

Bell FM-1A "Airacuda"

A/C Type: Bomber Destroyer
 Engine(s): Two Allison V-1710-23 inline
 Eng. Pwr: 1920-2180 hp, liquid-cooled
 A/C Crew: Pilot, Gunnery Officer/Navigator,
 Flt Eng/Gunner, 2 Loaders.

Maximum Speed: 270 mph at 12,600 ft
 Maximum Ceiling: 30,500 ft.

Defense factor: 6 Size Modifier: +1
 Damage Factor: 10/15 Endurance: 160
 Cockpit View: Good Blind Area: None

Protection: Cockpit +0 Fuel +0 Engine +0

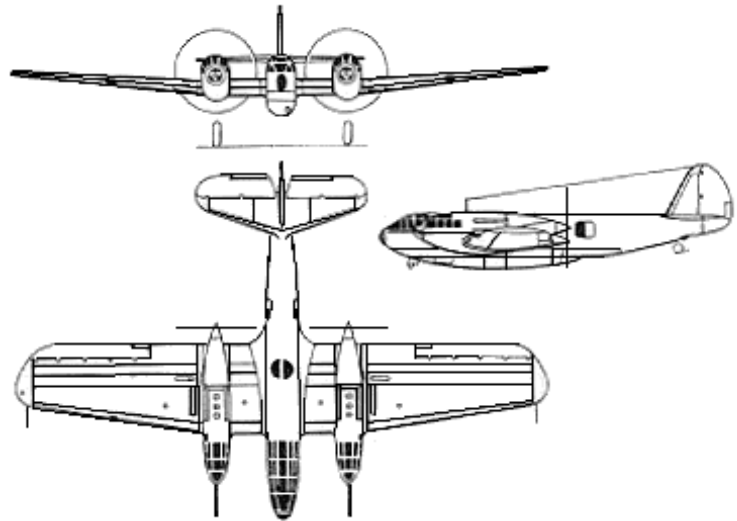
Climb Decel/ Dive Accel: 3.0 / 1.0

Weight and Load Limit: None

Wpn Stations Weight Allowed Loads

Country: USA

Service Entry Date: Sept, 1939



Class: M

Victory Points: 4-6

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(5)	Min ET(6)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	3.0	5.0	8.0	4.5	6.0	7.0	8.0	25-30	HI	300
19-24	MH	2.5	5.5	8.5	4.0	5.5	6.0	7.0	19-24	MH	800
13-18	ML	2.5	5.5	8.5	3.5	4.5	5.5	6.5	13-18	ML	1,400
7-12	LO	2.0	5.5	8.0	3.0	4.0	4.5	5.5	7-12	LO	1,200
1-6	VL	2.0	5.0	7.5	2.5	3.5	4.0	5.0	1-6	VL	1,500

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
W1	1x 37mm Colt M4 cannon	8	1
W2	1x 37mm Colt M4 cannon	8	1
W3	1x .30 cal MG (coax)	8	4
W4	1x .30 cal MG (coax)	8	4
L/RG	1x .50 cal mg	12	3
DT	1x .30 cal mg	12	4
VG	1x .30 cal mg	12	4

GUN ATTACK FACTORS

Rng	W1	W2	W3	W4	DT	VG	L/RG	Total
0	7	7	6	6	4	3	6	26
1	5	5	4	4	3	2	4	18
2	4	4	2	2	2	1	3	12
3	3	3	1	1	1	1	2	8
4	2	2	1	1	1	1	1	6
5	1	1	1	1	1	1	1	4
6	1	1	--	--	--	--	1	2
7	1	1	--	--	--	--	--	2
10	1	1	--	--	--	--	--	2

WEAPON STATION LOCATION

POWER VERSUS SPEED CHART

(per engine)

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	1.0/1.5	--	--	--	HI
19-24	MH	1.5/2.0	0.5	--	--	MH
13-18	ML	2.0/2.5	1/1.5	--	--	ML
7-12	LO	2.0/2.5	1/1.5	--	--	LO
1-6	VL	2.0/2.5	1/1.5	--	--	VL
Banking FPs		3	4	6	--	
Side Slip FPs		4	5	7	--	

NOTES AND VARIANTS

Defensive Gun Arcs For Mike Traynor, who waited a long time...
 DT: All level - high; 6:00 high only Only 1 defensive gun can be manned
 VG: Rear -30, low per turn. DT retracts: 3 cbt turns to raise;
 L/RG: Left/Right Rear, level 2 to lower. 1decel while raised.

Bell FM-1A Airacuda: First US twin-engine fighter (Fighter Multiplace).
 Developed to destroy heavy bombers. Features pusher props (+1 bailout mod, +3 from nacelle); first use of the Allison V-1710. Navigator has 2nd set of controls but limited periscope vision. Criticals: If radio hit, roll D10: 1-5, Aux Power unit hit; no fuel pumps, gear, flaps, hydraulics (EZ turns only). 12 built.

Canon: Can use W3,W4 for MG sighting. Hand-loaded from nacelle. Guns track by ballistic computer: harmony = 2-5 on second and subsequent attacks at a target. Loaders can fire: +2 shot mod, no computer bonus.

Seversky 2PA "Guardman"

A/C Type: Two-seat fighter
 Engine(s): One Wright R-1830-S3C radial
 Eng. Pwr: 1100-hp, air-cooled, Non-F.I.
 A/C Crew: Pilot, gunner

Maximum Speed: 309 mph at 10,000 ft
 Maximum Ceiling: 28,000 ft.

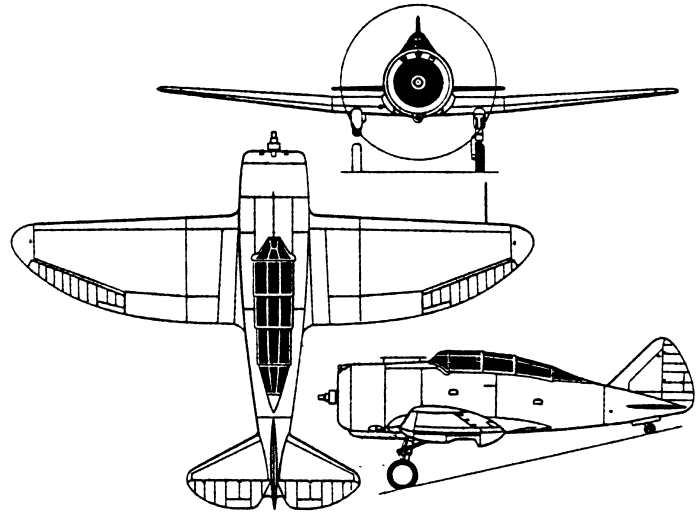
Defense factor: 5 Size Modifier: +0
 Damage Factor: 7/11 Endurance: 110
 Cockpit View: Fair Blind Area: Rear Low

Protection: Cockpit +0 Fuel +0 Engine +0
 Climb Dece/ Dive Accel: 3.0 / 1.0
 Weight and Load Limit: 500 / 2-3

Wpn Stations	Weight	Allowed Loads
1, 2, 4, 5	100	1x 100 lb bomb
3	500	1x 500lb bomb

Country: IJN (A8V1)
 USAAC (AT-12)

Service Entry Date: 1938
 June, 1940



Class: F

Victory Points: 3-5

AIRCRAFT PERFORMANCE CHART

Altitude Levels		Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(5)	Min ET(6)	Altitude Levels		Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	2.5	4.5	8.5	3.5	4.5	5.5	6.5	25-30	HI	200
19-24	MH	2.5	5.0	8.5	3.0	4.0	5.0	6.0	19-24	MH	600
13-18	ML	2.0	5.5	9.0	2.5	3.5	4.5	5.5	13-18	ML	1,100
7-12	LO	2.0	6.0	9.0	2.0	3.0	3.5	4.5	7-12	LO	1,500
1-6	VL	1.5	5.0	7.5	2.0	2.5	3.0	4.0	1-6	VL	1,600

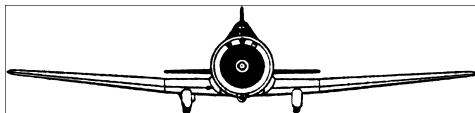
FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	Two .30 cal Browning	8	4
W1	One .50 cal M2 mg	8	3
W2	One .50 cal M2 mg	8	3
W3	One .30 cal Browning	10	4
W4	One .30 cal Browning	10	4
DG	One .30 cal/7.7mm mg		4

GUN ATTACK FACTORS

Rng	N1	W1	W2	W3	W4	DG	Total
0	11	9	9	6	6	3	29/23
1	8	6	6	4	4	2	20/16
2	6	4	4	3	3	1	14/12
3	4	3	3	2	2	1	10/8
4	3	2	2	1	1	1	7/5
5	2	1	1	1	1	1	4/4
6	1	1	1	--	--	--	3/1
7	--	--	--	--	--	--	--

WEAPON STATION LOCATION



1 23 4 5

POWER VERSUS SPEED CHART

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	1	--	--	--	HI
19-24	MH	2	1	--	--	MH
13-18	ML	4	1	--	--	ML
7-12	LO	6	3	--	--	LO
1-6	VL	6	3	--	--	VL
Banking FPs		3	4	6	--	
Side Slip FPs		4	5	7	--	

NOTES AND VARIANTS

DG: Rear level to high; 6:00 high only.

Seversky 2PA: Available 1938. 2-seat monoplane fighter developed from P-35 for export. Could be armed with W1/2 or W3/4

- 20 2PA-B3 bought by Japanese Navy (designated A8V1). Armed only with N1 & DG. Deemed not sufficiently maneuverable or fast. Used as a recon patrol fighter over China in 1939. Withdrawn from combat before 1941.
- 52 ordered by Sweden (as 2PA-204L), but were confiscated in June 1940 by US. Used as AT-12 trainers.

Douglas B-18A Bolo

A/C Type: Medium Bomber
 Engine(s): Two Wright R-1820-53
 Eng. Pwr: 1700-2000-hp, air-cooled, Non-F.I.
 A/C Crew: Pilot, Copilot, Nav/Bombadier,
 3 Gunners

Maximum Speed: 215 mph at 10,000 ft
 Maximum Ceiling: 23,900 ft.

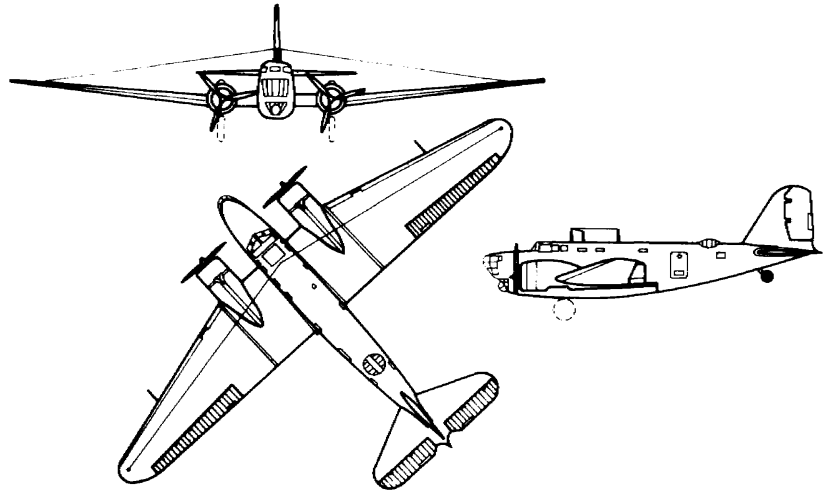
Defense factor: 6 Size Modifier: +1
 Damage Factor: 12/18 Endurance: 248
 Cockpit View: Fair Blind Area: None

Protection: Cockpit +0 Fuel +0 Engine +0
 Climb Dece/ Dive Accel: 2.0 / 1.0
 Weight and Load Limit: 4,400 / 7-10

Wpn Stations	Weight	Allowed Loads
1 (bombbay)	4400 lbs	10 bombs

Country: USA

Service Entry Date: June, 1938



Class: M

Victory Points: 4-6

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(2)	Min HT(3)	Min BT(-)	Min ET(-)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	--	VH	--
25-30	HI	--	--	--	--	--	--	--	25-30	HI	--
19-24	MH	2.0	3.5	7.0	3.0	4.5	--	--	19-24	MH	500
13-18	ML	2.0	4.0	7.0	2.5	4.0	--	--	13-18	ML	800
7-12	LO	2.0	4.0	6.5	2.0	3.0	--	--	7-12	LO	1,000
1-6	VL	1.5	4.0	6.0	2.0	3.0	--	--	1-6	VL	1,000

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
FG	One .30 cal mg	8	4
TT	One .30 cal mg	8	4
VG	One .30 cal mg	8	4

GUN ATTACK FACTORS

Range	FG	TT	VG
0	3	6	3
1	2	4	2
2	2	3	2
3	1	2	1
4	1	1	1
5	1	1	1
6	--	--	--
7	--	--	--

WEAPON STATION LOCATION



1

POWER VERSUS SPEED CHART

(per engine)

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	--	--	--	--	HI
19-24	MH	1.0/-	--	--	--	MH
13-18	ML	1.0/1.5	--	--	--	ML
7-12	LO	1.5/2	--	--	--	LO
1-6	VL	1.5/2	--	--	--	VL
Banking FPs		3	4	6	--	
Side Slip FPs		4	5	7	--	

NOTES AND VARIANTS

Defensive Gun Arcs

FG: Front, level to low TT & VG share a gunner; onlt fire 1/turn.
 TT: All level - high; 6:00 high only TT is retractable: 3 combat turns to raise; 2 to lower. 1decel while raised.
 VG: Rear, low

Boeing B-18A: Avail Jun-38. Selected as a hedge against the technologic leap involved with the B-17. Based on DC-2, the B-18 provided a lack-luster improvement over the B-10/B-12. Obsolete when ordered, the B-18 was the most widely available bomber in USAAF inventory in Dec-41. Immediately assigned coastal patrols along the east and west coasts and the Carribean. First US a/c to successfully install ASV radar or MAD (122 outfitted w/SCR-517 ASV radar as B-18B). Phased out by 1942. 217 built.

B-18: Avail May-37. Slightly weaker eng. TT is not powered: 4/3/2/2/1/1/-/-.
 FG: high to low.Emd=233. roc =100 VL-LO. 133 built.

Douglas B-32 Dragon

Country: USA

Service Entry Date: June, 1940

A/C Type: Medium Bomber
 Engine(s): Two Wright R-2600-3 radials
 Eng. Pwr: 2550-3200-hp, air-cooled, Non-F.I.
 A/C Crew: Pilot, Copilot, Nav/Bombadier,
 Radio/Gun, CamOp/Gun, Tail Gun

Maximum Speed: 282 mph at 10,000 ft
 Maximum Ceiling: 31,600 ft.

Defense factor: 6 Size Modifier: +1
 Damage Factor: 12/18 Endurance: 470
 Cockpit View: Fair Blind Area: None

Protection: Cockpit +0 Fuel +0 Engine +0

Climb Dece/ Dive Accel: 2.0 / 1.0

Weight and Load Limit: 6,000 / 8-12

Wpn Stations	Weight	Allowed Loads
1 (bombbay)	6000 lbs	up to 2000 lb bombs

Class: M

Victory Points: 5-8

AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(-)	Min ET(-)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	2.5	4.5	7.5	4.0	5.0	--	--	--	VH	300
25-30	HI	2.5	4.5	8.0	4.0	5.0	--	--	25-30	HI	400
19-24	MH	2.0	5.0	8.0	3.5	4.5	--	--	19-24	MH	700
13-18	ML	2.0	5.5	8.0	3.5	4.0	--	--	13-18	ML	1,100
7-12	LO	2.0	5.5	7.5	3.0	3.5	--	--	7-12	LO	1,400
1-6	VL	1.5	5.0	7.0	3.0	3.5	--	--	1-6	VL	1,400

FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
FG	One .30 cal mg	8	4
L/RG	One .30 cal mg	8	4
TG	One .50 cal mg	8	3

GUN ATTACK FACTORS

Range	FG	L/RG	TG
0	3	4	6
1	2	3	4
2	2	2	3
3	1	1	2
4	1	1	1
5	1	1	1
6	--	--	1
7	--	--	--

WEAPON STATION LOCATION

POWER VERSUS SPEED CHART

(per engine)

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	0.5/-	--	--	--	VH
25-30	HI	0.5/1.0	--	--	--	HI
19-24	MH	1.0/1.5	0.5/-	--	--	MH
13-18	ML	1.5/2.0	0.5/1.0	--	--	ML
7-12	LO	2.0/2.5	1.0/1.5	--	--	LO
1-6	VL	2.0/2.5	1.0/1.5	--	--	VL
Banking FPs		3	4	6	--	
Side Slip FPs		4	5	7	--	

NOTES AND VARIANTS

Defensive Gun Arcs

FG: Front, level to low

L/R: Level, L or R -30

VG: Rear, low to high

L/RG shoots to either side, but it is a single weapon.

Boeing B-23: Avail Jun-40. B-18 improved by larger engines, better streamlining, and DC-3 wings. However, since it was quite inferior to the B-17E, B-25, and B-26 then becoming available, it was never used as a bomber. First used for ASW patrols with 17th BG, it was relegated for training and experimental use. 38 built.