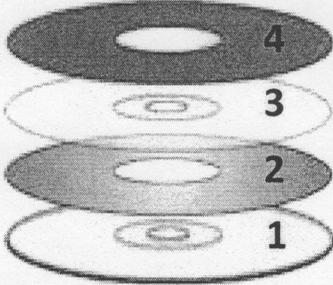


## Anatomy of a CD

1. Polycarbonate layer. This makes up most of the CD's thickness and weight. It serves two purposes: it protects the data layer from damage on the play side (the bottom, or side the laser reads through) and it acts as a lens to focus the laser onto the data layer.



A CD is a high tech "sandwich"

2. Data layer. Audio or other digital information. The data layer is molded into the top of the first layer, and the data, which is physically represented by tiny "pits" and "lands," is arranged in one very long spiral track—a little like the groove on an 'old school' record—except that a CD is read from the inner to the outer ring.
3. Reflective, metallic layer. Often aluminum, but sometimes copper, silver, or even gold, this layer reflects the disc player's laser back to the detector in the disc player. This layer is what gives the disc's play side its shiny appearance.
4. Protective, antioxidant coating. Thin layer of lacquer protects the reflective and data layers and provides a surface upon which the label is printed.

The label, with decorative graphics and CD title and other info is printed on top of the protective layer. The reflective, lacquer, and graphic layers combined are about as thick as a human hair. The entire disc is only 4 one hundredths of an inch thick.

A scratch on the top side of a disc may be irreparable. If the lacquer coating is damaged, the reflective surface will begin to oxidize. If the reflective surface is damaged, the laser will not be able to properly read the data.

A scratch on the bottom side of the disc may not affect the CD, and if it does, it may be polished out if the scratch is not too deep. Scratches that go around the disc, the way the spiral of data does, are more likely to cause problems than scratches that are radial—that go from the center to the edge.