

Legend of Legaia Save State Hacking Guide

by demonsword2

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Legend of Legaia (c) Conrail, 1999

Save State Hacking Guide

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Version History

2009 October 4: v. 0.9

- First Version of this guide. Still a lot to do, but hey!

2009 October 6: v. 0.99

- Added the money offsets
- Tested the save states with the Windows version of ePSXe (it worked)
- Corrected inventory starting offset, it was off by 5 positions
- Completed ALL lists (items, weapons, etc)
- Added some stuff in section 1.1 Chars Stats Offsets that were missing
- "Corrected" my name in the beggining (not everyone uses ISO-8859-1 or Unicode after all)
- Changed license terms, this work now licensed under a open license, check it out right above.

2010 April 14: v. 0.991

- Improved way to handle the save state files!!
- Corrected Gala's level offset

This is a save state hacking guide for Legend of Legaia, a classic PSX RPG by Conrail. Why I bothered writing this stuff for this game you ask. I love this game and wanted to play it again but... couldn't bear the thought of grinding for hours to level up... and to finally USE Juggernaut!! (must be lv 99 to unlock it, talk about GRIND!!). So I loaded my favorite hexeditor, a diff tool, some save states and now I want to share it with you, my dear lazy classic RPG gamer. Enjoy :)

PS: This guide won't teach you hex editing. There are plenty of other guides who'll teach you better than me.

PS2: I used ePSXe. State hacking with ePSXe is a bit tricky but I'll explain it in detail on section 1.0.

PS3: Use this guide with moderation! You can ruin your fun if you go overboard and max out everything. In fact, I recommend that you beat the game first without cheating, and in subsequent replays hexedit away.

And, before anyone bug me with annoying accusations, I played on a emulator yes, but I DO OWN a copy of this game!

Well, on to the guide...

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1.0 Save state?

Save state is a file with a snapshot of the game progress on a given instant. More specifically, its the CPU & Memory data on a given instant. This guide was made and tested on ePSXe for Linux (stated above, before the index). I guess that the files structure are the same on Linux and Windows but I cannot be certain, since I can't and won't install Windows EVER AGAIN :P

EDIT: in fact the save states works in both versions. Just tested the Windows version using wine. (and, surprise! running the Windows version via wine is way better than playing the native Linux version. Go figure...)

As I said earlier it takes some effort to hack the states. First thing, ePSXe save states are compressed using gzip, so before you edit anything at all you must decompress it (used gunzip but I guess 7-Zip, WinRAR, etc should do the trick on Windows). Then you load the file on your hexeditor, edit whatever you want, then recompress the file. Remember to remove any file extension that gets added to the recompressed file, if any. Now you can load the save state on the emulator. A word of warning, it seems that ePSXe somehow keeps the save state in memory, so to edit it you must close it before. Phew! I said it was tricky :)

EDIT: I recently used ePSXe 1.7 -- wine emulation :P -- and there's no need to gzip the file again after you're done editing it... just load it (no need to restart the emulator too!!)

So, to be clearer, that's how I (used) to do it myself:

```
$ mv SCUS_942.54.001 SCUS_942.54.001.gz
$ gunzip SCUS_942.54.001.gz           #decompressing the file
$ bless SCUS_942.54.001              #loading on the hexeditor
$ gzip SCUS_942.54.001               #done editing, recompressing it
```

```
$ mv SCUS_942.54.001.gz SCUS_942.54.001 #removing file extension
$ cd ..
$ ./epsxe #play away
```

Since now there's no need to gzip again the file neither restart the emulator it may be already running... SO here's the improved way:

```
$ wine ePSXe.exe & #yeah the windows version IS better
$ cd sstates/
$ mv SCUS_942.54.001 SCUS_942.54.001.gz #save state name of course
$ gunzip SCUS_942.54.001.gz #decompress file
$ bless SCUS_942.54.001 #load it on hexeditor
#reload it on ePSXe and play away
```

BACKUP YOUR FILES before you edit them to save yourself a lot of grief in case something goes wrong! Saving in two or more slots and editing one does the trick neatly.

1.1 Chars stats offsets

All stats values are reversed (i.e second offset is the 'start'). Suppose you want to set Vahn's Max HP to 500 (0x1F4). Then, you need to fill 'F4' in offset 0x849C6 and '01' in offset 0x849C7. Got it?

1.1.1. Vahn

name (starting offset): 0x84B69

Level: 0x849F2

EXP: 0x

AP: 0x

HP (max/current): 0x849C6 - 0x849C7 / 0x849C8 - 0x849C9

HP (unequipped value): 0x849DE - 0x849DF

MP (max/current): 0x849CA - 0x849CB / 0x849CC - 0x849CD

MP (unequipped value): 0x849E0 - 0x849E1

AGL (current/unequipped): 0x849D2 - 0x849D3 / 0x849E4 - 0x849E5

ATK (current/unequipped): 0x849D4 - 0x849D5 / 0x849E6 - 0x849E7

UDF (current/unequipped): 0x849D6 - 0x849D7 / 0x849E8 - 0x849E9

LDF (current/unequipped): 0x849D8 - 0x849D9 / 0x849EA - 0x849EB

SPD (current/unequipped): 0x849DA - 0x849DB / 0x849EC - 0x849ED

INT (current/unequipped): 0x849DC - 0x849DD / 0x849EE - 0x849EF

Magic

<TODO I kinda found the offsets but I'm lazy right now, when I figure out how to edit them I will update the guide. C'mon you can live without it :P hehe>

Moves

of moves learned: 0x84A47

Insert the moves you want right after the move counter offset. The game will show them in the order you put them in the list! Neat, huh? Rearrange them the way you want!

To have all insert this: 01020304050607080900A0B0C0D0E0F

Miracle Arts seems to be activated after story event and won't show on the list until then (maybe I'm mistaken since its been so long I played the game, email me if you find this out).

Hyper Elbow:	0x0E	Charging Scorch:	0x0D
Somersault:	0x0C	Slash Kick:	0x0B
Power Punch:	0x0A	Cross-Kick:	0x09
Pyro Pummel:	0x08	Spin Combo:	0x07
PK Combo:	0x06	Hurricane:	0x05
Cyclone:	0x04	Tornado Flame:	0x03
Fire Blow:	0x02	Burning Flare:	0x01

1.1.2 Noa

name (starting offset): 0x84F7D

Level: 0x84E06

EXP: 0x

AP: 0x

HP (max/current):	0x84DDA - 0x84DDB	/	0x849C8 - 0x849C9
HP (unequipped value):	0x84DF2 - 0x84DF3		
MP (max/current):	0x84DDE - 0x84DDF	/	0x84DE0 - 0x84DE1
MP (unequipped value):	0x84DF4 - 0x84DF5		
AGL (current/unequipped):	0x84DE6 - 0x84DE7	/	0x84DF8 - 0x84DF9
ATK (current/unequipped):	0x84DE8 - 0x84DE9	/	0x84DFA - 0x84DFB
UDF (current/unequipped):	0x84DEA - 0x84DEB	/	0x84DFC - 0x84DFD
LDF (current/unequipped):	0x84DEC - 0x84DED	/	0x84DFE - 0x84DFE
SPD (current/unequipped):	0x84DEE - 0x84DEF	/	0x84E00 - 0x84E01
INT (current/unequipped):	0x84DF0 - 0x84DF1	/	0x84E02 - 0x84E03

Magic

<TODO same deal will write them later>

Moves

of moves learned: 0x84E5B

All moves: 01020304050607080900A0B0C0D0E0F

Lizard Tail:

Acrobatic Blitz:

Sonic Javelin:

Blizzard Bash:

Mirage Lancer:

Dolphin Attack:

Bird Step:

Swan Diver:

Tough Love:

Rushing Gale:

Tempest Break:

Frost Breath:

Vulture Blade:

Hurricane Kick:

1.1.3 Gala

name (starting offset): 0x85391

Level: 0x8521A

EXP: 0x

AP: 0x

HP (max/current):	0x851EE - 0x851EF	/	0x851F0 - 0x851F1
HP (unequipped value):	0x85206 - 0x85207		
MP (max/current):	0x851F2 - 0x851F3	/	0x851F4 - 0x851F5
MP (unequipped value):	0x85208 - 0x85209		
AGL (current/unequipped):	0x851FA - 0x851FB	/	0x8520C - 0x84DF9
ATK (current/unequipped):	0x851FC - 0x851FD	/	0x8520E - 0x8520F
UDF (current/unequipped):	0x851FE - 0x851FF	/	0x85210 - 0x85211
LDF (current/unequipped):	0x85200 - 0x85201	/	0x85212 - 0x85213
SPD (current/unequipped):	0x85202 - 0x85203	/	0x85214 - 0x85215
INT (current/unequipped):	0x85204 - 0x85205	/	0x85216 - 0x85217

Magic

<TODO same deal will write them later>

Moves

of moves learned: 0x

All moves: 01020304050607080900A0B0C0D0E0F

Flying Knee Attack:
Battering Ram:
Ironhead:
Back Punch:
Guillotine:
Head-Splitter:
Side Kick:
Black Rain:
Neo Raising:
Electro Thrash:
Bull Horns:
Thunder Punch:
Lightning Storm:
Explosive Fist:

1.2 Money

Money works like stats, which means values are in reverse order. For example, you decide to become filthy rich and give yourself 500,000G (0x7A120). Put '07' in the third byte, 'A1' in the second and '20' in the first and you're good to go.

Money offsets: 0x84756, 0x84757, 0x84758

1.3 Items

Items are stored using two bytes, one identifies the item, the other says the quantity you have, ex. '78 0E' means '14 Healing Flowers'. Refer to next section for valid values to enter here. Maybe it goes without saying but in this game everything belongs on the same inventory (weapons, items, etc) so it can get quite large, I haven't tested how big it can be. If anyone out there discover this mail me please so I can update this info!

Inventory offset (start): 0x85B12

1.4 Lists

This section is still work in progress. I plan to play through the game, acquiring everything, and updating the list as I go but you can help by sending me the remaining items and testing other values, etc. if you don't want to wait (won't take that long anyway, maybe a week or two, but who knows I'm a busy man and can drop gaming if work or something else requires it...)

EDIT: I decided to test all possible values, in case I miss something in my gameplay. Note that the game auto-rearranges the inventory so some values may be off. As I said before, feel free to correct me if you find any errors :D

1.4.1 Items

0x65 Honey	0x82 Life Water	0x8F Fire Book I
0x6D Miracle Water	0x83 Power Water	0x90 Fire Book II
0x77 Healing Leaf	0x84 Guardian Water	0x91 Fire Book III
0x78 Healing Flower	0x85 Swift Water	0x92 Wind Book I
0x79 Healing Berry	0x86 Wisdom Water	0x93 Wind Book II
0x7A Healing Bloom	0x87 Magic Water	0x94 Wind Book III
0x7B Healing Fruit	0x88 Door of Light	0x95 Thunder Book I
0x7C Magic Leaf	0x89 Door of Wind	0x96 Thunder Book II
0x7D Magic Fruit	0x8A Incense	0x97 Thunder Book III
0x7E Antidote	0x8B Power Elixir	0x98 Lippian Flute
0x7F Medicine	0x8C Shield Elixir	0x99 Spikefish Flute

0x80 Phoenix	0x8D Speed Elixir	0xA3 Healing Shroom
0x81 Fury Boost	0x8E Wonder Elixir	

1.4.2 Weapons

1.4.2.1 Ra-Seru Weapons (?!)

What? Why the Ra-Seru are listed here?! If you remember, everytime you save a Genesis Tree your chars gets stronger, yes that's how it was implemented... (save a tree and the game automatically upgrades your Ra-Seru "weapons" to the next level). But you can have two Ra-Seru equipped now, thanks to me!! :D They don't get displayed on battle though... Just imagine having two Meta lv.9 by the end of the game! Oh well...

0x01 Ra-Seru Meta lv. 1	0x0A Ra-Seru Terra lv. 1	0x13 Ra-Seru Ozma lv. 1
0x02 Ra-Seru Meta lv. 2	0x0B Ra-Seru Terra lv. 2	0x14 Ra-Seru Ozma lv. 2
0x03 Ra-Seru Meta lv. 3	0x0C Ra-Seru Terra lv. 3	0x15 Ra-Seru Ozma lv. 3
0x04 Ra-Seru Meta lv. 4	0x0D Ra-Seru Terra lv. 4	0x16 Ra-Seru Ozma lv. 4
0x05 Ra-Seru Meta lv. 5	0x0E Ra-Seru Terra lv. 5	0x17 Ra-Seru Ozma lv. 5
0x06 Ra-Seru Meta lv. 6	0x0F Ra-Seru Terra lv. 6	0x18 Ra-Seru Ozma lv. 6
0x07 Ra-Seru Meta lv. 7	0x10 Ra-Seru Terra lv. 7	0x19 Ra-Seru Ozma lv. 7
0x08 Ra-Seru Meta lv. 8	0x11 Ra-Seru Terra lv. 8	
0x09 Ra-Seru Meta lv. 9	0x12 <empty wp. for Noa>	

1.4.2.2 "Normal" Weapons

0x1A Vahn Fist	0x23 Battle Knife	0x2C Holy Claw
0x1B Ra-Seru Blade	0x24 Short Sword	0x2D Golden Claw
0x1C Noa Feral	0x25 Force Blade	0x2E Survival Club
0x1D Hard Beat	0x26 Beast Buster	0x2F Red Club
0x1E Heavy Strike	0x27 Chaos Breaker	0x30 Power Club
0x1F Ra-Seru Fangs	0x28 Nail Glove	0x31 Survival Axe
0x20 Gala Mace	0x29 Crimson Nails	0x32 Battle Axe
0x21 Ra-Seru Club	0x2A Fighter Claw	0x33 Great Axe
0x22 Survival Knife	0x2B Bloody Claw	0x52 <empty wp. for Vahn>
0xBA Astral Sword		

1.4.3 Armors

0x43 Hunter's Clothes	0x4A Triumph Armor	0x51 Ra-Seru Robe
0x44 Savior Clothes	0x4B Ra-Seru Armor	0x53 Power Plate
0x45 Warrior Armor	0x4C Fighting Robe	0x54 Fighting Plate
0x46 Ironman Armor	0x4D Green Robe	0x55 Valor Plate
0x47 Master Armor	0x4E Scarlet Robe	0x56 War God Plate
0x48 Expert Armor	0x4F Tempest Robe	0x57 Ra-Seru Plate
0x49 Hero Armor	0x50 Battle Robe	

1.4.4 Helmets

0x34 Warrior Seal	0x39 Guardian Clip	0x3E Ra-Seru Plume
0x35 Ironman Seal	0x3A Green Clip	0x3F Power Earring
0x36 Expert Seal	0x3B Jeweled Clip	0x40 Fighter's Band
0x37 Hero Seal	0x3C Royal Crown	0x41 War God Band
0x38 Ra-Seru Seal	0x3D Pronged Crown	0x42 Ra-Seru Helmet

1.4.5 Boots

0x58 Warrior Boots	0x5E Ra-Seru Boots	0x64 Ra-Seru Shoes
0x59 Ironman Boots	0x5F Eletric Shoes	0x66 Power Shoes
0x5A Master Boots	0x60 Tempest Shoes	0x67 Fighting Boots

0x5B Expert Boots	0x61 Tempest Shoes	0x68 War God Boots
0x5C Hero Boots	0x62 Olive Shoes	0x69 Ra-Seru Thongs
0x5D Triumph Boots	0x63 Steel Boots	

1.4.6 Relics

Note that some equippable relics are also story items, in this case they get listed on the next section instead of here, ok?

0x6E Earth Egg	0xCF Warrior Icon	0xE8 Mettle Ring
0x6F Water Egg	0xD0 Evil God Icon	0xE9 Mettle Armband
0x70 Light Egg	0xD1 Speed Chain	0xEA Mettle Goblet
0x71 Dark Stone	0xD2 Slowness Chain	0xEB Mettle Gem
0x72 Earth Talisman	0xD3 Target Chain	0xEC War Soul
0x73 Earth Talisman	0xD4 Defender Chain	0xED Evil Medallion
0x74 Water Talisman	0xD5 Guardian Chain	0xEE Ivory Book
0x75 Light Talisman	0xD6 Cure Amulet	0xEF Crimson Book
0x76 Dark Talisman	0xD7 Pure Amulet	0xF0 Bronze Book
0x77 Evil Talisman	0xD8 Forest Amulet	0xF1 Golden Compass
0xC0 Life Ring	0xD9 Magic Amulet	0xF2 Silver Compass
0xC1 Life Armband	0xDA Stone Amulet	0xF3 Chicken Heart
0xC2 Magic Ring	0xDB Nature Amulet	0xF4 Chicken Safe
0xC3 Magic Armband	0xDC Wonder Amulet	0xF5 Chicken Guard
0xC4 Spirit Jewel	0xDD Earth Jewel	0xF6 Chicken King
0xC5 Spirit Talisman	0xDE Deep Sea Jewel	0xF7 Life Source
0xC6 Power Ring	0xDF Burning Jewel	0xF9 Magic Source
0xC7 Scarlet Jewel	0xE0 Tempest Jewel	0xFA Mettle Source
0xC8 Azure Jewel	0xE1 Madlight Jewel	0xFB Bad Luck Bell
0xC9 Guardian Ring	0xE2 Luminous Jewel	0xFC Good Luck Bell
0xCA Speed Ring	0xE3 Ebony Jewel	0xFD <unnamed item>
0xCB Wisdom Ring	0xE4 Rainbow Jewel	0xFE Point Card
0xCC Vitality Ring	0xE5 Life Grail	0xFF Platinum Card
0xCD War God Icon	0xE6 Magic Grail	
0xCE Unholy Icon	0xE7 Lost Grail	

1.4.7 Miscellaneous

0x6A Zalan's Letter	0xA5 Lightning Key	0xB2 Soru Bread
0x6B Something Good(!?)	0xA6 Star Key	0xB3 Letona Key
0x6C Minea's Ring	0xA7 Mountain Key	0xB4 West Ratayu Key
0x9A Mary's Diary	0xA8 Water Key	0xB5 Nemesis Gem
0x9B Soren's Secrets	0xA9 Fertilizer	0xB6 Seru Flame
0x9C Gold Card	0xAA Weed Hammer	0xB7 Genesis Seedling
0x9D Light Lure	0xAB Ra-Seru Egg	0xB8 Soren Flute
0x9E Normal Lure	0xAC Mei's Pendant	0xB9 <invalid item>
0x9F Heavy Lure	0xAD Camera Stone	0xBB Music Score
0xA0 Old Rod	0xAE Star Pearl	0xBC Fire Droplet
0xA1 Deluxe Rod	0xAF Yuma's Ring	0xBD Ruins Key
0xA2 Legendary Rod	0xB0 Spring Salts	0xBE TimeSpace Bomb
0xA4 Sunrise Key	0xB1 Zalan's Crown	0xBF Evil Seru Key

1.5 Thanks & contact info

- Thanks to Contrail, for this wonderful game, I enjoy it to this day!
- Thanks to the free & open source software people!
- Thanks to the GameFAQs people!
- Thanks to Zheng Yi Ming for pointing out Gala's level correct offset!
- Thanks to anyone who deserves a thanks but I forgot to mention!

You can reach me on demonsword at gmail dot com. Please, if you want to mail me, write in proper English so I can understand you. Offensive mails won't get replied. And please, I'm a busy man, so if I don't reply to you the same day/month/year/century don't be mad at me ok? :)

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