



Nintendo Game Boy Color

The Game Boy Color (GBC) is a 8-bit, fourth-generation handheld console released by  [Nintendo](#) on November 18, 1998. The Game Boy Color uses the same LR35902 core as the [original Game Boy](#); while it is clocked at 8.38 MHz, it can be underclocked to 4.19 MHz for backwards-compatibility purposes. It was named such from its color screen, but it also had a larger memory size and a faster CPU. The hardware similarities allow cross-compatibility between the two platforms and they are often treated as one.

The “Color” spelling remains consistent throughout the world, even in countries that opt to use the British spelling: “colour”.

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



Quick reference

- **Emulator:** [RetroArch](#)
- **Cores available:** [gambatte](#), [mgba](#), [vba-m](#), [mesens](#)
- **Folder:** /userdata/roms/gbc
- **Accepted ROM formats:** .gbc, .zip, .7z

BIOS

No Game Boy Color emulator in Batocera needs a BIOS file to run.

ROMs

Place your Game Boy Color ROMs in /userdata/roms/gbc.

To play two virtually linked Game Boy Color instances for multiplayer games, refer to [GBC2Players](#).

Emulators

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: `gbc.videomode`, `gbc.ratio`, `gbc.smooth`, `gbc.shaders`, `gbc.pixel_perfect`, `gbc.decoration`, `gbc.game_translation`

ES setting name batocera.conf_key	Description ⇒ ES option key_value
Settings that apply to all cores of this emulator	
GRAPHICS BACKEND <code>gbc.gfxbackend</code>	Choose your graphics rendering ⇒ OpenGL <code>opengl</code> , Vulkan <code>vulkan</code> .
AUDIO LATENCY <code>gbc.audio_latency</code>	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.
THREADED VIDEO <code>gbc.video_threaded</code>	Improves performance at the cost of latency and more video stuttering. Use only if full speed cannot be obtained otherwise. ⇒ On <code>true</code> , Off <code>false</code> .

libretro/Gambatte

Gambatte is an accuracy-focused, open-source, cross-platform Game Boy Color emulator written in C++. It is based on hundreds of corner case hardware tests, as well as previous documentation and reverse engineering efforts. The accuracy of the emulator is among the highest and is based off numerous reverse engineering tests and document studies.

We use the latest [libretro](#) core. See the [official documentation](#) for more information.

libretro/Gambatte configuration

ES setting name batocera.conf_key	Description ⇒ ES option key_value
Settings that apply to all systems this core supports	
SHOW BIOS BOOTLOGO <code>global.gb_bootloader</code>	Show BIOS animation when starting content ⇒ Off <code>disabled</code> , On <code>enabled</code> .
GHOSTING EFFECT <code>global.gb_mix_frames</code>	Simulate LCD ghosting effects ⇒ Off <code>disabled</code> , Simple (Accurate) <code>mix</code> , Simple (Fast) <code>mix_fast</code> , LCD Ghosting (Accurate) <code>lcd_ghosting</code> , LCD Ghosting (Fast) <code>lcd_ghosting_fast</code> .
Settings specific to gbc	
COLOR CORRECTION <code>gbc.gbc_color_correction</code>	Adjusts output colors to imitate real hardware ⇒ Off <code>disabled</code> , On <code>always</code> .
Settings specific to gb	

ES setting name batocera.conf_key	Description ⇒ ES option key_value
COLORIZATION gb.gb_colorization	Set the Game Boy palettes to use ⇒ Off none, GB - Smart Coloring GB - SmartColor, GB - DMG GB - DMG, GB - Light GB - Light, GB - Pocket GB - Pocket, GB - Black and White GB - Disabled, GBC - Blue GBC - Blue, GBC - Brown GBC - Brown, GBC - Dark Blue GBC - Dark Blue, GBC - Dark Brown GBC - Dark Brown, GBC - Dark Green GBC - Dark Green, GBC - Grayscale GBC - Grayscale, GBC - Green GBC - Green, GBC - Inverted GBC - Inverted, GBC - Orange GBC - Orange, GBC - Pastel Mix GBC - Pastel Mix, GBC - Red GBC - Red, GBC - Yellow GBC - Yellow, SGB - 1A SGB - 1A, SGB - 1B SGB - 1B, SGB - 1C SGB - 1C, SGB - 1D SGB - 1D, SGB - 1E SGB - 1E, SGB - 1F SGB - 1F, SGB - 1G SGB - 1G, SGB - 1H SGB - 1H, SGB - 2A SGB - 2A, SGB - 2B SGB - 2B, SGB - 2C SGB - 2C, SGB - 2D SGB - 2D, SGB - 2E SGB - 2E, SGB - 2F SGB - 2F, SGB - 2G SGB - 2G, SGB - 2H SGB - 2H, SGB - 3A SGB - 3A, SGB - 3B SGB - 3B, SGB - 3C SGB - 3C, SGB - 3D SGB - 3D, SGB - 3E SGB - 3E, SGB - 3F SGB - 3F, SGB - 3G SGB - 3G, SGB - 3H SGB - 3H, SGB - 4A SGB - 4A, SGB - 4B SGB - 4B, SGB - 4C SGB - 4C, SGB - 4D SGB - 4D, SGB - 4E SGB - 4E, SGB - 4F SGB - 4F, SGB - 4G SGB - 4G, SGB - 4H SGB - 4H, Special 1 Special 1, Special 2 Special 2, Special 3 Special 3, Special 4 (TI-83 Legacy) Special 4 (TI-83 Legacy), TWB64 - Pack 1 TWB75 - WonderSwan, TWB64 - Pack 2 TWB76 - Yellow Banana.

libretro/mGBA

mGBA is an emulator for running Game Boy Advance games. It aims to be faster and more accurate than many existing Game Boy Advance emulators, as well as adding features that other emulators lack. It also supports Game Boy and Game Boy Color games.

libretro/mGBA configuration

ES setting name batocera.conf_key	Description ⇒ ES option key_value
Settings that apply to all systems this core supports	
SHOW BIOS BOOTLOGO global.skip_bios_mgba	Show BIOS animation when starting content ⇒ Off True, On False.
Settings specific to gb	
SUPER GB BORDERS gb.sgb_borders	Only for Super Game Boy enhanced games ⇒ Off False, On True.
COLOR CORRECTION gb.color_correction	Adjusts output colors to feel real hardware ⇒ Off False, On GBA.
Settings specific to gbc	
SUPER GB BORDERS gbc.sgb_borders	Only for Super Game Boy enhanced games ⇒ Off False, On True.
COLOR CORRECTION gbc.color_correction	Adjusts output colors to feel real hardware ⇒ Off False, On GBC.
Settings specific to gba	

ES setting name batocera.conf_key	Description ⇒ ES option key_value
SOLAR SENSOR LEVEL gba.solar_sensor_level	Only for games that employed it (for Boktai) ⇒ 0 0, 1 1, 2 2, 3 3, 4 4, 5 5, 6 6, 7 7, 8 8, 9 9, 10 10.
FRAMESKIP gba.frameskip_mgba	Skip frames to improve performance (smoothness) ⇒ 0 0, 1 1, 2 2, 3 3, 4 4, 5 5, 6 6, 7 7, 8 8, 9 9, 10 10.

libretro/VBA-M

VBA-M is a Game Boy Advance emulator with the goal to improve upon VisualBoyAdvance by integrating the best features from the various builds floating around. It also supports Game Boy, Game Boy Color and Super Game Boy (both borders and palettes).

libretro/VBA-M configuration

ES setting name batocera.conf_key	Description ⇒ ES option key_value
Settings specific to gb	
COLORIZATION gb.palettes	Set the Game Boy palettes to use ⇒ original gameboy original gameboy, black and white black and white, gba sp gba sp, blue sea blue sea, dark knight dark knight, green forest green forest, hot desert hot desert, pink dreams pink dreams, weird colors weird colors.
COLOR CORRECTION gb.gbcoloroption_gb	Adjusts output colors to simulate real hardware ⇒ Off disabled, On enabled.
SUPER GB BORDERS gb.showborders_gb	Only for Super Game Boy enhanced games ⇒ Off disabled, On enabled.
Settings specific to gbc	
COLOR CORRECTION gbc.gbcoloroption_gbc	Adjusts output colors to simulate real hardware ⇒ Off disabled, On enabled.
SUPER GB BORDERS gbc.showborders_gbc	Only for Super Game Boy enhanced games ⇒ Off disabled, On enabled.
Settings specific to gba	
SOLAR SENSOR LEVEL gba.solarsensor	Only for games that employed it (for Boktai) ⇒ 0 0, 1 1, 2 2, 3 3, 4 4, 5 5, 6 6, 7 7, 8 8, 9 9, 10 10.
SENSOR SENSITIVITY (GYROSCOPE) gba.gyro_sensitivity	For Gyro-enabled games (bound to left analog stick) ⇒ 10 10, 15 15, 20 20, 25 25, 30 30, 35 35, 40 40, 45 45, 50 50, 55 55, 60 60, 65 65, 70 70, 75 75, 80 80, 85 85, 90 90, 95 95, 100 100, 105 105, 110 110, 115 115, 120 120.
SENSOR SENSITIVITY (TILT) gba.tilt_sensitivity	For Gyro-enabled games (bound to right analog stick) ⇒ 10 10, 15 15, 20 20, 25 25, 30 30, 35 35, 40 40, 45 45, 50 50, 55 55, 60 60, 65 65, 70 70, 75 75, 80 80, 85 85, 90 90, 95 95, 100 100, 105 105, 110 110, 115 115, 120 120.

libretro/MesenS

Wait does this actually work for Game Boy *Color* games and not just ordinary Game Boy games?

Technically a SNES emulator, MesenS supports some Game Boy Color games via the Super Game Boy (or at least, an emulated version of it). Requires the appropriate BIOS files to function.

ROMs placed in the `roms/sgb` folder will appear in the SNES's game list, opening them from here will start the Game Boy Color game as if though you were playing it from the Super Game Boy. How neat!

Controls

Here are the default Game Boy Color's controls shown on a [Batocera Retropad](#):



Troubleshooting

Further troubleshooting

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

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