

# Breath of Fire IV Save State Hacking Guide

by demonsword2

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Save State Hacking Guide  
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## Version History

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2015 December 23: v. 0.91

-Hey there it's been a long time. Been bitten by the nostalgia bug and decided to play yet again some BoF4 & take some time to improve this guide. Added weapons, armor & accessories offsets and respective lists.

2010 April 9: v. 0.9

-First Version, still a lot to do. Probaly a lot of wrong offsets and values too... and typos...It'll get better soon I promise :D

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This is a save state hacking guide for Breath of Fire IV, a classic PSX J-RPG by Capcom. Why I bothered writing this stuff? Well, I've done it JUST to BEAT mo&##\$\*@>@er Rider without having to grind to level 60+. That's reason enough to you?! :D

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.

And, before anyone bug me with annoying accusations, I played on a emulator yes, but I DO OWN a copy of this game! Well I mean I had one... CD's so badly scratched it won't ever work again that's for sure...

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, 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 Chars stats offsets

YEAHHH you can rename everyone if you wish to :)

As a note, multi-offset stats (HP, MP) are inverted i.e most significant digit goes last. Just like the money offsets, check below.

#### 1.1.1 Hidden Stats?!

There are some char stats are hidden from the main menu i.e. no way to figure, in-game, their values. They follow basically the same hidden stats that existed on BoF3 (yeah they were there too!!). All thanks to Zhi Cheng Liu for this. Check his BoF3 Secrets Guide for further explanations along with some nice tables and in-depth info on them.

The hidden (BoF3) stats are: Willpower, Resistances (Physical, Fire, Ice, Electric, Earth, Wind, Holy, Mind, Status, Death), surprise rate, reprisal rate, critical rate, dodge rate, and attack accuracy. Willpower is the chance of auto-revival during battle when you are KOed the first time, the resistances are how well a given char copes with an element attack on him/her, surprise rate are your chances at first strike at battle, reprisal rate is counter attack frequency, critical rate is how often you crit when you attack, dodge rate is how often you dodge an incoming attack, and attack accuracy is, well, self-explanatory :P Willpower and surprise/reprisal/critical/dodge/accuracy rates range from 0x00 to 0x64 (i.e 0 to 100 decimal), the resistances range from 0 (most vulnerable) to 7 (damage is negligible or absorbed). Like other stats, there are both natural values and equipped values for all of those.

All that said, I still haven't tested all this very well yet... there are some values that are easy to guess (i.e. Ryu is strong to fire and weak to ice and Fou-lu is just the reverse...) Also, the list may not be exactly the same as BoF3... it will take some time to pinpoint exactly which offset is which, coming in a future update :) The list below are the natural values of all chars (values in hex):

```

Ryu      02 02 02 02 04 02 01 02 05 02 02 02 19 0A 06 06 32 64
Nina     03 02 02 02 02 03 02 02 05 02 02 02 00 00 00 14 32 64
Cray     02 02 02 02 02 02 02 03 05 02 02 02 00 0F 04 04 37 64
Scias    02 02 02 02 02 02 03 02 05 02 02 02 00 14 08 0F 46 64
Ursula   02 02 02 02 03 02 02 02 05 02 02 02 00 00 02 0A 37 50
Ershin   02 03 02 02 02 02 02 02 05 05 05 19 00 04 00 1E 5A 39
Fou-lu   02 02 02 02 01 02 04 02 05 07 07 07 19 14 0F 08 46 64

```

So my educated guess, with the very little testing I've done so far, is that the order is: \*dunno\*, Physical?, \*dunno\*, \*dunno\*, Fire, Wind, Ice, Earth, Holy,Mind,Status,Death, Suprise, Reprisal, Willpower, Dodge, \*dunno\*, \*dunno\*.

Lots of \*dunno\*... It will get fixed soon don't worry :)

#### 1.1.1 Ryu

```

Name          0x11AB06-0x11AB0F
Current HP    0x11AB1A-0x11AB1B
Current MP    0x11AB1E-0x11AB1F
Max HP        0x11AB62-0x11AB63
Max MP        0x11AB66-0x11AB67
CP (equipped/natural) 0x11AB46/0x11AB6A

```

Pwr (equipped/natural)	0x11AB48/0x11AB6C
Def (equipped/natural)	0x11AB4A/0x11AB6E
Agl (equipped/natural)	0x11AB4C/0x11AB70
Wis (equipped/natural)	0x11AB4E/0x11AB72
Hidden stats (equipped)	0x11AB50-0x11AB61
Hidden stats (natural)	0x11AB74-0x11AB85

#### 1.1.2 Nina

Name	0x11AB9E-0x11ABA5
Current HP	0x11ABB2-0x11ABB3
Current MP	0x11ABB6-0x11ABB7
Max HP	0x11ABFA-0x11ABFB
Max MP	0x11ABFE-0x11ABFF
CP (equipped/natural)	0x11ABDE/0x11AC02
Pwr (equipped/natural)	0x11ABE0/0x11AC04
Def (equipped/natural)	0x11ABE2/0x11AC06
Agl (equipped/natural)	0x11ABE4/0x11AC08
Wis (equipped/natural)	0x11ABE6/0x11AC0A
Hidden stats (equipped)	0x11ABE8-0x11AC0C
Hidden stats (natural)	0x11AC0C-0x11AC1D

#### 1.1.3 Cray

Name	0x11AC36-0x11AC3D
Current HP	0x11AC4A-0x11AC4B
Current MP	0x11AC4E-0x11AC4F
Max HP	0x11AC92-0x11AC93
Max MP	0x11AC96-0x11AC97
CP (equipped/natural)	0x11AC76/0x11AC9A
Pwr (equipped/natural)	0x11AC78/0x11AC9C
Def (equipped/natural)	0x11AC7A/0x11AC9E
Agl (equipped/natural)	0x11AC7C/0x11ACA0
Wis (equipped/natural)	0x11AC7E/0x11ACA2
Hidden stats (equipped)	0x11AC80-0x11AC91
Hidden stats (natural)	0x11AB74-0x11ACB5

#### 1.1.4 Scias

Name	0x11ACCE-0x11ACD5
Current HP	0x11ACE2-0x11ACE3
Current MP	0x11ACE6-0x11ACE7
Max HP	0x11AD2A-0x11AD2B
Max MP	0x11AD2E-0x11AD2F
CP (equipped/natural)	0x11AD0E/0x11AD32
Pwr (equipped/natural)	0x11AD10/0x11AD34
Def (equipped/natural)	0x11AD12/0x11AD36
Agl (equipped/natural)	0x11AD14/0x11AD38
Wis (equipped/natural)	0x11AD16/0x11AD3A
Hidden stats (equipped)	0x11AD18-0x11AD29
Hidden stats (natural)	0x11AB74-0x11AD4D

#### 1.1.5 Ursula

Name	0x11AD66-0x11AD6D
Current HP	0x11AD7A-0x11AD7B
Current MP	0x11AD7E-0x11AD7F
Max HP	0x11ADC2-0x11ADC3
Max MP	0x11ADC6-0x11ADC7
CP (equipped/natural)	0x11ADA6/0x11ADCA

Pwr (equipped/natural)	0x11ADA8/0x11ADCC
Def (equipped/natural)	0x11ADAA/0x11ADCE
Agl (equipped/natural)	0x11ADAC/0x11ADF0
Wis (equipped/natural)	0x11ADAE/0x11ADF2
Hidden stats (equipped)	0x11ADB0-0x11ADC1
Hidden stats (natural)	0x11AB74-0x11ADE5

#### 1.1.6 Ershin

Name	0x11ADFE-0x11AE05
Current HP	0x11AE12-0x11AE13
Current MP	0x11AE16-0x11AE17
Max HP	0x11AE5A-0x11AE5B
Max MP	0x11AE5E-0x11AE5E
CP (equipped/natural)	0x11AE3E/0x11AE62
Pwr (equipped/natural)	0x11AE40/0x11AE64
Def (equipped/natural)	0x11AE42/0x11AE66
Agl (equipped/natural)	0x11AE44/0x11AE68
Wis (equipped/natural)	0x11AE46/0x11AE6A
Hidden stats (equipped)	0x11AE48-0x11AE59
Hidden stats (natural)	0x11AE6C-0x11AE7D

#### 1.1.7 Fou-lu

Name	0x11AE96-0x11AE9D
Current HP	0x11AEAA-0x11AEAB
Current MP	0x11AEAE-0x11AEAF
Max HP	0x11AEF2-0x11AEF3
Max MP	0x11AEF6-0x11AEF7
CP (equipped/natural)	0x11AED6/0x11AEFA
Pwr (equipped/natural)	0x11AED8/0x11AEFC
Def (equipped/natural)	0x11AEDA/0x11AEFE
Agl (equipped/natural)	0x11AEDC/0x11AF00
Wis (equipped/natural)	0x11AEDE/0x11AF02
Hidden stats (equipped)	0x11AEE0-0x11AEF1
Hidden stats (natural)	0x11AF04-0x11AF15

#### 1.2 Money

Money offsets are reversed i.e. most significant digit goes last...  
Example: to have 50000 Zenny (0xC350) you must fill the offsets 0x50 - 0xC3  
Money offsets: 0x11AF3A, 0x11AF3B, 0x11AF3C

#### 1.3 Items

Items are composed of two offsets, the first defines which item and the second, its quantity. For example, to add 15 Panaceas to your inventory on the very first item slot, put 0x0E on offset 0x11AF52, then 0x0F on 0x11AF53. :)

Items inventory offset start: 0x11AF52

#### 1.4 Weapons

Weapons follow the same layout of Items: two offsets, the first defines which weapon and the second, its quantity.

Weapons inventory offset start: 0x11B152

#### 1.5 Armors

Armors follow the same layout of Items and Weapons. By now you've got the hang of it, right?

Armors inventory offset start: 0x11B352

## 1.6 Accessories

Same deal as Items, Weapons & etc.

Accessories inventory offset start: 0x11B552

## 1.7 Lists

### 1.7.1 Items List

00	Nothing	01	Healing Herb	02	Vitamin	03	MultiVitamin
04	SuperVitamin	05	Vitamins	06	Berries	07	Apple
08	Wisdom Seed	09	Wisdom Fruit	0A	Croc Tear	0B	Antidote
0C	Eye Drops	0D	Jabberglass	0E	Panacea	0F	Ammonia
10	Life Shard	11	Magic Shard	12	Power Food	13	Protein
14	Swallow Eye	15	Fish-head	16	Ambrosia	17	Weather Vane
18	Void Sphere	19	Molotov	1A	Firecracker	1B	Electrode
1C	Dynamite	1D	Water Bomb	1E	Icicle	1F	Napalm
20	Taser	21	Belladonna	22	Scorched Rice	23	Aurum
24	Moon Tears	25	Ginseng	26	Ivory Dice	27	Dragon Scale
28	Headband	29	Knockout Gas	2A	Flash Grenade	2B	Poison Powder
2C	Mouth Gag	2D	Jelly Fish	2E	Piranha	2F	Bass
30	Blue Gill	31	Sweetfish	32	Browntail	33	Black Bass
34	Angelfish	35	Trout	36	Rainbow Trout	37	Bullcat
38	Martian Squid	39	Dorado	3A	Salmon	3B	Barandy
3C	Sturgeon	3D	Man-o'-War	3E	Flying Fish	3F	Blowfish
40	Moorfish	41	Sea Bass	42	Flatfish	43	Sea Bream
44	Octopus	45	Bonito	46	Black Porgy	47	Angler
48	Spearfish	49	Whale	4A	Acheron	4B	Rice Ball
4C	Mozweed	4D	Straw	4E	Faerie Drop	4F	Stamp Card
50	Ship Parts	51	Glass Shard	52	Iron Scraps	53	Lottery Stub
54	Ribs	55	Roast	56	Flank	57	Loins
58	Fire Seed	59	Wind Seed	5A	Water Seed	5B	Earth Seed
5C	Spirit Seed	5D	Vigor Seed	5E	Phoenix Seed	5F	Holy Seed
60	Strength Seed	61	Hard Seed	62	Speed Seed	63	Sage Seed
64	Strike Seed	65	Reflex Seed	66	Dodge Seed	67	Sight Seed
68	Target Seed	69	Elixer	6A	Elixer+	6B	Wassail
6C	Wassail+	6D	Draught	6E	Draught+	6F	Dark Daught
70	Bird Drop	71	Rotten Meat	72	Bent Screw	73	Old Tire
74	Dirty Filter	75	Burnt Plug	76	Rusty Pipe		
77	and beyond -- rubbish, removed items, etc						

### 1.7.2 Weapons List

00	Nothing	01	King's Sword	02	Flame Sword	03	Bowie Knife
04	Broken Sword	05	Short Sword	06	Moon Sword	07	Scramasax
08	Katzbalger	09	Broad Sword	0A	BastardSword	0B	Claymore
0C	PiercingEdge	0D	Firangi	0E	FeatherSword	0F	Barbarrosa
10	Ascension	11	Slicer	12	DamascusSword	13	Dragon Blade
14	Royal Sword	15	GooKingSWORD	16	Cursed Sword	17	Chopsticks
18	Jang'do	19	Taegum	1A	Ice Blade	1B	Biter
1C	Cleaver	1D	Render	1E	HiddenDagger	1F	PointedStick
20	Baton	21	Sage's Staff	22	Magic Wand	23	Ruby Scepter
24	Reed Baton	25	Wand of Air	26	WardingStaff	27	Rune Staff
28	Blessed Staff	29	Ouroboros	2A	Skull Staff	2B	Bamboo Stick
2C	Log	2D	Steel Bat	2E	Spiked Rod	2F	Mace
30	Quarterstaff	31	Stone Club	32	Flail	33	Crusher
34	Giant Club	35	Pole	36	Nunchaku	37	Earthbreaker
38	Cudgel	39	Linked Pole	3A	MultiGun	3B	Scattershot
3C	Flintlock	3D	Sparkler	3E	Arquebus	3F	Flamethrower
40	Repeater	41	Electrifier	42	Mortar	43	Culverin

44 Red Knuckles	45 Fork	46 Raptor Claws	47 Drill Punch
48 Homing Bomb	49 Rocket Punch	4A Toxic Claws	4B Stunner
4C Atomic Punch	4D Ghostbuster	4E Mass Driver	4F Power Glove
50 Flame Punch	51 Ice Punch	52 Weather Wand	53 Rusted Sword
54 Slayer	55 Earth Claws	56 Dragonslayer	57 Battle Rod

58 and beyond -- rubbish, removed weapons, etc. Some are equippable (and even work), but some are... odd (i.e. attack never connects). Explore those offsets at you peril (or leisure, who knows!).

### 1.7.3 Armors List

00 Nothing	01 LeatherArmor	02 Chain Cap	03 Cuirass
04 Scale Mail	05 AsbestosArm	06 Amber BPlate	07 Brigandine
08 Full Plate	09 Silver Mail	0A Magma Armor	0B MithrilArmor
0C BlizzardMail	0D Force Armor	0E DamascusMail	0F Mist Armor
10 King's Armor	11 Life Armor	12 Dragon Armor	13 Gargantua
14 Chopam Plate	15 Clothing	16 Waistcloth	17 Ranger Garb
18 FightingRobe	19 Wetsuit	1A Lgt. Clothing	1B Armored Vest
1C Wolfskin	1D Burglar Garb	1E Gideon'sGarb	1F ManlyClothes
20 Fancy Dress	21 Crepe Cape	22 Mage's Robes	23 Cuirass
24 Party Dress	25 Robe of Wind	26 Sage's Frock	27 Holy Robe
28 PhanthomDress	29 Diana'sDress	2A Angel's Vest	2B Star Dress
2C Royal Armor	2D Steel BPlate	2E Midas' Armor	2F Stout Mail
30 Stout Mail(1)	31 Booster	32 Panzer	33 Maelstrom
34 Gravedigger	35 Orihalcyon	36 Defender	37 Quicksilver
38 Mithril Rig	39 Psychometer	3A Lightning	3B Fire Rig
3C Whirlwind	3D Water Rig	3E Earth Rig	3F Heavy Armor
40 Spirit Armor	41 Light Armor	42 Flame Armor	43 Wind Armor
44 Hydro Armor	45 Earth Armor		

46 and beyond -- rubbish, removed armors, etc. Some are equippable, but I dunno if there is any additional effects besides having 0 armor...

### 1.7.4 Accessories List

00 Nothing	01 Bandana	02 Hairband	03 Brass Helm
04 Glass Domino	05 Long Boots	06 Dress Shoes	07 Divine Helm
08 Combat Boots	09 Spats	0A DamacsusHelm	0B Dragon Helm
0C Titan's Boots	0D Wisdom Ring	0E Speed Boots	0F Hawk's Ring
10 Artemis' Cap	11 Hunting Cap	12 Winged Boots	13 Dream Ring
14 UV Goggles	15 Balance Ring	16 Bell Collar	17 Holy Mantle
18 Cupid's Lyre	19 Ivory Bangle	1A Ring of Fire	1B Ring of Wind
1C Ring of Ice	1D Ring of Clay	1E Aura Ring	1F Barrier Ring
20 Life Sandals	21 Light Bangle	22 Talisman	23 Diamong Ring
24 Topaz Tear	25 Poison Ward	26 Healing Ring	27 Dragon Tear
28 Shaman'sRing	29 Soul Ring	2A Spirit Ring	2B Soul Gem
2C Midas Stone	2D Coupons	2E Fire Ward	2F Wind Ward
30 Water Ward	31 Earth Ward	32 Astral Ward	33 Body Ward
34 HarmonicRing	35 Red Cape	36 Toothpick	37 Wooden Rod
38 Bamboo Rod	39 Deluxe Rod	3A Angling Rod	3B Spanner
3C Master's Rod	3D Silver Top	3E Gold Top	3F Platinum Top
40 Twister	41 Warbler	42 Dancer	43 Popper
44 Flattop	45 Swisher	46 Floater	47 Hanger
48 Deep Diver	49 Baby Frog	4A Toad	4B Fat Frog
4C Straight	4D Tail	4E Crab	4F Spoon
50 King Frog	51 Demon's Helm	52 BronzeShield	53 Buckler
54 Face Guard	55 Medallion		

56 and beyond -- rubbish, removed accessories, etc. Some are equippable but I didn't test them, if you want to, be my guest & remember to mail me your results :)

### 1.8 Thanks & contact info

-Thanks to Capcom, 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? :)

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