Rockwell B-1 Lancer

The Rockwell B-1 is a long-range strategic bomber.

Versions

B-1A

The original B-1A was designed and developed as a long-range, high-speed strategic nuclear bomber to replace the B-52. Four prototype aircraft were built. However, the project was cancelled in 1977 to a large degree because it was thought that the B-52 with air-launched cruise missiles could provide an equivalent capability at a lower cost.

The B-1A did not progress past the prototype stage.

B-1B

The B-1 project was revived in the 1980s. A total of 100 B-1Bs were acquired by the USAF, with modifications that gave lower radar cross-section and higher speed at low altitude at the cost of much reduced speed at high altitude, an improved defensive countermeasures suite, and a secondary conventional role. Although the B-1B is formally named the “Lancer,” informally it is called the “Bone”.

The B-1B entered service with the USAF in 1986, although full operability of its TFR and ECM systems took several years.

B-1R

The B-1R is a proposed modernization of the B-1B presented in 2004. It would have had more powerful Pratt & Whitney F119 engines, the air intakes reverted to a high-speed configuration (with a concomitant increase in radar cross-section), provision for weapons on the external stations, including AIM-120 AMRAAM AHMs for self-defense, a dual-mode radar able to combine air-to-air and air-to-ground modes, and improved defensive countermeasures.

The B-1R did not progress beyond a conceptual proposal.

Armament and Stores

B-1A

The B-1A is equipped with three internal bays. Each internal bay can carry a rotary launcher with either eight AGM-69A SRAM nuclear ASMs or eight B43 or B61 nuclear BBs or a 2,975 gal (11,200L) fuel tank.

Had in entered service, possible upgrades could have included the AGM-69B SRAM nuclear ASM and the B77 nuclear BB.

B-1B

The B-1B is equipped with three internal bays and eight external weapon stations on the fuselage and wing gloves. The six fuselage stations have higher capacity than the two wing-glove stations. Use of the external stations causes a significant increase in the radar cross-section.

Each internal bay can carry either a Multi-Purpose Rotary Launcher (MPRL), a Conventional Bomb Module (CBM), or a 2,975 gal (11,200L) fuel tank. Except for in the first few aircraft, the two forward bays can also be combined to carry a Common Strategic Rotary Launcher (CSRL) and a 1,500 gal (5,700L) fuel tank.

At its entry to service in 1986, the nuclear weapon options of the B-1B were eight B61/B63 nuclear BB or eight AGM-69A SRAM nuclear ASM in each MPRL. The SRAM was retired in 1990, the B-1B removed from the nuclear role in 1997, and the ability to carry nuclear weapons was disabled in 2011 to comply with the New START treaty.

The B-1B was tested for the internal carriage of eight AGM-86B ALCM or AGM-129A ACM nuclear ASMs in the CSRL and for the external carriage of fourteen ALCMs or ACMs on the external stations (two on each of the six fuselage stations and one on each of the two wing-glove stations). The vibration levels were too severe for the external carriage of the ALCM, but external carriage of the more robust ACM was feasible. Nevertheless, neither of these options became operational as the USAF deployed the ALCM and ACM exclusively on the B-52 in compliance with the (unratified) SALT II treaty.

In addition to cruise missiles, the fuselage external stations were designed to each carry six Mk 84 bombs or one 1,000 gal (3,800L) FTs, and the wing-glove stations were designed to each carry four Mk 82 bombs, but these options were never deployed.

The conventional weapons load was initially restricted to twenty-eight Mk 82 500 lb bombs in a CBM. The Mk 82 bombs could be high-drag or low-drag, and the similar

Mk 36 or Mk 62 mines could be used as well.

The conventional weapons options were expanded considerably during the aircraft's service with a series of upgrades:

- The 1996 upgrade allowed each CBM to carry ten CBU-87/89/97 cluster BBs.
- The 1998 upgrade allowed each MPRL to carry eight Mk 84 2,000 lb BBs or eight GBU-31 2,000 lb JDAM BSes, specifically the GBU-31(V)1/B with the standard Mk 84 2000 lb bomb as a warhead and the GBU-31(V)3/B with the BLU-109/B 2000 lb penetration bomb.
- The 2003 upgrade allowed the MPRL to carry eight AGM-154A JSOW BSes, but this weapon was not deployed operationally. It also allowed each CBM to carry ten CBU-103/104/105 wind-corrected cluster BBs or five GBU-38 JDAM BSes with a Mk 82 500 lb bomb as a warhead.
- The 2005 upgrade allowed each MPRL to carry eight AGM-158A JASSM ASMs. It also allowed each weapon bay to carry a different conventional weapon option. Prior to this, all weapon bays had to carry the same type of launcher and each launcher had to carry the same type of weapon.
- The 2008 upgrade recommissioned external station 1 for the AAQ-33 Sniper DP/LP and allowed the use of the laser-guided GBU-54 JDAM BS/BG in place of the GBU-38 BS.
- The 2014 upgrade allowed each MPRL to carry eight AGM-158B JASSM-ER ASMs.
- The 2018 upgrade allowed each MPRL to carry eight AGM-158C LRASM ASMs.
- The 2022 upgrade allowed each MPRL to carry a mixture of GBU-31 and GBU-38 JDAM BSes, with two GBU-38s replacing one GBU-31.

B-1R

I have assumed that the internal weapon options for the B-1R are the same as for the B-1B. I have assumed the external weapon stations can each carry two AMRAAMs or any air-to-ground weapon that can be carried internally.

Combat

The B-1B saw combat in 1998 in the Operation Desert Fox bombing campaign against Iraq, in 1999 in the Operation Allied Force armed intervention in Serbia and Kosovo, in the 2001-2021 War in Afghanistan, in the 2003 Invasion of Iraq, and in the 2011-2024 Syrian Civil War.

ADCs

- B-1A
- B-1B
- B-1R

Photo Credit

- B-1B: Andy Dunaway (Public Domain)

B-1A

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	3.5	2.5	1.5	36.0
M	2.5	2.0	1.0	9.0
N	0.0	0.0	0.0	4.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.0	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	3.0	3.0	4.0
HT	5.0	5.0	6.0
BT	6.0	7.0	8.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings / Climb Capabilities

Alt. Band	Conf. Ceil.	CL 55	1/2 48	DT 40	Dive Speed	CL AB	CL Oth	1/2 AB	1/2 Oth	DT AB	DT Oth	
EH+	46+	3.0 – 3.5	3.0 – 3.5	—	13.0	1.0	0.5	0.5	0.0	—	—	EH+
VH	36–45	3.0 – 3.5	3.0 – 3.5	3.0 – 3.5	12.0	1.0	1.0	0.5	0.5	0.5	—	VH
HI	26–35	2.5 – 3.5	3.0 – 3.5	3.0 – 3.5	11.0	2.0	1.0	1.0	0.5	0.5	0.5	HI
MH	17–25	2.5 – 3.5	2.5 – 3.5	2.5 – 3.5	11.0	3.0	1.0	2.0	1.0	1.0	0.5	MH
ML	8–16	2.5 – 3.5	2.5 – 3.5	2.5 – 3.5	10.0	4.0	2.0	3.0	2.0	1.0	0.5	ML
LO	0–7	1.5 – 3.5	2.0 – 3.5	2.0 – 3.5	10.0	4.0	2.0	3.0	2.0	2.0	1.0	LO

Radar:	APQ-144	**ECM:**	IFF
ECCM:	3	RWR:	C
Arcs:	120+	DDS:	D
Search:	Gr. Nav. (475)	DJM:	C4
Track:	Gr. Attack (250)	AJM:	C4
Lock-On:	8	BJM:	B3

Weapon Stations Diagram:

Guns:	—
To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—
Bomb System:	Advanced

Technology:

LPI Radar, TFR-B, and TV/IR Optics

Load Point Limits: CL : 0–64
1/2: 65–88
Weight Limit: 75,000 DT : 89+

Station	Limit	Allowed Loads
1–3	26,000	RL FT

Load Notes:

1. Stations 1-3 are internal bays and may each carry a rotary launcher with eight AGM-68A SRAM nuclear ASM or eight B43/B61 nuclear BB or an 11,200L FT (960 fuel points).
2. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1A Lancer is a strategic nuclear bomber.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the forward geometry and are used if the speed is 3.5 or less.
3. High bleed rate (HBR). High transonic drag (HTD). Low roll rate (LRR). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. DDS capacity is 250 decoys.

VPs: 90/60/30/15

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B-1A

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	3.5	2.5	1.5	36.0
M	2.5	2.0	1.0	9.0
N	0.0	0.0	0.0	4.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.0	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	3.0	4.0	5.0
HT	5.0	6.0	7.0
BT	7.0	7.0	8.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings

Climb Capabilities

Alt. Band	Conf. Ceil.	CL 55	1/2 48	DT 40	Dive Speed	CL AB	CL Oth	1/2 AB	1/2 Oth	DT AB	DT Oth	
EH+	46+	3.0 – 5.0	3.0 – 5.0	—	13.0	1.0	0.5	0.5	0.0	—	—	EH+
VH	36–45	3.0 – 5.0	3.0 – 5.0	3.0 – 5.0	12.0	1.0	1.0	0.5	0.5	0.5	—	VH
HI	26–35	2.5 – 5.0	3.0 – 5.0	3.0 – 5.0	11.0	2.0	1.0	1.0	0.5	0.5	0.5	HI
MH	17–25	2.5 – 5.0	2.5 – 5.0	2.5 – 5.0	11.0	3.0	1.0	2.0	1.0	1.0	0.5	MH
ML	8–16	2.5 – 5.0	2.5 – 5.0	2.5 – 5.0	10.0	4.0	2.0	3.0	2.0	1.0	0.5	ML
LO	0–7	1.5 – 5.0	2.0 – 5.0	2.0 – 5.0	10.0	4.0	2.0	3.0	2.0	2.0	1.0	LO

Radar:	APQ-144	**ECM:**	IFF
ECCM:	3	RWR:	C
Arcs:	120+	DDS:	D
Search:	Gr. Nav. (475)	DJM:	C4
Track:	Gr. Attack (250)	AJM:	C4
Lock-On:	8	BJM:	B3

Weapon Stations Diagram:

Guns:	—
To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—
Bomb System:	Advanced

Technology:

LPI Radar, TFR-B, and TV/IR Optics

Load Point Limits: CL : 0–64
1/2: 65–88
Weight Limit: 75,000 DT : 89+

Station	Limit	Allowed Loads
1–3	26,000	RL FT

Load Notes:

1. Stations 1-3 are internal bays and may each carry a rotary launcher with eight AGM-68A SRAM nuclear ASM or eight B43/B61 nuclear BB or an 11,200L FT (960 fuel points).
2. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1A Lancer is a strategic nuclear bomber.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the mid geometry and are used if the speed is 4.0 to 5.0.
3. High bleed rate (HBR). Low roll rate (LRR). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. DDS capacity is 250 decoys.

VPs: 90/60/30/15

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B-1A

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	3.5	2.5	1.5	36.0
M	2.5	2.0	1.0	9.0
N	0.0	0.0	0.0	4.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.0	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	4.0	5.0	5.0
HT	6.0	7.0	7.0
BT	7.0	8.0	9.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings

Alt. Band	Conf. Ceil.	CL 55	1/2 48	DT 40	Dive Speed
EH+	46+	3.0 – 14.0	3.0 – 12.0	—	15.0
VH	36–45	3.0 – 14.0	3.0 – 12.0	3.0 – 11.0	15.0
HI	26–35	2.5 – 12.0	3.0 – 11.0	3.0 – 10.0	14.0
MH	17–25	2.5 – 10.0	2.5 – 9.0	2.5 – 8.0	13.0
ML	8–16	2.5 – 8.0	2.5 – 7.0	2.5 – 6.5	11.0
LO	0–7	2.0 – 6.5	2.0 – 6.0	2.0 – 5.5	10.0

Climb Capabilities

CL AB	CL Oth	1/2 AB	1/2 Oth	DT AB	DT Oth	
1.0	0.5	0.5	0.0	—	—	EH+
1.0	1.0	0.5	0.5	0.5	—	VH
2.0	1.0	1.0	0.5	0.5	0.5	HI
3.0	1.0	2.0	1.0	1.0	0.5	MH
4.0	2.0	3.0	2.0	1.0	0.5	ML
4.0	2.0	3.0	2.0	2.0	1.0	LO

Radar:	APQ-144	**ECM:**	IFF
ECCM:	3	RWR:	C
Arcs:	120+	DDS:	D
Search:	Gr. Nav. (475)	DJM:	C4
Track:	Gr. Attack (250)	AJM:	C4
Lock-On:	8	BJM:	B3

Weapon Stations Diagram:

Guns:	—
To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—
Bomb System:	Advanced

Technology:

LPI Radar, TFR-B, and TV/IR Optics

Load Point Limits: CL : 0–64
1/2: 65–88
Weight Limit: 75,000 DT : 89+

Station	Limit	Allowed Loads
1–3	26,000	RL FT

Load Notes:

1. Stations 1-3 are internal bays and may each carry a rotary launcher with eight AGM-68A SRAM nuclear ASM or eight B43/B61 nuclear BB or an 11,200L FT (960 fuel points).
2. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1A Lancer is a strategic nuclear bomber.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the aft geometry and are used if the speed is 5.5 or more.
3. High bleed rate (HBR). Low roll rate (LRR). Low transonic drag (LTD). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. DDS capacity is 250 decoys.

VPs: 90/60/30/15

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B-1B Lancer

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	3.5	2.5	1.5	36.0
M	2.5	2.0	1.0	9.0
N	0.0	0.0	0.0	4.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.0	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	3.0	3.0	4.0
HT	5.0	5.0	6.0
BT	6.0	7.0	8.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings

Alt. Band	Conf. Ceil.	CL 55	1/2 48	DT 40	Dive Speed
EH+	46+	3.0 – 3.5	3.0 – 3.5	—	13.0
VH	36–45	3.0 – 3.5	3.0 – 3.5	3.0 – 3.5	12.0
HI	26–35	2.5 – 3.5	3.0 – 3.5	3.0 – 3.5	11.0
MH	17–25	2.5 – 3.5	2.5 – 3.5	2.5 – 3.5	11.0
ML	8–16	2.5 – 3.5	2.5 – 3.5	2.5 – 3.5	10.0
LO	0–7	1.5 – 3.5	2.0 – 3.5	2.0 – 3.5	10.0

Climb Capabilities

CL AB	CL Oth	1/2 AB	1/2 Oth	DT AB	DT Oth	
1.0	0.5	0.5	0.0	—	—	EH+
1.0	1.0	0.5	0.5	0.5	—	VH
2.0	1.0	1.0	0.5	0.5	0.5	HI
3.0	1.0	2.0	1.0	1.0	0.5	MH
4.0	2.0	3.0	2.0	1.0	0.5	ML
4.0	2.0	3.0	2.0	2.0	1.0	LO

Radar:	APQ-164	**ECM:**	IFF
ECCM:	3	RWR:	D
Arcs:	120+	DDS:	D
Search:	Gr. Nav. (475)	DJM:	C4
Track:	Gr. Attack (250)	AJM:	C4
Lock-On:	8	BJM:	D4

Weapon Stations Diagram:

Guns:	—
To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—
Bomb System:	Advanced

Technology:

TFR-B, Stealth (2), LPI Radar, and Towed Decoy (+2)

Load Point Limits: CL : 0–64
1/2: 65–88
Weight Limit: 75,000 DT : 89+

Station	Limit	Allowed Loads
1–3 and 9–11	7,000	ASM BB FT OP/LP
4 and 8	3,500	ASM BB
5–7	26,000	CBM MPRL CSRL FT

Load Notes:

1. Stations 1-3 and 9-11 are the fuselage stations.
2. Stations 4 and 8 are the wing-glove stations.
3. Stations 5 to 7 are internal bays and may each carry a MPRL, CBM, or 11,200L FT (960 fuel points). Stations 5 and 6 may be combined to carry a CSRL and a 5,600L FT (480 fuel points).
4. See the extended notes for load options and restrictions for the MPRL, CBM, and CSRL.
5. Station 1 may carry an AAQ-33 Sniper DP/LP.
6. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1B Lancer is a strategic nuclear and conventional bomber that also serves as a long-endurance close-support aircraft. Its nickname is “Bone”.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the forward geometry and are used if the speed is 3.5 or less.
3. High bleed rate (HBR). High transonic drag (HTD). Low roll rate (LRR). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. Tail Radar. Equiped with a ALQ-153 tail radar with ECCM 2, arc 60–, search 40-20, track 25-8, and lock-on 8–.
5. DDS capacity is 250 decoys.
6. DDS/DJM/AJM/BJM from 1991. TFR-B from 1992. Towed decoy technology from 1998.
7. Stealth technology is reduced to 1 if the OP/DP is carried and 0 if any other external store is carried.

VPs: 100/67/33/17

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B-1B Lancer

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	3.5	2.5	1.5	36.0
M	2.5	2.0	1.0	9.0
N	0.0	0.0	0.0	4.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.0	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	3.0	4.0	5.0
HT	5.0	6.0	7.0
BT	7.0	7.0	8.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings

Alt. Band	Conf. Ceil.	CL 55	1/2 48	DT 40	Dive Speed
EH+	46+	3.0 – 5.0	3.0 – 5.0	—	13.0
VH	36–45	3.0 – 5.0	3.0 – 5.0	3.0 – 5.0	12.0
HI	26–35	2.5 – 5.0	3.0 – 5.0	3.0 – 5.0	11.0
MH	17–25	2.5 – 5.0	2.5 – 5.0	2.5 – 5.0	11.0
ML	8–16	2.5 – 5.0	2.5 – 5.0	2.5 – 5.0	10.0
LO	0–7	1.5 – 5.0	2.0 – 5.0	2.0 – 5.0	10.0

Climb Capabilities

	CL		1/2		DT		
	AB	Oth	AB	Oth	AB	Oth	
EH+	1.0	0.5	0.5	0.0	—	—	EH+
VH	1.0	1.0	0.5	0.5	0.5	—	VH
HI	2.0	1.0	1.0	0.5	0.5	0.5	HI
MH	3.0	1.0	2.0	1.0	1.0	0.5	MH
ML	4.0	2.0	3.0	2.0	1.0	0.5	ML
LO	4.0	2.0	3.0	2.0	2.0	1.0	LO

Radar:	APQ-164
ECCM:	3
Arcs:	120+
Search:	Gr. Nav. (475)
Track:	Gr. Attack (250)
Lock-On:	8

ECM:	IFF
RWR:	D
DDS:	D
DJM:	C4
AJM:	C4
BJM:	D4

Weapon Stations Diagram:

Guns:	—
To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—

Bomb System: Advanced

Technology:

TFR-B, Stealth (2), LPI Radar, and Towed Decoy (+2)

Load Point Limits: CL : 0–64
1/2: 65–88
Weight Limit: 75,000 DT : 89+

Station	Limit	Allowed Loads
1–3 and 9–11	7,000	ASM BB FT OP/LP
4 and 8	3,500	ASM BB
5–7	26,000	CBM MPRL CSRL FT

Load Notes:

1. Stations 1-3 and 9-11 are the fuselage stations.
2. Stations 4 and 8 are the wing-glove stations.
3. Stations 5 to 7 are internal bays and may each carry a MPRL, CBM, or 11,200L FT (960 fuel points). Stations 5 and 6 may be combined to carry a CSRL and a 5,600L FT (480 fuel points).
4. See the extended notes for load options and restrictions for the MPRL, CBM, and CSRL.
5. Station 1 may carry an AAQ-33 Sniper DP/LP.
6. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1B Lancer is a strategic nuclear and conventional bomber that also serves as a long-endurance close-support aircraft. Its nickname is “Bone”.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the mid geometry and are used if the speed is 4.0 to 5.0.
3. High bleed rate (HBR). Low roll rate (LRR). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. Tail Radar. Equiped with a ALQ-153 tail radar with ECCM 2, arc 60–, search 40-20, track 25-8, and lock-on 8–.
5. DDS capacity is 250 decoys.
6. DDS/DJM/AJM/BJM from 1991. TFR-B from 1992. Towed decoy technology from 1998.
7. Stealth technology is reduced to 1 if the OP/DP is carried and 0 if any other external store is carried.

VPs: 100/67/33/17

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B-1B Lancer

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	3.5	2.5	1.5	36.0
M	2.5	2.0	1.0	9.0
N	0.0	0.0	0.0	4.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.0	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	4.0	5.0	5.0
HT	6.0	7.0	7.0
BT	7.0	8.0	9.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings

Alt. Band	Conf. Ceil.	CL 55	1/2 48	DT 40	Dive Speed
EH+	46+	3.0 – 8.0	3.0 – 7.5	—	13.0
VH	36–45	3.0 – 8.0	3.0 – 7.5	3.0 – 6.5	12.0
HI	26–35	2.5 – 8.5	3.0 – 8.0	3.0 – 7.5	11.0
MH	17–25	2.5 – 8.0	2.5 – 7.5	2.5 – 7.0	11.0
ML	8–16	2.5 – 7.5	2.5 – 7.0	2.5 – 6.5	10.0
LO	0–7	2.0 – 7.0	2.0 – 6.5	2.0 – 6.0	10.0

Climb Capabilities

	CL		1/2		DT		
	AB	Oth	AB	Oth	AB	Oth	
EH+	1.0	0.5	0.5	0.0	—	—	EH+
VH	1.0	1.0	0.5	0.5	0.5	—	VH
HI	2.0	1.0	1.0	0.5	0.5	0.5	HI
MH	3.0	1.0	2.0	1.0	1.0	0.5	MH
ML	4.0	2.0	3.0	2.0	1.0	0.5	ML
LO	4.0	2.0	3.0	2.0	2.0	1.0	LO

Radar:	APQ-164
ECCM:	3
Arcs:	120+
Search:	Gr. Nav. (475)
Track:	Gr. Attack (250)
Lock-On:	8

ECM:	IFF
RWR:	D
DDS:	D
DJM:	C4
AJM:	C4
BJM:	D4

Weapon Stations Diagram:

Guns:	—
To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—

Bomb System: Advanced

Technology:

TFR-B, Stealth (2), LPI Radar, and Towed Decoy (+2)

Load Point Limits: CL : 0–64
1/2: 65–88
Weight Limit: 75,000 DT : 89+

Station	Limit	Allowed Loads
1–3 and 9–11	7,000	ASM BB FT OP/LP
4 and 8	3,500	ASM BB
5–7	26,000	CBM MPRL CSRL FT

Load Notes:

1. Stations 1-3 and 9-11 are the fuselage stations.
2. Stations 4 and 8 are the wing-glove stations.
3. Stations 5 to 7 are internal bays and may each carry a MPRL, CBM, or 11,200L FT (960 fuel points). Stations 5 and 6 may be combined to carry a CSRL and a 5,600L FT (480 fuel points).
4. See the extended notes for load options and restrictions for the MPRL, CBM, and CSRL.
5. Station 1 may carry an AAQ-33 Sniper DP/LP.
6. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1B Lancer is a strategic nuclear and conventional bomber that also serves as a long-endurance close-support aircraft. Its nickname is “Bone”.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the aft geometry and are used if the speed is 5.5 or more.
3. High bleed rate (HBR). Low roll rate (LRR). Low transonic drag (LTD). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. Tail Radar. Equiped with a ALQ-153 tail radar with ECCM 2, arc 60–, search 40-20, track 25-8, and lock-on 8–.
5. DDS capacity is 250 decoys.
6. DDS/DJM/AJM/BJM from 1991. TFR-B from 1992. Towed decoy technology from 1998.
7. Stealth technology is reduced to 1 if the OP/DP is carried and 0 if any other external store is carried.

VPs: 100/67/33/17

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B-1R Lancer

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	4.0	3.0	2.0	42.0
M	3.5	2.5	1.5	12.0
N	0.0	0.0	0.0	5.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.5	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	3.0	3.0	4.0
HT	5.0	5.0	6.0
BT	6.0	7.0	8.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings

Alt. Band	Conf. Ceil.	CL 57	1/2 50	DT 42	Dive Speed
EH+	46+	3.0 – 3.5	3.0 – 3.5	—	13.0
VH	36–45	3.0 – 3.5	3.0 – 3.5	3.0 – 3.5	12.0
HI	26–35	2.5 – 3.5	3.0 – 3.5	3.0 – 3.5	11.0
MH	17–25	2.5 – 3.5	2.5 – 3.5	2.5 – 3.5	11.0
ML	8–16	2.5 – 3.5	2.5 – 3.5	2.5 – 3.5	10.0
LO	0–7	1.5 – 3.5	2.0 – 3.5	2.0 – 3.5	10.0

Climb Capabilities

CL AB	CL Oth	1/2 AB	1/2 Oth	DT AB	DT Oth	
1.0	0.5	0.5	0.0	—	—	EH+
1.0	1.0	0.5	0.5	0.5	—	VH
2.5	1.5	1.5	1.0	0.5	0.5	HI
3.5	1.5	2.5	1.5	1.0	0.5	MH
4.5	3.0	3.5	3.0	1.5	1.0	ML
5.0	3.0	3.5	3.0	2.5	1.5	LO

Radar:

ECCM:	4
Arcs:	120+
Search:	360–60
Track:	300–60
Lock-On:	8

ECM: IFF

RWR:	D
DDS:	D
DJM:	D5
AJM:	D5
BJM:	D5

Weapon Stations Diagram:

Guns: —

To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—

Bomb System: Advanced

Technology:

Auto-Track, Look-Down Radar, LPI Radar, Multi-Target (6), Target ID, TFR-B, Towed Decoy (+2), and Track-While-Scan (100)

Load Point Limits: CL : 0–64
1/2: 65–88
DT : 89+

Weight Limit: 75,000

Station	Limit	Allowed Loads
1–3 and 9–11	7,000	MDR AHM BB BS BG ASM OP/LP
4 and 8	3,500	MDR AHM BB BS BG ASM
5–7	26,000	CBM MPRL FT

Load Notes:

1. Stations 1-3 and 9-11 are the fuselage stations.
2. Stations 4 and 8 are the wing-glove stations.
3. Stations 5 to 7 are internal bays and may each carry any internal load allowed for the B-1B.
4. Stations 1-4 and 8-11 may carry any BB, BG, BG, or ASM weapon that can be carried internally or a MDR with two AIM-120 AHMs. Stations 1-3 and 9-11 may each carry two 2,000 lb weapons or six 500 lb weapons. Stations 4 and 8 may each carry one 2,000 lb weapon or four 500 lb weapons. Station 1 may carry an AAQ-33 Sniper OP/DP.
5. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1R Lancer is a strategic conventional bomber. Its nickname is “Bone”.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the forward geometry and are used if the speed is 3.5 or less.
3. High bleed rate (HBR). High transonic drag (HTD). Low roll rate (LRR). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. DDS capacity is 250 decoys.
5. Dual-Mode Radar. The radar may also function as a navigation/attack radar with a search range of 475, tracking range of 250, and a lock-on roll of 8–.

VPs: 110/73/37/18

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B-1R Lancer

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	4.0	3.0	2.0	42.0
M	3.5	2.5	1.5	12.0
N	0.0	0.0	0.0	5.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.5	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	3.0	4.0	5.0
HT	5.0	6.0	7.0
BT	7.0	7.0	8.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings

Alt. Band	Conf. Ceil.	CL 57	1/2 50	DT 42	Dive Speed
EH+	46+	3.0 – 5.0	3.0 – 5.0	—	13.0
VH	36–45	3.0 – 5.0	3.0 – 5.0	3.0 – 5.0	12.0
HI	26–35	2.5 – 5.0	3.0 – 5.0	3.0 – 5.0	11.0
MH	17–25	2.5 – 5.0	2.5 – 5.0	2.5 – 5.0	11.0
ML	8–16	2.5 – 5.0	2.5 – 5.0	2.5 – 5.0	10.0
LO	0–7	1.5 – 5.0	2.0 – 5.0	2.0 – 5.0	10.0

Climb Capabilities

	CL		1/2		DT		
	AB	Oth	AB	Oth	AB	Oth	
EH+	1.0	0.5	0.5	0.0	—	—	EH+
VH	1.0	1.0	0.5	0.5	0.5	—	VH
HI	2.5	1.5	1.5	1.0	0.5	0.5	HI
MH	3.5	1.5	2.5	1.5	1.0	0.5	MH
ML	4.5	3.0	3.5	3.0	1.5	1.0	ML
LO	5.0	3.0	3.5	3.0	2.5	1.5	LO

Radar:

ECCM:	4
Arcs:	120+
Search:	360–60
Track:	300–60
Lock-On:	8

ECM: IFF

RWR:	D
DDS:	D
DJM:	D5
AJM:	D5
BJM:	D5

Weapon Stations Diagram:

Guns: —

To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—

Bomb System: Advanced

Technology:

Auto-Track, Look-Down Radar, LPI Radar, Multi-Target (6), Target ID, TFR-B, Towed Decoy (+2), and Track-While-Scan (100)

Load Point Limits: CL : 0–64
1/2: 65–88
Weight Limit: 75,000 DT : 89+

Station	Limit	Allowed Loads
1–3 and 9–11	7,000	MDR AHM BB BS BG ASM OP/LP
4 and 8	3,500	MDR AHM BB BS BG ASM
5–7	26,000	CBM MPRL FT

Load Notes:

1. Stations 1-3 and 9-11 are the fuselage stations.
2. Stations 4 and 8 are the wing-glove stations.
3. Stations 5 to 7 are internal bays and may each carry any internal load allowed for the B-1B.
4. Stations 1-4 and 8-11 may carry any BB, BG, BG, or ASM weapon that can be carried internally or a MDR with two AIM-120 AHMs. Stations 1-3 and 9-11 may each carry two 2,000 lb weapons or six 500 lb weapons. Stations 4 and 8 may each carry one 2,000 lb weapon or four 500 lb weapons. Station 1 may carry an AAQ-33 Sniper OP/DP.
5. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1R Lancer is a strategic conventional bomber. Its nickname is “Bone”.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the mid geometry and are used if the speed is 4.0 to 5.0.
3. High bleed rate (HBR). Low roll rate (LRR). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. DDS capacity is 250 decoys.
5. Dual-Mode Radar. The radar may also function as a navigation/attack radar with a search range of 475, tracking range of 250, and a lock-on roll of 8–.

VPs: 110/73/37/18

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B-1R Lancer

Crew: Pilot, Copilot, Offensive Systems Operator, and Defensive Systems Operator

Power APs/DPs: ○○○○

	CL	1/2	DT	Fuel
AB	4.0	3.0	2.0	42.0
M	3.5	2.5	1.5	12.0
N	0.0	0.0	0.0	5.0
I	1.0	2.0	2.0	1.0
SPBR	2.0	2.0	2.0	—

Cruise Spd. CL:	5.5	Restr. Arcs:	-
Climb Spd.:	4.5	Blind Arcs:	90–
Visibility:	11	Internal Fuel:	9800
Size:	–2	AtA Refuel:	Yes
Vulnerability:	+1	Ejection Seat:	Adv

Maneuver HFPs/DPs:

LR/DR	1.0	2.0
VR		1.5

Turn DPs:

	CL	1/2	DT
TT	4.0	5.0	5.0
HT	6.0	7.0	7.0
BT	7.0	8.0	9.0
ET	—	—	—

Rolling maneuvers only if CL.

Speeds and Ceilings

Alt. Band	Conf. Ceil.	CL 57	1/2 50	DT 42	Dive Speed
EH+	46+	3.0 – 14.0	3.0 – 12.5	—	15.0
VH	36–45	3.0 – 14.0	3.0 – 12.5	3.0 – 11.5	15.0
HI	26–35	2.5 – 12.5	3.0 – 11.5	3.0 – 10.5	14.0
MH	17–25	2.5 – 11.0	2.5 – 10.0	2.5 – 9.0	13.0
ML	8–16	2.5 – 9.0	2.5 – 8.5	2.5 – 7.5	11.0
LO	0–7	2.0 – 7.5	2.0 – 7.0	2.0 – 6.5	10.0

Climb Capabilities

Alt. Band	CL AB	CL Oth	1/2 AB	1/2 Oth	DT AB	DT Oth	Alt. Band
EH+	1.0	0.5	0.5	0.0	—	—	EH+
VH	1.0	1.0	0.5	0.5	0.5	—	VH
HI	2.5	1.5	1.5	1.0	0.5	0.5	HI
MH	3.5	1.5	2.5	1.5	1.0	0.5	MH
ML	4.5	3.0	3.5	3.0	1.5	1.0	ML
LO	5.0	3.0	3.5	3.0	2.5	1.5	LO

Radar:

ECCM:	4
Arcs:	120+
Search:	360–60
Track:	300–60
Lock-On:	8

ECM: IFF

RWR:	D
DDS:	D
DJM:	D5
AJM:	D5
BJM:	D5

Weapon Stations Diagram:

Guns: —

To Hit:	—
Ammunition:	—
Gunsight:	—
Ranging:	—
AtA/AtG:	—

Bomb System: Advanced

Technology:

Auto-Track, Look-Down Radar, LPI Radar, Multi-Target (6), Target ID, TFR-B, Towed Decoy (+2), and Track-While-Scan (100)

Load Point Limits: CL : 0–64
1/2: 65–88
DT : 89+

Weight Limit: 75,000

Station	Limit	Allowed Loads
1–3 and 9–11	7,000	MDR AHM BB BS BG ASM OP/LP
4 and 8	3,500	MDR AHM BB BS BG ASM
5–7	26,000	CBM MPRL FT

Load Notes:

1. Stations 1-3 and 9-11 are the fuselage stations.
2. Stations 4 and 8 are the wing-glove stations.
3. Stations 5 to 7 are internal bays and may each carry any internal load allowed for the B-1B.
4. Stations 1-4 and 8-11 may carry any BB, BG, BG, or ASM weapon that can be carried internally or a MDR with two AIM-120 AHMs. Stations 1-3 and 9-11 may each carry two 2,000 lb weapons or six 500 lb weapons. Stations 4 and 8 may each carry one 2,000 lb weapon or four 500 lb weapons. Station 1 may carry an AAQ-33 Sniper OP/DP.
5. As an exception to the normal rules, internal stores and fuel contribute 1 load point for each 1,000 of weight or 50 fuel points. A return mission will typically require leaving the target with at least 3200 fuel points (64 load points).

Notes:

1. The Rockwell B-1R Lancer is a strategic conventional bomber. Its nickname is “Bone”.
2. This is a variable-geometry aircraft with allowed geometries of forward, mid, and aft. The geometry changes automatically at the end of each turn according to the speed. The data shown here are for the aft geometry and are used if the speed is 5.5 or more.
3. High bleed rate (HBR). Low roll rate (LRR). Low transonic drag (LTD). Poor supersonic maneuverability (PSSM). Rapid acceleration (RA).
4. DDS capacity is 250 decoys.
5. Dual-Mode Radar. The radar may also function as a navigation/attack radar with a search range of 475, tracking range of 250, and a lock-on roll of 8–.

VPs: 110/73/37/18

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