

## Game Mechanics: Corrections, Observations & Questions

Hi folks! I've consulted this site, plus the Dungeon Master Encyclopedia, on and off for a couple of years and have found them to be an invaluable resource. I've been doing some testing of Dungeon Master 2 and have noticed a few things that are interesting, or are different from what is stated on the encyclopedia, and I wanted to share what I've learned.

### SHIELDS & ARMOR

Shield defense power is definitely NOT ignored, despite what the Encyclopedia says. I ran 4 tests (with solo Torham) against one of the guards in the second village and recorded the damage I received with various armor setups. I tested with and without shields (2 Techshields @ 100, total of 200 defense) and with and without a typical set of strong armor (Techplate @ 160, Fire Poleyn @ 88, Techhelm @ 76, Mithral Hosen @ 40 = total of 364 defense). I mention the defense totals above cautiously as I am unsure of their impact. Also note that my tests were not extensive enough to have any confidence in minimum and maximum numbers, but the ranges listed should still be fairly average. Here were my results:

N Armor, N Shields: Avg 71, Range 30-123

N Armor, Y Shields: Avg 41, Range 27-61

Y Armor, N Shields: Avg 39, Range 15-68

Y Armor, Y Shields: Avg 28, Range 07-53

As you can see, just wearing the shields (I never used any actions on them) clearly had an impact on the damage received. However, this impact was smaller both in terms of actual reduction, and proportionate reduction, when other armor was worn. Looking at the damage ranges, shields also appeared to reduce damage more consistently (not stronger, just more consistently) than 4 pieces of armor with different defense ratings. I'm not quite sure what this means as far as mechanics of different body parts being targeted, etc., but shields definitely reduce damage.

## WEAPONS & DAMAGE

I also looked into weapons and damage a little bit. My main goal here was just to figure out if, playing as solo Torham, I could do more damage over time by spamming a weaker but faster weapon, such as the dagger, with the first listed attack and just clicking as fast as possible. With a full party the wait time on weapons is never an issue, but with just Torham, there's time left over. The answer here is simpler: early on this is a great tactic, but once you face enemies with significant armor, low damage attacks do little to no damage. In fact the ONLY first slot attack I could find that could compete with the best third-slot attacks (Vorax Berzerk, Excysmyr Melee, Blue Steele Sever) was the Vorax's own Chop -- when spammed, it will do more damage over time than Berzerk, and use less stamina.

I was also able to discover that weapon strength and attack strength both affect damage done, but attack strength makes much more of a difference -- at least at high strength, high fighter skill, and against enemies with armor. That might be different under other circumstances.

## STAT GAIN & CHAMPIONS

I looked very briefly at how your stats go up when you increase in skill level. I'm not sure it's exactly the same, but at first glance gains appear to be fairly similar to the ones described on this board for the original DM. I put this information into a spreadsheet and backwards-calculated what we would expect the stats of all 16 Champions would average WITHOUT their already-acquired training. The results were mostly unsurprising. I also added together Str, Dex, Wis, Vit, and Stamina to see who had the most points all around (omitting Health and Mana since gains made at high skill levels far outstrip, and do not depend on, original scores; and omitting Anti-Magic and Anti-Fire due to irrelevance; I also omitted Luck since (1) its effects are poorly understood, and (2) we don't even know if starting with a higher Luck will actually keep it higher throughout the game). Of note:

- The best all-around champions were Bane and Jarod (at 244) followed by Torham and Aliai (at 231); those four champions also have no specific problems or weaknesses. Equus was close behind at 229, but suffers from low Dexterity. The worst scorer was Cordain (at 193) followed by Uggo (at 198).

- Kol Del Tac, despite having mostly excellent scores, has an incredibly low base Stamina -- only 25! (The range for all other champions is 35-67.) Since Stamina gains are always dependent previous Stamina, this explains why his is always a persistent problem.

- All the hardcore magic-users have low Strength. Jarod and Saros are the most tolerable.
- Torham and Saros actually have negative base Mana, if you account for the skill levels they come with. Not that it matters.

## EXPERIENCE GAIN

I also played around a bit with experience gain. I didn't use any kind of RAM watching tool, which would have made this process much easier and more precise, but I still concluded a few things.

- It was hard to tell if location affects experience gained as it does in DM and CSB. I suspect that either location or enemy difficulty plays a role, though.
- Compared to original DM, doing things while in combat seems to make more of a difference.
- Anecdotally, casting a new spell (or an old spell at a higher power level) seems more likely to trigger skill gain than casting an old spell. This observation could be explained in many ways, particularly by observer bias. But, it has persisted through all of my playthroughs.
- In practice, it was more effective for experience to just charge into battle swinging and casting wildly, than to attempt any kind of organized skill-practice session.
- Using weapon actions that are faster or give more experience helped speed things up, but not too dramatically.
- That said, attacking with daggers is definitely the fastest way to improve ninja skill.
- Attacking your own guard minions is a poor way to earn experience. This is in line with original DM where you need to be under attack to get the in-battle bonus.

I don't know how much of this is new, but hopefully it will be useful to someone. Comments are welcome. Criticism is especially welcome -- if I look to be making a poor assumption somewhere, or if I've overlooked something, please correct me!

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Character Power:

- Max Stats:

Champion	HP	Sta	Mana	Str	Dex	Wis	Vit	Total
Aliai	46.5	60.0	6.0	43.5	43.5	46.5	41.5	235
Kol Del	48.0	25.0	0.0	53.0	54.5	35.0	48.0	216
Anders	4.5	37.0	20.0	32.0	57.0	42.0	54.0	222
Het	2.5	36.0	21.0	34.0	47.0	51.5	36.0	204.5
Equus	65.0	66.5	2.0	55.5	26.5	36.0	49.5	233
Graen	9.5	36.0	17.5	34.5	51.0	56.0	31.5	209
Cletus	54.0	49.5	5.0	56.0	26.5	32.0	49.0	213
Bane	39.0	59.0	3.0	46.0	56.0	39.0	48.0	248
Odo	24.5	41.0	7.0	53.0	29.0	39.5	42.0	204.5
Cordain	19.0	48.5	6.5	33.0	39.0	39.5	38.0	198
Tresa	18.5	51.5	8.5	45.5	51.0	40.0	30.0	218
Seri	13.5	57.0	10.0	30.0	46.0	48.0	43.0	224
Uggo	39.5	44.0	6.5	51.0	33.5	29.0	46.0	203.5
Jarod	38.5	67.0	4.0	36.0	57.0	49.0	39.0	248
Torham	29.0	48.5	-1.0	45.5	50.5	51.0	43.0	238.5
Saros	51.5	41.0	-3.0	37.0	35.0	50.5	36.5	200

- Average Stats

Champion	HP	Sta	Mana	Str	Dex	Wis	Vit	Total	Total (No Sta)
Aliai	46.5	60.0	6.0	43.0	43.0	46.0	41.5	233.5	173.5
Kol Del	48.0	25.0	0.0	51.5	53.5	35.0	48.0	213.5	188.0
Anders	4.5	37.0	20.0	32.0	56.0	40.5	54.0	219.5	182.5
Het	2.5	36.0	21.0	34.0	46.0	51.5	36.0	203.5	167.5
Equus	65.0	66.5	2.0	55.0	25.0	36.0	49.5	231.0	165.5
Graen	9.5	36.0	17.5	34.5	50.5	54.5	31.5	207.0	171.0
Cletus	54.0	49.5	5.0	54.5	25.5	32.0	49.0	210.5	161.0
Bane	39.0	59.0	3.0	44.0	56.0	39.0	48.0	246.0	187.0
Odo	24.5	41.0	7.0	52.0	29.0	39.5	42.0	203.0	162.5
Cordain	19.0	48.5	6.5	32.0	39.0	39.0	38.0	196.5	148.0
Tresa	18.5	52.0	8.5	45.5	49.5	39.0	30.0	216.0	164.0
Seri	13.5	57.0	10.0	30.0	46.0	47.5	43.0	223.5	166.5
Uggo	39.5	44.0	6.5	49.5	32.5	28.5	46.0	200.5	156.5
Jarod	38.5	67.0	4.0	36.0	56.0	47.5	39.0	245.5	178.5
Torham	29.0	48.5	-1.0	44.0	50.0	50.0	43.0	235.5	187.0
Saros	51.5	41.0	-3.0	37.0	35.0	48.5	36.5	198.0	157.0

- Min Stats:

Champion	HP	Sta	Mana	Str	Dex	Wis	Vit	Total
Aliai	43.0	57.5	5.0	42.0	42.0	45.0	41.0	227.5
Kol Del	39.0	24.0	0.0	49.0	51.0	35.0	47.0	206
Anders	0.0	35.5	17.0	31.0	55.0	39.0	53.0	213
Het	-3.0	34.0	18.0	33.0	45.0	50.0	34.0	196
Equus	59.0	62.5	2.0	53.0	23.0	36.0	49.0	223.5
Graen	5.0	34.0	13.0	34.0	50.0	52.0	30.0	200
Cletus	45.0	46.0	5.0	52.0	23.5	32.0	48.0	201
Bane	29.0	56.0	3.0	42.0	54.0	39.0	47.0	238
Odo	18.0	38.5	4.0	51.0	28.0	38.0	40.0	195.5
Cordain	12.0	45.5	3.0	31.0	38.0	37.0	36.0	187.5
Tresa	13.0	49.0	7.0	44.0	48.0	38.0	29.0	208
Seri	8.0	54.5	5.0	30.0	46.0	45.0	41.0	216.5
Uggo	30.0	41.0	6.0	47.0	30.0	28.0	45.0	191.0
Jarod	34.0	64.0	1.0	35.0	55.0	46.0	38.0	238
Torham	19.0	44.5	-4.0	42.0	48.0	48.0	41.0	223.5
Saros	48.0	39.0	-8.0	37.0	35.0	46.0	35.0	192

S tier: Bane (248), Jarod (248)

A tier: Torham (238.5), Aliai (235), Equus (233)

B tier: Seri (224), Anders (222)

C tier: Tresa (218), Cletus (213), Graen (209)

D tier: Het (204.5), Odo (204.5), Uggo (203.5), Saros (200)

E tier: Kol Del (216), Cordain (198)

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Digging deeper into the data files

CM - It seems to be 'how to handle an attack'.

Full command list:

CM1 - Block

CM2 - Invisibility (OH EW SAR)

CM3 - Launch Missile specified in PA parametr

CM4 - Physical damage

CM5 - Confuse

CM6 - Darkness (DES EW SAR)

CM7 - Spell Reflection (ZO BRO ROS)

CM8 - Physical damage

CM9 - Aura of Speed (OH IR ROS)

CM10 - Use Rope (Climb Down)

CM11 - Freeze life

CM12 - Aura of Dexterity (OH EW ROS)

CM13 - Aura of Wisdom (OH EW DAIN)

CM14 - Aura of Vitality (OH EW NETA)

CM15 - Aura of Strength (OH EW KU)

CM16 - Consume

CM32 - Launch associated projective (Bow/Sling)

CM33 - Spellshield (YA IR DAIN)

CM34 - Fireshield (FUL BRO NETA)

CM35 - Shield (YA IR)

CM36 - Healing

CM38 - Light (covers both FUL and FUL IR RA)

CM42 - Throw the active item

CM49 - Attack Minion (ZO EW KU)

CM50 - Guard Minion (ZO EW NETA)

CM54 - Teleport

SK - Skill number used. Skills from 0-3 are 'normal' visible skills (Fighter, Ninja, Priest, Wizard)

LV - minimal skill level for the command to appear

BZ - Stamina loss

TR - Fatigue ( the ammount of time before reusal of the weapon)

TA - Defence modifier

EX - Experience gained

PB - Hit Probality

DM - Damage done

Now spells:

{PAL}{DES}{EW}:CM3PA3ST150SK16LV4BZ24TR2TA-7EX25NC1SD253

The new parametrs here are:

PA - It seems to affect the projective launched. here's a table:



0 - Fireball

2 - Lightning

3 - Dispell

4 - Zo Spell

6 - Poison bolt

7 - Poison cloud

9 - Push spell

10 - Pull spell

NC - Charges used

ST - Spell strenght (Usually spell damage / duration for other spells)

SD - Unknown. Staves have this 253, Rouge staff has this 254, Bows have this 1.

Other paramets

AT - I'm not perfectly sure about this...

HN - Harm non-material - attack harms non-materials

RP - repeat (attack is dealt and is repeated x number of times)

Now: Undocumented features found in creatures.dat

It seems that most items have 'hidden features' of which none of the hint books/pages seem to mention about. Using Kentaro tools I managed to find this

It seems some weapons can influence the hidden skills. I've found this after I equiped Excsymyr and suddenly noticed that I could do a LUNGE attack with my rapier (I couldn't do it before). I've put the Excsymyr down and I couldn't. I later dug into the graphics.dat using Kentaro tools and found this:

Excsymyr has 'Value 23h' = 1.

Since 1Eh = Fighter main skill, and 20h = Priest main skill (taken from Fire Armour and SAR shield), then 21h = Wizard skill, and anything that comes after them is 'hidden skills'. So I started decoding them and this is what I've found:

## Weapons

Kalan Gauntlet - Increases Hidden Ninja skill nr.2 by 2(According to the hint book it's the one responsible for bare hand fighting)

Excysmyr - Increases Hidden Fighter skill nr. 2 by 1(Responsible for 'Thrust'-attacks. Again hintbook comes in handy)

Blue Steele - Increases Hidden Fighter skill nr. 1 by 1 (Swing attacks)

Vorax - Increases Hidden Fighter skill nr. 1 AND has ?poison of strength 10?

Techmace - Increases Hidden Fighter skill nr. 3 by 1(Club attacks)

War Club - Increases Hidden Fighter skill nr. 3 by 1(Club attacks)

Poison dart - ?Poison strenght of 20? (Unsure)

Combat Staff - Fighter Skill +1

Staff of Neta - Increases Hidden Priest Skill 3 by 1( Influence - Calm, Fear, Freeze life)

Serpent Staff - Increases Hidden Wizard Skill 3 by 1( Earth spells )

Bainbloom - Incereases Hidden Wizard Skill 2 by 2( Air spells )

NumenStaff - Increases Hidden Wizard Skill 1 by 1( Fire spells )

Scarab - Increases Luck by 5

## Clothing:

Fine Robe Top - Increases Hidden Wizard Skill 3 & 4 by 1

Fine Robe - Increases Hidden Wizard Skill 1 & 2 by 1 (It explains now why suddenly my spells started to get crappier when I changed it to Ra-Sar armour)

Bodice - Increases Hidden Priest Skill 3 by 1

Mithral hosen - +1 value 33h ??? (I think it modifies your load/speed, but I'll have to clarify that)

Brigandine - Increases Hidden Ninja Skill 1 by 1( Purpose unknown ??? )

Bandana - Increases Hidden Priest Skill 2 by 1( Healing & Potions )

Great Helm - Increases Hidden Priest Skill 3 by 1 (Ohhh! Scary helmet of doom!)

Mithral Mail & Huke - Each one increases luck by 5

RA-SAR Poleyn - Increases luck by 5

Misc:

Rune Charm - Increases luck by 4

Meteor Metal - Increases lucky by 4

Some food items seem to affect the skills (Palmapples and Spirit Caps). I still have to clarify that.

That's about all of my findings so far. GREAT thanks to Kentaro for the tools, and authors of the DM2 Hintbook and Steve Debnar for providing scans.

I still need to decode some of the features of the items... they seem to have 'flags' that seem to modify something... they're mysteries still unsolved like "Clan Chief Gem" that SEEMS to do something, but I dunno

what still... I hope the ammount of info I've gathered will help in replaying DM2.. again.

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Loads o' Money

Well, this works for the PC CD version of Dungeon Master II. Not sure if it works for any others. And with crashes and stuff, I didn't have a problem with this method. (So far.)

Anyway, here's what you do.

Start a new game. Go down to the end of the Chamber of Heroes and click on Equus. (The horse headed guy.) He has a money box in his inventory but there's not much in it. (Not for long though.)

Pick up his money box with a left-click. Press the space bar and then your own inventory (Torham's) will pop up. Put the money box in Torham's right hand with a left-click, and then exit the inventory screen with a right-click. Two more right clicks will return the display to normal (as you'll see that Torham's face is covered with the picture of the money box) but this isn't necessary. Anyway, open Torham's inventory again and open the money box which is in his hand. Put all of Torham's money (gold and silver coins, and the green gem) inside the money box. Exit your inventory and click on Equus again. If you pick up his money box and click on the eye icon, you'll notice that whatever you've put into the one in Torham's inventory is now also in Equus' inventory.

With crashes and things, I've noticed that if you try to take too many copies of items in the heroes inventories, strange things begin to happen. For example, if you start a new game and fill up your inventory with copies of Equus' torso plate, save your game, then haul them over to the armour shop to be sold: After about 5 trips you'll have a lot of money, but I found that the savegames started to get damaged. (They wouldn't load.)

However, this money box method seems (so far) to have avoided that problem.

Anyway, once you've filled the money box in your right hand, save your game and reload. (You don't have to quit to DOS (or DOSBox (Version 0.70 was released on 02/03/2007))), just restart via the ingame menu and reload the savegame. You'll find that the money box in your right hand is no longer linked to the money box in Equus' inventory. And so, head back on over to Equus again and take another copy of his money box. (Open his inventory, left click on the money box, press space, left-click on Torham's left hand (just put the knife anywhere) and then right-click to exit the inventory.)

After doing this you should have a money box in both hands. (The left hand one is linked to Equus, and the right hand one is normal.) Take all the money from the right hand money box (the old money box) and put it in the left hand (new) money box. (You'll see the changes in Equus' inventory as well.) Then just save, reload and repeat as needed. As you can see, if you repeat this process over and over, each time the value of Equus' money box doubles. Before long you'll have a massive amount of cash.

I recommend that before saving, make a trip over to one of the shops and get the merchant to sort out your change for you. (Put the linked money box on the selling table.) That way, it'll take a lot less time moving all those coins and gems from one box to another. The only extra thing you'll be left with after each repetition is an empty money box, but you can just dump them somewhere.

Remember that when you've finished you should save and reload before playing. (Otherwise you'll be playing part of the game with a money box which is linked to Equus' inventory in the Chamber of Heroes. I don't think it'll matter, but I wouldn't recommend it.)

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## Technical Documentation - Dungeon Master and DM 2 - Skills and Statistics

There are twenty skills that each champion can use and in which he gains experience. The first four skills (0 to 3) are the "basic skills" displayed in the champion sheet screen (Fighter, Ninja, Priest, Wizard) and the other 16 are hidden skills.

Basic skills:

00: Fighter

01: Ninja

02: Priest

03: Wizard

Hidden skills:

04: Swing (Hidden Fighter skill)

05: Thrust (Hidden Fighter skill)

06: Club (Hidden Fighter skill)

07: Parry (Hidden Fighter skill)

08: Steal (Hidden Ninja skill)

09: Fight (Hidden Ninja skill)

10: Throw (Hidden Ninja skill)

11: Shoot (Hidden Ninja skill)

12: Identify (Hidden Priest skill)

13: Heal (Hidden Priest skill)

14: Influence (Hidden Priest skill)

15: Defend (Hidden Priest skill)

16: Fire (Hidden Wizard skill)

17: Air (Hidden Wizard skill)

18: Earth (Hidden Wizard skill)

19: Water (Hidden Wizard skill)

When a champion is reincarnated or resurrected, the experience in each basic skill is set to the sum of experience in the four associated hidden skills.

When experience is gained in any of the hidden skills 4 through 19 then that experience is also added to the experience in the associated "basic skill". For example, experience added to skill number 10 is also added to skill number 1.

Consequently, experience in a basic skill is always greater than or equal to the sum of experience in each associated hidden skills.

The only ways to gain experience in a basic skill directly are:

The Mana Potion (Ee Potion) gives Priest experience

The Zokathra Spell gives Wizard experience

The actions of the Firestaff (Invoke, Fluxcage, Fuse) give Wizard experience

Each skill has two components: a permanent "experience" component that can only increase and a temporary adjustment which can be negative as a result of battle injuries and such.

Champions earn experience points in each of these skills in many ways during their adventure in the dungeon. Once enough experience has been acquired in a skill, champions gain a level in that skill, and some of their statistics are increased.

#### Skill Levels

To determine a champion's level in any of the skills, the following table is used:

1. - (0)
2. Neophyte (500)
3. Novice (1000)
4. Apprentice (2000)
5. Journeyman (4000)
6. Craftsman (8000)
7. Artisan (16000)
8. Adept (32000)
9. Expert (64000)
10. Symbol - Lo Master (128000)
11. Symbol - Um Master (256000)

- 12. Symbol - On Master (512000)
- 13. Symbol - Ee Master (1024000)
- 14. Symbol - Pal Master (2048000)
- 15. Symbol - Mon Master (4096000)
- 16. Archmaster (8192000)

Actually, the game does not use a table but simply a power of two algorithm (the required amount of experience points is doubled with each level). There is no hard limit in the game at level 15 so it is possible to have a champion of level 16 (or even above) with twice the amount of experience required for Archmaster but the champion would still appear as Archmaster as it is the last level name defined in the game. However, there is an upper limit to the amount of experience when the 32 bit variable used to store the experience value overflows (the champion level then goes back to 0!). There is no check for an overflow in the original game engine but this was added in CSBwin where the maximum experience valued allowed is 0x10000000 (268435456) which corresponds to level 21.

The champion's effective level can be affected by the possession of some items.

In order to compute the skill level of a champion in one of the four basic skills, the game uses the amount of experience in that basic skill.

In order to compute the skill level of a champion in one of the sixteen hidden skills, the game uses the average of experience in that hidden skill and the associated basic skill:  $\text{hidden skill experience} + \text{basic skill experience} / 2$ .

## Statistics

### Health

This value represents how much damage a champion can take before dying.

Health slowly increases over time. You can speed up can regaining Health points by sleeping and drinking healing potions.

The speed of the increase of health depends on the Vitality of the champion.

### Stamina



This value represents the champion's ability to overcome fatigue. It decreases when you walk and fight and also when you are hungry or thirsty. If this value is equal to zero, any more activity will decrease health.

Stamina slowly increases over time. You can speed up regaining Stamina points by sleeping and drinking Stamina potions.

The game engine manages an internal value that is divided by 10 before being displayed on screen.

## Mana

This value represents the magickal energy a champion has to cast spells. Each spoken symbol will consume some Mana.

Mana slowly increases over time. You can speed up regaining Mana points by sleeping and drinking Mana potions.

The speed of the increase of mana depends on the Wisdom and the Priest and Wizard levels of the champion. Each time mana is increased, some Stamina is consumed.

## Load

This value represents the weight a champion can carry. The more a champion is carrying, the more stamina is consumed. When this value is displayed in yellow, this is a warning that the champion carries a lot of things. When it is displayed in red, the champion is overloaded and his actions will consume a lot of stamina.

The maximum load a champion can carry is based on the Strength value.

In Dungeon Master and Chaos Strikes Back, the character sheet of a champion shows the load that the champion is currently carrying and the maximum load he is able to carry. We will call these values CurrentLoad and MaxLoad.

The MaxLoad value depends on the current value of strength and the current and maximum values of stamina.

The current strength value is used to determine a base maximum load value. We will call this value BaseMaxLoad.

$\text{BaseMaxLoad} = (8 \times \text{CurrentStrength} + 100) / 10 \text{ Kg}$

For example, a champion with a current strength of 46 would be able to carry  $(8 \times 46 + 100) / 10 = 46.8$  Kg. This value is rounded to 47 Kg.

The BaseMaxLoad value is then adjusted using the current and maximum stamina values to determine the MaxLoad value that is displayed in the character sheet:

If Stamina  $\geq$  MaxStamina/2 Then MaxLoad is equal to BaseMaxLoad

If Stamina  $<$  MaxStamina/2 Then MaxLoad is equal to  $\text{BaseMaxLoad} / 2 + (((\text{BaseMaxLoad} / 2) * \text{Stamina}) / (\text{MaxStamina} / 2))$

If the champion has his feet injured then  $\text{MaxLoad} = 3 * \text{MaxLoad} / 4$  else if the champion is injured elsewhere then  $\text{MaxLoad} = 7 * \text{MaxLoad} / 8$

If the champion wears 'Elven Boots' then  $\text{MaxLoad} = 17 * \text{MaxLoad} / 16$

If CurrentLoad is greater than 5/8th of MaxLoad, the current and maximum load values are displayed in yellow.

If CurrentLoad is greater than MaxLoad, the current and maximum load values are displayed in red.

Reference:

BaseMaxLoad: CSBwin version 9.8 source code: file Code11f52.cpp, in function "i32 MaxLoad(CHARDESC \*pChar)"

MaxLoad after adjustment: CSBwin version 9.8 source code: file Code11f52.cpp, in function "i16 StaminaAdjustedAttribute(CHARDESC \*pChar, i16 baseValue)"

Color used to display Load: CSBwin version 9.8 source code: file Character.cpp, in function "void DrawCharacterState(i32 chIdx)"

Strength

This value determines the load a champion can carry, how far items can be thrown and how much damage is done by melee attacks.

#### Dexterity

This value determines the accuracy of missiles and the odds of hitting opponents in combat. It also helps the champion to avoid or reduce physical damage.

#### Wisdom

This value is important for spellcasters as it determines their ability to master Magick. It also determines the speed of Mana recovery.

#### Vitality

This value determines how quickly a champion heals and regains Stamina as well as his poison resistance. It also helps to reduce damage.

Because of a bug this statistic is ignored against poison and to determine the probability of being wounded in all Atari ST versions (but not in other versions). Vitality is still used normally to compute the defense against wounds and the speed of health regeneration.

#### Anti-Magic

This value determines a champion's resistance to magic attacks.

Because of a bug this statistic is completely ignored in all Atari ST versions (but not in other versions).

#### Anti-Fire

This value determines a champion's resistance to fire damage.

Because of a bug this statistic is completely ignored in all Atari ST versions (but not in other versions).

#### Food and Water

These two values represent how hungry and thirsty a champion is. Food and Water values are decreased to regenerate Stamina and Health. When these values reach zero, the champion is starving: his Stamina and health decrease until he eats, drinks or dies.

Luck (hidden statistic)

This value is not visible through the game user interface.

It is used during combat and its value is changed each time you use it. The value increases when you are unlucky and decreases when you are lucky. For example, if a champion would miss a hit, his Luck can help him still succeed. In this case, the Luck value is decreased.

This value is modified by some items: a Rabbit's Foot will increase it by 10, while cursed items will decrease it by 3.

Resurrect and Reincarnate

Resurrection: Champions return to life exactly as they were: they will keep their name and all their skills and statistics. In Dungeon Master, this option is only good in the short term as you start the game with champions already having a very basic training. In Chaos Strikes Back, this option makes the game easier as you start the game with champions already having a good training.

Reincarnation: Champions lose their skills and you can choose new names for them. Apart from that, reincarnation behaves differently in Dungeon Master and in Chaos Strikes Back:

In Dungeon Master: Some statistics are slightly increased. Later in the game, you will find that at equivalent levels, you will have more Health and Mana than if the same champion had been resurrected.

This option is better in the long term because as you train your champions yourself, they will end up with higher skills and statistics. However, this makes the beginning of the game a little harder.

In Chaos Strikes Back: Health, Stamina and Mana are decreased to much lower values. The other statistics are slightly increased or decreased.

This option makes the beginning of the game much harder.

Statistics increase

When a champion has gained enough experience in one skill to reach a new level, some of the champion's statistics are increased based on which skill he progressed in:

All skills can increase Health, Stamina, Vitality and Anti-Fire.

Fighter and Ninja skills can increase Strength and Dexterity.

Priest and Wizard skills can increase Mana, Wisdom and Anti-Magic.

Each time a champion gains a skill level, the Maximum Health value is increased by a random amount between X and 1.5X where X depends on the improved skill:

Fighter skills:  $X = \text{new skill level} * 3$

Ninja skills:  $X = \text{new skill level} * 2$

Priest skills:  $X = \text{new skill level} * 1.5$

Wizard skills:  $X = \text{new skill level}$

Each time a champion gains a skill level, the Maximum Stamina value is increased by a random amount between X and 1.5X where X depends on the improved skill:

Fighter skills:  $X = \text{MaximumStamina} / 16$

Ninja skills:  $X = \text{MaximumStamina} / 21$

Priest skills:  $X = \text{MaximumStamina} / 25$

Wizard skills:  $X = \text{MaximumStamina} / 32$

Each time a champion gains a Wizard or Priest skill level, the Maximum Mana value is increased by:

Priest skills:  $\text{new skill level} + \text{Min}(\text{Random}(4), \text{Base Priest Skill Level} - 1)$

Wizard skills:  $(\text{new skill level} * 1.5) + \text{Min}(\text{Random}(4), \text{Base Wizard Skill Level} - 1)$

Maximum statistic values

Health: 999

Mana: 900

Stamina: 9999 (The game engine manages an internal value that is divided by 10 before being displayed on screen)

Strength, Dexterity, Wisdom, Vitality, Anti-Magic, Anti-Fire, Luck: 170. In earlier versions of Dungeon Master, the maximum value was 255 (in Dungeon Master for Atari ST version 1.0a and 1.0b) or 250 (in Dungeon Master for Atari ST version 1.1).