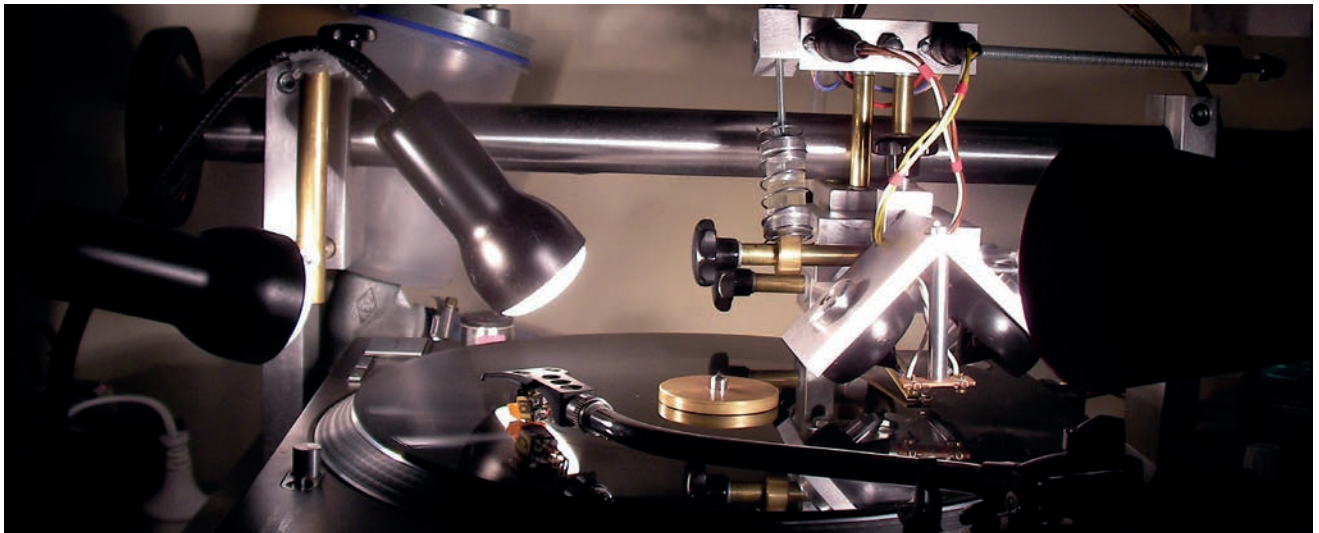


well tempered

vinyl manufacturing services



Vinyl & CD Manufacturing Guide



Mastering

Vinyl Manufacturing

CD Manufacturing

Artwork



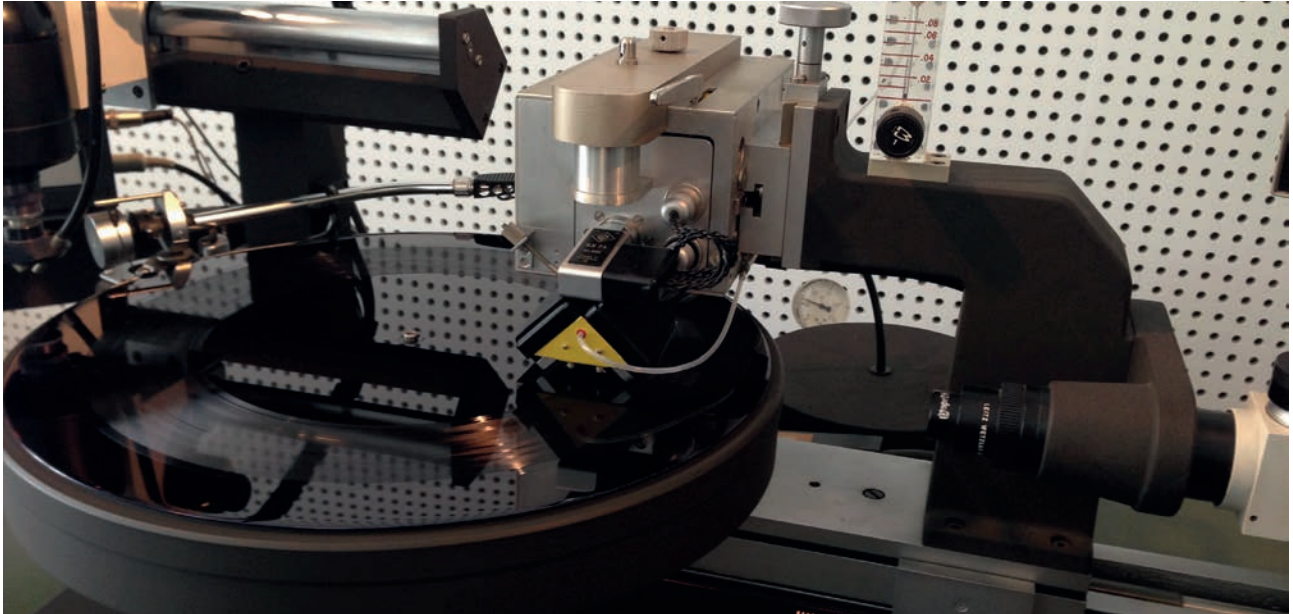
About

With over a decade of music industry experience specialising in vinyl & CD production, Well Tempered offer the very best in manufacturing solutions and consultancy. A wealth of knowledge and years of maintaining excellent supplier relationships enable us to offer you much more than a standard manufacturing facility.

What sets us apart from a standard broker is that we work with a selection of the world's best pressing plants and mastering engineers to ensure that our tailored service is best suited to your needs. We can advise on where to get your audio mastered, and which plant is right for your requirements.

Experience in key areas of the music industry including distribution, label management services & production mean we'll find the most suitable option to bring your music to market. We will ensure your product is always on schedule and cost, whilst maintaining premium quality both audibly and visually.





It is important that you supply pre-mastered files with sufficient headroom, this will enable the mastering engineer to get the best out of your music. The files must be labelled correctly in the correct order.

Vinyl Mastering:

Your music will be prepared by a cutting engineer and made 'vinyl-ready'. Due to limitations of vinyl, audio will need processing before it is cut onto a lacquer using a lathe. The cutting stylus converts the audio to mechanical motion by cutting a precise spiral groove across an acetate coated aluminium disc, 14" in diameter.





Vinyl Manufacturing

Processing:

Through a very complicated and delicate process, the lacquer is carefully cleaned and washed in preparation for silvering. A silver nitrate is then sprayed onto the lacquer, creating a metal coating and making it ready for electroplating.

The silver disc is submerged in a solution of nickel sulphamate electrolyte for a period of approximately ninety minutes. The nickel is deposited onto the lacquer through the electroplating procedure creating a negative which can then be separated from the original disc.

The negative is then cleaned and coated with a passivator. The electroplating procedure is repeated with the negative in order to create a new positive. This positive is an exact copy of the original lacquer but made from nickel metal, this positive is also known as the metalwork.

From the metalwork the stampers can be made. These are negatives, so once again have to be produced through electroplating as before. Stampers can be used to create approximately one thousand records until it is worn out or split. A new stamper has to then be made from the positive.

Test Presses:

Test Presses are then created and sent for approval. These must be checked carefully for audio quality, skips, pops and crackles, and surface noise. It is necessary to do this using a good quality record player and stylus.

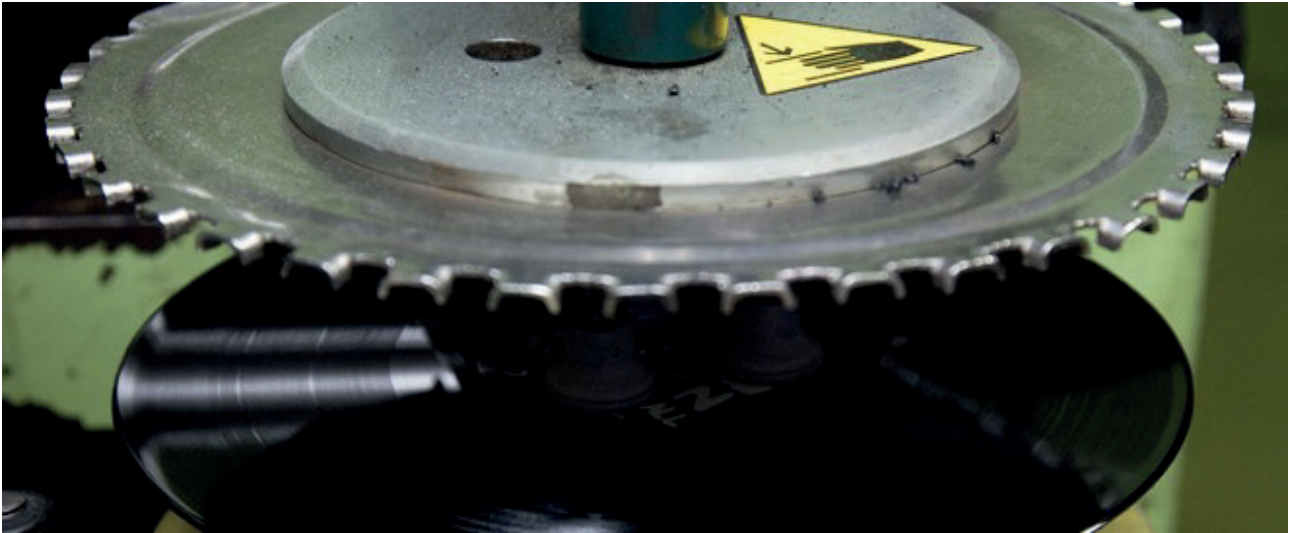
Vinyl Pressing:

After separation, the stamper is prepared and fixed onto the press. The mechanical system drops a bottom centre label into place onto the bottom stamper, followed by the vinyl biscuit or 'cake', and then finally the top label. The stampers are then quickly heated with steam and then pressed together and the vinyl squeezed into shape. A blade then swings round and shaves off the excess vinyl, while the stampers are cooled using cold water.





Vinyl Manufacturing



Coloured Vinyl:

The vinyl compound starts off clear, a polycarbonate is added which colours the vinyl black. It is this additive that reduces the noise floor level. A pressing of coloured vinyl requires a dye and uses less polycarbonate resulting in slightly noisier floor level. As a simple rule, the lighter the colour of the vinyl the noisier the record.

Packaging:

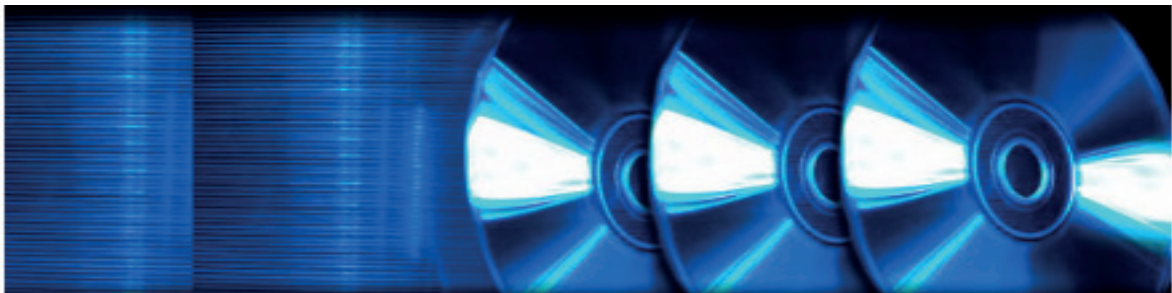
Many pressing plants have automated sleeving machines, though many prefer to sleeve the product manually. Manual sleeving enables the plant to give that extra added quality control, and make sure that no defective records are shipped to the customer.





CD Manufacturing

Compact Disc Manufacturing is a process whereby commercial CDs are replicated using a Glass Master. A CD can be used to store audio, or data (CD-Rom) in various standardised forms.



Glass Mastering:

The glass master is extremely delicate and the requirements are very specific. The mastering is performed in a self-enclosed clean environment to avoid any contamination such as hair, dust or smoke. The round plates of glass are 240mm in diameter and 6mm thick with a small area of steel on one side to facilitate handling. The glass is polished until very smooth as even microscopic scratches would affect the quality of the finished product. The glass is then cleaned with chemicals before being washed on a spin coater. The rotation spreads the solvent wash over the master to ensure an even coating.

The glass is then placed into an LBR (Laser Beam Recorder) which writes the information using the source material from the DDPi or Production Master CD. A chemical solution is then used to wash away the part exposed to the laser which forms the pits and the lands.

Electroplating:

A layer of nickel is then added to the master through electrolysis. The nickel layer is then separated from the glass and used as the stamper, this is an exact negative of the CD. With the mould ready, the CDs can now be replicated.





CD Manufacturing

Replication:

In order for the CD to be readable, it must be covered with a micro thin layer of aluminum which is vacuum laid. The aluminum surface acts as a mirror to reflect the laser light back so information can be read.

To protect the CD and its information from harm — scratching, bending, or dropping it — the disc is covered with a layer of varnish. The lacquer envelops the aluminum and seals it from the elements. The disc is then ready for printing.

The CD can then be silkscreen or offset printed with artwork. Silkscreen is normally used for vector graphics for better color matching. Offset is used for photographic artwork using CMYK as the basic color elements. Once the artwork is printed, the disk will be exposed to a high intensity UV lamp which dries the ink instantly. The discs are stacked and then transported for packaging.





Artwork must be supplied using the correct templates. Artwork not supplied as per our specification will be rejected. Once your artwork is received it will be processed by our in-house artwork dept and a full set of PDF proofs will be sent for your approval.

Submitting Artwork:

Please follow the guidelines set below when submitting artwork. Contact Us for any templates you require.

Artwork must be supplied as PDF files or Adobe CS files in the templates supplied. No other formats will be accepted.

Please use designers that have knowledge and experience of the print process and know how artwork should be supplied for printing.

All artwork must include the following text:

*Made in the E.U. Manufactured by Well Tempered. t: +44 (0) 7973 984358
www.well-tempered.co.uk*

Fonts:

Convert all text to outlines.

Placed Images:

Embed all placed images into the file.

Colours:

Please supply as CMYK or spot colours. Do not supply artwork using RGB or LAB colours and clearly indicate Pantone reference numbers.

Vector vs. Bitmap:

Where possible use vector graphics as opposed to bitmap graphics, as this ensures a higher quality print.

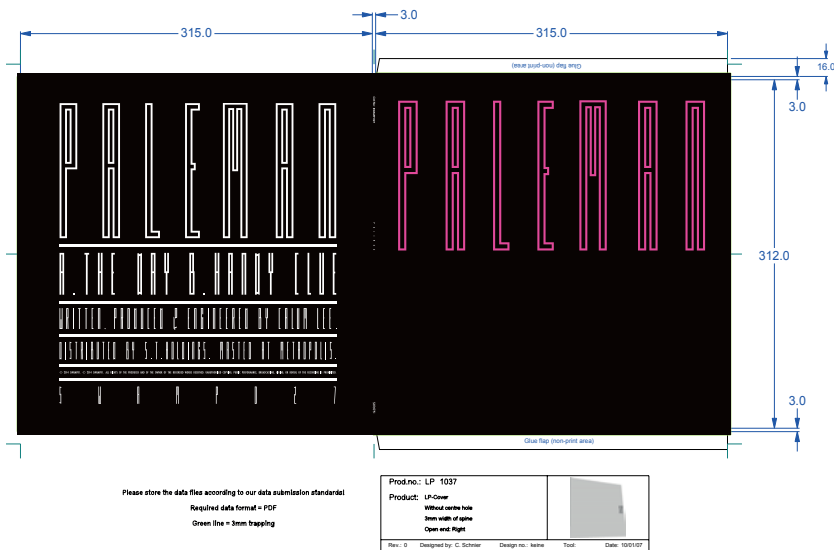
Die Cut Holes:

Supply artwork as a separate file, in the exact position, in the relevant template as a vector graphic only.





Artwork



Varnishes / Embossing / Debossing:

Supply artwork as a separate file, in the exact position, in the relevant template as a vector graphic only.

Centre Holes:

Do not include the centre holes in the label or sleeve artwork. Just specify in writing when submitting artwork.

Bleed:

Ensure all artwork has the specified amount of bleed added (refer to relevant template for details).

File Name Protocol:

Always include the cat number, label/sleeve and side in the file name e.g. ABC001_Aside_label.pdf / ABC001_sleeve.pdf

Templates Layers:

Do not unlock, adjust or add artwork to the template layers, they should be non-printing layers.

Text Proofing:

All artwork should be proof read by you, before it's submitted to Well Tempered. Correct metadata is the responsibility of the label.

Only when you are 100% certain the artwork is correct should it be submitted to us. If you have any questions about the the artwork or templates used, please contact us.





Well Tempered and its associated pressing plants cannot be held responsible for errors in the reproduction of artwork supplied by the record label or its designer. It is the responsibility of the record label and its designer to supply artwork that conforms with the requirements provided by Well Tempered and its pressing plants. It is our responsibility to ensure that the supplied artwork is print-ready and to identify aspects of the design that may impede print production.

Proofing & Printing:

Once your artwork is received it will be processed by our in-house studio team and a full set of PDF proofs will be sent for your approval.

Any alterations required to the artwork will be charged at £25 per hour. After the first proof, any additional or replacement proofs required will be charged at £15 each.

Due to the variants in screen settings and resolution, PDF proofs are not an accurate colour representation of the finished product. Please use them for checking content, spelling, fonts, position, cut off and overprint (if applicable).

Once approved, your files are sent to the print-house. All our printing is output using high quality off-set printers by a team with over 20 years experience.

