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1. General information for Production Master Delivery

Please pay attention to the general information listed here for Production Master Delivery.

- Please check your master media before delivery. All masters must be of the best quality available, free of content errors and physical damage. In particular CDs and DVDs must not have scratches, stains or fingerprints. To avoid any damage during transport, please pack media carefully.
- Please use our online connection to transfer your Master Data to Sonopress.
We can offer several options for you.
- Each master-medium must be marked so clearly, that an appropriate order allocation can be executed.
- Production Masters which meet specification, will be transferred 1:1 without any additional processing. If master data needs to be corrected or supplemented, you must attach this information to the master data. Sonopress has optionally available a catalog of studio-services.
- If your master data is prepared for a copy protection system which may require special processing during replication process, you must attach all required information.



2. Online-Connections to

Please use our online connection to transfer your data to Sonopress.

We can offer several options for you.

The connections preferred by our customers are:

- **Signiant Media Shuttle**
- WAM!NET
- **EMU – Easy Media Upload**
- In exceptional case FTP would be possible

We recommend using Signiant Media Shuttle for Master-Images and EMU for Artwork files.

You will get access information for the available connections from your customer service manager.

Data download from customer servers is not part of our standard procedures and is only rarely possible.

If your master data is already completely prepared for media replication “production master” (uncompressed), then please send us the complete master-image folder plus the associated metadata.

Suitable image formats are:

- CD-Audio, CD-ROM, DVD-Video, DVD-ROM → DDP 2.0 – Image or DDP 2.1 – Image
- CD-ROM, DVD-ROM → ISO - Image
- CD-Audio, CD-ROM, DVD-ROM → Nero – Image
- CD-Audio, CD-ROM, DVD-ROM → Roxio Toast – Image
- Blu-ray Disc Video → BD CMF 0.9 or newer / SonyCMF –Image
- Blu-ray Disc for Data (Type P) → BD CMF 0.9 or newer / ISO-Image
- UHD-Blu-ray Video Disc (4K) → UHD-BDCMF 0.8 or newer

For DVD 9 Video you need to transmit two DDP-Images, one for each layer.

Before uploading the image folder, it is mandatory to generate a MD 5 checksum



Checksum File Specification

- To prevent data security it is mandatory to add a plain text file containing the MD 5 checksum information for each file in the folder.
- Master images with missing corresponding checksums won't be processed without written confirmation by the customer.

Sample tool to use for generating MD5 sums:

<http://www.md5summer.org/>

The checksum file must be located into the image folder.

Filename: **Chksum.md5** -- contains the MD5 checksum(s) followed by the filename(s) (case sensitive), separated by a single space and followed by an asterisk.

Sample:

CD-Image :

```
a5df407ae447cf265324fd398a0ff84b *ic05.trk
28011bf09e623fed7bb3e75706cacc14 *ic04.trk
fbc176a62ab1059ce2af35b0968c806c *ic03.trk
49ffdb18ffe9d29f47cde142636807cd *ic02.trk
7328ae72735db4c17cd5e84901512758 *ic01.trk
48802dd402385200d1960352e61eb54f *ddppq
bd091a3a33a21de0096888d6f7e153c1 *ddpms
02194de0b2c411e1725c44e23ecb3135 *ddpid
```

DVD-Image :

```
ca42f7f4e5c2e45db98d12c184f9236b *CONTROL.DAT
09e008c8e8540d5730f6e8f7c06d48bc *DDPID
532167c846f4ce86e173eb6a5354d653 *DDPMS
2978fb9dc2db29874dab5aa3d3bc9959 *MAIN.DAT
```

BD-Image :

```
d5ad8257ca33bb4c184d11535549ad33 *BDCMF.CMF
ce03808e998939e889e80ca4407d1559 *FAI.DAT
976a385eec8e62c211cea9d24c01e83d *PACLO.DAT
8edc80df80747bf5969fd66ee859f509 *PIC.DAT
0b135648064a43a006f20f81db90fda1 *UCD.DAT
c59e47b39abb646d1721284adf4fef51 *UD.DAT
```

ISO-Image :

```
7328ae72735db4c17cd5e84901512758 *IMAGE.iso
```

Please inform your customer service manager about the transferred master folder name and Meta Data together with your production order.



3. Production Master Delivery Specification

If your master data is correctly prepared for the replication process, which means you have created a “Production Master“, please send us your data formatted as follows.

Preferred formats for Production Masters are:

CD-Audio

- CD-Audio replica
- CD-R with playable CD-Audio content (finalised, Disc-at-once format)
- CD-R / DVD-R, formatted as a data-disc including DDP 1.0-Image or DDP 2.0-Image (all DDP-files uncompressed placed inside the Root-Directory)

CD-ROM / DVD-ROM

- CD-ROM replica / DVD-ROM replica (without copy protection)
- CD-R / DVD-R ROM-formatted
- CD-R / DVD-R ROM-formatted including DDP 2.0 -Image (all DDP-files uncompressed placed inside the Root-Directory; for DVD9 per each layer one separate DVD-R)
- DLT III, DLT IV, SuperDLT 1 including DDP 2.0 -Image (uncompressed) recorded with DLT-2000, DLT-4000, DLT-8000 or SDLT-320 (for DVD9 per each layer one separate tape)

Multi-Session CD or Enhanced Music CD

- CD-Replica or CD-R, already formatted into Multi-Session format
- CD-R / DVD-R ROM-formatted including DDP 1.0 -Image or DDP 2.0 - Image (all DDP-files uncompressed placed inside the Root-Directory)
- CD-Audio content and CD-ROM content separately on 2 CD-Rs. arvato digital services will create Multi-Session Production Master (extra cost).

DVD-Video

- DVD-Video Replica (without copy protection)
- DVD-R ROM-formatted including DDP 2.0 - or DDP 2.1 -Image (all DDP-files uncompressed placed inside the Root-Directory; for DVD9 per each layer one separate DVD-R)
- DLT III, DLT IV, SuperDLT 1 including DDP 2.0 - or DDP 2.1 -Image recorded (uncompressed) with DLT-2000, DLT-4000, DLT-8000 or SDLT-320 (for DVD9 per each layer one separate tape)

Blu-ray

- BDCMF-Image or SonyCMF-Image Online or USB HDD/Stick-NTFS formatted

Blu-ray for Data (Type P)

- BDCMF-Image or ISO-Image Online or USB HDD/Stick-NTFS formatted

UHD-Blu-ray 4K

- UHD- BDCMF-Image Online or USB HDD/Stick-NTFS formatted

SACD

- HD-Layer: AIT 1 Cutting-Master with Sony/Philips -format
CD-Layer: formatted like “CD-Audio“



4. Format Capacities

CD Format	Max. Playtime	Max. Capacity
12 cm CD (Red Book Specification)	78 min. 30 sec.	690 MB
12 cm CD (max.)*	81 min. 30 sec.	716 MB
8 cm CD (Red Book Specification)	21 min. 56 sec.	192 MB
8 cm CD (max.)*	25 min. 00 sec.	219 MB

DVD Format	Max. Sectors	Max. Capacity
12 cm DVD 5	2.295.000	4,38 GB
12 cm DVD 5 (max.)*	2.298.000	4,384 GB
12 cm DVD 9	2 x 2.085.000	7,95 GB
12 cm DVD 9 (max.)*	2 x 2.093.000	7,98 GB
12 cm DVD 10	2 x 2.295.000	8,75 GB
8 cm DVD 5	714.500	1,3 GB
8 cm DVD 9	2 x 649.500	2,5 GB
8 cm DVD 10	2 x 714.500	2,6 GB

SACD Format	Max. Playtime	Max. Capacity
SACD HD Layer (Scarlet Book)	only Stereo: 109 Min. only Multichannel: 90 Min. Stereo +Multi.: 65 Min.	4,38 GB
SACD CD Layer	78 min. 30 sec.	690 MB

Blu-ray Format	Max. Sectors	Max. Capacity
BD 25	12.219.238	23,306 GB
BD 50	2 x 12.219.238	46,612 GB

UHD-Blu-ray Format	Max. Sectors	Max. Capacity
UHD-BD 66	2 x 16.292.864	62,15 GB
UHD-BD 100	3 x 16.292.864	93,22 GB

* Replicas with these extended playtimes are out of international specification, may not play satisfactorily on some players and carry no guarantee.

Production-Master-Delivery

Sonopress



Master Data Process
Sonopress-Germany

Sonopress

