How should I clean and care for DVDs?

Since DVD's are read by a laser, they are resistant to fingerprints, dust, smudges, and scratches. However, surface contaminants and scratches can cause data errors. On a video player, the effect of data errors ranges from minor video artifacts to frame skipping to rendering them completely unplayable. So it's a good idea to take care of your discs.

Your player can't be harmed by a scratched or dirty disc unless nasty substances on it actually hit the lens. Still, it's best to keep your discs clean, which will also keep the inside of your player clean. Don't attempt to play a cracked disc, as it could shatter and damage the player. It doesn't hurt to leave the disc in the player, even if it's paused and still spinning.

In general, there's no need to clean the lens on your player, since the air moved by the rotating disc keeps it clean. However, if you use a lens cleaning disc in your CD player, you may want to do the same with your DVD player. It's advisable to use a cleaning disc specifically designed for DVD players, because there are minor differences in lens positioning between DVD and CD players. Periodic alignment of the pickup head is not necessary. Sometimes the laser can drift out of alignment, especially after rough handling of the player, but this is not a regular maintenance item.

Care and feeding of DVD's

Only handle disks at the hub or outer edge. Don't touch the shiny surface with greasy fingers. Always store DVD's in a protective case when not in use. Don't bend the disc when taking it out of the case, and be careful not to scratch the disc when placing it in the case or in the player tray. Ensure that the disc is properly seated in the player tray before you close it.

Keep discs away from radiators, heaters, hot equipment surfaces, direct sunlight (near a window or in a car during hot weather). The DVD specification recommends that discs be stored at a temperature between -20 to 50 °C (-4 to 122 °F). Artificial light and indirect sunlight have no effect on replicated DVDs since they are are made of poly carbonate, polymer adhesives, and metal (usually aluminum or gold), none of which are significantly affected by exposure to light. Exposure to bright sunlight may affect recordable DVD's, specifically write-once DVD's (DVD-R and DVD+R) that use light-sensitive dyes. Magnetic fields have no effect on DVD's, so it's OK to leave them sitting on your speakers.

If you notice problems when playing a disc, you may be able to correct them with a simple cleaning.

- Do not use strong cleaners, abrasives, solvents, or acids.
- With a soft, lint-free cloth, wipe gently in only a radial direction (a straight line between the hub and the rim). Since the data is arranged circularly on the disc, the micro scratches you create when cleaning the disc (or the nasty gouge you make with the dirt you didn't see on your cleaning cloth) will cross more error correction blocks and be less likely to cause unrecoverable errors.
- Don't use canned or compressed air, which can be very cold and may thermally stress the disc.
- For stubborn dirt or gummy adhesive, use water, water with mild soap, or isopropyl alcohol.
- There are commercial products that clean discs and provide some protection from dust, fingerprints and scratches. CD cleaning products work as well as DVD cleaning products.

If you continue to have problems after cleaning the disc, you may need to attempt to repair one or more scratches. Sometimes even hairline scratches can cause errors if they just happen to cover an entire error correction (ECC) block. Examine the disc to find scratches, keeping in mind that the laser reads from the bottom. There are essentially two methods of repairing scratches:

1) Fill or coat the scratch with an optical material;
2) Polish down the scratch.

There are many commercial products that do one or both of these. The trick is to polish out the scratch without causing new ones. A mess of small polishing scratches may cause more damage than a big scratch. As with cleaning, polish only in the radial direction.