

Star Engine/Sonic Retro Engine



Star Engine (formerly Sonic Retro Engine) are multiple engine ports developed by Rubberduckycooly. They were released in 2021.

These engines, part of the [Ports](#) section of Batocera, are enhanced versions of the original Sonic 1, 2 and Sonic CD for the Sega Megadrive/Genesis and CD32. They require additional game files from the recent iOS/Android ports to setup the games.

This system scrapes metadata for the “sonicretro” group(s) and loads the sonicretro set from the currently selected theme, if available.

Grouped with the “ports” group of systems.

Quick reference

- **Accepted ROM formats:** .son, .scd
- **Folder:** /userdata/roms/sonicretro

Emulators
sonic2013
soniccd

BIOS

The Star Engine itself does not need any BIOS file to run, however it is non-functional without the appropriate .rsdk file for the Sonic game you wish to play.

Data Files Setup ("ROMS")

Sonic 1 and 2

This port requires the .rsdk files from the Android or iOS versions of Sonic 1 & Sonic 2.

The Android APKs can be opened up in an extractor program like 7-zip. You need to extract the file /assets/Data.rsdk.xmf and rename it to Data.rsdk and place it in a folder named <Game Name>.son (for example Sonic 1.son).

Sonic CD

For Sonic CD, you can use the files from the Android, iOS, or Steam versions, as well as the video files from the Steam version.

The `Data.rsdk` is not included in the Play Store version of the Android APK files. It is a downloaded asset, and may be extractable on a rooted Android device. It is, however, included in the XAPK distributions from third-party app stores, which can also be treated as a zip file for extraction purposes. The file will match the pattern `Android/obb/com.sega.soniccd.classic/patch.*.com.sega.soniccd.classic.obb`. If you're using the Steam version, the `Data.rsdk` file is in the game's folder.

The `Data.rsdk` file and `videos/` folder should be in a folder named `<Game Name>.scd` (i.e. `roms/sonicretro/Sonic CD.scd/`).

The `<Game Name>.scd/videos/` folder is optional, and is only used for some full motion video sequences, including the "INTRO MOVIE" selectable from the game's main menu. The video files added to this folder **must** be the `.ogv` video files from the Steam version, regardless of which platform's `Data.rsdk` is used. Note however that the filename case for these files will require some tweaking, e.g. `Opening.ogv` from the Steam game must be called `opening.ogv` for use with the Android data file. For reference, the Android MP4 video assets can be extracted from the zip `Android/obb/com.sega.soniccd.classic/main.*.com.sega.soniccd.classic.obb` and can be viewed with any compatible video player software.

Working game data files

Here are the checksums of some data files that have been reported to be working.

Sonic game	Game file	md5	Source system	Game package versions	Notes
Sonic 1	Sonic 1.son/Data.rsdk	f679e87477bbed17ff1bdb9a6793f49c	iOS	v3.7.0	
		ad10f658daf0f09b367ad7f23e35ff57	Android	v3.0.0 - v3.3.0_57	
		39d3aa33504909a1f0771a7b3045f952	Android	v3.3.0_60 - v3.4.9	
		150e44dfea6a140dbf5575cc18944c51	Android	v3.5.0 - v3.5.1	
		b0a17e35bbc95b00ede921c1c0b80d40	Android	v3.8.1	
		2881d2492be3ba5d3b6106cdbf82c3e5	Unknown	Unknown	
Sonic 2	Sonic 2.son/Data.rsdk	b7339e7a4cf4ae6264449eec06465c7c	iOS	v4.6.0	
		2b2e44eaacbed7a12823e87a500f236f	Android	v1.0.1 - v1.2.9	
		7c638025b63d2da158dfaa70a402ec51	Android	v1.3.0 - v1.3.1	
		4d0821083a7cdb36a39e5cc1afb2e640	Android	v1.6.1	

Sonic game	Game file	md5	Source system	Game package versions	Notes
Sonic CD	Sonic CD.scd/Data.rsdk	78a03b962acf3e2622addab9cdb8e2ce	Unknown	Unknown	
		8879cd4d4656683cdce84877b3c9f64d	Android	v1.0.0	
		f21825684f8794fab41424ee682182b7	Android	v1.0.2	
		f3767127e84d11a59bdf18dfbde457a9	Android	v1.0.4_33	
		bc886a704acf60aab6c23e0e4b52b7e8	Android	v1.0.4_37 - v1.0.4_38	
		774e7e01ba3d6764fb678812150cbf38	Android	v1.0.5	
		8ba3cf699e9e48478ba9563c5e4aa33e	Android	v1.0.9	
		6649dd9866d07d6e588e29b101da3488	Android	v2.0.0	
		496b02ff3edcfbbcf3983a626fecf41	Android	v3.4.2 - v3.4.3	
		3e0d65650fefed8882977d6732fa0bc4	Android	v3.4.4	
		8c373a84d66bec9eedfbe178f2de39d2	Android	v3.4.5	
		1bd5ad366df1765c98d20b53c092a528	iOS	Unknown	Controller doesn't work Mouse works (but no visible mouse cursor)
		d497da2c7bac6485d1257dd35ee7f598	Unknown	Unknown	

Emulators

Batocera will auto-select the port to use based on the folder's extension - sonic2013/rsdk4 for .son folders, or soniccd/rsdk3 for .scd folders.

Selecting the wrong emulator will be ignored as the two versions are not compatible. The options are slightly different between the two, so you may need to manually select the emulator to change them.

The dev menu option is needed to run mods.

sonic2013

sonic2013 configuration

Standardized features available to all cores of this emulator: sonicretro.videomode

ES setting name batocera.conf_key	Description ⇒ ES option key_value
Settings that apply to all cores of this emulator	

ES setting name batocera.conf_key	Description ⇒ ES option key_value
LANGUAGE sonicretro.language	Change the game language ⇒ English 0, French 1, Italian 2, German 3, Spanish 4, Japanese 5, Portugese 6, Russian 7, Korean 8, Chinese 9.
VSYNC sonicretro.vsync	Enable vertical sync ⇒ Off 0, On 1.
SCALING MODE sonicretro.scalingmode	Screen scaling options ⇒ Nearest Neighbour 0, Integer Scale 1, Sharp Bilinear 2, Regular Bilnear 3.
HQ Mode sonicretro.hqmode	Enable High Quality effects for special stages ⇒ Off 0, On 1.
SKIP START MENU sonicretro.skipstart	Bypass the pre-game menu ⇒ Off 0, On 1.
DEV MENU sonicretro.devmenu	Modding and other advanced options ⇒ Off 0, On 1.

soniccd

soniccd configuration

Standardized features available to all cores of this emulator: sonicretro.videomode

ES setting name batocera.conf_key	Description ⇒ ES option key_value
Settings that apply to all cores of this emulator	
LANGUAGE sonicretro.language	Change the game language ⇒ English 0, French 1, Italian 2, German 3, Spanish 4, Japanese 5.
VSYNC sonicretro.vsync	⇒ Off 0, On 1.
SCALING MODE sonicretro.scalingmode	Screen scaling options ⇒ Nearest Neighbour 0, Integer Scale 1, Sharp Bilinear 2, Regular Bilnear 3.
HQ Mode sonicretro.hqmode	Enable high quality effects for special stages ⇒ Off 0, On 1.
SPINDASH TYPE sonicretro.spindash	Spindash type ⇒ By Save -1, Sonic 2 0, Sonic CD 1.
DEV MENU sonicretro.devmenu	For modding and other advanced options ⇒ Off 0, On 1.

Controls

Here are the default Sonic Retro Engine's controls shown on a [Batocera Retropad](#):



Troubleshooting

Further troubleshooting

For further troubleshooting, refer to the [generic support pages](#).

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