Player's Handbook for Crossfire

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compiled, edited, and written by

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Chapter 1. Introduction

Section 1.1. What is *Crossfire* ?

In the words of its original author Frank Tore Johansen :

> "*Crossfire* is a multi-player graphical arcade and adventure game made for the X Windows systems environment. It has certain flavours from other games, especially *Gauntlet (TM)* and the rogue-like games (mainly *NetHack*, *Moria*, *Angband*, and *Ragnarok*). Any number of players can move around in their own window, finding and using items and battling monsters. They can choose to cooperate or compete in the same *world*."

In the years of development that have followed, *Crossfire* has grown to encompass over 150 monsters, ~3000 maps to explore, an elaborate magic system, over 15 character types, a system of skills, and many, many artifacts and treasures.

Crossfire is freely distributed under the GNU license and the code may be obtained from a number of FTP sites (see section 1.3). **Take note:** you will need at least an ANSI C compiler (i.e. `gcc`) to build the game. A screen shot of the *Crossfire* display appears in Figure 1.1.

Crossfire is currently being maintained by Mark Wedel (`mwedel@sonic.net`). Crossfire is uses the client server model - clients for unix (using gtk or straight X11) and windows are readily available. SDL client is being worked on.

To be notified of new releases of *Crossfire* , subscribe to the announcement mailing list (see section 1.2) to get notified of updates.

1.1.1. What is included in this document?

This document is a guide intended to focus on the game-play aspects of *Crossfire*. The original intention of this text was to help aspiring players create and play a character and more quickly initiate them into the intricacies of *Crossfire*. But, as things went along, many of the older docs began to be incorporated and lots of good reference material slipped in; this document may also be a good resource for more experienced players.

Having said all of that, lets point out that each release contains a fair amount of documentation and the *Crossfire* **Player's Handbook** is definitely not the last word! Certainly, every player will want to obtain the *Crossfire* **Spoiler**, and while this may sound flippant, its still true–a good place to start tracking down much of the information you may want is the README document in the top directory of your release.

1.1.2. Getting started: beginning players

First-time players may want to skim over sections 2.1, 2.2, 3.1, and 7.1 before playing the game. Don't be daunted by the apparent complexity of *Crossfire*–in reality *Crossfire* is quite easy to play and character generation is simple. Later on,

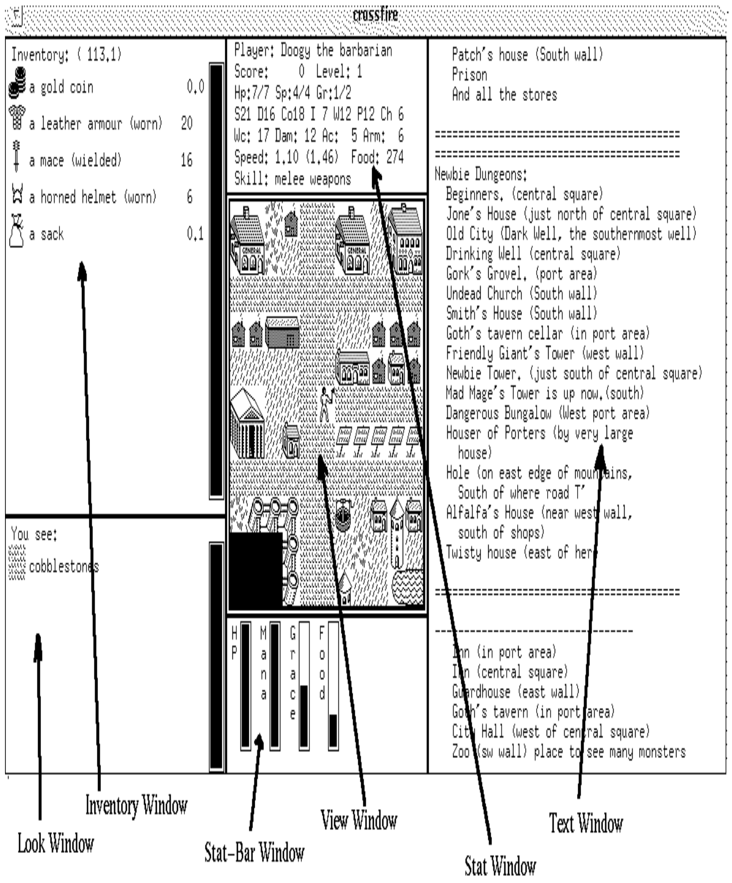


Figure 1.1 Screen shot of the game display which comprises of six different windows.

when you have some experience playing the game, you may wish to go back and re-read skimmed material and expand your knowledge of the unread sections.

If you just want to damn the torpedoes and "roll"[1] up a character quickly then proceed to section 2.2 in this text. You may *still* find section 7.1 helpful reading.

Section 1.2. *Crossfire* Mailing lists

Two mailing-lists exist; the first is for discussing bugs and development while the second is for just announcing new versions. If you want to join or leave any of the lists, send mail to `crossfire-request@ifi.uio.no` with the subject "`subscribe`", "`unsubscribe`","`subscribe announce`" or "`unsubscribe announce`". If you use the subject "`subscribe`" or "`unsubscribe`" you will (un)subscribe to *both* lists.

To send messages directly to the list, mail `crossfire@ifi.uio.no`. While the development/bug list is not supposed to be used for helping players solve problems, sometimes a knowledgeable reader of the list can be tempted into answering your question.

An archive of old messages can be found at `ftp.ifi.uio.no` in the directory `/pub/crossfire/archive`.

Section 1.3. Obtaining *Crossfire*

FTP sites where you can look for the latest versions are:

`ra.pyramid.com:/pub/crossfire` (129.214.1.102)
`ftp.ifi.uio.no:/pub/crossfire` (129.240.64.44)
`ftp.real-time.com/pub/games/crossfire` (206.10.252.12)
`ftp.cs.city.ac.uk:/pub/games/crossfire` (138.40.91.9)
`ftp.sunet.se:/pub/unix/games/crossfire` (130.238.127.3)
`ftp.cs.titech.ac.jp:/pub/games/crossfire` (131.112.90.201)

Please use the one nearest to you. ".se", ".no" or ".uk" in Europe, ".au" in Australia, ".net" in North America, and ".jp" in Asia.

Section 1.4. DOCUMENT CREDITS

B.T. provided the bulk of the written material; K.E. and (to a lesser extent) J.K provided expert editing and typesetting advice. The *Crossfire* **Player's Handbook** uses material borrowed from older documentation written by the following people (in rough order of borrowing magnitude):

Sam Mackrill (lots of bits from the old FAQ)
Laurent Wacrenier
Kjetil T. Homme
Lars H. B. Olafsen
Peter Mardal

[1] This archaic term comes from paper and pencil role-playing games which used dice in the character generation process.

Rupert G. Goldie
Frank T. Johansen

If I left anyone out, please send me some email!

Brian Thomas
`thomas@astro.psu.edu`

Chapter 2. About Characters

Section 2.1. Character Attributes

Each player interacts in the *Crossfire* world through the persona of a character. In turn, the interaction between the character and the game world is mediated by the “attributes” of the character. After all, the player is not going to play him/herself! In *Crossfire* we chose to parameterize the acceptable limits of player behavior via the values of the character attributes which, in turn, help to determine the success of any action taken by the player. There are no limits per se on what you can attempt to do with your character; rather, the attributes of a character indicate the certain “natural” talents and inclinations. Two concepts which are relevant to *Crossfire* character attributes are “stats” and “class”.

2.1.1. Character Stats

Character statistics (or “stats” for short) can be divided into two types: primary and secondary. What’s the difference between them? Secondary stats are calculated from a number of things including the primary stats. But the reverse isn’t true, secondary stats never have any influence on the primary stats. In playing the game, the player may find that either of these kinds of stats may be changed for better or worse. In general, the primary stats change much less often than the secondary stats. Equipment, magic, and death are just three examples of the many things which can alter the values of the character stats. The current values of both the primary and secondary stats may be viewed in the stat window. Four important secondary stats–food, grace, hitpoints and mana also appear again in the stat-bar window.

Primary stats

The seven primary stats are:

- **Strength** (“STR”) – a measure of the physical strength.
- **Dexterity** (“DEX”) – measures physical agility and speed.
- **Constitution** (“CON”) – measures physical health and toughness.
- **Intelligence** (“INT”) – measures ability to learn skills and incantations.
- **Wisdom** (“WIS”) – measures the ability to learn/use divine magic.
- **Power** (“POW”) – measures magical/spiritual potential.
- **Charisma** (“CHA”) – measures social and leadership abilities.

Primary stats have a “natural” range between 0 and ∼20. The actual upper limit on each primary stat is set by the chosen character class (see section 2.1.2). You can raise your primary stats by drinking potions up to your class natural limit.

There are plenty of items which give you bonuses to your stats even *beyond* your class limit – swords, armour and rings to name the most important. You can also

Table 2.1 Selected primary stat bonuses/penalties.

Stat	HpB (CON)	MgB[1]	AcB (DEX)	DmB (STR)	Thaco (STR)	Max Carry (STR)	Speed (DEX)	%learn[2]	Buy/Sell (CHA)
1	-5	-10	3	-2	-2		1	0	1,600/ 0,400
2	-4	-9	2	-2	-2		1	0	1,600/ 0,400
3	-3	-8	2	-1	-2		1	1	1,500/ 0,500
4	-2	-7	1	-1	-1		1	2	1,500/ 0,500
5	-1	-6	1	-1	-1		1	4	0,000/ 2,000
6	-1	-5	1	0	/* 5 */		1	8	1,333/ 0,667
7	0	-4	0	0	-1		1	12	1,333/ 0,667
8	0	-3	0	0	-1		1	16	1,333/ 0,667
9	0	-2	0	0	0		1	25	1,333/ 0,667
10	0	-1	0	0	0		1	36	0,000/ 2,000
11	1	0	0	0	0		1	45	1,333/ 0,667
12	2	1	0	1	/* 10 */		1	55	1,333/ 0,667
13	3	2	0	1	0		1	65	1,333/ 0,667
14	4	3	-1	1	1		1	70	1,333/ 0,667
15	5	4	-1	2	1		1	75	1,333/ 0,667
16	6	5	-1	2	1		1	80	0,000/ 2,000
17	7	6	-2	2	1		1	85	1,000/ 1,000
18	8	7	-2	3	/* 15 */		1	90	1,000/ 1,000
19	9	8	-2	3	2		1	95	1,000/ 1,000
20	10	9	-3	3	2		1	100	1,000/ 1,000
21	12	10	-3	4	2		1	100	0,000/ 2,000
22	14	12	-3	4	2		1	100	1,000/ 1,000
23	16	15	-4	5	2		1	100	1,000/ 1,000
24	18	20	-4	5	/* 20 */		1	100	1,000/ 1,000
25	20	25	-4	6	3		1	100	1,000/ 1,000
26	22	30	-5	6	3		1	100	1,000/ 1,000
27	25	40	-5	7	3		1	100	1,951/ 0,049
28	30	50	-6	8	3		1	100	1,961/ 0,039
29	40	70	-6	9	4		1	100	1,972/ 0,028
30	50	100	-7	10	/* 25 */		1	100	1,980/ 0,020

[1] Either POW or WIS can be used to calculate MgB (magic bonus).

[2] Percentage for learning either skills (INT), incantations (INT) or prayers (WIS).

read scrolls or cast spells (incantations or prayers) to temporarily raise your stats. The ultimate maximum value is 30, and the player class doesn't matter here.

Some quantitative effects of the primary stats are summarized in table 2.1. The top row in the column header specifies a particular bonus (i.e. `HpB`, `MgB`, `AcB`, `DmB`, etc.) while the second row in the header indicates the stat which is used to calculate the value of that column. Where no stat appears, one of *several* stats may be used to calculate that value. See later parts of the text (particularly section 3.2.3) for further details.

Secondary stats

The secondary stats are :

- `score` – The total accumulated experience of the character. `score` is increased as a reward for appropriate player action and may decrease as a result of a magical attack or character death (see section 3.2.4 for more about death). The `score` starts at a value of 0.

• `level` – A rating of overall ability whose value is determined from the `score`. As the `level` of the character increases, the character becomes able to succeed at more difficult tasks. `level` starts at a value of 0 and may range up beyond 100. The value of the stat which appears in the stat window is sometimes known as the *overall* `level`. See section 3.2.2 for more details.

• **hit points** ("`Hp`") – Measures of how much damage the player can take before dying. Hit points are determined from the player `level` and are influenced by the value of the character CON (see section 3.2.3). `Hp` value may range between 1 to beyond 500 and higher values indicate a greater ability to withstand punishment.

• **mana** ("`Sp`") – Measures of how much "fuel" the player has for casting incantations. Mana is calculated from the character `level` and the value of the character POW (see section 3.2.3). Mana values can range between 1 to beyond 500. Higher values indicate greater amounts of mana.

• **grace** ("`Gr`") – How favored the character is by the gods. In game terms, how much divine magic a character can cast. Character `level`, WIS and POW effect what the value of grace is (see section 3.2.3). During play, grace values *may* exceed the character maximum; grace can take on large positive and negative values. Positive values indicate favor by the gods.

• **weapon class** ("`Wc`") – How skilled the characters melee/missile attack is. Lower values indicate a more potent, skilled attack. Current weapon, user `level` and STR are some things which effect the value of `Wc`. The value of `Wc` may range between 25 and -72. See section 3.2.3 for a more detailed explanation of weapon class. See section 3.2.1 to see how `Wc` works in attacking.

• **damage** ("`Dam`") – How much damage a melee/missile attack by the character will inflict. Higher values indicate a greater amount of damage will be inflicted with each attack. See section 3.2.3 for a calculation of the character `Dam`.

• **armour class** ("`Ac`") – How protected the character is from being hit by any attack. Lower values are better. `Ac` is based on the character class (table 2.2) and is modified by the DEX (`AcB` column in table 2.1) and current armour worn. For characters that cannot wear armour, `Ac` improves as their level increases (see section 3.2.3).

• **armour** ("`Arm`") – How much damage will be subtracted from successful hits made upon the character. This value ranges between 0 to 99%. Current armour worn primarily determines `Arm` value.

• `speed` – How fast the player may move. The value of `speed` may range between nearly 0 ("very slow") to higher than 5 ("lightning fast"). Base `speed` is determined from the DEX and modified downward proportionally by the amount of weight carried which *exceeds* the `Max Carry` limit (table 2.1). The armour worn

Table 2.2 *Crossfire* character classes.

Type		Str	Dex	Con	Int	Wis	Pow	Cha	Special
Dwarf		23	18	24	18	19	18	19	Ac 10, Wc 21, Dam 1
Elf		18	23	18	22	17	22	24	Ac 10, Wc 21, Dam 1
Fenx		18	24	20	22	18	16	22	Ac 10, Wc 21, Dam 1
Fireborn		15	24	20	22	22	27	18	Ac 0, Wc 21, Dam 0 Attacks: fire
Gnome		19	17	18	20	23	23	20	Ac 10, Wc 21, Dam 1, luck 1
Halfling		16	23	24	20	17	20	20	Ac 10, Wc 21, Dam 1, luck 1
Human		20	20	20	20	20	20	20	Ac 10, Wc 21, Dam 1
Northman		21	21	22	18	19	19	19	Ac 10, Wc 21, Dam 1
Fire hatchling		25	20	26	17	12	25	20	Ac 5, Wc 21, Dam 10
Half orc		22	21	22	18	18	19	17	Wc 21, Ac 10, Dam 1
Quetzalcoatl		26	23	26	12	12	26	20	Armour is, Ac 5, Wc 21, Dam 10
Serpentman		22	22	24	18	18	20	16	Ac 5, Wc 21, Dam 8
Troll		25	19	25	15	18	18	16	Ac 10, Wc 21, Dam 1
Wraith		17	24	17	22	17	23	16	Ac 6, Wc 21, Dam 1 Attacks: cold

also sets the upper limit on `speed` (see the *Crossfire* **Spoiler** for these limits).

• **weapon speed** – Appears in parentheses after the `speed` in the stat window. This quantity is how many attacks the player may make per unit of time. Higher values indicate faster attack speed. Current weapon and user DEX effect the value of weapon speed. See section 3.2.3 for a calculation of weapon speed.

• `food` – How full the character's stomach is. Ranges between 0 (starving) and 999 (satiated). At a value of 0 the character begins to die. Some magic can speed up or slow down the character digestion. Healing wounds will speed up digestion too.

2.1.2. Character Classes

Much like the older "paper and pencil" role-playing games *Crossfire* has adopted the idea of character "class". Each class is meant to be a template of a particular "style" of play; therefore each choice of class modifies both the starting values and sets the natural upper limit on the primary stats. *Important note:* character class is chosen at the time a character is created and can't be changed later on.

Table 2.2 shows the various available character classes with the natural stat limits for each. Under the "special" column several bits of information are included. "`Ac`" indicates the base armour class for the character; "damage" indicates the base `Dam` value. Some character classes have special attack abilities and certain vulnerabilities, protections from, and immunities to various attacktypes. Read section 3.2.1 for more information about what effect these can have.

Table 2.3 Starting equipment by character class.

Type	Starting Equipment
Dwarf	,
Elf	Quiver, Arrows, Bow
Fenx	Quiver, Arrows, Bow
Fireborn	Cleric book 11, Pyro book 11, Amulet, Power crystal, Ring
Fire hatchling	,
Gnome	,
Halfling	,
Half orc	,
Human	,
Northman	Bighorned helmet,
Quetzalcoatl	,
Serpentman	,
Troll	,
Wraith	,

Sizing up the character classes

Generally, the titles of the character classes speak for themselves. But you can get a better idea of the potential of a class by checking out a few things. Take a look at the starting equipment (table 2.3) and, if you are using *Crossfire* compiled with the skills system, checkout the starting skills for those classes your interested in (table 2.4).

Finally, here are some notes concerning a couple of the more "exotic" classes:

- **Fireborn**

Attacks: fire, physical
Protections: immune: fire, poison; vulnerable: ghosthit, drain, cold
Special: fly, no armour, no weapons. `Ac` 0
Fireborns are fire spirits. They're closely in tune with magic and learn all types of magic easily. Being fire spirits, they are immune to fire and poison, and vulnerable to cold. They are vulnerable to ghosthit and drain because being mostly non-physical, anything which strikes directly at the spirit hits them harder.

- **Monk**

Attacks: physical
Protections: none
Special: no weapons.
Monks are members of various martial arts orders. They have devoted themselves to a life of contemplation and revelation though physical fighting! Their life-long secret vows keep them from using all hand-held melee weapons, but in return they are allowed to learn secret techniques of meditation.

- **Quetzalcoatl**

Attacks: physical
Protections: immune: fire; vulnerable: paralyze, poison, cold
Special: no armour, `Ac` 5
Quetzalcoatls are an odd mixture of magic and combat abilities. They are born knowing the spell of burning hands (heh, its their "dragon breath"). But because

Table 2.4 Starting skills

Character class	Additional skills[1]
Dwarf	Smithery,
Elf	Missile weapons, Woodsman, Bowyer
Fenx	Singing, Jumping, Missile weapons, Woodsman
Fireborn	Praying, Pyromancy, Flame touch, Levitate
Fire hatchling	Evocation, Woodsman, Clawing, Levitate
Gnome	Praying,
Halfling	Hide, Stealing
Half orc	Stealing,
Human	Random skill,
Northman	,
Quetzalcoatl	Pyromancy, Clawing, Levitate
Serpentman	Jumping, Clawing
Troll	,
Wraith	Wraith feed,

[1] All character classes start with the skills `melee weapons`, `find traps`, `use magic item`, `literacy`, and `disarm traps`.

of their low natural intelligence/wisdom, they have a very hard time learning new spells. All the same, they may become potent wizards/priests as they have the highest power bonus, and they will typically have a large amount of mana and a fair amount of grace. Quetzalcoatls can be very devastating fighters at low level. A combination of their low natural `Ac` and high base damage tend to make mincemeat out of low-level monsters. However, at mid-level, they really begin to have problems because they cannot use armour.

- **Wraith**

Attacks: cold, physical
Protections: immune: drain, ghosthit; protected: physical, cold; vulnerable: fire
Special: `Ac` 6
The Wraith is a creature of the undead. These characters represent revenging spirits come back to life to work their unholy will on the living. Their undead nature makes them immune to life-damaging forces and their etherealness protects them from physical harm. Like all undead, they succumb to fire readily.

Section 2.2. Generating a character

When you start up *Crossfire*, you will be asked for a character name followed by a password. If you are playing for the first time, type any name you like; this will be your character name for the rest of the life of that character. Next, type in any password. *Remember!:* you will need to type the same password again to play that character again! One more note: its not a good idea to use “real” passwords to your computer accounts! Doing so may make your system vulnerable to unscrupulous *Crossfire* server administrators.

Your next step will be to generate random (primary) stats for your character. You aren't limited to the number of times you can roll your stats—so have fun. Notice that the stats are always arranged that the STR stat has the highest value, the CHA stat has the lowest. You may re-arrange the order of these values when you decide that you have rolled some decent stats. *Two points:* you can never roll a character with better stats than an average of straight 15's, and you can't roll higher than 18 in a stat.

When you roll your character, the stats displayed are the stats you will get as a human (which are unmodified). When satisfied, you can step through a number of classes, each with special bonuses in stats.

Table 2.2 shows how your basic stats will be changed by choosing a different class. The difference between the natural stat limit and 20 indicates the bonus/penalty assigned to rolled primary stats. For example, a barbarian has a maximum strength which is 4 higher than 20—that means he will begin with an additional 4 points added to his strength roll. On the other hand, a barbarian can never get above 14 in intelligence. This means that your rolled character will have 6 less in intelligence if you choose that class. It also means that you can't be a barbarian if you roll less than 7 in intelligence; the poor barbarian would have had a stat below 1.

Selecting a character

While each class has its particular strengths and weaknesses, in summary its just a fact that some classes are easier to play than others.

For beginning players, the "simple fighter" characters are the easiest to play successfully. The Dwarf, Human, and Warrior are among good earlier choices. As you gain experience with using *Crossfire* you may wish to branch out into other "fighter" characters such as the Thief or Elf, or try your hand at playing "spellcaster" characters like the Wizard, Mage, Cleric or Priest. The "exotic" classes (e.g. Fireborn, Monk, Quetzalcoatl, and Wraith) are the hardest classes to master.

One more note: If you are using the default game (compiled with the skills system), you will probably find any character class that has a low natural INT (for example, the Barbarian class) will have a fairly difficult time at higher levels. Skills, and most importantly, spells, will be more difficult learn. Plan to spend a lot of loot on spell books (grimores and prayer books) and skill scrolls.

Chapter 3. Playing *Crossfire*

Section 3.1. Basics

In this section, several basic bits of information are detailed in a concise way in rough order of importance. Various pointers to other sections of this document will help you to round out your knowledge if you want to. All of the available player commands are concisely explained in appendix A. You can always get a summary of available commands while playing the game; hit “`?`” for help.

3.1.1. How to do simple stuff

Move around and attack

Movement is accomplished with the mouse, or with the same keys that some rouge-like computer games use. To move using the mouse, position the cursor over a square you wish to move to in the view window then click the right hand button. If you want to use the keys, here’s a simple diagram of where the various movement keys will take you:

$$\begin{array}{ccccc} \texttt{y} & & \texttt{k} & & \texttt{u} \\ & \nwarrow & \uparrow & \nearrow & \\ \texttt{h} & \longleftarrow & \texttt{.} & \longrightarrow & \texttt{l} \\ & \swarrow & \downarrow & \searrow & \\ \texttt{b} & & \texttt{j} & & \texttt{n} \end{array}$$

The “`.`” refers to yourself; you don’t move anywhere when you press it. In order to “run” in a particular direction (i.e. move continuously without having to repeatedly punch the key) hold down the control key then hit any movement key or the right hand mouse button to start moving. Release the <`control`> key when you wish to stop running.

If you move into something, you will attack it. This means walls, doors, and monsters will be damaged if you hit them. Players and friendly monsters may also be attacked in this way, but only if you set the peaceful flag to “off”. To learn more about the combat system see section 3.2.1.

Pickup stuff

To pickup items, move over the item, then either hit the “`,`” key or move the cursor over to the look window, position it over the desired item and click the left mouse button. You will see the item appear in your inventory window. If you pick up too much stuff, you won’t be able to see it all at once. Use the “<” and “>” keys to rotate through the inventory list.

Applying stuff: wear armour, wield a weapon, eat, and so on.

Most of the time, in order to manipulate or "`apply`" items you have to be holding them. Move the cursor over to the desired item in the inventory window. By using the middle button on the mouse, you may toggle the status (ie between "applied" or "unapplied") of items. Note that some items when applied will be used up (they disappear from the inventory window). Examples of these kind of items include "food", "potions", and "scrolls". To learn more about the uses of various items see chapter 6.

Shoot a ranged weapon

Ranged weapons include bows, wands, rods, or horns. Apply the desired weapon, then check to see that the `Range:` slot in the status window indicates that item is "readied" (yes...you can have something applied but not readied). If its not ready, use either the plus or minus keys to rotate though all of the slots. Once readied, use the "`<shift>`" key followed by a movement key to fire the object in that direction. Alternatively, place the cursor in the view window, then hit the middle mouse button to fire.

Enter a building or boat.

Move over on top of the desired structure. Then hit either middle mouse button while the cursor is on the icon of the structure in the look window, or hit the `A` key. If there is a link to a map drawn of the "inside" you will be taken there. If no link exists, you will get the message "`the <structure> is closed.`".

Use a skill

In order to use a skill, it must first be readied. You can ready any skill you have with the `ready_skill` command. Also, some skills will auto-matically be readied when you undertake certain actions. For example, if you run into a hostile monster with a wielded weapon the `melee weapons` skill is readied. A ready skill will show up in the stat window in the `Range:` slot. If a skill doesn't appear in the slot, rotate the range slot to check for the skill. When a skill is readied, the range slot will appear as "`Skill: <skill>`" (otherwise it appears as "`Skill: none`"). To use the skill, make a "ranged attack" (ie hit the same keys or mouse button as for firing a wand). To learn more about the skills system see chapter 5.

Cast a spell

In order to "`cast`" spells (either incantations or prayers), you must have the skills of `wizardry` (incantations) or `praying` (prayers). Possession of a "talisman" or a "holy symbol" will also allow you to respectively `cast` incantations or prayers). You can only `cast` those spells you have *learned*. Issue the meta-command `'cast <spell>` to ready a spell in the `Range:` slot. To “fire” the spell, make a ranged attack. Note! if you don’t have enough mana an incantation will fail. If you don’t have enough grace a prayer *may* work. For more information concerning the magic system see chapter 4.

3.1.2. Saving the game and ending the *Crossfire* session:

The `save` command is to provide an emergency backup in case of a game crash. To save your player at the end of your game session you must find a “Bed to reality”  , move your player over it and `apply` it (“`A`”). These beds can usually be found in the inns and taverns dotted around the maps (especially in cities). This prevents you just saving anywhere and forces you to finish what you are doing and return somewhere safe.

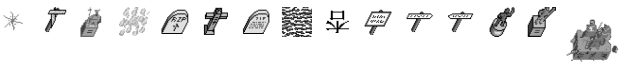
3.1.3. About NPCs

*N*on *P*layer *C*haracters are special “monsters” which have “intelligence”. Players may be able to interact with these monsters to help solve puzzles and find items of interest. To speak with a monster you suspect to be a NPC, simply move to an adjacent square to them and push the double-quote, ie. `"`. Enter your message, and press `<return>`. You can also use the meta-command `'say` if you feel like typing a little extra.

Other NPCs may not speak to you, but display intelligence with their movement. Some monsters can be friendly, and may attack the nearest of your enemies. Others can be “pets”, in that they follow you around and help you in your quest to kill enemies and find treasure.

3.1.4. Important special items

There are many special items which can be found in *Crossfire*, of those shown below, the most important may be the signs.

- **Signs:** 0 0 0 

Signs often have messages that might clue you in on quests and puzzles or even refer you to NPCs. It is your job as a player to make sure you read every sign to make sure you do not miss things.

- **Handles and Buttons:** 

These items can often be manipulated to open up new areas of the map. In the case of handles, all a player must do is apply the handle. In the case of buttons, the player must move items over the button to "hold" it down. Some of the larger buttons may need very large items to be moved onto them, before they can be activated.

- **Gates and locked doors:**  

Gates are often tied to a handle or button and can only be opened by manipulating the the handle/button. Doors that are locked can either be smashed down by attacking the door, by using keys which can be found throughout the game, or by picking the lock.

- **Pits:**
  Pits can be doorways to new areas of the map too, but be careful, for you could fall down into a pit full of ghosts or dragons and not be able to get back out!

- **Break away walls:**
  Are a common occurrence in *Crossfire*. These type of walls can be "destroyed" by attacking them. Thus, sometimes it may be worth a player's time to test the walls of a map for "secret doors".

- **Fire walls:**
  Will shoot missiles (including bullets, lightning, etc.) at players. Some firewalls can be destroyed while others cannot.

- **Spinners and Directors:**
  These odd items will change the direction of any item flying over them, such as missile weapons and spells.

Section 3.2. Matters of life and death

3.2.1. Attack system

Every time you make an attack, your attack is classified with one or more "attacktypes". For example, an attack made with a ordinary sword results in the attack being made with the attacktype of "physical". For another example, if a Mage attacks with a fireball spell the attack is made with the "magic" and "fire" attacktypes. In similar fashion, a defender may be protected, vulnerable, or immune to any attacktype.

Here is a summary of the attack system; in fact, its a bit more complicated.

Hitting an opponent

Several quantities are involved in determining whether an attack will hit its target. The attacker will hit if his `Wc` is less than or equal to the defender's `Ac` + 1D20[1] or if the D20 gives a 20 (remember, both `Wc` and `Ac` improve as their value drops *lower*).

Damaging a hit opponent

Damages are randomly generated, with the magnitude of the random number being based on the attacker's `Dam` stat. If defender is immune to an attacktype in the

[1] a random number between 1 and 20

Table 3.1 Relationship between experience and `level` for the first 10 levels.

`Level`	Experience
...	...

attack, he receives no damage, if he's protected he receives half damage, if he's vulnerable to this kind of attacktype, he receives double damage. For physical attacks, the percent of your `Arm` value is subtracted from incoming damage. Some magic weapons can "slay" various races of creatures. If the weapon slays the defender, the attack damage is tripled.

3.2.2. Experience

Accumulation of experience will result in increasing the `level` of the player's character. In a *Crossfire* game where skills are *not* present, experience is only gained for removing traps and killing monsters. A player will gain a new `level` when their experience total reaches a new amount in the hierarchy shown in table 3.1.

In the skills-based game, *several* kinds of experience exist. The `score` represents the "*overall*" proficiency of the player and is the *sum* of all the differing kinds of experience possessed.

The player accumulates experience into various "*experience categories*" according to their actions. Another way of putting this is that you become better at what you do most often and most successfully. For example, a player who kills monsters with incantations gains experience in casting incantations. A player who steals from creatures often will get better at stealing, and so on.

Each experience category will have a `level` assigned to it based on the amount of experience accumulated in it (using the same schedule shown in table 3.1). Use the `skills` command to investigate which skills your character has and to see the `level` of ability you have in each experience category. See chapter 5 for more information about skills and skill-based experience.

As an aside, monsters *also* are assigned a `level` of proficiency and may gain experience. The main way which monsters gain experience is by *killing* players! Beware going after a monster that has killed several players, it will be much more difficult to challenge!

3.2.3. Calculation of selected secondary stats

Both the primary stats and `level` of the character will influence the secondary stats given below. In the skills-based game, the appropriate experience category[2] is identified for purposes of determining which `level` is used in the calculation. In the non-skills game, the *overall* `level` is always used.

Refer to table 2.1 if a quantity in a calculation is left unexplained.

[2]categories are given for the default settings, this can be changed by the server administrator

Weapon class (`Wc`)

The `Wc` calculation is:

class `Wc` - `thaco`(STR) - weapon `Wc` - `level` - 1 every 6 `levels`

where `thaco` is found using the STR stat on table 2.1, the weapon `Wc` can be determined from the *Crossfire* **Spoiler** and the `level` is taken from the `physique` experience category.

Weapon Speed

The calculation for weapon speed is quite complex (but here it is!). The value for the weapon speed is:

`speed`/(`LF` * *NastyFactor* * *LessNastyFactor*)

where `LF` ("level factor") is a number between 0.8 and 1.2 that increases with the `level` as (4+`level`)/(6+`level`)*1.2, (the `level` is taken from the overall `level`), and both *NastyFactor* and *LessNastyFactor* are calculated below.

The value of *NastyFactor* is:

2/3 + `MaxC`/363 - ((0.00167*`WpnW`)/`MaxC`) + (`speed`/5) + ((Dex-14)/28)

where `MaxC` is the maximum carrying limit of the character, `WpnW` is the weapon weight. Weapon weight can be determined from examining the given weapon (ie look at the number to the right side of the weapon icon in the inventory window).

The value of *LessNastyFactor* is:

2 - ((WpnF - `magic`/2)/10)

where `WpnF` is the "weapon factor" and `magic` is the value of the enchantment on the weapon (i.e. +1, +2, etc.). Weapon factor is given for some weapons in table 3.2.

Damage (`Dam`)

Current weapon, character class (table 2.2) and STR (`DmB` in table 2.1) all effect the value of `Dam`. The calculation for `Dam` is:

Class bonus + `DmB` + Weapon damage + Skill damage

In addition, for every 4 levels of fighting expertise (`physique` experience category level) 1+(`Dmb`/5)) is added to `Dam`. Some skills (namely the hand-to-hand, or martial arts skills) can add significant damage to the overall total. The amount that is added depends on the user's `level` in that skill. Note that weapon damage is automatically added to your damage rating in the stat window when you wield any weapon.

Armour class (`Ac`)

For characters that cannot wear armour (ex. Fireborn), their `Ac` can improve as their score increases. The calculation for `Ac` is then:

Class `Ac` − `level`/3

The value of the character `Ac` may decrease to the value of -10. After that, no more improvement is made regardless of earned experience. The overall `level` is *always* used for this calculation.

Table 3.2 Weapon factor (`WpnF`) for selected weapons

1.6	nunchacu
1.5	dagger
1.4	Sting, katana, shortsword, taifu
1.3	Belzebub's sword, Darkblade, Excalibur
1.2	Firebrand, Frostbrand, Mjoellnir, Mournblade, Stormbringer, broadsword, falchion, light sword long sword, quarterstaff, sabre, sword, trident
1.1	Deathbringer, Demonbane, Dragonslayer, Holy Avenger club, hammer, mace, unicorn horn
1.0	axe, stonehammer
0.9	Skullcleaver, morningstar, stake, stoneaxe
0.8	large morningstar
0.5	Bonecrusher, Gram, shovel
0.3	large club
0.1-0.4	chair
0.1	bed

Hit points (`Hp`)

A character will gain the following number of `Hp` for *each* new overall `level` gained between levels 1–10:

(`HpB`)/2 + D4 + D4 + 1 + 1/every even `level` *if* `HpB` is even.

Where D4 is a random number between 1 and 4 and you always get 1 hit point gained per `level`, regardless of `HpB`. For levels after 10th, `Hp` grow 2 per `level`. The overall `level` provides the correct value for `level` in the calculation.

Mana (`Sp`)

A character will gain the following number of `Sp` for *each* new `magic` experience category `level` gained between levels 1–10:

(`MgB`(POW))/2 + D3 + D3 + 1 every even `level` *if* `MgB` is even.

Where D3 is a random number between 1 and 3 and you always get 1 mana gained per new `level`. For `magic` levels past the 10th, mana grows 2 per level.

Grace (`Gr`)

A character will gain the following number of `Gr` for *each* new `wisdom` experience category `level` gained between levels 1–10:

(`MgB`(WIS) + `MgB`(POW))/8 + D3

Where D3 is a random number between 1 and 3 and you always get 1 grace gained per new `level`. For levels past the 10th, grace grows 1 per `wisdom level`.

3.2.4. Death – – – the ultimate penalty?

Should your hit point total drop below 0 you will die  . What happens next depends on the options the server administrator choose.

If the `NOT_PERMDEATH` option is being used (this is the default) then your character (and his all of his *carried* equipment at the instant of death) will appear at the last savebed you used.

For each time you die, your character loses 20% (this is the default and can be different depending on the server). of their experience (in all categories) and a random primary stat decreases by 1. At low levels, the stat loss is bad news, while it is the experience loss that *really* hurts at those high levels. You may still re-gain lost stats (up to your natural limit) by drinking potions.

If the server administrator has made death permanent, there is still hope for your character. When the `RESURRECTION` option is enabled (the default option when `NOT_PERMDEATH` is *not* being used) other characters may bring you back from the beyond. There are 3 spells that are capable of doing this, but you may need to retrieve the corpse  of the character that is to be resurrected!

Section 3.3. Some advanced stuff

3.3.1. Some useful advanced commands

Meta-command (')

Any command listed by the use of help (`?` key) can be used by spelling it out after the meta-command is issued. For example, you can use the command `say` either by hitting the double-quote (`"` key) or by issuing the command string `'say`.

Binding commands ('bind and 'unbind)

You may bind any key with a complex command. For example, you could bind the use of the meditation skill to the key "`m`". To do this first type:

```
'bind use_skill meditation
```

then press <`return`>. The game will then ask you for a key to bind the command to, you then hit `m`. You can also re-bind this key to something else later if you wish too. Issue the command: command:

```
'unbind reset
```

to totally reset bindings on keys.

Pick up toggle (@)

This allows you to change your pickup status. Eight different modes for pick up exist: "don't pick up","pick up 1 item", "pick up 1 item and stop", "stop before picking up", "pick up all items", pick up all items and stop", "pick up all magic items", "pick up all coins and gems". Whenever you move over a pile of stuff your pickup mode controls if and what you collect. You can always pickup stuff using the pickup command (`,`) regardless of your current pickup mode.

Invoke (`'invoke`)

A useful way to quickly cast both incantations and prayers is via the invoke command. To use it effectively, `bind invoke <spell>` to any key. Then, when that binded key is pressed, your character will cast that magic in the direction they're currently facing.

3.3.2. Playing with other people

As a general rule, other *Crossfire* players will prefer to co-operate or at least leave each other alone. If you go about killing other player's characters you may not only risk their continued wrath, but the anger of the server administrator as well. Check out the house rules before you start slaying players.

Useful multi-player commands

Here are some useful commands for playing with other players:

`shout`
This meta-command will broadcast your message to every player currently logged in. The say command only sends messages to players who share your current map. Invoke this command just like `say`.

`who`
This will give you a listing of all the current players and the maps they are on currently. Invoke this command as `'who`.

`tell`
Will send your message only to the player indicated. It is invoked as: `'tell <character name> <message string>`.

The simple party system

If the `SIMPLE_PARTY_SYSTEM` has been enabled on your server you can use this to adventure with other players. All experience gained by members of the party is split equally, and in addition, party members are always peaceful towards each other. Here's 2 useful party commands:

1) To form a party issue the command:

    'party form <party name>

2) To join a party, type:

    'party join <party name>

To see all of the options, type `'party help`.

Chapter 4. Magic System

Section 4.1. Description

Two broad categories of magic exist in *Crossfire*: "wizardry" and "divine magic". The fundamental difference between the two comes down to the source that powers the magic of each. In divine magic the practitioners, "priests", do not use their own power but rather channel power from divine entities ("gods"). They utilize various "prayers" to cast their magic and grace is the measure of how much magic the priest may channel. The higher the level of the priest and the better his wisdom and power, the more grace the priest will have in the eyes of his god. In the practice of wizardry a "wizard" calls upon his own lifeforce (or "mana") to power his arcane incantations. Mana is based on of the wizard's innate power but may be increased through his skill in wizardry.

The scope and sphere of these two magics are different. Through the use of divine magic the priest has access to powerful spells[1] of protection, healing, and of slaying *unholy* creatures. If the multiple gods option is used[2], the god a priest worships will have other impacts on the priest's magic and abilities (see section 4.4). In contrast, wizardry is more oriented towards the harnessing of elemental forces of creation, alteration and destruction. There are two minor variants of wizardry: alchemy (section 4.5) and rune magic (section 4.6).

Each form of magic is orthogonal to the other. In some *no magic* areas, the wizard is blocked from accessing his store of mana, but the priest may operate his magic normally. Similarly, there are *unholy* areas in which the priest loses his contact with his god and cannot cast magic; in unholy areas the wizard is unhindered. Of course, no magic and unholy areas can sometimes coincide.

In addition, wizards have the handicap that if they are encumbered with 'stuff', they are less effective at incantations. Heavy weapons and heavy armour are the main cause spell-failures. See the section on encumbrance (section 6.3) for details. Weapons and armour have no effect on the practice of divine magic but grace regenerates slower than mana, and the amount of grace that a priest possesses helps to determine the success of their prayers.

Section 4.2. Learning spells

Both types of spells may be learned by reading books (see section 6.2). The overall chance of learning a spell uses the following formula

$$\% \text{ chance to learn} = (\text{base chance} + (2\times\texttt{level}))/1.5$$

The base chance that a prayer/incantation will be learnt is based on WIS/INT respectively. Look at table 2.1 to find your *base* chance in the learn% column. If

[1] A "spell" is a common name referring to both prayers and incantations.
[2] this is the default

Table 4.1 Known Spell Paths

Mind	Creation	Teleportation	Information	Transmutation
Protection	Fire	Frost	Electricity	Missiles
Self	Summoning	Abjuration	Restoration	Detonation
Transferrence	Turning	Wounding	Death	Light

you are attempting to learn a *prayer*, you would use your WIS stat to find the base chance. Likewise, the `level` used in the formula is related to the type of spell. If you are attempting to learn an incantation, the value of level to use is your magery experience level (and you use the wisdom experience level for learning prayers). Once your chance to learn a spell exceeds 100all attempts to learn spells.

Section 4.3. Magic paths

Long ago a number of archmages discovered patterns in the web that spells weave in the aether. They found that some spells had structural similarities to others and some of the mages took to studying particular groups of spells. These mages found that by molding their thought patterns to match the patterns of the spells they could better utilize all the spells of the group. Because of their disciplined approach, the mages were described as following spell Paths. As they attuned themselves to particular spell Paths they found that they would become repelled from others, and in some cases found they were denied any access to some paths. The legacy of these mages remains in some of the magical items to be found around the world. Use of these "attuned" items will strongly effect the quality of the incantations and prayers cast by the magician. See section 4.4 to see how the worship of a god might effect the spell casting of the magician.

Technical details

The Paths themselves are given in table 4.1.

A character (or NPC) that is attuned to a Path can cast incantations/prayers from that Path at 80% of the mana/grace cost and in addition receives duration/damage bonuses as if the caster were five levels higher. A person that is repelled from a Path casts incantations/prayers from that Path at 125% of the mana/grace cost and receives duration/damage bonuses as if the caster were five levels lower (minimum of first level). The casting time is also modified by 80% and 125% respectively. If a wizard or priest is denied access to a Path they cannot cast any spells from it.

Paths are quite powerful; they don't come cheaply. Most magical items with path_attuned attributes will have path_repelled and path_denied attributes as well, to balance them out.

Section 4.4. Multiple gods

Gods in *Crossfire* are not omnipotent beings. Each is thought of possessing a certain sphere of influence, indeed, some philosophers have thought that the gods might spring from the same mystical patterns that form the spell Paths. Certainly it appears that each of the gods embodies one or more of these Paths (but not all of them!!). Because the gods are not omnipotent, we often speak of their religions as being 'cults'.

Under the multigod option, priests are allowed to select from an array of different gods. Worship of each god is unique, and brings differing capabilities to the priest. See appendix C for a listing of the gods and some of the attributes/effects of worshiping of these cults.

4.4.1. Joining a cult

Praying at *aligned* altars  is the usual way in which a priest interacts with their god/cult. Aligned altars are identified by their name (e.g. altar of <god's name>) and may be found in various maps all over the world of *Crossfire*. When a player prays over an aligned altar, one of three things may happen based on the players currently worshiped god:

> (1) **"Unaligned" player prays over an altar** – results in that player becoming a worshiper of the god the altar is dedicated to.
>
> (2) **Player prays over their god's altar** – results in faster grace regeneration. In addition, player may pray to gain up to twice their normal amount of grace. Also, from time to time your god might give you information, blessings, or something really good; it depends on your WIS, POW and wisdom experience.
>
> (3) **Player prays over alien god's altar** – results in punishment of the player (generally they lose some of their wisdom experience). This action *can* result in the defection of the player to the alien god's cult.

Note that once a player has joined a cult, it is impossible to go back to being "unaligned" to any god.

Summary of benefits/penalties for joining

The following things happen when a worshiper joins a god's cult:

> - the worshiper gains access to the special flavor of magic belonging to the cult (see table 4.2).
>
> - the ability to cast magic is altered to reflect the powers of the worshiper's god. Some spells will be easier to cast; others will be more difficult, and some spell Paths will be forbidden. It is impossible to regain forbidden spells by any means except leaving the cult.
>
> - the worshiper becomes protected and/or vulnerable to certain attacks.

Note that a player can belong to only *one* cult at any one time.

Table 4.2 Special priest prayers.

Prayer	Description
Bless	Enhances the recipients combat ability and confers some of the gods special sphere of protection.
Banishment	An `AT_DEATH`[1]attack is made versus enemies of the caster's god.
Call holy servant	Weaker version of an avatar is summoned.
Cause wounds	These prayers use the attacktype of "godpower". This means they will effect magic immune creatures AND each prayer has the special attacktype(s) of the priest's god.
Consecrate	Dedicates an altar to the caster's god.
Curse	Decreases the recipients combat ability and confers some vulnerabilities particular to the caster's god.
Holy orb	Its like a fireball, but has the same effect as holy word[2] This prayer is most effective against single creatures.
Holy word[2]	This prayer shoots forth a cone of power that will damage only enemies of the caster's god.
Holy wrath	Currently the most powerful "holy word"[2] prayer available.
Summon avatar	Summons a "golem" that is tailored to the powers of the worshiped god. This prayer is more powerful (in general) than a summoned elemental and is one of the priest's most potent attack spells.
Summon cult monsters	Summons creatures friendly to the priest's god. Depending on the god this can be a powerful or wimpy prayer.

[1]The target and caster's `levels` are compared. If the caster's `level` is higher, then the creature will probably be destroyed.

[2]"holy word" also defines a class of prayers. These spells are all designed to slay only the enemies of the priest's god.

4.4.2. Example god

Lets create an example god—the "god of the undead". If you worship the god of the undead, don't expect to be able to gain priest experience[3] for killing the undead! But you might gain, as a priest of the undead, greater powers of commanding undead, and experience for killing certain (living) creatures that serve an enemy god. Each priest takes on a portion of the "aura" of their god; this means that our priest will probably become protected to life-damaging magic like draining and death, while conversely becoming more vulnerable to fire. Such a priest, because their god's domain does not include the living, probably wont be capable of healing either.

Section 4.5. Alchemy

Alchemy is a sub-type of wizardry. Being an alchemist is easy; you only need satisfy the following:

1) be able to cast the `alchemy` spell.
2) have access to a cauldron   .
3) have some ingredients.

To create something put ingredients in the cauldron, then cast the '`alchemy`' incantation. You might make something :). Be warned though! backfire effects are possible, especially if you throw a lot of stuff in the pot. In fact, the more junk which is in the cauldron, the *worse* any potential backfire is likely to be. Backfire generally occurs when you get the ingredients wrong but low-level alchemists attempting very difficult (4+ ingredient) formulae may have problems too!

In order to get better at making stuff, you will need to learn the `alchemy` *skill*. Books found in shops (and elsewhere) will give you formulae for making stuff. There is no hard limit on the number of formulae which might make something (the code is pretty flexible), so you can always *experiment* on your own, but this will be dangerous!

Section 4.6. Rune magic

Runes are another special form of wizardry; essentially runes are magical inscriptions on the dungeon floor which cast a spell (or "detonate") when something steps on them. Flying objects don't detonate runes. Beware! Runes are invisible most of the time!

There are several runes which are specialized; these can be set as your range spell. Some of these are:

[3]i.e. experience for the `wisdom` experience category

Rune of Fire	-	does fire damage when it detonates
Rune of Frost	-	does cold damage
Rune of Blasting	-	does physical damage
Rune of Shocking	-	does electric damage
Rune of Death	-	attacks with attacktype "death" at caster level

+ some others you may discover in grimores.

The spell 'disarm' may be used to try and destroy a rune you've discovered. In addition, there are some special runes which may only be called with the 'invoke' command:

Magic Rune	-	You may store any incantation in this rune that you know and have the mana to cast.
Marking Rune	-	this is basically a sign. You may store any words you like in this rune, and people may apply it to read it. Maybe useful for mazes! This rune will not detonate, nor is it ordinarily invisible.

Partial Visibility of Runes

Your runes will be partially invisible. That is, they'll be visible only part of the time. They have a 1/(your `level`/2) chance of being visible in any given round, so the higher your level, the better hidden the runes you make are.

Examples of usage

Here are several examples of how you can use the runes.

```
'invoke magic rune heal
```

will place a magic rune of healing one square ahead of you, whichever way you're facing.

```
'invoke magic rune transfer
```

as above, except the rune will contain the spell of transference

```
'invoke magic rune large fireball
```

as above, except the spell large fireball will be cast when someone steps on the rune. the fireball will fly in the direction the caster was facing when he created the rune.

`'cast rune of fire`

prepares the rune of fire as the range spell. Use the direction keys to use up your mana and place a rune.

`'invoke marking rune fubar`

places a rune of marking, which says "fubar" when someone applies it.

`'invoke marking rune touch my stuff and I will hunt you down!`

places the marking rune warning would-be thieves of their danger.

Restrictions on runes:

You may not place runes underneath monsters or other players. You may not place a new rune on a square which already has a rune. Any attempt to do the latter strengthens the pre-existing rune.

Chapter 5. Skills System

Section 5.1. Description

Under the skills system the flow of play changes dramatically[1,2]. Instead of gaining experience for basically just killing monsters (and disarming traps) players will now gain a variety of experience through the use of skills. Some skills replicate old functions in the game (e.g. melee weapons skill, missile weapon skill) while others add new functionality (e.g. stealing, hiding, writing, etc). A complete list of the available skills can be found in table 5.1. Appendix B contains descriptions for many of the skills.

Section 5.2. About experience and skills

5.2.1. Associated and miscellaneous skills

In *Crossfire* two types of skills exist; The first kind, "associated" skills, are those skills which are *associated with a category of experience.* The other kind of skill, "miscellaneous" skills, are *not* related to any experience category.

The main difference between these two kinds of skills is in the result of their use. When associated skills are used *successfully* experience is accrued in the experience category *associated with that skill.* In contrast, the use of miscellaneous skills *never* gains the player any experience regardless of the success in using it.

Both miscellaneous and associated skills can *fail.* This means that the attempt to use the skill was unsuccessful. *Both* miscellaneous and associated skills *can* have certain primary stats *associated* with them. These associated stats can help to determine if the use of a skill is successful and to what *degree* it is successful.

All gained experience is modified by the associated stats for that skill (table 5.1) and then the appropriate experience category automatically updated as needed.

[1]The skills system is enabled as the default option as of version 0.92.0

[2]The new skills/experience system is compatible with character files from at least version 0.91.1 onward.

Table 5.1 Skills

Skill	Experience Category	Associated Stats		
		(Stat 1)	(Stat 2)	(Stat 3)

5.2.2. Restrictions on skills use and gaining experience

Neither a character's stats nor the character class restricts the player from gaining experience in any of the experience categories. Also, there are no inherent restrictions on character skill use—any player may use any *acquired* skill.

5.2.3. Algorithm for Experience Gain under the skills system

Here we take the view that a player must 'overcome an opponent' in order to gain experience. Examples include foes killed in combat, finding/disarming a trap, stealing from some being, identifying an object, etc.

Gained experience is based primarily on the difference in levels between 'opponents', experience point value of a "vanquished foe", the values of the associated stats of the skill being used and two factors that are set internally[3].

Below the algorithm for experience gain is given where player "pl" that has "vanquished" opponent "op" using skill "sk":

$$\text{EXP GAIN} = (\text{EXP}_{op} + \text{EXP}_{sk}) * \text{lvl\_mul}$$

where EXP_{sk} is a constant award based on the skill used, EXP_{op} is the base experience award for 'op' which depends on what op is (see below),
For $\text{level}_{pl} < \text{level}_{op}$::

$$\text{lvl\_mult} = \text{FACTOR}_{sk} * (\text{level}_{op} \text{ - } \text{level}_{pl})$$

For $\text{level}_{pl} = \text{level}_{op}$::

$$\text{lvl\_mult} = \text{FACTOR}_{sk}$$

For $\text{level}_{pl} > \text{level}_{op}$::

$$\text{lvl\_mult} = (\text{level}_{op}/\text{level}_{pl});$$

where level_{op} is the level of 'op', level_{pl} is the level of the player, and FACTOR_{sk} is an internal factor based on the skill used by pl.

There are three different cases for how EXP_{op} can be computed:

1) **op is a living creature**: EXP_{op} is just the base experience award given in the *Crossfire* **Spoiler**.

2) **op is a trap**: $\text{EXP}_{op} \propto 1/(\text{the time for which the trap is visible})$. Thus, traps which are highly *visible* get *lower* values.

3) **op is not a trap but is non-living**: EXP_{op} = internal experience award of the item. Also, the lvl_mult is multiplied by any `magic` enchantment on the item.

Table 5.2 Skills commands

`skills`	This command lists all the player's current known skills, their level of use and the associated experience category of each skill.
`ready_skill` <skill>	This command changes the player's current readied skill to <`skill`>.
`use_skill` <skill> <string>	This command changes the player's current readied skill *and* then executes it in the facing direction of the player. Similar in action to the `invoke` command.

Section 5.3. How skills are used

Three player commands are related to skills use: `ready_skill`, `use_skill`, and `skills` (see table 5.2). Generally, a player will use a skill by first readying the right one, with the `ready_skill` command and then making a ranged "attack" to activate the skill; using most skills is just like firing a wand or a bow. In a few cases however, a skill is be used just by having it *readied*. For example, the `mountaineer` skill allows favorable movement though hilly terrain while it is readied.

To change to a new skill, a player can use either the `use_skill` or `ready_skill` commands, but note that the use of several common items can automatically change the player's current skill too. Examples of this include readying a bow (which will cause the code to make the player's current skill `missile_weapons`) or readying a melee weapon (current skill auto-matically becomes `melee weapons`). Also, some player actions can cause a change in the current skill. Running into a monster while you have a readied weapon in your inventory causes the code to automatically make our current skill `melee weapons`. As another example of this–casting a spell will cause the code to switch the current skill to `wizardry` or `praying` (as appropriate to the spell type).

It is not possible to use more than one skill at a time.

Section 5.4. Acquiring skills

Skills may be gained in two ways. In the first, new skills may *learned.* This is done by reading a "skill scroll" and the process is very similar to learning a spell. Just as in attempts to learn incantations, success in learning skills is dependent on a random test based on the learner's INT. Using your INT stat, look in the learn%

[3] If you want to know more about this, check out the skills_developers.doc

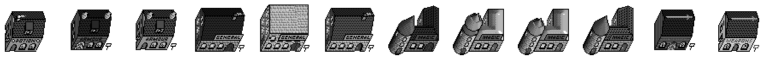
column in table 2.1 to find your % chance of learning a skill. Once you hit 100% you will always be successfull in learning new skills.

The acquisition of a *skill tool* will also allow the player to use a new skill. An example of a skill tool is “lockpicks”  (which allow the player to pick door locks). The player merely applies the skill tool in order to gain use of the new skill. If the tool is unapplied, the player looses the use of the skill associated with the tool.

After a new skill is gained (either learned or if player has an applied skill tool) it will appear on the player’s skill roster (use the ’skills’ command to view its status). If the new skill is an associated skill, then it will automatically be gained at the player’s current level in the appropriate experience category. For example, Stilco the Wraith, who is 5th level in `agility`, buys a set of lockpicks and applies them. He may now use the skill lockpicking at 5th level of ability since that is an `agility` associated skill.

Chapter 6. Equipment

Section 6.1. Going to market..



You can find equipment for sale at easily recognizable buildings. To buy an item just pick it up and walk out of the building by stepping on a shop mat . The cost of the item will auto-matically be deducted from your money . To sell an item, enter the shop and drop the item on the shop floor. Money from the sale will auto-matically be placed in your inventory. Use the `examine` command, or the cursor and left button of the mouse to examine the price of an item *before* you buy or sell.

6.1.1. Some notes about shopping

Most items will have a value based on their "standard" cost multiplied by a factor based on your charisma (see table 2.1). You can never look good enough that you can buy stuff then sell it at a profit.

Some notable exceptions to the above:

- Gems  will always be sold or bought 3% more or less their standard value.
- For magic stuff value is $3\times(\texttt{magic})^3$ of standard value.
- Unidentified items value is 2/3 of standard.

6.1.2. Plundering shops

It is not possible to steal from shops (sorry!). If you somehow make it out of a shop with "unpaid" items, you will find that they will be unusable until paid for. On another note, if you save yourself with unpaid items in a shop, then crash the game and reload, you will find that the unpaid items will not be saved.

Section 6.2. Items

In this section we detail some interesting properties of various bits of equipment which may be found in *Crossfire*.

Books: 
This is how players can obtain magical spells, sometimes a player can learn the spell, other times they cannot. The chance depends on the type of spell, either INT (incantations) or WIS (prayers) is used to help determine the percentage chance that the spell might be learned (see section 4.2 for details).

There are many, many different types of books out there, as well as being spell books (grimores and prayerbooks), the following information can appear in books generated in shops and/or monster treasure hoards–

- Compendiums on monsters. Their powers/abilities are described as in the *Crossfire* **Spoiler**.
- Compendiums of incantations/prayers by spell Path. Higher level texts are more complete in their description of available spells.
- "Bibles": various aspects, properties, and characteristics of a God/cult are described. Higher level texts have more/better information.
- Compendiums explaining the powers of magic items. Higher level texts have more items detailed.
- Alchemical Formulae.
- Other randomly generated information.

Book level is assigned when the book is generated as treasure. Level is based on the difficulty of the map the book is generated on. All information is *server* specific.

Scrolls and Potions: 


Most of these items provide a one-shot use of a spell without making the user expend either mana or grace. Scroll use depends on the user's `literacy` skill and may fail. Potions always work, but are more expensive to buy. Several kinds of items are classed as "potions": balms, figurines, and dusts. Some potions don't cast spells, but instead raise the drinker's stats. Beware cursed potions. They can *lower* your stats instead!

Wands(Staves)/Rods/Horns: 
These items provide use of spells. Wands have a limited number of charges, while horns and rods will recharge (but don't fire as much damage in a small amount of time). Horns are used at the overall level of ability of the user, while rods and wands cast spells at the item level.

Rings: 
Many different types, rings can be worn to add/remove different immunities, gain/lose spell Paths and alter all types of stats.

Food/Flesh: 

These items provide sustenance. Food is generally more healthy to eat, while some flesh items can be sold for good cash. Both types may temporarily alter your stats, and/or be poisonous. Many flesh items inherit the properties of the monster they came from. For example, a "poisonous" monster will leave behind poisonous flesh. Don't eat it if you know what's good for you!!

Weapons/Armour:
Tons of items, it is up to you as the player to figure out which work better then others. Take a look at weapon/armour weight in the *Crossfire* **Spoiler** to get an idea of how enchanted unidentified items are.

Artifacts:
These are the real treasures of the game. There are more than 20 artifacts out there, but they are very hard to come by.

Section 6.3. Encumbrance

Armour, weapons, shields will encumber a wizard and cause spell failure. Light equipment causes no failure at all whereas heavy equipment causes mondo failures.

The reasoning is that the bulkiness of objects, not their weight exactly, is what causes failures. So the basic idea of encumbrance is that items get in the way more than they weigh down. Unfortunately, our only measure of 'getting in the way' was the weight.

6.3.1. How encumbrance is calculated

Encumbrance points are tallied only from *applied* objects. Weapons give 3x their weight in kg in encumbrance points. Shields give 1/2 their weight in kg in encumbrance points. Armour gives its weight in encumbrance points.

There's an allowance of encumbrance points which all players get before they start losing incantations, this was about 35-45, not too much.

The formula works like this: You make a roll of 1-200. You compare it to a failure threshold. This threshold is: encumbrance + incantation `level` - caster `level` - 35

For example, lets say a 4th `level` wizard is casting a 5th `level` incantation. The wizard is wearing plate mail (100 kg), a 20 kg shield and wielding a 15 kg weapon. His encumbrance is 100 + 10 + 45 = 155. Thus, his threshold for failure is 155 + 5 - 4 = 156 or just about 3/4 failure rate.

There is no special bonuses for using magical equipment, although, it is clear that magical armour and weapons make things better through their weight.

Section 6.4. Enchantments

Some items will have numerical values such as +1, +2, +3, etc. trailing their names. These *magic* values indicate that the item is enchanted, and in some way may be better or (if the value is negative) worse than ordinary runaday items of its kind.

6.4.1. Enchanting armour

Enchantment of armour is achieved with the *enchant armour*  scrolls. Each time you successfully use a scroll, you will add a plus value, more armour to the piece of equipment and some fractional amount of weight.

You may only add up to 1 + (overall `level`/10) (rounded down like an integer) in pluses to any one piece of armour. How much armour value you add to the item is also dependent on your overall `level`. You may never enchant a piece of armour to have an armour rating greater than their overall `level` or 99.

6.4.2. Enchanting weapons

This is done via a series of scrolls that you may find or buy in shops. The procedure is done in two steps. Use the *prepare weapon* scroll to lay a magic matrix on your weapon. Then use any of the other scrolls to add enchantments you want. Note that some of these scrolls will also require a "sacrifice" to be made when they are read. To sacrifice an object just stand over it when you read the weapon scroll. Scrolls for weapon enchantment are:

Prepare weapon
Diamonds are required for the sacrifice. The item can be enchanted the square root of the number of diamonds sacrificed. Thus, if 100 diamonds are sacrificed, the weapon can have 10 other enchant scrolls read.

Improve damage
There is no sacrifice. Each scroll read will increase the damage by 5 points, and the weight by 5 kilograms.

Lower (Improve) Weight
There is no sacrifice. Each scroll read will reduce the weight by 20%. The minimum weight a weapon can have is 1 gram.

Enchant weapon
This does not require any sacrifices, and increases the magic by 1.

Improve Stat (ie, Strength, Dexterity, etc)
The sacrifice is the potion of the same type as the ability to be increased (ie, Improve Strength requires strength potions). The number of potions needed is the sum of all the abilities the weapon presently gives multiplied by 2. The ability will then be increased by 1 point. Thus, if a sword is Int +2 and Str +2, then 8 potions would be needed to raise any stat by one point. But if the sword was Int +2, Str +2, and Wis -2, then only 4 potions. A minimum of 2 potions will be needed.

WARNING: something to keep in mind before you start enchanting like crazy—you can only use a weapon that has 5 + 1 enchantments for every 5 levels of `physique` experience you possess. So, a character with 10th level in the `physique` experience category may only be able to use a weapon with a maximum of 7 enchantments!

Chapter 7. Hints on playing *Crossfire*

This section amounts to spoilers for the game. If you don't like that kind of information, don't read any further in this chapter!

Section 7.1. Beginning players

I'm on the starting map, what do I do now? You should be in a city square with a few sign posts in the middle. Move over the signs and `apply` them (`"A"`) to read what they say.

For beginners, there are several maps designed for them. Find these areas and clear them out. All throughout these levels, a player can find signs and books which they can read by stepping onto them and hitting '`A`' to apply the book/sign. These messages will help the player to learn the system. Probably the first, best area for a beginning player to start out in is "Beginners". This area is a small house located south-west of your starting location.

Flailing about with spells

Some items are perishable. If you shoot a fireball into a room full of scrolls, you will notice them going up in smoke! So be careful not to destroy valuable items.

Tips on surviving

Crossfire is populated with a wealth of different monsters. These monsters can have varying immunities and attacktypes. In addition, some of them can be quite a bit smarter than others. It will be important for new players to learn the abilities of different monsters and learn just how much it will take to kill them.

Most monsters in the game are out to mindlessly kill and destroy the players. Killing monsters will help boost a player's score. When fighting a large amount of monsters in a single room, attempt to find a narrower hallway so that you are not being attacked from all sides. Charging into a room full of Beholders would not be wise, instead, open the door and fight them one at a time.

Section 7.2. Priorities for low-level characters

The priority for characters below about 5th level is to gain some basic items. In this regard, better armour and better spells are best. Look for a quest among the various islands that will allow you to obtain mithril mail. Whenever you scrape together $\sim$100$-$200 platinum pieces go shopping for armour and weapons (or spells). If you are a fighter type, try to have at least a +2 weapon, +2 helmet, +2 suit of armour, and +2 shield before you reach 5th level. For wizards, attempt to recover enough treasure to be able to buy up good attack spells. For priests, first thing to do is worship a god! Try to get the *holy word* prayer as soon as possible. Make sure your current god allows good potential use of this spell.

For all classes, get access to the *detect magic* incantation as soon as possible. This will allow you to sort through the treasure you find while you're in the dungeon, and will save you time and money at the shops.

Chapter A. Player Commands

apply <string>	Without any parameter, applies the top object in the ground view. With a string, applies the first object matching the string.
bind	Used to bind commands to keys.
brace	Toggles brace status. While braced you will not move.
cast <spell>	Readies named spell.
clearinfo	Clears the text screen.
disarm	Executes a disarming action in facing direction.
dm <password>	Player becomes the dm. You character is unsavable after this.
drop <object>	Drops object from player inventory. All items matching <object> are dropped, unless they are locked or cursed.
dropall	Drops all but locked objects in inventory.
east	Execute a move east.
examine <object>	Examines object, defaults to top object in look window.
get	Picks up top object in look window.
gsay	Sends a message only to members of your party.
help <subject>	Help on subject, defaults to shows list of available help. If <subject> is `commands`, will display a list of available commands.
hiscore	Show list of highest player scores.
inventory	Lists all objects in your inventory in text window.
invoke <spell> <string>	Readies, then casts a spell. String is optional
listen	Changes the level of your hearing.
mapinfo	Show information about current map.
maps <name>	Show status of all active maps. If <name> is provided, only lists maps with matching name.
motd	Show message of the day again.
north	Execute a move north.
northeast	Ditto to north east.
northwest	Ditto to the north west.
output-count	Toggles message grouping, so that identical messages are put together.
output-sync	No idea what this does.
party <command>	Set of commands used with simple party system.
peaceful	Toggle peaceful status.
pickup <command>	Change pickup status by number or value density.
prepare	Alias for cast command.
quit	Quit the game and totally removes your character.
ready_skill <skill>	Prepare a skill for use.
rotateshoottype	Rotate the range slot by 1.
save	Save your current position and status.
savewinpos	Save your current window layout.
say	Say something to all players on your map.
search	Execute a search in all nearby squares.
search-items <command>	Change the status of items searched for.
shout	Send a message to all players regardless of map.
show	
showinvicon	Toggle status of invicon in inventory window.
skills	Show all available skills, experience categories and level. If a string is provided, only lists matching skills.
south	Execute a move south.
southeast	Ditto to southeast.
southwest	Ditto to southwest.
stay	
take	Alias for pickup.
tell <who> <msg>	Tell character who the msg.
throw	Throws an item.
time	Displays the ingame time
title <string>	Change your title to string.
unbind <command>	A set of commands to reverse key bindings.
use_skill <skill> <string>	Ready, then use a skill.
version	Print out all the contributors to *Crossfire*.
west	Execute a move west.
who	Show what players are currently logged on. If a parameter is specified, only displays players in regions with matching name.

wimpy <percent>	Auto-matically run away when hp$<$%$\times$Max hp.

Commands for Dungeon Masters only:

malloc	Shows which stuff is taking up how much memory.
sstable	Sends to the server log statistics about shared strings.
strings	Shows the status of shared sting parameters.
sync <integer>	Change sync value to integer.

Chapter B. Skills

The following is the current (7/15/96) roster of skills and the description for each. Use the command `crossfire -m5` to see the array of skills and experience in your version of crossfire. (Note: you need to have compiled with the `DUMP_SWITCHES` and `ALLOW_SKILLS` flags for this to work!)

Emphasis on type denotes a skill which monsters/NPC's may also use.

alchemy	User can identify potions, containers, flesh parts, and amulets.
bargaining	While this skill is readied the user has added CHA for purposes of purchase and selling of items only. Cha is never allowed to exceed 30.
bowyer	User can identify missile weapons and missiles.
clawing	User can make a *bare-handed attack*. Damage is based on the user's Str and `level`. This is the default "hand-to-hand" fighting skill for the Quetzecoatl character class.
find traps	User can search (more effectively) for traps. Not a 'passive' skill, it is applied in order to gain the advantage in discovering traps.
flame touch	User can make a *bare-handed attack*. Damage is based on the user's Str and `level`. This is the default hand-to-hand fighting skill for the Fireborn character class.
hide	User enjoys limited form of invisibility. If they attack or move too much they become visible.
jeweler	User can ident gems and rings that they hold.
jumping	User can 'skip' over 1-2 spaces in a selected direction. Distance depends on weight carried, STR and DEX of the user. This skill may also be used as an attack.
karate	User can make a *bare-handed attack*. Damage is based on the user's Str and `level`. This attack

	is the fastest and (at higher levels) most deadly of the hand-to-hand attacks available.
literacy	User can ident books and scrolls that they hold. It also allows the player to read scrolls, books, grimores and praybooks.
lockpicking	User may 'pick locks' (open doors). User needs to have readied 'lockpicks' to use this skill.
meditation	Player can regain mana/hp at an accelerated rate. Player must first strip off encumbering armour however. This skill is only available to the Monk character class.
melee weapons	User may use hand-held weapons (eg swords, spears, mace, etc).
missile weapons	The user is allowed to make attacks with ranged weapons (eg bow, crossbow).
mountaineer	While the skill is readied, the possessor will move faster through "hilly" terrain (hills, mountains, etc.)
oratory	User may 'recruit' followers. Recruitees must be of lower `level`, and unaggressive to start. Use of this skill may anger the audience. Also, 'special' monsters are immune to recruitment. Success depends on User Cha and `level`.
praying	User is allowed to cast "priest" spells. In addition, this skill may be used to accelerate the accumulation of grace. This skill may be either *learned* or acquired through the use of a *holy symbol*.
punching	User can make a *bare-handed attack*. Damage is based on the user's Str and `level`. This is the most feeble of the hand-to-hand attacks.
remove traps	User may remove previously discovered traps.
sense curse	User may discover whether items that they hold are *cursed*.

sense magic	User may discover whether items that they hold are *magic*.
set traps	Unimplemented.
singing	User may pacify hostile monsters with this skill. Certain kinds of monsters are immune. Success depends on user `level` and CHA.
smithery	User may ident arms and armour that they hold.
wizardry	User is allowed to cast "wizard" spells. This skill may be acquired either through the use of a *talisman* or *learned* via a skill scroll.
stealing	User can steal items from other creatures.
thaumagragist	User can ident rods, wands and horns that they are holding.
throwing	Unimplemented.
use magic item	User can use magic items like rods/wands/horns.
woodsman	While the skill is readied, the possessor will move faster through "wooded" terrain (forest, grasslands, brush, jungle, etc.). If actively used, this skill will identify foods and flesh parts.
writing	User may both write messages in books *and* rewrite spell scrolls with a previously known spell. For new spell scrolls mana, time and an old scroll are needed. Backfire effects are possible. To write text in a book, use the skill as: `use_skill writing <msg>`. This skills is only available as a 'writing pen'; the literacy skill must be possessed before this can be used.

Chapter C. Description of Gods

Below in boxes, the gods in your compiled version of *Crossfire* are shown. Use the command `crossfire -m8` to check if the information presented here is accurate. (Note: you need to have compiled with the `DUMP_SWITCHES` and `MULTIPLE_GODS` flags for this to work!) The boxed attributes have meaning as follows:

Enemy cult:	Name of the enemy god
Aligned race(s):	Names of races friendly to the cult. The priest of this cult has greater power over these creatures. In some cases the prayer `summon cult monsters` will summon these monsters to help the priest.
Enemy race(s):	Names of races hated by the cult. "Holy word" prayers of this god may be used to kill these creatures.
Attacktype(s):	Attacktypes used by this god's avatar and by cult `cause wounds` prayers.
Immunity:	Granted by the `holy possession` prayer.
Protected:	Granted to a cult priest and by the `bless` prayer.
Vulnerable:	Given to a cult priest and by the `curse` prayer.
Attunded:	The cult priest is attuned to these spellpaths.
Repelled:	The cult priest is repelled to these spellpaths.
Denied:	The cult priest is denied use of these spellpaths.
Added gifts/limits:	A cult priest has these addtional benefits and restrictions.

Note that not all gods have values for all possible attributes. In this case, no attribute will appear in that god's box.

Valriel	Lord of Angels
Enemy cult:	Gorokh
Aligned race(s):	Angel
Enemy race(s):	Demon
Attacktype(s):	Blinding
Attuned:	Protection, Mind
Denied:	Wounding, Death

Gorokh	Demon King
Enemy cult:	Valriel
Aligned race(s):	Demon
Enemy race(s):	Angel

Attacktype(s):	Fear
Attuned:	Wounding
Repelled:	Protection, Restoration
Added gifts/limits:	
	hp regenerate at -2
	sp regenerate at -1
	luck is -1

Devourers	Soul Eaters
Enemy cult:	Gaea
Aligned race(s):	Undead
Enemy race(s):	None
Attacktype(s):	Depletion, death, life stealing
Attuned:	Wounding, Death
Repelled:	Protection, Fire, Restoration, Light
Denied:	Turning
Added gifts/limits:	
	is undead
	has infravision
	hp regenerate at -1
	digestion is faster (60)

Sorig	Lord of Storms
Enemy cult:	NONE
Aligned race(s):	Air elemental
Enemy race(s):	None
Attacktype(s):	Electricity
Attuned:	Electricity, Missiles, Wounding
Repelled:	Restoration
Denied:	Protection, Turning

Ruggilli	Chaos God of slaughter and terror
Enemy cult:	Ixalovh
Aligned race(s):	Consuming fire creatures
Enemy race(s):	Chaotic water creatures
Attacktype(s):	Physical, fire
Attuned:	Fire, Wounding
Repelled:	Frost, Restoration, Creation
Denied:	Turning
Added gifts/limits:	
	no armour may be worn
	reflect missiles

	hp regenerate at 1
	digestion is slowed (-1)

Ixalovh	Chaos Goddess of many tentacles
Enemy cult:	Ruggilli
Aligned race(s):	Chaotic water creatures
Enemy race(s):	Consuming fire creatures
Attacktype(s):	Physical, cold
Attuned:	Frost, Transmutation
Repelled:	Fire, Detonation
Denied:	Turning

Gaea	Goddess of peace
Enemy cult:	Devourers
Aligned race(s):	Animal,Bird,Slime, Insect,Reptile,Water elemental, Earth elemental,Air elemental,Fire elemental
Enemy race(s):	Undead,Unnatural
Attacktype(s):	Fear
Attuned:	Protection, Summoning
Denied:	Wounding, Death
Added gifts/limits:	
	weapon use is forbidden
	hp regenerate at 2
	grace regenerates at 3

Valkyrie	The Brave
Enemy cult:	NONE
Aligned race(s):	Human,Troll
Enemy race(s):	Unnatural,Angel,Demon, Undead
Attacktype(s):	Physical, weaponmagic
Denied:	Protection, Fire, Frost, Electricity, Missiles, Self, Summoning, Abjuration, Restoration, Detonation, Mind, Creation, Teleportation, Information, Transmutation, Transferrence, Turning, Wounding, Death, Light
Added gifts/limits:	
	sp regenerate at -5

Mostrai	Dwarven deity of metal smithing and warcraft
Enemy cult:	Gnarg
Aligned race(s):	Dwarf
Enemy race(s):	Goblin,Giant
Attacktype(s):	Weaponmagic
Attuned:	Creation, Transmutation
Repelled:	Summoning

Lythander	Elven god of luck
Enemy cult:	Gnarg
Aligned race(s):	Faerie
Enemy race(s):	Goblin,Troll
Attacktype(s):	Confusion, slow
Attuned:	Missiles, Turning
Denied:	Detonation
Added gifts/limits:	
	is stealthy
	sp regenerate at 1
	luck is 2

Gnarg	Father of goblins
Enemy cult:	Lythander
Aligned race(s):	Goblin,Giant,Troll
Enemy race(s):	Faerie,Dwarf
Attacktype(s):	Poison
Attuned:	Missiles, Wounding
Repelled:	Protection, Turning
Added gifts/limits:	
	08/02/09 15:59:10 [Debug] Cleanup called. freeing data.
	08/02/09 15:59:10 [Info] Cleaning up...

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