



Create CHD

First off, here's a comparison of sizes for the PSX-game Driver - You Are the Wheelman (USA) (v1.1).

1. In **BIN/CUE** it is 747,030,480 bytes.
2. In **PBP** (maximum compression) it is 517,187,964 bytes.
3. In **CHD** it is 465,566,193 bytes.

It's a LOT easier to batch convert **BIN/CUE** dumps to **CHD** than it is to convert them to **PBP**

Just place the chdman.exe into the directory where you have your **BIN/CUE** dumps, open the command line in that location (assuming you are on Windows), and type this in:

```
for %i in (*.cue) do chdman created -i "%i" -o "%~ni.chd"
```

If you want to reverse the process, you can type in. This will create your **BIN/CUE** back! LOSELESS!

```
for %i in (*.chd) do chdman extracted -i "%i" -o "%~ni.cue"
```

For a Unix machine you can use this little script, placed next to your ROM files.

[cue2chd.sh](#)

```
#!/bin/bash
for cueFile in *.cue; do
    echo "Converting ${cueFile}..."
    chdman created -i "${cueFile}" -o "${cueFile%.*}.chd"
done
echo "All done."
```

It might take a while, depending on how many games you have in that directory. This will also leave the **BIN/CUE** files untouched (delete them afterwards if you want to). Just be sure you have enough space on your drive before doing this.

I'm not currently aware of any batch command line methods of creating PBP files like this . So converting to CHD format will be a lot easier for you than converting to be PBP. Just enter the command into the command line before you go to bed, and the conversion process should be done by the time you wake up.

The CHD format was created with the purpose of preserving exact copies of games in a compressed format. The PBP format was created so that PSX games could run on PSPs in a compressed format (which is less compressed than the CHD format). In other words, I'd argue that the CHD format is better for preservation purposes.

M3U files work just like **BIN/CUE** files. You can just replace the .cue with .chd in your existing .m3u playlist.



If you have one of the European PSX games that features LibCrypt copy protection, you have a `.sbi` file in addition to the **BIN/CUE** file. The **CHD** creation process doesn't process the `.sbi` file. Thus, you will need the `.sbi` file in the same directory as the `.chd` file for the game to run.

Different images formats

I want you to understand some definitions of disc images, as we want get you messed with some valuable information.

ISO and all other disc images. Just for understanding....

There is no standard definition for ISO image files. ISO disc images are uncompressed and do not use a particular container format; they are a sector-by-sector copy of the data on an optical disc, stored inside a binary file. ISO images are expected to contain the binary image of an optical media file system (usually ISO 9660 and its extensions or UDF), including the data in its files in binary format, copied exactly as they were stored on the disc. The data inside the ISO image will be structured according to the file system that was used on the optical disc from which it was created.

ISO files store only the user data from each sector on an optical disc, ignoring the control headers and error correction data, and are therefore slightly smaller than a raw disc image of optical media. Since the size of the user data portion of a sector (logical sector) in data optical discs is 2,048 bytes, the size of an ISO image will be a multiple of 2,048. The `.iso` file extension is the one most commonly used for this type of disc images. The `.img` extension can also be found on some ISO image files, such as in some images from Microsoft DreamSpark; however, IMG files, which also use the `.img` extension, tend to have slightly different contents. The `.udf` file extension is sometimes used to indicate that the file system inside the ISO image is actually UDF and not ISO 9660.

Then? NRG, BIN, IMG?

Disk images are a handy way of storing backup copies of your disks. For instance, you might have some Audio CDs which you play on a regular basis. You probably don't want them to wear out fast because you use them often. In that case, a good way to listen to them but also keep them in a pristine condition - because you will actually not use them - is to create disk images for them. The disk images can be stored on your computer and you can simply mount them when you want to listen to your music. Obviously, you can rip their contents into another format, but that's another story.

The usefulness of creating disk images for your Audio CD s is just an example, but there are more situations in which disk images prove their worth. For instance, some software vendors choose to deliver their programs as disk images, which you can download from the Internet. A very good example of that are operating systems, which are often delivered online under the form of disk images. That's because disk images are exact replicas of physical DVD disks, and because installing an operating system usually means you have to have it on a bootable disk. If you get the operating

system as a disk image, which is a single file that you can download from the Internet, you can then burn it on a CD or DVD and, finally, you can use it to boot and install the operating system.

To sum it a bit up, here are some of the most prominent benefits of using disk images:

- Disk images are exact replicas of disk drives or disk volumes, so they faithfully preserve all details related not only to content but also to the original files and folders structure;
- A disk image of an optical disk can be very useful when you need to create multiple copies of that disk;
- A disk image of a hard drive that contains a Windows operating system can be used to reinstall Windows very fast;
- A disk image of a hard disk or of an optical disk has the big advantage of portability. Being a single file it is very easy to send it online to others or store it on an external hard disk drive, for instance.

The most common file formats for disk images

As we know by now, a disk image is a file stored on your disk. Like any file, it must bear a name and an extension. In other words, a file must have a file format. The most common disk image file format today is “.ISO” , but there are many other types of file formats that can be used. Here are some of them:

- “.NRG” (Nero CD/DVD Image File) - are CD or DVD disk images created with the Nero disc authoring software.
- “.BIN” & “.CUE” (Cue Sheet File) - are CD or DVD disk images split into two different files. One of them is a “.BIN” file that is a binary file that's an exact copy of the disk. The complementary “.CUE” file contains the details on how the data is structured on the original disk.
- “.MDF” & “.MDS” (Media disk Image File & Media Descriptor File) - the CD or DVD image is stored inside the “.MDF” file, while the header and track information are stored in the “.MDS” file.



[Original Article Wikipedia ISO images](#)

Why is BIN not recommended :-?

... or I can't see my ROMs in the rooster anymore in PSX

BIN support for some emulators isn't removed at all. You need a **CUE**-sheet file that describes the **BIN** file. A **BIN** file is the exact physical copy of the PSX original media. Sometimes there are multiple tracked images out there. Especially those containing multiple files. A good example is *Rockman 8 - Metal Heroes (Japan)* for PSX

```
Rockman 8 - Metal Heroes (Japan) (Track 1).bin
Rockman 8 - Metal Heroes (Japan) (Track 2).bin
Rockman 8 - Metal Heroes (Japan) (Track 3).bin
Rockman 8 - Metal Heroes (Japan) (Track 4).bin
```

Rockman 8 - Metal Heroes (Japan).cue

This game contains 1 DATA-track, 3 AUDIO-tracks (tracks 2-4) and one CUE-Sheet file. So you would see 5 entris in this game (4 times BIN, and 1 CUE) in your rooster.

For this simple reason do not recommend **BIN**. If you've lot's of these files in your collection then:

1. Add the CUE file
 1. from the original file
 2. Generate online with [CUEMAKER \(multi-bin\)](#)
 3. Annother online generator [PSX Cue File Maker \(multi-bin\)](#)
 4. Pick up some [premade ones \(github\)](#)
 5. Use some dedicated tool, like [Liors CUE Maker \(win\)](#)
2. Convert files from **BIN -> IMG*** usually it's just a rename but you possible loose audio music, too
3. Convert to **CHD** file format
4. **Do never** convert to **ISO**

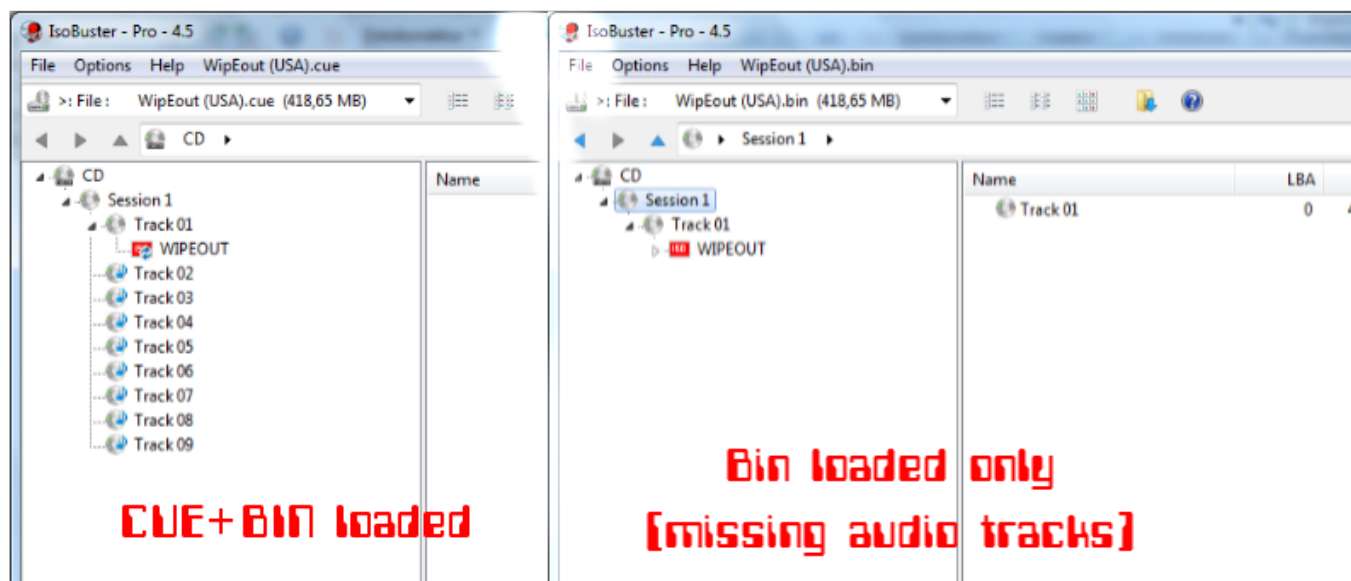
To make it short: If you have a **BIN** file and **NO CUE** next, then you are lost with additional audio tracks inside the ROM because only the data track works! So CUE is needed to make audio tracks work at all. Up for now best format is **CHD**

* You can enter this line to mass rename your ROM files.

```
for file in /userdata/roms/psx/*.bin; do mv "$file" "${file%.bin}.img"; done
```

I still don't understand....? C.U.E.??

Even you merged all tracks to a big huge file even then you need the CUE file. I'll show you :) This is the same for the **IMG** format! (I think CDRWin used this)



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