



## The Imation Disc Stakka helps to maximise the life of your discs

Disc Stakka not only helps you manage your CDs and DVDs and protect them from loss, it also helps to make them last longer by protecting them from deterioration.



### What is disc deterioration?

Under some circumstances, there can be a gradual deterioration of the data-carrying layer of discs caused by corrosion and delamination. Symptoms of this deterioration can include picture break-up and freezing at a specific place on a video disc.

With optical discs expected to last for 30 to 50 years, this deterioration has caused concern to manufacturers and consumers alike, and a lot of research has been done into the causes.

This research has found that while there were a few manufacturing problems when the technology was new, the problems we are seeing today are typically caused by improper handling and storage of discs.

### How discs work

CD-ROMs have an aluminium layer that reflects the light of the player's laser, which is separated from the CD label by a thin layer of lacquer. If this layer of lacquer is damaged, air can penetrate to oxidize the aluminium, which eats it up in much the same way as iron rusts in air.

DVDs are a bit tougher in the sense that the data layer (or layers—some discs have two) is sandwiched in the middle of the disc between two layers of plastic. But this structure causes problems of its own, especially in combination with the type of centre spindle used in DVD storage cases. While most storage cases enable the easy release of the DVD, some cases have spindles that are so stiff, they cause people to flex the disc to remove it. This can put a strain on the glue and also tear the edges of the outer lamination so that dust and other particles can creep in.

### Improper handling and storage

Handling your CD-ROMs in a harsh manner, such as stacking them or allowing them to rub against each other, can disturb their fragile protective layer and allow the atmosphere to interact with the aluminium.

Another common problem is caused because most people believe it's the clear underside of the disc that is fragile, when in fact it's the side with the label. Scratches on the underside have to be fairly deep to cause skipping, while scratches on the top can easily penetrate to the aluminium layer. Even the pressure of a pen on the label side can dent the aluminium, and render the disc unreadable.

Fingerprints, smudges, dirt or dust on the clear side of the disc can also cause problems, including causing the disc drive to miss data as the disc is read, and misreading of data to an extent that exceeds the error correction capability of the disc drive.

Other factors that can cause damage to your discs include exposure to UV, large fluctuations and extremes in temperature, and high levels of humidity. It has also been found that storing your discs horizontally for long periods of time (even in their jewel cases) can cause the discs to warp.

## How can you protect your discs?

A report was recently produced by the NIST (National Institute of Standards and Technology) and CLIR (Council on Library and Information Resources) called "Care and Handling Guide for the Preservation of CDs and DVDs". It is available from the NIST web site at <http://www.itl.nist.gov/div895/carefordisc/>

This report begins with a one-page quick reference guide for care and handling of discs, and then goes on to describe in more detail how discs work and what kinds of problems can be caused by improper handling and storage.

The report's list of recommendations to help ensure long life for your discs includes the following:

- Handle discs by the outer edge or the centre hole.
- Keep dirt or other foreign matter away from discs.
- Store discs upright (book style) in cases specified for CDs and DVDs.
- Return discs to storage cases immediately after use.
- Store discs in a cool, dry, dark environment in which the air is clean.

## Introducing the Disc Stakka from Imation

The revolutionary new Disc Stakka helps to protect your discs against many of the handling and environmental factors that can cause deterioration.

Disc Stakka is an automated carousel that stores and protects your 12 cm optical discs. Each Disc Stakka unit holds up to 100 discs, and links to your computer via a single USB connection that supplies both power and data. Built-in connectors allow you to stack units up to five high to create a tower that holds up to 500 discs without needing extra cables or desk space. Over 100 of these towers can be linked using powered USB hubs, which provides the ability to manage over 50,000 discs—all from the one computer!

The Disc Stakka carousel stores discs vertically, which protects them against warping. The outer casing also protects your discs from dust, UV, and other environmental contaminants, and reduces the need to handle your discs. Plus, Disc Stakka is designed so that you hold your discs by their outer edge and centre hole when you insert them or remove them after they are ejected.

Disc Stakka is managed using the bundled OpdiTracker software, database and search engine. OpdiTracker automatically recognizes whenever you insert a new disc into a Disc Stakka unit



or your computer's CD or DVD drive, and gives you the option to add the disc's details to your database. It then keeps track of the disc and its location.

Once recorded in the OpdiTracker database, you can search for a disc by its name, description, or content (such as file or folder name, or audio track title or artist). Within seconds, OpdiTracker will find the disc for you: either its location within a Disc Stakka unit or the name of the person who last ejected it. OpdiTracker also provides a number of tools to help you manage your discs and their content, and includes reporting capabilities and the ability to back up, restore, and import database details.

## **The Disc Stakka and OpdiTracker content management solution**

Once your discs are catalogued in OpdiTracker and inserted into Disc Stakka, this powerful solution helps to protect them against both deterioration and loss.

Your disc content is stored "virtually online" and can be quickly accessed by browsing your discs and the files they contain in the same way as you browse files and folders stored on your computer's drives. You can also take advantage of OpdiTracker's powerful search functionality. After you locate the virtual version of a file, you can eject the disc on which it is stored, and then insert the disc into your computer's CD or DVD drive to read the actual file.

With Disc Stakka and OpdiTracker,

- It takes only a few seconds to locate any disc you want.
- You can locate discs by searching for disc name, file or folder name, audio track details, or disc description.
- When someone ejects a disc from a Disc Stakka unit, you can capture their name in the OpdiTracker database so that you always know who has the disc.
- You can password protect a Disc Stakka unit to prevent access by unauthorized persons.
- Your investment in your discs is protected by keeping them safe from dirt, UV, loss, theft, and improper handling.
- This solution is scalable, and can be expanded using powered USB hubs so that you are managing over 500 Disc Stakkas (that's over 50,000 discs) all from a single computer!
- The intuitive OpdiTracker software is so easy to use, you'll be productive in no time.

## **Summary**

Disc Stakka helps to protect your valuable CDs and DVDs against damage that can be caused by environmental factors and improper handling, while OpdiTracker provides you with "virtually online" access to your discs and their content. It's the smart and affordable way to keep your discs safe, organised and easy to access.

## **Where to find out more**

Go to <http://www.imation.com.au/stakka> to find out more about this solution, including where to buy it.



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