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Sega - Dreamcast/NAOMI (Flycast)

Contribute to this documentation

In order to propose improvements to this document, [visit its corresponding source page on github](#). Changes are proposed using "Pull Requests."

Background

Flycast is a multi-platform Sega Dreamcast, NAOMI, and Atomiswave emulator.

Why use this core?

Awaiting description.

How to get and install the flycast core:

1. Start up RetroArch. Inside the main menu, go to 'Online Updater'.
2. Just to make sure we have the latest info files, select 'Update Core Info Files'. Wait until this is done. Then, select 'Core Updater'.
3. Browse through the list and select 'Sega Dreamcast (flycast)'.

After this has finished downloading, the core should now be ready for use!

How to play (after installation):

1. Go back to RetroArch's main menu screen. Select 'Load Content'.
2. Browse to the folder that contains the content you want to run.
3. Select the content that you want to run.
4. If you are asked which core to select, choose 'Sega Dreamcast (flycast)'.

The game should now start running!

How to play NAOMI Games:

1. Run NAOMI games stored in MAME format zip files by following the same process as standard Dreamcast games
2. Run NAOMI GD-ROM format games stored in MAME zip + chd format by running the zip file through RetroArch. The zip file should be stored in your roms folder with the chd file in a subdirectory of the roms folder named after the mame ID.

Example (MAME ID=ikaruga)

- [ROM FOLDER]/ikaruga.zip
- [ROM FOLDER]/ikaruga/gdl-0010.chd

Authors

- flyinghead

See also

License

A summary of the licenses behind RetroArch and its cores can be found [here](#).

- [GPLv2](#)

Extensions

Content that can be loaded by the flycast core have the following file extensions:

- .cdi
- .gdi
- .chd
- .cue
- .bin
- .iso
- .elf
- .zip
- .7z
- .lst
- .dat
- .m3u

Databases

RetroArch database(s) that are associated with the flycast core:

- [Sega - Dreamcast](#)

BIOS

Required or optional firmware files go in RetroArch's system directory.

Filename	Description	md5sum
dc/dc_boot.bin	Dreamcast BIOS - Required for Dreamcast	e10c53c2f8b90bab96ead2d368858623
dc/dc_flash.bin	Date/Time/Language - Required for Dreamcast	0a93f7940c455905bea6e392dfde92a4
dc/naomi.zip	Naomi Bios from MAME - Optional	
dc/hod2bios.zip	Naomi The House of the Dead 2 Bios from MAME - Optional	
dc/f355dlx.zip	Naomi Ferrari F355 Challenge deluxe Bios from MAME - Optional	
dc/f355bios.zip	Naomi Ferrari F355 Challenge twin/deluxe Bios from MAME - Optional	
dc/airlbios.zip	Naomi Airline Pilots deluxe Bios from MAME - Optional	
dc/awbios.zip	Atomiswave BIOS from MAME - Optional	

⚠️ Attention

1. naomi.zip must include the epr-21576g.ic27 file (md5sum:3bfffafac42a7767d8dcecf771f5552ba)
1. All bios files need to be in a directory named 'dc' in RetroArch's system directory.

Features

Feature	Supported
Restart	✓
Screenshots	✓
Saves	✓
States	✗
Rewind	✗
Netplay	✗
Core Options	✓
RetroAchievements	✗
RetroArch Cheats	✓
Native Cheats	✗
Controls	✓
Remapping	✓
Multi-Mouse	✗
Rumble	✓
Sensors	✗
Camera	✗
Location	✗
Subsystem	✗
Softpatching	✗
Disk Control	✓
Username	✗
Crop Overscan (in RetroArch's Video settings)	✗

Directories

The FlyCast core's directory name is 'Flycast'

The FlyCast core creates these files in RetroArch's system directory.

- dc/vmu_save_A1.bin
- dc/vmu_save_B1.bin
- dc/vmu_save_C1.bin
- dc/vmu_save_D1.bin
- dc/data/dc_nvmem.bin

- dc directory ()
 - vmu_save_A1.bin ()
 - vmu_save_B1.bin ()
 - vmu_save_C1.bin ()
 - vmu_save_D1.bin ()
 - data directory ()
 - dc_nvmem.bin ()

Core provided aspect ratio

FlyCast's core provided aspect ratio is 4/3.

Rumble

Rumble only works when the Joypad being used has rumble functionality and the Joypad input driver being used has rumble function implementation (e.g. **Xinput**).

Core options

The FlyCast core has the following option(s) that can be tweaked from the core options menu. The default setting is bolded. Settings with (Restart) means that core has to be closed for the new setting to be applied on next launch.

- **CPU Mode (restart)** (**dynamic_recompiler**/**generic_recompiler**)

Awaiting description.

- **Boot to BIOS (restart)** (Off/On)

Boot directly into the Dreamcast BIOS menu.

- **Internal resolution (restart)** (**640x480**/1280x960/1920x1440/2560x1920/3200x2400/3840x2880/
4480x3360/5120x3840/5760x4320/6400x4800/7040x5280/7680x5760/8320x6240/8960x6720/
9600x7200/10240x7680/10880x8160/11520x8640/12160x9120/12800x9600)

Self explanatory.





- **Mipmapping (Off/On)**

Awaiting description.

- **Volume modifier (On/off)**

A GPU feature that is typically used by games to draw shadows of objects. You should typically leave this on - performance impact should be minimal to negligible.

- **Widescreen hack (Off/On)**

Awaiting description.

- **Audio buffer size (1024/2048)**

Awaiting description.

- **Cable type (TV (VBS/Y+S/C)/TV (RGB)/VGA (RGB))**

Awaiting description.

- **Broadcast (2/¾/0/½)**

Awaiting description.

- **Framerate (fullspeed/normal)**

Awaiting description.

- **Region (3/0/½)**

Awaiting description.

- **Precompile shaders (Off/On)**

Awaiting description.

- **"Enable RTT (Render To Texture) (Off/On)**

Awaiting description.

- **Purupuru Pack (restart) (Off/On)**

Awaiting description.

Controllers

Device types

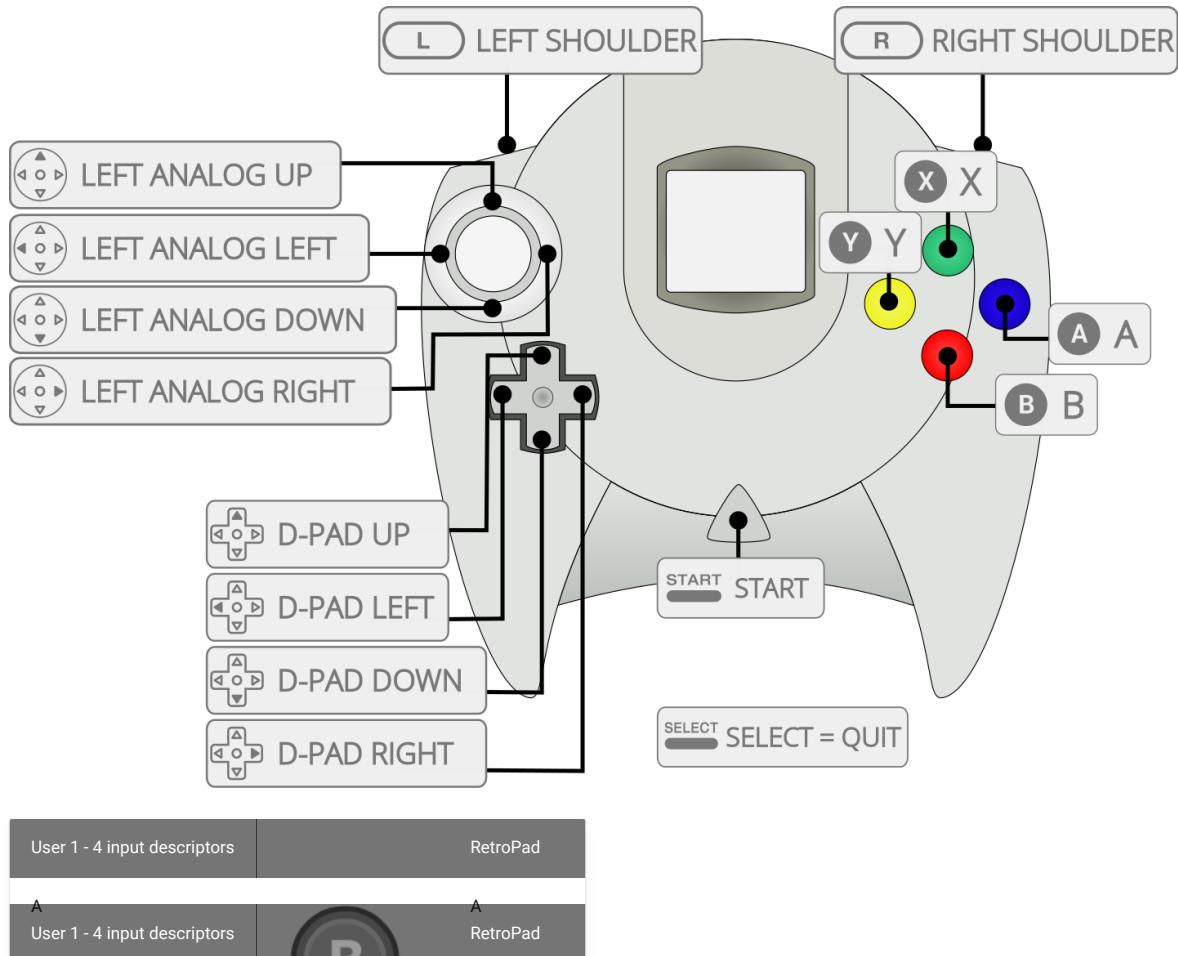
The Flycast core supports the following device type(s) in the controls menu, bolded device types are the default for the specified user(s):

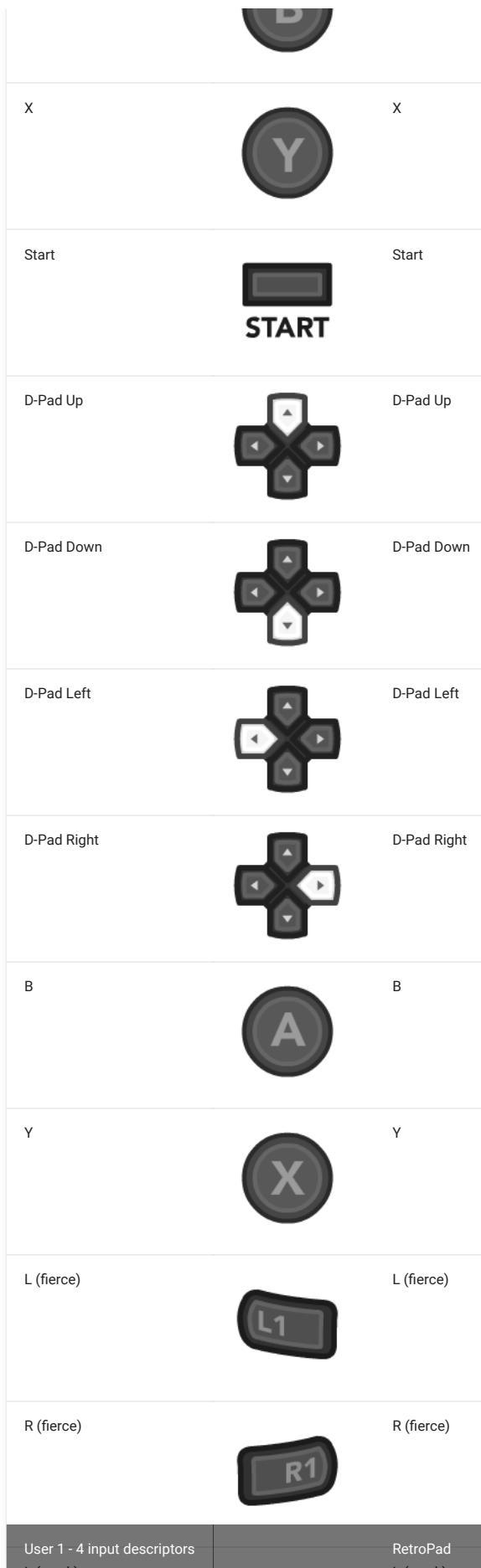
User 1 - 4 device types

- None - Input disabled.
- **RetroPad** - Joypad
- RetroPad w/Analog - Joypad - **There is no reason to switch to this.**

Controller tables

Joypad and analog device type table







Multiple-disc games

If foo is a multiple-disc game, you should have .chd/cue/cdi/gdi files for each one, e.g. `foo (Disc 1).chd`, `foo (Disc 2).chd`, `foo (Disc 3).chd`.

To take advantage of Flycast's Disk Control feature for disk swapping, an index file (a m3u file) should be made.



Create a text file and save it as `foo.m3u`. Then enter your game's .chd/cue/cdi/gdi files on it. The m3u file contents should look something like this:

```
foo.m3u
```

```
foo (Disc 1).chd
foo (Disc 2).chd
foo (Disc 3).chd
```

After that, you can load the `foo.m3u` file in RetroArch with the Flycast core.

An alternative is to append discs to the current playlist via the "Disk Image Append" option in the Disk Control RetroArch menu.

Compatibility

General Flycast Issues

- If the date and time are not being saved properly, please ensure you have the correct dc_flash.bin and dc_bios.bin files (check the md5sum values). Also try deleting all of the dc_nvmem.bin files in the system/dc directory.
- Once you save to a VMU slot with any game, that VMU becomes inaccessible the next time you load the emulator. The fix for this is to enable the Core Option for "Boot to BIOS", exit RA, delete all of the vmu_save*.bin files, start RA/Flycast. It will boot to BIOS where you can select the VMU option, select one of the VMUs, click the "All" icon in upper-left, click Delete All and the VMU will be formatted/intialized. Disable the "Boot to BIOS" option, restart RA, and everything should be fine.
- Polygon sorting issues can make objects appear distorted. Use Per-Pixel Alpha sorting for accurate rendering (at the expense of performance).
- When using an Xbox 360 Controller, analog triggers don't work properly. Use the bumpers instead.
- Changing games without closing and reloading RetroArch often leads to RetroArch crashing.

Game	Issue
Crazy Taxi (PAL)	Player taxis do not emit engine sounds.
Crazy Taxi (USA)	Player taxis do not emit engine sounds.
Jet Grind Radio (USA)	Police reports during levels do not display correctly.
Sonic Adventure (PAL)	Must be set to use "VGA" output in core options, as "TV" mode will cause all subsequent FMV to make RetroArch become unresponsive.
Unreal Tournament (USA)	Set Cable Type to 'VGA (RGB)', otherwise the game will crash at start.

External Links

- [Libreto Flycast Core info file](#)
- [Libreto Flycast Github Repository](#)
- [Report Flycast Core Issues Here](#)