 of the original BRDMs, it contained several major flaws: the gunner needed to expose himself to enemy fire to fire the vehicle's weapons, the vehicle possessed no protection from NBC attack, and the operators lacked any internal night vision capabilities.²

The Soviet Union introduced the BRDM-2 in 1963 as an attempt to correct the deficiencies of the original BRDM. The BRDM-2 moved the engine to the rear of the vehicle; featured improved amphibious capabilities; demonstrated improved road and off-road performance; introduced an NBC overpressure system to protect the crew when the hatches were closed; and included night vision equipment for not only the driver, but the vehicle commander as well. The BRDM-2 retained the belly wheel design that increased cross country mobility in difficult terrain. Since its introduction and 1989, the Soviet Union produced over 7,200 BRDM-2s and exported them to over 40 nations.³



Figure 2. BRDM-1



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BRDM-1

The first BRDM-1, also known as the BTR-40P or GAZ (*Gorkovsky Avtomobilny Zavod*) 41, became the standard light-wheeled reconnaissance vehicle for most of the Warsaw Pact countries with its debut in the late 1950s. The vehicle's designers focused on producing a scout vehicle with the movement capabilities to stay up with the PT-76 light amphibious tank used in Soviet reconnaissance operations.⁴

Specifications:⁵

- Weight: 5.6 tons
- Length: 5.7 m
- Width: 2.25 m
- Height: 2.9 m
- Drive: 4 x 4 (+4 auxiliary wheels)
- Crew: Usually 4 (driver, co-driver, commander, and gunner)
- Main Armament: 12.7-mm DShK (*Degtyaryova-Shpagina Krupnokaliberny*) 1938/46 heavy machine gun or 14.5-mm KPV (*Krupnokaliberniy Pulemyot Vladimirova*) heavy machine gun
- Secondary Armament: two 7.62-mm SGMB (variant of the SG-43 Goryunov) medium machine guns on side pintle mounts

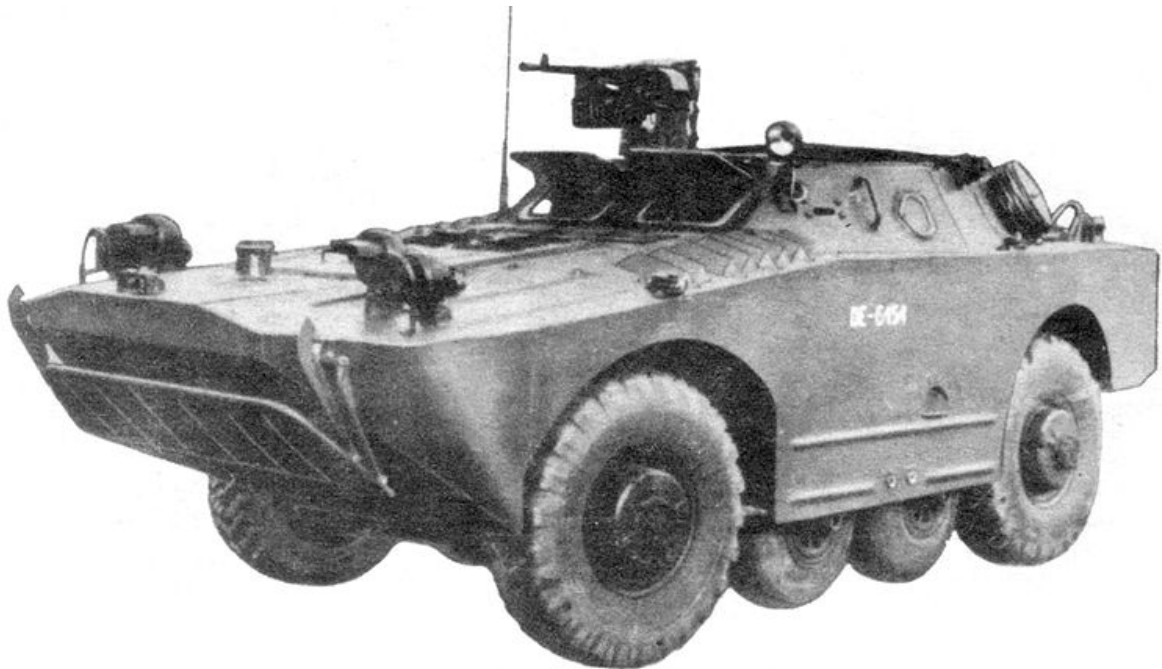


Figure 3. BRDM-1 with 12.7-mm DShK machine gun, but no secondary weapon that shows gunner must expose his body to fire the vehicle's primary weapon system



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- Engine: GAZ-40PB6 with 90 horsepower at 3,400 rpm
- Ground clearance: 340 mm
- Fuel Capacity 150 liters
- Cruising Range: 750 km (road) and 120 km (water)
- Speed: 90 km/h (road) and 9 km/h (water)
- Maximum armor thickness: 10 mm



Figure 4. Belly wheels deployed on a BRDM-1U

BRDM-2

The standard BRDM-2 or GAZ 41-08 included an improved engine at the rear of the vehicle, an armor turret just like the one found on the BTR-60PB armored personnel carrier with a 14.5-mm machine gun, a centralized tire pressure regulation system, infrared spotlight and driving lights, and an NBC protective system. Before entering the water in the amphibious mode, a piece of armor that covers a single four-bladed water jet at the rear of the vehicle must be removed. This vehicle is no longer in production, but is still fielded by many countries.⁶

Specifications:⁷

- Weight: 7.2 tons
- Length: 5.75 m



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- Width: 2.35 m
- Height: 2.31 m
- Drive: 4 x 4 (+4 auxiliary wheels)
- Wheelbase: 3.10 m
- Ground clearance: 430 mm
- Crew: Usually 4 (driver, co-driver, commander, and gunner)



Figure 5. BRDM-2 swims a river with its improved propulsion system



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- Main Armament:
 - 14.5-mm KPVT (*Krupnokaliberniy Pulemyot Vladimirova*) heavy machine gun
 - Maximum Aimed Range: 2,000 m
 - Maximum Effective Range: 2,000 m
 - Rate of Fire: 150 practical/600 cyclic
 - Loader Type: Belt Fed
 - Ready/Stowed Rounds: 500
 - Elevation: -5 to +30 degrees
 - Fire on Move: Yes
 - 360 degree traverse
- Secondary Armament:
 - 7.62-mm *Pulemyot Kalashnikova* (PKT) machine gun
 - Mount type: Coaxial
 - Maximum Aimed Range: 1,500 m
 - Maximum Effective Range: 1,000 m; 400-500 m on the move
 - Rate of Fire: 250 practical/650 cyclic in 2-10 round bursts
 - Ready/Towed Rounds: 2,000
 - Fire on the Move: Yes
 - Some vehicles may possess an AT-4 Spigot
- Engine: GAZ-41 V-8 with 140 horsepower at 3,400 rpm
- Fuel Capacity: 150 liters
- Cruising Range: 750 km (road)
- Speed: 95 k/h (road) and 10 km/h (water)
- Gradient: 60%
- Side Slope: 30%
- Vertical step: 0.4 m
- Trench: 1.25 m
- Maximum armor thickness: 14 mm
 - Upper Hull Front: 5 mm at 80 degrees
 - Lower Hull Front: 7 mm at 45 degrees



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- Hull Nose Plate: 14 mm at 14 degrees
- Hull Side Uppers: 7 mm at 18 degrees
- Hull Side Lower: 7 mm at 0 degrees
- Hull Rear Upper: 7 mm at 0 degrees
- Hull Rear Lower: 7 mm at 0 degrees
- Belly Front: 2 mm
- Belly Rear: 3 mm
- Turret front: 7 m at 43 degrees
- Turret Sides: 7 mm at 36 degrees
- Turret Rear: 7 mm at 36 degrees
- Turret Top: 7 mm



Figure 6. BRDM-2 Interior



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- Internal winch mounted on the front of the hull for self recovery
- Periscopes mounted at the roof level around the front and sides of the driver's and commander's positions
- Single firing port on each side of the hull
- Three vision blocks immediately behind the firing ports
- Infrared search light mounted over the commander's position
- Infrared driving lights

Vulnerabilities of the BRDM Vehicles⁸

The BRDM-1 and BRDM-2 both possess a number of vulnerabilities that can be attacked. These include:

- The side panels above the four main wheels
- The driver's compartment
- Between the wheels on the vehicle
- The top and bottom of the vehicle where the armor is thinner
- The rear fuel tanks on the BRDM-2
- The back of the turret on the BRDM-2
- Tires

Possible Hybrid Threat Uses

- Scout vehicle by conventional or non-conventional forces
- Troop carrier with additional troops riding on the outside of the vehicle
- Anti-tank missile carrier
- Anti-aircraft vehicle using a variety of man-portable air defense systems (MANPADS)
- Command vehicle
- Communications vehicle
- Convoy security vehicle
- Indirect fire forward observer vehicle
- Forward support supply vehicle



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The hybrid threat could use the BRDM for a number of reasons. First, BRDMs are easily found as there are approximately 80 countries that use one of the variants. Second, the BRDM is relatively low-cost when compared to other military vehicles, especially tanks. While modern main battle tanks can start at the \$4 million mark, BRDMs with a Tier 2 or Tier 3 anti-tank missile system can be found at less than 3% of that amount of money. Lastly, military vehicles with wheels are cheaper to operate and require less maintenance than vehicles that use tracks.⁹

Variants

The BRDM has been used for many purposes over the past 60 years and has featured a number of different weapons systems. The most prevalent purposes include as a reconnaissance vehicle and an anti-tank missile carrier. The BRDM has also been useful as an air defense weapon.



Figure 7. BRDM-1 in the Czech Republic

BRDM-Rkh (BTR-40P-Rkh) ¹⁰

- Radiological-chemical reconnaissance
- Flag marking dispensing system: 2 box-shaped canvas covered containers mounted outboard of the rear deck



- Armament: one 7.62-mm SGMB machine gun or one 7.62-mm PKT machine gun

BRDM-U (BTR-40PU) ¹¹

- Command vehicle
- Extra radio antennas

BRDM Anti-Tank Versions ¹²



Figure 8. AT-1 Snapper Anti-Tank Missiles on BRDM-1

AT-1 Snapper

- First anti-tank guided missile (ATGM) used by the Warsaw Forces
- High explosive, anti-tank (HEAT) missile
- Range: 2,000 m
- Manual command to line of sight (MCLOS)
- Armor penetration: 380 mm
- Triple launcher
- Armor plates move to the side when in firing position
- Used up until the early 1970s



Figure 9. AT-2 Swatter Anti-Tank Missiles

AT-2 Swatter

- ATGM developed in 1960
- HEAT missile
- Range: 500-2,500 m (Type A); 500-3,500 m (Type B); up to 4,000 m (Type C)
- MCLOS
- Armor penetration: 500+ mm
- Four launchers
- Armor plates move to the side when in firing position
- Still in use by some countries

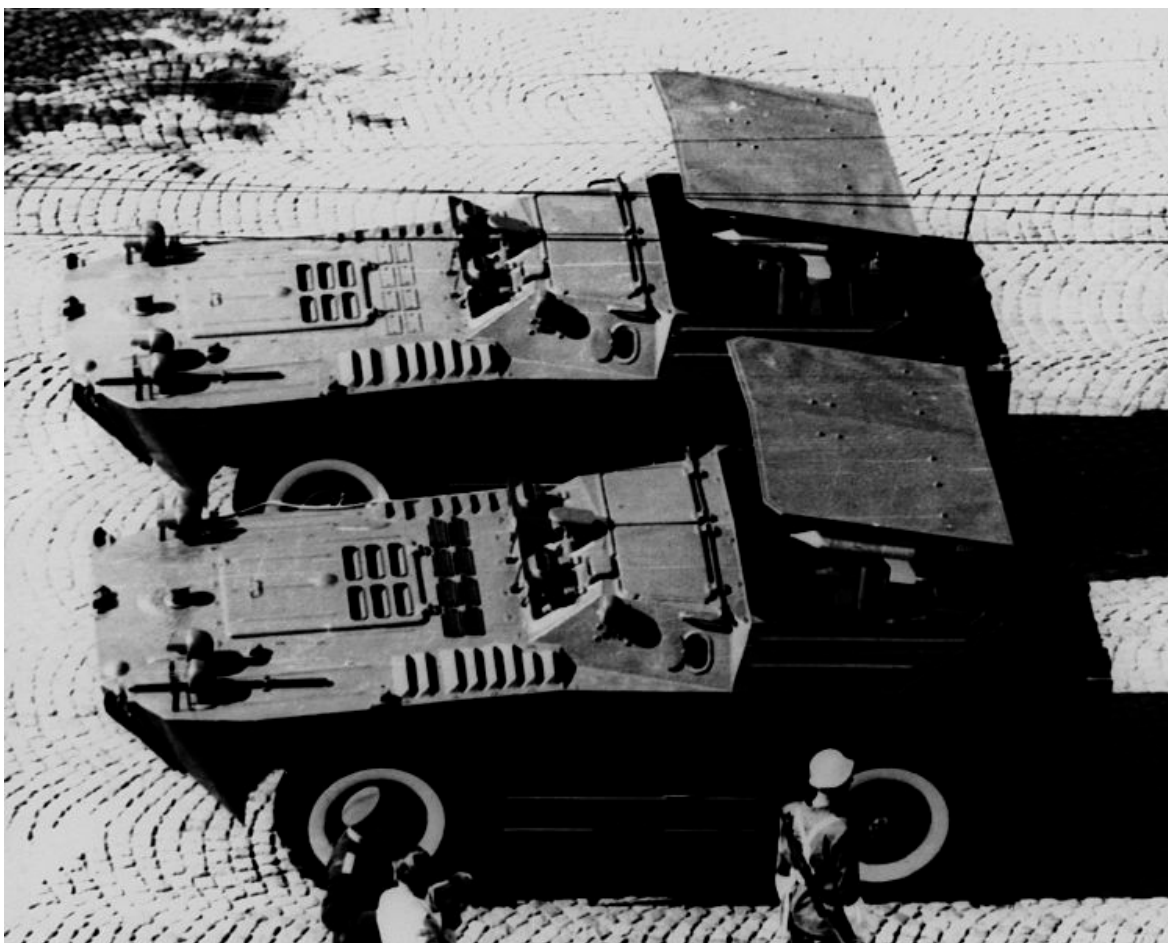


Figure 10. AT-3 Sagger on two BRDM-1s

AT-3 Sagger

- Also called the Malyutka
- ATGM first seen in 1961, but became more prevalent in 1963
- HEAT missile
- Wire guided anti-tank missile
- Range: 500-3,000 m
- Armor penetration: 400+ mm
- Minimum range: 500 m
- Maximum range: 3000 m
- Flight time for 3,000 m: 26 seconds; 23 seconds for the Malyutka-2/AT-3e variant
- Mounted on the underside of a retractable armored cover on top of the vehicle



BRDM-2RKh¹³



Figure 11. BRDM-2RKhB in England

- Radiological-chemical reconnaissance
- Twin rectangular-shaped racks on the vehicle
- Racks can fire the flags individually to rapidly allow the crew to survey and mark a contaminated area
- The RKhA carries the standard 14.5-mm KPVT heavy machine gun
- The RKhB carries twin 7.62-mm machine guns, but also sports improved sensors

BRDM-2U¹⁴

- Command vehicle
- Usually found in Russian maneuver battalion and regimental headquarters and artillery units
- No turret
- Hatch that opens forward
- Communications equipment generator mounted to this hatch



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- Special communications equipment
- Two radio antennas on each side of the hull
- BRDM-2UM is later version with improved communications equipment
- BRDM-2U2 features a sword-like antenna on the rear deck
- BRDM-2U1 is noticeable by the large box-like structure on the vehicle's roof



Figure 12. BRDM-2U Command Vehicle

9P122 (BRDM-2 with AT-3 Sagger)¹⁵

- Sometimes called the BRDM-2 Malyutka
- AT-3 Sagger Missiles; max range 3,000 m
- 6 launcher rails
- Sagger missiles are no longer wire-guided, but operated by semi-automatic IR guidance
- Protected within the hull when moving



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- Raised along with the overhead protection when in the firing position
- Missiles can be launched directly from the vehicle or up to 80 m away
- 8 reserve missiles
- Radio antenna at the vehicle's right rear



Figure 13. 9P122 Malyutka in traveling position

9P124 (BRDM-2 with AT-2 Swatter) ¹⁶

- AT-2 Swatter-C missiles
- MCLOS ATGM
- 4 launcher rails
- Turret is retractable for reloading
- 5 reserve missiles
- Similar in appearance to the 9P122



9P133 (BRDM-2 with AT-3C Sagger)¹⁷

- AT-3C Sagger Missiles
- Semi-automatic Command to Line of Sight (SACLOS) ATGM
- 6 launcher rails
- Almost the same as the 9P122 except with improved missiles



Figure 14. Romanian 9P133 just after launching anti-tank missile

9P137 (BRDM-2 with AT-5 Spandrel)¹⁸

- Sometimes called the Flejita or the BRDM-3
- Crew: 2
- AT-5 Spandrel missiles; max range 5,000 m
- 5 launcher rails
- No turret
- Bowed hatch at the rear of the turret may be a way to internally reload the launcher without exposing the troops to enemy fire



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- 9 reserve missiles
- Former East German version mounted six AT-5 Spandrels and 8 AT-4 Spigots



Figure 15. Two BRDM-2s with anti-tank missiles in an Army Day Parade

9P148 (BRDM-2 with AT-4 or AT-5)¹⁹

- SACLOS
- Called the Konkurs with the AT-5 Spandrel
- Called the Konkurs-B with the AT-5B Spandrel
- Called the Fagot with the AT-4 Spigot
- Crew: 2
- 5 launcher rails
- Ready/stowed missiles: 15
- Autoloader
- Fire on the move: No
- Can be configured with AT-4 Spigot or AT-5 Spandrel missiles



Figure 16. 9P148 Konkurs reveals the launcher rails at a static display in Russia

SA-9 (Gaskin)²⁰

- Sometimes called the BRDM-2 Strela 1
- 4 missiles with infrared homing seeker
- Max missile speed: Mach 1.8
- Max effective range:
 - 9M31: 4,200 m
 - 9M31M: 8,000 m
- Minimum effective range:
 - 9M31: 800 m
 - 9M31M: 560 m
- Maximum effective altitude:
 - 9M31: 3,500 m
 - 9M31M: 6,100 m



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- Minimum effective altitude:
 - 9M31: 30 m
 - 9M31M: 10 m



Figure 17. SA-9 Gaskin

- 360 degree traverse, but limited elevation range
- Surface-to-air missile (SAM) transporter-erector-launcher (TEL) vehicle that uses the BRDM-2 chassis
- No belly wheels
- Original turret removed and replaced by a one-man turret
- No reserve missiles
- Reload time: 5 minutes from support vehicle
- NATO nomenclature: Gaskin



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BRDM-2K Command Vehicle²¹

- Turret remains
- Collapsible telescopic antenna on the vehicle's right side
- Whip antenna on the vehicle's left side
- "K" stands for *kommandnyi* or command in Russian

R-1A/R-5 Command Vehicles²²

- Polish variant
- Two R-123Z and one R-107 radio
- Used by anti-tank commanders
- The difference between the R-5 and the R-1A is the antenna configuration

BRDM-B²³

- BRDM-2 upgraded by the VOP 026 overhaul facility in the Czech Republic
- Major electronic package upgrades including a TV system and infrared camera
- Auxiliary wheels removed
- Front-opening doors on either side of the hull
- Additional armor protection on the underside of the vehicle to protect against mines
- 12.7-mm NSVT machine gun in the hull with a 7.62-mm PKT coaxial mounted machine gun
- New Renault turbocharged diesel engine with 162 horsepower
- Weight: 8,000 kg
- Maximum speed: 101 km/h (road)

Polish Upgrades²⁴

- Different versions with more than 20 upgrades
 - Armament ranges from 7.62-mm machine guns to 30-mm auto-cannons
- BRDM-2 Model 96i upgraded by the Military Mechanical Works Siemianowice Slaskie
 - Iveco 165 horsepower engine
 - Auxiliary wheels removed
 - Additional door in the hull
 - Crew can now be up to five soldiers



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- Increased internal stowage
- Standard KPVT and PKT machine guns



Figure 18. BRDM-2M-96 in Poland

BRDM-2-M97/Zbik-B/BRDM-2B

- AT-4 Spigot AT missiles
- 12.7-mm NSTV machine gun
- New sensors and GPS



Figure 19. BRDM-2-M97, żbik-B in Poland

BRDM-2-M98/Żbik-A/BRDM-2A

- New turret
- 12.7-mm NSTV machine gun
- EO sighting system
- More digital communications

BRDM-2A (Russian Upgrades)²⁵

- Completed by the Arzamas Machinery Plant
- Gamma-1 or Gamma-2 Navigation System
- Improved radio system and intercom
- BPU-1 machine gun turret armed with an elevation of -4 to +60 degrees
- Armament in turret consists of one 14.5-mm KPVT and one coaxial 7.62-mm PKT machine gun



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- 81-mm electrically-generated smoke grenade launchers
- New GAZ-562 diesel engine with 175 horsepower or a D 2459 diesel engine with 136 horsepower
- Strap-on armor on the hull
- Bulletproof tires
- Rear water jet replaced the model used by the BTR-80
- Weight: 7,650 kg
- Maximum speed: 110 km/h (road)
- Maximum range: 700 km

BRDM-2 HOT 3²⁶



Figure 20. HOT Anti-Tank Missile

- Russian vehicle that mounts the HOT 3 anti-tank weapon built by a European consortium headed by France and Germany
- SACLOS
- 4 launcher rails



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- Ready/Stowed Missiles: 14
 - Estimated 10 HOT-3 Tandem HEAT
 - Estimated 4 HOT-2 multi-purpose missiles
- Armor penetration: 1,250 mm
- Minimum range: 75 m
- Maximum range: 4,300 m
- Rate of fire: 3 to 4 per minute, but varies based on distance to the target

BRDMs Available for Sale to Civilians²⁷

Both BRDMs and BRDM-2s are available to civilians in a number of markets. The sellers advertise the vehicle as an off-road vehicle useful for hunting, fishing, and other leisure activities. The sellers' advertisements also push the use of the vehicle for weddings, corporate parties, birthdays, and promotions as a status symbol. It is possible to rearm these vehicles. Prices start as low as \$6,680, but the following are current ones available for purchase sans armament:

- 1983 BRDM-2 with 248 miles in good condition: \$22,999
- 1985 BRDM-2 with 310 miles in ideal condition: \$27,000
- 1990 BRDM-2 with 620 miles in ideal condition: \$25,500



Figure 21. BRDM-2 owned by a civilian at a military collectors show in Europe



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BRDMs Available by Country

The following chart was compiled from several sources. Some sources separated the BRDMs by type while others did not. When major inconsistencies occurred in the data, the low and high figures are both given.

BRDM-1 and BRDM-2 Proliferation by Country²⁸			
Country (or other)	BRDM-1s	BRDM-2s	BRDM-1s & 2s
Abkhazia	0	0	Unknown
Afghanistan	0-50	0	0
Albania	0-15	0	0
Algeria	0	90-124 (BRDM-2s & 9P122s)	0
Angola	0-120	600	0
Armenia	0	120	0
Azerbaijan	0	0-29	0
Belarus	0-142	Unknown	0
Benin	0	14	0
Bosnia & Herzegovina	0	0	Unknown
Bulgaria	0	0	18-24
Burundi	0	30	0
Cambodia	0	0-200	0
Cameroon	0	0-300	0
Cape Verde	0	10	0
Central African Republic	Unknown	0	0
Chad	0	100	0
Congo	0	0	25
Cote d'Ivoire	0	0-13	0
Croatia	0	0	Unknown
Cuba	0-50	0-150	0
Czech Republic	0	Unknown	0
Democratic Republic of Congo	0	0	Unknown
Djibouti	0	0	Unknown
Egypt	0-200	300-400	0
Equatorial Guinea	0	6	0
Eritrea	0	0	40
Estonia	0	0-7	0
Ethiopia	0	70	0
Georgia	0	0-17	0
Germany	0	0	Unknown
Guinea	0	0	25



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BRDM-1 and BRDM-2 Proliferation by Country²⁸			
Country (or other)	BRDM-1s	BRDM-2s	BRDM-1s & 2s
Guinea-Bissau	0	10	0
Hungary	0	0	Unknown
India	0	110	0
Indonesia	0	0	21
Iraq	0	18	Unknown
Israel	0	400	0
Kazakhstan	0	0	140
Kyrgyzstan	0	30	0
Latvia	0	0-2	0
Libya	0	40-350	0
Lithuania	0	10	0
Macedonia	0	10	0
Madagascar	0	35	0
Malawi	Unknown	0	0
Maldives	0	0	Unknown
Mali	0	20	0
Mauritania	Unknown	0	0
Moldova	0	Unknown	0
Mongolia	0	120	0
Morocco	Unknown	0	0
Mozambique	0	0	30
Namibia	0	12	0
Nicaragua	Unknown	0	0
Pakistan	0	Unknown	0
Palestinian Authority	0	0-45	0
Peru	0	30	0
Poland	0	376-560	0
Romania	0	144 (BRDM-2, 9P122, 9P133, 9P148)	0
Russia	0	2000-2080	0
Sahrawi Arab Democratic Republic	0	Unknown	0
Sao Tome & Principe	Unknown	0	0
Serbia	0	0	84
Seychelles	0	6	0
Slovak Republic	0	Unknown	0
Slovenia	0	0-5	0
Somaliland	0	0	Unknown
Somalia	0	0	Unknown
Sudan	0	0	60



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BRDM-1 and BRDM-2 Proliferation by Country ²⁸			
Country (or other)	BRDM-1s	BRDM-2s	BRDM-1s & 2s
Syria	0	590-950	0
Tanzania	0-30	10	0
Turkmenistan	0	0	170
Uganda	0-96	0	0
Ukraine	0	0	600+
Uzbekistan	0	13	0
Vietnam	0	0	100-200
Yemen	0	100	0
Zambia	0	0	70
Zimbabwe	0	0-20	0
TOTAL (of known quantities)	Low: 0 High: 703	Low: 5,424 High: 7,258	Low: 1,383 High: 1,489

Analyst Assessment

The BRDM is found throughout the world and is used by the military in at least 80 countries. Some governmental police forces may also use the BRDM and non-conventional forces may use BRDMs captured on the battlefield. The BRDM is a somewhat inexpensive option for many militaries, especially as an anti-tank platform. The BRDM-2 can be used as the base for a number of anti-tank weapons, mostly Russian vintage, but from Western countries as well. The BRDM's prevalence on the battlefield makes it imperative that Soldiers know its strengths as well as its weaknesses, whether the BRDM operator is on the American military's side or the opposing forces'.

While the BRDM-1 and BRDM-2 are both considered Tier 2 weapon systems, some former Soviet countries still continue to produce newer and better variants based on the base BRDM. Knowing the difference in the capabilities between an original BRDM-1 and the newer BRDM-2 built in Poland, along with the models in between, will increase the survivability of Western forces.

Training Implications



- Units are encouraged to train against actual BRDM variants instead of their own vehicles altered in appearance to appear as BRDMs, in order to understand the actual vehicles' capabilities.
- Units that oppose American vehicles used as BRDMs should understand that the actual BRDM capabilities are much different than the altered American vehicles.
- Units should integrate BRDMs into training to better understand the BRDMs' capabilities and give units training in avoiding friendly fire incidents if working with coalition forces using the BRDM.
- Russian Armored Scout Car BRDM-2



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BRDM-2 WEG Sheet:

 <p>BRDM-2 with auxiliary wheels lowered</p>	<p>Weapons & Ammunition Types</p> <p>14.5-mm machinegun API, API-T, I-T HE-T</p> <p>7.62-mm coax MG Heavy ball, I-T, Light ball, Ball-T, API-T</p>	<p>Typical Combat Load</p> <p>500 160 340</p> <p>2,000</p>
<p>SYSTEM Alternative Designations: GAZ 41-08 Date of Introduction: 1963 Proliferation: At least 40 countries Description: Crew: 4 Troop Capacity: 0 (for this configuration) Combat Weight (mt): 7.2 Chassis Length Overall (m): 5.75 Height Overall (m): 2.31 Width Overall (m): 2.35 Ground Pressure (kg/cm²): INA Drive Formula: 4 x 4 (+ 4 auxiliary wheels)</p> <p>Automotive Performance: Engine Type: 140-hp Gasoline Cruising Range (km): 750 Speed (km/h): Max Road: 95 Max Off-Road: INA Average Cross-Country: INA Max Swim: 10 Forcing Depths (m): Amphibious</p> <p>Radio: R-123</p> <p>Protection: Armor, Turret Front (mm): 10 Applique Armor or Explosive Reactive Armor (mm): N/A Mineclearing Equipment or Self-Entrenching Blade: N/A Active Protective System: N/A NBC Protection System: Collective Smoke Equipment: N/A</p> <p>ARMAMENT Main Armament: Caliber, Type, Name: 14.5-mm Machinegun KPVT Rate of Fire (rd/min): 150 practical/600 cyclic Loader Type: Belt feed Ready/Stowed Rounds: 500/0 Elevation (°): -5 / +30 Fire on Move: Yes</p>	<p>ATGM Launcher: Some BRDMs may include an AT-4 launcher and ATGMs for dismounted self-defense. Firing Ports: INA</p> <p>FIRE CONTROL FCS Name: N/A. There is no gun stabilization or rangefinder. Infrared Searchlight: INA Sights w/Magnification: Gunner: Day: PP-61AM Field of View (°): 23 Acquisition Range (m): 2,000 Night: N/A</p> <p>Commander Fire Main Gun: No</p> <p>VARIANTS BRDM-2 has been used as the base chassis for a variety of vehicles.</p>  <p>National War College Photo</p> <p>Antitank guided missile launcher vehicles: 9P122: Variant with 6-rail AT-3 ATGM launcher 9P124: Variant with 4-rail AT-2 MCLOS ATGM launcher 9P133: Variant with 6-rail AT-3C SACLOS ATGM launcher 9P137: Variant with 5-rail AT-5 ATGM launcher 9P148: Variant with 5-rail AT-4 or AT-5 ATGM launcher. BRDM-2Rkh: NBC reconnaissance vehicle BRDM-2U: Command variant without a turret SA-9: SAM system transporter-erector-launcher vehicle</p>	



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<p>Auxiliary Weapon: Caliber, Type, Name: 7.62-mm (7.62x 54R) Machinegun PKT Mount Type: Coax Maximum Aimed Range (m): 1,500 Max Effective Range (m): Day: 1,000m / 400-500 on the move Night: N/A Fire on Move: Yes Rate of Fire (rd/min): 250 practical / 650 cyclic in 2-10 round bursts</p>	<p>MAIN ARMAMENT AMMUNITION Caliber, Type, Name: 14.5-mm API-T, BZT-44M Maximum Aimed Range (m): 2,000 Max Effective Range (m): Day: 2,000 Night: INA Tactical AA Range: 2,000 Armor Penetration (mm KE): 20 at 1,000 m/30 at 500 m</p> <p>Other Ammunition Types: 14.5-mm API, I-T, HE-T Type MDZ</p>
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Operational Environment Products - A listing of reports, handbooks, and guides, describing the operational Environment training and exercise design purposes.

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POCs

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913-684-7929 (COMM)
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TRADOC G-2 Intelligence Support Activity (TRISA)
Complex Operational Environment and Threat Integration Directorate (CTID)
803 Harrison Drive, BLDG 467
Fort Leavenworth, KS 66027

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Figure Credits

- Figure 1. Countries that operate BRDM-1s or BRDM-2s. Source: [U.S. Department of Defense](#), 28 March 2014; accessed and modified by TRISA, 28 March 2014.
- Figure 2. [BRDM-1](#). Source: Wikimedia Commons, 9 June 2010, BRDM-1 at Muzeum Wojska Polskiego Warszawie by Cezary.
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- Figure 4. [Belly wheels deployed on a BRDM-1U](#). Source: Wikimedia Commons, 25 September 2009, BRDM Wersja Przeciwpancerna by Kerim44.
- Figure 5. [BRDM-2 swims a river with its improved propulsion system](#). Source Wikimedia Commons, 1975, Polish BRDM-2 by J. Magnuski.
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- Figure 7. [BRDM-1 in the Czech Republic](#). Source: Wikimedia Commons, 6 September 2008, in Wallenstein Garden, Prague, Czech Republic, by Bogdan Migulski.
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- Figure 21. [BRDM-2 owned by a civilian at a military collectors show in Europe](#), 21 July 2010, by AlfvanBeem.

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