Grandia Save State Hacking Guide

by demonsword2   Updated to v0.2 on Dec 23, 2015

```
Grandia(c) Game Arts/SCEA, 1997

Save State Hacking Guide
Copyright 2015 Carlos Eugenio


****************************************************************************
   This guide is licensed under the Creative Commons Attribution-Sharealike,
avaiable here http://creativecommons.org/licenses/by-sa/2.0/legalcode
Simplifying the legalese, that means that you are free to copy, print,
distribute, and otherwise use this guide any way you want as long as you don't
violate the license i.e. give credit where it is due!
   Derivative works of this guide are allowed provided that you credit me for
the original work *AND* release it under this same license or other free,
copyleft license compatible with Creative Commons Attribution-Sharealike. If
you indeed produce a derivate, kindly inform me after it's done so I can enjoy
it too and maybe even improve this guide (you will be credited for it too of
course!)
****************************************************************************


Version History
-----------------------------------
2015 December 23: v. 0.2
       -Initial version of this guide. There's still plenty of work ahead but
this is a good beginning :) Added Justin's stats offsets, gold offsets, most of
the items, shoes and jewelry. Still missing other chars' stats, magic, most
weapons and armor.
-----------------------------------


       This is a save state hacking guide for Grandia, a classic PSX J-RPG
by Game Arts (published by SCEA). Why I bothered writing this stuff? Well...
<insert witty joke here>
So I did fiddle a little with a 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.

Well, on to the guide...

Index
1.0 Save state?
1.1 Characters stats offsets
     1.1.1 Justin
1.2 Gold
1.3 Lists
     1.3.1 Shoes
     1.3.2 Jewelry
```

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, 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 :P
$ 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 Characters stats offsets
        I'm still not sure if the character's offsets are dependent on their
position on the party. So, they're listed here in the order I've found them
on the save state BUT I'm not sure what happens when characters leave the
party, I've only recently started a game to test this. Future revisions will
shed light on this subject.
        All values offsets are reversed i.e. most significant digit goes last.
For example, if you want to have 1000 HP on Justin (0x03E8), you should edit

his maximum HP offsets (0x10432-0x10433) like this: 0xE8, 0x03.
        A side note, if you change any of the items equipped, the game doesn't
automatically correct your battle stats. You must swap the weapon off then on
again (or maybe level up the char? haven't tested that yet) and only then the
correct value will be on. You can equip any item in any slot (i.e a Sneakers on
your shield slot o_0) BUT if the item can't normally be equipped in the slot
you put it on (or at all) when you swap another item in, you won't be able to
re-equip it in the wrong slot unless you hack the value back in again.

1.1.1 Justin (or 1st Party Member?)
```
HP (Current/Maximum)       0x10430-0x10431 / 0x10432-0x10433
STR                        0x10434-0x10435
VIT                        0x10436-0x10437
WIT                        0x10438-0x10439
AGI                        0x1043A-0x1043B
SP (Current/Maximum)       0x1043C-0x1043D / 0x1043E-0x1043F
Weapon (Sword) skill level 0x10456
Weapon (Mace)  skill level 0x10457
Weapon (Axe)   skill level 0x10458
L1 MP (Current/Maximum)    0x10462/0x10463
L2 MP (Current/Maximum)    0x10464/0x10465
L3 MP (Current/Maximum)    0x10466/0x10467
Total Experience           0x1045A-0x1045D
Weapon Equipped            0x10472-0x10743
Shield Equipped            0x10474-0x10745
Armor Equipped             0x10476-0x10477
Helmet Equipped            0x10478-0x10479
Shoes Equipped             0x1047A-0x1047B
Jewelry Equipped           0x1047C-0x1047D
Inventory slots            0x1047E-0x10495
```

1.2 Gold
        All values offsets are reversed i.e. most significant digit goes last,
just like char stats. For example, say you want to be filthy rich and have
one million gold pieces (0xF4240), fill the offsets this way: 0F on 0x10320,
42 on 0x1031F, and 40 on 0x1031E.

Gold offsets: 0x1031E, 0x1031F, 0x10320

1.3 Lists

        The value 0x0000 corresponds to a empty slot. Note that each item
consists of two offsets, so there are 65535 possible values. I made a broad
sweep through this range of values, only tested a few hundred of them. There
may be items that I didn't find because of this. If someone smarter than me
manages to automate this tedious task of checking all possible values, a
comprehensive list of *ALL* combinations may emerge. But, my guess is that most
values will be garbage anyway.
        Garbage offset values may or may not work. This includes things like
unnamed items, "+35 move", "+5 water level", iconless things, Japanese strings,
and so on. Some even are equippable, for example you can equip "+5 water level"
as a weapon, I wonder what it does in combat... :)

1.3.1 Shoes

0001 Drgn Boots	0101 Ninja Sandals	0201 Wing Boots
0301 Beach Sandals	0401 Mach Boots	0501 Heavy Boots
0601 Queen Heels	0701 Iron Clogs	0801 Ogre Boots
0901 Rabbit Shoes	0A01 High Heels	0B01 Wolf Boots
0C01 Lion Boots	0D01 Battle Boots	0E01 Sprint Shoes
0F01 Slippers	1001 Warp Shoes	1101 Crampons

1201 Zero Boots	1301 *garbage*	

1.3.2 Jewelry

1401 Diana Amulet	1501 Hero Badge	1601 Demon Amulet
1701 Officer Badge	1801 Black Belt	1901 C Earring
1A01 Titan Ring	1B01 Fire Cape	1C01 Fire Charm
1D01 Water Charm	1E01 Wind Charm	1F01 Earth Charm
2001 Counter Ring	2101 Move Ring	2201 Hurricane Belt
2301 Mama Amulet	2401 Jade Charm	2501 Tree God Amulet
2601 Light Amulet	2701 Ancestor's Amulet	2801 Rain Coat
2901 Irides. Amulet	2A01 Move Unblocker	2B01 Yore Medal
2C01 Spirit Charm	2D01 Phantom Silk	2E01 Lightn. Amulet
2F01 Forest Charm	3001 Explosion Charm	3101 Blizzard Charm
3201 Wind Belt	3301 Confusion Charm	3401 Paralysis Charm
3501 Magic Block Charm	3601 Sudden Death Charm	3701 Poison Charm
3801 Talisman	3901 Sonic Belt	3A01 Metal Frog
3C01 *garbage*	3D01 Scarab	3E01 Demon Eye Stone
3F01 Jewel of Life	4001 Ankh of Temptation	4101 Anklet
4201 Energy Ring	4301 Disease Charm	4401 Paperweight
4501 Combat Anklet	4601 Chain of Gems	4701 Satisfaction Gem
4801 Soul of Asura	4901 Crescent Jade	4A01 Dragon Scales
4B01 Spectacles	4C01 Rune Ring	4D01 Tear Jewel
B801 Snake Earrings	C301 Elite Badge	CF01 Ring of Rage
D001 Holy Ring	D101 Mysterious Veil	D301 Telescope
D401 Energy Charm	D501 Devil's Anklet	D701 Astral Miracle
D801 Ethereal Miracle	D901 Miraculous Scales	

1.3.3 Consumables & key items

3B01 Revival Stone	4E01 Spirit Potion	4F01 Wound Salve
5001 Baobab Fruit	5101 Coconut	5201 Chocolate Cookies
5301 Honey	5401 Ultra Drink	5501 Weeds
5601 Dried Fish	5701 Bamboo Shoots	5801 Beef Jerky
5901 Box Lunch	5A01 Herbs	5B01 White Sulfa Weed
5C01 Smarna Weed	5D01 Cholla Flowers	5E01 Bamo Fruit
5F01 Squid Guts	6001 Move Mushroom	6101 Power Mushroom
6201 Poison Antidote	6301 Ginseng	6401 Banana
6501 Bandage	6601 Box of Sweets	6701 First Aid Kit
6801 Red Medicine	6901 Blue Medicine	6A01 Yellow Medicine
6B01 Crimson Potion	6C01 Deep Blue Potion	6D01 Golden Potion
6E01 Magic Lamp	6F01 Poison Antidote	7001 Vaccine
7101 Eye Drops	7201 Smelling Salts	7301 Paralysis Ointment
7401 Speel Breaker	7501 Move Breaker	7601 Ressurect Potion
7701 Panacea	7801 Bond of Trust	7901 Seed of Power
7A01 Seed of Defense	7B01 Seed of Speed	7C01 Seed of Running
7D01 All-Around Seed	7E01 Seed of Life	7F01 Seed of Magic
8001 Seed of Moves	8101 Mace Coloring Book	8201 Bow Coloring Book
8301 Sword Secrets	8401 Fire Secrets	8501 Earth Secrets
8601 How To Cut 'Em	8701 How To Pound 'Em	8801 How To Chop 'Em
8901 Roach Bomb	8A01 Firewood	8B01 Mana Egg
8C01 Holy Fire	8D01 Hand Grenade	8E01 Dynamite
8F01 Rocket Fireworks	9001 Launch Fireworks	9101 BOOM! Scroll
9201 Howler Scroll	9301 Vacuum Scroll	9401 Tremor Scroll
9501 Zap! Book	9601 Lightning Scroll	9701 Gale Scroll
9801 Overflowing Walnut	9901 Restraint Walnut	9A01 Sonic Walnut
9B01 Running Walnut	9C01 Snooze Scroll	9D01 Poisoned Apple
9E01 Culture Medium	9F01 Dream Truffle	A001 Paralyze Mushroom
A101 Orb of Silence	A201 Black Onyx	A301 Weak-knee Weed
A401 Ragged Weed	A501 Slouch Weed	A601 Trudge Weed
A701 Root of Confusion	A801 Torte's Whistle	A901 Freesia Flowers
AA01 Cone of Light	AB01 Mikeroma Scroll	AC01 Shuffle Card

```
AD01 Miracle Drink      AE01 Gold Key          AF01 Silver Key
B001 Key of Temptation  B101 Soldier's Key     B201 Pretty Jewel
B301 Pretty Jewel       B401 Pretty Jewel      B501 Horn of Inogon
B601 Key (garbage)      B701 Health Weed       B901 Resurrect Potion
BA01 Expensive Jewel    BB01 Rainbow Weed      BC01 Smoked Salmon
BD01 Prime Rib          BE01 Rescue Set        BF01 Black Nail Polish
C001 *garbage*          C101 Thor's Fury       C201 Magic Lipstick
C401 Fruit of Power     C501 Fruit of Defense  C601 Fruit of Speed
C701 Fruit of Agility   C801 All-Around Fruit  C901 Fruit of Life
CA01 Fruit of Magic     CB01 Fruit of Moves    CC01 Mogay Teachings 1
CD01 Mogay Teachings 2  CE01 Mogay Teachings 3 D201 Blizzard Scroll
D601 *garbage*          DB01 Brown Crayon      DC01 Blue Crayon
DD01 Red Crayon         DE01 Sky-Blue Crayon   E001 Soldier's Soul
E101 Poison of Power    E201 Poison of Defense E301 Poison of Speed
E401 Poison of Agility  E501 All-Around Poison E601 Poison of Life
E701 Poison of Magic    E801 Poison of Moves   E901 +1 Dagger Skill
EA01 +5 Dagger Skill    EB01 +1 Sword Skill    EC01 +5 Sword Skill
ED01 +1 Mace Skill      EE01 +5 Mace Skill     EF01 +1 Ax Skill
F001 +5 Ax Skill        F101 +1 Whip Skill     F201 +5 Whip Skill
F301 +1 Bow Skill       F401 +5 Bow Skill      F501 +1 Fire Skill
F601 +5 Fire Skill      F701 +1 Wind Skill     F801 +5 Wind Skill
F901 +1 Water Skill     FA01 +5 Water Skill    FB01 +1 Earth Skill
FC01 +5 Earth Skill


1.3.4 Weapons
DA01 General Staff      DF01 Emperor's Whip    FD01 100 Sword
FE01 100 Mace           FF01 Fire Mace


1.3.5 Armors
--TODO still pending


1.3.6 Shields
--TODO still pending


1.3.7 Helmets
--TODO still pending



1.4 Thanks & contact info

-Thanks to GameArts/SCEA, 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 Zhi Cheng Liu for his BoF3 Secrets Guide with the Hidden stats
info, it would take even more work to figure out WTF where those offsets...
-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
be 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? :)

---EOF
```