

Four Swords Adventures Documentation

FSA File Infos:

Agb => GBA client thread

AudioRes => Audio data

Boss => Level data

battle1.arc => (Unused)(Incomplete) Shadow Battle

boss1.arc => (Unused)(Incomplete) Early Stage 1-1 / Phantom ganon fight

boss2.arc => (Unused)(Incomplete) Early Stage 2-1 / Stone Arrghus fight

boss3.arc => (Unused)(Incomplete) Early Stage 3-1 / Helmaroc King fight

boss4.arc => (Unused)(Incomplete) Early Stage 4-1 / Big Poe fight 1&2

boss5.arc => (Unused)(Incomplete) Early Stage 5-1 / Phantom ganon fight 2

boss6.arc => (Unused) Early Stage 6-1 / Big Moldorm fight

boss7.arc => (Unused)(Incomplete) Early Stage 7-1 / Frostare fight

boss8.arc => (Unused)(Incomplete) Early Stage 8-1 / Ganon fight

boss000.arc => (Unused)(Test Level) Test-1.1, accessible via level select

boss001.arc => (Unused)(Test Level) Test-1.2, accessible via level select

boss002.arc => (Unused)(Test Level) Test-1.3, accessible via level select

boss004.arc => (Unused)(Test Level) ETCS.1, accessible via level select

boss005.arc => (Unused) (Test Level) ETCS.2, accessible via level select

boss006.arc => (Unused)(Test Level) ETCS.3, accessible via level select

boss007.arc => (Unused)(Test Level) E3.1, accessible via level select

boss008.arc => (Unused)(Test Level) E3.2, accessible via level select

boss009.arc => Tingle's Tower (Unused E3.3 Date still present!)

boss010.arc => 1.1 Lake Hylia

bin => Actors List used in the rooms.

J3D => Level specific J3D effects.

map => Map Layout.

szs => Room layer tiles data.

timg => Level specific 2D textures (TV only)

boss011.arc => 1.2 Cave Of No Return

boss012.arc => (Unused)(Cut level) The River's Flow

boss013.arc => 1.3 Hyrule Castle

boss020.arc => 2.1 The Coast

boss021.arc => 2.2 Village of the Blue Maiden

boss022.arc => (Unused)(Cut level) Forest of Endless Rain

boss023.arc => 2.2 Eastern Temple

boss030.arc => 3.1 Death Mountain Foothills

boss031.arc => 3.2 The Mountain Path

boss032.arc => (Unused)(Cut level) The Summit

boss033.arc => 3.3 Tower of Flames

boss040.arc => 4.1 The Field

boss041.arc => 4.2 The Swamp

boss042.arc => (Unused)(Cut level) Graveyard

boss043.arc => 4.3 Infiltration of Hyrule Castle

boss050.arc => 5.1 Lost Woods

boss051.arc => 5.2 Kakariko Village

boss052.arc => (Unused)(Cut level) Four Descents into the Darkness

boss053.arc => 5.3 Temple of Darkness

boss060.arc => 6.1 Desert of Doubt

boss061.arc => 6.2 Desert Temple

boss062.arc => (Unused)(Cut level) The Oasis

boss063.arc => 6.3 Pyramid

boss070.arc => 7.1 Frozen Hyrule
boss071.arc => 7.2 The Ice Temple
boss072.arc => (Unused)(Cut level) Into the Blizzard
boss073.arc => 7.3 Tower of Winds
boss080.arc => 8.1 Realm of the Heavens
boss081.arc => 8.2 The Dark Cloud
boss082.arc => (Unused)(Cut level) Clouds Crossing the Winds
boss083.arc => 8.3 Palace of Winds
boss090.arc => (Unused)(Test Level) Test 1 Minigames, accessible via level select
boss091.arc => (Unused)(Test Level) Test 2 Stone Arrghus fight
boss092.arc => (Unused)(Test Level) Test 3 Helmaroc King fight
boss093.arc => (Unused)(Test Level) Test 4 Big Poe fight 1&2
boss094.arc => (Unused)(Test Level) Test 5 Phantom ganon fight 2
boss095.arc => (Unused)(Test Level) Test 6 Big Moldorm fight
boss096.arc => (Unused)(Test Level) Test 7 Frostare fight
boss097.arc => (Unused)(Test Level) Test 8 Ganon fight
boss100.arc - boss116.arc => (Unused?) Credits scene 1-17 Also present in boss991
boss200.arc - boss207.arc => Tingle's Tower Mini game 1-8
boss210.arc => (Unused) Tingle's Tower
boss500.arc => Shadow Battle maps
boss990.arc => opening scene
boss991.arc => Credits scene
boss992.arc => (Deleted) test level E3.4, only present in game code.
ending.arc => (Unused)(Incomplete) Early Credits scene
opening.arc => (Unused)(Incomplete) Early opening scene

staff => (Unused?) Staff credits (also present in boss991.arc)

thpdemo => THP Video files

data.arc => Various in game data TV & GBA

audio => actors audio data.

enm => actors properties.

j3d => Data for the 3D Engine like model and effects.

scl => Tile/Sprite palettes. Standard GBA Format

sch => 4bpp sprites and tiles! sprite

smp => Tile preset for larger sprits.

sob => Layout of the sprite.

spl => Layout of the tileset.

timg => .bit image files for stages and special actors.

particle.jp => JPAC2-10 particle system

cardicon.arc => (Unused) Memory card and Banner icons.

entry.arc => Various screens

file.arc => file select screen

game2D.arc => HUD, pause, gameover screen

gamemode.arc => Mode select screen

logo.arc => Progressive-scan select

main2D.arc => Various screens

map1.arc => Level select

map2.arc => Shadow Battle Level select

msgjp.arc => jp font & In game text

msgus.arc => us font & In game text

result.arc => Shadow Battle result screen

result1.arc => (Unused) Hyrule adventure 1Player result screen

result2.arc => Hyrule adventure result screen

title.arc => Title screen

Games Specific File Formats:

Sprite Object File Format:

<https://nbouteme.github.io/fsasobdoc/>

Level File format:

BIN (Room Actors List)

These files consist of actor data entries and an ending marker sequence.

Each entry consists of 11 bytes: AAAABCDEFGH

AAAA	ActorNameID (E.g. GFBS, TLWP, BTIN)
B	Layer
C	XPosition
D	YPosition
E	Variable1
F	Variable2
G	Variable3
H	Variable4

map (Map Layout File)

These plain text files consist of a number of variables particular to the map and 100 room entries arranged in a 10x10 grid which determines how the rooms are connected.

The first line contains 10 comma separated entries: A,B,C,D,E,F,G,H,I,J

A	MapName (E.g. map010)
B	StartX
C	StartY
D	BackgroundMusicId
E	ShowE3Banner
F	TilesetID
G	Unknown7
H	OverlayTextureId
I	Unknown9
J	Unknown10

The next ten lines are room entries. Each line contains ten comma separated entries. An entry consists of the room's number, or "NULL" if it is an unused space.

The final line is always "end,,,".

szs (Room Layer Tiles)

Each room has 16 *.szs files (layer), making 8 possible different areas per room. Each area has a "low" layer(ending with 1_x.szs) which is rendered underneath the player and actors, and a "high" layer(ending with 2_x.szs) which is rendered over the player and most actors.

Each *.szs file contains 1024 16bit entries organised into 4 16x16 grids. The first 512 bytes of the file therefore contain the tile data for the top left 16x16 tiles of the room(which is 32x32 tiles). The next 512 are the top right, then bottom left and finally bottom right.

All the tile entries are in little Endian format.

Usual File format:

- **Yaz0** Nintendo Yaz0 Compression
- **RARC (ARC)** Nintendo RARC Archive
- **BIT** Nintendo Binary Texture Image
- **JPAC2-10 (JPC)** JParticle container v2

- **SCRNblo2 (BLO)** Binary layout v2
- **J3D2bmd3 (BMD)** J3D Binary Model Display List v3
- **J3D1brk1 (BTK)** J3D TEV color animation
- **MGCLbmc1 (BMC)** Binary Message Control
- **MESGbmg1(BMG)** Binary Message container
- **FONTbfn1(BFN)** Binary font
- **AWJ**Audio wave audio
- **DSP** Nintendo DSP Audio codec
- **THP** Nintendo THP Video
- **GBA ROM File**

Main.dol Strings:

https://github.com/Venomalia/Zelda-FSA-Modding/blob/main/Reverse-engineering/main.dol_Strings.csv

Navi / Tetra's Trackers Documentation

TT File Infos:

audio => Audio data in dsp format

bgm => Music data

se => Sound effects data

voice => voice data

vc_aka => King of Red Lions voice data

vc_aka_50on => King of Red Lions voice synthesizer

vc_cha => Sue-Belle voice data

vc_cha_50on => Sue-Belle voice synthesizer

vc_cin => Tingle voice data

vc_cin_evt => Tingle Event voice data

vc_npc => Various voice data for result screen

vc_quz => Salvatores quiz voice data

vc_sal => Salvatore voice data

vc_tes => Tetra voice data

vc_tes_50on => Tetra voice synthesizer

res => Audio data

2d => Various screens

bingo.arc => bingo screen

buttonIcon.arc => A&B buttons top right

connect.arc => GBA connect screen

courseSel.arc => Level select screen

data_select.arc => file select screen

error.arc => gba connect error screen

info.arc =>

infoItem.arc => info Item screen

infoRule.arc => How to play screen

mode.arc => Medals or time mode screen

navi_card.arc => Pirate Exam screen

navi_select.arc => Navigator select screen

pon.arc => pon minigame level 5 & 10

quiz.arc => quiz screen

record_kai.arc => Secret Seashell screen
record_score.arc => Score screen
record_stamp.arc => Medal screen
result.arc => result screen
rule.arc => Goal explanation screen
save.arc => Save screen
start.arc => start screen after level select
terop.arc => Info at the bottom of the TV screen
tinkle.arc => Tinkle difficulty levels
window.arc => TV screen
CardIcon => Memory card and Banner icons.
Demo => camera objects
Gba => GBA Data
 L_01 => Treasure Match Mini Game
 L_02 => Jar Thrower Mini Game
 L_03 => Moving Traps Mini Game
 L_04 => Quicksand Trap Mini Game
 L_05 => Balloon Attack Mini Game
 L_06 => Water Rapids Mini Game
 L_07 => (Unused) Tetra's Trackers Leftovers
 RULE0 => GBA Course 1-12.
 C_00 => Course 5 (Bridge Fountain)
 C_01 => Course 12 (Athletic Park)
 C_02 => Course 7 (Animal Trail)
 C_03 => Course 9 (Quicksand Pit)
 C_04 => Course 8 (Two Terraces)
 C_05 => Course 11 (Altar of Fire)
 C_06 => Course 6 (Cross Island)
 C_07 => Course 3 (Water Vacation)
 C_08 => Course 4 (Three Triangles)
 C_09 => Course 1 (Small Mountain)
 C_10 => Course 2 (Cherry Square)
 C_11 => Course 10 (Labyrinth)
Menu => jp font unused?
message => jp font & In game text
Object => 3D Objects
 3d_mini_game.arc => (unused)(Incomplete) icons
 Always.arc => Numerous model which are always needed
 BG.arc => (unused) Objects belonging to jina.
 bingo.arc => (unused) bingo game
 bird.arc => Seagulls
 csel.arc => (unused) earlier level select screen with clouds background
 gonzo.arc => gonzo & count down
 jina.arc => (unused) Marvelous jina model
 jina_2d.arc => (unused)(Incomplete) Marvelous earlier jina place holder?
 kaizoku.arc => pirate ship model
 kg.arc => Salvatore model
 Logo.arc => (unused) Nintendo logo and scan mode
 map.arc => (unused) E3 TV screen map
 pause01.arc => (unused) Pause screen
 picon.arc => (unused)(Incomplete) Marvelous player pointers
 player.arc => (unused)(Incomplete) Marvelous player badges
 roulette.arc =>
 roulette2.arc =>
 rupy.arc => Rupee model, also present in always
 rz.arc => (unused)(Incomplete) Marvelous player Emojis

shima.arc => map model
ship.arc => King of Red Lions model
stage.arc => Sea and sky
stmp.arc => (unused) early stmp map icons
studio.arc => Lookout model
System.arc => Toon shader
tc.arc => Tingle model
telop.arc =>(unused)(Incomplete)
Test.arc =>(unused)(Incomplete) Same as jina_2d.arc
tetora.arc => Tetra model
Title.arc =>(unused)(Incomplete) E3 2003 Tetra's Trackers logo
trackers_demo.arc => link and pirates model used in intro
trsbox.arc => (unused)(Incomplete) Treasure chest icon
weather.arc => (unused)(Incomplete) Marvelous Weather forecast
yubi.arc => (unused)(Incomplete) Marvelous Pointer
yw.arc => Sue-Belle model
zoomMap.arc =>(unused)(Incomplete)
Particle => unused?.
trackers_particle00.jpc => JPAC2-10 particle system

Framework.dol Strings

https://github.com/Venomalia/Zelda-FSA-Modding/blob/main/Reverse_engineering/framework.dol_Strings.csv

Framework.dol MAP

https://github.com/Venomalia/Zelda-FSA-Modding/tree/main/Reverse_engineering/Map

GBA Text Table File

<https://github.com/Venomalia/Zelda-FSA-Modding/tree/main/Reverse%20engineering/Text%20Table%20File>

Credits:

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Four Swords Plus Discord <https://discord.gg/G2FhAdf5pR>