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Understanding the basics of CD Replication by Julian Smith

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CD stands for Compact Disc. CD is an optical disc used to store digital data. Initially, the CD was introduced as a successor of the gramophone record for playing music but in the due course of time CDs evolved from its origins as a musical format to become a primary source of data storage medium to encompass other applications and media formats. Now, CDs are used to store data in various formats that include audio, video, text and many more.

Exponential growth of internet user base, gadgets and technical know-how of users across the globe has given rise to flow of information across various domain of daily life whether it is home, office, business and entertainment. This has increased demand for sophisticated medium for information and data sharing, as a result compact disc manufacturing has increased in leaps and bounds over the years.

The process by which commercial compact discs (CDs) are replicated (called CD replication) in mass quantities using a master version created from a source recording is called compact disc manufacturing.

The CD replication process takes place in 3 broad stages, namely - Glass Mastering, Electroforming and CD molding.

The glass master used in CD replication process is made of glass coated by a chemical which is burned off with a laser. Just like negatives are used for manufacturing photos, the glass master acts as a negative of the CD from which replicated copies can be created. This glass master is then turned into a stamper by coating it with a molten nickel compound. Stampers are molds which replicate the original master disc. During CD replication process, the stamper then punches tiny pits in the production CDs which consists of tiny pellets of polycarbonate plastic heated into a molten state resulting in formation of data pits and grooves into the disc. Once the discs cool down, they retain the information. Hundreds and thousands of CDs are manufactured by repeating this replication process at a rapid pace. Every single copy created via this process is a perfect copy of the original.

CD replication process involves pressing the discs during manufacturing from a glass master so as to create replicated copies. Such replicated discs created via CD replication process are called CD ROM discs, where ROM stands for 'Read Only Memory'. In other words, CD replication is a manufacturing process in which data is an integral part of the CDs when they are created.

With CD replication process, CDs can be replicated in mass quantity or 1000 units or more as it is very quick and cost-effective production method. The CDs produced from this replication process are then printed using a five color silk screen or offset lithographic process, which results in superior quality discs as finished products. However, this CD replication process requires high setup costs as sophisticated machinery and process control mechanisms need to be implemented for creating top quality finished products. Therefore, it may not be suitable for smaller productions runs or where the quatity requirement is less.

Advantages of CD Replication

â€¢ Superior quality data image than CD duplication

â€¢ Lower costs for high volume print runs of more than 1000 discs

â€¢ Resilient and more durable than duplicated discs

â€¢ Silk screen or offset lithographic printing gives high quality results

â€¢ No playback issues

Disadvantages of CD Replication

â€¢ Longer turnaround time, usually 7 to 14 days

â€¢ High minimum quantity requirement per run

For more information on CD Replication visit - http://www.vcmreplication.com/our-services/replication-duplication/

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VCM Media Replication Services is a leader in the media replication industry. VCM Replication combines the highest quality of replication technology, quality control standards, and the best engineers in the business to get the best results. VCM specializes in DVD & blu-ray authoring, CD & DVD production, CD printing, CD & DVD duplication, CD & DVD replication, SD card replication and packaging. For more information visit - http://www.vcmreplication.com/

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