Intelligence Handbook

Soviet Ground Force Weapons
and Armored Vehicles

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WARNING

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<td>73</td>
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M-1891/30 Mosin–Nagant Sniper Rifle

Weight 11.3 lbs
Ammunition 7.62mm M-1908 rimmed
Operation turning bolt
Magazine capacity 5 rounds
Effective range (with scope) 875 yds

Sniper version of M-1891/30 which was standard Soviet rifle from 1891 to 1944. Sniper rifle still used in USSR, Eastern Europe, and Communist China, and by Communist forces in South Vietnam. Being replaced in Soviet units by Dragunov.

SVD Dragunov Sniper Rifle

Introduced mid-1960s
Weight 9.4 lbs
Ammunition 7.62mm M-1908 rimmed
Operation gas, semiautomatic
Magazine capacity 10 rounds
Effective range (with scope) 875 yds

Based on AK-47 but has longer barrel, redesigned trigger, and flash suppressor. Side-mounted 4-power scope with infrared viewing device.
SECRET

SMALL ARMS AND MACHINE GUNS

M-1944 Mosin-Nagant Carbine

Introduced: 1944
Weight: 8.6 lbs
Ammunition: 7.62mm M-1908 rimmed
Operation: bolt
Magazine capacity: 5 rounds
Effective range: 440 yds

Last of the Mosin-Nagant rifles. Derived from M-1891/30 which it replaced as standard Soviet rifle. M-1944 is shorter and has folding bayonet. Was itself replaced in Soviet forces by SKS and AK-47, but is still used in some Warsaw Pact and Asian Communist countries.

SKS Simonov Carbine

Introduced: 1949
Weight (loaded): 8.84 lbs
Ammunition: 7.62mm M-1943 short round
Operation: gas, semiautomatic
Rate of fire: 35-40 rpm
Magazine capacity: 10 rounds
Effective range: 440 yds

Now largely replaced in Soviet forces by AK-47. Still used in other Warsaw Pact forces and in nations receiving Soviet military aid. Also manufactured and extensively exported to Asian and African countries by Communist China. Chinese version distinguishable from SKS by bayonet which folds down under barrel.
AK-47 Kalashnikov Assault Rifle

Introduced: 1947
Weight (loaded): 10.58 lbs
Ammunition: 7.62mm M-1943 intermediate round
Operation: gas
Rate of fire:
  automatic: 100 rpm
  semiautomatic: 40 rpm
Magazine capacity: 30 rounds
Effective range: 440 yds

Being replaced by the AKM which is nearly identical but almost two pounds lighter. Versions with folding stock are used by special units such as artillery, airborne, and tank troops. AK-47 is used by Warsaw Pact forces, in countries which have received Soviet military aid, and extensively by Communist forces in South Vietnam. Communist China and North Korea produce version of AK-47.
PPSh Shpagin Submachine Gun (M–1941)

Introduced 1941
Weight (box magazine, loaded) 9.26 lbs
Ammunition 7.62mm M-1930 pistol
Operation blowback, automatic or semiautomatic
Rate of fire, automatic 100 rpm
Magazine capacity, box 35 rounds
drum 71 rounds
Effective range 220 yds

Ruggedly and cheaply built. First models used drum magazine. Has been replaced in Soviet forces by AK-47. Communist China manufactures version called Type 50 with about the same performance. Type 50 has pistol grip and folding stock but no barrel shield. PPSh and Type 50 are used in countries which have received Soviet and Chinese military aid.

PPS Sudayev Submachine Gun

Introduced 1943
Weight (loaded) 7.98 lbs
Ammunition 7.62mm M-1930 pistol
Operation blowback, automatic or single shot
Rate of fire 100 rpm
Magazine capacity 35 rounds
Effective range 220 yds

Like PPSh, has been replaced in Soviet forces by AK-47. PPS is lighter than PPSh, has folding stock, and operates only with box magazine. Used extensively in Southeast Asia.
DP, DPM Degtyarev Light Machine Gun

First observed  late 1920s
Weight (loaded)  27.2 lbs
Ammunition  7.62mm
Operation  gas, automatic
Rate of fire  150 rpm
Magazine capacity  47 rounds
Effective range  880 yds

DP together with DPM modified version was standard Soviet squad light machine gun until introduction of RPD in 1949. DP and DPM have slotted barrel casing and pan-type magazine mounted on top of gun. Although obsolete by present Soviet standards, they are used in countries which have received Soviet military aid. Similar RP-46 model uses belt feed and has handle on top.
**SECRET**

**SMALL ARMS AND MACHINE GUNS**

**RPD Light Machine Gun**

First observed 1948  
Weight (loaded) 15.6 lbs  
Ammunition 7.62mm  
Operation gas, automatic  
Rate of fire 150 rpm  
Magazine capacity 100 rounds  
Effective range 875 yds

Standard squad automatic weapon until replaced by RPK. Has drum magazine and bipod mounted near muzzle. Used in countries--particularly in Southeast Asia--which have received Soviet military aid.
Introduced 1961
Weight (with empty drum) 12.3 lbs
Ammunition 7.62mm M-1943 short round
Operation gas, automatic
Rate of fire 130-150 rpm
Magazine capacity,
box 40 rounds
drum 70 rounds
Effective range 875 yds

Standard Soviet squad light machine gun. Essentially the AK-47 assault rifle with longer, heavier barrel, bipod, differently shaped stock, and larger-capacity magazine. Some parts are interchangeable; for example, AK-47 magazine can be used on RPK. RPK is used in some Warsaw Pact countries but has not yet appeared in Southeast Asia.
PK Kalashnikov General Purpose Machine Gun

- First observed: mid-1960s
- Weight (with empty drum): 12.3 lbs
- Ammunition: 7.62mm M-1943 short round
- Operation: gas, automatic
- Rate of fire: 130-150 rpm
- Magazine capacity, box: 40 rounds
- Magazine capacity, drum: 70 rounds
- Effective range: 875 yds

A further modification of AK-47 and RPK. PK uses rimmed cartridge, is belt fed, has different receiver and gas cylinder, and provision for mounting gun on tripod.
SG, SGM Goryunov Machine Gun
(M-1943)

First observed late World War II
Weight (gun only) 29.8 lbs
Ammunition 7.62mm M-1930D
Operation gas, automatic
Rate of fire 250-300 rpm
Effective range about 1,100 yds

Has been modified for mounting on tanks and APCs. Usually found on two-wheel mount. SGM distinguishable by fluted barrel. Being replaced in ground support role by PK Kalashnikov general purpose machine gun. Used by countries which have received Soviet military aid.
DSHK Degtyarev–Shpagin Heavy Machine Gun
(M-1938/45)

Introduced 1946
Weight (gun only) 75 lbs
Ammunition 12.7mm rimless
Operation gas, automatic
Rate of fire 125 rpm
Effective range,
ground targets 3,300 yds
air targets 3,000 ft

Designed for use against aircraft and lightly armored
ground targets, and adopted as primary AA machine gun on
tanks and assault guns. Ground version is mounted on two-
wheel carriage. Vehicle-mounted version is being replaced
in Soviet units by KPV 14.5mm heavy machine gun, which is
similar to ZPU-1. Used extensively and effectively by
Communist forces in Southeast Asia as AA weapon, particu-
larly against helicopters.
SECRET

RECOILLESS ANTITANK WEAPONS

RPG-2 Antitank Grenade Launcher

Introduced late 1940s
Weight 6.3 lbs
Length 37.5 inches
Caliber 80mm
Range 109 yds
Armor penetration 6-7 inches

Light recoilless, shoulder-fired rocket developed from German "Panzerfaust." Effective against tanks at short range. Being replaced by RPG-7. Used in most countries which have received Soviet military aid.

RPG-7 Antitank Grenade Launcher

Introduced 1962
Weight 15 lbs
Length 37.5 inches
Caliber 80mm
Range 547 yds
Armor penetration 12 inches

Replacing RPG-2 and essentially same type of weapon. RPG-7 fires rocket-assisted projectile having greater range, penetration, and accuracy. Used in USSR and other Warsaw Pact countries, in Middle East, and by Communist forces in South Vietnam.
**B-10 Recoilless Rifle**

<table>
<thead>
<tr>
<th>Introduced</th>
<th>early 1950s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>188 lbs</td>
</tr>
<tr>
<td>Length</td>
<td>6.4 ft</td>
</tr>
<tr>
<td>Caliber</td>
<td>82mm</td>
</tr>
<tr>
<td>Range</td>
<td>430 yds</td>
</tr>
<tr>
<td>Armor penetration</td>
<td>9.4 inches</td>
</tr>
</tbody>
</table>

Smoothbore recoilless weapon fired from two-wheel mount or tripod. Can be hand-towed by bars on muzzle or mounted on truck. Used in Soviet airborne units and other Warsaw Pact forces.
B-11 Recoilless Rifle

<table>
<thead>
<tr>
<th>Introduced</th>
<th>early 1950s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>670 lbs</td>
</tr>
<tr>
<td>Length</td>
<td>11.1 ft</td>
</tr>
<tr>
<td>Caliber</td>
<td>107mm</td>
</tr>
<tr>
<td>Range</td>
<td>500 yds</td>
</tr>
<tr>
<td>Armor penetration</td>
<td>15 inches</td>
</tr>
</tbody>
</table>

Largest Soviet recoilless weapon. Fired from wheeled mount or from tripod with wheels removed. Nearly obsolete in Soviet units but still used by other Warsaw Pact forces.
B-14 Recoilless Rifle

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>about 125 lbs</td>
</tr>
<tr>
<td>Length</td>
<td>about 7 ft</td>
</tr>
<tr>
<td>Caliber</td>
<td>76mm</td>
</tr>
<tr>
<td>Maximum range</td>
<td>1,000 yds</td>
</tr>
<tr>
<td>Armor penetration</td>
<td>13-15 inches</td>
</tr>
</tbody>
</table>

Pictured in 1968 Soviet publication. Not yet observed with troops. First Soviet recoilless gun to mount a spotting rifle. Fires round similar to that of RPG-7 grenade launcher.
M-1937, M-1941, M-1943
82mm Mortar

Introduced (original version) prior to World War II
Weight 123 lbs
Length of tube 4 ft
Maximum rate of fire 25 rpm
Maximum range 3,300 yds

M-1937 has two short shock absorbers, M-1941 and M-1943 one longer shock absorber. Weapon can be carried by three men or one draft animal. Used by countries which have received Soviet military aid.
M-1938, M-1943 120mm Regimental Mortar

<table>
<thead>
<tr>
<th>Introduced</th>
<th>prior to World War II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td></td>
</tr>
<tr>
<td>travel position</td>
<td>1,100 lbs</td>
</tr>
<tr>
<td>firing position</td>
<td>606 lbs</td>
</tr>
<tr>
<td>Length of tube</td>
<td>6.2 ft</td>
</tr>
<tr>
<td>Maximum rate of fire</td>
<td>15 rpm</td>
</tr>
<tr>
<td>Maximum range</td>
<td>6,230 yds</td>
</tr>
</tbody>
</table>

Two versions--M-1938 and M-1943--are complementary to 82mm mortars. Despite its large size, 120mm mortar is highly mobile and can be towed on two-wheel limber or broken down into three loads. Used by Soviet and other Warsaw Pact forces and in countries which have received Soviet military aid. Widely used by Communist forces in Vietnam.
M-1943, M-160 160mm Mortar

<table>
<thead>
<tr>
<th>Introduced</th>
<th>World War II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight,</td>
<td></td>
</tr>
<tr>
<td>travel position</td>
<td>1.61 tons</td>
</tr>
<tr>
<td>firing position</td>
<td>1.2 tons</td>
</tr>
<tr>
<td>Length of tube</td>
<td>14.9 ft</td>
</tr>
<tr>
<td>Maximum rate of fire</td>
<td>3 rpm</td>
</tr>
<tr>
<td>Maximum range</td>
<td>8,825 yds</td>
</tr>
</tbody>
</table>

Two versions--M-1943 and M-160--can be towed on two-wheel limber. M-1943 being replaced by M-160 which has longer barrel and is breech-loaded. Both versions are used by Soviet and other Warsaw Pact forces and in countries which have received Soviet military aid.
M-240 240mm Mortar

Introduced: early 1950s

Weight,
   travel position: 4.6 tons
   firing position: 4 tons

Length of tube: 17.5 ft

Maximum rate of fire: 1 rpm

Maximum range: 10,600 yds

Largest standard Soviet mortar. Has large base plate. Breech-loaded. Replacing medium artillery in some support and bombardment roles. Used in some Warsaw Pact forces.
M-1943 57mm Antitank Gun

- Introduced: World War II
- Weight: 1.4 tons
- Maximum rate of fire: 25 rpm
- Maximum range: 9,200 yds

There is also a self-propelled version. M-1943 is being replaced in Soviet forces by larger caliber weapons and antitank missiles, but is still widely used in countries which have received Soviet military aid.
M-1942 76mm Divisional Gun

Introduced: World War II
Weight: 2.75 tons
Maximum rate of fire: 15 rpm
Maximum range: 14,550 yds

Once widely used in Soviet forces as both field artillery piece and antitank weapon. Replaced by 85mm and 100mm pieces and now used primarily for training. Still standard equipment in many countries which have received Soviet military aid.
**D-44 85mm Field Gun**

- **Introduced**: mid-1950s
- **Weight**: 1.9 tons
- **Maximum rate of fire**: 10 rpm
- **Maximum range**: 17,120 yds

Essentially the same as T-34/85 tank gun. Used as both field artillery piece and antitank weapon. Normally towed, but self-propelled version also in use. D-44 has been replaced in Soviet forces by M-1955 100mm field gun, but is still widely used in other Warsaw Pact forces and in countries which have received Soviet military aid.
BS-3 100mm Field Gun (M-1943)

First observed end of World War II
Weight 3.85 tons
Maximum rate of fire 8-10 rpm
Maximum range 23,000 yds

Fires same ammunition as T-54/55 tank gun. Used as both field artillery piece and antitank weapon. Largely replaced by M-1955 100mm field gun. BS-3 is distinguishable by dual tires and recoil mechanism which protrudes beyond shield below barrel. Obsolete in Soviet forces but still used in other Warsaw Pact forces and in countries which have received Soviet military aid.

M-1955 100mm Field Gun

Introduced mid-1950s
Weight 3.7 tons
Maximum rate of fire 7 rpm
Maximum range 23,000 yds

Fires same shell as BS-3 but is lighter and distinguishable from BS-3 by recoil mechanism above barrel and behind shield and by single tires. Latest version of M-1955 has longer barrel and smooth bore. Used as both field artillery piece and antitank weapon. Has largely replaced BS-3 in Soviet units and is used by other Warsaw Pact forces and countries which have received Soviet military aid.
A-19 122mm Corps Gun
(M-1931/1937)

First observed prior to World War II
Weight 8.7 tons
Maximum rate of fire 5-6 rpm
Maximum range 22,750 yds

Postwar versions have dual pneumatic or sponge-rubber-filled tires in place of spoked wheels with solid rubber tires on early models. Obsolete in Soviet forces but still used in other Warsaw Pact countries.
M-30 122mm Howitzer (M-1938)

Introduced prior to World War II
Weight 2.7 tons
Maximum rate of fire 5-6 rpm
Maximum range 12,900 yds

Being replaced in Soviet forces by D-30 howitzer. Still standard equipment in other Warsaw Pact forces and countries which have received Soviet military aid.
This light piece has wheels mounted near end of trails and double recoil cylinders mounted above barrel behind shield. Used by Soviet and some other Warsaw Pact forces and by Communist forces in Southeast Asia.
D-30 122mm Howitzer (M-1963)

Travel position

Firing position

First observed 1963
Weight 3.5 tons
Maximum rate of fire 8 rpm
Maximum range 16,740 yds

Rests on three trails and central jack when in firing position, gaining stability. Towed by barrel with trails folded. New shell gives direct-fire antitank capability. Replacing M-30 howitzer as standard equipment in Soviet forces. Has also been seen with Egyptian units.
M-46 130mm Field Gun

First observed 1954
Weight 9.4 tons
Maximum rate of fire 7-8 rpm
Maximum range 29,500 yds

Based on naval and coastal guns of same caliber.
Features collar around barrel forward of shield and detachable spades on trails. Used by Soviet and other Warsaw Pact forces and in Middle East and India.
M-10 152mm Howitzer (M-1938)

Introduced prior to World War II
Weight 5 tons
Maximum rate of fire 4 rpm
Maximum range 13,560 yds

Resembles M-1931/37 122mm corps gun but has shield. Obsolete in Soviet forces but still used in other Warsaw Pact countries—extensively in Rumania.
M-1943 152mm Howitzer

- Introduced: World War II
- Weight: 4 tons
- Maximum rate of fire: 4 rpm
- Maximum range: 13,560 yds

Essentially the tube of the M-10 152mm howitzer mounted on the carriage of the M-1938 122mm howitzer. Has firepower of 152mm tube but is more mobile because of lighter carriage. Now largely replaced in Soviet units by M-1955, but still used in other Warsaw Pact forces and in countries which have received Soviet military aid.

D-20 152mm Howitzer

- First observed: 1955
- Weight: 6.5 tons
- Maximum rate of fire: 4 rpm
- Maximum range: 18,000 yds

Designed as replacement for M-1937 152mm howitzer. D-20 is companion piece to D-74 122mm howitzer and distinguishable from it by shorter, thicker barrel and larger muzzle brake. Used by USSR and several other Warsaw Pact countries.
M-1955 203mm Howitzer

Largest of Soviet towed artillery pieces since World War II. Probably can fire atomic round in addition to conventional. Has dual-mounted wheels but no shield, and is towed out of battery. Shown in Soviet parades but not observed with operational units.
M-1964 122mm Rocket Launcher

First observed 1964
Vehicle Ural-375 truck
Weight (with full rocket load) 3.8 tons
Cruising range 252 miles
Rocket load 40
Range of rocket, maximum 18,600 yds
minimum 6,600 yds
Propellant solid

Air transportable. Smallest caliber postwar Soviet rocket launcher. First rocket to be mounted on Ural-375 truck. Four banks of ten launchers. Absence of blast shields on cab indicates launcher fires either to right or left. Probably will replace BM-14 and BM-24 launchers.
BM-13 132mm Rocket Launcher

- Introduced: World War II
- Vehicle: ZIL-151 truck
- Weight (with full rocket load): 7.8 tons
- Cruising range: 373 miles
- Rocket load: 16
- Range of rocket, maximum: 9,850 yds
- Range of rocket, minimum: 3,280 yds
- Propellant: solid

Standard field rocket through mid-1950s. Since replaced by BM-14. Still used as training weapon by Soviets and standard equipment in Communist China, Cuba, Egypt, North Korea, and other countries which have received Soviet military aid.
UNGUIDED ROCKETS

140mm Rocket Launchers

BM-14-16

First observed 1954
Vehicle ZIL-151 truck
Weight (with full rocket load) 8.7 tons
Cruising range 373 miles
Rocket load 16

Mounted in two banks of eight launchers. BM-14 is replacement for 16-round BM-13. Used in Warsaw Pact forces, Communist China, and Indonesia.

First observed 1959
Vehicle GAS-63 truck
Weight (with full rocket load) 4.7 tons
Cruising range 404 miles
Rocket load 17

Mounted on much lighter truck than BM-14-16. Lacks stabilizing jacks of heavier 140mm systems. Used by Soviet and Polish forces.

First observed 1962
Weight (with full rocket load) 1,000 lbs
Rocket load 8

One of two towed rocket launchers used by Soviet and other Warsaw Pact forces. Well suited for airborne operations because of light weight.

Introduced 1964
Weight (with full rocket load) 2,400 lbs
Rocket load 16

Sixteen tubes arranged in square. Well suited for airborne operations.
BMD–20 200mm Rocket Launcher

Vehicle | ZIL-157 truck
---|---
Weight (with full rocket load) | 9.1 tons
Cruising range | 373 miles
Rocket load | 4
Range of rocket, maximum | 20,200 yds
Range of rocket, minimum | 13,900 yds
Propellant | solid

First seen in 1954 on ZIL-151 truck, later on ZIL-157. Mounted in single bank of four open-frame launchers. Has been seen in Cuba and may be in use in Warsaw Pact forces.
**BM-24 240mm Rocket Launcher**

*Photograph of model*

<table>
<thead>
<tr>
<th>Introduced</th>
<th>mid-1950s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle</td>
<td>AT-S medium tracked artillery tractor</td>
</tr>
<tr>
<td>Weight (with full rocket load)</td>
<td>16 tons</td>
</tr>
<tr>
<td>Cruising range</td>
<td>236 miles</td>
</tr>
<tr>
<td>Rocket load</td>
<td>12</td>
</tr>
<tr>
<td>Range of rocket, maximum</td>
<td>8,000 yds</td>
</tr>
<tr>
<td>minimum</td>
<td>4,820 yds</td>
</tr>
<tr>
<td>Propellant</td>
<td>solid</td>
</tr>
</tbody>
</table>

Despite its high silhouette, this vehicle has excellent mobility and can carry entire firing crew of six.
SECRET

UNGUIDED ROCKETS

BM-25 250mm Rocket Launcher

![Image of BM-25 250mm Rocket Launcher]

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>First observed</td>
<td>1957</td>
</tr>
<tr>
<td>Vehicle</td>
<td>KRAZ-214 general purpose truck</td>
</tr>
<tr>
<td>Weight (with full rocket load)</td>
<td>21.1 tons</td>
</tr>
<tr>
<td>Cruising range</td>
<td>329 miles</td>
</tr>
<tr>
<td>Rocket load</td>
<td>6</td>
</tr>
<tr>
<td>Range of rocket, maximum</td>
<td>61,000 yds</td>
</tr>
<tr>
<td>Range of rocket, minimum</td>
<td>19,700 yds</td>
</tr>
<tr>
<td>Propellant</td>
<td>liquid</td>
</tr>
</tbody>
</table>

Six rockets in two banks of three open-frame launchers. Warhead slightly more effective than 8-inch artillery round. Largest multiple rocket launcher in Soviet army.
**UNGUIDED ROCKETS**

**FROG-1**

<table>
<thead>
<tr>
<th>First observed</th>
<th>1957</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launcher weight (with rocket)</td>
<td>40 tons</td>
</tr>
<tr>
<td>Launcher cruising range</td>
<td>112 miles</td>
</tr>
<tr>
<td>Rocket weight</td>
<td>about 11,000 lbs</td>
</tr>
<tr>
<td>Warhead weight, nuclear</td>
<td>2,866 lbs</td>
</tr>
<tr>
<td>HE, CW</td>
<td>2,600 lbs</td>
</tr>
<tr>
<td>Maximum range, nuclear</td>
<td>13.5 nm</td>
</tr>
<tr>
<td>HE, CW</td>
<td>17.5 nm</td>
</tr>
<tr>
<td>Propellant</td>
<td>solid</td>
</tr>
</tbody>
</table>

Believed to be obsolete. Mounted on modified JS heavy tank chassis. Used in some Warsaw Pact countries.
UNGUIDED ROCKETS

FROG-2

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launcher weight (with rocket)</td>
<td>15.7 tons</td>
</tr>
<tr>
<td>Launcher cruising range</td>
<td>155 miles</td>
</tr>
<tr>
<td>Rocket weight</td>
<td>3,858 lbs</td>
</tr>
<tr>
<td>Warhead weight</td>
<td>1,220 lbs</td>
</tr>
<tr>
<td>Maximum range</td>
<td>9.8 nm</td>
</tr>
<tr>
<td>Propellant</td>
<td>solid</td>
</tr>
</tbody>
</table>

Not operational. Seen only in 1957 Moscow parade. Probably served only for research and development. Mounted on chassis of PT-76 light amphibious tank, but not itself amphibious.
First observed Launcher weight (with rocket) Launcher cruising range Rocket weight Warhead weight Warhead diameter Maximum range Propellant  
FROG-3 1960 15.7 tons 155 miles 4,720 lbs 1,090 lbs 21.1 in 17.4 nm solid 
FROG-4 1960 15.7 tons 155 miles 4,220 lbs 820 lbs 17.0 in 29 nm solid 
FROG-5 1964 15.7 tons 155 miles 4,700 lbs 900 lbs 15.7 in 29 nm solid

All are mounted on chassis of PT-76 light amphibious tank, but none is amphibious. FROG-3 warhead is nuclear. FROG-4 carries HE warhead. FROG-5 is probably a training version with concrete-filled warhead. FROGs have been seen with Soviet and other Warsaw Pact forces and in Cuba.
FROG-6

First observed 1965
Launcher weight 8.7 tons
(with rocket)
Rocket weight 2,000-2,500 lbs

Mounted on ZIL-157 truck. First Soviet departure from tracked launchers for FROGs. FROG-6 is believed to be a nonfiring training system. Seen with Soviet and East German forces.
First observed 1965
Launcher weight (with rocket) about 13 tons
Launcher cruising range 311 miles
Rocket weight 5,000-6,000 lbs
Warhead weight, HE 1,300 lbs
nuclear 610 lbs
chemical 400 lbs
Maximum range 30-45 nm
Propellant solid

Eight-wheel launcher provides greater mobility than tracked launcher. FROG-7 distinguishable from earlier FROGs by single motor section as opposed to two in tandem. FROG-7 is gradually replacing older FROGs in first-line Soviet divisions and has been seen with Czechoslovak, East German, and Polish forces.
ZPU-1 14.5mm Antiaircraft
Heavy Machine Gun

- Introduced: mid-1950s
- Maximum rate of fire: 600 rpm
- Maximum effective range, vertical: 4,600 ft
- Maximum effective range, horizontal: 2,200 yds

Single gun mounted on light two-wheel towed carriage. Also effective against light armor and other ground targets. Apparently no longer used in Soviet forces. Seen in countries which have received Soviet military aid. Widely used in North Vietnam.

ZPU-2 Antiaircraft
Heavy Machine Gun

- Introduced: mid-1950s
- Maximum rate of fire per barrel: 600 rpm
- Maximum effective range, vertical: 4,600 ft
- Maximum effective range, horizontal: 2,200 yds

Twin-mounted version of ZPU-1 on two-wheel towed carriage. This mount also seen on BTR-40 and BTR-152 armored personnel carrier chassis. ZPU-2 is used in Soviet and other Warsaw Pact forces and in countries which have received Soviet military aid.
ZPU-4 Antiaircraft Heavy Machine Gun

- Introduced: mid-1950s
- Maximum rate of fire: 600 rpm per barrel
- Maximum effective range:
  - Vertical: 4,600 ft
  - Horizontal: 2,200 yds

Quad-mounted version of ZPU-1 on four-wheel towed carriage. Used in Soviet and other Warsaw Pact forces and in countries which have received Soviet military aid.
ZU-23 23mm Antiaircraft Heavy Machine Gun

 Introduced early 1960s
 Maximum rate of fire 800-1,000 rpm
 Maximum effective range,
  vertical 6,600 ft
  horizontal 2,188 yds

Twin-barrel machine cannon mounted on light two-wheel carriage similar to that of ZPU-2. Cylindrical muzzle brakes distinguishable from conical type on ZPU-2. ZU-23 also effective against light armor and other ground targets. Will probably replace ZPU series of heavy machine guns.
First observed: 1965
Maximum rate of fire: 1,200-1,400 rpm
Maximum effective range:
  vertical: 6,600 ft
  horizontal: 2,188 yds
Maximum vehicle speed: 25 mph
Cruising range: 150 miles
Weight: 15.4 tons
Crew: 4

Four liquid-cooled guns in light armored turret mounted with fire-control radar on chassis similar to that of PT-76 light amphibious tank. Not amphibious. Designed to provide ground forces mobile protection against low-flying aircraft. Also effective against light armor and other ground targets. Has been seen with Soviet and Polish forces.
M-1939 37mm Antiaircraft Gun

First observed: World War II
Maximum rate of fire: 160-180 rpm
Maximum effective range (vertical): 8,200 ft

Mounted on four-wheel towed carriage. Not suitable for use against ground targets. Replaced in Soviet forces by S-60 but still used in other Warsaw Pact countries, Cuba, Middle East, and Southeast Asia.
First observed 1950
Maximum rate of fire 105-120 rpm
Maximum effective range,
vertical 19,700 ft
horizontal 13,000 yds

Mounted on four-wheel towed carriage. Also effective against light armor and other ground targets. Has replaced M-1939 in Soviet forces. Used in countries which have received Soviet military aid.
ZSU-57-2 57mm Self-Propelled Antiaircraft Gun

First observed 1957
Maximum rate of fire 210-240 rpm per barrel
Maximum effective range, vertical 19,700 ft
horizontal 13,000 yds
Vehicle speed 31 mph
Cruising range 250 miles
Weight 31 tons
Crew 6

Two S-68 guns in open turret mounted on modified T-54 tank chassis. Optical sighting and fire control. Designed to provide ground forces mobile protection against aircraft. Also effective against light armor and other ground targets. Has been seen with Soviet and other Warsaw Pact forces and in countries which have received Soviet military aid.
KS-12 85mm Antiaircraft Gun

- Introduced: prior to World War II
- Maximum rate of fire: 15-20 rpm
- Maximum effective range:
  - vertical: 27,500 ft
  - horizontal: 17,000 yds

Mounted on four-wheel towed carriage. Uses on-carriage optical site or off-carriage radar fire control. Essentially same gun as KS-18 but with longer tube. Both are also effective against light armor and other ground targets. Being replaced by KS-19, but still used by Soviet and other Warsaw Pact forces and in countries which have received Soviet military aid.
KS-19 100mm Anti-aircraft Gun

First observed: 1949
Maximum rate of fire: 15 rpm
Maximum effective range:
  vertical: 39,000 ft
  horizontal: 23,000 yds

Uses off-carriage fire control and director against aircraft. Designed to replace KS-12 and KS-18, and itself being replaced by SA-2 surface-to-air missile. Also effective against light armor and other ground targets.
PT-76 Light Amphibious Tank

Introduced: 1952
Main armament: 76mm tank gun
Weight: 15.4 tons
Speed, land: 27 mph
       water: 6.3 mph
Cruising range: 150 miles
Crew: 3

Amphibious and lightly armored. Undergunned by present Soviet standards. Standard reconnaissance tank in Soviet and other Warsaw Pact forces and in countries which have received Soviet military aid. Used by Communist forces in Laos and South Vietnam.

Chassis forms basis for ASU-85 airborne assault gun and FROG-2, 3, 4, and 5 rocket launchers.
T-34/85 Medium Tank

First observed: 1944
Main armament: M-1944 85mm tank gun
Weight: 35.3 tons
Speed: 35 mph
Cruising range: 186 miles
Crew: 4

Replaced in first-line Soviet units by T-54/55 series, but still used in Soviet reserves and extensively in other Warsaw Pact forces and in countries which have received Soviet military aid.
**Secret**

**Tanks**

**T-44 Medium Tank**

<table>
<thead>
<tr>
<th>Introduced</th>
<th>mid-1940s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main armament</td>
<td>M-1944 85mm tank gun</td>
</tr>
<tr>
<td>Weight</td>
<td>35.2 tons</td>
</tr>
<tr>
<td>Speed</td>
<td>35 mph</td>
</tr>
<tr>
<td>Cruising range</td>
<td>186 miles</td>
</tr>
<tr>
<td>Crew</td>
<td>4</td>
</tr>
</tbody>
</table>

Interim system between T-34/85 and later T-54, produced in only limited numbers. Hull similar to T-54 and turret similar to T-34/85. T-44 saw some use with Soviet forces in World War II and during Hungarian Revolution.
T-54 Medium Tank

First observed: 1949
Main armament: 100mm tank gun
Weight: 40 tons
Speed: 30 mph
Cruising range: 216 miles
Crew: 4

Developed from T-44. Distinguishable by hemispherical turret, low silhouette, and 100mm gun. Standard Soviet medium tank until late 1950s, now largely replaced in first-line units by T-55 and T-62. Used by other Warsaw Pact forces and in countries which have received Soviet military aid. A Chinese-produced version, T-59, is exported to Pakistan.
T-55 Medium Tank

Photograph of model

Introduced possibly 1959
Main armament 100mm tank gun
Weight 40 tons
Speed 30 mph
Cruising range 216 miles
Crew 4

Has largely replaced T-54 in first-line Soviet units. Distinguishable from T-54 by lack of AA machine gun, flush hatch replacing loader's cupola, and infrared devices mounted on turret and hull front. Used in Warsaw Pact countries, Middle East, and India.
T-62 Medium Tank

Photograph of model

<table>
<thead>
<tr>
<th>First observed</th>
<th>1961</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main armament</td>
<td>115mm smoothbore gun</td>
</tr>
<tr>
<td>Weight</td>
<td>40.2 tons</td>
</tr>
<tr>
<td>Speed</td>
<td>30 mph</td>
</tr>
<tr>
<td>Cruising range</td>
<td>216 miles</td>
</tr>
<tr>
<td>Crew</td>
<td>4</td>
</tr>
</tbody>
</table>

Developed from T-55. Distinguishable from T-54/55 series by spacing of road wheels, larger, more circular turret, longer hull, and 115mm smoothbore gun with bore evacuator mounted in middle of tube. Designed to support T-55 against 105mm NATO tank guns. Used by Soviet and probably Czechoslovak forces.
JS–3 Heavy Tank

Introduced: 1945
Main armament: 122mm tank gun
Weight: 50.6 tons
Speed: 23 mph
Cruising range: 112 miles
Crew: 4

Features sloping, angular armor and low silhouette. Largely replaced in Soviet units by T-10 heavy tank, but still used in other Warsaw Pact forces and in countries which have received Soviet military aid.
T-10, T-10M Heavy Tank

Introduced 1953
Main armament 122mm tank gun
Weight 55 tons
Speed 30 mph
Cruising range 155 miles
Crew 4

Resembles JS-3 which it has largely replaced. Distinguishable from JS-3 by more angular hull armor, 14 vice 12 road wheels, and bore evacuator mounted on gun. Improved version, T-10M, first seen in 1958, has overhang welded on rear of turret, longer gun, and night vision devices.
ASU-85 85mm Airborne Assault Gun

Can be air-dropped. Designed to provide antitank support for airborne forces. Full armor and larger gun make it an improvement over ASU-57. Used widely in Soviet forces and to a limited extent in Poland.
ASSAULT GUNS

SU-100 100mm Assault Gun

Photograph of model

First observed 1945
Weight 33.1 tons
Speed 35 mph
Cruising range 190 miles
Crew 4

Mounts 100mm gun on T-34 medium tank chassis. Still used in some Soviet units and other Warsaw Pact forces, as well as in countries which have received Soviet military aid.
SU-100 100mm Assault Gun
(M-1968)

First observed: early 1968
Weight: 40 tons
Speed: 31 mph
Cruising range: 216 miles
Crew: 3-4

Probably intended as replacement for aging SU-100. Believed to mount modified 100mm gun similar to T-55 tank gun and M-1955 field gun. Gun is mounted in box body on modified chassis of T-54/55 tank. Vehicle probably has same weight and performance characteristics as tank.
JSU-122 122mm Assault Gun

First observed: 1944
Weight: 50.6 tons
Speed: 25 mph
Cruising range: 85 miles
Crew: 5

Consists of 122mm artillery piece mounted in armored superstructure on JS heavy tank chassis. Believed to be obsolete in Soviet forces but still in use in other Warsaw Pact countries. Recently appeared with Communist forces in Southeast Asia.
JSU-152 152mm Heavy Assault Gun

<table>
<thead>
<tr>
<th>First observed</th>
<th>1944</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>51.2 tons</td>
</tr>
<tr>
<td>Speed</td>
<td>23 mph</td>
</tr>
<tr>
<td>Cruising range</td>
<td>85 miles</td>
</tr>
<tr>
<td>Crew</td>
<td>5</td>
</tr>
</tbody>
</table>

Mounts 152mm gun with limited traverse and protruding mantlet on JS heavy tank chassis. Similar in appearance to JSU-122 but has shorter gun. Still used in some Soviet units and in other Warsaw Pact forces.
RECONNAISSANCE VEHICLES

BRDM Amphibious Armored Reconnaissance Vehicle

First observed          1959
Main armament      usually 7.62mm machine gun,
                   antitank missiles
Weight                   6.17 tons
Speed, land            50 mph
                    water    5.5 mph
Cruising range        310 miles
Crew                    5

Has four main wheels. Four auxiliary wheels in belly can be raised or lowered as needed. Produced in three other versions, each specially designed to carry Snapper, Swatter, or Sagger antitank missiles. Used by Soviet and some other Warsaw Pact forces and in countries which have received Soviet military aid.

BRDM-2 Amphibious Armored Reconnaissance Vehicle

First observed          1966
Main armament      14.5mm heavy machine gun,
                   7.62mm machine gun
Weight                   about 7.5 tons
Speed                   unknown
Cruising range         unknown
Crew                     3-4

Probably will replace original BRDM in reconnaissance role. Basically same type of vehicle with four road wheels and four auxiliary wheels in belly. BRDM-2 distinguishable by heavy machine gun mounted in conical turret.
BTR-152 Armored Personnel Carrier

<table>
<thead>
<tr>
<th>Introduced</th>
<th>1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main armament</td>
<td>7.62mm machine gun</td>
</tr>
<tr>
<td>Weight</td>
<td>9.9 tons</td>
</tr>
<tr>
<td>Speed</td>
<td>40 mph</td>
</tr>
<tr>
<td>Cruising range</td>
<td>490 miles</td>
</tr>
<tr>
<td>Capacity</td>
<td>1 driver, 18 troops</td>
</tr>
</tbody>
</table>

Not amphibious. Produced in many different versions—covered, open top, and mounting AA guns. Gradually being replaced by BTR-60P armored personnel carrier. BTR-152 for years was standard armored personnel carrier in Soviet and other Warsaw Pact forces. Also used by Arab forces in the Middle East.
**BTR-40 Armored Personnel Carrier**

<table>
<thead>
<tr>
<th>Introduced</th>
<th>1951</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main armament</td>
<td>usually 7.62mm machine gun</td>
</tr>
<tr>
<td>Weight</td>
<td>5.8 tons</td>
</tr>
<tr>
<td>Speed</td>
<td>50 mph</td>
</tr>
<tr>
<td>Cruising range</td>
<td>400 miles</td>
</tr>
<tr>
<td>Capacity</td>
<td>2 crew, 8 troops</td>
</tr>
</tbody>
</table>

Primarily used as command and reconnaissance vehicle. Some versions mount twin 14.5mm antiaircraft heavy machine guns in open turret in troop compartment. Replaced in Soviet and some Warsaw Pact forces by BRDM. Used in countries which have received Soviet military aid.
BTR-50P Armored Personnel Carrier

First observed (original models) 1955
Main armament usually 7.62mm machine gun
Weight 16 tons
Speed, land 27 mph
     water 6 mph
Cruising range 155 miles
Capacity 2 crew, 18 troops

Amphibious. Based on PT-76 tank. Common variations of BTR-50P include covered version and open top command vehicle with two cupolas in front. Used in Soviet forces and countries which have received Soviet military aid. Czechoslovakia produces own version, OT-62.
ARMORED PERSONNEL CARRIERS

BTR–60PB Armored Personnel Carrier

First observed 1961
Main armament usually one 14.5mm and one 7.62mm machine gun
Weight 11 tons
Speed, land 50 mph
water 6.2 mph
Cruising range 375 miles
Capacity 1 driver, 18 troops

Amphibious, boat-shaped, with eight wheels. Also seen in two other versions—covered and open. Used in Soviet and other Warsaw Pact forces, and seen in Cuba. Similar vehicle, OT-64, is produced in Czechoslovakia and Poland.
Amphibious Armored Infantry Combat Vehicle (AAICV)

First observed: 1967
Main armament: 76mm smoothbore gun, Sagger antitank missile
Weight: about 15 tons
Speed, land: 27.3 mph
Water: 6.3 mph
Cruising range: 149 miles
Capacity: 3 crew, 8 troops

Probably designed to replace PT-76 amphibious tank and armored personnel carriers in reconnaissance role. Sagger missile is capable of engaging heaviest armored vehicles.
ANTITANK GUIDED MISSILES

AT-1 Snapper

Introduced: early 1960s
Range, maximum: 2,200 yds
Range, minimum: 656 yds
Guidance: wire
Armor penetration: 12 inches
Launch platform: GAZ-69

Cruising range: 225 miles
Missile load: 4

Cruising range: 310 miles
Missile load: 3

Capable of engaging heaviest armored vehicles. Mounted on either GAZ-69 truck or more modern BRDM amphibious armored reconnaissance vehicle. GAZ-69 (photo above) mounts four missiles in square. BRDM mounts three abreast on retractable pylon (illustrated below). AT-1 is distinguished from AT-2 and AT-3 by larger, more triangular fins. AT-1 has been exported to Warsaw Pact countries, Afghanistan, Cuba, and Egypt.
ANTITANK GUIDED MISSILES

AT-2 Swatter

 Introduced  early 1960s
 Range, maximum  3,300 yds
   minimum  600 yds
 Guidance  radio
 Armor penetration  19 inches
 Launch platform  BRDM
 Cruising range  310 miles
 Missile load  4

Capable of engaging heaviest armored vehicles. BRDM amphibious vehicle mounts four AT-2s on retractable pylon. Used in Soviet and some other Warsaw Pact forces.
AT-3 Sagger

INTRODUCED
Range, maximum 2,750 yds
minimum 219 yds

Guidance wire

Armor penetration 16 inches
Launch platform BRDM

Cruising range 310 miles
Missile load 6

Capable of engaging heaviest armored vehicles. BRDM amphibious vehicle mounts group of six AT-3s on retractable pylon with armored cover. Portable version of AT-3 can be carried and fired by one man. Used by Soviet and Czechoslovak forces.