Sega System SP

The Sega System SP (also known as “Spider” or “Aurora”) is an arcade board developed by Sega, released in 2004. It is a cost-reduced derivative of the NAOMI hardware, built around the same Dreamcast-based system-on-a-chip (Hitachi SH-4 CPU and PowerVR2 GPU) but with enhanced memory (64 MB RAM vs. NAOMI's 32 MB). Unlike NAOMI, the System SP runs a bespoke version of Linux 2.6 and has all controls wired directly to the main board, eliminating the need for a separate JVS I/O board.

The System SP was primarily used for kid-oriented arcade games, medal/hopper games, and card-based games. Notable titles include Dinosaur King, Love and Berry, Tetris Giant, and Brick People.

Games are stored on CompactFlash cards or the board's built-in flash memory. Some titles like Love and Berry run entirely from internal flash.

For more details on the hardware, see the Sega-Arcade documentation on GitHub.

This system scrapes metadata for the “systemsp” and “arcade” groups and loads the `systemsp` set from the currently selected theme, if available.

Quick reference

- **Accepted ROM formats:** `.lst`, `.bin`, `.dat`, `.zip`, `.7z`
- **Folder:** `/userdata/roms/systemsp`

Emulators
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Flycast

BIOS

The BIOS is required for System SP emulation.

MD5 checksum	Share file path	Description
	`bios/dc/segasp.zip`	Sega System SP (Spider) MAME BIOS

ROMs

Place your System SP ROMs in `/userdata/roms/systemsp`. Flycast uses the MAME ROMset.

ROMs are stored as ZIP archives (MAME format). Simply place the game's `.zip` file in the ROM folder:

```
roms/
└─ systemsp/
   ├─ dinoking.zip
   ├─ lovebery.zip
   ├─ tetgiant.zip
   ├─ brickppl.zip
   └─ kingyo.zip
```

System SP games in MAME are individual ROM sets (like NAOMI cartridge games). Each game is a standalone ZIP file — no CHD disc images are needed.

Game list

MAME ID	Game title	Type
dinoking	Dinosaur King (USA)	Card battle
dinokior	Dinosaur King - Operation: Dinosaur Rescue	Card battle
dinoki25	Dinosaur King - D-Team VS. the Alpha Fortress	Card battle
dinoki4	Kodai Ouja Kyouryuu King (Japan)	Card battle
dinokich	Konglongwang (China)	Card battle
lovebery	Love And Berry - 1st-2nd Collection	Card fashion
lovebero	Love And Berry - 1st-2nd Collection (older)	Card fashion
loveber3	Love And Berry - 3rd-5th Collection	Card fashion
loveber3cn	Love And Berry - 3rd-5th Collection (China)	Card fashion
tetgiant	Tetris Giant / Tetris Dekaris (Ver.2.000)	Puzzle
tetgiano	Tetris Giant / Tetris Dekaris (older)	Puzzle
brickppl	Brick People / Block PeePoo	Puzzle
btlracer	Saikyou Saisoku Battle Racer	Racing
huhimage	Heat Up Hockey Image	Sports
isshoni	Isshoni Wanwan Waiwai Puppy 2008	Kids
kingyo	Yataimura Kingyosukui	Medal / Hopper
shateki	Yataimura Shateki	Medal / Hopper
magicpop	Magical Poppins	Medal / Hopper
manpuku	Manpuku Suizokukan	Medal / Hopper
unomedal	UNO the Medal	Medal / Hopper
puyomedal	Puyo Puyo! The Medal Edition	Medal / Hopper
ochaken	Ocha-Ken Hot Medal	Medal / Hopper
westdrmg	Western Dream Gold	Medal / Hopper
monomedal	Monopoly the Medal 2nd Edition	Medal / Hopper

MAME ID	Game title	Type
kazaaan	100&Medal Kazaaan!!	Medal / Hopper
kazaaan2	100&Medal GekiKazaaan!!	Medal / Hopper
arajewel	Arabian Jewel	Medal / Hopper
bingogal	Bingo Galaxy	Medal / Bingo
bingopar	Bingo Parade	Medal / Bingo
mirworld	Mirage World	Medal
aminosan	Aminosan	Medal
galilfac	Galileo Factory	Medal

Many System SP games are medal/hopper games designed for Japanese arcade medal gameplay. These games may have limited appeal outside of an arcade setting as they are designed for physical coin/medal dispensing hardware. The card-based games (Dinosaur King, Love and Berry) and standard games (Tetris Giant, Brick People) are generally more suitable for home emulation.

Emulators

System SP support was added to Flycast starting with version 2.2. Not all games are fully compatible.

RetroArch

RetroArch (formerly SSNES), is a ubiquitous frontend that can run multiple “cores”, which are essentially the emulators themselves. The most common cores use the libretro API, so that's why cores run in RetroArch in Batocera are referred to as “libretro: (core name)”. RetroArch aims to unify the feature set of all libretro cores and offer a universal, familiar interface independent of platform.

RetroArch configuration

RetroArch offers a **Quick Menu** accessed by pressing `[HOTKEY]` +  which can be used to alter various things like RetroArch and core options, and controller mapping. Most RetroArch related settings can be altered from Batocera's EmulationStation.

Standardized features available to all libretro cores: `systemsp.videomode`, `systemsp.ratio`, `systemsp.shaderset`, `systemsp.smooth`, `systemsp.integerscale`, `systemsp.bezel`, `systemsp.bezel_stretch`, `systemsp.hud`, `systemsp.bezel.tattoo`, `systemsp.bezel.tattoo_corner`, `systemsp.bezel.tattoo_file`, `systemsp.bezel.resize_tattoo`

ES setting name `batocera.conf_key`	**Description ⇒ ES option `key_value`**
Settings that apply to all cores of this emulator	
GRAPHICS BACKEND `systemsp.gfxbackend`	Choose your graphics rendering ⇒ OpenGL `opengl`, Vulkan `vulkan`.

ES setting name batocera.conf_key	Description ⇒ ES option key_value
AUDIO LATENCY systemsp.audio_latency	Audio latency in milliseconds, turn it up if you hear crackles ⇒ 256 256, 192 192, 128 128, 64 64, 32 32, 16 16, 8 8.
ALLOW ROTATION systemsp.video_allow_rotate	Allow cores to set rotation. ⇒ On true, Off false.

libretro: Flycast

A fork of a fork of a fork... this is an identical version of standalone Flycast but inside of a libretro core. Makes use of RetroArch's features.

libretro: Flycast configuration

ES setting name batocera.conf_key	Description ⇒ ES option key_value
Settings that apply to all systems this core supports	
SYNCHRONOUS RENDERING global.reicast_synchronous_rendering	When threaded rendering is on (on by default), waits for the GPU to finish rendering the frame before dropping the current one. This can avoid certain emulation issues (flashing screens, glitchy video). Significant performance cost. ⇒ Off disabled, On enabled.
RENDERING RESOLUTION global.reicast_internal_resolution	Enhancement. Increases the rendering resolution. Makes 3D objects clearer. Significant performance cost. Use 640×480 for native. ⇒ 640×480 640×480, 960×720 960×720, 1280×960 1280×960, 1920×1440 1920×1440, 2560×1920 2560×1920, 3840×2880 3840×2880.
TEXTURE MIP-MAPPING (BLUR) global.reicast_mipmapping	Enables mip-mapping to smooth out textures on distant 3D objects. ⇒ Off disabled, On enabled.
ANISOTROPIC FILTERING global.reicast_anisotropic_filtering	Enables anisotropic filtering to enhance perspective textures. ⇒ Off False, 2x 2, 4x 4, 8x 8, 16x 16.
FRAMESKIP global.reicast_frame_skipping	Skip frames to improve performance, at the cost of choppy motion. ⇒ Off disabled, 1 1, 2 2, 3 3, 4 4, 5 5, 6 6.

All other settings can be configured from RetroArch's **Quick Menu** → **Options** ([HOTKEY] + ).

Flycast

Flycast is a fork of Reicast (which itself is a fork of nullDC). A highly compatible and accurate standalone Dreamcast, NAOMI, and System SP emulator.

System SP support was added in Flycast v2.2, with RFID chip emulation for Dinosaur King and Love & Berry added in v2.3.

Flycast configuration

ES setting name `batocera.conf_key`	**Description ⇒ ES option `key_value`**
Settings that apply to all cores of this emulator	
SCREEN RATIO `systemsp.flycast_ratio`	Choose which screen ratio you want to use. ⇒ Default `False`, Widescreen `True`.
RENDER RESOLUTION `systemsp.flycast_render_resolution`	Choose which internal rendering resolution you want to use. ⇒ 320×240 (Half) `240`, 640×480 (Native) `480`, 960×720 (x1.5) `720`, 1280×960 (x2) `960`, 1920×1440 (x3) `1440`.
GRAPHICS API `systemsp.flycast_renderer`	Choose your graphics renderer. ⇒ OpenGL (Default) `0`, Vulkan `4`.

All other configuration must be done via the `flycast-config` in the Applications folder (`[F1]` on the systems screen).

Controls

System SP games use a variety of input methods depending on the game type:

- **Card-based games** (Dinosaur King, Love & Berry): Primarily use buttons for card scanning and simple inputs.
- **Standard games** (Tetris Giant, Brick People): Standard arcade joystick and button controls.
- **Medal/hopper games**: Simplified button controls designed for medal gameplay.

Troubleshooting

Game fails to boot or shows black screen

1. Ensure you have `segasp.zip` BIOS in `bios/dc/`.
2. Verify the game ROM ZIP is a valid MAME ROMset (0.258 or newer recommended).
3. Try switching between **libretro: Flycast** and **standalone Flycast**.

Medal/hopper games don't work properly

Medal games are designed for arcade medal dispensing hardware. In emulation, hopper functionality is simulated but may not behave identically to real hardware. Some medal games may be difficult to play without the original arcade cabinet.

RFID card games (Dinosaur King, Love & Berry)

RFID chip emulation was added in Flycast v2.3. Ensure you are running a recent enough version of Flycast. These games may require specific button mappings to simulate card scanning functionality.

Further troubleshooting

For further troubleshooting, refer to the generic support pages.