



This article needs some TLC. Read at your own risk.

Magnavox Odyssey²

The Magnavox Odyssey² is a second-generation home videogame console developed by Magnavox - Philips, as a follow-up to the first home videogame console ever, the [Magnavox Odyssey](#). The Magnavox Odyssey² was released in 1978 for \$179.99 USD (\$475 in 2021).



This system scrapes metadata for the "odyssey2" group and loads the odyssey2 set from the currently selected theme, if available.

Quick reference

- **Emulator:** [RetroArch](#)
- **Core:** [libretro: O2EM](#)
- **Folder:** /userdata/roms/o2em
- **Accepted ROM formats:** .bin, .zip, .7z

BIOS



There is conflicting information about whether BIOS is required or not!

MD5 checksum	Share file path	Description
562d5ebf9e030a40d6fabfc2f33139fd	o2rom.bin	Odyssey2 BIOS - G7000 model
f1071cdb0b6b10dde94d3bc8a6146387	c52.bin	Videopac+ French BIOS - G7000 model
c500ff71236068e0dc0d0603d265ae76	g7400.bin	Videopac+ European BIOS - G7400 model
279008e4a0db2dc5f1c048853b033828	jopac.bin	Videopac+ French BIOS - G7400 model

ROMs

Place your Magnavox Odyssey² ROMs in /userdata/roms/o2em.


Place your Videopac+ ROMs in /userdata/roms/videopacplus.

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: `odyssey2.videomode`, `odyssey2.ratio`, `odyssey2.smooth`, `odyssey2.shaders`, `odyssey2.pixel_perfect`, `odyssey2.decoration`, `odyssey2.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>odyssey2.gfxbackend</code>	Choose your graphics rendering ⇒ OpenGL <code>opengl</code> , Vulkan <code>vulkan</code> .
AUDIO LATENCY <code>odyssey2.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>odyssey2.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: O2EM

[O2EM](#) is an open-source Magnavox Odyssey² emulator. This is the [libretro port](#) of that.

libretro: O2EM configuration

ES setting name batocera.conf_key	Description ⇒ ES option key_value
Settings that apply to all systems this core supports	
EMULATED HARDWARE <code>global.o2em_bios</code>	Choose what Odyssey/Videopac system to emulate ⇒ Odyssey 2 (NTSC) <code>o2rom.bin</code> , Videopac G7000 (European) <code>c52.bin</code> , Videopac+ G7400 (European) <code>g7400.bin</code> , Videopac+ G7400 (France) <code>jopac.bin</code> .

ES setting name batocera.conf_key	Description ⇒ ES option key_value
CONSOLE REGION global.o2em_region	To force 60hz or 50hz if the auto detection fail ⇒ Autodetect autodetect, NTSC NTSC, PAL PAL.
SWAP GAMEPADS global.o2em_swap_gamepads	Some games accept player 1 input from controller 2 ⇒ Off disabled, On enabled.
CROP OVERSCAN global.o2em_crop_overscan	Remove the border around the edges of the screen ⇒ Off disabled, On enabled.
GHOSTING EFFECT global.o2em_mix_frames	Simulate CRT phosphor ghosting effects ⇒ Off disabled, Simple mix, Ghosting (65%) ghost_65, Ghosting (75%) ghost_75, Ghosting (85%) ghost_85, Ghosting (95%) ghost_95.
AUDIO FILTER global.o2em_low_pass_range	Soften the hash sound effect from some games ⇒ Off 0, 10% 10, 20% 20, 30% 30, 40% 40, 50% 50, 60% 60, 70% 70, 80% 80, 90% 90.

Videopac+ G7400

The Videopac+ G7400 is a console developed by Philips. It was released in 1983.



In order to use this system instead, place your ROMs in /userdata/roms/videopacplus. Most games were also backwards compatible with the original Videopac/Magnox Odyssey2, to play games in this backward compatibility mode adjust the **ADVANCED SYSTEM SETTINGS** → **MODEL** to



or simply place your ROMs in /userdata/roms/o2em.

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

Voice samples

New to Batocera v32, a recent update to [libretro: O2EM](#) added sample support for emulating the voice synthesis module. Download the samples from [O2EM's homepage](#) (hover over "Misc" near the top of the page) and extract them into /userdata/bios/voice. Sid the Spellbinder requires its own pack, but if you're not intending on playing that game they're not required.

To confirm they are loaded correctly, K.C.'s Krazy Chase! plays a voice sample almost immediately after starting a game.

Controls

The Magnavox Odyssey² used both a standard joystick controller with a single button and the built-in keyboard. The keyboard is already mapped to your default keyboard but most games utilized just the joystick.

In some games, for example UFO/Satellite Attack, the player order is swapped. This can be solved by switching the player order for the affected games, or by saving a [manual remap](#) with the controller IDs swapped.

Here are the default Magnavox Odyssey²'s controls shown on a [Batocera Retropad](#):



Troubleshooting

Further troubleshooting

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

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