GNU Video CD Ripping Program (*vcdxrip*)

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1 Introduction

Note in the guide, we use the term Video CD to mean some sort of Video Compact Disk. There are various formats of Video Compact Disks, the oldest format of which is called "VCD" and is followed by a version number: 1.0, 1.1 or 2.0. Hopefully it should also be clear by context whether we are referring to a class of Video Compact Disks or the specific older format called VCD *version-number*.

vcdxrip can be used to extract or disassemble the contents of a CD or a on-disk CD (commonly referred to as "ripping"). So in a sense *vcdxrip* is the inverse of *vcdxbuild*—if you use *vcdxrip* followed by *vcdxbuild* on the result and then use another *vcdxrip*, you should get exactly what you got the first time you used *vcdxrip* (assuming everything is working correctly).

But *vcdxrip* can also disassemble pieces of a CD or CD disk image and can create an XML Video CD description file without extracting a single file located on the CD.

You might use *vcdxrip* as a step in re-mastering or re-authoring and existing CD, or it could be used to extract MPEGs from a CD or on-disk CD image file.

Since Video CD's use the ISO-9660 format, another way to "extract" an MPEG or piece of a Video CD is simply to mount the CD and use file copy commands. However this program will interpret the Video-CD specific files and output a corresponding XML description file. So *vcdxrip* is something similar to the program *vcd-info*; however the latter gives more detailed, lower-level Video-CD specific information and does not output its results in XML.

2 Command Options

There are a number of miscellaneous options, but there some broad categories of options. There is a set of options for specifying what not to dump, these all start `--no` and another set of options which specify where the CD-ROM or on-disk CD-ROM image is.

2.1 General Options

Here are some general-purpose options. These you might find on other programs.

`--help`   This option give a list of options type `--help`. `-?` is an abbreviation however you will probably have to "escape" the question mark so that the shell doesn't interpret this; i.e. you may have to type `-\?`.

`--usage`   This option shows an abbreviated usage message

`--verbose`
`-v`   This option gives more verbose, debugging output.

`--quiet`
`-q`   Show only critical messages

`--version`
`-V`   Display version and copyright information and exit after displaying this information. Sometimes, you just wanna know what version you got.

2.2 Options controlling where to read from

If you don't specify any place to read from `vcdxrip` will try to read from the default device that may be appropriate for your OS.

There are two broad categories of input, reading from a device that contains a Compact Disc, and reading from a file on the filesystem that contains an image that could be burned into a Compact Disk. The option for the former category, reading a physical CD, is `--cdrom-device` (`-C`); options for the latter category, reading a file containing a CD image, are `--bin-file` (`-b`), `--nrg-file` (`-N`). There is one other option `--input` (`-i`) which blurs the distinction—it tries to figure out based on the name whether you are reading from a device containing a CD or not and do the appropriate thing. Of course, since it only makes sense to read from one place, these options are mutually exclusive; use only one option from this set.

2.2.1 Reading from a file containing an on-disk CD image

The option `--bin-file` (the short forms for this is `-b`) indicate to read from a file containing an image what might be burned onto Compact Disk. The format is expected to be in the BIN/CUE format that `cdrdao` uses and is used by a popular DOS/Windows CD mastering tool.

If you use the `--toc-file`, the file read is expected to be a `cdrdao` image.

If you use the `--bin-file` option, the file read is expected to be the ".BIN" part—this is the bulk of the data.

If you use the `--nrg-file` option (short form `-N`), the file read is expected to be a CD-ROM disk image using a proprietary and unpublished format used by the Nero burning

software. Because this is proprietary and not published, this code has been reverse engineered and we really can't do as good a job as we can with a cue-sheet file. It's better not to work with such things when possible.

If you do not specify a file name after `--bin-file`, a default name is used "videocd.bin" is probably used

2.2.2 Reading from CD-ROM Device

The option `--cdrom-device` or the short form `-C` is used when you want to read from a Compact Disk. The name given would be the device name. If you don't specify a device, a default will be selected based on the Operating System or information that can be gleaned from the OS. For example on GNU/Linux, the default device may be `/dev/cdrom`, while on Solaris it might be `/vol/dev/aliases/cdrom0`.

2.2.3 Reading from wherever

The option `--input` or the short form of this `-i` tries to be intelligent by trying to figure out whether the thing you are referring to is a device or a CD disc image.

Currently the algorithm it uses the one that the provided by from the underlying library: `libcdio`. It is pretty simple: if the thing referred to is what in Unix is called a "block" or "character" device (and there is such a notion in your OS), then it assumes a device name. When you do "long listing" ("ls -l") of the name and track down possible symbolic links you will see a "b" or "c" in the first column if the file is a block or character devices.

If the thing referred to in an `--input` option is a "regular" file then it is assumed you have a file image of a CD. If the filename ends (i.e. the extension is) ".bin" or ".BIN" then we assume a "BIN file" if the filename ends ".nrg or ".NRG we assume a Nero NRG disk image, and if the filename ends ".toc" or ".TOC" then we assume a `cdrdao` CD image.

Although this algorithm is subject to change and there may be more sophisticated or alternative methods, in practice I think this does pretty much what's expected.

Use at most one option in an invocation from the following list. These options are described in general in Section 2.2 [Options controlling where to read from], page 2.

2.2.4 A list of just input options

`--bin-file [`*filename*`]`
`-b [`*filename*`]`
> Specifies a BIN CD-ROM disk image to read from. See Section 2.2.1 [Reading from a file containing an on-disk CD image], page 2.

`--cdrom-device [`*device-name*`]`
`-C [`*device-name*`]`
> Specifies a CD-ROM device to read from. See Section 2.2.2 [Reading from CD-ROM Device], page 3.

`--nrg-file [`*filename*`]`
`-N [`*filename*`]`
> Specifies a Nero NRG-format CD-ROM disc image to read from. See Section 2.2.1 [Reading from a file containing a CD disk image], page 2.

`--input [`*`file or device name`*`]`
`-i [`*`file or device name`*`]`

> This option is insensitive to whether the thing reading from is a CD-ROM device or a file. See Section 2.2.3 [Reading from wherever], page 3.

`--sector-2336`

> This option only makes sense if you are reading from a BIN CD disk image This indicates to *vcdxrip* to assume a 2336-byte sector mode for image file. *Note: This option is slated to disappear.*

`--toc-file [`*`filename`*`]`
`-b [`*`filename`*`]`

> Specifies a cdrdao CD-ROM disc image to read from. See Section 2.2.1 [Reading from a file containing a CD disc image], page 2.

2.3 Options controlling what do you want done

By default *vcdxrip* will extract everything it can about a Video CD image.

However if you specify something in particular you don't want to extract, for example you don't want to extract the tracks or "segments" use `--nosegments`.

The options below reduce what is extracted.

When you use any of the options `--nosequence`, `--nosegments`, `--norip` or `--tracks` you will get the warning:

Some entry point and auto pause locations might not be checked.

Without looking into the MPEG's we don't know how big they are and therefore can't verify if entry points and auto pause lie inside the MPEGs.

`--nofiles`

> Video CD's are formatted on an ISO-9660 filesystem. As such they may have additional files that are not strictly necessary for Video CD operation. For example, there may be some additional documentation or commentary in some sort of text format and these may be put under additional directories. Normally, such files are extracted with the directory or path information removed. If you don't want these additional files extracted use the `--nofiles` option.
>
> Using `--nofiles` will still extract files which are necessary for Video CD playback however. (These are located under the /SEGMENT, /EXT, /CDDDA, /SVCD, and/or /VCD directories). The options below however may affect Video CD operation and they are mutually exclusive of this operation. That is, this operation does not touch any of the files that the options below will and vice versa.

`--nosegments`

> Segment play items are usually stored one per "track" in the CD, are an MPEG of some sort. They often constitute the bulk of the CD, and when extracted by this program will start have a name of the form `avseq`*`dd`*`.mpg` where *dd* is a two-digit number.
>
> Segment items are located in under the /SEGMENT directory on the CD. However when extracted these directories do not appear.

If you don't want to extract these MPEG files, use this option. To extract only a specific track see the `--track` option below.

If you use the option `--nosegments`, you might not be able create a CD image back unless some of these files are created or the XML description modified. Another way to "extract" these file might be to "mount" the CD and use your OS's file copy commands.

`--nosequences`

Sequence items are usually smaller than segment item and can be stored with more than on item per track. They often constitute for menus or still frame selections. When extracted by this program will start have a name of the form `itemdddd.mpg` where *dddd* is a four-digit number.

Sequence items are located in under the /MPEGAV, /MPEG2 directories. However when extracted these directories do not appear.

If you don't want to extract these MPEG files, use this option. You may however might not be able create a CD image back unless some of these files are created or the XML description modified. Another way to "extract" these file might be to "mount" the CD and use your OS's file copy commands.

`--norip`   Just create an XML description file of the format used by *vcdxbuild*. Using this option is like adding the options `--nofiles`, `--nosequences`, `--nosegments`.

`--track track-num`

If you want to extract only a single track (segment) from a CD rather than all of them, use this option. This option does not make sense and has no effect if you have also given the option `--nosegments`.

2.4 Miscellaneous Options

`--progress`
`-p`   Show progress.

`--no-ext-psd`

Ignore extended PSD (located in the ISO-9660 filesystem under `/EXT/PSD_X.VCD`) and use the "standard" PSD.

`--output-file`
`-o`   Specify the place to write the output XML description file. The default is `videocd.xml`.

3 Some simple command invocations.

3.1 Examples specifying input

Perhaps all you want to do is rip a CD onto your disk to modify it. If the CD is in the default location for your OS, then this might work:

```
vcdxrip
```

It means the same thing as:

```
vcdxrip --cdrom-device
```

and using the short option:

```
vcdxrip -C
```

I have a combined CD-ROM and DVD drive called */dev/dvd*. I have another CD-ROM drive which goes under the name */dev/cdrom*, but I generally prefer to use the DVD/CD-ROM drive for reading since it doesn't seem to run as hot. Since that drive is not the "default" (*/dev/cdrom*) on my GNU/Linux box, I have to give a location. So this will work:

```
vcdxrip -C=/dev/dvd
```

Or even better, I'll let *vcdxrip* figure out it's a CD-ROM device:

```
vcdxrip -i /dev/dvd
```

The equals sign before */dev/dvd* is optional in either format.

Let's say you just used *vcdimager* or *vcdxbuild* it created output to its "default" location (probably *videocd.cue* and *videocd.bin*. To dump out this out:

```
vcdxrip --bin-file
```

But if you specified the output to go to say *nausicaa.bin* and *nausicaa.cue* you would have to specify that location like this:

```
vcdxrip -b nausicaa.bin
```

Or again not having to worry about what type of file you could use the "intelligent" input option again as we did before:

```
vcdxrip -i nausicaa.bin
```

If I want the XML file that gets created to to "nausicaa.xml" rather than "videocd.xml" then use this:

```
vcdxrip -i nausicaa.bin -o nausicaa.xml
```

3.2 Examples specifying what to rip

If I just want the XML description only for the last example in the previous section:

```
vcdxrip --norip -i nausicaa.bin --output-file nausicaa.xml
```

Suppose I want extract only the big MPEGs of the CD in the default CD without menus and extra file information. This is probably close:

```
vcdxrip --nosequences --nofiles
```

The above will create an XML description file. Suppose on the other hand I just want the extraneous files but not the MPEG data of the CD in the default CD-ROM drive, then this may work:

```
vcdxrip --noseqeunces --nosegments
```

If you only want to extract track 1 from your CD this might work:

```
vcdxrip --track 1
```

4 History

This program was written by Herbert Valerio Riedel.

General Index

Option Index

The body of this manual is set in
cmr10 at 10.95pt,
with headings in **cmb10 at 10.95pt**
and examples in `cmtt10 at 10.95pt`.
cmti10 at 10.95pt,
cmb10 at 10.95pt, and
cmsl10 at 10.95pt
are used for emphasis.