

# Gear Krieg

Roleplaying Game

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## Translating History - Firearms

By

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## TRANSLATING HISTORY

Although SiICORE firearms are summarized by only a few statistics, determining those statistics for historical weapons is no easy task. Fortunately, 90% of the information (weight, ammo capacity, magazine type) requires no interpretation to be useable in the game. The rest, however, needs a bit of math. Additionally, designers may want to fudge the final numbers slightly to make weapon performance conform a little more to their expectations.

The statistics generated by this system may not be completely accurate in terms of weapon historical performance. However, they will be consistent within the Gear Krieg Roleplaying Game and will approximate the performances of the respective generic versions of the weapons.

### Design Note: Shotguns

This system does not currently support shotgun design. It will either be expanded at some point, or a second shotgun-specific document will eventually be made available.

### Open Gaming Content: OGL Weapon Design

The rules provided here are intended for use with the SiICORE system. They can be used to generate OGL weapons. Simply create the weapon using this system, then translate the statistics using the SiICORE Conversions document available at [www.dp9.com](http://www.dp9.com).

## Damage Modifier (DM)

The basic formula is as follows.

$$DM = (\text{Cube Root of (Muzzle Velocity in m/s)} * (\text{Caliber in mm}) * (\text{bullet mass in grams})) / \text{Damage Factor}$$

Multiply muzzle velocity in feet per second by 0.305 for MV in meters/second.

Multiply caliber in inches by 25.4 for caliber in millimeters.

Multiply bullet mass in grains by 0.065 for bullet mass in grams.

*Damage Factor* is a "fudge" value to bring the results within the ranges established by the generic firearms in the book. In most cases, the final value falls nicely within the range of generic DMs. If the values are off, they tend to be too high.

### Damage Factors by General Weapon Type

Weapon Type	Damage Factor
Handguns	2.4
Rifles	2
Submachine guns	2.2
Light Machineguns	2
Medium Machineguns	2
Heavy Machineguns	2
Anti-Armor Guns	2

### Design Note: Research

Out of all the statistics, DM is the hardest one to calculate because of the research involved in obtaining some of the information. Specifically, bullet weight information, especially for Axis firearms, is difficult to locate. As a rule of thumb to help determine information: ammunition for pistols and submachine guns of a specific caliber for a specific nation is identical, as is ammunition for rifles and light machineguns. This is not always the case, but it does happen more often than not.

### Design Note: Taylor Knockout Value

This formula is based loosely on the Taylor Knockout Value (TKO), a system developed by legendary African hunter John Taylor for measuring the basic stopping power of a given weapon. His formula multiplies MV in fps, caliber in inches and bullet mass in grains together and divides the result by 7000. Designers wishing to experiment with this formula instead of the one provided above should note that TKO creates a linear scale of comparison. While the results may be close to DM values for lighter small arms, it completely overshoots anything with a DM of approximately 20 or more.

## Accuracy (Acc) and Basic Range (BR)

Weapon accuracy can be summed up in two ways: the Acc rating and Basic Range. For the most part, Acc reflects the targeting capabilities of the weapon itself, specifically with regards to sights and (for larger weapons), stability. This value will very rarely be anything other than 0, though it may be lower for extremely old or shoddy weapons.

The Basic Range for a weapon will vary far more than its Accuracy, especially if ammunition of varying power for a given caliber is used. There are two factors in determining a weapon's Base Range: muzzle velocity and barrel length. The following formula gives a general Base Range. Final results may need to be adjusted slightly to match real-world performance. Round results off.

$$BR = (\text{Square Root of (Muzzle Velocity} \times \text{Barrel Length)}) / \text{Range Factor}$$

Muzzle Velocity is in meters per second.

Barrel length is in millimeters (multiply length in inches by 25.4 for length in millimeters)

Range Factor is a fudge factor based on general weapon type, according to the table below.

### Range Factors by General Weapon Type

Weapon Type	Range Factor
Handguns	30
Rifles	10
Submachine guns	12
Light Machineguns	7
Medium Machineguns	5.8
Heavy Machineguns	8
Anti-Armor Guns	7

## Rate of Fire (ROF)

To determine the number of rounds fired per combat turn, divide the number of rounds per minute by 10 and round down. To determine the full ROF, divide the number of rounds/turn (or the full ammo capacity of the weapon, whichever is lower) by 5 and round down. If using the optional ROF rules in the Signature Weapons PDF, this final number is the Full ROF of the weapon. Otherwise, any ROF value higher than 2 is reduced to 2, save for heavy machineguns, which can go as high as 3. Some weapons, particularly heavy machineguns, can fire only on full automatic. These weapons must fire with a minimum ROF of 1.

## Perks, Flaws and Quirks

Although the System Design rules in SiICORE are intended for vehicle-scale weapons, the individual System Perks and Flaws can be applied to personal-scale firearms. Additional quirks have been developed to deal with rules that apply to a particular weapon. Some quirks are similar, and the common ones are summarized below. In most cases, designers will have to rely on verbal descriptions of weapon performance to decide if any of these apply.

### Awkward Magazine Replacement

The number to beat on the die roll is specified when the weapon is designed.

**SiICORE Rules:** An Agility-based Small Arms test (Threshold 2 or 3) is required to replace an empty magazine.

**OGL Rules:** The user must make a Dexterity check (DC 5 or 10) to successfully replace an empty magazine. The user can Take 10 as a full-round action.

### Bayonet

**SiICORE Rules:** When using the rifle-fixed bayonet, the weapon is treated as a short spear (DM of AD+8).

**OGL Rules:** A rifle-fixed bayonet does 1d8 points of piercing damage.

### Disintegrating Round

Some bullet types are inherently unstable, and may tumble or break up while in flight. Even though this sounds like a problem, it is actually an advantage, as there is a potential to do increased damage.

**SiICORE Rules:** If the target fumbles his Defense test, increase the weapon DM by 8 to 10.

**OGL Rules:** The weapon has an increased critical threat range (19-20 instead of just 20).

### Efficient Bolt Action or Low Automatic Rate of Fire

The Gamemaster will have to rely on weapon descriptions to determine if either of these apply. A low rate of fire is generally regarded as less than 450 rounds per minute; this quirk should be applied only to weapons incapable of semiautomatic fire.

**SiICORE Rules:** Anyone specializing in an efficient bolt-action (or low ROF) weapon or taking it as a Favored Item or Signature Weapon may fire it as if it has an ROF of 0.

**OGL Rules:** Anyone with the Advanced Firearms Proficiency feat may fire an efficient bolt-action (or low ROF) weapon as if it is a semi-automatic (S) weapon.

### **Loud Report or Bright Muzzle Flash**

The gun is extremely loud or visible when fired.

**SiICORE Rules:** Notice checks are at +2 to locate a loud or bright weapon discharge.

**OGI Rules:** Listen and/or Spot checks when detecting the location of the weapon are made with a +5 circumstance bonus.

### **Recoil, Heavy**

Some weapons have such a strong “kick” when fired, they can bruise or seriously hurt the person pulling the trigger.

**SiICORE Rules:** If the firer fumbles his Attack test, he takes a Flesh Wound from the recoil.

**OGI Rules:** Each time the weapon is fired, the user must make a Fortitude save (DC 5). Failure means the user takes 1d4 damage.

### **Recoil, Severe**

**SiICORE Rules:** If the user fumbles his Attack test, he must immediately make a HEA test (Threshold 3). Failure gives the user a Light Wound, a Fumble gives the user a Deep Wound and a broken collar bone – one arm can no longer be used until the wound is healed.

**OGI Rules:** Each time the weapon is fired, the user must make a Fortitude check (DC 10), failure means the user takes 2d6 damage. If maximum damage is rolled, the user loses the use of one arm until the damage is completely healed.

### **Sensitive Trigger**

Regardless of game system, it is up to the Gamemaster to determine the effects of an accidental shooting.

**SiICORE Rules:** Whenever someone is carrying a sensitive weapon that they have not been trained to use (e.g., he lacks the Small Arms Skill or an appropriate Specialization), Any fumble to a physical Skill test causes the weapon to go off.

**OGI Rules:** If the character lacks the Personal Firearms Proficiency feat and must make a Reflex save, regardless of the results of that save, a second save must be made (DC 15) to avoid having the weapon go off.

### **Weapon Jams**

Automatic weapons only.

**SiICORE Rules:** The weapon jams if the attacker either Fumbles his Attack test or generates a predefined Margin of Failure (GM decides which of the two apply/how big the MoF is when the weapon is created). The jammed round requires an action to clear. The weapon cannot be fired until it is cleared.

**OGI Rules:** Each time the weapon is fired, it jams on a d20 roll of 5 or greater (this is a separate roll, not the to-hit roll). If the user has a luck bonus, it can be applied to this roll. The jam requires one attack action to clear.

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