

601: CD Ripping Preservation User guide

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1 PREPARATION

1.1 Setting up dBpoweramp CD Ripper

Connect an optical drive and install the [dBpoweramp software 'CD Ripper'](#).

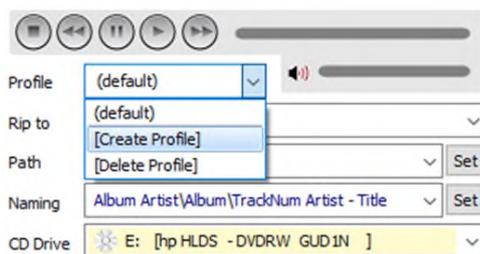
Recommended drives are updated each year by the makers of dBpoweramp each here:

<https://forum.dbpoweramp.com/showthread.php?43786-CD-Drive-Accuracy-2019>

At the Northwest Hub we use several different drives including a higher end ASUS BW-16D1H-U_PRO TurboDrive External 16X Blu-ray CD/DVD Burner USB, and also the more portable Pioneer BDR-XD07TB and Asus SDRW-08U7M-U drives.

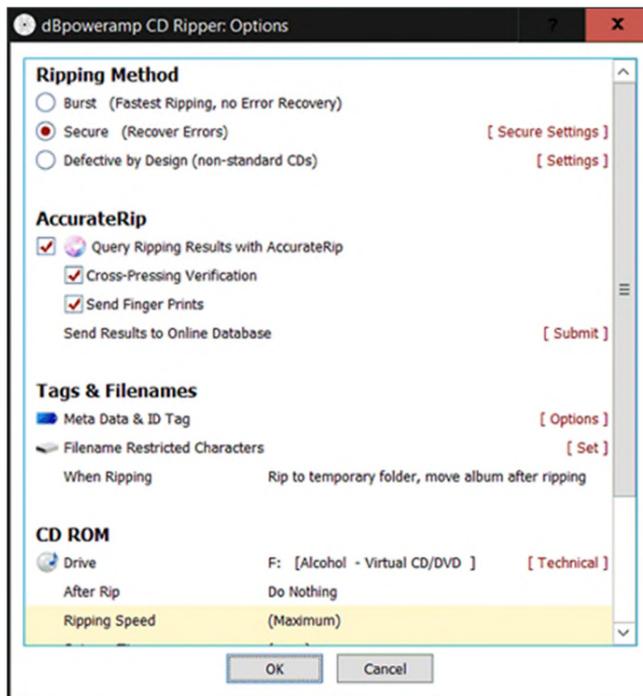
We need to begin the set up by creating three profiles 'Secure Rip', 'Insecure Rip' and 'Burst Mode'.

To do this select [Create Profile]:



1.2 Secure Settings

Click the green menu button (top toolbar) >> CD Ripper Options the Ripping Method to Secure (Recover Errors):



Then click on the [Secure Settings] link on the right hand side of the menu. Select the following:

- Click green icon and select CD ripper options.
- Select button left of '\Secure' (Recovers Errors) and then press the button to the right (same line) 'Secure Settings'
- A pop up window will open.
- Select
C2 Error Pointers for Error Detection

8kb Transfers

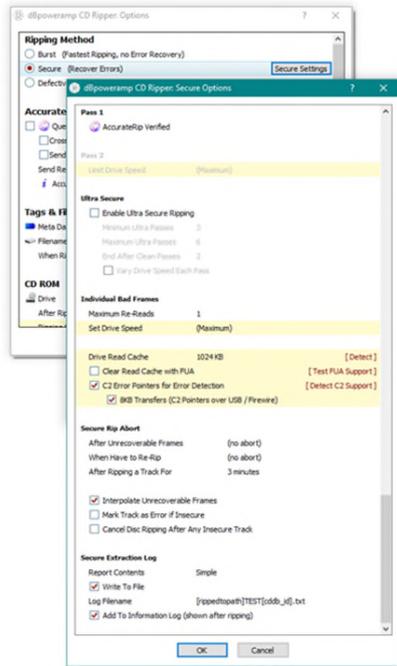
- UNTICK interpolate unrecoverable frames and mark track as error if insecure
- SELECT Cancel Disc Ripping After Any Insecure Track.

1.3 Insecure rip profile

Next we need to set up the 'insecure' profile for ripping CDs. This profile will attempt to interpolate uncorrectable C2 errors and will produce a detailed log of the errors encountered. As this process might be lengthy, insecure profile limits the rip time to 20 minutes per track.

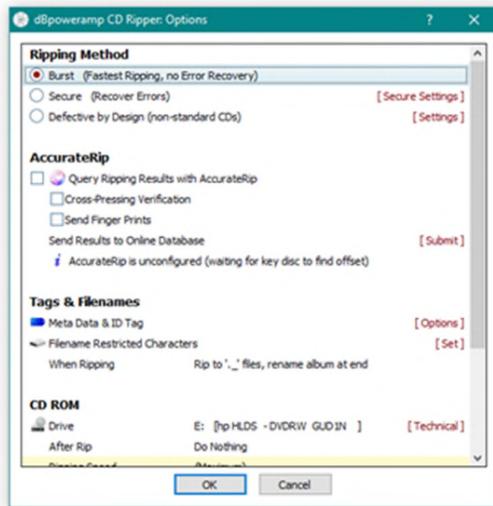
Commented [DG1]: In my experience this is not enough as some 74 min tracks can take 20 mins to rip! Also I think the image shows 3 mins.

Select the following setting as seen in this image making sure to **TICK interpolate unrecoverable frames**:



1.4 Burst profile

If both secure and insecure rips have failed, the burst ripping method might be the only option to recover the audio. We recommend trying to rip the disc on different CD drives as some appears to perform better on specific drives. To set up the 'burst' profile, create profile and only select the top option 'Burst (Fastest Ripping, no error recovery)'.



2. Ripping the CD

The following are the steps once you're ready to rip using **dBpoweramp CD Ripper** and a connected optical drive.

2.1 Metadata

Open drive and insert CD.

Open dBpoweramp and the CD will load and search for tracknames/metadata. By default CD Ripper will embed album art inside each ripped audio file (audio format permitting) and also write a Folder.jpg file to the location of the album.

To prevent all of this happening, untick all metadata settings.

Title	Length	Rip Status	CRC	Rating	Artist	Estimated Size
1. Track 1	2:15	Not Ripated			BBC Northern Dance Orche...	23,390 KB
2. Track 2	3:08	Not Ripated			BBC Northern Dance Orche...	32,400 KB
3. Track 3	2:15	Not Ripated			BBC Northern Dance Orche...	23,272 KB
4. Track 4	3:16	Not Ripated			BBC Northern Dance Orche...	33,781 KB
5. Track 5	2:40	Not Ripated			BBC Northern Dance Orche...	27,694 KB
6. Track 6	2:55	Not Ripated			BBC Northern Dance Orche...	30,266 KB
7. Track 7	2:09	Not Ripated			BBC Northern Dance Orche...	22,377 KB
8. Track 8	1:54	Not Ripated			BBC Northern Dance Orche...	19,724 KB
9. Track 9	2:02	Not Ripated			BBC Northern Dance Orche...	21,111 KB
10. Track 10	2:54	Not Ripated			BBC Northern Dance Orche...	30,094 KB
11. Track 11	2:31	Not Ripated			BBC Northern Dance Orche...	26,013 KB
12. Track 12	2:28	Not Ripated			BBC Northern Dance Orche...	25,512 KB
13. Track 13	2:42	Not Ripated			BBC Northern Dance Orche...	27,942 KB
14. Track 14	3:03	Not Ripated			BBC Northern Dance Orche...	31,594 KB
15. Track 15	2:33	Not Ripated			BBC Northern Dance Orche...	26,392 KB
16. Track 16	2:10	Not Ripated			BBC Northern Dance Orche...	22,482 KB
17. Track 17	3:08	Not Ripated			BBC Northern Dance Orche...	32,432 KB
18. Track 18	2:35	Not Ripated			BBC Northern Dance Orche...	26,844 KB
19. Track 19	2:05	Not Ripated			BBC Northern Dance Orche...	21,534 KB
20. Track 20	3:06	Not Ripated			BBC Northern Dance Orche...	32,134 KB
21. Track 21	2:02	Not Ripated			BBC Northern Dance Orche...	21,088 KB
22. Track 22	2:53	Not Ripated			BBC Northern Dance Orche...	29,910 KB
23. Track 23	2:32	Not Ripated			BBC Northern Dance Orche...	26,270 KB
24. Track 24	3:24	Not Ripated			BBC Northern Dance Orche...	35,257 KB
25. Track 25	2:11	Not Ripated			BBC Northern Dance Orche...	22,668 KB
26. Track 26	2:46	Not Ripated			BBC Northern Dance Orche...	28,597 KB
27. Track 27	2:16	Not Ripated			BBC Northern Dance Orche...	23,578 KB
28. Track 28	2:51	Not Ripated			BBC Northern Dance Orche...	29,495 KB
29. Track 29	2:42	Not Ripated		☆☆☆☆	BBC Northern Dance Orche...	27,908 KB
1:15:38						763.42 MB

2.2 Destination folder

At the North West Hub we save our files to a Synology server. So our workflow is to create collection level folders within the Optical Rips partition on this drive.

Name	Date modified	Type	Size
Diamonds For Andrew	11/12/2019 09:38	File folder	

Name	Date modified	Type	Size
01 BBC Northern Dance Orchestra - Track 1.wav	11/12/2019 09:44	WAV File	23,390 KB
02 BBC Northern Dance Orchestra - Track 2.wav	11/12/2019 09:45	WAV File	32,401 KB
03 BBC Northern Dance Orchestra - Track 3.wav	11/12/2019 09:45	WAV File	23,273 KB
04 BBC Northern Dance Orchestra - Track 4.wav	11/12/2019 09:45	WAV File	33,781 KB
05 BBC Northern Dance Orchestra - Track 5.wav	11/12/2019 09:46	WAV File	27,695 KB
06 BBC Northern Dance Orchestra - Track 6.wav	11/12/2019 09:46	WAV File	30,267 KB
07 BBC Northern Dance Orchestra - Track 7.wav	11/12/2019 09:47	WAV File	22,377 KB
08 BBC Northern Dance Orchestra - Track 8.wav	11/12/2019 09:47	WAV File	19,724 KB
09 BBC Northern Dance Orchestra - Track 9.wav	11/12/2019 09:48	WAV File	21,112 KB
10 BBC Northern Dance Orchestra - Track 10.wav	11/12/2019 09:48	WAV File	30,095 KB
11 BBC Northern Dance Orchestra - Track 11.wav	11/12/2019 09:49	WAV File	26,013 KB
12 BBC Northern Dance Orchestra - Track 12.wav	11/12/2019 09:49	WAV File	25,512 KB
13 BBC Northern Dance Orchestra - Track 13.wav	11/12/2019 09:50	WAV File	27,943 KB

2.3 Settings

Back in CD Ripper , in the bottom left corner select:

WAVE UNCOMPRESSED

Bit depth and Sample Rate AS SOURCE

Select the folder that you have prepared as the path:



The three profiles that you set up earlier are available as presets to follow this workflow order:

1st attempt SECURE > 2nd attempt INSECURE > 3rd and final attempt BURST

For the first attempt select the Secure Rip profile from the drop-down menu.

We recommend trying to rip the disc on different CD drives as some appears to perform better on specific drives. So test a disc on different drives (if available) before you proceed to the next profile.

When you are ready to rip click the Rip icon in the top left corner

There will be a green tick secure when the ripping is happening:

[83%] dBpoweramp CD Ripper: Rippi

Ripping track 24 of 28 Speed x3.7 14 minutes 16 seconds elapsed Skip Track Cancel Rip

	Title	Length	Rip Status	CRC	Rating	Artist	Estimated Size
✓	1. Track 1	3:58	✓ Secure	C3C929D0	Not Rated	The BBC NWJ and Northern...	41,623 KB
✓	2. Track 2	2:25	✓ Secure	A3669036	Not Rated		25,061 KB
✓	3. Track 3	2:49	✓ Secure	512F4D6	Not Rated		29,221 KB
✓	4. Track 4	2:34	✓ Secure	2927320C	Not Rated		26,994 KB
✓	5. Track 5	3:15	✓ Secure	024C79E1	Not Rated		33,752 KB
✓	6. Track 6	2:08	✓ Secure	9D4C4C3	Not Rated		22,213 KB
✓	7. Track 7	1:38	✓ Secure	4899206	Not Rated		16,911 KB
✓	8. Track 8	2:11	✓ Secure	A1637006	Not Rated		22,588 KB
✓	9. Track 9	2:45	✓ Secure	554676A	Not Rated		28,452 KB
✓	10. Track 10	1:05	✓ Secure	6D44315A	Not Rated		11,260 KB
✓	11. Track 11	2:20	✓ Secure	584CC1D	Not Rated		24,281 KB
✓	12. Track 12	3:07	✓ Secure	ABE5A0C3	Not Rated		32,244 KB
✓	13. Track 13	3:30	✓ Secure	2538F0D9	Not Rated		36,190 KB
✓	14. Track 14	3:19	✓ Secure	828F9B8	Not Rated		34,362 KB
✓	15. Track 15	2:58	✓ Secure	397AF27	Not Rated		30,666 KB
✓	16. Track 16	2:53	✓ Secure	62CF487E	Not Rated		29,908 KB
✓	17. Track 17	3:19	✓ Secure	6672020	Not Rated		34,288 KB
✓	18. Track 18	2:20	✓ Secure	0850F71	Not Rated		24,258 KB
✓	19. Track 19	2:50	✓ Secure	3608A12	Not Rated		29,325 KB
✓	20. Track 20	3:02	✓ Secure	03702D62	Not Rated		31,362 KB
✓	21. Track 21	3:50	✓ Secure	946E00E	Not Rated		39,660 KB
✓	22. Track 22	3:14	✓ Secure	C1F0540	Not Rated		33,558 KB
✓	23. Track 23	2:53	✓ Secure	642DCEA	Not Rated		29,917 KB
✓	24. Track 24	2:32	Flac Ripping 70%		Not Rated		26,274 KB
✓	25. Track 25	3:06	Queued		Not Rated		32,063 KB
✓	26. Track 26	2:40	Queued		Not Rated		27,640 KB
✓	27. Track 27	2:27	Queued		Not Rated		25,457 KB
✓	28. Track 28	2:06	Queued		Not Rated		21,864 KB

1:17:26 Ripped 23 Tracks 781.68 MB

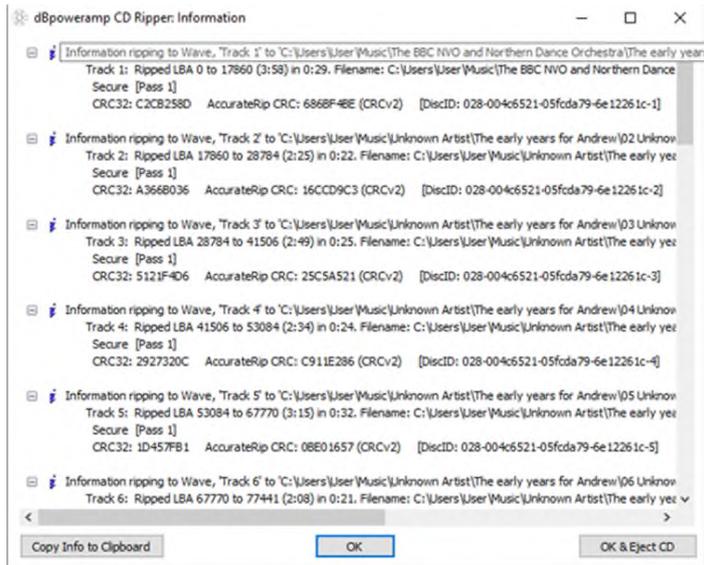
Profile: [Default] Rip to: [WAV] Path: [Music] Naming: Album Artist\Album\Track\Num Artist - Title CD Drive: [D: (ASUS RW-CD/DVD)]

Encoder: Uncompressed Bit Depth: [as source] Sample Rate: [as source] Channels: [as source]

Compressed Settings Wave-Mp3 Settings

Wave No Album Art

When it has finished:



2.4 Workflow Order

If the first attempt did not work proceed along the established workflow order:

1st attempt SECURE profile

2nd attempt INSECURE profile

3rd and final attempt BURST profile.

(Also try on an alternate disc drives at each stage if possible).

From attempt 1, if any tracks do not have the Secure green tick they will need ripping again on the insecure profile.

From attempt 2, a red cross means the individual tracks will need to be ripped again on a burst profile.

A grey cross 'Not an accurate rip', then check the playback and if the files are not corrupt and play fine, then this is the best.

From attempt 3 any playable file is a good result and should be retained.

Make note on Tracking Sheet.

3. Quality Control

3.1 Logs

In the folder you should find a .txt file which is a log of the ripping process. Save or copy this log for future reference into your digital preservation metadata.

Note that no log is produce on BURST profile.

```
Various Artists - Morvern Callar.txt
dBpoweramp Digital Audio Extraction Log from 2020-03-31 11:15:22
dBpoweramp version: Release 16.8
OS version: Version 10.14.4 (Build 18E226)

-----
Drive & Settings
-----
Ripping with drive 'disk2 [ASUS - BW-12D15-U]', Drive offset: 667, Overread Lead-in/out: No
AccurateRip: Active, Using C2: Yes, Cache: 1024 KB, FUA Cache Invalidate: No
Pass 1 Drive Speed: Max, Pass 2 Drive Speed: Max
Bad Sector Re-rip: Drive Speed: Max, Maximum Re-reads: 34

Encoder: Wave

-----
Extraction Log
-----
Track 1: Ripped LBA 0 to 15960 (3:32) in 0:24. Filename: /Users/gianyrig/Music/Various Artists/Morvern Callar/01 Can - I Want More...
AccurateRip: Accurate (confidence 17) [Pass 1]
CRC32: A6F97F47 AccurateRip CRC: 2A133A03 (CRCv2) [DiscID: 014-001d6b1e-01386ce8-c00d0d0e-1]
AccurateRip Verified Confidence 17 [CRCv2 2a133ad3]
AccurateRip Verified Confidence 6 [CRCv1 e191f011]
AccurateRip Verified Confidence 17 [CRCv2 2a133ad3]
AccurateRip Verified Confidence 6 [CRCv1 e191f011]

Track 2: Ripped LBA 15960 to 24857 (1:58) in 0:09. Filename: /Users/gianyrig/Music/Various Artists/Morvern Callar/02 Apex Twin - Goon Gv0000s...
AccurateRip: Accurate (confidence 17) [Pass 1]
CRC32: C42003C0 AccurateRip CRC: 3A17380B (CRCv2) [DiscID: 014-001d6b1e-01386ce8-c00d0d0e-2]
AccurateRip Verified Confidence 17 [CRCv2 3a1738db]
AccurateRip Verified Confidence 6 [CRCv1 b6b65940]
AccurateRip Verified Confidence 17 [CRCv2 3a1738db]
AccurateRip Verified Confidence 6 [CRCv1 b6b65940]
```

Extraction Log

Track 1: ERROR Ripping LBA 0 to 225395 (50:05) in 10:36. Filename:
/Users/sianyriot/Music/M185-1(1of2)/Disc 1/01 M185-1(1of2) - Interview._

Unable to read CD, check CD disc (frame LBA 219233 ripping 26 frames track end LBA
225395)

1 Tracks Could Not Be Ripped

3.2 Spot Checks

There is an element of QCing on the go by following the SECURE > INSECURE > BURST workflow. The error logs for each ripping attempt will contain some information that can be recorded in your tracking spreadsheet.

Play the files back and spot check by listening in 3 places.

Once you've had to resort to the burst profile to rip the CD, any file you have captured is really the best you can get from the material. Therefore there's not much point investing time and effort into QCing these files further than this. Noting information like 'partial transfer' 'couldn't be transferred' or 'c2 errors throughout' is enough data.