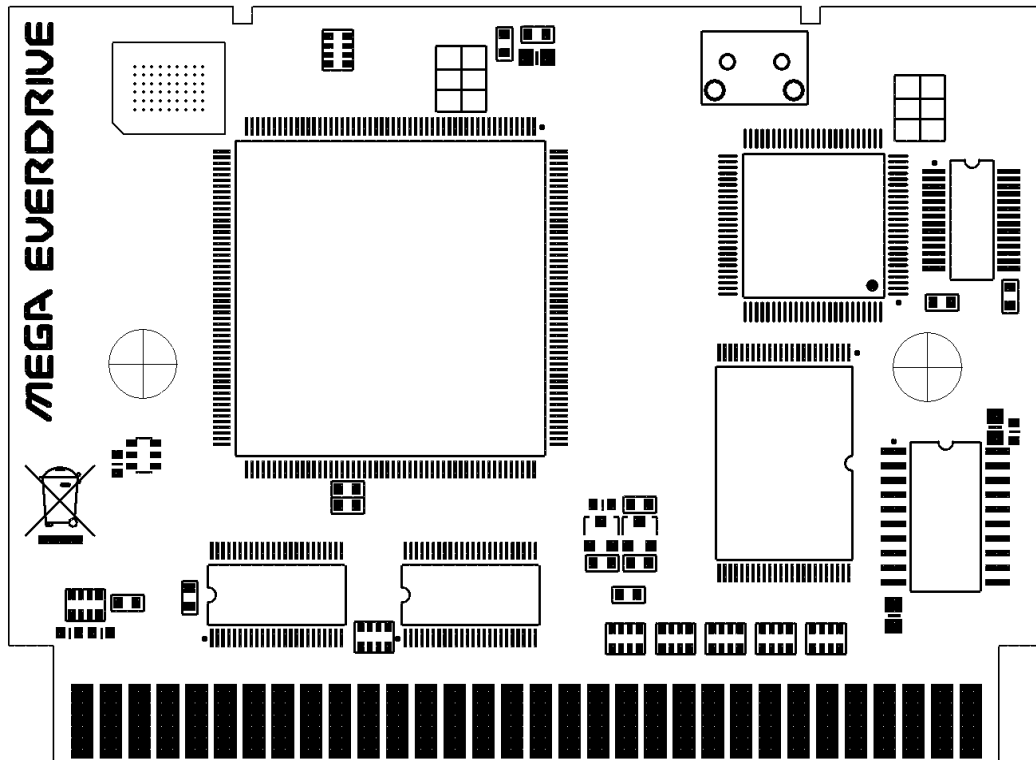


# MEGA EVERDRIVE v2

## User Manual



[www.krikzz.com](http://www.krikzz.com)

05.01.2014

## Features:

- Supports 99% of games from SEGA library
- 128mbit (16mbyte) PSRAM.
- 120mbit (10mbyte) max ROM size.
- 256Kbyte Battery RAM
- Firmware update through SD card
- FAT32 file system supported.
- SD cards up to 32GB.
- Instant loading (1-2 sec).
- Built in audio playback. WAV, GYM, TFC
- USB port for homebrew development and for future features.
- In-game menu that allows access back to menu system without leaving the sofa.
- Snapshot Saves.
- Regular game battery back-up saves.
- Genesis, Mega-drive, Sega Master System, and 32X games supported.
- Hardware MEGAKEY.
- CD BIOS loading.
- CD RAM cart feature.
- Cheats feature. Game Genie and Play-Action Replay format supported.

## Advantages of Mega EverDrive-V2 compared to Mega EverDrive-V1:

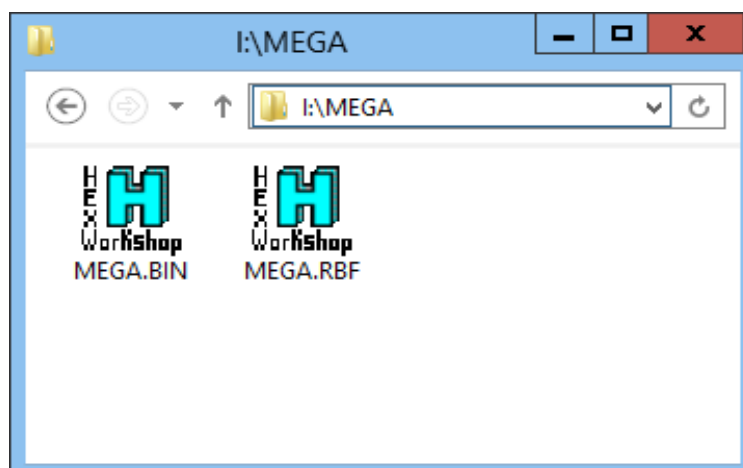
- Battery RAM for saves. It allow to save without need to push reset.
- Improved software.
- Better compatibility with clone systems.
- Improved hardware design and reduced power consumption.

## Preparation required for the cart to work:

- Download MEGAOS.ZIP from <http://krikzz.com>
- Unzip MEGAOS.ZIP to the root of SD card;
- Unzip ROM files and copy them to SD card;
- Insert SD card into cartridge;

(Not recommended to put a lot of files in a single folder, cart will not display more than 1024 files per folder. Folders with large amount of files inside may open slowly. Would be better to make a few folders with alphabetic names and put the ROM files in these folders.)

With the cart inserted and the SD prepared as instructed above you can then turn on your system, choose a ROM, invoke the file menu with the A button and run the game.



# File Browser

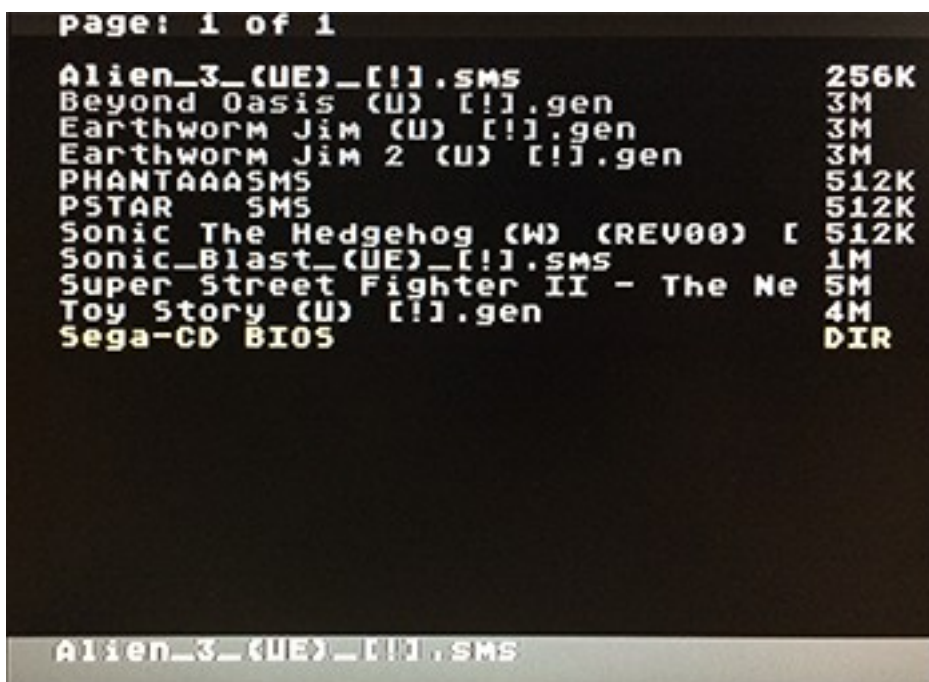
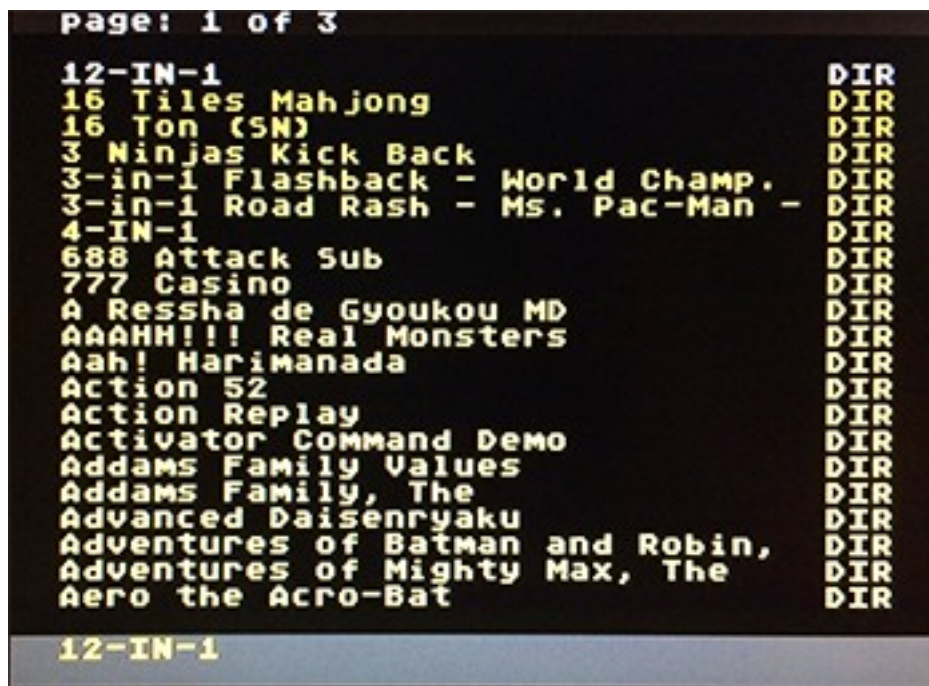
## Controls:

- A – Open the folder or open file menu
- B – Back to sub folder
- C – Open main menu
- START – Run last selected game

Yellow color display folders, gray color for files.

The File Browser allows to load ROM files, SRAM files, GameGenie cheats from text files, play wav, gym and tfc audio files.

The File browser can display up to 1024 files per folder. At the bottom of the screen OS displays the full name of selected file, in case if file name is too long to fit the screen in the list section.



# System folder

System folder located in the root of SD card(/MEGA/). This folder contains OS files, Save files and cheat files.

Contents:

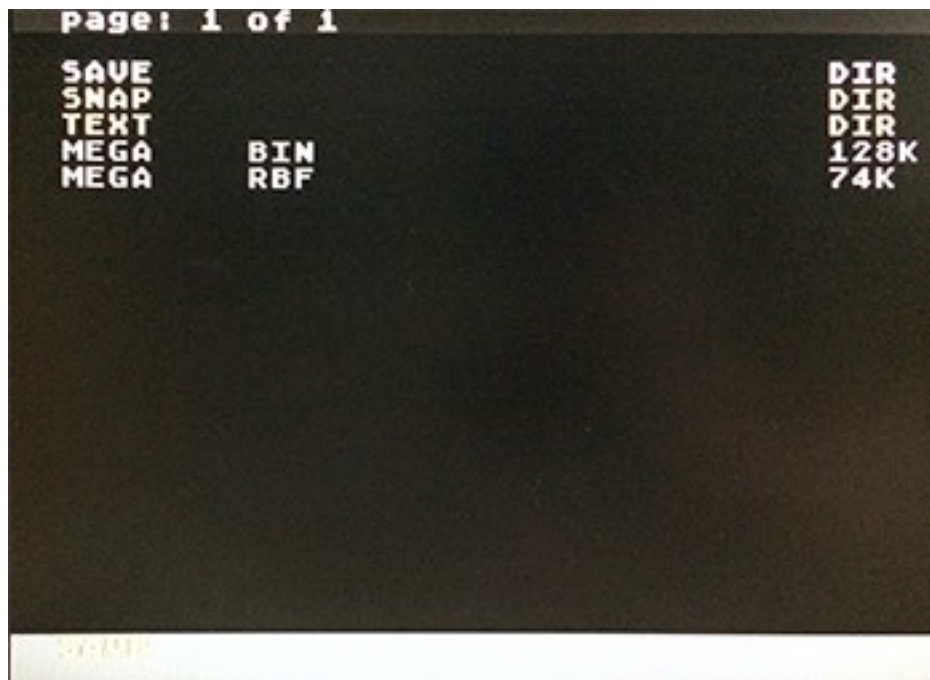
/MEGA/MEGA.BIN – CPU software (OS)

/MEGA/MEGA.RBF – FPGA software (firmware)

/MEGA/SAVE/ - Folder contains battery ram saves and mega-cd ram cart saves

/MEGA/SNAP/ - Folder contains snapshot saves

/MEGA/TEXT/ - Folder contains text files which cheats. System remembers cheat codes which were used previously and save them to this folder. When game will be selected next time, OS will check this folder, if folder contains text file with same name as selected ROM file, system will load cheats from this text file automatically.



# File Menu

The content of this menu depends on the type of file.

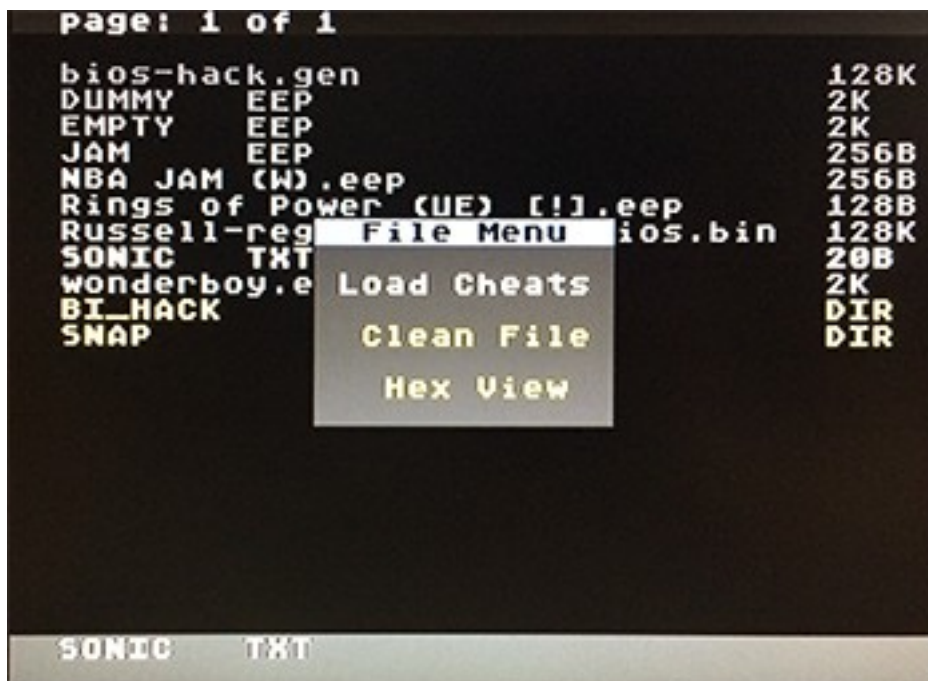
ROM file:

- Select And Start: Select active ROM, then load and start this ROM.
- Select Only: Select active ROM and stay in browser
- Hex view: View file in HEX



.txt file:

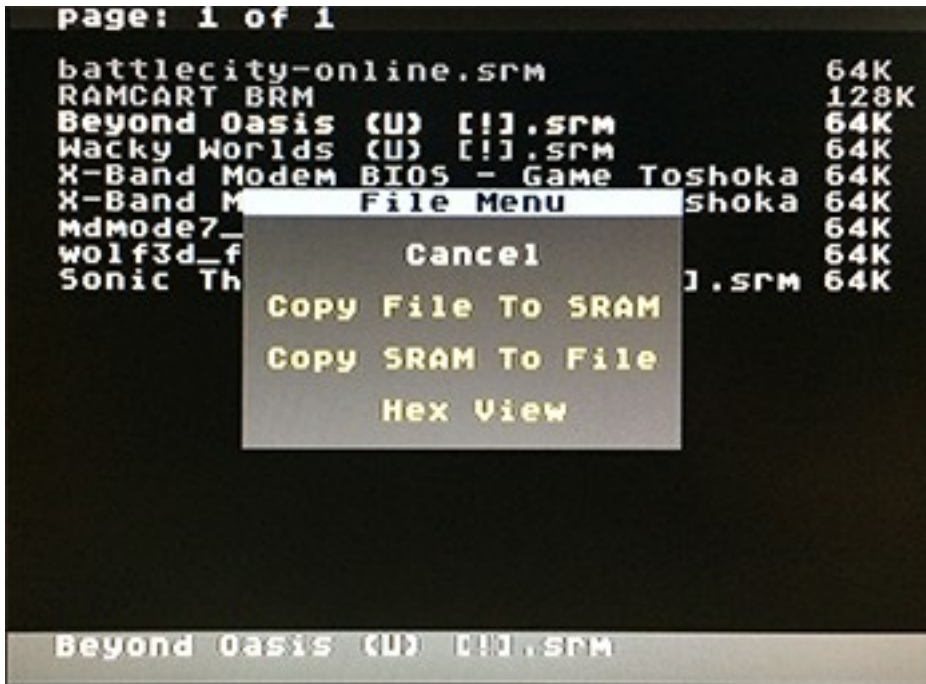
- Load Cheats: Load GameGenie cheats from the file
- Clean file: Clean content of text file. This is useful if need to remove cheats from auto loading folder (/MEGA/TEXT/)
- Hex view: View file in HEX





.srm, .eep, .sav, .brm, .ssm file:

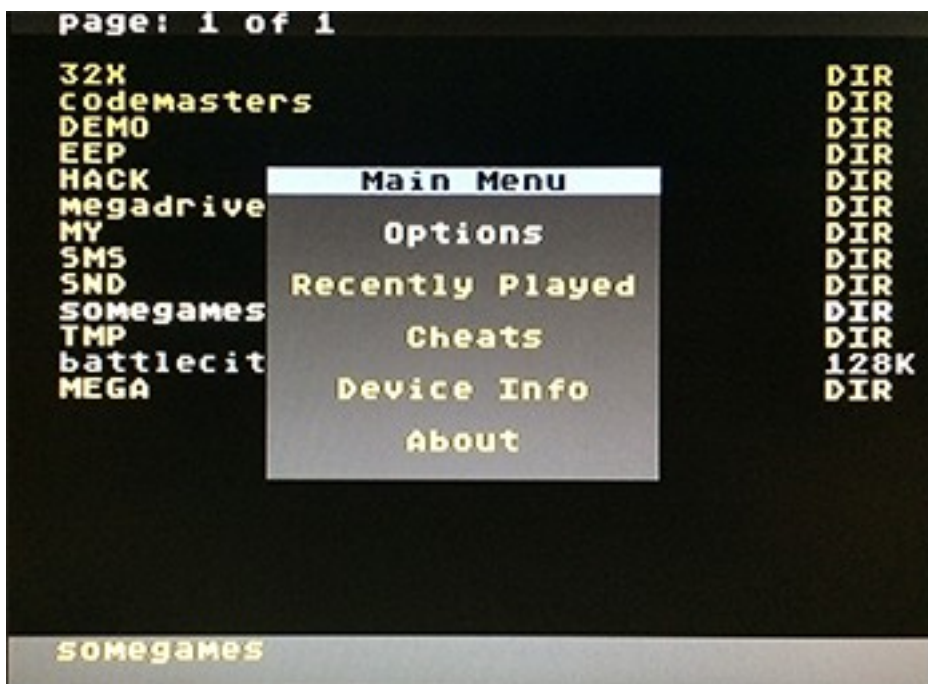
- Cancel: Close file menu
- Copy File to SRAM: Copy file from SD to SRAM
- Copy SRAM to file: Copy from SRAM to file in SD
- Hex view: View file in HEX



## Main Menu

Push C button to invoke the main menu

- Options: System settings
- Recently Played: List of recently played games
- Cheats: Cheat codes editor
- Device Info: System information
- About: Short information about developer and controls



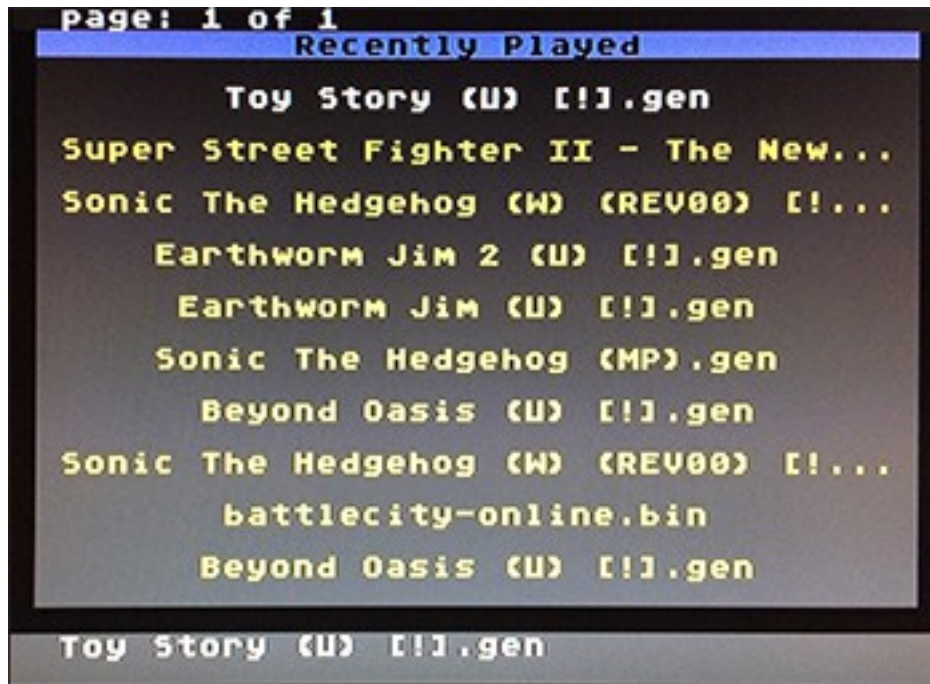
## Options

- **Game Region:** The value should match the ROM region (not the console region). This option is set automatically every time the user changes the game. The MegaKey feature uses the value of this option to disable region protection. The user can change this parameter manually, in case the OS detects the ROM region incorrectly.
- **MegaKey:** Allows to disable region protection. Some games may have advanced methods of region detection, MegaKey will not work for such games. MegaKey does not work in case cartridge is connected through a 32x. Some PAL games may not work properly with NTSC console, or vice versa. This happens because NTSC and PAL system have different timings, MegaKey can not fix it, MegaKey can only disable protection, nothing more. Because of this reason it is suggested to use ROMs which match the console region, exported ROMs should be used only in case if native ROMs does not exist.
- **SRAM backup:** This function allow automatic backup of SRAM save data to SD card. Every time when user changes the game, the OS will make write a file in MEGA/SAVE/ folder, the file name will match to ROM name, the SRAM data will be saved to this file. Next time, when the user selects the same game again, the OS will copy SRAM data from that file to SRAM memory. SRAM Save works only for games that have battery save functions. The OS will not create the save file if the game does not use the SRAM memory. If this option is disabled, the OS will not save/load SRAM memory to the SD file automatically every time when user change the game, but games are still allowed to use SRAM.
- **Reset To Game:** This option allows to back out from a game back to the menu after a reset. The OS will back out to menu when the option is disabled, will instead reset and stay in the the game if enabled.
- **In-Game Menu:** Enable/Disable in-game menu and save states function. In-Game menu offer functions for save game in any time and any place, also In-Game menu allow to return in cartridge menu without reset pushing.
- **Cheats:** Enable/Disable GameGenie cheats



## Recently Played

Choose one of games from the list and push A. System will set selected game as active and start, equal to "Select And Start" in ROM file menu.







## Device Info

- OS Version: Version of OS
- CPLD Version: Firmware of Altera MAX II
- MegaKey Mode: Hardware: MegaKey is operative. Software: MegaKey is inoperative, may be the cart is connected to the system through 32x. In this case the cart will try to apply a software patch to disable region protection, but this software method may not work for all games.
- System Type: Console region
- 32x Addon: Detection of 32x addon
- CD-ROM: Mega-CD region, or «No» if Mega-CD is not detected.
- Assembly date: Date of cartridge creation
- Assembly time: Time of cartridge creation

```
page: 1 of 1
bios-hack.gen 128K
DUMM System Information 2K
EMPT 2K
JAM OS Version: 2.00 256B
NBA CPLD Version: 1 256B
Ring 128B
RUSS 128K
SONI MegaKey Mode: Hardware 20B
wond 2K
BI_H DIR
SNAP DIR

SONIC TXT
```

# In-Game Menu

User can call In-Game menu right from the game, during game process. Push START+DOWN on first controller to call In-Game menu.

## Cases when In-game menu does not working:

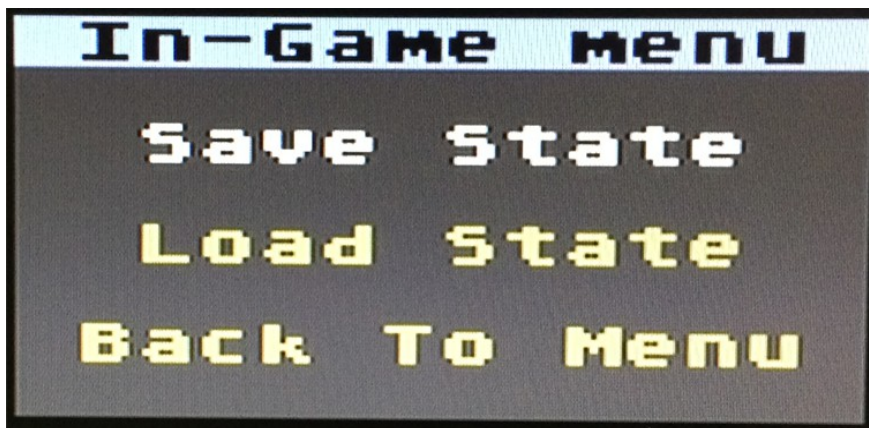
- If Mega EverDrive connected via 32x. Cartridge should be connected directly to console, without 32x addon
- This function does not work for 8-bit master system games, Super-street fighter, Big-size hacks and 32x games
- If game turn off vblank interrupt

## Menu functions:

- Save State: Save current state
- Load State: Load last saved state
- Back To Menu: Return to file browser

Save State function is experimental and may not work properly with some games. In some games this function may cause of hang, lost sound, some graphics artifacts etc. There is no known way to make complete snapshot of system state on real hardware, so, it working as is and probably will never be improved.

System store save state files to /MEGA/SNAP/ folder in .sav format. Sav file contains screen shot, user can view screen shot if push A on .sav file and choose "Preview" in file menu.



## SEGA Master System compatibility mode

The 16-bit Genesis/MegaDrive console has an embedded mode for compatibility with the old 8-bit SEGA Master System games. This mode allows to play old 8-bit SMS games with the new 16-bit system. Almost all Master System games works fine, but some of them may not work with 16-bit system. It happens because some games used specific video modes, this modes were removed from 16-bit VDP. SEGA-SG1000 and SEGA GameGear video modes are not supported by 16-bit VDP as well. Such games may start, but the system will display garbled grafix instead of the game normal picture. Also some games work fine only if used with an original Master System controller, without that they will normally not allow to control the main character. The Master System compatibility mode is disabled if the 32x peripheral is connected to the system. The SEGA Nomad and Genesis3 does not have native support for Master System mode at all, some Chinese clones may not have this mode as well. The Mega EverDrive cart has a push button on the top of the cart to be used for the pause button in the original Master System , since such a button was located in the Master System itself.



## **Recommendations**

- Do not put too many files in a single folder, it may slow down browser speed.
- FAT32 with 32Kbyte cluster size is recommended while formatting. Big cluster size may accelerate loading speed a bit.
- Standard Windows is the best for SD formatting and ROM file transfer. Some specific tools for formatting and file managers for file transfer are not recommended.
- GoodGen romset is recommended for use.
- Do not fill all the space on SD card, the card should have at least 10% of free space.
- Some Master System games may not work if MEGA-CD is connected to the system.
- Cartridge may not work reliably if MEGA-CD is connected to the system, but its power supply is not connected
- 32x games will not work without 32x add on
- ROM files must be unzipped, compressed ROMs will not work



# FAQ

**Q) What CD-BIOS function doing?**

A) This function allow to play US disk on EU system, or visa versa. Just need to load BIOS file which match to disk region

**Q) Can I save any game in any moment, like on emulators?**

A) Yes. Turn on In-Game menu in option, now you can push start+down in the game to call In-Game menu and use save state function.

**Q) What should I do if every time when I turn on the system, I see such message: "Settings reset to default"**

A) Probably time to change the battery

**Q) I copied OS files on SD, but cart still show me gray screen with error message, what is going on?**

A) Try to use another SD card. Some cards may not work with cart, especially if it some cheap cards which were bought in internet.

**Q) Can I play PAL rom on NTSC system or visa versa?**

A) Yes, but would be better to use ROM which match to console region. Export ROMs may be unstable or work with wrong speed.

**Q) Is there any difference in terms of gameplay between EverDrive and regular cart?**

A) No, games works exactly like with original cartridge.

**Q) I can see small button on the top of the cartridge, what is it?**

A) This button used for pause in 8-bit Master System games and as hard reset in 16-bit games.

**Q) Can I use Mega EverDrive as RAM cart for Mega-CD?**

A) Yes. Just run some CD bios file from SD

**Q) Can I play 32x games without 32x add-on?**

A) No.

**Q) Can I play Master System games without Power Base Converter ?**

A) yes.

**Q) I am having some problems using Game Genie codes, what should I do?**

A) It is highly suggested you learn how Game Genie codes work before using them on your Mega EverDrive. The Game Genie is not a creation of KRIKzz so support regarding them is limited.

## **Error Codes**

C0-C9: SD initialize error. May happens if SD card is not compatible with cartridge

D2-D3: SD read error. May happens if SD card is not compatible with cartridge, or if FAT system is damaged.

D4-D8: SD write error. May happens if SD card is not compatible with cartridge, or if FAT system is damaged.

F0: File not found

F1: Trying to create the file which already exist.

F3: Out of bounds of the file. May happened if FAT system is damaged.

F4: Not enough space on SD card

F6: FAT system not found.

FB: Unsupported file system. Only FAT32 is supported

30: ROM is to large.

32: Game is not selected