

German Aircraft Data Table							
Aircraft	Maneuver	Attack	Defense	Forward Guns	Bombs	Rockets, Bomblets	Date
Me-109E-1	9	4	6	2x 20mm, 2x 7.92mm			1/39
Me-109E-3	9	6	6	3x 20mm, 2x 7.92mm			1/40
Me-109F	10	3	6	1x 20mm, 2x 7.92mm			12/40
Me-109G	12	4	7	1x 20mm, 2x 13mm		2x 210mm	5/42
Me-109K	14	6	8	1x 30mm, 2x 13mm		2x 210mm	9/44
Me-110 C/F	8	4,1	8	2x 20mm, 2x 7.92mm			4/39
Me-410A	8	10	8	4x 20mm, 2x 13mm	2x 1100 lb.		1/43
Me-163B	20	6	6	2x 30mm			9/44
Me-262	18	12	8	4x 30mm			4/44
Fw-190A-1	11	5	8	2x 20mm, 4x 7.92mm			6/41
Fw-190A-2	11	8	8	4x 20mm, 2x 7.92mm			9/42
Fw-190F,G,D	11	6	8	2x 20mm, 2x 13mm	1x 1100 lb.	2x 210mm	6/43
Ta-152	14	7	8	1x 30mm, 2x 20mm			12/44
He-162A	17	6	7	2x 30mm			2/45
Hs-129A0	0	5	8	2x 20mm, 2x 7.92mm			10/41
Hs-129B1	0	8	8	1x 30mm, 2x 20mm, 2x 7.92mm	770 lb.	4x 24 bomblets	2/42
Hs-129B2	0	5	8	2x 20mm, 2x 13mm	240 lb.	4x 24 bomblets	1/43
Hs-129B2/R3	0	9	8	1x 37mm, 2x 20mm, 2x 13mm			2/43
Hs-129B2/R4	0	9	8	1x 75mm, 2x 20mm, 2x 13mm			3/43
JU-88C-1	5	6,1	9	2x 20mm, 3x 7.92mm			6/40
JU-88C-6	5	9,1	9	5x 20mm, 3x 7.92mm			12/42
JU-87B	2	1,1	6	2x 7.92mm	1,800 lb.		1/39
JU-87D	1	2,1	6	3x 7.92mm	2,200 lb.		2/41
JU-87G	1	8,2	6	2x 37mm, 3x 7.92mm			3/43

Italian Aircraft Data Table							
Aircraft	Maneuver	Attack	Defense	Guns	Bombs	Rockets	Date
CR-42 'Falco'	5	2	5	1x 12.7mm, 1x .303cal.			1/36
G. 50 'Freccia'	6	2	5	2x 12.7mm			1/38
MC 200 'Saetta'	7	2	6	2x 12.7mm			10/39
MC 202 'Folgore'	9	3	6	2x 12.7mm, 2x 7.7mm			4/41
Re 2000 'Falco I'	8	2	6	2x 12.7mm	500 lb.		1/40
Re 2001 'Ariete'	7	3	6	2x 12.7mm, 2x 7.7mm			6/41

British Aircraft Data Table							
Aircraft	Maneuver	Attack	Defense	Guns	Bombs	Rockets	Date
Gladiator I	4	2	5	4x .303cal.			1/39
Hurricane I	7	4	6	8x .303cal.			1/39
Hurricane IIC	9	8	7	4x 20mm		6x 5" rockets	6/41
Spitfire I-A	10	4	6	8x .303cal.			1/39
Spitfire I-B	10	6	6	2x 20mm, 4x .303cal.			1/40
Spitfire V-B	10	6	6	2x 20mm, 4x .303cal.			1/41
Spitfire IX	12	4	6	8x .303cal.			1/42
Spitfire XIV	14	6	7	2x 20mm, 4x .303cal.			1/44
Mosquito FB VI	9	10	9	4x 20mm, 4x .303cal.	4x 250 lb.		5/43
Beaufighter IF	2	11	9	4x 20mm, 6x .303cal.			7/40
Typhoon IIB	13	8	8	4x 20mm	2x 500 lb.	8x 5" rockets	8/42
Tempest V	14	8	8	4x 20mm	2000 lb.	8x 5" rockets	6/44

US Aircraft Data Table							
Aircraft	Maneuver	Attack	Defense	Guns	Bombs	Rockets	Date
P-36 Hawk 75A	8	2	6	4x 7.5mm			1/39
P-38G Lightning	10	6	9	1x 20mm, 4x .50cal.	2x 1000 lb.		6/42
P-38J Lightning	11	6	9	1x 20mm, 4x .50cal.	2x 1000 lb.	6x 4.5" rockets	7/43
P-39D Airacobra	10	7	6	1x 37mm, 2x .50cal, 2x .30cal.	500 lb.		2/41
P-39Q Airacobra	10	8	6	1x 37mm, 4x .50cal.			7/43
P-40F Warhawk	9	6	7	6x .50cal.	500 lb.		1/43
P-47D Thunderbolt	12	8	9	8x .50cal.	500 lb.	10x 4.5" rockets	3/42
P-51D Mustang	14	6	8	6x .50cal.		6x 4.5" rockets	1/44
F2A-3 Buffalo	8	4	6	4x .50cal.			1/41
F4F-3 Wildcat	8	4	6	4x .50cal.			2/40
F4F-4 Wildcat	7	6	7	6x .50cal.	2x 500 lb.		5/41
F6F-3 Hellcat	10	6	7	6x .50cal.			10/42
F4U-1 Corsair	13	6	9	6x .50cal.			7/42
F4U-4 Corsair	14	6	9	6x .50cal.	2x 1000 lb.		10/44

Russian Aircraft Data Table							
Aircraft	Maneuver	Attack	Defense	Guns	Bombs	Rockets	Date
I-153	5	1	3	2x 7.62mm	2x 165lb.		1/38
I-16 Type 10	5	2	4	4x 7.62mm		6x RS-82	1/38
I-16 Type 24	7	5	5	2x 20mm, 2x 7.62mm	440 lb.		1/39
Mig-1	11	2	6	1x 12.7mm, 2x 7.62mm		6x RS-82	9/40
Mig-3	11	2	6	1x 12.7mm, 2x 7.62mm		6x RS-82	4/41
LaGG-1	10	6	6	2x 20mm, 2x 12.7mm			12/40
LaGG-3	8	4	6	1x 20mm, 2x 12.7mm		6x RS-82	2/41
La-5FN	11	4	7	2x 20mm	2x 220 lb.		6/42
La-7	13	6	7	3x 20mm	2x 220 lb.		1/44
Yak-1	10	4	6	1x 20mm, 2x 12.7mm			5/40
Yak-3	12	4	6	1x 20mm, 2x 12.7mm			3/43
Yak-9D	10	4	7	1x 20mm, 2x 12.7mm	2x 220 lb.		12/42
Yak-9U	13	4	7	1x 20mm, 2x 12.7mm			12/44
Il-2 'Sturmovik'	3	5	9	2x 20mm, 2x 7.62mm	880 lb.		5/41
Il-2M 'Sturmovik'	3	5,1	9	2x 20mm, 2x 7.62mm	880 lb.		9/42
Il-2m3	4	7,1	10	2x.23mm, 2x 12.7mm	1300 lb.		1/43
Il-2m3	4	7,1	10	2x 37mm			4/43
Il-10	6	9,1	10	4x 23mm			2/45

Japanese Aircraft Data Table							
Aircraft	Maneuver	Attack	Defense	Guns	Bombs	Rockets	Date
A6M2 Zero	10	5	6	2x 20mm, 2x 7.7mm	2x 132lb.		1/40
A6M3 Zero	10	5	6	2x 20mm, 2x 7.7mm	2x 132 b.		6/41
A6M5 Zero	10	5	6	2x 20mm, 2x 7.7mm	2x 132lb.		8/43
Ki-43-Ia Oscar	8	1	6	2x 7.7mm	2x 33lb.		4/41
Ki-43-IIb Oscar	8	2	6	2x 12.7mm	2x 220lb.		1/43
Ki-61-I Tony	9	2	7	2x 12.7mm			2/43
Ki-61-I-KAI Tony	9	4	7	4x 12.7mm			1/44
Ki-45 KAIb Nick	9	5	7	1x 37mm, 1x 20mm, 2x .303cal.			7/42
Ki-45 KAIIc Nick	9	6,1	7	1x 37mm, 2x 20mm	2x 551lb.		5/43
Ki-84-Ia Frank	9	6	7	2x 20mm, 2x 12.7mm			5/44
N1K1-Ja George	10	6	7	2x 20mm, 2x 12.7mm			5/44
N1K1-Jb George	10	8	7	4x 20mm	2x 551 b.		11/44
N1K2-J George	10	8	7	4x 20mm	2x 551lb.		1/45
D3A-2 Val	4	1,1	6	2x 7.7mm	1x 551lb, 2x 132 lb.		1/40

Air Combat Factors	
Attacking Aircraft Disposition	Factor
Attacking opponent from a higher level.	+2
Tailing opponent aircraft.	+2
Wingman supporting attack on opponent aircraft.	+1
Pilot is Ace	+2
Pilot is Green	-2
Carrying rockets	-1
Bombing or carrying bombs or bomblets.	-3

Penetration and Damage - Rockets, Bomblets				
Aircraft Weapon	HE	HEAT	D	S
RS-82 rockets	4		4	9
4.5" rockets	5		3	8
5" rockets (60lb. RP)	6		2	7
210mm rockets	12		-1	2
bomblets		8	6	10

Aircraft Attack Variable	
D6	Modify the Attack Damage by the Amount Below:
6	maximum + 1
4-5	maximum
3	maximum -1 (but not less than ½)
2	maximum -2 (but not less than ½ maximum)
1	maximum -3 (but not less than ½ maximum)

To Hit - Aircraft Rockets	
Aircraft Weapon	To Hit
Per Rocket (Base)	10
Target Moving	+1
First Salvo	+2
Target size	size factor / 2

Aircraft Critical Hit Damage	
D10	Effect
10	Pilot killed - plane destroyed
9	Fuel explodes - plane destroyed.
8	Plane catches fire - Pilot bails out
6-7	Smoke from plane - Maneuver factors halved.
4-5	Weapons disabled
1-3	Maneuver factor reduced by 2.

AFV Hit Locations From Low Aircraft	
D10	Location
8-10	Turret Top
4-7	Deck Top
1-3	D10 Location Front, Side or Rear

Anti-Aircraft Table						
AA Weapon	Attack	very low (short)	very low (long)	low	medium	high
100-130mm flak	12			2% (3000)	4% (3500)	2% (4000)
85-99mm flak	10	2% (1000)	4% (1500)	9% (2500)	5% (2400)	
75-84mm flak	8	2% (800)	4% (1000)	8% (2500)	1% (2000)	
50-74mm flak	7	2% (600)	4% (800)	6% (2000)		
37-49mm flak	6	10% (300)	8% (700)	4% (1800)		
30-36mm flak	5	10% (300)	7% (600)	3% (1500)		
20-29mm AA	4	10% (300)	6% (500)	3% (1200)		
14-15mm AA	2	10% (250)	6% (400)	3% (800)		
12.7-13mm, .50cal AA	2	10% (200)	6% (350)	3% (700)		
.6-10mm, .30-.303 cal AA	1	10% (150)	5% (300)	1% (500)		
Rifle squad	1	2% (75)				

Roll one chance to hit per barrel of attacking AA weapon.

Apply damage from Attack factor to defending aircraft in the same manner is done with air to air combat.

Cannons of 45mm or greater not on trains or ships must be stationary to fire effectively on aircraft.

On moving ground vehicles chance reduced by ½ of stated percentages.

On moving trains not changing speed or curving track only reduces chance by ¼ of stated percentages.

Air to Ground Weaponry - Machineguns and Cannons																
.30 cal, 7.62 - 8.0mm	D	S	Pen.					1	.5	To Hit	2 <sup>5.8</sup>	3 <sup>6.9</sup>	4 <sup>7.10</sup>	5 <sup>8.11</sup>	6 <sup>9.12</sup>	7 <sup>10</sup>
	8	-	Range					100	300	Range	75	100	150	200	250	300
.50 cal, 12.7 - 13.2mm			Pen.			2	1.5	1		To Hit	2 <sup>5.8</sup>	3 <sup>6.9</sup>	4 <sup>7.10</sup>	5 <sup>8.11</sup>	6 <sup>9.12</sup>	7 <sup>10</sup>
	8	15	Range			100	300	550		Range	75	100	150	200	250	300
14.5mm - 15mm			Pen.		3	2	1.5			To Hit	2 <sup>5.8</sup>	3 <sup>6.9</sup>	4 <sup>7.10</sup>	5 <sup>8.11</sup>	6 <sup>9.12</sup>	7 <sup>10</sup>
	8	15	Range		100	300	550			Range	75	100	150	200	250	300
20mm			Pen.		3	2	1.5			To Hit	2 <sup>5.8</sup>	3 <sup>6.9</sup>	4 <sup>7.10</sup>	5 <sup>8.11</sup>	6 <sup>9.12</sup>	7 <sup>10</sup>
	8	14	Range		150	400	575			Range	100	125	175	225	275	325
23mm			Pen.		3	2	1.5			To Hit	2 <sup>5.8</sup>	3 <sup>6.9</sup>	4 <sup>7.10</sup>	5 <sup>8.11</sup>	6 <sup>9.12</sup>	7 <sup>10</sup>
	8	14	Range		175	450	600			Range	100	125	175	225	275	325
30mm			Pen.	4	3	2				To Hit	2 <sup>5.8</sup>	3 <sup>6.9</sup>	4 <sup>7.10</sup>	5 <sup>8.11</sup>	6 <sup>9.12</sup>	7 <sup>10</sup>
	7	13	Range	125	400	600				Range	100	150	200	250	300	350
37mm			Pen.	5	4	3				To Hit	2 <sup>6.9</sup>	3 <sup>7.10</sup>	4 <sup>8.11</sup>	5 <sup>9.12</sup>	6 <sup>10.13</sup>	7 <sup>11</sup>
	7	13	Range	150	400	600				Range	100	175	250	300	350	375
45mm			Pen.	6	5	4				To Hit	2 <sup>6.9</sup>	3 <sup>7.10</sup>	4 <sup>8.11</sup>	5 <sup>9.12</sup>	6 <sup>10.13</sup>	7 <sup>11</sup>
	7	12	Range	150	400	600				Range	125	200	275	325	375	425
75mm			Pen.	9	8	7				To Hit	2 <sup>6.9</sup>	3 <sup>7.10</sup>	4 <sup>8.11</sup>	5 <sup>9.12</sup>	6 <sup>10.13</sup>	7 <sup>11</sup>
	6	10	Range	150	400	600				Range	150	225	300	350	400	450

Firing from very low level minimum range is 75. Add +3 to location on AFVs hit.

Firing from low level minimum range is 200. For location hit on AFV use the AFV hit locations from Low Aircraft table.