Note: The following notes refer to File 2.

Universal

Values are stored in little-endian format, meaning that the number 4660 would be written as "34 12", instead of "12 34", etc.. Values higher than FF .. FF 7F are interpreted as negative numbers, unless otherwise stated.

Line-up

- Party member order is stored as a set of six single-byte values stored in bytes 11DB8..11DBD. The values range from 00 to 05 and represent the Hero, Yangus, Jessica, Angelo, Red, and Morrie, in that order. Empty slots are represented as FF and stored at the end of the set. Referring to an invalid character index will crash the game, and so will attempting to load the game with empty character slots in the front of the party. Loading the game with no characters in the party, or with multiple of the same character in the party, will result in the game failing to load.

Tactics

- Tactics are stored as single-byte values, one for each party member, for the following party members. The value can be set between 00 and 05; any value higher than 05 will crash the game.:
  - Hero: 11E3C
  - Yangus: 11E7C
  - Jessica: 11EBC
  - Angelo: 11EFC
  - Red: 11F3C
  - Morrie: 11F7C

Levels

- Level values are stored as two-byte values, one for each party member. Indexes are listed below:
  - Hero: 11E18..11E19
  - Yangus: 11E58..11E59
  - Jessica: 11E98..11E99
  - Angelo: 11ED8..11ED9
  - Red: 11F18..11F19
  - Morrie: 11F58..11F59
- Experience points are stored as four-byte values, in the following bytes for the following party members:
  - Hero: 11E10..11E13
  - Yangus: 11E50..11E53
  - Jessica: 11E90..11E93
  - Angelo: 11ED0..11ED3
  - Red: 11F10..11F13
  - Morrie: 11F50..11F53

Stats

- Stat values are stored as two-byte values. The HP and MP values for a single party member are stored in a series of sixteen bytes, with two empty bytes after each value. The values for this series are Max. HP, current HP, Max. MP, and current MP, in that order. In a second series, this one of eight bytes with no empty bytes in between, are stored the values for Strength, Resilience, Agility, and Wisdom, in that order. Lastly, a series of twelve bytes stores additional stat bonuses (i.e. those gained from seeds), in the order HP, MP, Strength, Resilience, Agility, and then Wisdom. Below are listed the stat indexes for each party member (listed as [HP/MP values; Basic stat values; Bonus stat values]).
  - Hero: 11E00..11E0F; 11E1A..11E21; 11E24..11E2F
  - Yangus: 11E40..11E4F; 11E5A..11E61; 11E64..11E6F
  - Jessica: 11E80..11E8F; 11E9A..11EA1; 11EA4..11EAF
  - Angelo: 11EC0..11ECF; 11EDA..11EE1; 11EE4..11EEF
  - Red: 11F00..11F0F; 11F1A..11F21; 11F24..11F2F

    - Morrie: 11F40..11F4F; 11F5A..11F61; 11F64..11F6F

Skill Points

- Skill points are stored as two-byte values, that come in a set of six. The first five values represent the respective character's skill trees, in the same order as they appear in-game, and the final value represents the skill points yet to be allocated to a skill tree. Value arrays for each of the six characters are as follows:
    - Hero: 11E30..11E3B
    - Yangus: 11E70..11E7B
    - Jessica: 11EB0..11EBB
    - Angelo: 11EF0..11EFB
    - Red: 11F30..11F3B
    - Morrie: 11F70..11F7B

Status Effects

- Poison is stored as several single-byte variables, one per party member. If the byte is set to 40, the party member is poisoned; if it is set to 00, they are not. Bytes for each party member are as follows:
    - The Hero: 11E16
    - Yangus: 11E56
    - Jessica: 11E96
    - Angelo: 11ED6
    - Red: 11F16
    - Morrie: 11F56
- Curses are stored as several single-byte variables, one per party member. If the byte is set to 02, the party member is cursed; if it is set to 00, they are not. The status effect is purely cosmetic and will remove itself after changing equipment or entering a battle. Bytes for each party member are as follows:
    - The Hero: 11E17
    - Yangus: 11E57
    - Jessica: 11E97
    - Angelo: 11ED7
    - Red: 11F17
    - Morrie: 11F57
- Death is stored as several single-byte variables, one per party member. If the byte is set to 02, the party member appears deceased; if it is set to 00, they are not. Like curses, the status effect is purely cosmetic and will remove itself after entering a battle. Bytes for each party member are as follows:
    - The Hero: 11E14
    - Yangus: 11E54
    - Jessica: 11E94
    - Angelo: 11ED4
    - Red: 11F14
    - Morrie: 11F54

Gold

- Gold on hand is stored as a single four-byte value in bytes 11620..11623.
- Gold in the bank is stored as a four-byte value in bytes 11624..11627. Gold in the bank can be set to a number that is not a multiple of 1000, but can still be withdrawn by setting the withdrawal amount to the maximum.

Items

- Items in the bag are stored in sets of four bytes per stack, between bytes 116F4..11DB7. The first two bytes of each entry refer to the item ID (see *Item Indices.txt*), and the last two bytes indicate the amount of items in the stack.
- Party members' inventories are stored as arrays of two-byte item IDs (see *Item Indices.txt*). Equipment values are stored as five sets of two-byte integers between 00 00 and 04 00, each value pointing to an

inventory slot holding the equipped item. If no item is equipped in that slot, the value is set to FF FF. The five values point to Weapon, Armour, Shield, Headwear, and Accessory, in that order. The six party members' inventory indexes are listed below, followed by their respective equipment indexes.
    - Hero: 11628..1163F; 11640..11649
    - Yangus: 1164A..11661; 11662..1166B
    - Jessica: 1166C..11683; 11684.. 168D
    - Angelo: 1168E..116A5; 116A6..116AF
    - Red: 116B0..116C7; 116C8..116D1
    - Morrie: 116D2..116E9; 116EA..116F3

Location

- Location is stored as a two-byte value in bytes 138C0..138C1. For a mostly-complete list of locations, refer to *save_locations.txt*.
- The value that indicates whether the save was or was not performed at a church is stored in byte 121EB. If this value is set to 00, the game will set the player to the church's position and display the proper dialogue; if it is set to any other value, this will not happen. If this value is set to 00 in a location that does not contain a church, the save file will fail to load.
- Player position upon loading is stored as a set of four-byte variables. The value in 121D0..121D3 controls the player's X position, the value in 121D4..121D7 controls the player's Y position, and the value in 121D8..121DB controls the player's Z position. The player's rotation is stored at address 121E0..121E3.
- Camera orientation upon loading is stored as a two-byte value in bytes 138C4..138C5. During normal gameplay, this appears to always be exactly the same as the value in 138C0..138C1. This value only seems to come into effect when loading from a church.
- The music that plays upon loading the save file is controlled by the value in byte 1394B. There is currently no list of possible values.

Monster Team

- Monster team names are stored as 32-character strings in UTF-16 little endian, between bytes 11FC0..11FFF for team 1, and 1200C..1204B for team 2.
- Voice data is stored as two single-byte variables, at address 13876 for team 1 and address 13878 for team 2. Changing this byte will affect the name by which the Monster Arena announcer calls your team. See *team_names.txt* for a full list of possible values.
- “Number of times called” is stored as a 32-bit value at address 12008..1200B for team 1, and address 12054..12057 for team 2.
- Monsters assigned to a team are stored as a series of three 16-bit values stored from address 12000..12005 for team 1, and address 1204C..12051 for team 2. The values indicate the index that the member is stored at (see below). The same monster can be set to multiple slots, though this is prone to cause glitches and can result in a softlock.
- Monster team member entries are stored as a series of 8-byte values stored between the indices of 12058..1212F. The same monster can be set to multiple slots, though this is prone to cause glitches and can result in a softlock.
    - The first two bytes contain a two-byte value representing the ID of the monster (see enemy_indices.txt).
    - The seventh byte is a binary value, set to 01 if the respective monster is alive, or to 00 if that monster is dead.
- The values that indicate progress in the Monster arena are a set of nine bits, starting at the final bit of byte 11091, and ending at the final bit of byte 11092, from Rank G, to Rank X, in order. If the corresponding bit is set to 0, the rank is considered “not cleared”, and if the bit is set to 1, the rank is considered “cleared”, and the next rank can be selected. In addition, the Monster Team reward for that rank will also be unlocked.
    - If the sixth bit (00X00000) of byte 110F0 is set to 1, the option for Rank S will be displayed in the rank select; if it is set to 0, it will not. If the sixth bit of byte 110E8 is set to 1, the option for Rank X

will be displayed in the rank select; if it is set to 0, it will not. If the bit for Rank X is set to 1, Rank S will also appear regardless.

- If the seventh bit (0X000000) of byte 1214E is set to 1, a statue of the Hero will be displayed on the roof of the Monster Arena; otherwise, it will not.
- If the second bit (000000X0) of byte 11093 is set to 0, the Zoom menu entry for the Monster Arena will read “Morrie's Place” instead; otherwise, it will read “Monster Arena”.

Battle Records

- Battle Log
  - Time Spent Adventuring: Unknown.
  - Distance Travelled: Stored as a set of four single-byte values in bytes 144A0..144A3. Byte 144A3 represents a number that is roughly equivalent to 7.3468432e-43 * 4 ^ (value). The value in byte 144A2 increments the previous value by a degree of 3/256. The value in byte 144A1 represents 1/256th of that value, and the value in byte 144A0 represents 1/256th of that value. All values are added together to create the final distance travelled.
  - Battles Fought: 4-byte value stored in bytes 144A4..144A7
  - Monsters Defeated: 4-byte value stored in bytes 144A8..144AB
  - Monsters Intimidated: 4-byte value stored in bytes 144AC..144AF
  - Times Fled: 4-byte value stored in bytes 144B0..144B3
  - Victories: 4-byte value stored in bytes 144B4..144B7
  - Times Wiped Out: 4-byte value stored in bytes 144B8..144BB
  - Total Gold Obtained: 4-byte value stored in bytes 144BC..144BF
  - Maximum Damage in a Turn: Two four-byte values, stored in bytes 144C0..144C7. The first value represents the ID of the enemy the damage has been dealt upon, and the second value represents the numeric damage value. For a full list of enemy IDs, see *enemy_indices.txt*.
- Cleared Game Records
  - Time Spent Adventuring: 4-byte value stored in bytes 144C8..144CB. The value indicates the amount of time spent in seconds. All integers are interpreted as positive.
  - Distance Travelled: Stored as a set of four single-byte values in bytes 144CC..144CF. Byte 144CF represents a number that is roughly equivalent to 7.3468432e-43 * 4 ^ (value). The value in byte 144CE increments the previous value by a degree of 3/256. The value in byte 144CD represents 1/256th of that value, and the value in byte 144CC represents 1/256th of that value. All values are added together to create the final distance travelled.
  - Battles Fought: 4-byte value stored in bytes 144D0..144D3
  - Monsters Defeated: 4-byte value stored in bytes 144D4..144D7
  - Monsters Intimidated: 4-byte value stored in bytes 144D8..144DB
  - Times Fled: 4-byte value stored in bytes 144DC..144DF
  - Victories: 4-byte value stored in bytes 144E0..144E3
  - Times Wiped Out: 4-byte value stored in bytes 144E4..144E7
  - Total Gold Obtained: 4-byte value stored in bytes 144E8..144EB
  - Maximum Damage in a Turn: Two four-byte values, stored in bytes 144EC..144F3. The first value represents the ID of the enemy the damage has been dealt upon, and the second value represents the numeric damage value. For a full list of enemy IDs, see *enemy_indices.txt*.
- Defeated Monster List: The values for entries in the defeated monster list are stored as sets of eight bytes each between the bytes 13A44..1449B. The first four bytes make up a value that represents the amount of monsters defeated of that species. If this value is set to 00000000, the monster will not show up on the Defeated Monster list and will instead be displayed as question marks. The following two bytes represent whether or not the monster's first and second drop items should be displayed on their info page, respectively. If the value is set to 00, the item will not be displayed; if the value is set to any number above 00, it will be displayed. The purpose of the final two bytes is yet unknown. The order of the monsters is the same as displayed in-game, beginning with Slime in bytes 13A44..13A4B, and ending with Estark in bytes 14494..1449B.

- Collected Item List: The entirety of the collected item list is stored as values in bytes 11DC8..11DFE. The values within are interpreted as binary, with each bit representing an item; if the bit is set to 1, the item is registered in the list, if it is set to 0, the item is absent. The item list begins at the second bit of the first byte, and ends at the first bit of the final byte. For the order of items, refer to *Item Indices.txt*.
- Alchemy Recipe Book
  - All known recipes are stored as binary values between the bytes 20EB0 and 20ECD. If the respective bit is set to 1, the recipe is registered in the recipe book, if it is set to 0, it is not. For the indexes of each individual recipe, see *AlchemyIndices.txt* ("N/A" is listed for bits that do not pertain to a recipe).
  - Items created are stored in a series of two-byte values between bytes 20ED0..21069. The first byte of each value represents the index of the recipe (see *AlchemyIndices_2.txt*; changing these values does nothing), and the second byte is a binary value representing whether or not the respective item has been created (00 for not created, 01 for created)
- Casino Chronicles
  - Casino winnings are divided into five separate categories and added together to produce the total amount. The bytes 1455C..1455F hold a four-byte value representing the amount of tokens won from bingo games, the bytes 14608..1460B and 1460C..1460F hold four-byte values representing the amount of tokens won from one-token slot machines (both sets of bytes hold the same value), the bytes 14634..14637 and 14638..1463B hold four-byte values representing the amount of tokens won from ten-token slot machines (both sets of bytes hold the same value), the bytes 14664..14667 hold a four-byte value representing the amount of tokens won from 100-token slot machines, and the bytes 14690..14693 hold a four-byte value representing the amount of tokens won from roulette spins.
  - The amount of tokens purchased is stored as a four-byte value in bytes 14550..14553.

Options

- Sound options are stored in three bytes from 13948..1394A, each byte a value between 00 (representing 1) and 04 (representing 5), or 05 (representing "Off", in the case of Voice Volume). Music Volume is stored in byte 13948, Sound Volume in byte 13949, and Voice Volume in byte 1394A. Values higher than 05 are likely to crash the game.
- Camera options are stored in byte 13725, in the second through fourth bits. If the respective bit is set to 1, the respective control is set to "Inverted"; if it is set to 0, it is set to "Default". The second bit controls the "+Control Pad left/right" option, the third bit controls the "+Control Pad up/down" option, and the fourth bit controls the "L/R Buttons" option.

Misc.

- The Hero's name is stored in bytes 11608..1161E, in UTF-16 little endian.
- The value that indicates whether or not a crown should appear next to the file is stored at bit 2 in byte 110C7 (00000010). If this bit is set to 0, no crown will be displayed, and if it is set to 1, one will. This will also allow the Cleared Game Records page to be viewed from the Battle Records screen. However, this does not trigger postgame events.
- Bytes 121CC..121CF contain the four-byte value representing the amount of casino tokens the player has on hand.
- The amount of mini medals consigned is stored as a four-byte value in bytes 137CC..137CF. It has yet to be determined whether this actually affects Princess Minnie's behaviour.
- Zoom locations are stored as a series of binary values, between bytes 1379C and 137A0. If the respective bit is set to 0, the Zoom location is unregistered, and if it is set to 1, it is registered. Locations are ordered in the same order as they are in-game, and stored in reverse per each byte (little-endian, so that the order goes 00000001, 00000010, and so on), with a notable empty bit between Tryan Gully and the Altar of Wroth. The bit representing Dark Empycchu is stored elsewhere, at the fourth bit in byte 137A8 (00010000, representing 10, or 16 in decimal).
- Follower ID value is stored in byte 11F80. Only one follower may be active at a time. If the value is set to FF, no follower will be displayed. Followers will not appear in battle. Follower dialogue is only displayed if the appropriate story flags are active. If set to any value other than the ones listed below, the follower icon will appear empty with no portrait inside and no associated dialogue. Follower IDs are

listed below:
    - Bangerz: 32
    - Ishmahri: 33
    - King Trode: 34
    - Cash: 35
    - Carrie: 36
    - Prince Charmles: 37
    - Marek: 38
    - Chen Mui: 39
- Time of day is stored as a four-byte value in the index 138B4-138B6. After this value reaches a certain amount, the value loops back to about 41000000. Some handy values are listed below:
    - 45A8C000: Daytime begins
    - 467D1FFF: Nighttime begins
    - 45C4E000: Result of staying overnight at an inn
    - 468CA000: Result of resting until evening at an inn
    - FFFFFFFF: Game crashes when going outside

Undiscovered

- Battle Records
- Unlocks
- Sidequests
- Story Progress
- Stella
- Cameron's Codex
- photo album
- Other Files
- WiFi Stats