Gakken Compact Vision TV Boy

The Compact Vision TV Boy is a home video game console manufactured by Gakken (a Japanese educational publisher and toy maker), released in October 1983 exclusively in Japan at a price of 8,800 yen.

The console has a unique architecture — the CPU (a Motorola MC6801U4 or Hitachi HD6801V0P 8-bit microcontroller at 3.579 MHz) resides **inside the cartridge, not the console**. The console itself only contains the video hardware (Motorola MC6847P VDG), 2 KB of VRAM, an RF modulator, a 1-bit DAC for sound, and the built-in controls. Each cartridge ROM is exactly 4 KB.

The MC6847P video chip provides resolutions up to 256×192 pixels (2 colors) with various lower-resolution multicolor modes and a 12-color palette. Sound output is basic square-wave through a 1-bit DAC with volume decay. The controller is integrated into the console body — a 4-way joystick, two buttons (A and B/START), and a pause button.

The Compact Vision TV Boy was a commercial failure, having launched several months after the far superior Nintendo Famicom (July 1983). Only **six games** were ever released before the system was abandoned. It is one of the most obscure and rare consoles of the early 1980s, fully preserved and made playable in MAME 0.262 (January 2024).

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

Quick reference

- **Emulator:** MAME, RetroArch
- **Core:** MAME, libretro: MAME
- **Folder:** `/userdata/roms/ctvboy`
- **Accepted ROM formats:** `.bin`, `.zip`, `.7z`

MAME version 0.262 or newer is required for Compact Vision TV Boy emulation.

BIOS

No BIOS files are required. The CPU is embedded inside each cartridge, so there is no system ROM. Games run directly from the cartridge dump.

ROMs

Place your Compact Vision TV Boy ROMs in `/userdata/roms/ctvboy`.

All cartridge ROM dumps are exactly 4 KB in size. The complete game library consists of only six titles (all 1983, all published by Gakken):

1. **Excite Invader** — Space Invaders clone
2. **Mr. Bomb** — Kaboom! (Atari 2600) clone
3. **Robotan Wars** — Robotron: 2084 clone
4. **Chitaikuu Daisakusen** — Super Cobra (Konami) port
5. **Frogger** — Frogger (Konami) port
6. **Shigaisen 200X-nen** — Tank maze game

Emulators

MAME

MAME (Multiple Arcade Machine Emulator) is the only emulator that supports the Compact Vision TV Boy. The driver (`ctvboy`) was added as newly working in MAME 0.262, with all 6 games dumped and playable. The driver was created by **hap**, with game dumps provided by Jeremy Parish, Sean Riddle, and Gaming Alexandria.

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.

libretro: MAME

The libretro version of MAME can be used to emulate the Compact Vision TV Boy. It uses the same ROM sets as the standalone version.

Controls

The original console has all controls built into the body (no separate controllers):

Compact Vision TV Boy	Batocera RetroPad
4-way joystick	D-pad
Button A	
Button B / START	
Pause	[START]

See also

- Cassette Vision — another early Japanese console by Epoch (1981)
- Bandai Super Vision 8000 — another rare early Japanese cartridge console (1979)
- Casio PV-1000 — another obscure Japanese console from 1983

Troubleshooting

Game won't load

The Compact Vision TV Boy requires **MAME 0.262 or newer**. If your version of Batocera includes an older MAME version, this system may not work. Check your MAME version in the emulator settings.

Further troubleshooting

For further troubleshooting, refer to the generic support pages.

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