Nintendo GameCube

The Nintendo GameCube is a console developed by Nintendo. It was released in 2001.

Nintendo Gamecube is emulated through the Dolphin emulator, which is the same emulator we use for the Nintendo Wii. Its emulation performance are stunning, and it offers several options to enhance the graphic quality of the Gamecube titles, that can be upscaled and look gorgeous, even by today's standards, if your PC can support it.

Some of the options for enhanced visual quality are available from the “Advanced System Options”. In particular you can enable a higher **VIDEO RESOLUTION** that will upscale the 3D models to a higher resolution, in combination with the use of **HIRES TEXTURES**.

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

Quick reference

- **Emulator:** Dolphin
- **Accepted ROM formats:** `.gcm`, `.iso`, `.gcz`, `.ciso`, `.wbfs`, `.rvz`, `.elf`, `.dol`, `.m3u`
- **Folder:** `/userdata/roms/gamecube`

BIOS

No Nintendo GameCube emulator in Batocera needs a BIOS file to run.

ROMs

Place your Nintendo GameCube ROMs in `/userdata/roms/gamecube`.

Emulators

Dolphin

For general information about the Dolphin Emulator itself, you can also visit the Dolphin Emulator page.

Dolphin configuration

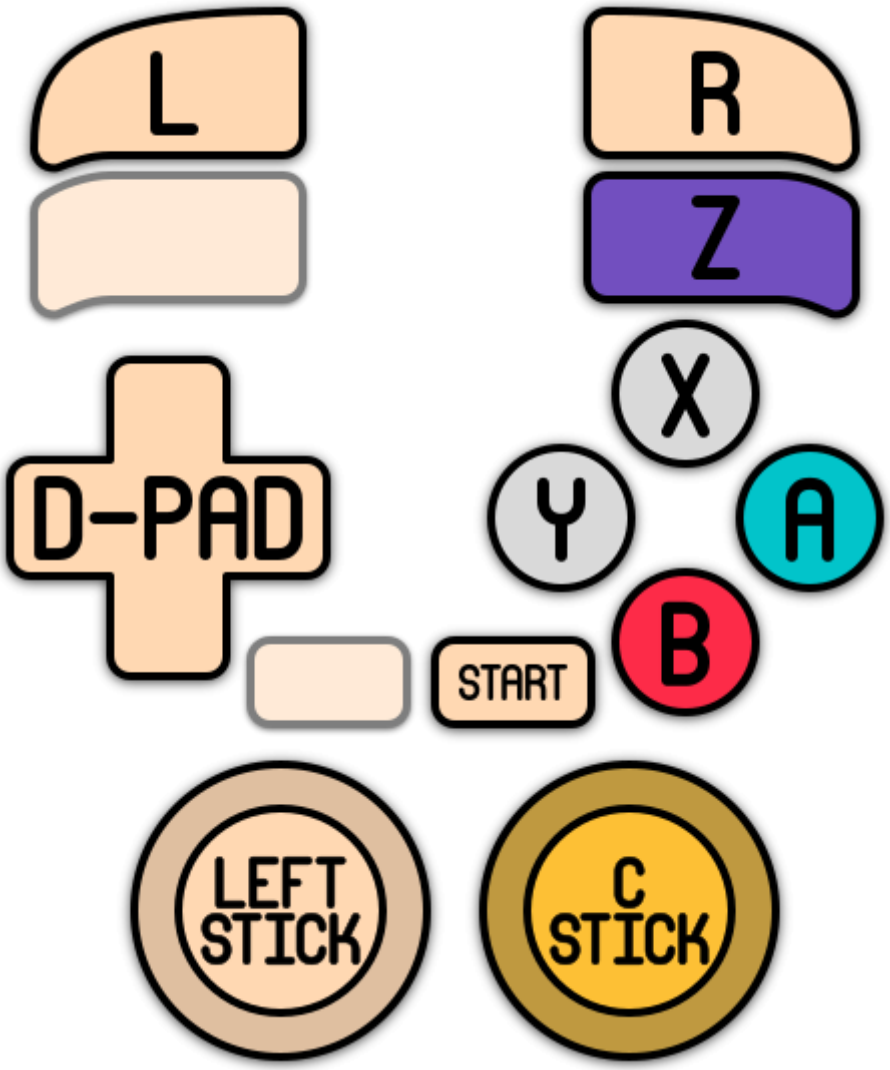
Standardized features available to all cores of this emulator: `gamecube.videomode`, `gamecube.ratio`

ES setting name `batocera.conf_key`	**Description ⇒ ES option `key_value`**
Settings that apply to all cores of this emulator	
GRAPHICS BACKEND `gamecube.gfxbackend`	Choose your graphics rendering ⇒ OpenGL `OGL`, Vulkan `Vulkan`.
UBERSHADERS `wii.ubershaders`	Improve performance with Ubershaders. Ubershaders take advantage of your GPU to avoid in-game stutters as it generates shaders for the first time; this can happen when a certain special effect shows on the screen or a new model is rendered. Hybrid ubershaders are preferred, it will use the GPU accelerated ubershader if available to avoid stutter, otherwise it will fall back to traditional shader generation. Exclusive ubershaders will only use ubershaders, only activate this option if you have an extremely powerful GPU. Normally there is no downside to activating ubershaders, however it does increase the minimum requirements out of your GPU to run. On especially weak hardware, such as SBCs, ubershaders are disabled by default. They can still be manually turned on, but you may encounter *more* stutter if on an SBC. Skip draw is a hack that opts to take a different approach altogether: don't display the object in game if its shader hasn't compiled yet. Obviously, this can result in visual glitches, but may be the best option performance-wise if your hardware is extremely weak.; asynchronous is preferred, synchronous is more compatible ⇒ No Ubershaders `no_ubershader`, Exclusive Ubershaders `exclusive_ubershader`, Hybrid Ubershaders `hybrid_ubershader`, Skip Drawing `skip_draw`.
PRE-CACHE SHADERS `gamecube.wait_for_shaders`	Wait for shaders to compile completely before starting the game, can reduce micro-freezes ⇒ Off (default) `0`, On `1`.
PERFORMANCE HACKS `gamecube.perf_hacks`	Increase emulator performance, at the cost of accuracy/stability. Settings set to “True” with this option: Defer EFB copies to RAM `DeferEFBCopies`, Scaled EFB Copy `EFBScaledCopy`, EFB Copies `EFBToTextureEnable`, Skip Presenting Duplicate Frames `SkipDuplicateXFBs`, XFB copies `XFBToTextureEnable`, Force Texture Filtering `ForceFiltering`, Arbitrary Mipmap Detection `ArbitraryMipmapDetection`, Disable Copy Filter `DisableCopyFilter`, Force 24-Bit Color `ForceTrueColor`. Settings set to “False” with this option: Bounding Box `BBoxEnable`, Ignore Format Changes `EFBEmulateFormatChanges`. ⇒ Off `0`, On `1`.

ES setting name batocera.conf_key	Description ⇒ ES option key_value
USE PAD PROFILES gamecube.use_pad_profiles	Search for custom configured joystick profiles ⇒ Off 0, On 1.
VIDEO RESOLUTION gamecube.internal_resolution	Improve the fidelity of 3D models (does not affect 2D sprites) ⇒ 1x native (640×528) 1, 2x 720p (1280×1056) 2, 3x 1080p (1920×1584) 3, 4x 1440p (2560×2112) 4, 5x (3200×2640) 5, 6x 4K (3840×3168) 6, 7x (4480×3696) 7, 8x 5K (5120×4224) 8.
ANISOTROPIC FILTERING gamecube.anisotropic_filtering	Enhance the quality of distant perspective textures ⇒ Off 0, 2x 1, 4x 2, 8x 3, 16x 4.
DUAL CORE MODE gamecube.dual_core	Usually not much faster than single core mode ⇒ Off 0, On 1.
GPU SYNC gamecube.gpu_sync	Speed hack for dual core mode to fix some glitches ⇒ Off 0, On 1.
ANTI-ALIASING gamecube.antialiasing	Smooth out jagged edges on 3D object polygons ⇒ Off 0, 2x 2, 4x 4, 8x 8.
ANTI-ALIASING MODE gamecube.use_ssaa	Toggle MSAA/SSAA. Depends on anti-aliasing being enabled. ⇒ MSAA (default) 0, SSAA 1.
HIRES TEXTURES gamecube.hires_textures	Use HD texture packs ⇒ Off 0, On 1.
WIDESCREEN HACK gamecube.widescreen_hack	You must use a 16/9 RATIO to work ⇒ Off 0, On 1.
ENABLE CHEATS gamecube.enable_cheats	To use game cheats or 16/9 Aspect Ratio Fix codes ⇒ Off 0, On 1.
MEMORY MANAGEMENT UNIT gamecube.enable_mmu	Allows many games to boot and work properly ⇒ Off 0, On 1.
FAST DISK SPEED gamecube.enable_fastdisc	Speeds up disc speed to remove any loading ⇒ Off 0, On 1.
VSYNC gamecube.vsync	Fix the heavy screen tearing in games (CPU heavy) ⇒ Off 0, On 1.
DUALSHOCK MOTION CONTROL gamecube.dsmotion	Emulate the Wii pointer with your DS4's gyroscope ⇒ Off 0, On 1.
MOUSE AS IR WIIMOTE gamecube.mouseir	Emulate the Wiimote IR control with a mouse ⇒ Off 0, On 1.
RUMBLE gamecube.rumble	To use vibration on games with Rumble mode ⇒ Off 0, On 1.

Controls

Here are the default Nintendo GameCube's controls shown on a Batocera Retropad:



GameCube adapter for Wii U USB passthrough

In a similar fashion to using Bluetooth passthrough for Wii controllers, you can use USB passthrough to allow Dolphin to entirely handle the GameCube controllers from your adapter.

Download the following file:

51-gcadapter.rules

```
SUBSYSTEM=="usb", ENV{DEVTYPE}=="usb_device", ATTRS{idVendor}=="057e", ATTRS{idProduct}=="0337", MODE="0666"
```

Save it as a udev rule to `userdata/system/udev/rules.d/51-gcadapter.rules` (there is no need to “reload” the udev rules, if you want to be sure just reboot Batocera).

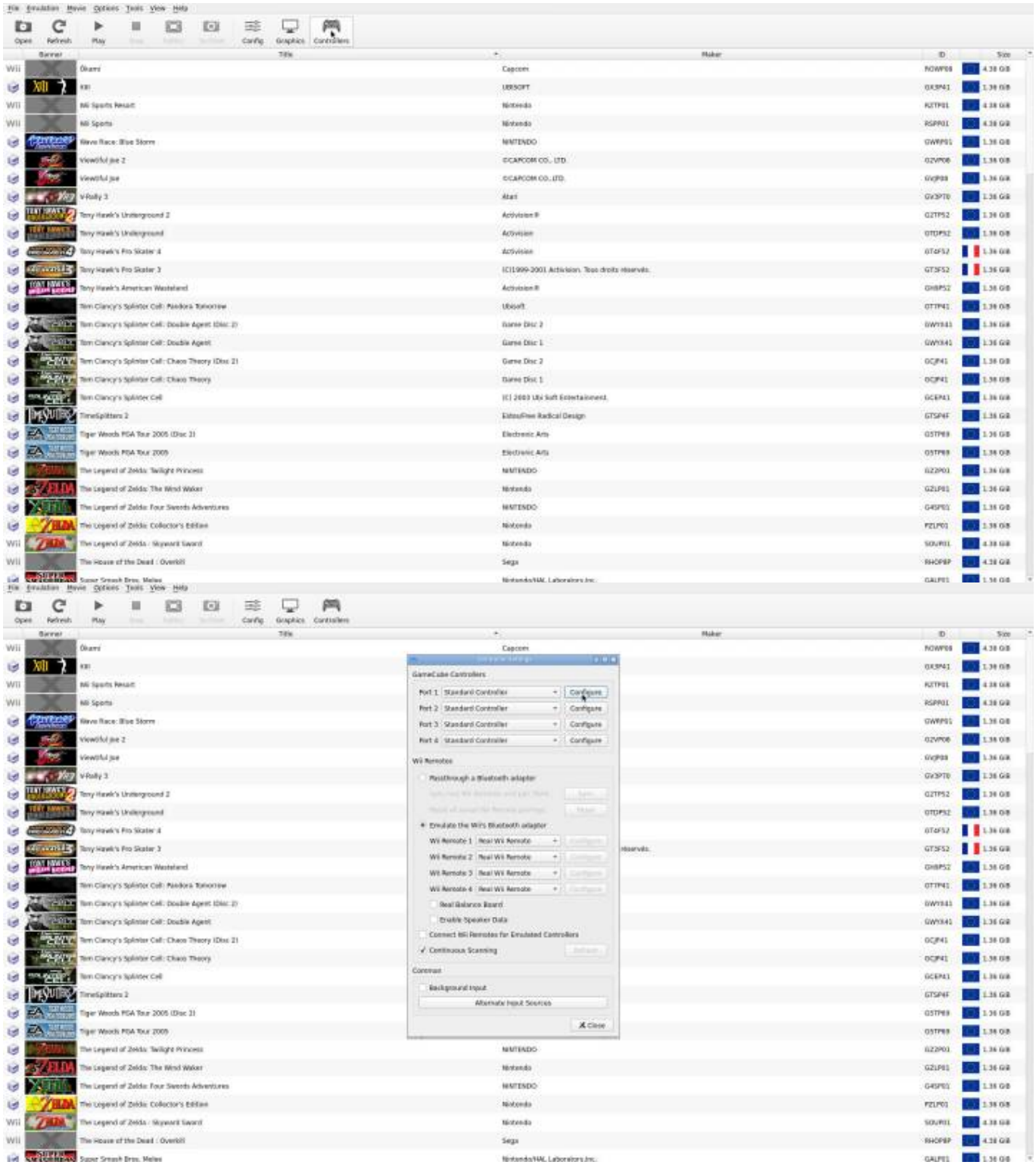
You must activate “Custom Pad Profile” and select “GameCube Adapter for Wii U” in Dolphin's controller settings. Boot up Dolphin, attach the Adapter, and it should become selectable.

You can access Dolphin's menu in-game with `[Alt]` + `[Tab]` to do this.

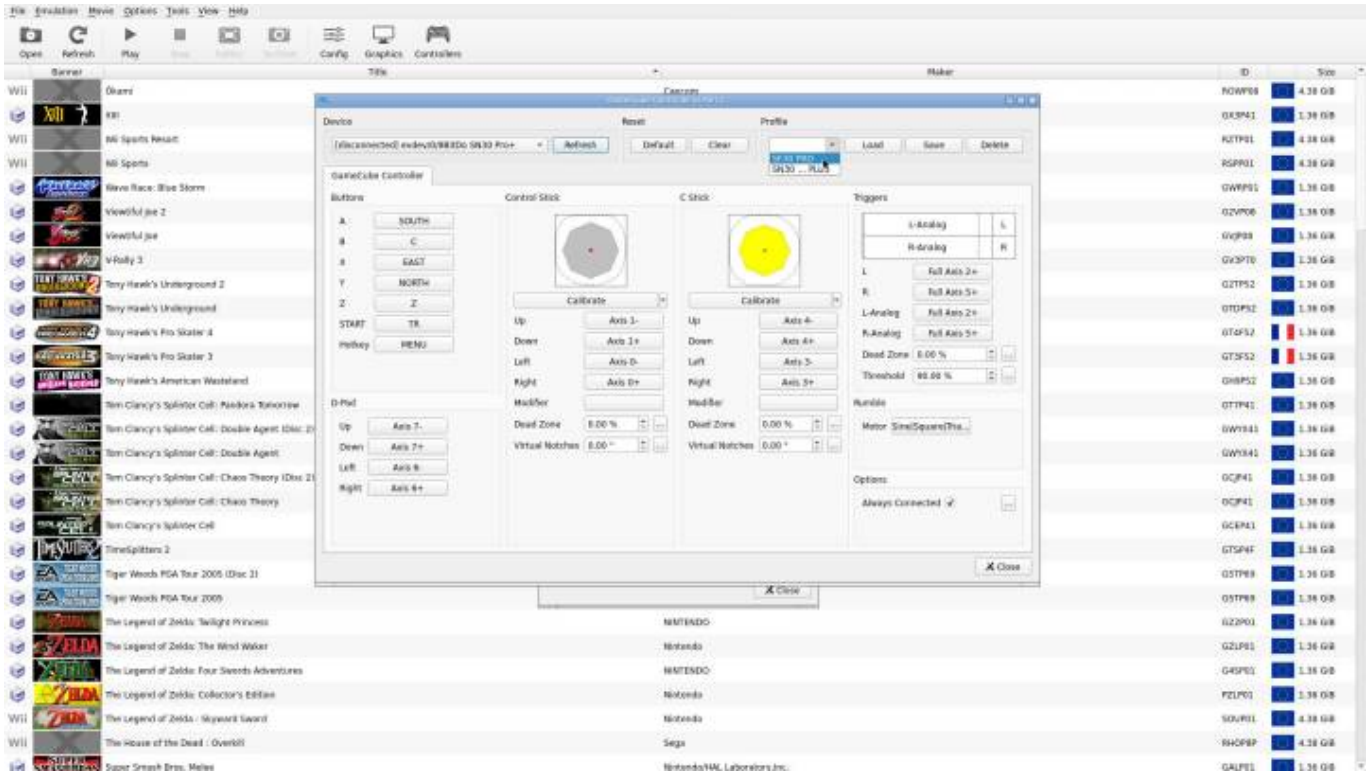
Custom Pad Profile

Since **v31**, it's possible to create and save custom pad profiles for GameCube (Dolphin emulator)

All you need to do is to go to **pads options** on Dolphin emulator by pressing the F1 key from system menu on EmulationStation.



Here, you can customize and save buttons mapping, and stick calibration.



Only one profile per pad.

After that, you simply need to set the **USE PAD PROFILES** option (in Dolphin advanced options on EmulationStation) to **TRUE** and your custom profile will be loaded.

Pad profiles are saved in `/userdata/system/configs/dolphin-emu/Profiles`.

For more information on remapping per system, refer to the relevant section on the remapping controls per emulator page.

Troubleshooting

There are infrequent frame-drops in my games despite them running at full-speed most of the time

Your GPU might not be strong enough to calculate the caches in real-time while playing. This can be worked around by activating the **PRE-CACHE SHADERS** **`gamecube.wait_for_shaders`** setting, at the cost of having to wait a while on your next launch of the game (one time only).

It's still happening!

For exceptionally weak hardware, it might also be worth turning off **UBERSHADERS** **`gamecube.ubershaders`** altogether.

Further troubleshooting

For further troubleshooting, refer to the generic support pages.