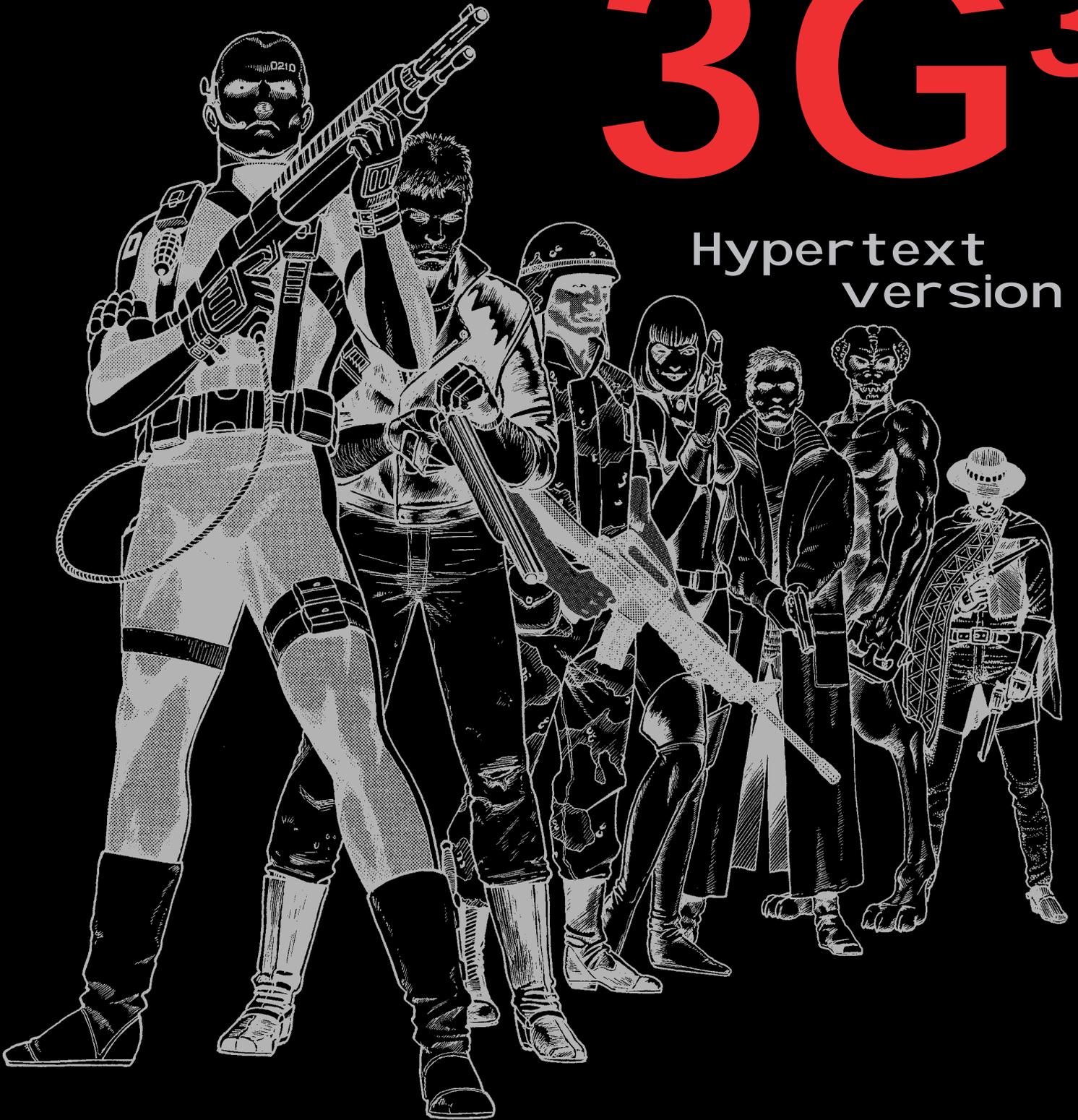


# 3G<sup>3</sup>

Hyper text  
version 1.1



Weapon design for any RPG

# 3G<sup>3</sup>

Guns!, guns!, guns!, 3rd edition

©1991,1996 by Greg Porter

Published by:           Blacksburg Tactical Research Center  
P.O. Box 1121  
Collinsville, VA 24078 USA  
btrc@digdat.com  
<http://www.btrc.net/index.html>

Illustrations:           Thomas Darrell Midgette  
Computer graphics:    Greg Porter

Assistance:            Bertil Jonell, Otto Kopra, Sean Malloy, Jasper Merendino and numerous others who sent in comments and suggestions on the 1st and 2nd editions.

First edition           August 1988  
Second edition        January 1989  
Third edition          October 1991  
Revised third edition  October 1996  
1 2 3 4 5

Printed in the United States of America.

All rights reserved. Protected by the Universal Copyright Convention. Violators will be used as test subjects for ballistics experiments and other moderately stressful tasks.

**3G<sup>3</sup>** is the BTRC's trademark for its universal gun and melee weapon design system.

Most game names are trademarks of the companies publishing those games. Use of a trademark to identify a product mentioned in these rules should not be construed as implying the sponsorship of the trademark holder, nor, conversely, should use of the name of any product without mention of the trademark status be construed as a challenge to such status. So there!



# Introduction

## Intro to the hypertext edition

This is the digital version 1.1 of the **3G<sup>3</sup>** weapon design system, also known as **Guns! Guns! Guns!**. The electronic edition differs from the original only in that we've added a little color (as above), and some useful cross-referencing here and there. You won't be able to do much full-page reading of it unless you are fortunate enough to have a full page monitor, but you can print off the .pdf file to a laser or color printer and get a copy with the exact same information you would get in the printed version, for a significantly lower cost.

However, please remember that **BTRC** is a small company (i.e. one guy, me), and any copy you make that you are not going to personally use literally means that I'm less able to make a living at the marginally profitable job of game design.

Pleading aside, the best way to use these rules on-screen is to set your magnification to a comfortable reading level, set your Acrobat reader to thumbnail mode, and use the thumbnails for onscreen maneuvering. Once you become familiar with the book, you'll be able to associate the tiny thumbnails with each rules section, and jump to them as needed. If you are going to hop from section to section, a full set of bookmarks is available in bookmark mode, and if you still can't find something, go to the **Index** bookmark, which has hyperlinks to every item in it.

As in our other hypertext products, anything you see in red is probably a hyperlink to more detail on the highlighted item. For **Hypertext 3G<sup>3</sup>** we have the default magnification set to a comfortable level for reading on 15 inch monitors.

## Other BTRC info

This is the second on-line product we've made available. The first is **Slag!**, the hypertext version of our space combat and starship design system. Unlike **3G<sup>3</sup>**, it was designed expressly to be used on your computer, and is formatted for full-page reading on most monitors, is extensively hyperlinked, with web links, **NASA** technical references and other neat stuff. It took a lot of work for a product that is only US\$5-6, but if you are a space combat fan, it's certainly worth checking out.

If for some reason you didn't acquire **Hypertext 3G<sup>3</sup>** through a legitimate channel (mean person!), note that we also have a full set of spreadsheets available to almost completely automate weapon design. These are available for a number of platforms and spreadsheet programs, and are available for a nominal fee from on-line vendors of **BTRC** goods. For information on how to order these or other **BTRC** products, check out our web site, at <http://www.btrc.net/index.html>.

And, as long as you are on-line and interested in **BTRC** products, note that we produce a few role-playing games of our own, the most sophisticated of which is **CORPS**. You can download a condensed version of the rules for free from our web site, so check it out. Thanks, and remember that you can always email([btrc@aol.com](mailto:btrc@aol.com)) if you have questions.



*Greg Porter*

## Intro

This is the updated 3rd edition of **Guns!, Guns!, Guns!**, otherwise known as **3G<sup>3</sup>**. It is a set of design rules and guidelines to let you construct a realistic set of melee and ranged weapons for virtually any role-playing system. They can be kept in the detailed **3G<sup>3</sup>** format, or transferred to the system you currently play, or even to systems of your own design. You have the advantage that any weapon designed with **3G<sup>3</sup>** will follow the same rules as any other weapon designed with the system, giving you a level of cross-system consistency no other weapon supplement can match. Read on!

## Designer's Notes

**3G<sup>3</sup>** has progressed from a simple black and white booklet (1988), through two printings of the 2nd edition (1989), to the third edition (1991) to what it is now (1996). Originally a hidden design tool for the 2nd edition **TimeLords** rpg, it was published in the hope that a few others would like to take advantage of its capabilities. Despite being the densest, driest, most textbook-like game supplement ever made, acceptance of **3G** was surprisingly high, and there are now enough copies in circulation to prove that it works, and people *did* want what it could give them. But it still had a few bugs. You can never get rid of them all, but you have to try. So, lessons learned have been incorporated into each new edition.

If this is the first time you have seen **3G<sup>3</sup>**, here's what it is: A system that lets you create or recreate just about any weapon that has ever existed/might exist, in a form that you can convert into the role-playing system you use. For instance, while you might not be able to *exactly* duplicate an Uzi using the design rules, you can get accurate figures for a weapon with the characteristics of a 9mm submachine gun built with 1960's technology, having a medium length barrel and a 30 round clip. You'll know how long and heavy the weapon is, how much it costs, the range characteristics, and so on. While this is no big deal, since you can just look up the real world figures, the system would also let you design a submachine gun that might be built using technology from the year 2100, or what a submachine gun might be like if built in 1800!

While these rules are mainly for hand-held weapons, the equations used can be stretched all the way out to naval guns and starship weapons with surprisingly little loss of accuracy, provided you pay sufficient attention to detail.

These rules require a bit of thought to use, and no doubt you will run into design dead-ends and compromises. Your hand-held tank cannon will end up weighing more than you do, and the recoil would knock you into next week, anyway. For computer buffs, all the **3G<sup>3</sup>** rules are based on formulas (condensed into tables for convenience), and you can design spreadsheets to virtually automate the weapon design process.

Regretfully, results are not guaranteed. Very few people can accurately predict the future, and I don't claim to be one of them. A lot of research and computer time went into these rules, but science marches to a strange drummer, and unexpected breakthroughs can make futuristic designs obsolete at any time. On the bright side, predictions can't be proven wrong until things actually happen otherwise, so any changes you make to the rules are right until science catches up with your imagination and proves you wrong (at which point we'll revise the rules). Have fun!

Last but not least, if you use **3G<sup>3</sup>** to design a weapon for any sort of *published* game, game scenario, magazine article, etc., give credit where credit is due. It lets me know that you're out there using it. Thanks!

## Basics

**3G<sup>3</sup>** makes the assumption that you are willing to do some work for your game to get realistic and consistent guns. This willingness may not necessarily be matched by a practical knowledge of ballistics, material science, terminology or a number of other pertinent factors. This section should help alleviate that problem. If you are already familiar with these terms, skip to the next section.

The terms on the following pages are used throughout the rules. If you have *any* questions while trying to design a weapon, are confused about what a term means, or are not sure where to look, please check either here or in the **index** (p.123). One of the two should provide some assistance.

## Destroy this book!

If you are going to use **3G<sup>3</sup>** on a regular basis, probably the best thing you can do is get a 3-ring binder. Then take **3G<sup>3</sup>** down to your local print shop, and tell them to cut off the binding (carefully!) and drill it for the ring binder. Then you can put index tabs in it, keep all your designs in one place, and even loan out sections in case friends want to design something from one section while you want to design from another. It would be *much* better though if they were to buy their own copy. It is also *not* nice to photocopy the entire rules for other people. BTRC tries to produce games at a price where you'd rather have an original for just slightly more than a photocopy. Be nice to us; buy our games.

## Weapon Design 101

Guns are generally designed for the purpose of killing living creatures, usually humans. The motives may be legal, illegal, moral or immoral, but dead is still dead. Guns are inherently dangerous and should be treated with great respect.

Weapons generally do damage by disruption of the target. This is usually by the application of energy. Conventional guns apply the kinetic energy of a moving projectile, and energy weapons cause the target to absorb some form of electromagnetic energy, such as a laser beam. Energy alone is not enough, however. The ability to penetrate armor is a matter of the area this energy is applied over. While you may not have realized this, it happens all the time in everyday life. While you can't stick your finger through a piece of wood, the same force concentrated into the point of a thumbtack lets you push it in up to the head. The same applies to the difference between a punch and a knife thrust. One is force applied over the area of a fist, and the other is concentrated into the tip of the blade.

As you will see later, the diameter of an attack makes a large difference in the damage that weapon does. The same energy will have a higher damage if placed behind a small bullet than a large one. An energy beam with double the diameter of a small one will have four times the area to distribute its energy over, so its ability to penetrate armor is lower than that of the small beam.