

CHDMAN

Convert your CD roms into a readable compressed format.

Introduction

The file formats to adopt for CDs and other optical supports.

We have talked about a format, derived from researches we had on MAME, in order to be able to represent these supports in a compressed way, without losing the integrity of the data and that these can remain scrappable.

This format is the CHD (Compressed Hunks of Data), datas that could be useful for SEGA CD, PS1, PC Engine...

Unfortunately, the classic user will have difficulties to use the converter, which is a command line executable.

So here is a Zip file, with automated scripts, to convert from BIN+CUE (Redump format) to CHD, and vice versa.

It has been added also for the GDI format, which is for the Dreamcast.

For PS1 games protected by LibCrypt, normally you have SBI (Subchannel Information) files, you keep them and put them with the CHDs, otherwise your games will not pass.

If you ever lose them or make a bad manipulation, these files are available on the files of each corresponding disk at Redump, next to the re-downloadable CUE files.



Avoid using them for the moment with your Saturn sets, otherwise in the bug reports/user incident sheets on the emulators, the requests will be invalidated on the RetroArch side or at the emulator devs.

Software

Windows

macOS


Linux

CHDMAN exists for macOS via Homebrew.

- Installation of XCode tools

First, you need to use the following command in the Terminal:

```
xcode-select --install
```


- ▶ Installation of [Homebrew](#) 

Next, you must use the following command in the Terminal:

```
/bin/bash -c "$(curl -fsSL  
https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

- ▶ If you are on Mac with Apple Silicon chip, you need to use this command:

```
echo 'eval $(/opt/homebrew/bin/brew shellenv)' >> ~/.zprofile
```

- ▶ Installation of [rom-tools](#) 

You must use the following command in the Terminal after Homebrew is installed:

```
brew install rom-tools
```

macOS 10.13 High Sierra minimum is required.

Here is a link to download files to automate format conversions:



[ChdScripts.zip](#)

In this zip you will find 6 files:

File name	Description
ConvertFromChdToCue.sh	A .sh file that allows you to convert your CHD roms to BIN / CUE format.
convertFromChdToGdi.sh	A .sh file that allows you to convert your CHD roms to GDI format.
convertFromChdToIso.sh	A .sh file that allows you to convert your CHD roms to ISO format.
convertFromCueToChd.sh	A .sh file that allows you to convert your BIN / CUE roms to CHD .
convertFromGdiToChd.sh	A .sh file that allows you to convert your GDI roms to CUE .

File name	Description
convertFromIsoToChd.sh	A .sh file that allows you to convert your ISO roms to CUE .
README_EN.txt	
README_FR.txt	

Contents of the readme file

► **convertFromChdToCue.sh**

Decompresses a CHD (V5) file into a BIN+CUE file.

The CUE format is used by games on CD. CHD is supported by 3DO, Amiga CD32, Amiga CDTV, Dreamcast, Mega CD, Neo-Geo CD, PC Engine CD, PlayStation and Saturn.

► **convertFromChdToGdi.sh**

Decompresses a CHD (V5) file into a GDI file.

The GDI format is used by disk-based games for Dreamcast.

► **convertFromChdToIso.sh**

Decompresses a CHD (V5) file into an ISO file.

The ISO format is used by disk-based games for PlayStation 2.

► **convertFromCueToChd.sh**

Compresses any type of BIN disk files with a CUE header to the CHD (v5) format. Searches all subfolders and creates CHD (v5) files in the folder where the files are placed with CHDMAN.

► **convertFromGdiToChd.sh**

Compresses any type of BIN disk files with a GDI header to the CHD (v5) format. The GDI format is used by disk-based games for Dreamcast.

► **convertFromIsoToChd.sh**

Compresses any type of BIN disk files with a ISO header to the CHD (v5) format. The ISO format is used by disk-based games for PlayStation 2.

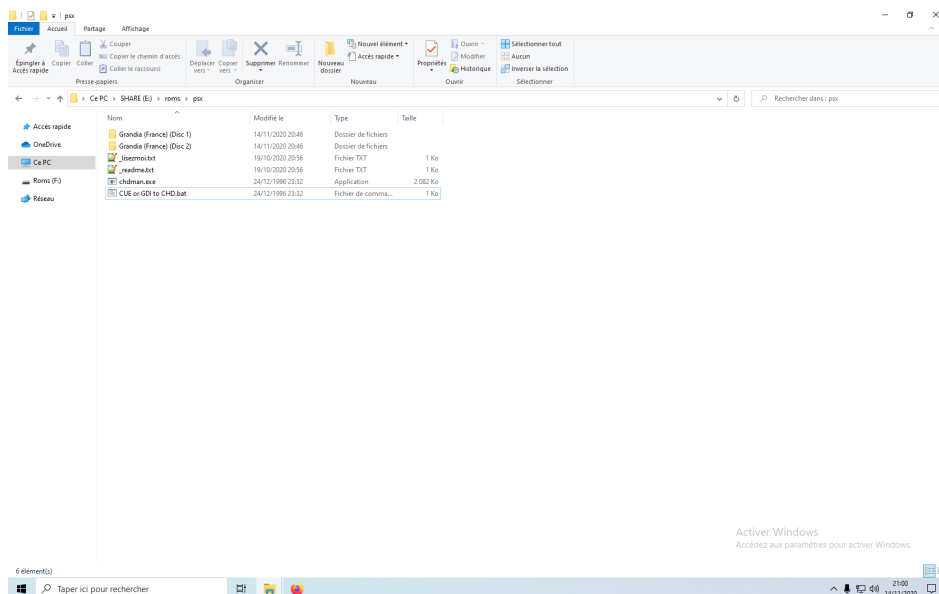
Automated use

Windows

Linux / macOS

Convert your game from **BIN / CUE or GDI to CHD**

- Put "**chdman.exe**" and "**CUE or GDI to CHD.bat**" in the folder containing your game as below.
Example for the game "Grandia (France)":



- Click on the file "**CUE or GDI to CHD.bat**" to start the conversion.

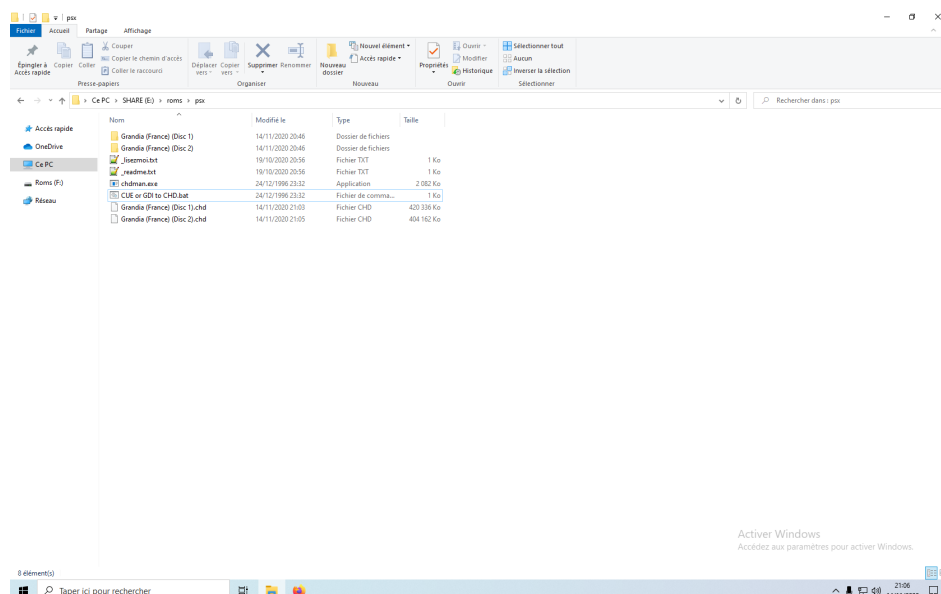
```

C:\WINDOWS\system32\cmd.exe

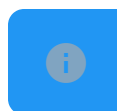
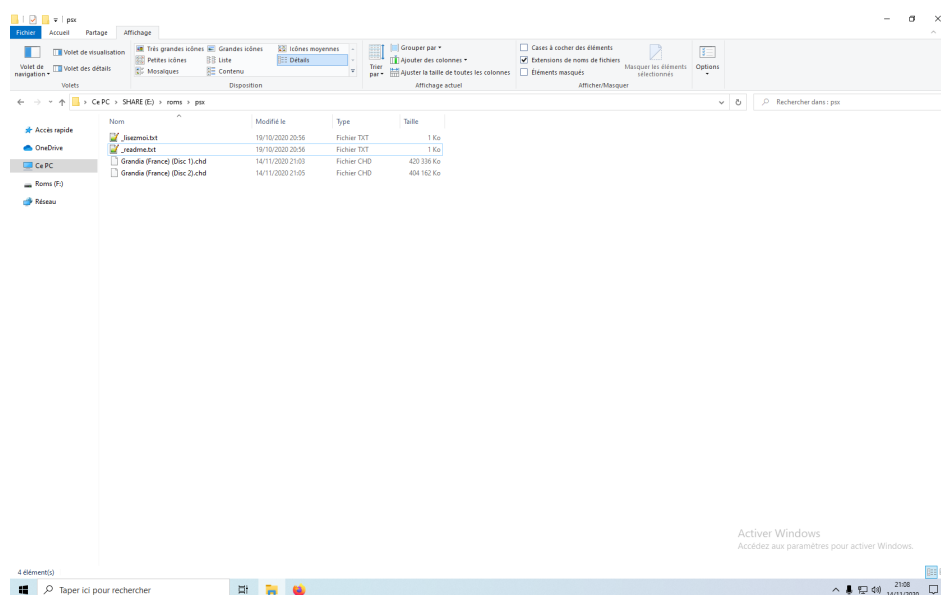
E:\roms\psx>for /R %i in (*.cue *.gdi) do chdman createdcd -i "%i" -o "%~ni.chd"
E:\roms\psx>chdman createdcd -i "E:\roms\psx\Grandia (France) (Disc 1)\Grandia (France) (Disc 1).cue" -o "Grandia (France) (Disc 1).chd"
chdman - MAME Compressed Hunks of Data (CHD) manager 0.205 (mame0205)
Output CHD: Grandia (France) (Disc 1).chd
Input file: E:\roms\psx\Grandia (France) (Disc 1)\Grandia (France) (Disc 1).cue
Input tracks: 1
Input length: 65:30:30
Compression: cd1z (CD LZMA), cdz1 (CD Deflate), cdf1 (CD FLAC)
Logical size: 721,621,440
Compression complete ... final ratio = 59.6%

E:\roms\psx>chdman createdcd -i "E:\roms\psx\Grandia (France) (Disc 2)\Grandia (France) (Disc 2).cue" -o "Grandia (France) (Disc 2).chd"
chdman - MAME Compressed Hunks of Data (CHD) manager 0.205 (mame0205)
Output CHD: Grandia (France) (Disc 2).chd
Input file: E:\roms\psx\Grandia (France) (Disc 2)\Grandia (France) (Disc 2).cue
Input tracks: 1
Input length: 64:05:03
Compression: cd1z (CD LZMA), cdz1 (CD Deflate), cdf1 (CD FLAC)
Logical size: 705,954,240
Compressing, 29.1% complete... (ratio=63.7%)
  
```

- Once the CMD window above has closed automatically, your conversion is complete.



- You can delete "**chdman.exe**" and "**CUE or GDI to CHD.bat**", your rom is ready.



You can also run the .bat file to start the conversion of several games at once.

Convert your game from CHD to BIN / CUE

- Put "**chdman.exe**" and "**Extract CHD to CUE.bat**" in the folder containing your game as below.
Example for the game "Grandia (France)":
- Click on the file "**Extract CHD to CUE.bat**" to start the conversion.
- Once the CMD window above has closed automatically, your conversion is complete.
- You can delete "**chdman.exe**" and "**Extract CHD to CUE.bat**", your rom is ready.



You can also run the .bat file to start the conversion of several games at once.

Convert your game from CHD to GDI

- ▶ Put "**chdman.exe**" and "**Extract CHD to GDI.bat**" in the folder containing your game as below. Example for the game "Grandia (France)":
- ▶ Click on the file "**Extract CHD to GDI.bat**" to start the conversion.
- ▶ Once the CMD window above has closed automatically, your conversion is complete.
- ▶ You can delete "**chdman.exe**" and "**Extract CHD to GDI.bat**", your rom is ready.



You can also run the .bat file to start the conversion of several games at once.

Create the .M3U file

In CHD conversion for multi-disk games, you have to make a **M3U** file to declare all the disks.

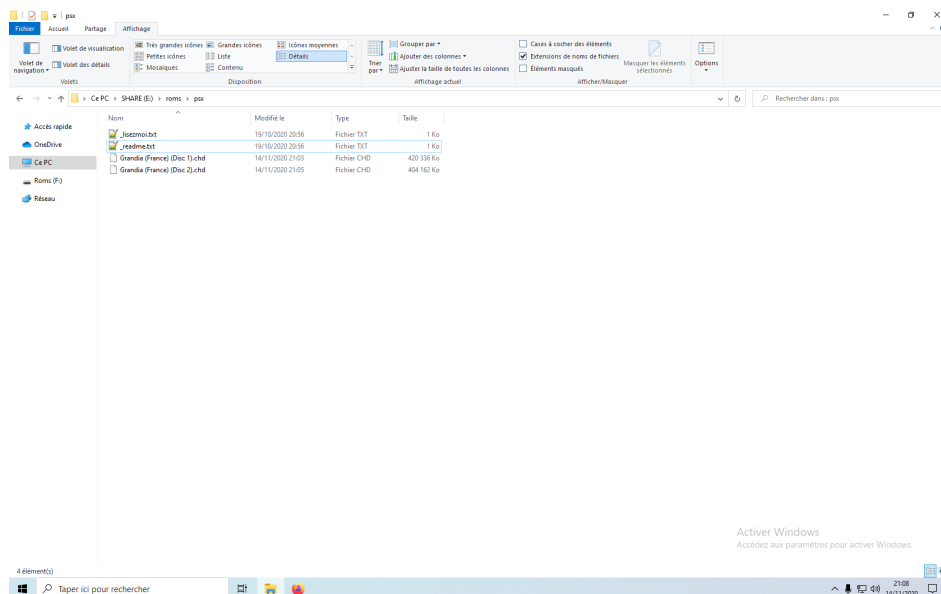
The **.M3U** file is a list of the different CDs for a game that allows you to switch from one CD to another in a simple way by using the disc change combination (**Hotkey** + **L. STICK** to the *LEFT* or to the *RIGHT*).

Example for the game "Grandia (France)":

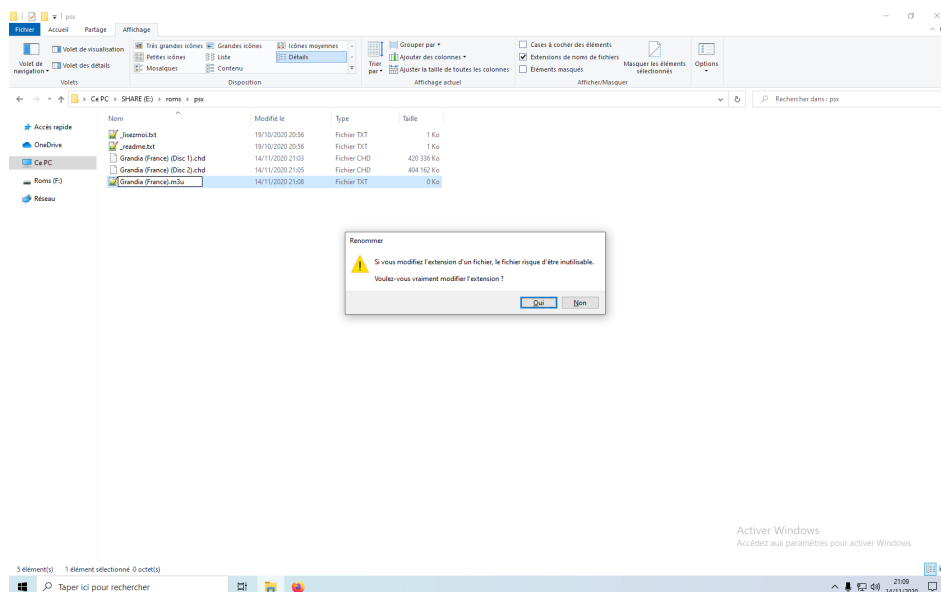
- ▶ Create a **M3U** file via Notepad++ named "Grandia (France).m3u".
- ▶ In the file, fill in the **CHD** files of the game:

```
1 | Grandia (France) (Disc 1).chd
2 | Grandia (France) (Disc 2).chd
```

- ▶ On Windows, you must have the extension view enabled to create this file:
 - ▶ Go to **View** at the top of the Windows Explorer window.
 - ▶ Check "File name extensions" at the top right.



► Confirm the extension change



Credits

A big thank you to **Zet-sensei**, one of the shadowy people who work in preservation in the videogame heritage.

You don't know him, but he has been at the origin of or a major participant in major projects in this field, notably co-founder of No-Intro and Redump in the most known ones.