

The Original Kar. 98 . . .

• a little-known German Military arm

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THE "GEWEHR 98," a Mauser design adopted as a prototype by the German Army in April, 1898, is well known. Its adoption was preceded by two tests with rifles in calibers 8mm (Gewehr 88/97) and 6mm (Mauser). Production examples of the 29,000 *Gewehre* made by Mauser in Oberndorf from 1898 to 1907, from government *Gewehrfabriken* in Spandau, Danzig, Erfurt, Amberg, and during WWI manufactured by many private German arms companies, have survived in great numbers and can be seen in arms museums and private collections.

On the other hand, early military Model 98 carbines are generally unknown. The reason is that only a small number was manufactured, from 1898-1905, and most of them went to the *Kaiserliche Schutztruppe* in Africa and the *Deutsches Ostasiatische Expeditionskorps*. When Germany lost World War I in 1918 those arms remained in Africa, and only a few have survived. The author was able to obtain his early Kar.98, marked ERFURT 1904, from a collector in South Africa.

Several authors in the past have shown one or two samples of the short "Kar.98," built in the beginning primarily for troop testing, with or without an *Aufpflanzvorrichtung* (attachment) for the *Seitengewehr 98* (SG.98) bayonet; their attempts fell short of giving a complete list of all the variations. While in the U.S. publications the Kar.98 has been shown with a round-headed bolt, in German books these carbines are pictured with a flat bolt as is found with the German Kar.88. Ludwig Baer wrote in *Die leichten Waffen der deutschen Armeen von 1844 -1945*, that the Kar98 was made with two different bolts: The flat Kar.88 bolt, and, with the later Kar.98, a round-head bolt. This author found that on all known carbines with round-head bolts, the bolt serials did not match the gun's serial. Kar.98 with flat bolts, in comparison, had mostly matching serial numbers throughout.

Since the Kar.98 bolts can be interchanged with Gewehr 98 bolts, it must be assumed then, that all early Kar:98s were manufactured with a flat bolt, the same as all Kar.88 and Gew.91s.

Worldwide research by the author found carbines with the following types of rear sights:

1. 200-1200 MAUSER
2. 200-1200 LANGE
3. 200-1800 LANGE
4. 200-1800 LANGE (with a 200-1200 limit curve)
5. 300-1800 LANGE
6. 300-1800 LANGE (with a 200-1200 limit curve)
7. 300-2000 MAUSER (Erfurt 1907)

One model carbine of the Kar.98 variations was officially accepted on June 16, 1902, by Kaiser Wilhelm II, Commander in chief of the German Armed Forces. This *Einheitskarabiner* (official model) was produced in the Arsenal Erfurt from 1903-1905. One carbine that was inspected by the author is marked, DANZIG 1903, but its serial number was completely rusted away. This indicates that a few may also have been made in this East Prussian arsenal. All the remaining carbines, those made from 1898-1902, should be seen as *Versuchskrabiner* (test carbines) for troop tests.

It should be noted that in the *Spandauer Gewehr Prüfungs Kommission* (Spandau Rifle Test Commission), which was responsible for testing and evaluating new weapons, one group of commissioners advocated that two types of 98 carbines should be made, one for the cavalry and a second one for the artillery, following the tradition of the Kar.88 (Kav.) and Kar.88 with a stacking hook, which was designated the Gew.91 (Art.). A second group within the commission believed that only one carbine type could serve the cavalry, artillery and other troops with similar needs. The second group won out and the *Einheitskarabiner* was adopted in 1902.

The Kar.98 was designed to use the same cartridge as the late Kar.88, that is, the Patrone 88. The rear sight graduation of 200-1200 meters did not change. In 1903 the new "S" cartridge was introduced into the German Army, requiring all Gew.98 and Kar.98s to be modified for the *S-Patrone*. The cartridge seat in the barrel had to be bored slightly larger to fit the new cartridge, and the rear sight was extended to 1800 meters. The letter "S" was then stamped on the top of the barrel, to indicate the change had been made.

Unfortunately, the more powerful S-Patrone with its *Spitzgeschoss* (pointed bullet) caused not only much heavier recoil, but also a foot-long flame at the muzzle when fired in a carbine! The carbine, only 95cm long, thus proved to be too short for the new cartridge so its production was terminated in 1905. Most of the carbines made from 1903-1905 received replacement rear sight curves, which limit their use to the Patrone 88 at ranges from 200 to 1200 meters.

Spandau 1898

The oldest known Kar.98 is marked SPANDAU 1898 under a crown on top of the barrel. This carbine has the matching serial number 2 on all parts. In addition, the barrel is stamped on the side,

C.7.9 Z.O.15.D.24

Hans Bert Lockhoven, who has researched Mauser rifles and carbines over the past 30 years, and will publish his findings in the near future, interprets these markings as follows:

- C. = Caliber
- 7.9 = 7.9 millimeter (bore)
- Z. = Depth of grooves (*Zugtiefe*)
- 0.15 = 0.15 millimeter
- D. = Length of twist (Drall-Lange-length of barrel for one turn of rifling)
- 24 = 24 centimeter (Drall-Lange). It probably should read 240, but the "0" is covered by the rear sight; the Drall-Lange is normally given in millimeters (24 centimeters equals 240 millimeters).

Kar.98 number 2 is in the Museum Fuer Deutsche Geschichte (M.F.D.G.) in Berlin. This carbine has the following features;

- 1—Aufpflanzvorrichtung for the Seitengewehr 98 (S.G.98),
- 2—Mauser-Visier (rear sight) 200-1200 meters.
- 3—Pistol grip
- 4—Total length of 950 millimeters
- 5—Cartridge: Patrone 88.

Erfurt 1900

One of the first Erfurt 1900s marked KAV.KAR.98, can be seen in Berlin at the M.F.D.G. Its serial number 32 is matching throughout this carbine is of the same construction as the Spandau 1898 with one exception: The Mauser-Visier 2-12 is replaced with a Lange-Visier also graduated 2-12, and the correct cartridge is still the Patrone 88. This Kav.Kar.98 has, however, also been modified at some time by inserting a smaller, shorter barrel to shoot 5mm *Zielmunition* (low-powered ammunition for indoor target shooting).

Another early Erfurt 1900 carbine marked ART.KAR.98, full stocked to the muzzle with a stacking hook, (*Zusammensetvorrichtung*) but without an *Aufpflanzvorrichtung* for the S.G.98, is in a private German collection. Its serial number is 158, and its total length is 950mm and caliber 7.91mm.

A second Erfurt 1900, marked ART.KAR.98, in the same private collection, bears serial number 202, but bolt number 5639; the caliber is 7.91mm. It has the Lange-Visier 2-12 and uses the Patrone 88. Since this carbine has the *Aufpflanzvorrichtung* with the later (1903-05) double barrel band and no front sight protection it is doubtful this carbine was originally manufactured in this form. The stock of this carbine was replaced after World War II, probably because it had rotted away through improper *Auslagerung* (storage) during the war.

A third Art.Kar.98 marked ERFURT 1900, serial number 933, all matching with full stock and stacking hook, was reported by another German private collector, The troop marking O.F.A.1.21 indicates that this carbine saw service with the *Ostasiatisches Feldartillerie-Regiment I. Batterie, Waffennummer 21*

Erfurt 1901

Two Kav.Kar.98s with full stock to the muzzle and Aufpflanzvorrichtung for the S,G.98 survived in South Africa. The first, serial number 1645, is in a private collection. The troop markings F.P.3.72 (*Fahrpark-Kolonne Nr.3, Waffe Nr.72*), indicates this carbine could have seen service with the *Kaiserliche Schutztruppe* in South-West Africa against the *Hereros* and *Hottentotten*, when they rebelled against the German Colonial Troops. The second Kav.Kar.98, serial number 1668, is without regimental markings and is in the collection of an arms manufacturer in South Africa,

Still another original Art.Kar.98 with a full stock and stacking hook, can be seen at the Bavarian Army Museum in Ingolstadt. The serial number 2170 matches on all parts. The Lange rear sight is numbered 2-12, for the Patrone 88. The total length was reported as 960mm, 10mm longer than all other known artillery and cavalry carbines; the barrel length is 425mm. But, since all other Kar.98s listed by the author are of the same length of 95 centimeters, it must be assumed that this carbine was measured at an angle, rather than at a straight line with the barrel, and is probably also 95 centimeters long.

Erfurt 1902

One Einheitskarabiner 98, with non-matching round head bolt, double barrel band, rear sight 3-18, was reported (with a question mark) to be stamped ERFURT 1902. This carbine was checked by the author together with three others, and found to be so badly rusted through poor safekeeping during World War II, that the date 1902 was not clear and the serial number not readable anymore. This carbine was not listed in the table at the end of this article. It could have been manufactured in any year from 1903-1905.

Erfurt 1903

The author was able to locate several carbines Erfurt 1903, marked KAR.98, or just 98. They all are almost identical with the Erfurt 1900, serial number 32, and represent the first issue of the Einheitskarabiner 98th cavalry and artillery alike. Some of these carbines had seen service in *Maschinengewehr-Abteilungen*, as indicated by M.G.A. markings on butt-plates. The barrel is visible above the open barrel band, which is part of the Aufpflanzvorrichtung for the Seitengewehr 98 (S.G.98). The serial numbers are between 794 and 1498, and are listed at the end of this article. Hans Bert Lockhoven, the eminent German researcher on Mauser rifles has suggested that the barrel would move freely at the muzzle without the enclosing barrel band; it was also tested on the very first Gew.98.

All first issue Einheitskarabiner were manufactured to accept the S-Patrone. The base of the LangeVisier is scaled 2-18, but the original upper curve was later exchanged with a replacement curve to limit shooting to 1200 meters with the Patrone 88. All carbines show the "S" stamp in front of the Erfurt and crown markings.

The author did not include a reported and personally inspected Danzig 1903 carbine in the final table because of its questionable characteristics and condition. Its serial number is not visible because of corrosion. This carbine has the open barrel band and the early 2-12 rear sight for the Patrone 88, while all other known Erfurt 1903 carbines, first issue, were manufactured with the 2-18 rear sight, and later changed to 2-12 with the replacement rear sight curve.

In 1903 the first Einheitskarabiner 98, second issue, was assembled in Erfurt, Only one good example of this type survives, which can be seen at the M.F.D.G. in Berlin. The serial number 1 matches on all parts. The original Lange-Visier 3-18 was never modified with a replacement curve to limit the distance to 1200 meters for the Patrone 88, as were all known carbines of the first issue. The half-open barrel band is now secured with a second (double) band of the same type used on the Gewehr 98, with an opening on the left side to accept a sling. As one can see, the two differences between the two carbine issues are the change from a 2-18 scaled Lange-Visier to the 3-18 rear sight, and the addition of an extra barrel band to give the barrel more strength at the muzzle. The Einheitskarabiner 98, -second issue, was then built through 1904 and 1905 as the official Kar.98, without further change, in some numbers.

Erfurt 1904

This year saw production total well over 7,000 Kar.98s; the highest serial number reported is 7141 the lowest 1834. The latter, in the arms collection of the Bavarian Army Museum in Ingolstadt, is the only known unmodified Kar.98 from 1904, which can still utilize the S-Munition up to 1800 meters. All other recorded carbines of this production period have been altered in later years to limit their use to 200-1200 meters with the Patrone 88, as explained before. There was only one remaining obstacle with the sight which had to be overcome. The Lange-Visier of the second issue was designed for a minimum distance of 300 meters, in contrast with the first issue which maintained a lower limit at 200 meters, the same as the earlier rear sights from 1898 to 1902. The replacement rear sight curve for the second issue carbine was thus designed so that the sight release knob could be pushed one notch further to the rear resulting in a reduced setting of 200 meters.

The author's Kar.98, Erfurt 1904 with serial number 6913, has a round-head bolt with serial number 5421. This short carbine has been compared with a Kar.88 of the same length and the later Kar.98a accepted in 1908. Luck also led the author to an extra Kar.98 action with a flat-head bolt, serial number 1244, with all matching parts, to be able to show this carbine with both type actions. As stated before, all short Kar.98s were manufactured with flat-head bolts.

An interesting note is that carbine number 6913 is marked on the buttplate K.G.P.47; another, serial 7141, is marked K.G.P.202 suggesting *Kaiserliche Government Polizei, Waffennummers 47 and 202*. The German police in South-West Africa were officially named: *Kaiserliche Landes Polizei*, so the correct interpretation of K.G.P. has to stay open for the time being until other proof can be found.

The Kar.98 with Aufpflansvorrichtung could be used both with the short S.G.98 saw back bayonet, and with the long S.G.98 bayonet as shown on page 159. However, new information brought to the attention of the author indicates that the short S.G.98 bayonet was only used with the short Kar98 in East Africa and Cameroun, while the long S.G.98 was used exclusively in South-West Africa; all three are former German colonies

Erfurt 1905

Only two Kar98s produced in Erfurt in 1905 could be found. The first, serial number 3030 with matching flat bolt, is located in the arms museum in Swakopmund, South-West Africa. The second, serial 8993 with round head bolt, serial 3686, is on display at the Musée d'Armes, Liege in Belgium. The last carbine serial number indicates that at least 9,000 carbines were manufactured this final year in Erfurt before production was halted.

Erfurt 1906-1908

In order to find a replacement for the obsolete short Kar.98, the Gewehr-Prüfungs Kommission in Spandau assembled a new Versuchskarabiner with a total length of 1090mm and a barrel length of 590mm. Here, as before, one group of commissioners wanted one carbine design for the cavalry, and another for foot troops. Result: two Versuchskarabiner without an Aufpflanzvorrichtung for the SG98, made in Erfurt in 1907, can be seen in the Bavarian Army Museum in Ingolstadt.

The final Kar.98, accepted on January 16, 1908, was again an Einheitskarabiner with Aufpflanzvorrichtung to mount the S.G.98, called the Kar.98a. A Mauser-Visier 300-2000 allowed use of the S-Munition to its full potential. This model carbine is known to most collectors, and is very well documented in the various arms books, making it unnecessary to discuss the Kar.98a in detail.

A final Note

The research of the author documents that the first Versuchskarabiner 1898, serial number 2, survived as a Einheitskarabiner despite all later introduced and tested Versuchskarabiner. Only the Mauser-Visier was replaced, plus some other rather minor changes, when it was accepted as the official Karabiner 98 from 1902-1905.

The idea of having separate carbines for the cavalry and artillery was rejected. Adoption of the S-Patrone rendered the short Kar.98 obsolete for the new ammo, but, by reverting to the 200-1200 meter rear sight, this carbine was still useful with the Patrone 88 (in stock in great quantities). It saw service until 1918 with secondary units.

The author estimates that a minimum of 20,000 Kar.98s—perhaps more—were manufactured from 1898-1905, taking known serial numbers, which started each year with the number one, into account.

KNOWN EXAMPLES OF THE KAR. 98

Mfr.	Year	Serial Number	Bolt No.	Bolt Handle	Sight Range		Barrel/Unit Marking	Caliber Marking	Cart.	Bayonet Attach.	Source
					Orig.	Mod.					
Spandau	1898	0002	0002	Flat	2-12	2-12	C.7.9 Z.0.15. D. 24	7,9	88	Yes	M.F.D.G., Berlin
Erfurt	1900	0032	0032	Flat	2-12	2-12	Kav.Kar.98		88	Yes	M.F.D.G., Berlin
Erfurt	1900	0158	0158	Flat	2-12	2-12	Art.Kar.98	7,91	88	No	Private Collection
Erfurt	1900	0202	5639	Flat	2-12	2-12	Art.Kar.98 "A"	7,91	88	Yes	Private Collection
Erfurt	1900	0933	0933	Flat	2-12	2-12	Art.Kar.98 O.F.A. 1.21		88	No	Private Collection
Erfurt	1901	1645		Flat	2-12	2-12	Kav.Kar.98 F.P.3.72		88	Yes	South Africa, Private
Erfurt	1901	1668	1668	Flat	2-12	2-12	Kav.Kar.98	7,91	88	Yes	B. Musgrave, So. Africa
Erfurt	1901	2170	2170	Flat	2-12	2-12	Art.Kar.98		88	No	B.A.M., Ingolstadt
Erfurt	1903	0794	0794	Flat	2-18	2-12	98	7,92	S	Yes	Enfield Lock, Pattern Rm.
Erfurt	1903	0819	0819	Flat	2-18	2-12	98 M.G.A.10.41.	7,92	S	Yes	Imperial War Mus., London
Erfurt	1903	0862	0862	Flat	2-18	2-12	98 M.G.A.12.14.		S	Yes	Imperial War Mus., London
Erfurt	1903	0905	0905	Flat	2-18	2-12	98 M.G.A.13.44.		S	Yes	Private Collection
Erfurt	1903	1095	1095	Flat	2-18	2-12	Kar.98 M.G.A.12.35.	7,91	S	Yes	Imperial War Mus., London
Erfurt	1903	1106	1106	Flat	2-18	2-12	Kar.98 E.J. IV.8.		S	Yes	Private Collection
Erfurt	1903	1145	1145	Flat	2-18	2-12	Kar.98		S	Yes	School of Infantry, Warminster, England
Erfurt	1903	1221	1221	Flat	2-18	2-12	Kar.98	7,9	S	Yes	Imperial War Mus., London
Erfurt	1903	1498	1498	Flat	2-18	2-12	98		S	Yes	Private Collection
Erfurt	1903	0001	0001	Flat	3-18	3-18	98		S	Yes	M.F.D.G., Berlin
Erfurt	1904	0554	0554	Flat	3-18		Kar.98		S	Yes	M.F.D.G., Berlin
Erfurt	1904	0555	5179	Rnd.	3-18		Kar.98		S	Yes	M.F.D.G., Berlin
Erfurt	1904	1834	1834	Flat	3-18	3-18	Kar.98		S	Yes	M.F.D.G., Berlin
Erfurt	1904	1941	1941	Flat	3-18		Kar.98		S	Yes	B.A.M., Ingolstadt
Erfurt	1904	3794	0577	Flat	3-18	2-12	Kar.98		S	Yes	M.F.D.G., Berlin
Erfurt	1904	4010	4010	Flat	3-18	2-12	Kar.98		S	Yes	Private Collection
Erfurt	1904	4507	4507	Flat	3-18	2-12	Kar.98 J2	7,91	S	Yes	Private Collection
Erfurt	1904	5550	5772	Flat	3-18	2-12	Kar.98		S	Yes	Private Collection
Erfurt	1904	6311	7577	Rnd.	3-18	2-12	Kar.98		S	Yes	Private Collection
Erfurt	1904	6535	6535	Flat	3-18	2-12	Kar.98		S	Yes	Springfield Armory Mus.
Erfurt	1904	6573	6573	Flat	3-18	2-12	Kar.98		S	Yes	Schloss Rastatt
Erfurt	1904	6913	5421	Rnd.	3-18	2-12	Kar.98		S	Yes	John Walter's Book
			1244	Flat			Kar.98 K.G.P.47.	7,9	S	Yes	Author's Collection
Erfurt	1904	7141	7141	Flat	3-18	2-12	Kar.98 K.G.P.202.		S	Yes	Author's Collection
Erfurt	1905	3030	3030	Flat	3-18	2-12	Kar.98		S	Yes	Private Collection
Erfurt	1905	8993	3686	Rnd.	3-18	2-12	Kar.98		S	Yes	Swakopmund Arms Mus. Musée d'Armes, Liège

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