

Easy Burner

X-CD-ROAST

KARSTEN GÜNTHER



X-CD-Roast is one of the oldest graphical user interface applications for burning CDs known to Linux. We'll show you why it's still one of the most powerful...

There are currently two versions of X-CD-Roast in circulation: the now fairly old version 0.96 (ex) and the one still marked as "Alpha" – version 0.98xx. At the moment, the Alpha release of November 2000 is still the most recent. The developer, Thomas Niederreiter, has deemed this version more refined and stable than version 0.96, so users should ideally use X-CD-Roast 0.98. The current version is available for download at <http://www.xcdroast.org>

X-CD-Roast 0.98, unlike the older versions, which relied on the Tcl/Tk toolkit, uses Gtk (the Gimp Toolkit also used in GNOME) from version 1.2.3. So the corresponding libraries must first be installed. X-CD-Roast is also often installed via link under the name *xcdrgtk*.

A word about compiling the source texts. Less experienced users may be faced with a few problems here in some circumstances since, as the developer is at pains to point out, the software is in Alpha code. The ready-made RPM packages should be unpacked and used if you have any problems. X-CD-Roast also includes adapted versions of *cdrecord* (Version 1.9, back-end for writing the CDs), *mkisofs* (to create image files, "masters"), *readcd* to read from CDs (corresponds to the *dd* of earlier versions) and *vrftytool*, to check finished CDs. Use the commands *cdda2wav*, *cddbtool* and *wavplay* for processing audio CDs.

Audio and data CDs can be created or copied directly with X-CD-Roast from data on the hard disk. Apart from CDRs, rewriteable CDs (CDRW) can also be used for this purpose. It's even possible to create mixed mode and boot CDs using this program. Mixed mode CDs consist of both data and audio components, but can't be played on normal CD players.

Data CDs can be mastered on the fly, but multiple image files are also supported. The new

version of *cdrecord* (1.9) can also be used with **BURN-Proof** technology. Only multi-session CDs can't be created yet.

0.96 and 0.98alpha7 differences

Principally, the two versions differ in terms of ease of use. While in the earlier version, a distinction was made between six modes, the number in the new version is reduced to three. When creating CDs, the user doesn't have to decide whether audio or data CDs are being copied or created – this option (amongst others) is now taken care of automatically. Additionally, the new version has been expanded with several useful and practical features:

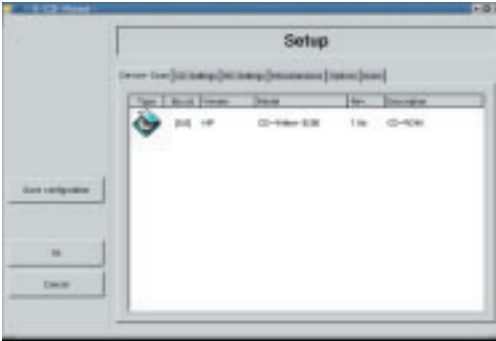
- Image files can be stored in several data directories.
- Mastering CDs can be done on the fly, thus saving on image files.
- Selected tracks can be read from CDs.
- Mastering has been expanded so any number of directories can be specified.
- X-CD-Roast can also be used by ordinary users.

Parallel installation of X-CD-Roast 0.96 and 0.98 under SuSE Linux

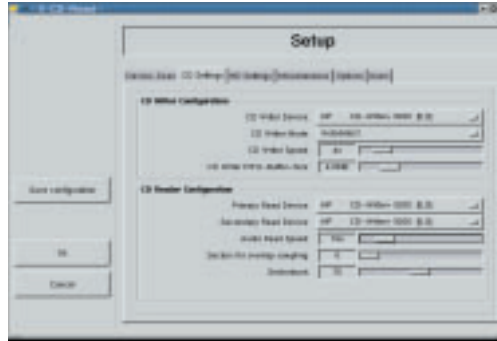
X-CD-Roast 0.96 and 0.98 can be installed in parallel under SuSE Linux, provided a few points are taken into account; both versions are automatically installed in different directories (see *Box 1*). The binaries of both versions are installed under */usr/X11R6/bin* as *xcdroast* – a conflict. In Version 0.98 this is a link to *xcdrgtk*. After the installation of 0.98 the link must be removed, in order to install the RPM package of X-CD-Roast 0.96:

BURN-Proof: CD burner technology which prevents buffer underruns, where CD burners destroy the blank CD if the data to be burned is not fed in quickly enough by the computer.

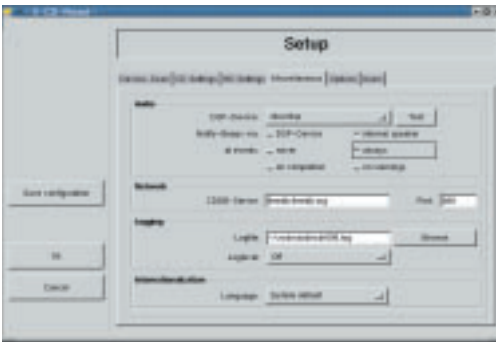




[left]
Figure 1: Recognising the CD burner



[right]
Figure 2: Settings for the CD burner



[left]
Figure 3: Miscellaneous settings



[right]
Figure 4: Copy a CD

```
rpm -ihv xcdroast-0.96ex2-50.i386.rpm
...
```

One overlap still occurs. This relates to the *README.nonroot* file in the */usr/share/doc/packages/xcdroast/* directory. A version must consequently be saved under a different name (*README.nonroot-0.98*).

Configuration

Before implementing X-CD-Roast, the software has to be configured. On first starting up, a reference is made to one of the new features of the program: Normal users can also make use of X-CD-Roast in the current version (formerly, its use was reserved for the administrator *root*). Additional information and special details can be found in the *README.nonroot* file.

The entire configuration is carried out in six dialogs. The CD writer is determined first. With SCSI devices this is no problem at all: CD writers are recognised as CD-ROM drives as a matter of course.

Highly detailed information about the hardware can be displayed in this window with a double-click on the corresponding device symbol.

The use of ATAPI writers will be examined elsewhere. X-CD-Roast includes *README.atapi*, in which a few special instructions are given. But you can always fall back on the excellent *CD Writing HOWTO* by Winfried Trumper in case of doubt and/or problems. The latest version of this document can be found on the Internet at <http://www.linuxdoc.org/HOWTO/CD-Writing-HOWTO.html>.

In the second dialog (Figure 2), special settings are made for the CD writer. The burn rate can be

altered manually later, so there is only a pre-set for this here.

As the tool tips show, the read configuration depends largely on what hardware is used. Not all devices even evaluate these settings. Often, if values that are too high are set for the audio read rate, this can lead to errors, so that somewhat lower settings often provide better results. The lowest two settings can help if there are errors. The online help supplies truly exhaustive information on this topic.

Image files are stored in the directory, which you enter in the third dialog. Any desired directory can be included using the *Add* button, although there must be space in the directories in each case for at least one (whole) image file. Under *Miscellaneous*, sounds for different purposes can be defined. By the way, no sound card is necessary for this, as X-CD-Roast can also home in on the internal loudspeaker.

Box 1: X-CD-Roast directories

```
#ls -l /usr/X11R6/lib/xcdroast-0.9*
/usr/X11/lib/xcdroast-0.96ex:
total 9
drwxr-xr-x  5 root  root   1024 Mar 21 19:48 .
drwxr-xr-x 33 root  root   5120 Mar 22 01:01 ..
drwxr-xr-x  2 root  root   1024 Mar 21 19:48 bin
drwxr-xr-x  2 root  root   1024 Mar 21 19:48 logo
drwxr-xr-x  2 root  root   1024 Mar 21 19:48 sound

/usr/X11/lib/xcdroast-0.98:
total 10
drwxr-xr-x  6 root  root   1024 Mar 21 19:37 .
drwxr-xr-x 33 root  root   5120 Mar 22 01:01 ..
drwxr-xr-x  2 root  root   1024 Mar 21 19:37 bin
drwxr-xr-x  2 root  root   1024 Mar 21 19:37 icons
drwxr-xr-x  2 root  root   1024 Mar 21 19:37 lang
drwxr-xr-x  2 root  root   1024 Mar 21 19:37 sound
```

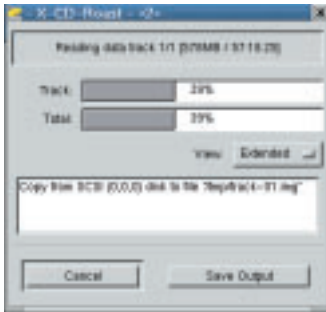


Figure 5: Creating an image file of a data CD



The additional options are described at length in the online help. The options available under *Options* are also clarified there. The last dialog controls the access options for the user of a multi-user system, in which several references are made to the *README.nonroot* file – the details of this feature are explained therein. X-CD-Roast takes over access control automatically. You can create a configuration file under *xcdroast.conf* in the */etc* directory, using the *Save configuration* button.

Practice

Once configuration is complete, X-CD-Roast can be put to use. Clicking on *OK* switches back to the initial mode. First, a disc will be copied.

Pressing the *Duplicate CD* button leads to the window in Figure 4.

X-CD-Roast automatically makes a distinction here between audio and data CDs. Firstly the program ascertains the information on the CD. Individual tracks can be selected on audio CDs and additional information can be called up using **CDDB** queries when there is an existing Internet connection. An image file is usually created first in order to copy a data CD. It is obviously possible to copy between the two if an additional CD drive is available. The advantages of image files lie in the possibility of just using the CD writer and being able to create several copies of a CD relatively quickly (Figure 5).

You can set the read rate and the directory used for image files manually here. The image file can be checked after reading in, with *Verify CD*.

Individual (or all) tracks on an audio CD can be output via *Play Audio-Tracks* for checking, before

they are burnt onto a new CD.

You can access the individual tracks on audio discs (Figure 6). If the “Read CD” option *Perform index scan* has been selected, the read-in takes a relatively long time. On some CDs this information cannot be completely read out.

It's possible to listen to individual tracks for test purposes. The CD is then burnt using the *Write CD* dialog (Figure 7). The most important parameters (such as the write rate) are summarised in the window and can also be adjusted. The whole write procedure is conducted with the write laser beam switched off with *Simulation write*.

The tracks on audio CDs can be filled up automatically so that a proper audio CD can be created from any WAV files. In some cases it is necessary to *Swap audio byte order*. Badly created CDs contain nothing but a steady hiss.

CDRWs can now be deleted with X-CD-Roast before being written on (Figure 8). This wasn't possible at this stage in version 0.96 and always had to be done on the command line.

X-CD-Roast supports the usual variants from deleting the whole CD (by completely over-writing all tracks) to *Fast delete*, where only the table of contents, PMA and pregap are deleted. The last variant is normally sufficient and the process only takes one or two minutes.

Creating a CD

A data CD can also be created from files already present on the hard disk. From the start dialog, first click on *Create CD* to call up the appropriate window (Figure 9).

The *Master tracks* button is a new feature in this window. Click here to access the dialog that allows you to adjust relevant settings.

Click the *Add* button under *Master source* to select the desired paths. Subdirectories can be taken into account here with *Exclude*. One especially practical feature is the option of showing the master paths on the CD in a different way from the way they exist on the source via *Redirect*. The directories in the example housed under */lib* are moved into the */work* directory of the backup CD. This leads to considerably simpler paths when playing in the backup. A wrongly specified path can be deleted at any time using *Remove*.

[[left]

Figure 6: Copying an audio CD

[[right]

Figure 7: Writing a CD



In the second dialog *ISO9660 options* (Figure 11), extremely detailed adjustments are made before the CD is created. All the options are again explained by the online help. For this reason, only the differences between *Rock Ridge (Anonymous)*, where all users are given access to the files on the CD and *Rock Ridge (Data protection)*, where the original permissions are applied on the CD, are referred to here. *Not backup files ...* means that all files ending with a tilde “~” or including a hash “#” in the name are ignored when mastering – as are those with the extension *.bak*. Another important option is *Follow symbolic links*: The result of this is that the corresponding original files are copied onto the CD, too. Without this option only the links themselves would be copied.

Diverse settings for creating bootable CDs are summarised under *Boot Options*. The *ISO9660 header* (Figure 12) allow CDs to be marked professionally. There should be at least one TOC file (Table of contents), entered under *Abstract information*, on the CD.

The final preparations for creating the CD can be made in the last dialog – *Create session/image*. A catalogue of the files copied onto the CD must first be created. Click on *Calculate size* in the *Create session on disk* field – remembering that an image file is not yet created in this step. The track that has been created can be marked using *File prefix* for ease of classification. In the *Write session on the fly* field, information on the medium can be viewed and adjusted. Unfortunately, there is no *Multi-session CD* support currently available.

An image file can now be created by *Master as image file* or the CD can be created directly through *Master and write on the fly*. The second option proved workable, provided the system load was not

too high. The creation of CDs without space-grabbing image files is certainly an advantage over the predecessor, version 0.96ex, which should not be underestimated.

Conclusion

The new version of X-CD-Roast is one of the best applications available for creating CDs under Linux. It enhances many of *cdrecord's* features and at the same time offers a simple, intuitive interface which allows even relatively inexperienced users to create and copy audio and data CDs. Any worries with respect to the Alpha status of the software turned out to be completely unfounded. The online help via tool tips is exemplary – and something we wish more applications would make available. The clear structure of the program guides the user effortlessly, so that problems rarely occur. If any steps have been forgotten, the program notes this and makes a reference to missing settings.

X-CD-Roast demonstrates how the combination of back-end commands and front-end GUI, so often used under Linux, can function well. Quite simply, working with X-CD-Roast is a lot of fun. ■

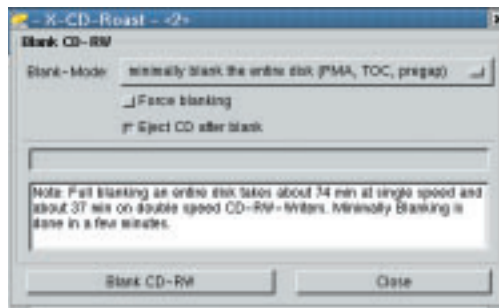
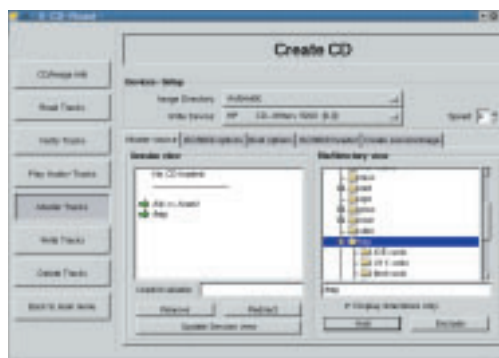
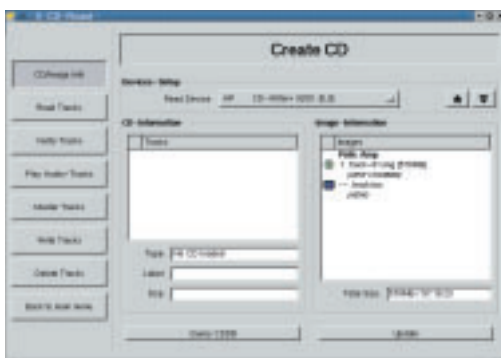
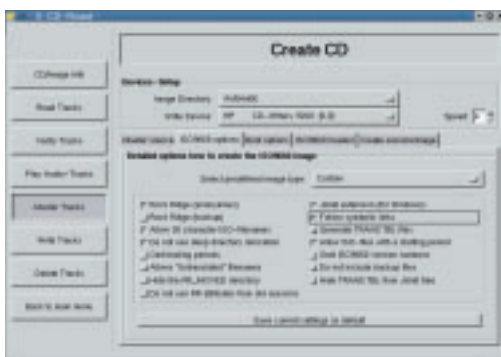


Figure 8: Deleting a CDRW



[left] Figure 9: Dialogs for creating a CD

[right] Figure 10: Add paths



[left] Figure 11: ISO9660 Options

[right] Figure 12: ISO identifiers