

Cheating Techniques

Note:

The numbers used in this article are in Hexadecimal format. If you are not familiar or comfortable with this numbering system then you have no business trying these things out because you are likely to screw things up beyond repair.

Taking the wiz out of..Wizardry

by Rob Hall (from Computist Issue No. 40 February 1987, pages 23-25)
(I found this at: ftp.apple.asimov.net)

Requirements:

- A Wizardry Program
- A good sector editor (ie. a Hex editor)
- A sceneraio disk with six characters
- A blank disk to copy your scenario disk

Most veteran Wizardry players know that, in "Proving Grounds", if your Bishop successfully "Identifies item number "9", he'll receive 100,000,000 experience points. Also, if he successfully "Identifies "S", the character below the bishop will receive 100,000,000 experience points. Any by "Identifing "J", he gives the character below him 100,000,000 gold pieces. This technique allows you to create almost unbeatable characters in "Proving Grounds" and when you transfer your characters to "Knight of Diamonds", they keep their experience and powers. But just when you think you've got all the answers Sir Tech throws you a curve.

Yes, this technique doesn't work with "Legacy of Llylgamyn" and you can't just transfer your characters from a previous scenario, you must perform a "rite of passage". This "rite of passage" creates new characters who are descendants of your characters, but have minimal experience and power. Are all those months, even years, of wandering through dungeons and tunnels, "lost forever"?. Not if you grab your handy sector editor and read on.

The Scenario Disk

In all the Wizardry games, the scenario disk is the key to your adventure. On this disk is stored all the infromation about the maze, the monsters and your characters. Your character information is usually located on track \$1A, sector \$01 through track \$1B, sector \$0F (track \$1D for "Proving Grounds"). This information is \$CF bytes long and is formatted as follows:

Character Format	
Bytes	Information
00	Number of letters in name
01-0F	Name (15 letters maximum)
10	Number of letters in password
11-1F	Password (15 letters maximum)
20	(\$01) character is "out" , (\$00) is available
22	Race: see Table I
24	Class: see Table II
26-27	Age: see Table III
28	Life: (\$00) OK, (\$05) Dead, (\$07) Lost
2A	Alignment: see Table IV
2C-2F	Characteristics: (\$52 4A 52 4A is perfect) see Characteristics Breakdown
3A	# of pieces of equipment (8 max)
34-38	Gold: see Table V
3A	# of pieces of equipment (8 max)
3C-7B	Equipment information: see Table_VI
7C-80	Experience (like gold: see Table V)
82	Last level of character
84	Current level of character
86-87	# of hit points character has
88-89	max # of hit points your character can possess
8A-91	Type of spells: see Table VII
92	# of level 1 mage spells can cast
94	# of level 2 mage spells can cast
96	# of level 3 mage spells can cast
98	# of level 4 mage spells can cast
9A	# of level 5 mage spells can cast
9C	# of level 6 mage spells can cast
9E	# of level 7 mage spells can cast
A0	# of level 1 priest spells can cast
A2	# of level 2 priest spells can cast
A4	# of level 3 priest spells can cast
A6	# of level 4 priest spells can cast
A8	# of level 5 priest spells can cast
AA	# of level 6 priest spells can cast
AC	# of level 7 priest spells can cast
AE-AF	Last armor class
B0-B1	Current armor class
B6-BF	Measures effect of weapons & items
CE-CF	Indicates honors

Characteristics Breakdown
(Cracked by Emmet "Chaos" McMahan)

Note: The characteristics use bytes 2C-2F, a total of 32-bits.

Assume the left-most bit is number 1, and the right-most bit is 32.

Attribute	Bits Used
Strength	4-8
Intelligence	15-16, 1-3
Piety	10-14
Vitality	20-24
Agility	31-32, 17-19
Luck	26-30

Table I

Value	Race
01	Human
02	Elf
03	Dwarf
04	Gnome
05	Hobbit

Table II

Value	Class
00	Fighter
01	Mage
02	Priest
03	Thief
04	Bishop
05	Samurai
06	Lord
07	Ninja

Table III

Age is calculated using bytes \$26 and \$27 under the following formula:
$[(\$26) / \$34] + [(\$27) X 5] = \text{years (in decimal)}$
Therefore, if \$26 and \$27 are \$D0 and \$04 respectively: your character's age is 24.

Table IV	
Value	Alignment
01	Good
02	Neutral
03	Evil

Table V	
Gold is calculated by bytes \$34-38 using the following formula: (Experience is calculated in the same way using bytes \$7C-80)	
Byte \$34	1st nibble: 16's place
	2nd nibble: 1's place
Byte \$35	1st nibble: 4,096's place
	2nd nibble: 256's place
Byte \$36	1st nibble: 160,000's place
	2nd nibble: 10,000's place
Byte \$37	1st nibble: 40,960,000's place
	2nd nibble: 2,560,000's place
Byte \$38	1st nibble: 1,600,000,000's place
	2nd nibble: 100,000,000's place

Table VI	
Each piece of equipment is represented by an eight byte string. The string contains the following:	
Byte	Meaning
1	status of possession (\$00 = unequiped, \$01 =equiped)
2	not used
3	not used
4	not used
5	status of equipment (\$00 = unidentified, \$01 = identified)
6	not used
7	actual equipment (first byte)
8	actual equipment (second byte)

Table VI Continued	
When giving a chracter a piece of equipment; insure all "not used" bytes are \$00, set byte #1 to \$00 (unequiped), byte #5 to \$01 (identified), and bytes #7-#8 as follows:	

Table VI Continued
Proving Grounds Items

Byte 7	Byte 8	Item	Byte 7	Byte 8	Item
01	00	Long Sword	33	00	Shield + 2
02	00	Short Sword	34	00	Helm + 2 (evil)
03	00	Anointed Mace	35	00	Potion of Dial
04	00	Anointed Flail	36	00	Ring of Porfic
05	00	Staff	37	00	Were Slayer
06	00	Dagger	38	00	Mage Masher
07	00	Small Shield	39	00	Mace Pro Poison
08	00	Large Shield	3A	00	Staff/Montino
09	00	Robes	3B	00	Blade Cusinar'
0A	00	Leather Armor	3C	00	Amulet/Manifo
0B	00	Chain Mail	3D	00	Rod of Flame
0C	00	Breast Plate	3E	00	Evil Chain + 2
0D	00	Plate Mail	3F	00	Neurtal Plate Mail + 2
0E	00	Helm	40	00	Evil Shield + 2
0F	00	Dios Potion	41	00	Amulet Makanito
10	00	Latumofis Potion	42	00	Diadem of Malor
11	00	Long Sword + 1	43	00	Scroll/Badial
12	00	Short Sword + 1	44	00	Short Sword - 2
13	00	Mace + 1	45	00	Dagger + 2
14	00	Staff of Mogref	46	00	Mace - 2
15	00	Scroll/Katino	47	00	Staff - 2
16	00	Leather Armor + 1	48	00	Dagger of Speed
17	00	Chain Mail + 1	49	00	Cursed Robe
18	00	Plate Mail + 1	4A	00	Leather Armor - 2
19	00	Shield + 1	4B	00	Chain Mail - 2
1A	00	Breast Plate + 1	4C	00	Breast Plate - 2
1B	00	Scroll/Badios	4D	00	Shield - 2
1C	00	Scroll/Halito	4E	00	Cursed Helmet
1D	00	Long Sword - 1	4F	00	Breast Plate + 2
1E	00	Short Sword - 1	50	00	Silver Gloves
1F	00	Mace - 1	51	00	Evil Sword + 3
20	00	Staff + 2	52	00	Evil Short Sword + 3
21	00	Dragon Slayer	53	00	Thieves Dagger
22	00	Helm + 1	54	00	Breast Plate + 3
23	00	Leather Armor - 1	55	00	Lords Garb
24	00	Chain Mail - 1	56	00	Murasama Blade
25	00	Breast Plate - 1	57	00	Suriken
26	00	Shield - 1	58	00	Chain Pro Fire
27	00	Jeweld Amulet	59	00	Evil Plate Mail + 3
28	00	Scroll/Badios	5A	00	Shield + 3

29	00	Potoin of Sopic	5B	00	Ring of Healing
2A	00	Long Sword + 2	5C	00	Ring Pro Undead
2B	00	Short Sword + 2	5D	00	Deadly Ring
2C	00	Mace + 2	5E	00	Werdna's Amulet
2D	00	Scroll/Lomilwa	5F	00	Statuette/Bear
2E	00	Scroll/Dilto	60	00	Statuette/Frog
2F	00	Copper Gloves	61	00	Bronze Key
30	00	Leather Armor + 2	62	00	Silver Key
31	00	Chain Mail + 2	63	00	Gold Key
32	00	Plate Mail + 2	64	00	Blue Ribbon

Table VI Continued
Knight of Diamonds Items
(Same as in "Proving Grounds" with the following exceptions)

Byte 7	Byte 8	Item	Byte 7	Byte 8	Item
5E	00	Rod of Raising	70	00	Dreamer's Stone
5F	00	Amulet of Cover	71	00	Damien Stone
60	00	Robe + 3	72	00	Great Mage Wand
61	00	Winter Mittens	73	00	Coin of Power
62	00	Necklace Pro Magic	74	00	Stone of Youth
63	00	Staff of Light	75	00	Mind Stone
64	00	Long Sword + 5	76	00	Stone of Piety
65	00	Sword of Swinging	77	00	Blarney Stone
66	00	Priest Puncher	78	00	Amulet of Skill
67	00	Priest's Mace	79	00	Amulet of Skill
68	00	Short Sword of Swinging	7A	00	Great Mage Wand
69	00	Ring Pro Fire	7B	00	Coin of Power
6A	00	Cursed Plate Mail + 1	7C	00	Staff of Gnilda
6B	00	Plate Mail + 5	7D	00	Hrathnit
6C	00	Staff of Curing	7E	00	Kod's Helmet
6D	00	Ring of Regeneration	7F	00	Kod's Shield
6E	00	Metamorph Ring	80	00	Kod's Gauntlets
6F	00	Stone Stone	81	00	Kod's Armor

Table VI Continued
Legacy of Llylgamyn Items

Byte 7	Byte 8	Item	Byte 7	Byte 8	Item
01	04	Haubek	35	04	Displacer Robes
02	04	Breast Plate	36	04	Hauberk + 2
03	04	Plate Armor	37	04	Breast Plate + 2
04	04	Sallet	38	04	Plate Armor + 2
05	04	Potion of Dios	39	04	Armet
06	04	Latumofis Oil	3A	04	Wargan Robes
07	04	Short Sword + 1	3B	04	Giant's Club
08	04	Broad Sword + 1	3C	04	Blade Cuisinart
09	04	Mace + 1	3D	04	Shepherd Crook
0A	04	Battle Axe + 1	3E	04	Unholy Axe
0B	04	Nunchuka	3F	04	Rod of Death
0C	04	Dagger + 1	40	04	Gem of Exorcism
0D	04	Katino Scroll	41	04	Bag of Emeralds
0E	04	Cuirass + 1	42	04	Bag of Garnets
0F	04	Hauberk + 1	43	04	Blue Pearl
10	04	Breast Plate + 1	44	04	Ruby Slippers
11	04	Plate Armor + 1	45	04	Necrology Rod
12	04	Heater + 1	46	04	Book of Life
13	04	Bascinet	47	04	Book of Death
14	04	Iron Gloves	48	04	Dragon's Tooth
15	04	Badios Scroll	49	04	Trollkin Ring
16	04	Halito Potion	4A	04	Rabbit's Foot
17	04	Short Sword - 1	4B	04	Thief's Pick
18	04	Battle Axe - 1	4C	04	Book of Demons
19	04	Mace - 1	4D	04	Butterfly Knife
1A	04	Dagger - 1	4E	04	Gold Tiara
1B	04	Battle Axe - 1	4F	04	Mantis Gloves
1C	04	Margauz's Flail	FF	03	Mage's Robe
1D	04	Bag of Gems	FE	03	Heater Shield
1E	04	Wizard's Staff	FD	03	Round Shield
1F	04	Flametongue	FC	03	Flail
20	04	Round Shield - 1	FB	03	Dagger
21	04	Cuirass - 1	FA	03	Battle Axe
22	04	Hauberk - 1	F9	03	Hand Axe
23	04	Breast Plate - 1	F8	03	Staff
24	04	Plate Armor - 1	F7	03	Mace
25	04	Sallet - 1	F6	03	Broad Sword
26	04	Sopic Philtre	F5	03	Short Sword
27	04	Gold Ring	F4	03	Butterfly Knife
28	04	Salamander Ring	F3	03	Orb of Mhuuzfis

29	04	Serpent's Tooth	F2	03	Gold Medallion
2A	04	Short Sword + 2	F1	03	Rod of Fire
2B	04	Broad Sword + 2	F0	03	Holy Water
2C	04	Battle Axe + 2	EF	03	Amulet of Air
2D	04	Ivory Dagger	EE	03	Staff of Earch
2E	04	Ebony Dagger	ED	03	Ship in Bottle
2F	04	Amber Dagger	EC	03	Crystal of Good
30	04	Mace + 2	EB	03	Crystal of Evil
31	04	Mithril Gloves	EA	03	Neutral Crystal
32	04	Dailki Amulet	E9	03	Orb of Earithin
33	04	Cuirass + 2	E8	03	Broken Item
34	04	Heater + 2			

Once your characters have the proper equipment, then can equip themselves in camp or at Gilgamesh's Tavern.

Table VII							
The type of spells that a character can cast is determined by bytes \$8A-90							
bytes	\$8A	\$8B	\$8C	\$8D	\$8E	\$8F	\$90
all spells	FE	FF	FF	FF	FF	FF	07
all mage spells	FE	FF	3F	00	00	00	00
ass priest spells	00	00	C0	FF	FF	FF	07

Each bit in these bytes represents a type of spell. If the bit is on ("1"), that spell is known by the character. Don't forget that in order for a character to cast a spell, he must have "spells left" in that level. The "spells left" are indicated in bytes \$92-AD.

Mage Spells		
Byte 8A	Byte 8B	Byte 8C
bit 0: Not Used	bit 0: Molito	bit 0: Zilwan
bit 1: Halito	bit 1: Morlis	bit 1: Masopic
bit 2: Mogref	bit 2: Dalto	bit 2: Haman
bit 3: Katino	bit 3: Lahalito	bit 3: Malor
bit 4: Dumapic	bit 4: Mamorlis	bit 4: Mahaman
bit 5: Dilto	bit 5: Makanito	bit 5: Tiltowait
bit 6: Sopic	bit 6: Madalto	bit 6: priest spell
bit 7: Mahalito	bit 7: Lakanito	bit 7: priest spell

Priest Spells				
Byte 8C	Byte 8D	Byte 8E	Byte 8F	Byte 90
bit 0: not used	bit 0: Badios	bit 0: ???	bit 0: Dialma	bit 0: Mabadi
bit 1: mage spell	bit 1: Milwa	bit 1: Dialko	bit 1: Badialma	bit 1: Loktofeit
bit 2: mage spell	bit 2: Porfic	bit 2: Latumapic	bit 2: Litokan	bit 2: Malikto
bit 3: mage spell	bit 3: Matu	bit 3: Bamatu	bit 3: Kandi	bit 3: Kadorto

bit 4: mage spell	bit 4: Calfo	bit 4: Dial	bit 4: Di	bit 4: not used										
bit 5: mage spell	bit 5: Manifo	bit 5: Badial	bit 5: Badi	bit 5: not used										
bit 6: Kalki	bit 6: Montino	bit 6: Latumofis	bit 6: Lorto	bit 6: not used										
bit 7: Dios	bit 7: Lomilwa	bit 7: Maporfic	bit 7: Madi	bit 7: not used										
A character with all spells left is indicated on the status screen as:														
Mage	9	9	9	9	9	9	9							
Priest	9	9	9	9	9	9	9							
And we find bytes \$92-AC are:														
Byte:	92	93	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F
Value:	09	00	09	00	09	00	09	00	09	00	09	00	09	00
Byte:	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	
Value:	09	00	09	00	09	00	09	00	09	00	09	00	09	

Now that you know how your character is formatted, it's time to turn your wimp into a wizard.

Using the Sector Editor

Before creating your new character, you should make a backup copy of your scenario disk. The scenario disk is not copy protected so you can use COPY A or any fast copy program to duplicate it. To get the most out of this procedure, I recommend that your scenario disk contains at least six characters you would like to strengthen. For a start, read track \$1A or \$1B (\$1D for proving ground) to do some investigation work. The location of your character within a sector or track will vary depending on the sequence that your characters were created on the disk. However, it is easy to find the beginning of your character's information by looking for the flashing ASCII representation or your character's name. This will be the first line of information, bytes \$01 to \$0F (remember that byte \$00 is the number of letters in your character's name).

If you're lucky, your character's information will start at the start of a sector. However, it is more likely that your character's information will start in the middle of a sector. This is because each character's information block is only \$CF bytes long and new characters are added immediately after old characters. If your character does not start at byte 0 of a sector, count bytes starting with the byte to the left of your character's name (starting at 0) and use the chart to find the feature you want changed.

Unfortunately, the character's information is usually not ordered in sequential sectors (starting with sector \$1 and finishing in sector \$2). It is usually in reverse order (starting with sector \$F and finishing in sector \$E) or may jump from the beginning of a track to the end. Careful attention to the length of each character's information block and a little trial and error can solve this problem.

The Little Fix

Along with the literature Sir Tech provides with its program, a note warns of tampering with the characters: "While it may seem appealing to use these products (cheat programs), we urge you not to succumb to the temptation. It took more than four years of careful adjustment to properly balance Wizardry." Well, it took me all of last summer to get through the "Proving Grounds" even using the bishop trick. If these games are really balanced, those dungeon monsters sure weigh a lot. In fact, I was quite surprised at the number of items I never came across when I played Proving Grounds and Knight of Diamonds the normal and laborious way. Wouldn't it be nice to use a "great mage wand" for a change?

Anyway, for those afraid to upset the proper balance of a Wizardry game, may I suggest the "Little Fix":

1. Change the gold bytes (\$34-38) to "00 00 00 01 00"
2. Change the experience bytes (\$7C-80) to "00 00 00 01 00"
3. take your characters to the "Adventurer's Inn" and have him "rest" there several times.

This method will allow your character to progress normally, learning and acquiring normal spells and powers. It will also give him enough hit points to survive most levels. In addition, you now have the money to buy the items you want from Boltac's Trading Post.

The Super Lord

And for those who have no mercy for monsters and the creatures of the dungeon, I suggest the creation of a "Super Lord":

1. Change the class byte (\$24) to "06"
2. Change age bytes (\$26-27) to "00 04"
3. Insure life byte (\$28) is "00"
4. Insure alignment byte (\$2A) is "01"
5. Change the characteristic bytes (\$2C-2F) to "52 4A 52 4A"
6. Change the gold bytes (\$34-38) to "00 00 00 00 01"
7. Change equipment possession byte (\$3A) to "08"
8. Equip the character with eight items as explained in Table VI
9. Change the experience bytes (\$7C-80) to "00 00 00 00 01"
10. Change level bytes (\$82) and (\$84) to "60"
11. Change status bytes (\$86-87) to "00 03"
12. Change hits bytes (\$88-89) to "00 03"
13. Change spell type bytes (\$8A-91) to "FE FF FF FF FF FF 07"
14. Change spell bytes (\$92-AC) to "09 00 09 00 09 00 09 00. etc"
15. Equip your lord in "camp" or in Gilgamesh's Tavern".

This will give you a Super Being which will defeat all your foes, if you play your "spells" right!

Other Uses

There are quite a few other uses for your sector editor. For instance, Sir Tech will charge you \$15.00 to delete a password you have forgotten. Now all you have to do is to insert \$00 from bytes \$10 to \$1F to delete your password or better yet, just look at these bytes to see your password.

If you have a power failure or you accidentally press reset while you're playing Wizardry, your character's record on the disk will be logged as "on expedition". Normally, you would not be able to use your character until you recovered it using the utility recover program. Now you may recover your character on your own by placing a "00" in byte \$20.

If you own Legacy of Llylgamyn and have always had less than twenty character on your scenario disk you will be in for a surprise. As you examine the character information sectors, you are likely to find many ghosts of past explorers. No one is sure where they came from! These characters are usually "lost" (byte \$28 is "\$07") and may have "\$00" in byte \$00 (number of letters in name). To resurrect these explorers, place a "\$00" in byte \$28 and place a hex number corresponding to the number of letters in the explorer's name in byte \$00. Be careful with these characters. I wouldn't trust a character named "6502".