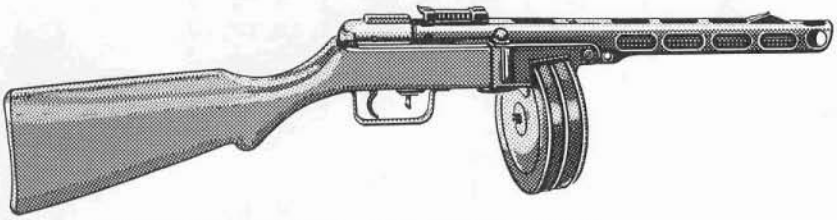
$100

Pistols		Physical Data		Aim Time AC	Aim Time Md	Ballistic Data		10	20	40	70	100	200	300	400
Lebel M1892		L	9	1	-17	LRN	PEN	1.0	.9	.8	.6	.5	.2	.1	
		W	2.1	2	-11		DC	1	1	1	1	1	1	1	
Double Action Revolver				3	-10										
		RT	12	4	-9	*LHP	PEN	1.0	.9	.8	.6	.5	.2	.1	
8mm MLe 92		ROF	1	5	-8		DC	1	1	1	1	1	1	1	
				6	-7										
France		Cap	6			*FMJ	PEN	1.1	1.0	.8	.7	.5	.2	.1	
		AW	.18 HMC				DC	1	1	1	1	1	1	1	
First introduced into the French army in 1893, this revolver remained in service through 1945.		KD	2				BA	48	41	33	26	21	12	6	
		SAB	3				TOF	1	2	3	6	10	22	37	
Walther PP		L	6	1	-16	FMJ	PEN	1.1	.9	.7	.5	.4	.1		
		W	1.7	2	-11		DC	1	1	1	1	1	1		
Automatic Pistol				3	-10										
		RT	4	4	-9	*JHP	PEN	1.0	.9	.7	.5	.4	.1		
32 ACP		ROF	*	5	-8		DC	2	2	1	1	1	1		
				6	-7										
Germany		Cap	8			*AP	PEN	1.5	1.3	1.1	.7	.5	.2		
		AW	.35 Mag				DC	1	1	1	1	1	1		
First introduced in 1929 as a police pistol, this highly successful weapon was used by the German military.		KD	2				BA	44	35	26	18	13	4		
		SAB	2				TOF	1	1	3	5	8	19		
Mauser HSc		L	6	1	-16	FMJ	PEN	1.1	1.0	.8	.5	.4	.1		
		W	1.5	2	-11		DC	1	1	1	1	1	1		
Automatic Pistol				3	-10										
		RT	4	4	-9	*JHP	PEN	1.0	.9	.7	.5	.4	.1		
32 ACP		ROF	*	5	-8		DC	2	2	1	1	1	1		
Germany		Cap	8			*AP	PEN	1.5	1.4	1.1	.8	.5	.2		
		AW	.35 Mag				DC	1	1	1	1	1	1		
This pistol was introduced in 1938 as a commercial venture and later used by the German Navy and Air Force.		KD	2				BA	44	35	26	18	14	4		
		SAB	3				TOF	1	1	3	5	8	19		
Walther P38		L	8	1	-17	FMJ	PEN	1.9	1.8	1.5	1.1	.9	.4	.1	.1
		W	2.4	2	-11		DC	3	3	2	2	1	1	1	1
Automatic Pistol				3	-10										
		RT	4	4	-9	*JHP	PEN	1.9	1.7	1.4	1.1	.8	.3	.1	.1
9mm Parabellum		ROF	*	5	-8		DC	4	4	3	2	1	1	1	1
				6	-7										
Germany		Cap	8			*AP	PEN	2.7	2.5	2.1	1.6	1.2	.5	.2	.1
		AW	.38 Mag				DC	3	2	2	2	1	1	1	1
Standard pistol of the German army in WW II. It was adopted in 1938. After the war it was renamed the Walther P1.		KD	3				BA	45	36	27	20	15	5	0	-3
		SAB	4				TOF	1	1	2	4	6	15	25	36
Glisenti M10		L	8	1	-17	FMJ	PEN	1.7	1.6	1.3	1.0	.8	.3	.1	.1
		W	2.0	2	-11		DC	2	2	2	1	1	1	1	1
Automatic Pistol				3	-10										
		RT	4	4	-9	*JHP	PEN	1.7	1.5	1.3	1.0	.8	.3	.1	.1
9mm Glisenti		ROF	*	5	-8		DC	4	3	3	2	1	1	1	1
				6	-7										
Italy		Cap	7			*AP	PEN	2.4	2.2	1.9	1.5	1.1	.5	.2	.1
		AW	.36 Mag				DC	2	2	2	1	1	1	1	1
The 9mm Glisenti was the standard Italian pistol round. It was adopted in 1910 and used throughout WW II.		KD	3				BA	46	37	28	21	16	7	1	-2
		SAB	4				TOF	1	1	2	5	7	16	27	39
Taisho 14		L	9	1	-17	FMJ	PEN	1.8	1.6	1.4	1.1	.9	.4	.2	.1
		W	2.2	2	-11		DC	2	2	1	1	1	1	1	1
Automatic Pistol				3	-10										
		RT	4	4	-9	*JHP	PEN	1.7	1.6	1.3	1.0	.8	.4	.2	.1
8mm Taisho 14		ROF	*	5	-8		DC	3	3	2	1	1	1	1	1
				6	-7										
Japan		Cap	8			*AP	PEN	2.5	2.3	2.0	1.5	1.2	.5	.2	.1
		AW	.42 Mag				DC	2	2	1	1	1	1	1	1
Improved Taisho 04 which retained serious design flaws making reloading slow if not impossible.		KD	3				BA	47	40	31	24	19	10	4	1
		SAB	3				TOF	1	1	2	5	7	16	26	38

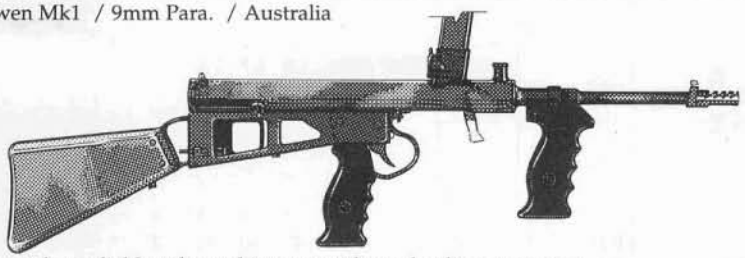
Pistols		Physical Data		Aim Time AC	Md	Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
Kenju Type 94		L	7	1	-16	FMJ	PEN	1.6	1.5	1.3	1.0	.8	.3	.1	.1
		W	1.9	2	-11		DC	2	2	1	1	1	1	1	1
Automatic Pistol				3	-10										
		RT	4	4	-9	*JHP	PEN	1.5	1.4	1.2	.9	.7	.3	.1	.1
8mm Taisho 14		ROF	*	5	-8		DC	3	2	2	1	1	1	1	1
				6	-7										
Japan		Cap	6			*AP	PEN	2.3	2.1	1.8	1.4	1.1	.5	.2	.1
		AW	.32 Mag				DC	2	2	1	1	1	1	1	1
This pistol was introduced in 1937 to supplement the Taisho 14. Of poor quality, a sharp blow can cause it to fire.		KD	2				BA	47	39	31	24	19	9	4	1
		SAB	3				TOF	1	1	3	5	7	17	28	40
Tokarev TT33 $150		L	8	1	-17	FMJ	PEN	2.6	2.4	2.0	1.6	1.3	.6	.2	.1
		W	2.0	2	-11		DC	3	3	2	2	1	1	1	1
Automatic Pistol				3	-10										
		RT	4	4	-9	*JHP	PEN	2.5	2.3	2.0	1.5	1.2	.5	.2	.1
7.62mm Tokarev		ROF	*	5	-8		DC	4	4	3	3	2	1	1	1
				6	-7										
USSR		Cap	8			AP	PEN	3.7	3.4	2.9	2.3	1.8	.8	.3	.1
		AW	.39 Mag				DC	3	2	2	2	1	1	1	1
Standard pistol of the Russian military. It fires the 7.62mm Tokarev, which is primarily a sub-machinegun round.		KD	3				BA	46	38	29	22	17	8	3	-1
		SAB	4				TOF	0	1	2	3	5	12	20	29
Enfield Revolver #2 Mk1		L	10	1	-16	FMJ	PEN	.9	.8	.7	.5	.4	.2	.1	
		W	1.9	2	-11		DC	1	1	1	1	1	1	1	
Double Action Revolver				3	-10										
		RT	12	4	-9	LRN	PEN	.8	.8	.6	.5	.4	.2	.1	
.380in British Service		ROF	1	5	-8		DC	1	1	1	1	1	1	1	
				6	-7										
United Kingdom		Cap	6			*LHP	PEN	.8	.8	.6	.5	.4	.2	.1	
		AW	.24 HMC				DC	1	1	1	1	1	1	1	
This revolver was designed to replace the Webley .45in whose weight and recoil were considered excessive.		KD	3				BA	47	39	31	23	18	9	4	
		SAB	4				TOF	1	2	4	7	11	26	43	
Webley Mk6 (6 inch barrel)		L	11	1	-17	LRN	PEN	1.0	.9	.8	.6	.5	.2	.1	.1
		W	2.7	2	-11		DC	1	1	1	1	1	1	1	1
Double Action Revolver				3	-10										
		RT	12	4	-9	*LHP	PEN	1.0	.9	.8	.6	.5	.2	.1	.1
.455in Revolver		ROF	1	5	-8		DC	1	1	1	1	1	1	1	1
				6	-7										
United Kingdom		Cap	6			*FMJ	PEN	1.0	1.0	.8	.7	.5	.3	.1	.1
		AW	.30 HMC				DC	1	1	1	1	1	1	1	1
Durable, well made revolver used throughout WW II and still in service with police and military forces.		KD	4				BA	47	39	31	23	18	9	4	0
		SAB	5				TOF	1	2	4	7	11	25	42	60
Colt M1911A1 $450		L	8	1	-18	FMJ	PEN	1.6	1.5	1.2	1.0	.8	.3	.2	.1
		W	3.0	2	-11		DC	3	3	2	1	1	1	1	1
Automatic Pistol				3	-10										
		RT	4	4	-9	*JHP	PEN	1.5	1.4	1.2	.9	.7	.3	.1	.1
45 ACP		ROF	*	5	-8		DC	4	4	3	2	1	1	1	1
				6	-7										
USA		Cap	7			*AP	PEN	2.2	2.1	1.8	1.4	1.1	.5	.2	.1
		AW	.7 Mag				DC	3	3	2	1	1	1	1	1
Standard US sidearm since WW I. The M1911A1 was used throughout WW II and is still in service.		KD	5				BA	45	36	27	20	15	5	0	-4
		SAB	5				TOF	1	1	3	5	8	19	31	45
OSS M1942 $50		L	6	1	-15	FMJ	PEN	1.3	1.2	1.0	.8	.6	.3	.1	
		W	1.1	2	-11		DC	2	2	2	1	1	1	1	
Single Shot Pistol				3	-10										
		RT	14			*JHP	PEN	1.3	1.2	1.0	.8	.6	.3	.1	
45 ACP		ROF	-				DC	3	3	2	1	1	1	1	
USA		Cap	1			*AP	PEN	1.9	1.7	1.5	1.1	.9	.4	.2	
		AW	.04 Rnd				DC	2	2	2	1	1	1	1	
This single shot pistol was mass produced and distributed by the OSS to clandestine forces in occupied countries.		KD	4				BA	45	36	27	19	14	5	0	
		SAB	6				TOF	1	2	3	6	9	20	34	

Sub-Machineguns

	Physical Data		Aim Time		Ballistic Data		Range in 2 yard hexes							
			AC	Md			10	20	40	70	100	200	300	400
Type 100 / 8mm Taisho 14 / Japan	L	35	1	-23	FMJ	PEN	1.9	1.8	1.5	1.2	1.0	.4	.2	.1
	W	9.2	2	-12		DC	2	2	2	1	1	1	1	1
			3	-9	*JHP	PEN	1.9	1.7	1.5	1.2	.9	.4	.2	.1
	RT	8	4	-8		DC	3	3	2	2	1	1	1	1
	ROF	*4	5	-6	*AP	PEN	2.7	2.5	2.2	1.7	1.4	.6	.3	.1
			6	-5		DC	2	2	2	1	1	1	1	1
	Cap	30	7	-4										
	AW	1.2	8	-3										
		Mag	9	-3		MA	.2	.3	.5	.9	1	3	4	5
	KD	3	10	-2		BA	47	40	31	24	19	10	4	1
This SMG appeared in 1940 and used the underpowered 8mm Taisho 14 round.	SAB	2	11	-1		TOF	1	1	2	4	7	15	25	36
Type 100 1944 pattern / 8mm Taisho 14 / Japan	L	35	1	-23	FMJ	PEN	1.9	1.8	1.5	1.2	1.0	.4	.2	.1
	W	9.0	2	-12		DC	2	2	2	1	1	1	1	1
			3	-9	*JHP	PEN	1.9	1.7	1.5	1.2	.9	.4	.2	.1
	RT	8	4	-8		DC	3	3	2	2	1	1	1	1
The Japanese were very late in developing a sub-machinegun, with production starting in 1940 with the Type 100. In 1944 an improved model 100 was introduced. This 1944 version was simplified to minimize manufacturing time and costs. The 1944 Type 100 had fixed sights, a very rough finish, and a higher rate of fire than the 1940 version. In all, less than 30,000 Type 100 sub-machineguns were made. The weapon was not very successful and suffered from poor quality ammunition which frequently caused jams. The bar under the barrel is a bayonet mount.	ROF	*6	5	-6	*AP	PEN	2.7	2.5	2.2	1.7	1.4	.6	.3	.1
			6	-5		DC	2	2	2	1	1	1	1	1
	Cap	30	7	-4										
	AW	1.2	8	-3										
		Mag	9	-3		MA	.2	.4	.8	1	2	4	6	8
	KD	3	10	-2		BA	47	40	31	24	19	10	4	1
	SAB	2	11	-1		TOF	1	1	2	4	7	15	25	36
PPD 40 / 7.62mm Tokarev / USSR	L	31	1	-23	FMJ	PEN	3.7	3.5	3.0	2.4	1.9	.9	.4	.2
	W	9.8	2	-13		DC	4	4	4	3	2	1	1	1
			3	-9	*JHP	PEN	3.6	3.3	2.9	2.3	1.8	.9	.4	.2
	RT	12	4	-8		DC	6	6	6	4	3	1	1	1
The PPD 40 was a well made weapon and was introduced in 1940. It used a 71 round drum magazine but had to be replaced by the PPSh 41. Wartime production required a simpler, more easily made weapon. In appearance, the PPD 40 is very similar to the PPSh 41 shown below. Over 5 million PPSh guns were produced by 1945. Some Soviet units were armed exclusively with them. These weapons have been exported in huge numbers to Communist countries, including China, and were used in Korea and Vietnam. One item of interest is that the 7.62mm Tokarev is essentially a 7.63mm Mauser round.	ROF	*7	5	-6	AP	PEN	5.3	4.9	4.2	3.4	2.7	1.3	.6	.3
			6	-5		DC	4	4	3	2	2	1	1	1
	Cap	71	7	-4										
	AW	2.4	8	-3										
		Drm	9	-2		MA	.3	.5	1	2	3	5	8	11
	KD	3				BA	47	39	30	23	18	8	3	-1
	SAB	2				TOF	0	1	2	3	4	10	17	24
PPSh 41 / 7.62mm Tokarev / USSR	L	33	1	-23	FMJ	PEN	3.6	3.3	2.8	2.3	1.8	.8	.4	.2
	W	9.7	2	-13		DC	4	4	3	2	2	1	1	1
			3	-9	*JHP	PEN	3.4	3.2	2.7	2.2	1.7	.8	.4	.2
	RT	12	4	-8		DC	6	6	5	4	3	1	1	1
	ROF	*8	5	-6	AP	PEN	5.0	4.7	4.0	3.2	2.5	1.2	.5	.3
			6	-5		DC	4	4	3	2	2	1	1	1
	Cap	71	7	-4										
	AW	2.4	8	-3										
		Drm	9	-2		MA	.3	.6	1	2	3	6	9	12
	KD	3				BA	47	39	30	22	18	8	3	-1
Standard sub-machinegun of the Russian army during WW II.	SAB	2				TOF	0	1	2	3	4	10	17	25
PPS 43 / 7.62mm Tokarev / USSR	L	33	1	-22	FMJ	PEN	3.7	3.5	3.0	2.4	1.9	.9	.4	.2
	W	7.7	2	-12		DC	4	4	4	3	2	1	1	1
			3	-9	*JHP	PEN	3.6	3.3	2.9	2.3	1.8	.9	.4	.2
	RT	8	4	-7		DC	6	6	6	4	3	1	1	1
	ROF	*6	5	-6	AP	PEN	5.3	4.9	4.2	3.4	2.7	1.3	.6	.3
			6	-5		DC	4	4	3	2	2	1	1	1
	Cap	35	7	-4										
	AW	1.2	8	-3										
		Mag	9	-2		MA	.3	.5	1	2	3	5	8	11
	KD	3				BA	47	39	30	23	18	8	3	-1
2nd Russian SMG produced in large numbers in WW II.	SAB	3				TOF	0	1	2	3	4	10	17	24
Lanchester Mk1 / 9mm Parabellum / UK	L	34	1	-24	FMJ	PEN	2.3	2.1	1.8	1.4	1.1	.5	.2	.1
	W	10.8	2	-13		DC	3	3	3	2	1	1	1	1
			3	-10	*JHP	PEN	2.2	2.0	1.7	1.3	1.0	.4	.2	.1
	RT	9	4	-8		DC	5	4	4	3	2	1	1	1
	ROF	*5	5	-6	*AP	PEN	3.2	3.0	2.5	1.9	1.5	.6	.3	.1
			6	-5		DC	3	3	2	2	1	1	1	1
	Cap	50	7	-4										
	AW	2.0	8	-3										
		Mag	9	-3		MA	.2	.4	.7	1	2	4	5	7
	KD	3	10	-2		BA	45	36	27	20	15	6	0	-3
This sub-machinegun was produced for the Royal Navy in 1941.	SAB	2				TOF	0	1	2	4	6	13	23	32

Sub-Machineguns

Owen Mk1 / 9mm Para. / Australia

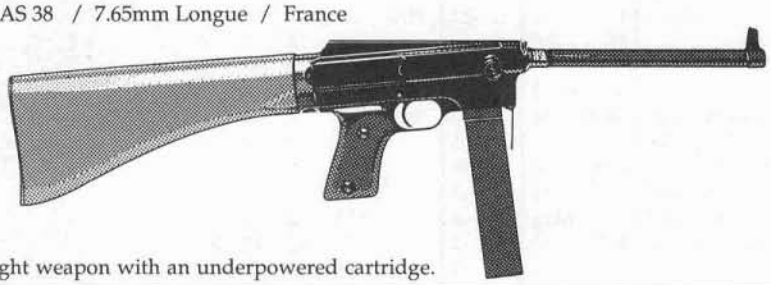


Heavy but reliable sub-machinegun with top loading magazine.

Physical Data		Aim Time AC	Aim Time Md
L	32	1	-23
W	10.1	2	-13
		3	-10
RT	9	4	-8
ROF	*6	5	-7
		6	-5
Cap	34	7	-4
AW	1.4	8	-4
	Mag	9	-3
KD	3	10	-2
SAB	2	11	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	2.3	2.1	1.8	1.4	1.1	.5	.2	.1
	DC	3	3	3	2	1	1	1	1
*JHP	PEN	2.2	2.0	1.7	1.3	1.0	.4	.2	.1
	DC	5	4	4	3	2	1	1	1
*AP	PEN	3.2	3.0	2.5	1.9	1.5	.6	.3	.1
	DC	3	3	2	2	1	1	1	1
	MA	.2	.5	.9	2	2	5	7	9
	BA	45	36	27	20	15	6	0	-3
	TOF	0	1	2	4	6	13	23	32

MAS 38 / 7.65mm Longue / France



Light weapon with an underpowered cartridge.

Physical Data		Aim Time AC	Aim Time Md
L	25	1	-21
W	6.8	2	-11
		3	-9
RT	8	4	-7
ROF	*5	5	-6
		6	-5
Cap	32	7	-4
AW	1.2	8	-3
	Mag	9	-2
KD	2		
SAB	2		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	1.9	1.7	1.5	1.1	.9	.4	.2	.1
	DC	2	2	1	1	1	1	1	1
*JHP	PEN	1.8	1.7	1.4	1.1	.8	.4	.2	.1
	DC	3	3	2	2	1	1	1	1
*AP	PEN	2.7	2.4	2.1	1.6	1.2	.5	.2	.1
	DC	2	2	1	1	1	1	1	1
	MA	.2	.3	.6	1	2	3	5	7
	BA	47	39	30	23	18	9	3	0
	TOF	1	1	2	4	6	15	24	35

MP 35/I / 9mm Parabellum / Germany

Standard sub-machinegun of the Waffen-SS.

Physical Data		Aim Time AC	Aim Time Md
L	33	1	-23
W	9.7	2	-13
		3	-9
RT	9	4	-8
ROF	*5	5	-6
		6	-5
Cap	32	7	-4
AW	1.3	8	-3
	Mag	9	-2
KD	3		
SAB	3		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	2.3	2.1	1.8	1.4	1.1	.5	.2	.1
	DC	3	3	3	2	1	1	1	1
*JHP	PEN	2.2	2.0	1.7	1.3	1.0	.4	.2	.1
	DC	5	4	4	3	2	1	1	1
*AP	PEN	3.2	3.0	2.5	1.9	1.5	.6	.3	.1
	DC	3	3	2	2	1	1	1	1
	MA	.2	.4	.8	1	2	4	6	8
	BA	45	36	27	20	15	6	0	-3
	TOF	0	1	2	4	6	13	23	32

MP 38/40 / 9mm Parabellum / Germany

Famous sub-machinegun known as the Schmeisser.

Physical Data		Aim Time AC	Aim Time Md
L	25/33	1	-23
W	9.5	2	-13
		3	-9
RT	8	4	-8
ROF	*4	5	-6
		6	-5
Cap	32	7	-4
AW	1.3	8	-3
	Mag	9	-2
KD	3		
SAB	3		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	2.3	2.1	1.8	1.4	1.1	.5	.2	.1
	DC	3	3	3	2	1	1	1	1
*JHP	PEN	2.2	2.0	1.7	1.3	1.0	.4	.2	.1
	DC	5	4	4	3	2	1	1	1
*AP	PEN	3.2	3.0	2.5	1.9	1.5	.6	.3	.1
	DC	3	3	2	2	1	1	1	1
	MA	.2	.3	.6	1	2	3	5	6
	BA	45	36	27	20	15	6	0	-3
	TOF	0	1	2	4	6	13	23	32

MAB 38A / 9mm Modello 38A / Italy

Standard Italian sub-machinegun of WW II. It used a high-velocity 9mm cartridge.

Physical Data		Aim Time AC	Aim Time Md
L	38	1	-23
W	10.2	2	-13
		3	-10
RT	8	4	-8
ROF	*5	5	-6
		6	-5
Cap	40	7	-4
AW	1.6	8	-3
	Mag	9	-3
KD	4	10	-2
SAB	3		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	3.0	2.8	2.4	1.9	1.5	.7	.3	.2
	DC	4	4	3	3	2	1	1	1
*JHP	PEN	2.9	2.7	2.3	1.8	1.4	.7	.3	.1
	DC	6	6	5	4	3	1	1	1
*AP	PEN	4.2	3.9	3.3	2.7	2.1	1.0	.5	.2
	DC	4	3	3	3	2	1	1	1
	MA	.2	.4	.9	2	2	4	7	9
	BA	46	38	29	22	17	7	2	-2
	TOF	0	1	2	3	5	12	20	29

MAB 38/42 / 9mm Parabellum / Italy

Wartime production of the MAB 38A proved to be too expensive and time consuming. The MAB 38/42 was a simpler version of the MAB 38A and incorporated cost and manufacturing savings. The MAB 38/42 was available only in 9mm Parabellum as the complexity of having a special 9mm round for sub-machineguns proved impractical. Both the Germans and Romanians took delivery of this weapon. Later MAB 38/43 and 38/44 versions of this weapon were also made in continuing efforts to cut cost and manufacturing time.

Physical Data		Aim Time AC	Aim Time Md
L	32	1	-22
W	8.1	2	-12
		3	-9
RT	8	4	-8
ROF	*5	5	-6
		6	-5
Cap	40	7	-4
AW	1.6	8	-3
	Mag	9	-2
KD	4		
SAB	3		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	2.5	2.3	2.0	1.5	1.2	.6	.2	.1
	DC	3	3	3	2	2	1	1	1
*JHP	PEN	2.4	2.2	1.9	1.5	1.2	.5	.2	.1
	DC	5	5	4	3	2	1	1	1
*AP	PEN	3.5	3.2	2.7	2.2	1.7	.8	.4	.2
	DC	3	3	3	2	2	1	1	1
	MA	.2	.5	.9	2	2	5	7	9
	BA	46	38	29	21	16	7	2	-2
	TOF	0	1	2	4	6	13	22	32

Sub-Machineguns

Sten Mk2 / 9mm Parabellum / UK

Standard British sub-machinegun of WW II.

Physical Data		Aim Time AC	Aim Time Md
L	30	1	-22
W	7.2	2	-12
		3	-9
RT	9	4	-7
ROF	*5	5	-6
		6	-5
Cap	32	7	-4
AW	1.3	8	-3
	Mag		
KD	3		
SAB	3		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	2.3	2.1	1.8	1.4	1.1	.5	.2	.1
	DC	3	3	3	2	1	1	1	1
*JHP	PEN	2.2	2.0	1.7	1.3	1.0	.4	.2	.1
	DC	5	4	4	3	2	1	1	1
*AP	PEN	3.2	3.0	2.5	1.9	1.5	.6	.3	.1
	DC	3	3	2	2	1	1	1	1
	MA	.2	.5	.9	2	2	5	7	9
	BA	45	36	27	20	15	6	0	-3
	TOF	0	1	2	4	6	13	23	32

Sten Mk3 / 9mm Parabellum / UK

$700

The Sten sub-machinegun was the standard sub-machinegun of British forces during WW II. Over 2 million of the Mark 2 were made in three years. Both the Mark 2 and Mark 3 were mass produced. The Mark 3 started production in 1943 and was essentially identical to the Mark 2 shown above. The Mark 2 was easily dismantled and ideal for clandestine operations in occupied Europe. The Mark 3 was not as easily dismantled and neither were as popular as the M1A1 Thompson.

Physical Data		Aim Time AC	Aim Time Md
L	30	1	-22
W	7.7	2	-12
		3	-9
RT	9	4	-7
ROF	*5	5	-6
		6	-5
Cap	32	7	-4
AW	1.3	8	-3
	Mag		
KD	3		
SAB	3		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	2.3	2.1	1.8	1.4	1.1	.5	.2	.1
	DC	3	3	3	2	1	1	1	1
*JHP	PEN	2.2	2.0	1.7	1.3	1.0	.4	.2	.1
	DC	5	4	4	3	2	1	1	1
*AP	PEN	3.2	3.0	2.5	1.9	1.5	.6	.3	.1
	DC	3	3	2	2	1	1	1	1
	MA	.2	.4	.9	2	2	5	7	9
	BA	45	36	27	20	15	6	0	-3
	TOF	0	1	2	4	6	13	23	32

Thompson M1928A1 / 45 ACP / USA

First model of the Thompson sub-machinegun with drum magazine.

Physical Data		Aim Time AC	Aim Time Md
L	34	1	-26
W	14.8	2	-16
		3	-10
RT	12	4	-8
ROF	*7	5	-7
		6	-6
Cap	100	7	-5
AW	5.5	8	-4
	Drm	9	-3
KD	5	10	-2
SAB	3	11	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	1.7	1.5	1.3	1.0	.8	.4	.2	.1
	DC	3	3	2	1	1	1	1	1
*JHP	PEN	1.6	1.5	1.3	1.0	.8	.4	.2	.1
	DC	5	4	3	2	1	1	1	1
*AP	PEN	2.3	2.2	1.8	1.4	1.1	.5	.2	.1
	DC	3	3	2	1	1	1	1	1
	MA	.3	.6	1	2	3	6	9	12
	BA	45	36	27	20	15	5	0	-4
	TOF	1	1	3	5	8	18	30	44

Thompson M1A1 / 45 ACP / USA

Popular wartime version Thompson sub-machine gun.

Physical Data		Aim Time AC	Aim Time Md
L	32	1	-24
W	12.0	2	-14
		3	-10
RT	8	4	-8
ROF	*6	5	-7
		6	-6
Cap	30	7	-5
AW	2.0	8	-4
	Mag	9	-3
KD	5	10	-2
SAB	3	11	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	1.7	1.5	1.3	1.0	.8	.4	.2	.1
	DC	3	3	2	1	1	1	1	1
*JHP	PEN	1.6	1.5	1.3	1.0	.8	.4	.2	.1
	DC	5	4	3	2	1	1	1	1
*AP	PEN	2.3	2.2	1.8	1.4	1.1	.5	.2	.1
	DC	3	3	2	1	1	1	1	1
	MA	.3	.6	1	2	3	6	9	12
	BA	45	36	27	20	15	5	0	-4
	TOF	1	1	3	5	8	18	30	44

M3A1 / 45 ACP / USA

The M3A1 "grease-gun" was introduced in late 1944.

Physical Data		Aim Time AC	Aim Time Md
L	23/30	1	-23
W	9.4	2	-12
		3	-9
RT	8	4	-8
ROF	*4	5	-6
		6	-5
Cap	30	7	-4
AW	2.0	8	-3
	Mag		
KD	5		
SAB	3		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	1.7	1.5	1.3	1.0	.8	.4	.2	.1
	DC	3	3	2	1	1	1	1	1
*JHP	PEN	1.6	1.5	1.3	1.0	.8	.4	.2	.1
	DC	5	4	3	2	1	1	1	1
*AP	PEN	2.3	2.2	1.8	1.4	1.1	.5	.2	.1
	DC	3	3	2	1	1	1	1	1
	MA	.2	.5	.9	2	2	5	7	9
	BA	45	36	27	20	15	5	0	-4
	TOF	1	1	3	5	8	18	30	44

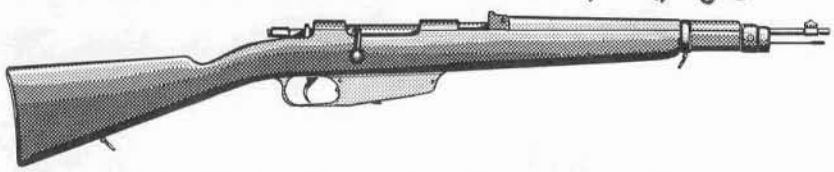
Reising M50 / 45 ACP / USA

This sub-machinegun was used in small numbers by the US Marine Corps.

Physical Data		Aim Time AC	Aim Time Md
L	36	1	-22
W	7.6	2	-12
		3	-9
RT	8	4	-8
ROF	*5	5	-6
		6	-5
Cap	20	7	-4
AW	1.3	8	-3
	Mag	9	-2
KD	5		
SAB	4		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	1.7	1.6	1.3	1.1	.8	.4	.2	.1
	DC	3	3	2	2	1	1	1	1
*JHP	PEN	1.6	1.5	1.3	1.0	.8	.4	.2	.1
	DC	5	4	3	2	1	1	1	1
*AP	PEN	2.4	2.2	1.9	1.5	1.2	.5	.2	.1
	DC	3	3	2	2	1	1	1	1
	MA	.3	.7	1	2	3	7	10	13
	BA	45	36	27	20	15	5	0	-4
	TOF	1	1	3	5	8	18	30	43

Bolt Action Rifles

	Physical Data		Aim Time AC	Aim Time Md	Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
Fusil Mle 34 / Bolt Action Rifle / 7.5mm MAS / France	L	43	1	-22	FMJ	PEN	17	17	15	14	13	9.0	6.4	4.6
	W	8.1	2	-12		DC	7	7	7	7	7	6	5	3
			3	-9										
	RT	8	4	-7	*JHP	PEN	16	16	15	13	12	8.6	6.2	4.4
	ROF	3	5	-6		DC	9	9	9	9	8	8	7	5
After WW I, the French decided to replace the old 8mm Mle 86 cartridge with a new 7.5mm Mle 29. A modified and shortened basic Fusil Mle 07/15 rifle was then chambered for the 7.5mm round and renamed the Fusil Mle 34. The Mle 34 was replaced by the MAS 36, shown below, and is of interest as the first rifle to chamber the 7.5mm Mle 29. Both the Mle 34 and the MAS 36 were adopted after the successful development of a machine gun chambered to the 7.5mm round.			6	-5										
	Cap	5	7	-4	AP	PEN	24	23	22	20	18	13	9.0	6.5
	AW	.31	8	-3		DC	7	7	7	7	7	6	5	3
		CS	9	-2										
	KD	9	10	-1		BA	61	53	44	37	32	23	17	13
	SAB	6	11	0		TOF	0	0	1	2	3	5	9	12
MAS 36 / Bolt Action Rifle / 7.5mm MAS / France	L	40	1	-23	FMJ	PEN	18	18	17	15	14	9.8	7.0	5.1
	W	8.6	2	-12		DC	8	7	7	7	7	6	6	4
			3	-9										
	RT	8	4	-7	*JHP	PEN	18	17	16	14	13	9.4	6.8	4.9
	ROF	3	5	-6		DC	9	9	9	9	8	8	7	6
			6	-5										
	Cap	5	7	-4	AP	PEN	26	25	23	21	19	14	9.9	7.1
	AW	.31	8	-3		DC	7	7	7	7	7	6	5	3
After the adoption of the 7.5mm Mle 29 cartridge, the MAS 36 rifle was designed for it. It was adopted in 1935 and was the last bolt action rifle accepted by a major military power.		CS	9	-2										
	KD	9	10	-1		BA	61	53	45	37	32	23	17	13
	SAB	6	11	0		TOF	0	0	1	2	2	5	8	12
Kar 98k / Bolt Action Rifle / 7.92mm Mauser / Germany	L	44	1	-23	FMJ	PEN	18	17	16	15	14	11	8.1	6.2
	W	8.9	2	-12		DC	8	8	8	7	7	7	6	6
			3	-9										
	RT	8	4	-7	*JHP	PEN	17	17	16	15	13	10	7.8	6.0
	ROF	3	5	-6		DC	9	9	9	9	9	8	8	7
			6	-5										
	Cap	5	7	-4	AP	PEN	25	24	23	21	20	15	12	8.7
	AW	.36	8	-3		DC	7	7	7	7	7	7	6	6
Standard German rifle of WW II. The Kar 98k appeared in 1935 and was produced throughout the war. It was the last Mauser bolt action military rifle produced and was known for its reliablility.		CS	9	-2										
	KD	10	10	-1		BA	63	55	47	39	35	25	19	15
	SAB	7	11	0		TOF	0	0	1	2	3	6	9	12
Ge w 33/40 / Bolt Action Rifle / 7.92mm Mauser / Germany	L	39	1	-22	FMJ	PEN	16	16	15	14	13	9.7	7.4	5.6
	W	8.3	2	-12		DC	8	7	7	7	7	7	6	4
			3	-9										
	RT	8	4	-7	*JHP	PEN	16	15	15	13	12	9.3	7.1	5.4
	ROF	3	5	-6		DC	9	9	9	9	9	8	8	6
The Gew 33/40 was a German adoption of the Czech Carbine 33. It was a short, lightweight rifle primarily issued to mountain troops. It fired the full powered 7.92mm Mauser cartridge, and as a result had high recoil and muzzle blast. The Gew 33 / 40 was designed to fill the role of a light rifle much as the M16 replaced the M14 in the US army after WW II. During the war the Germans could not afford to introduce a new rifle cartridge and the standard 7.92mm Mauser was used. Very late in the war, however, the 7.92mm Kurz cartridge was introduced. This was the first short rifle round intended for use in lighter weapons and was the predecessor of the Russian 7.62 x 39mm round used in the SKS carbine and AK 47.			6	-5										
	Cap	5	7	-4	AP	PEN	23	22	21	20	18	14	10	7.9
	AW	.36	8	-3		DC	7	7	7	7	7	6	6	4
		CS	9	-2										
	KD	10	10	-1		BA	63	55	46	39	34	25	19	15
	SAB	7	11	0		TOF	0	1	1	2	3	6	9	13
Fucile Mod 91 / Bolt Action Rifle / 6.5mm Carcano / Italy	L	51	1	-23	FMJ	PEN	16	16	15	14	12	9.2	6.9	5.1
	W	8.8	2	-12		DC	7	7	6	6	6	6	5	3
			3	-9										
	RT	8	4	-7	*JHP	PEN	16	15	14	13	12	8.9	6.6	4.9
	ROF	3	5	-6		DC	8	8	8	8	8	7	7	4
			6	-5										
	Cap	6	7	-4	AP	PEN	23	22	21	19	18	13	9.7	7.2
	AW	.44	8	-3		DC	6	6	6	6	6	5	4	2
This rifle was originally adopted in 1892, but was used during World War II in several variations. Whatever its wartime value, it is currently most famous as the rifle used in the assassination of President John F. Kennedy.		CS	9	-2										
	KD	7	10	-1		BA	64	57	48	41	37	27	22	18
	SAB	5	11	0		TOF	0	1	1	2	3	6	9	13
Arisaka Type 99 / Bolt Action Rifle / 7.7 x 58 mm / Japan	L	44	1	-23	FMJ	PEN	18	18	17	16	15	11	8.8	6.8
	W	9.4	2	-12		DC	8	8	7	7	7	7	6	6
			3	-9										
	RT	8	4	-7	*JHP	PEN	18	17	16	15	14	11	8.4	6.5
	ROF	3	5	-6		DC	9	9	9	9	9	8	8	7
			6	-5										
	Cap	5	7	-4	AP	PEN	26	25	24	22	21	16	12	9.6
	AW	.35	8	-3		DC	7	7	7	7	7	7	6	6
The Type 99 rifle was essentially a Meiji 38 rechambered for the 7.7 x 58 mm cartridge. The 7.7 x 58mm replaced the 6.5 x 50mm round which was used in the Sino-Japanese war in Manchuria.		CS	9	-2										
	KD	10	10	-1		BA	64	56	48	41	36	27	21	17
	SAB	6	11	0		TOF	0	1	1	2	3	6	9	12

Bolt Action Rifles

$150

Karabin 1938g / Bolt Action Rifle / 7.62mm Mosin-Nagant / USSR

This weapon is a shortened version of the Model 1891 on which it was based. Unlike other European counterparts, the basic Russian rifle cartridge changed little after 1891 and was used throughout WW I and WW II.

Physical Data		Aim Time AC	Md
L	40	1	-22
W	8.0	2	-12
		3	-9
RT	8	4	-7
ROF	3	5	-6
		6	-4
Cap	5	7	-3
AW	.27	8	-2
	CS	9	-1
KD	12		
SAB	7		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	23	22	21	20	18	14	11	8.9
	DC	8	8	8	8	8	7	7	6
*JHP	PEN	22	21	20	19	18	14	11	8.5
	DC	10	9	9	9	9	9	8	8
AP	PEN	32	31	30	28	26	20	16	12
	DC	8	8	8	8	7	7	7	6
	BA	64	56	48	41	36	27	21	17
	TOF	0	0	1	2	2	5	8	11

Karabin 1944g / Bolt Action Rifle / 7.62mm Mosin-Nagant / USSR

This weapon was introduced late in the war and is essentially identical to the Karabin 1938g shown above. A folding, cruciform-bladed bayonet was added to the muzzle. Russian bolt action rifles have changed little since the Model 1891. This is in part due to the efficiency of the 7.62mm Mosin-Nagant cartridge. This cartridge was introduced in 1891 and is still in use today.

Physical Data		Aim Time AC	Md
L	40	1	-23
W	8.8	2	-12
		3	-9
RT	8	4	-7
ROF	3	5	-6
		6	-4
Cap	5	7	-3
AW	.27	8	-2
	CS	9	-2
KD	12	10	-1
SAB	7		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	23	22	21	20	18	14	11	8.9
	DC	8	8	8	8	8	7	7	6
*JHP	PEN	22	21	20	19	18	14	11	8.5
	DC	10	9	9	9	9	9	8	8
AP	PEN	32	31	30	28	26	20	16	13
	DC	8	8	8	8	7	7	7	6
	BA	64	56	48	41	36	27	21	17
	TOF	0	0	1	2	2	5	8	11

Rifle #4 Mk1 / Bolt Action Rifle / .303 British / UK

The Rifle Number 4 was similar to the Short Magazine Lee Enfield used in WW I. The Rifle Number 4 was designed for wartime production and was used throughout WW II. Some of these rifles were made in the USA and in Canada.

Physical Data		Aim Time AC	Md
L	44	1	-23
W	9.7	2	-13
		3	-9
RT	8	4	-8
ROF	3	5	-6
		6	-5
Cap	10	7	-4
AW	1.0	8	-3
	Mag	9	-2
KD	10	10	-1
SAB	6	12	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	18	17	16	15	13	10	7.5	5.6
	DC	7	7	7	7	7	6	6	4
*JHP	PEN	17	16	15	14	13	9.6	7.2	5.4
	DC	9	9	9	9	9	8	8	6
AP	PEN	25	24	23	21	19	14	11	7.9
	DC	7	7	7	7	7	6	6	4
	BA	63	55	47	40	35	25	20	16
	TOF	0	1	1	2	3	6	9	13

Rifle #5 Mk1 / Bolt Action Rifle / .303 British / UK

$200

The Rifle Number 5 is a shortened version of the Rifle Number 4 shown above. It was known as the "Jungle Carbine", and was lighter and easier to carry than the full length rifle. The Number 5 had a bell flash hider and was five inches shorter than the standard Number 4. Like all shortened and lightened weapons firing a full sized cartridge, it had a high recoil and muzzle blast. Because of this, it was not particularly popular with the soldiers who used it.

Physical Data		Aim Time AC	Md
L	40	1	-22
W	7.8	2	-12
		3	-9
RT	8	4	-7
ROF	3	5	-6
		6	-5
Cap	10	7	-4
AW	1.0	8	-3
	Mag	9	-2
KD	8	10	-1
SAB	6	11	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	12	12	11	10	9.1	6.6	4.8	3.5
	DC	7	7	7	6	6	6	3	3
*JHP	PEN	12	11	11	9.6	8.7	6.4	4.6	3.4
	DC	8	8	8	8	8	7	5	4
AP	PEN	17	17	16	14	13	9.4	6.8	5.0
	DC	7	7	6	6	6	6	3	2
	BA	63	55	46	39	34	25	19	15
	TOF	0	1	1	2	3	7	11	16

Pattern 1914 / Bolt Action Rifle / .303 British / UK

When first introduced, the Short Magazine Lee Enfield rifle met with a storm of criticism. As a result the British began development of another rifle, based on a Mauser action. This rifle went to trials in 1913 but was not produced. In 1914 however, wartime rifle production needs could not be met by Lee Enfield, so this rifle was re-intoduced as the Pattern 1914. It was actually made in the USA by Remington and Winchester. After WW I the Pattern 1914 rifles were put into storage. In 1940, they were returned to service as Rifles Number 3. They were primarily used by the Home Guard.

Physical Data		Aim Time AC	Md
L	46	1	-23
W	9.0	2	-12
		3	-9
RT	8	4	-7
ROF	3	5	-6
		6	-5
Cap	5	7	-4
AW	.35	8	-3
	CS	9	-2
KD	12	11	-1
SAB	7	13	1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	24	23	22	20	18	14	11	8.1
	DC	8	8	8	8	8	7	7	6
*JHP	PEN	23	22	21	19	18	14	10	7.8
	DC	10	9	9	9	9	9	8	8
AP	PEN	33	32	31	28	26	20	15	11
	DC	8	8	8	8	7	7	6	6
	BA	63	56	47	40	35	26	20	16
	TOF	0	0	1	2	2	5	8	11

M1903 A4 / Sniper Rifle / 30 '06 Springfield / USA

This was the standard sniper's rifle version of the M1903 rifle. It was equipped with permanent telescope mounts and had no conventional sights. The Weaver Model 330C was the standard telescopic sight.

Physical Data		Aim Time AC	Md
L	43	1	-22
W	9.7	2	-11
		3	-7
RT	16	4	-5
ROF	3	5	-4
		6	-2
Cap	5	7	0
AW	.07	8	1
	Rnd	9	2
KD	12	10	3
SAB	7	11	4

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	23	23	21	20	18	14	10	7.7
	DC	8	8	8	8	8	7	7	6
*JHP	PEN	22	22	20	19	17	13	9.8	7.4
	DC	10	10	9	9	9	9	8	8
AP	PEN	33	32	30	28	25	19	14	11
	DC	8	8	8	8	7	7	6	6
	BA	69	61	52	45	40	30	24	20
	TOF	0	0	1	2	2	5	8	11

Semi-Automatic and Automatic Rifles

MP 43 (Stg 44) / Semi-Automatic Rifle / 7.92mm Kurz / Germany

This weapon used a short 7.92mm cartridge.

Physical Data		Aim Time AC	Aim Time Md
L	37	1	-25
W	12.4	2	-15
		3	-10
RT	8	4	-8
ROF	*4	5	-6
		6	-5
Cap	30	7	-4
AW	2.1	8	-3
	Mag	9	-2
KD	6	10	-1
SAB	4		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	9.3	8.9	8.2	7.2	6.4	4.2	2.8	1.8
	DC	6	6	6	6	6	4	3	2
*JHP	PEN	8.9	8.5	7.9	6.9	6.1	4.0	2.7	1.8
	DC	8	8	8	7	7	6	4	2
AP	PEN	13	13	12	10	9.0	5.9	3.9	2.6
	DC	6	6	6	6	5	4	2	2
	MA	.2	.5	1	2	3	5	7	10
	BA	58	49	40	32	27	17	12	8
	TOF	0	1	1	2	3	7	11	16

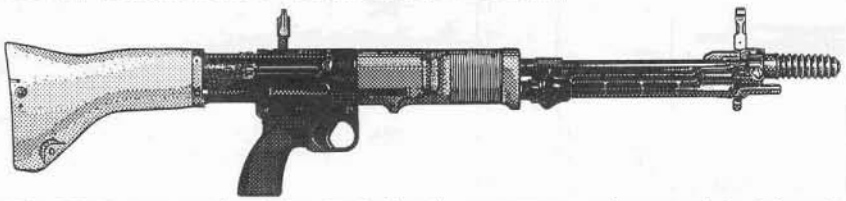
Gew 41 / Semi-Automatic Rifle / 7.92mm Mauser / Germany $200

The Walther Gew41 was developed during the war and was primarily used on the Russian front. Production ended in 1943 when the Gew 43 went into production. Although out of production after 1943, the Gew 41 remained in use through the war.

Physical Data		Aim Time AC	Aim Time Md
L	44	1	-24
W	11.7	2	-14
		3	-10
RT	8	4	-8
ROF	*	5	-6
		6	-5
Cap	10	7	-4
AW	.7	8	-3
	CS	9	-2
KD	11	10	-1
SAB	6	11	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	19	19	18	17	15	12	8.9	6.9
	DC	8	8	8	8	7	7	6	6
*JHP	PEN	19	18	17	16	15	11	8.6	6.6
	DC	9	9	9	9	9	8	8	8
AP	PEN	27	27	25	23	21	16	13	9.6
	DC	8	8	7	7	7	7	6	6
	MA	.7	1	3	5	7	13	20	27
	BA	62	55	46	39	34	25	19	15
	TOF	0	0	1	2	3	5	9	12

FG 42 / Automatic Rifle / 7.92mm Mauser / Germany



The FG 42 was produced for the Luftwaffe paratroops and appeared in Italy and France. The magazine fed from the left side and it had a bipod and integral bayonet.

Physical Data		Aim Time AC	Aim Time Md
L	37	1	-24
W	11.1	2	-14
		3	-9
RT	8	4	-8
ROF	*6	5	-6
		6	-5
Cap	20	7	-4
AW	2.1	8	-3
	Mag	9	-2
KD	11	10	-1
SAB	6	11	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	19	18	17	16	15	11	8.5	6.5
	DC	8	8	8	7	7	7	6	6
*JHP	PEN	18	17	16	15	14	11	8.2	6.3
	DC	9	9	9	9	9	8	8	7
AP	PEN	26	25	24	22	21	16	12	9.2
	DC	8	7	7	7	7	7	6	6
	MA	.7	1	3	5	7	13	20	27
	BA	62	55	46	39	34	25	19	15
	TOF	0	0	1	2	3	5	9	12

Gew 43 / Semi-Automatic Rifle / 7.92mm Mauser / Germany $250

The Gew 43 replaced the Gew 41 and was generally used for sniping. It was encountered in small numbers on both fronts, and always as a specialist's weapon. The Gew 43 had a number of improvements over the Gew 41, including a removeable box magazine.

Physical Data		Aim Time AC	Aim Time Md
L	44	1	-23
W	10.1	2	-13
		3	-9
RT	8	4	-7
ROF	*	5	-6
		6	-5
Cap	10	7	-4
AW	1.1	8	-3
	Mag	9	-2
KD	10	10	-1
SAB	6	11	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	18	17	16	15	14	11	8.1	6.2
	DC	8	8	8	7	7	7	6	6
*JHP	PEN	17	17	16	15	13	10	7.8	6.0
	DC	9	9	9	9	9	8	8	7
AP	PEN	25	24	23	21	20	15	12	8.7
	DC	7	7	7	7	7	7	6	6
	MA								
	BA	62	55	46	39	34	25	19	15
	TOF	0	0	1	2	3	6	6	12

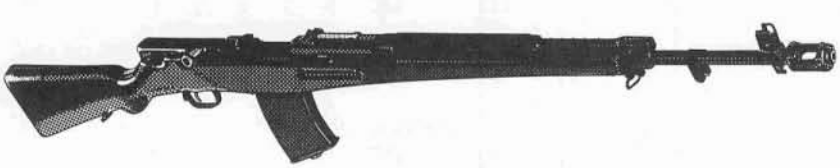
SKS / Semi-Automatic Rifle / 7.62 x 39mm / USSR $175

The SKS was the first weapon to use the short 7.62 x 39mm round which was later used in the AK 47. This round may have been produced as early as 1943, but it is questionable whether this weapon saw action in WW II.

Physical Data		Aim Time AC	Aim Time Md
L	40	1	-23
W	8.6	2	-12
		3	-9
RT	9	4	-7
ROF	*	5	-6
		6	-5
Cap	10	7	-3
AW	.62	8	-3
	CS	9	-2
KD	7	10	-1
SAB	5		

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	12	12	11	9.4	8.4	5.6		2.6
	DC	7	7	7	6	6	5		2
*JHP	PEN	11	11	10	9.0	8.0	5.4		2.5
	DC	8	8	8	8	8	7		3
AP	PEN	17	16	15	13	12	8.0		3.6
	DC	7	7	6	6	6	5		2
	MA								
	BA	58	49	40	33	28	18		8
	TOF	0	1	1	2	3	6		14

AVS 36 / Automatic Rifle / 7.92mm Mosin-Nagant / USSR



The Simonova AVS 36 was the first automatic rifle adopted by the Russian army. It had a number of design flaws and was replaced in 1938 by the Tokarev SVT 38. The AVS 36 was capable of fully automatic fire.

Physical Data		Aim Time AC	Aim Time Md
L	50	1	-24
W	10.7	2	-13
		3	-9
RT	8	4	-8
ROF	*5	5	-6
		6	-5
Cap	15	7	-4
AW	1.6	8	-3
	Mag	9	-2
KD	12	10	-1
SAB	6	12	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	24	23	22	21	19	15	12	9.3
	DC	8	8	8	8	8	7	7	6
*JHP	PEN	23	22	21	20	18	14	11	8.9
	DC	10	10	9	9	9	9	8	8
AP	PEN	33	33	31	29	27	21	17	13
	DC	8	8	8	8	8	7	7	6
	MA	.6	1	3	5	6	13	19	26
	BA	63	56	48	41	36	27	21	17
	TOF	0	0	1	2	2	5	8	11

Semi-Automatic and Automatic Rifles

SVT 40 / Semi-Automatic Rifle / 7.62mm Nagant / USSR

The SVT 40 is a sturdier version of the SVT 38 and essentially identical. The SVT 40 were issued mainly to NCOs, and a few were used as sniping weapons. A few of these weapons were modified for automatic fire.

Physical Data		Aim Time AC	Md
L	48	1	-23
W	9.2	2	-12
		3	-9
RT	8	4	-7
ROF	*	5	-6
		6	-5
Cap	10	7	-4
AW	1.1	8	-3
	Mag	9	-2
KD	12	10	-1
SAB	7	11	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	24	23	22	21	19	15	12	9.4
	DC	8	8	8	8	8	7	7	6
*JHP	PEN	23	23	21	20	19	15	12	9.0
	DC	10	10	9	9	9	9	8	8
AP	PEN	34	33	31	29	27	21	17	13
	DC	8	8	8	8	8	7	7	6
	BA	63	56	48	41	36	27	21	17
	TOF	0	0	1	2	2	5	8	11

M1 Carbine / Semi-Automatic Rifle / .30 M1 Carbine / USA $200

More M1 Carbines were produced in WW II than any other American weapon. It was designed as a light weapon for use by machine-gunners, mortarmen, and officers. Extremely popular, it was used throughout WW II and the Korean War.

Physical Data		Aim Time AC	Md
L	36	1	-21
W	5.9	2	-11
		3	-9
RT	8	4	-7
ROF	*	5	-6
		6	-4
Cap	15	7	-3
AW	.77	8	-2
	Mag	9	-2
KD	5	10	-1
SAB	4	11	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	6.8	6.4	5.8	4.9	4.2	2.4	1.4	.8
	DC	6	6	5	5	4	2	1	1
*JHP	PEN	6.5	6.2	5.5	4.7	4.0	2.3	1.3	.8
	DC	7	7	7	7	6	3	2	1
*AP	PEN	9.6	9.1	8.1	6.9	5.9	3.4	2.0	1.1
	DC	6	5	5	4	4	2	1	1
	BA	55	46	37	29	24	14	8	5
	TOF	0	1	1	2	3	8	13	18

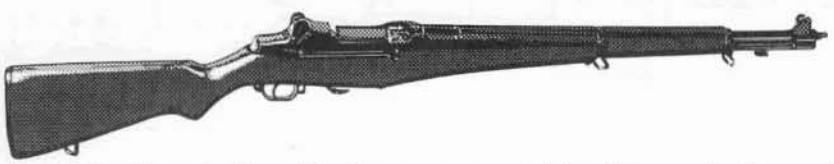
M2 Carbine / Semi-Automatic Rifle / .30 M1 Carbine / USA

The M2 Carbine is identical to the M1 Carbine shown above and was capable of fully automatic fire. A selective fire switch was added to the left side of the weapon. The data for the M2 includes a 30 round magazine. This magazine can also be used with the M1 and changes only the weapon weight.

Physical Data		Aim Time AC	Md
L	36	1	-21
W	6.3	2	-11
		3	-9
RT	8	4	-7
ROF	*8	5	-6
		6	-4
Cap	30	7	-3
AW	1.5	8	-2
	Mag	9	-2
KD	5	10	-1
SAB	4	11	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	6.8	6.4	5.8	4.9	4.2	2.4	1.4	.8
	DC	6	6	5	5	4	2	1	1
*JHP	PEN	6.5	6.2	5.5	4.7	4.0	2.3	1.3	.8
	DC	7	7	7	7	6	3	2	1
AP	PEN	9.6	9.1	8.1	6.9	5.9	3.4	2.0	1.1
	DC	6	5	5	4	4	2	1	1
	MA	.6	1	2	4	6	12	17	23
	BA	55	46	37	29	24	14	8	5
	TOF	0	1	1	2	3	8	13	18

M1 Garand / Semi-Automatic Rifle / 30 '06 / USA $400



The M1 Garand was the first self loading weapon accepted for military service. It entered service in 1936 and by 1941 was the standard US infantryman's weapon. The M1 Garand automatically ejects its ammo clip and single rounds cannot be fed to top off the clip.

Physical Data		Aim Time AC	Md
L	44	1	-23
W	10.0	2	-13
		3	-9
RT	7	4	-8
ROF	*	5	-6
		6	-5
Cap	8	7	-4
AW	.52	8	-3
	Cp	9	-2
KD	11	10	-1
SAB	6	12	0

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	22	21	20	18	17	13	9.3	6.9
	DC	8	8	8	8	7	7	6	6
*JHP	PEN	21	20	19	18	16	12	8.9	6.6
	DC	9	9	9	9	9	8	8	7
AP	PEN	31	30	28	26	24	18	13	9.7
	DC	8	8	8	7	7	7	6	6
	BA	62	54	45	38	33	24	18	14
	TOF	0	0	1	2	2	5	8	11

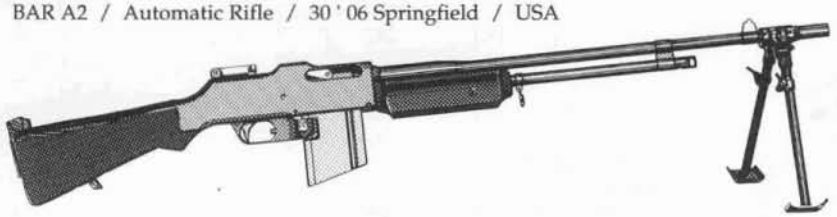
M1E7 / Sniper Rifle / 30 '06 Springfield / USA $700

The M1E7 is a sniper version of the M1 Garand. It was equipped with telescopic sights and a flash hider. Ballistic data is for a streamlined bullet rather than the standard flat based Ball M2. Magazine feed is identical to the M1 Garand.

Physical Data		Aim Time AC	Md
L	46	1	-23
W	11.6	2	-13
		3	-7
RT	8	4	-5
ROF	*	5	-4
		6	-2
Cap	8	7	0
AW	.52	8	1
	Cp	9	2
KD	12	10	3
SAB	6	12	4

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	23	23	21	20	18	14	10	7.7
	DC	8	8	8	8	8	7	7	6
*JHP	PEN	22	22	20	19	17	13	9.8	7.4
	DC	10	10	9	9	9	9	8	8
AP	PEN	33	32	30	28	25	19	14	11
	DC	8	8	8	8	7	7	6	6
	BA	69	61	52	44	40	30	24	20
	TOF	0	0	1	2	2	5	8	11

BAR A2 / Automatic Rifle / 30 '06 Springfield / USA



The Browning Automatic Rifle served as a light machine-gun through WW II and the Korean war. It is heavy and has limited magazine capacity, but is very robust and reliable.

Physical Data		Aim Time AC	Md
L	48	1	-27
W	19.7	2	-17
		3	-11
RT	8	4	-9
ROF	*4	5	-7
		6	-6
Cap	20	7	-5
AW	1.8	8	-4
	Mag	9	-3
KD	10	11	-1
SAB	4	13	1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	20	19	18	16	15	11	8.1	6.0
	DC	8	8	8	7	7	7	6	6
*JHP	PEN	19	18	17	16	14	11	7.8	5.7
	DC	9	9	9	9	9	8	8	7
AP	PEN	28	27	25	23	21	16	11	8.4
	DC	8	8	7	7	7	6	6	5
	MA	.3	.5	1	2	3	5	8	10
	BA	62	54	45	38	33	24	18	14
	TOF	0	0	1	2	2	5	8	12

Machine Guns

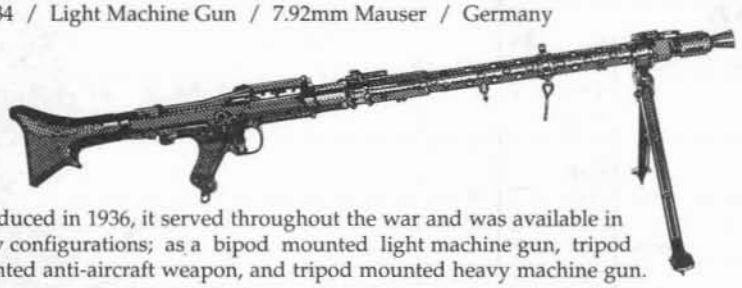
M1924/29 / Light Machine Gun — 7.5mm Mle 29 / France

Standard French machine gun

Physical Data		Aim Time AC	Aim Time Md
L	43	1	-28
W	21.5	2	-18
		3	-11
RT	8	4	-9
ROF	*4	5	-7
		6	-6
Cap	25	7	-5
AW	1.9	8	-4
	Mag	9	-3
KD	9	11	-1
SAB	3	13	1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	18	18	17	15	14	9.8	7.0	5.1
	DC	8	7	7	7	6	6	4	
*JHP	PEN	18	17	16	14	13	9.4	6.8	4.9
	DC	9	9	9	9	8	8	7	6
AP	PEN	26	25	23	21	19	14	9.9	7.1
	DC	7	7	7	7	7	6	5	3
MA		.2	.4	.8	1	2	4	6	8
BA		61	53	44	37	32	23	17	13
TOF		0	0	1	2	2	5	8	12

MG 34 / Light Machine Gun / 7.92mm Mauser / Germany



Introduced in 1936, it served throughout the war and was available in many configurations; as a bipod mounted light machine gun, tripod mounted anti-aircraft weapon, and tripod mounted heavy machine gun.

Physical Data		Aim Time AC	Aim Time Md
L	48	1	-30
W	29.9	2	-20
		3	-14
RT	12	4	-9
ROF	*7	5	-8
		6	-6
Cap	50	7	-5
AW	3.2	8	-4
	Blt	9	-3
KD	11	10	-2
SAB	3	11	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	18	18	17	16	14	11	8.4	6.4
	DC	8	8	8	7	7	7	6	6
*JHP	PEN	18	17	16	15	14	11	8.0	6.1
	DC	9	9	9	9	9	8	8	7
AP	PEN	26	25	24	22	20	15	12	9.0
	DC	8	7	7	7	7	7	6	6
MA		.3	.7	1	2	3	7	10	14
BA		62	55	46	39	34	25	19	15
TOF		0	0	1	2	3	5	9	12

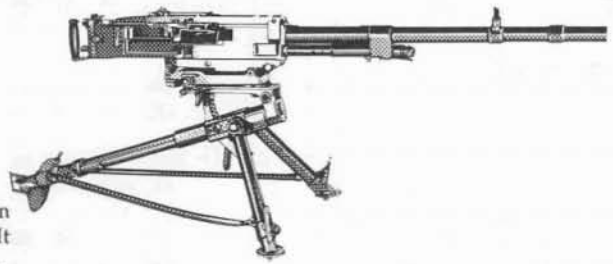
MG 42 / Light Machine Gun / 7.92mm Mauser / Germany

The MG 42 replaced the MG 34 and was designed for ease of production. It was one of the best machine guns of the war. The MG 42 replaced the MG 34 on the manufacturing line, but the MG 34s in service were never withdrawn. The MG 42 is essentially identical in appearance to the MG 34 shown above and was one of the first belt fed light machine guns. It normally fed from 50 round belts and barrel changes were made after every 250 rounds. Five 50 round belts were normally linked together for sustained fire.

Physical Data		Aim Time AC	Aim Time Md
L	48	1	-30
W	28.7	2	-20
		3	-14
RT	12	4	-9
ROF	*10	5	-7
		6	-6
Cap	50	7	-5
AW	3.2	8	-4
	Blt	9	-3
KD	11	10	-2
SAB	3	11	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	18	18	17	16	14	11	8.4	6.4
	DC	8	8	8	7	7	7	6	6
*JHP	PEN	18	17	16	15	14	11	8.0	6.1
	DC	9	9	9	9	9	8	8	7
AP	PEN	26	25	24	22	20	15	12	9.0
	DC	8	7	7	7	7	7	6	6
MA		.5	1	2	4	5	10	15	20
BA		62	55	46	39	34	25	19	15
TOF		0	0	1	2	3	5	9	12

Modello 37 Machine Gun — 8mm Modello 35 — Italy



Standard machine gun of the Italian army. It fed from a metal strip.

Physical Data		Aim Time AC	Aim Time Md
L	50	1	-37
W	79.2	2	-27
		3	-21
RT	8	4	-17
ROF	*4	5	-12
		6	-9
Cap	20	7	-7
AW	1.8	8	-6
	MS	9	-5
KD	12	11	-3
SAB	2	13	1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	21	21	20	18	17	13	9.7	7.4
	DC	8	8	8	8	8	7	7	7
*JHP	PEN	21	20	19	17	16	12	9.3	7.1
	DC	9	9	9	9	9	9	8	8
AP	PEN	30	29	28	26	24	18	14	10
	DC	8	8	8	8	7	7	6	6
MA		.2	.2	.4	.6	.9	2	3	4
BA		63	55	47	40	35	26	20	16
TOF		0	0	1	2	2	5	8	12

Kikanju 11 Light Machine Gun — 6.5mm Meiji 30 (RL) — Japan

Introduced in 1922, this MG was used throughout WW II.

Physical Data		Aim Time AC	Aim Time Md
L	44	1	-29
W	23.9	2	-19
		3	-12
RT	16	4	-9
ROF	*4	5	-7
		6	-6
Cap	30	7	-5
AW	2.2	8	-3
	Hop	9	-2
KD	8	10	-2
SAB	3	11	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	17	17	16	15	14	11	8.5	6.7
	DC	7	7	7	6	6	6	5	5
*JHP	PEN	16	16	15	14	13	10	8.1	6.4
	DC	8	8	8	8	8	7	7	7
AP	PEN	24	23	22	21	19	15	12	9.4
	DC	6	6	6	6	6	6	5	5
MA		.2	.3	.6	1	2	3	5	7
BA		64	58	50	44	39	30	25	21
TOF		0	1	1	2	3	6	9	13

Type 96 Light Machine Gun — 6.5mm Meiji 30 (RL) — Japan

The Type 96 used a 30 round magazine rather than Hopper.

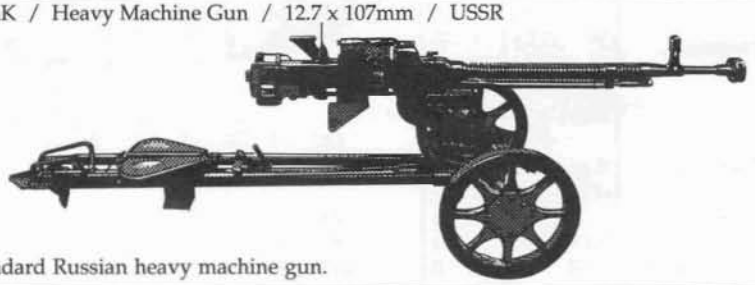
Physical Data		Aim Time AC	Aim Time Md
L	42	1	-28
W	21.5	2	-18
		3	-11
RT	8	4	-9
ROF	*5	5	-7
		6	-6
Cap	30	7	-5
AW	2.0	8	-4
	Mag	9	-3
KD	8	11	-1
SAB	3	13	1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	18	18	17	16	15	12	9.3	7.4
	DC	7	7	7	7	6	6	6	5
*JHP	PEN	18	17	16	15	14	11	8.9	7.1
	DC	8	8	8	8	8	8	7	7
AP	PEN	26	25	24	23	21	17	13	10
	DC	7	7	7	6	6	6	5	5
MA		.2	.5	.9	2	2	5	7	9
BA		64	58	50	44	39	30	25	21
TOF		0	1	1	2	3	6	9	12

Machine Guns	Physical Data		Aim Time AC	Md	Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
Type 92	L	46	1	-40	FMJ	PEN	18	17	16	15	14	11	8.3	6.4
	W	123.8	2	-30		DC	8	7	7	7	7	7	6	6
Machine Gun			3	-24	*JHP	PEN	17	17	16	15	13	10	7.9	6.1
	RT	8	4	-20		DC	9	9	9	9	9	8	8	7
7.7mm Shiki 99	ROF	*4	5	-17	AP	PEN	25	24	23	21	20	15	12	9.0
			6	-14		DC	7	7	7	7	7	6	6	5
Japan	Cap	30	7	-9										
	AW	2.1	8	-7										
		MS	9	-6		MA	.2	.2	.2	.3	.4	.9	1	2
The most widely used Japanese machine gun of WW II.	KD	10	11	-4		BA	63	55	47	40	35	26	21	17
	SAB	1	13	0		TOF	0	1	1	2	3	6	9	13
Type 99	L	46	1	-29	FMJ	PEN	17	17	16	14	13	10	7.9	6.0
	W	24.8	2	-19		DC	7	7	7	7	7	7	6	4
Light Machine Gun			3	-12	*JHP	PEN	16	16	15	14	13	9.8	7.5	5.8
	RT	8	4	-9		DC	9	9	9	9	9	8	8	6
7.7mm Shiki 99	ROF	*7	5	-7	AP	PEN	24	23	22	20	19	14	11	8.5
			6	-6		DC	7	7	7	7	7	6	6	4
Japan	Cap	30	7	-5										
	AW	2.4	8	-4										
		Mag	9	-3		MA	.4	.7	1	3	4	7	11	14
Light machine gun designed for the 7.7 mm Shiki 99.	KD	10	10	-2		BA	63	55	47	40	35	26	20	16
	SAB	3	12	0		TOF	0	1	1	2	3	6	9	13
PM 1910	L	44	1	-40	FMJ	PEN	25	25	24	22	20	16	13	10
	W	136.0	2	-30		DC	8	8	8	8	8	7	7	7
Machine Gun			3	-25	*JHP	PEN	24	24	23	21	20	15	12	9.6
	RT	12	4	-20		DC	10	10	10	9	9	9	9	8
7.62mm Mosin-Nagant	ROF	*5	5	-17	AP	PEN	36	35	33	31	29	23	18	14
			6	-15		DC	8	8	8	8	8	7	7	6
USSR	Cap	250	7	-10										
	AW	13.5	8	-8										
		Blt	9	-7		MA	.2	.2	.2	.3	.5	1	1	2
This water - cooled machine gun was in service from 1910 to 1943.	KD	12	11	-4		BA	63	56	48	41	36	27	21	17
	SAB	1	13	1		TOF	0	0	1	2	2	5	7	10
DP / Light Machine Gun / 7.62mm Mosin-Nagant / USSR	L	51	1	-28	FMJ	PEN	24	24	22	21	19	15	12	9.4
	W	22.8	2	-18		DC	8	8	8	8	8	7	7	6
			3	-12	*JHP	PEN	23	23	22	20	19	15	12	9.0
	RT	10	4	-9		DC	10	10	9	9	9	9	8	8
	ROF	*5	5	-7	AP	PEN	34	33	32	29	27	22	17	13
			6	-6		DC	8	8	8	8	8	7	7	6
	Cap	47	7	-5										
	AW	3.3	8	-4										
		Pan	9	-3		MA	.3	.7	1	2	3	7	10	13
The DP was the standard light MG from 1928 to the 1950s.	KD	12	10	-2		BA	63	56	48	41	36	27	21	17
	SAB	4	12	0		TOF	0	0	1	2	2	5	8	11
SG 43M	L	44	1	-39	FMJ	PEN	22	21	20	19	17	14	11	8.3
	W	113.5	2	-29		DC	8	8	8	8	8	7	7	6
Machine Gun			3	-23	*JHP	PEN	21	20	19	18	17	13	10	8.0
	RT	12	4	-19		DC	9	9	9	9	9	9	8	8
7.62mm Mosin-Nagant	ROF	*5	5	-16	AP	PEN	31	30	28	26	25	19	15	12
			6	-12		DC	8	8	8	8	7	7	6	6
USSR	Cap	250	7	-9										
	AW	13.7	8	-7										
		Blt	9	-6		MA	.2	.2	.2	.4	.5	1	2	2
Introduced in 1943, this medium MG replaced the PM 1910.	KD	12	11	-4		BA	63	56	48	41	36	27	21	17
	SAB	1	13	1		TOF	0	0	1	2	2	5	8	11
DPM / Light Machine Gun / 7.62mm Mosin-Nagant / USSR	L	50	1	-30	FMJ	PEN	24	24	23	21	20	15	12	9.5
	W	29.1	2	-20		DC	8	8	8	8	8	7	7	6
			3	-14	*JHP	PEN	23	23	22	20	19	15	12	9.1
	RT	10	4	-10		DC	10	10	9	9	9	9	8	8
	ROF	*5	5	-8	AP	PEN	34	33	32	30	28	22	17	13
			6	-6		DC	8	8	8	8	8	7	7	6
	Cap	47	7	-5										
	AW	3.3	8	-4										
		Pan	9	-3		MA	.3	.6	1	2	3	6	8	11
	KD	12	10	-2		BA	63	56	48	41	36	27	21	17
Updated DP with improved bipod & return spring.	SAB	3	12	0		TOF	0	0	1	2	2	5	8	11

Machine Guns

DShK / Heavy Machine Gun / 12.7 x 107mm / USSR



Standard Russian heavy machine gun.

Physical Data		Aim Time AC	Md
L	62	1	-41
W	173.5	2	-31
		3	-24
RT	12	4	-20
ROF	*5	5	-17
		6	-14
Cap	50	7	-11
AW	13.5	8	-6
	Blt	9	-4
KD	46	10	-3
SAB	2	11	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	43	42	41	38	36	30	25	21
	DC	10	10	10	10	10	10	10	10
*JHP	PEN	41	40	39	37	35	29	24	20
	DC	10	10	10	10	10	10	10	10
AP	PEN	61	59	57	54	51	42	35	29
	DC	10	10	10	10	10	10	10	10
	MA	.2	.3	.5	.9	1	3	4	5
	BA	63	56	48	41	36	26	21	17
	TOF	0	0	1	2	2	5	7	10

Vickers Mk1

Machine Gun

.303 British Mk8z

UK

Adopted in 1912, it remained in service into the mid 1960s.

Physical Data		Aim Time AC	Md
L	46	1	-38
W	95.0	2	-28
		3	-22
RT	12	4	-18
ROF	*4	5	-15
		6	-10
Cap	250	7	-8
AW	15.0	8	-7
	Blt	9	-6
KD	10	11	-4
SAB	1	13	1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	18	18	17	16	14	11	8.6	6.6
	DC	8	8	7	7	7	7	6	6
*JHP	PEN	18	17	16	15	14	11	8.2	6.3
	DC	9	9	9	9	9	8	8	7
AP	PEN	26	25	24	22	20	16	12	9.3
	DC	7	7	7	7	7	6	6	6
	MA	.2	.2	.2	.3	.5	.9	1	2
	BA	63	55	47	40	35	26	20	16
	TOF	0	0	1	2	3	6	9	12

Bren Mk1

Light Machine Gun

.303 British

UK

Reliable light machine gun developed in the 1930s.

Physical Data		Aim Time AC	Md
L	45	1	-29
W	24.1	2	-19
		3	-12
RT	8	4	-9
ROF	*4	5	-7
		6	-6
Cap	30	7	-5
AW	2.2	8	-4
	Mag	9	-3
KD	10	11	-1
SAB	3	13	1

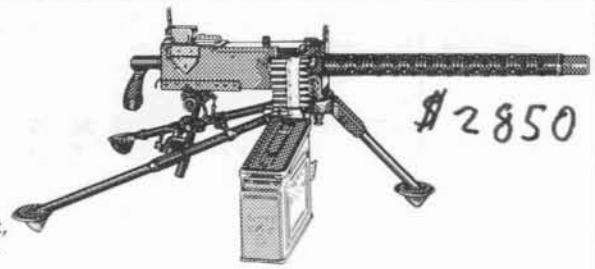
Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	18	17	16	15	13	10	7.5	5.6
	DC	7	7	7	7	7	6	6	4
*JHP	PEN	17	16	15	14	13	9.6	7.2	5.4
	DC	9	9	9	9	9	8	8	6
AP	PEN	25	24	23	21	19	14	11	7.9
	DC	7	7	7	7	7	6	6	4
	MA	.2	.4	.8	2	2	4	6	8
	BA	62	55	47	39	35	25	20	16
	TOF	0	1	1	2	3	6	9	13

M1919 A4

Machine Gun

30 ' 06 Springfield

USA

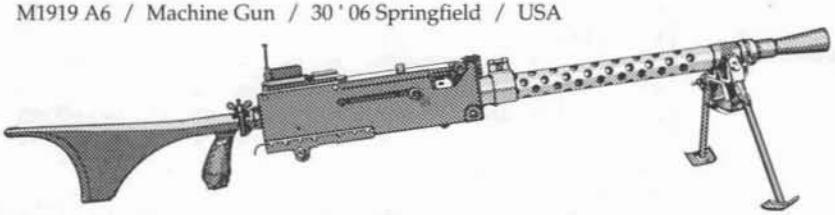


Standard US anti-aircraft, tank, and infantry machine gun of WW II.

Physical Data		Aim Time AC	Md
L	41	1	-36
W	76.5	2	-26
		3	-21
RT	12	4	-16
ROF	*4	5	-12
		6	-9
Cap	250	7	-7
AW	15.5	8	-6
	Blt	9	-4
KD	11	10	-3
SAB	1	12	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	22	21	20	18	17	13	9.3	6.9
	DC	8	8	8	8	7	7	6	6
*JHP	PEN	21	20	19	18	16	12	8.9	6.6
	DC	9	9	9	9	9	8	8	7
AP	PEN	31	30	28	26	24	18	13	9.7
	DC	8	8	8	7	7	7	6	6
	MA	.2	.2	.3	.4	.6	1	2	3
	BA	62	54	45	38	33	24	18	14
	TOF	0	0	1	2	2	5	8	11

M1919 A6 / Machine Gun / 30 ' 06 Springfield / USA

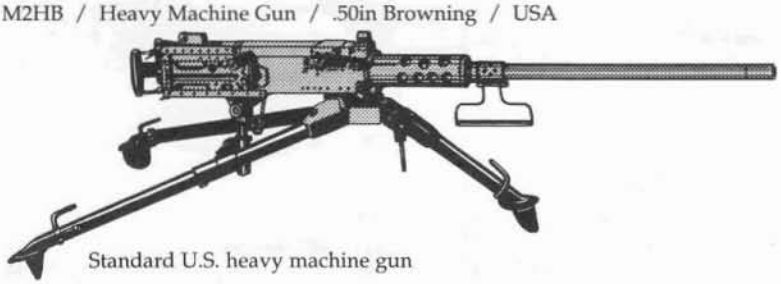


Developed in 1943, the M1919 A6 is a modified M1919 A4. A shoulder stock and bipod were added.

Physical Data		Aim Time AC	Md
L	53	1	-33
W	48	2	-23
		3	-17
RT	12	4	-12
ROF	*4	5	-9
		6	-7
Cap	250	7	-6
AW	15.5	8	-4
	Blt	9	-3
KD	11	10	-2
SAB	3	11	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	22	21	20	18	17	13	9.3	6.9
	DC	8	8	8	8	7	7	6	6
*JHP	PEN	21	20	19	18	16	12	8.9	6.6
	DC	9	9	9	9	9	8	8	7
AP	PEN	31	30	28	26	24	18	13	9.7
	DC	8	8	8	7	7	7	6	6
	MA	.2	.4	.7	1	2	4	5	7
	BA	62	54	45	38	33	24	18	14
	TOF	0	0	1	2	2	5	8	11

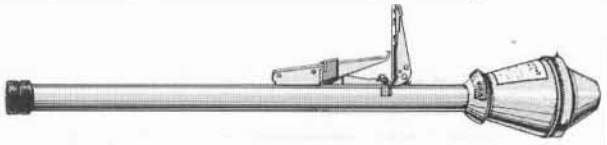
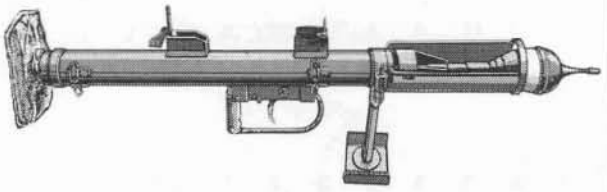
M2HB / Heavy Machine Gun / .50in Browning / USA



Standard U.S. heavy machine gun

Physical Data		Aim Time AC	Md
L	65	1	-41
W	157.5	2	-31
		3	-26
RT	12	4	-21
ROF	*4	5	-18
		6	-16
Cap	110	7	-12
AW	28.8	8	-9
	Blt	9	-7
KD	50	11	-4
SAB	2	13	-1

Ballistic Data		Range in 2 yard hexes 10	20	40	70	100	200	300	400
FMJ	PEN	49	48	47	45	43	36	31	26
	DC	10	10	10	10	10	10	10	10
*JHP	PEN	47	46	45	43	41	35	30	25
	DC	10	10	10	10	10	10	10	10
AP	PEN	69	68	66	63	60	51	44	37
	DC	10	10	10	10	10	10	10	10
	MA	.2	.3	.6	1	1	3	4	6
	BA	64	57	49	42	37	28	23	19
	TOF	0	0	1	1	2	4	7	9

Explosive Weapons	Physical Data	Aim Time AC Md	Ballistic Data	Target Range 40 70 100 400	Explosive Data Range	C	0	1	2	3	5	10
Sturmpistole / Flare & Grenade Launcher / Germany	L 12/23	1 -22	HC PEN	900	PEN	900	2.7	2.7	2.6	2.5	2.3	
	W 6.8	2 -11	DC	10	DC	10	4	4	3	3	3	
The Sturmpistole is a modified flare pistol with a rifled bore		3 -9			BSHC	*5	6	1	-3	-6	-9	
sleeve, a folding stock, and aiming sights. Data shown to the	RT 8	4 -7			BC	12K	654	165	50	25	11	4
right is for the pistol loaded with a Panzerwurfkorper 42 anti-		5 -5										
tank grenade. The 42 grenade is a modified Number 61 anti-	Cap 1	6 -4	HE PEN	2.9	PEN	2.9	2.4	2.4	2.2	2.1	1.9	
tank rifle grenade. It is muzzle loaded, arms immediately after	AW		DC	10	DC	10	3	3	3	3	3	
firing, and is impact detonated.	HC 1.3				BSHC	*3	4	0	-4	-7	-11	
High Explosive (HE) data is for the pistol loaded with a	HE .9				BC	8K	517	137	42	21	9	3
Wurfkorper 361 grenade. The 361 consists of a Number 39 egg												
grenade mounted on a plastic tube containing the propellant	MR		AOI	1								
charge. The grenade is muzzle loaded, has a four second (2	HC 30		BA	4								
phase) fuse, and a Maximum Range (MR) of about 40 hexes.	HE 40		TOF	16								
Panzerschreck / 88mm Rocket Launcher / Germany	L 64	1 -29	HC PEN	920 920 920 920	PEN	920	2.5	2.4	2.3	2.3	2.1	
	W 27.3	2 -19	DC	10 10 10 10	DC	10	4	4	4	4	3	
		3 -13			BSHC	*7	9	2	-2	-5	-8	
	RT 10	4 -9			BC	14K	733	181	54	27	12	4
		5 -8										
		6 -6										
	Cap 1	7 -5										
	AW 7.3	8 -4										
The Panzerschreck was a German copy of the US bazookas		9 -3										
which were captured in North Africa. Its 88mm rocket con-		10 -2										
tained a hollow charge explosive, and while not as effective as		11 -2										
the US bazooka, it was far better than the anti-tank rifles it		12 -1	BA	13 5 0 -19								
replaced. The Panzerschreck is handled by a two man team.	MR 600		TOF	4 7 11 50								
Panzerfaust / 48mm Recoilless Gun / Germany	L 32	1 -23	HC PEN	17H	PEN	17H	7.7	7.6	5.8			
	W 9.5	2 -12	DC	10	DC	10	8	8	7			
		3 -9			BSHC	34	-3	-8	-12			
		4 -8			BC	16T	5K	552	170	82	34	11
		5 -6										
		6 -5										
	Cap 1	7 -4										
		8 -3										
The Panzerfaust was a one shot disposable anti-tank weapon												
developed near the end of the war. It was not a rocket launcher,												
but actually a recoilless gun. Explosion of a black powder			AOI	1								
charge in the launch tube drove the bomb out the front of the			BA	2								
tube. The blast was driven out the back of the tube providing												
the recoilless effect.	MR 50		TOF	14								
PIAT / Anti-Tank Bomb Launcher / UK	L 39	1 -31	HC PEN	640 640	PEN	640	2.5	2.4	2.3	2.3	2.1	
	W 35.0	2 -21	DC	10 10	DC	10	4	4	4	4	3	
		3 -15			BSHC	*3	3	0	-5	-8	-12	
	RT 16	4 -10			BC	14K	733	181	54	27	12	4
		5 -8										
		6 -7										
	Cap 1	7 -6										
	AW 3.0	8 -5										
		9 -4										
The Projector, Infantry, Anti-Tank weapon or PIAT is a spigot		10 -3										
launcher using a steel rod to launch a bomb which is loaded into			AOI	1								
the muzzle tray. The propellant charge which launches the			BA	4 -4								
bomb drives the rod back, cocking it for the next shot.	MR 70		TOF	11 20								
M9A1 Bazooka / 2.36 inch Rocket Launcher / USA	L 54	1 -26	HC PEN	14H 14H 14H 14H	PEN	14H	1.5	1.5	1.4	1.4	1.2	1.0
	W 16.7	2 -16	DC	10 10 10 10	DC	10	2	2	2	2	2	2
		3 -10			BSHC	*11	14	3	0	-3	-7	-12
	RT 10	4 -8			BC	5K	368	103	32	17	7	2
		5 -7										
		6 -6										
	Cap 1	7 -5										
	AW 3.4	8 -4										
		9 -3										
		10 -2										
		11 -1	AOI	1								
The Bazooka fired a 60mm fin stabilized rocket with a hollow			BA	12 5 0 -19								
charge explosive. The rocket was loaded by an assistant into the												
rear of the launch tube and connected to an electric firing wire.												
When the trigger was pressed, two batteries in the pistol grip												
electrically fired the rocket motor. The bazooka was one of the												
most effective infantry anti-tank weapons of the war. After the												
war, a 3.5 inch Super-Bazooka saw service in Korea.	MR 600		TOF	4 7 11 50								

Grenades / Explosives		Physical Data		Explosion Data	Target Range From Burst in 2 Yard Hexes																	
					C	0	1	2	3	4	5	6	7	8	10	12	14	16	20	25	30	40
37M46		Length	3.9	PEN	2.7	1.7	1.7	1.6	1.6	1.5	1.4											
Fragmentation		Weight	1.2	DC	10	3	3	3	3	2	2											
Grenade		Arm Time	3	BSHC	*4	5	1	-4	-7	-9	-10											
		Fuse	2	BC	71H	459	124	38	20	12	9	6	5	4	3	2	2	1	1	1	1	
France		Range	14																			
OF 37		Length	3.9	PEN	2.7	1.2	1.1	1.0	.8	.7	.6	.5										
Blast		Weight	.6	DC	10	5	5	4	3	3	3	2										
Grenade		Arm Time	3	BSHC	*7	9	2	-2	-5	-7	-8	-10										
		Fuse	2	BC	71H	459	124	38	20	12	9	6	5	4	3	2	2	1	1	1	1	
France		Range	19																			
Defensive		Length	4.3	PEN	2.5	1.2	1.2	1.2	1.1	1.1												
Fragmentation		Weight	1.6	DC	10	2	2	2	2	2												
Grenade		Arm Time	3	BSHC	*3	3	0	-5	-8	-10												
		Fuse	2	BC	54H	384	107	33	17	11	7	6	4	4	2	2	1	1	1	1		
France		Range	12																			
Gr 24		Length	14	PEN	3.4	2.7	2.6	2.5	2.4													
Blast		Weight	1.3	DC	10	4	4	4	4													
Grenade		Arm Time	4	BSHC	*2	2	-1	-6	-9													
		Fuse	2	BC	13K	693	173	52	26	16	11	9	7	5	4	3	2	2	1	1	1	
Germany		Range	17																			
M 91		Length	4.9	PEN	2.4	1.2	1.2	1.2	1.1	1.1												
Fragmentation		Weight	1.2	DC	10	2	2	2	2	2												
Grenade		Arm Time	3	BSHC	*3	3	0	-5	-8	-10												
		Fuse	4	BC	50H	368	103	32	17	10	7	5	4	3	2	2	1	1	1	1		
Japan		Range	14																			
F 1		Length	4.9	PEN	2.4	1.1	1.1	1.0	1.0													
Fragmentation		Weight	1.3	DC	10	2	2	2	2													
Grenade		Arm Time	3	BSHC	*2	2	-1	-6	-9													
		Fuse	2	BC	47H	351	99	31	16	10	7	5	4	3	2	2	1	1	1	1		
USSR		Range	13																			
RDG 33		Length	11	PEN	2.7	1.8	1.8	1.7	1.6	1.6												
Fragmentation		Weight	1.6	DC	10	3	3	3	3	2												
Grenade		Arm Time	4	BSHC	*4	4	0	-4	-7	-9												
		Fuse	2	BC	67H	445	121	37	19	12	8	6	5	4	3	2	2	1	1	1	1	
USSR		Range	14																			
RPG 40		Length	6.5	PEN	7.3	7.2	7.1	6.9														
Anti-Tank		Weight	2.4	DC	10	7	7	7														
Grenade		Arm Time	4	BSHC	*1	1	-3	-8														
		Fuse	I	BC	71K	24H	445	116	57	35	24	18	14	11	8	6	5	4	3	2	1	1
USSR		Range	12																			
RG 42		Length	4.8	PEN	3.0	2.2	2.1	2.0	2.0	1.9												
Fragmentation		Weight	1.0	DC	10	3	3	3	3	3												
Grenade		Arm Time	3	BSHC	*3	3	0	-5	-8	-10												
		Fuse	2	BC	91H	545	143	44	22	14	10	7	6	5	3	2	2	2	1	1	1	
USSR		Range	15																			
# 36M		Length	3.5	PEN	2.5	1.2	1.2	1.2	1.1	1.1												
Fragmentation		Weight	1.7	DC	10	2	2	2	2	2												
Grenade		Arm Time	3	BSHC	*3	3	0	-5	-8	-10												
		Fuse	2	BC	54H	384	107	33	17	11	7	6	4	4	2	2	1	1	1	1		
UK		Range	12																			
M 2		Length	4.5	PEN	2.3	1.0	1.0	1.0	1.0													
Fragmentation		Weight	1.3	DC	10	2	2	2	2													
Grenade		Arm Time	3	BSHC	*2	2	-1	-6	-9													
		Fuse	2	BC	43H	335	95	30	15	10	7	5	4	3	2	2	1	1	1	1		
USA		Range	13																			
Mk A3		Length	5.3	PEN	3.8																	
Blast		Weight	1.0	DC	10																	
Grenade		Arm Time	3																			
		Fuse	2	BC	20K	928	218	63	32	20	14	10	8	6	4	3	3	2	1	1	1	
USA		Range	15																			