# Technical conditions for the production of vinyl records

## Introduction

Vinyl records are mechanically produced analogue sound storage mediums. The sound and dimensional parameters are based according to the standard IEC 98 publication in its 3rd edition in 1987.

## 1   Types of vinyl

Vinyl records are classified according to the combination of playback speed and diameter into the following categories:

| Code | Diameter | | RPM | Designated registration letter |
|---|---|---|---|---|
| | Inch ( ") | cm | | |
| LP | 12 | 30 | $33^{1}/$ | E |
| MP | 10 | 25 | $33^{1}/$ | F |
| SP | 7 | 17,5 | 45 | H |
| Maxi single | 12 | 30 | 45 | M |
| Maxi single | 10 | 25 | 45 | N |
| EP | 7 | 17,5 | $33^{1}/$ | O |

In addition to the above mentioned products, there are also different types of records which differ in weight (standard and "heavy"), colour, designer labels (picture disc) or shape (shaped vinyl). These may not conform to the standard specifications published in IEC 98.
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### 1.1   Recording times and choice of vinyl records

Each side of a record carries a spiral groove with 2 channels (stereo). The groove begins at the edge of the record and ends within a specified diameter from the centre, where the groove closes within itself. Any request involving a different geometrical groove order needs to be specifically defined as a planned difference from the IEC 98 norm.

The playing time of a record is limited to the frequency and dynamics of the sound, amount reproduced in stereo and various other characteristics of the sound signal. The table below can be used an orientation of playing times.

If the playing time per side does not exceed the timings mentioned, the cutting level is usually only limited according to parameters of the cutting machine and playback conditions. If the playing time is longer than the recommended times in the table, it is possible that the signal requested to be cut could exceed the recording area. In this case, it is necessary to lower the cutting level or to choose a suitable compromise.

| Suggested maximal playing times (in minutes) | | |
|---|---|---|
| Vinyl size | 33 1/3 RPM. | 45 RPM. |
| 7" | 6,5 | 5,0 |
| 10" | 13,5 | 10,0 |
| 12" | 19,5 | 14,5 |

For a more clear orientation between the track markings, it is possible to cut a silent transmission groove, keeping in mind that this transmission groove decreases the recordable area of the medium.

Before choosing the format of the record, you must take the total playback time and physical principles of playback into consideration. According to this, the worst suitable format is the 7" EP cut at 33 1/3 RPM

**(which we don't recommend, because this format has the lowest circumference speed during playback in the centre area of the record).**

## 1.2   Mechanical parameters of vinyl

The measurements of vinyl records are based on the IEC 98 norm. Record dimensions 12", 10" and 7" are valid for standard weight vinyl in the diagram below.



Obrázek 1 – Typ 30 a 25
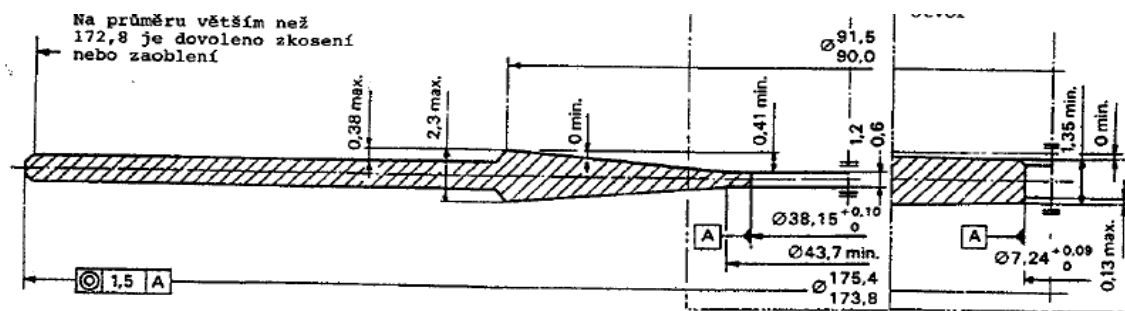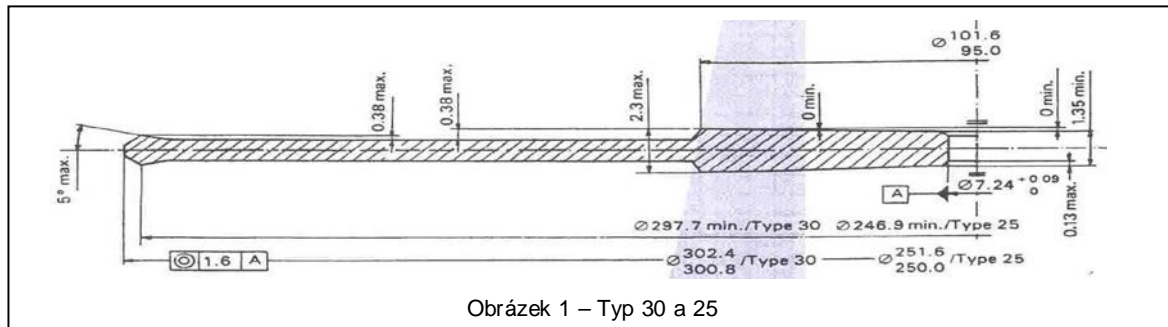


Other parameters not included in these figures are:

1. Flatness of the records :

    1. For 7" records, the deformation in the recorded area cannot exceed the area of the record with a maximum thickness (2.3mm) on a diameter of 90mm (91.5mm).

    2. When placed directly on a flat surface, the warping tolerance at the edge of the vinyl is max. 1,5mm for 12" and 10" records.

2. Eccentricity of the spiral groove cannot be more than 0,2mm.

## 1.3   Heavy vinyl

Records with a diameter of ∅ 17,5cm and ∅ 30cm are manufactured in 2 different weight classes: „standard" and „heavy". Records with a diameter of ∅ 25cm are manufactured in standard weight.

| Diameter | Standard weight | Heavy weight |
|----------|-----------------|--------------|
| 7" | 42g | 70g * |
| 10" | 110g | Not produced |
| 12" | 140g | 180 and 220g |

*) This type of record is only produced with a small centre hole

All types of records and weights are within ± 10g, apart from ∅ 17,5cm standard weight, which has a tolerance of ± 7g.

Note:
Heavy vinyl may deteriorate the acoustic properties of the recording, for example, by causing increased crackling. These degraded acoustic properties cannot be subject to claim.

## 1.4 Coloured vinyl

Records are normally produced in standard black vinyl, other colours can, however, also be combined and customized as follows:

- Solid colour
- Coloured with speckles/splatter
- Two colour - split
- Two colour- colour in colour
- Two colour – Side A, Side B
- Tri-colour – division of $120^0$, two colour split with speckles/splatter

The colour of the records is based according to the manufacturer's samples and/or according to the customer's special request. In the case of a special request, it is important to supply either a colour sample or provide the PMS number of the colour requested. The manufacturer is working with a tolerance during the manufacturing of coloured records based on supplied samples. This tolerance must be taken into consideration. The tolerance is required due to limited technological possibilities of coloured plastic materials. Two colour combinations (black w/ transparent splatters) and 2 colour configurations (transparent colour in black colour) are not suitable because the colour effect is lost when the transparent colour disappears in the black colour. Another unsuitable format is 7" heavy vinyl with splatters.

Note:
Coloured vinyl records (non-transparent or fluorescent pigments in particular) may deteriorate the acoustic properties of the recording, for example, especially causing increased noise. These degraded acoustic properties cannot be subject to claim.

## 1.5 Picture Disc (PD)

Picture discs are vinyl records which have a printed label on both sides with a plastic foil covering the entire surface area and grooves pressed into the plastic foil.

In the case that a one sided record is requested; only one side of the picture disc will be cut. The other side can be "mirrored" (smooth surface with no recording), but there must be a "silent groove" (groove without signal).

1 sided picture discs are offered, but uncommon. The label is printed from both sides and the recording is pressed on 1 side of the record and covered by plastic foil. The opposite side of the label is visible through the vinyl material on the opposite side of the picture disc. These types of picture discs are prone to warping more than others and do not comply with the flatness parameters mentioned above.

Note:
Picture Discs may deteriorate the acoustic properties of the recording, for example, causing especially increased noise and static. These degraded acoustic properties cannot be subject to claim.

When printing with a standard raster, images may appear distorted due to the interference phenomenon known as the moiré effect (interference between grooves and printed label raster). The intensity is based

on the character of the printed motive. It is not possible to remove this phenomenon by any technologies implemented by the manufacturer and cannot be subject to claim.

Exceeding of the flatness parameters cannot be subject to claim on 1 sided picture discs.

## 1.6  Shaped Vinyl

Shaped vinyl are records which are shaped into various geometric shapes using a cutting tool. The shapes are determined based on drawings submitted by the customer. W hen a special shape is requested, it is important to choose a suitable format (either 12" or 10") due to the fact that the record must have 175mm of recording area available (as in the picture below). The raw material for shaped records can either be standard black or a coloured 10" or 12" vinyl in standard or heavy weight. In the case that a shaped picture disc is requested, the picture disc label must be 2-3mm smaller than the requested final shape size. The only shaped picture disc option available is a 1 sided picture disc where warping        occurs        and        flatness        parameters        are        not        met.



Maximum size
Ø 300mm

Minimum surface
size Ø 175mm
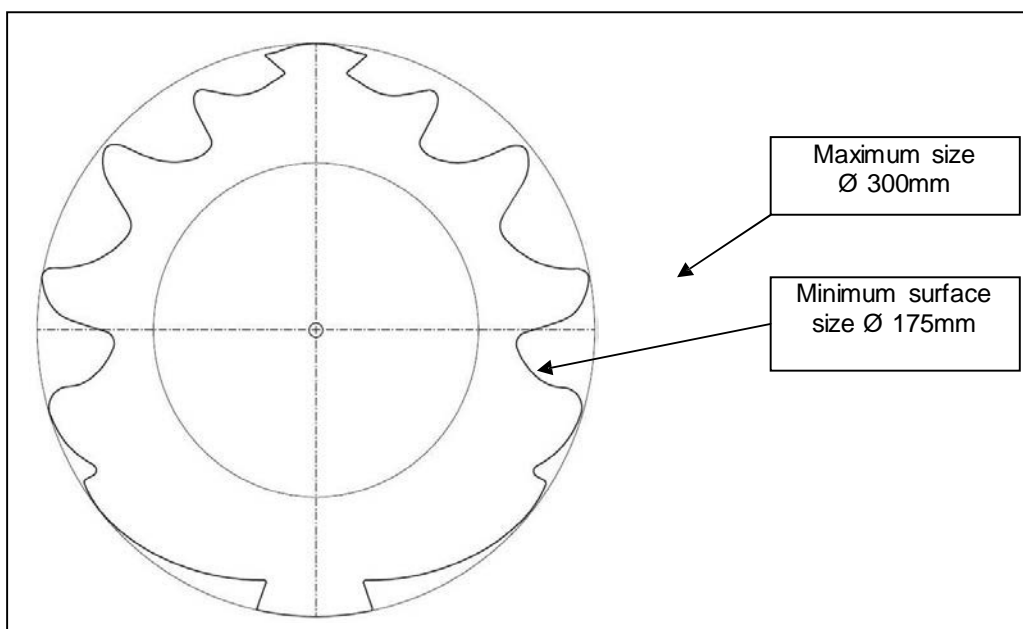
Note:
A limited recording area results in a limited playback area. Please refer to chapter 1.1. on page  1.
Exceeding the flatness parameter on a single sided shaped pic LPs cannot be subject to claim.

## 1.7  Test Pressings

Test pressings (usually 5-10 copies) can be produced upon request. The difference between test pressings and the full production is that test pressings come with white centre labels. Test pressings are sent to the customer for approval and are for approving the acoustic quality of the record only. Claims against other defects will not be accepted. The approved sample is used as a standard for assessing the acoustic quality of the complete production.

## 1.8 Labelling

Every record is required to have its own matrix number in the central area of the record. This matrix number is indicating what type of record the recording has been pressed on. This matrix number is generated from a series of numbers and a letter. This letter is indicating the type of carrier (as in the table in chapter 1). Behind this letter is a number which indicates which side of the record it is (1=A, 2=B).

## 2 Mastering material requirements

## 2.1 Data input format

Limitation of Liability for damages : In the case the physical data carrier is damaged or lost, GZ Digital Media, a.s. will cover the value of the medium, but not the content.

The physical media must be readable throughout the length of the program. In the event that the supplied medium contains read errors which cannot be corrected, processing of the order(s) will be suspended. The customer will be requested to supply a new data.

Each data carrier must be clearly identifiable in accordance with the supplied documentation and order (part number, customer, etc). The description must also define exactly what is stored on the data carrier (e.g., vinyl master, CD-Audio DDP master or WAV files). The medium needs to be labelled clearly according to the order without preventing an error free reading (self-adhesive labels, labelling the medium with an unsuitable hard tipped pen, etc).

If a single data carrier includes files for more titles, the files must be stored in separate folders and named according to the catalogue number of the title and must match the information contained in the attached documentation and order. We recommend storing the data for each side in separate subfolders.

Recommendation: Always send a copy of your original master to production. It is advisable to send two identical copies clearly marked as a master and back-up copies. In the event that any problems occur, we will use the back-up copy, thus avoiding potential delays associated with sending new data.

### 2.1.1 Audio files

Audio files can be added to physical media or uploaded via FTP. Audio files cannot be used as they are supplied for cutting directly. This is why the data is examined to see if they are suitable for vinyl master cutting. According to the documentation supplied, the tracks will be split between sides of the record and, if necessary, corrective actions to improve sound quality will be made.

### 2.1.1.1 Recommended formats:

- WAV (Windows PCM) - uncompressed audio
- AIF, AIFF (Apple Macintosh) - uncompressed audio
- APE (Monkey's Audio) - lossless compression, including error detection
- FLAC (Free Lossless Audio Codec) - lossless compression, including error detection

Bit resolution: accepted 16, 20, 24 a 32 bits.

Sampling frequency: accepted 44.1, 48, 88.2, 96, 176.4 and 192 kHz.

We generally do not resample files with a sampling frequency higher than 44.1 kHz - only in cases when all files for 1 side do not have the same sampling frequency. These particular files would be re-sampled in the GZ studio for the highest frequency of all frequencies used. Lower sampling frequencies (for example. 22,05 kHz a 32 kHz), are also accepted but we do not recommend them due to the possibility of a lower sound quality standard.

We recommend sending the files in the same quality as what has been recorded or received from the studio that produced, mastered or mixed the recordings. We recommended to contact the studio in advance regarding recommendations mentioned in this section as well as recommendations for the preparation of vinyl masters mentioned on the GZ website.

We do not recommend any additional conversion or transfer.

### 2.1.1.2   Non-recommended and inappropriate formats:

Lossy compressed audio formats:

- MP3, MP2, MP1 (MPEG-1 Layer 3, 2 and 1)
- MP4, AAC, M4A (MPEG-4, Advanced Audio Coding)
- AC3 (Dolby Digital), DTS (Digital Theatre System Coherent Acoustics)
- WMA (Windows Media Audio, Microsoft), MOV (QuickTime)
- OGG (Ogg Vorbis), MKA (Matroska Audio), RA, RM (Real Audio, Real Media)

### 2.1.1.3   Non acceptable formats:

- files with DRM protection to prevent unauthorized playback, for example, files with the extension m4p (AAC format with DRM protection)

Unsupported formats may be accepted upon prior consultation with the mastering department

### 2.1.1.4   Division of program

We recommend storing all of the music for an entire side in one file - forming a continuous and uninterrupted program, including pauses. We use the supplied track listing with the times and lengths of the songs for orientation in the program. Songs saved in separate folders are not suitable data for production. There is a high risk of error due to:

- Confusion when the name of the subfolders are not labelled correctly
- It is not clearly mentioned whether these folders contain gaps between the tracks or not.

During the compilation of the program, we expect that the files contain gaps in between the tracks. Generally we do not add gaps between the tracks. If the customer requests to have gaps added, it must be clearly mentioned in the supplied track list or production documentation. It is possible to request the length of the gaps according to each song or the same gap length for all songs.

- Compiling a program from more files with different technical parameters (sample rate, quantization, number of channels, volume, etc) requires additional studio work such as re-sampling or balancing the levels.

If the audio files have been created from an audio CD, it is possible that some data can be lost during the division of the tracks.

### 2.1.1.5   Name and location of files

Appropriate file naming and file location helps to locate the supplied data quickly as well as enabling a smoother and hassle-free order process.

We recommend choosing a name and the location of the files by following these instructions:

- Use a separate folder for each order using the catalogue number as the file name.
- Save all documentation files (track list, processing requirements, etc) in this file.
- Create a sub-folder for each order names SIDE-A, etc.

- If the program for the entire side is stored in one file, name it according to the number of tracks stored in it such as 01-05.WAV or 06-09.AIFF
- If the compositions are stored in separate files, name all files by track number and song title, such as 01-Song_name.WAV.

### 2.1.2 Physical audio carrier

Analogue or digital medium containing the continuous recorded information. The division of the program into tracks is defined by the technical conditions of the particular player (ID marks in time sequence) or according to the time mentioned in the supplied documentation.

If one physical medium is to be used for multiple sides, the tracks for each side should be separated by a silent pause which is long enough (at least 3 seconds) and defined by using tags (track number, ID, ...) and track times which are in accordance with the accompanying documentation
The order of the songs on the supplied medium must match the desired order of the final product to avoid having to change the song order (rewind, skip to another track,...). If they are not, the customer must state in written documentation the specific requirements to change the song order

We accept the following formats:

#### 2.1.2.1 CD Audio disc

Fully functional pressed or burnt discs in CD Audio format playable on desktop CD players. We do not accept shaped CDs, business cards CDs, etc.

#### 2.1.2.2 R-DAT

ABS time (A time) and ID START marks

#### 2.1.2.3 MiniDisc

#### 2.1.2.4 Analogue media

1/4" tapes, speed 38, 19 cm/s, EQ CCIR, NAB, Dolby A, Dolby SR

#### 2.1.2.5 Other media after prior consultation

U-Matic, SACD, DVD-Audio

### 2.1.3 Complex CD audio master in file form

This data contains all data in a format which is used exactly how it is supplied for mastering without making any unnecessary changes. The studio will only check the supplied files and, in case and if necessary or suitable, the studio will correct the master according to Phillips/Sony CD Audio format standards.

#### 2.1.3.1 DDP (Disk Description Protocol) format

The global standard for transmitting data for production of optical disks supported by all manufacturers of equipment for mastering CDs and manufacturers of professional workstations for audio processing.

Recommended version: 1.00. Version 2.00 also accepted.
Select the setting option for storage of audio tracks in one file if your authoring software supports it,..

#### 2.1.3.2 CMF (Cutting Master Format)

Similar to DDP and is transferable to DDP. If your workstation supports both DDP and CMF, select DDP.

### 2.1.3.3 Image data (ISO image) CD Audio

Files that can be used without any adjustments to burn a CD Audio master. Please refer to 2.1.1.

Recommended formats:

- NRG (Nero)
- BIN+CUE (CDRWin, ImgBurn, Toast, etc.)

Accepted formats:

- CDI (DiscJuggler)
- C2D (WinOnCD), CIF (Easy CD Creator)
- CCD+IMG (Clone CD), MDF+MDS (Alcohol 120%)
- IBP+IBQ (IsoBuster), UIF (MagicISO)
- BWT+BWI, B5T+B5I, B6T+B6I (BlindWrite)
- TOAST, CDR (Toast, Apple Disk Utilities)

### 2.1.4 Data carriers

Data carriers can be used to send audio files or disk images to burn a CD-Audio format (DDP, NRG, CUE + BIN, etc.) Accompanying documentation can also be supplied in electronic format on the same disk. One data storage medium can contain documentation for several titles.

### 2.1.4.1 Optical discs CD-R(W), DVD-R(W), DVD+R(W) containing data

Discs in CD-ROM or DVD-ROM format.
Discs must contain a compatible file system (ISO9660, Joliet, or UDF).

### 2.1.4.2 Hard drive

We accept all sizes of hard drives: (3.5", 2.5", etc) and all connection methods (IDE, SCSI, SATA, eSATA, USB, Firewire, LAN) .

We recommend using external drives, but we also accept the internal disc formats:

- NTFS (Windows 2000, XP, Vista) - recommended
- FAT32 (Windows 9X) (max. file size is 4294967294 bytes)
- EXT2, EXT3 (Linux)
- HFS (Apple)

### 2.1.5 Storage media

Accepted memory cards: SD, SDHC, XD, MMC, Compact Flash, Memory Stick and storage media USB Flash disk.
Each storage medium can contain data for more than 1 title.

### 2.2 Sending data electronically – FTP

Materials submitted for production via FTP must be accompanied by control elements for verifying the data integrity prior to production. Without these control elements, it is not possible to verify if the customer supplied files are the exact same files which the manufacturer has received.

Orders which do not contain the necessary control elements will be blocked until the data is resent in an

acceptable format. If the customer insists on the usage of non secure data, they must assume all risks associated with possible changes to the data during transmission.

Control elements can be supplied in one of the following ways:

### 2.2.1    Archived materials

Files which represent the disk image, DDP, CMF or individual audio files containing control elements (e.g. WAV), must be packed in one single file which can also contain documents.

Accepted formats of archive files: ZIP, RAR, SIT, 7Z, ARJ, ACE, others on request.

### 2.2.2    Using formats with built in control elements

APE, FLAC - compressed audio formats with control elements
UIF - a compressed video format audio CD with the control elements

### 2.2.3    Check code supplied

In order to control and verify that the data has not been corrupted or tampered with, a control element will need to be provided for all data that is not sent in an archived file format.

Accepted codes: MD5, CRC32 and SHA1. Each file must be calculated separately along with documentation of the checksum code for each file.
Control codes can be generated using free software such as HashCalc.

## *2.3    Location and identification of data and audio files*

Data supplied on  physical media or electronically (FTP) must include clearly  labelled  file  names  and folders  which are  organized  in a clear and concise   manner,   conforming   to   the   documentation accompanying the order.

Following these guidelines and recommendations will speed up the order process and reduce the risk of production delays and/or any confusion.

Guidelines for the names and locations of files:

### 2.3.1    File locations

Documents or data uploaded to the FTP server must be in a clearly labelled folder with a folder name that clearly identifies and corresponds with the catalogue number of the production. Files, directories and/or archives may not contain characters which are not allowed on PC or Mac operating systems (for example, : / \ > < : * ? |).

If each single track is saved in a separate file, please create a subfolder for each side with the name SIDE_A, SIDE_B, etc. and place the data into this folder.

### 2.3.2    Naming files

If the data for the entire side is stored in 1 file, name it according to the tracks that it contains, for example:  „A_01-05.WAV or  „B_06-09.AIFF".

If the data is stored in separate tracks, name it according to the track number and name, for example:

„A_01-Song_name.WAV".

Archived files and disc images should be named according to the catalogue number and nothing else.

## 2.4  Documentation

The supplied documentation must be clear and match the supplied data exactly in order to determine the accuracy of the data. In particular, any unusual features and/or anomalies need to be specially mentioned, otherwise these features may be tolerated as a defect or non-musical sounds.

Processing of orders (titles) without the required documentation will be suspended until the customer provides evidence and documentation in accordance with the specifications. If the customer insists on beginning the production without the documentation supplied, they will assume all risks associated with it. There is a large risk of the track listing not being followed in the desired order.

The documentation must include the following information:

### 2.4.1  Identification information
Catalogue number, customer name, song titles and artist, etc

### 2.4.2  Information on supplied data

#### 2.4.2.1  Type of supplied data

#### 2.4.2.2  Location on FTP server: directory and file name

#### 2.4.2.3  Document format (CD Audio Master, DDP, ISO image, individual files)

### 2.4.3  Description of the final product

#### 2.4.3.1  Required format

Size of record and speed; or speed of each side (if they are different).

#### 2.4.3.2  Track Division

#### 2.4.3.3  Track list

A track list must accompany all orders including the names and running times of all tracks as well as which side of the vinyl they should appear on. W e also recommend specifying the lengths of the pauses between tracks.

#### 2.4.3.4  Special requirements

Any special requirements (closing recording in the groove, endless loop, etc) need to be clearly specified and agreed upon in advance.

## 3  Pressing tools

Metal works for vinyl pressings are produced using DMM technology in GZ. On special request, we can make the processing of lacquer cuts.

## 3.1  Supplied pressings instruments

GZ Digital Media can press using customer supplied material. GZ accepts lacquers or nickel metal works called father or mother or stampers. Metal works must be without any visible damage, cannot be soiled (stain on nickel metal works, etc) or showing signs of corrosion. W e recommend that all supplied metal

works, especially lacquers (which are very sensitive) are packed carefully to avoid any damage during transport to GZ. Stampers have to be supplied as unprocessed originals and not bevelled.

GZ Digital Media is not responsible for the quality of records produced from customer supplied materials. Sound defects such as distortion, noise, etc. and defects caused by incorrect cuts (grooves) will not be accepted and all claims rejected.

## 4   Labels

Records are usually labelled on both sides. Labels on vinyl records are made of paper material and are directly associated with the pressing of the vinyl. Labels are made from offset paper (140gsm paper for 10" and 12" and from 120gsm paper for 7"s), the customer can also choose to produce the records without labels or with labels only on one side.

Note: Please consult with the customer service department in the case that labels will not be produced. Records without labels may have larger centre holes and the centre area may be deformed.  The side of the record with the label (especially picture discs) can be bent out of the „flatness" parameter. These defects cannot be subject to claim.

### 4.1   Types of labels

Basic labels are produced in the following sizes:

> a) For 7" records (17,5 cm) diameter ∅ 84 mm.
> b) For 10" and 12" records (30 cm a 25 cm) diameter  ∅ 100 mm.

PICTURE DISC labels are produced in the following sizes:

> a) For 7" records (17,5 cm) diameter  ∅ 168 mm.
> b) For 10" records (25 cm) diameter ∅242 mm.
> c) For 12" records (30 cm) diameter  ∅ 292 mm.

The text on the labels must be placed so that it does not interfere with the cutting of the labels. All labels must have a 2 mm gap between the text and the edge of the label and coloured labels must not exceed the 3 mm bleed on the diameter of the label. Text must not be placed within 10mm of the diameter from the centre of all labels and for all formats. Text cannot be placed within 40mm of the diameter of the centre for 7" labels with big holes.

Basic labels are made from offset paper weighing 120 and 140gsm. Labels for Picture Discs are made of coated paper with a weight of 150gsm.

### 4.2   Label material requirements

Documents supplied by the customer in electronic form shall be governed according to the technical conditions upon entry to the DTP studio. When preparing standard labels, it must be taken into account that the printing is done on offset paper, which affects the colour of dark colours, especially black. As a result, dark colours will usually appear brighter.

### 4.3   Delivery                                                                                                    label

The production of labels is arranged by GZ Digital Media or can be supplied to GZ after prior consultation and agreement. Supplied labels must be produced on uncoated paper with a weight of 140gsm and printed with colours which resistant to temperatures 150 or more. The backside of the labels must have

lines indicating the direction of the paper grain. The colours used on supplied labels must not bleed through to the front side of the label. The supplied quantity (pairs) must be more (10%) than the requested production quantity. GZ prefers to produce the labels internally and cannot assure the quality of customer supplied labels on the finished product.

## 5    Completion of product

The product is delivered in internal and external packaging (depending on the customer) and stored in sturdy cardboard boxes. The choice of packaging is specified in the customer order.

### 5.1    Inner sleeve

Records of all dimensions can be placed into an inner paper bag, microtene sack or plastic packaging before inserting them into the outer sleeve. This protects the product from abrasion of the outer packaging. Inner sleeves can be with or without a central hole. The sleeves can also be printed via offset print.

### 5.2    Outer sleeve

The outer packaging is manufactured according to the customer's technical documentation or the manufacturer's packaging (GZ Digital Media a.s.), based on the customer's data. The outer packaging may be universal (black or white) or can be printed via offset printing (CMYK, PMS).

### 5.3    Shrink wrapping

Records of all sizes can be shrink wrapped in clear plastic after completion of the outer packaging.

## 6    Printed sleeves

The outer packaging made in GZ Digital Media can be produced from either white-grey or white-white carton with a gsm of 280 – 350 $g/m^2$. Covers produced in GZ are according to the technical conditions of polygraphic                                                                                                              printing.

Printed packaging is produced according to data sent in an electronic form. The artwork must contain a 3mm bleed around the edges of the artwork. Artwork cannot be situated in the cut-out area when a cover with holes is requested.

### 6.1    Second outer sleeve

Outer sleeves can be produced as a flat cover or with a 3, 4 or 5mm spine, as gatefolds and more. The cover can be solid or include 1 or 2 centre holes. All types of outer sleeves may have a matte, gloss lamination laminate or UV varnish finish
.

### 6.2    Cover material requirements

See technical conditions of entering DTP documents.

## 7    Testing

Testing and measuring methods are carried out in accordance to the CSN IEC 98 norm, which is based on IEC 98 1987.

We recommend testing the acoustic quality on equipment which has at least a middle quality needle. There should be a weight/force on the tip set at 2/3 of the recommended interval. It is sufficient to use a

needle which has biradial point.

Labels are checked by visual control.

## 8    Operating specifications

Records are sound carriers which require special care upon handling and playback.

- Temperature range from 5°C to 35°C.
- Relative air humidity up to 85%, with no harmful chemical fumes.
- It is important to avoid any mechanical damage to the recorded areas, including incorrect set-up for playback, incorrect packaging, etc.
- Records should be stored in a direct upright position and avoid being tilted.

## 9    Storage, handling and transport

• Records are to be packed in transport boxes and stored in an upright position with a maximum of 4 layers. Stacking of cardboard boxes in multiple layers is permitted only in sturdy boxes.
• Boxes must be secured against shock and movement and must not be mixed with other goods.
• Records are transported in closed vehicles.
• Records must be transported in a condition which will not affect their quality.
• It is the customer's responsibility to inspect the goods upon receipt of delivery and, if any damage is found (torn or soiled through transport, both of the outer or inner packaging), to inform the carrier protocol.

## 10   Claims

It is mandatory to adhere to the provisions contained in the terms and conditions when submitting a claim against vinyl records. In order for GZ Digital Media to process a claim quickly, it is recommended to include:

- The claimed title, description of the claimed defect (you must specify the track time when claiming against defects in an audio track). Details of the claim must be complete.
- The claim must contain a sample of the item in question.
- It is necessary to lodge a written claim protocol with the carrier when submitting claims against damaged goods (damaged transport containers, inner and outer packaging), or the quantity delivered