



CD Production

If you're thinking of making a CD, read on..

The record label, whether a major or one-man-band, provides the master and specifies the production run, i.e. the quantity required of each format – CD, DVD, vinyl 12" or 7", 3" CD, Interactive Business Cards etc. All the ensuing stages as far as finished product are known as Manufacturing or (confusingly) Production. The Manufacturer supplies the Distributor and some copies usually go direct to the label for Promotion.

Here are some tips about aspects of manufacturing, as well as a checklist.

Choosing a Supplier

One of the first choices you will need to make is whether you wish to work direct with a factory or through a broker. If you want to deal direct with the factories, you will be responsible for dovetailing deliveries of components and would be well-advised to create a Critical Path Plan, incorporating deadlines for each item towards Delivery Day. Some factories accuse brokers of being more expensive. In practice, this is no more the case than with insurance brokers or travel agents. Since brokers buy in bulk, they can often sell at the same rate as the factories. They also save the factories time by attending to details and ensuring that clear and correct parts are received.

Packaging Concept

Think about packaging and your label design before production is completed. Be ready to supply your label instructions, artwork, film or disc when you supply your master. Don't forget the obligatory CD/DVD logo. Most audio CDs go out in a jewel case or a format of similar size, such as cardboard sleeve. This allows retailers, who use standardised racking, to display your product. If your product is being mailed, card packaging is not only lighter but less likely to get damaged than a jewel case. Clear plastic envelopes also represent a light-weight, cost effective alternative. The simplest and cheapest solution is a plain white sleeve. But if you want impact, there's a vast range of special packaging such as double CD-boxes, CD-books and even film-reel type tins! For vinyl, there are gatefold sleeves and cut-out shapes. A recent Bob Marley re-release sleeve was in the shape of a cigarette lighter. Non standard packaging is, of course, more expensive, particularly if you need a short order or re-order. Record company marketing departments tend to use these for limited launch promotions. When you've decided what packaging you want, design can be initiated during product testing.

Testing

You breathe a great sigh of relief - it's ready! But if your product has Rom content, you'll need to allow time for testing. It is important to identify any glitches at this stage.

Manufacturers verify fidelity - not the product itself - and produce a faithful copy of what you the publisher supply, bugs and all!

Mastering

You will need to supply a CD-R, or DAT for CD/CD-ROM replication, or for a DVD, a DLT or DVD-R per layer. For vinyl discs, you will supply a CD-R, PCM1610 or lacquers. The master should be treated as fragile and not fingered or used.

Glassmastering / Processing

This is when your master is processed to stamper, ready for replication. For CDs, a flat glass disc is coated with photoresist, a light sensitive material. Using a laser beam recorder, the signal from the master is converted to pulses and the glass disc becomes a "photo" of the master. Immersed in an electroplating bath, the disc attracts a layer of nickel which will be pitted in reverse position and depth to the pulse marks left by the laser beam. The process is similar for vinyl, although a groove, rather than pits, is reproduced. The hardened layer of nickel peels away as the father. It can be used to replicate directly, but it is usual to take the precaution of making a mother and replicating from stampers grown from the mother.

Replication

At last, you're ready for replication! On the CD production line, molten polycarbonate is injected into a cavity between stamper and a mirror surface, where it's moulded. After cooling, it looks like a transparent disc. The pitted side of the disc is then coated with a thin layer of aluminium and a layer of lacquer is spun over this to protect it. This is then dried hard. Analogue discs are pressed by inserting a quantity of soft vinyl between two stampers which mould the disc. It is cooled rapidly to harden it. At every stage during the process, tolerances are verified and any rejects discarded. At the end of the manufacturing line, labels are printed on-body, usually using silk-screen or offset process. Four-colour work looks good with white under the colours to enhance them. Vinyl records usually have paper labels. Although your new product could in theory be turned around in a day or so, in practice you have to wait your turn. Tell your manufacturer when your job is coming, so that it can be scheduled for an agreed delivery date.

Overs and Unders

It is common practice within the industry to consider an order complete if the quantity supplied is within 10% of that ordered. Small runs, in particular, tend to be over-pressed to allow for weeding out of any items failing quality control. If there are none, you will be expected to accept and pay for what you get within this limit. Likewise, should the stampers break 900 units into your 1000 order, the presser may well elect to deem the order complete, rather than make new ones. It is more usual to pay for deliveries at a price per unit rather than on a deal basis, so that you pay only for discs

received. In practice, the differential is usually much closer to 5% than 10%.

Printing

The printing of your packaging can take place while the glassmastering and replication is going on. If you're supplying your own design, check your supplier's specs. If your artwork is on disc, verify compatibility of formats and remember to define your colours as pantones.

Delivery

You will need to allow for delivery costs in your budget. If you require split deliveries - perhaps to a promoter, a distributor and your own HQ - advise quantities and addresses as soon as possible.

Distribution

Where and how your product is to reach its target is a consideration from the start of your project. If you have a distributor, use their experience. They may have vital input regarding your product content or presentation.

Turnaround

You should expect new launches to take two weeks approximately from finished artwork and master. Re-orders take around five working days. Large on-going orders are delivered on a daily basis. You can agree a delivery date with your designated Production Co-ordinator when you place your order.

Tips and Quirks

Take your favourite discs to the Mastering Studio with you, to help the engineer know what you like. Make your product as visually appealing as possible, so that the radio producer, retailer and buyer are attracted to your product. Also make sure that it won't give your retailer display headaches. A standard packaging format is cheaper and often easier. The challenge is to make the ordinary appear extraordinary. Your manufacturer will produce a faithful copy of your recording, bugs and all. The onus is on you to check that your Rom really works on various platforms and that your label track list matches the running order on your master.

It is also your responsibility to equalise sound levels for all tracks during mastering.

Triple check that your master is labelled with the correct catalogue number, which matches label and packaging information. This is particularly important if your manufacturer is dealing with several of your catalogue numbers at once. It's important to check your manufacturer's specifications before initiating mastering or artwork, if you are handling these yourself.

Happy Producing!

