

A Brief History of Incompatibility

The video game industry seems to be the one standout in electronic entertainment in which incompatibility is a way of life. When you purchase a CD, you know it will work on any CD player. If you buy a cassette tape, it will work on any cassette player regardless of the brand name. But when you buy video game software, you have to make sure that it will play on your console.

Despite popular opinion, the rest of the electronic entertainment industry is not immune to incompatibility. We see it every day, and we have taken it for granted. Just look at DVDs and videocassettes, two incompatible video formats. We just don't look at it that way because a DVD can work only in a DVD player, and a videotape will fit only in a VCR. But the bottom line is that they're two very incompatible video formats. And then we can add the near dead laser disc to that list. And if you think hard enough, you might even remember the video disc that RCA released in the early '80s. The CED format was a video disc that used grooves and styluses. Very incompatible with the competing laser disc system, and also very inferior. The laser disc, at least, lasted for 20 years.

And what about videotapes? Remember Beta? When Sony decided to begin manufacturing VHS VCRs, you knew it was throwing in the towel.

Don't think that video products are the only ones that suffer from incompatibility, though. Audio components have suffered from incompatibility issues ever since Thomas Edison recorded his immortal words "Mary Had a Little Lamb" onto a tinfoil cylinder in December 1877. While Edison sold his phonograph, companies such as Columbia and Edison's own General Electric began selling the software, the individual cylinders that contained prerecorded songs. Edison controlled the market for eight years until the first noncompatible players came out in 1885. The graphophone machine from Chichester Bell and Charles Tainter played wax-coated cylinders that had vertical-cut grooves throughout. And they couldn't play on Edison's phonograph.

A third incompatible player, the gramophone, arrived in 1887. Emile Berliner's manually driven Gramophone used a nonwax disc that had a lateral-cut groove. A year later, Berliner built a Gramophone that used a flat 12-inch disc. Within a year after opening his US gramophone company in 1893, Berliner's machines competed directly against Edison's. A motor was added to the gramophone in 1896, and, in 1901, Berliner's company became the Victor Talking Machine Company.

Edison continued to compete against the Victor Company with his cylinders, but it was a losing battle. In 1913, he abandoned the cylinders, and all the folks who had bought his phonograph found themselves with a product that was no longer supported.

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RELATED LINKS



Front left to right:
Mini-disc, 45
Center l-r: analog
cassette, digital
compact cassette,
8-track
Back l-r: LP,
Compact Disc

In 1919, the Gennett Record Company and several smaller companies began manufacturing lateral-cut, which were compatible with the Victor Company's players. Victor sued, but Gennett claimed that the lateral-cut process rested in the public domain. The judge agreed, and Gennett went on to become the largest record company in the country. Meanwhile, many more independent companies - armed with the knowledge that what they were doing was legal - began producing records for the Victor machine. This happened more than 60 years before Activision began marketing games that played on Atari's 2600.

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The popular discs spun on a platter that rotated at approximately 78rpm. However, in the late '20s, talking movies ("talkies") began to appear. This was accomplished by playing a record in sync with the film. The problem was that a reel of film would run for around ten minutes, but a 12-inch record could hold only about five minutes of sound. Engineers began to slow down the rotation speed until they found one that could accommodate ten minutes of sound. They found it at 33 1/3 rpm. Soon, the 33 1/3 records were used exclusively in movie houses, while the 78s continued to be sold to the public. In the late '40s, Columbia released the first 33 1/3 rpm vinyl record to the public. By making the grooves smaller, the new long-playing (LP) records could accommodate up to 30 minutes per side. While the LP format was popular, people still liked having one song on a record, as was the case with the 78s. Unfortunately, the fast rotational speed of the 78s didn't produce high-fidelity sound. RCA came to the rescue with a 7-inch disc that would play at 45rpm and produce the highest-quality sound.

Thus, with the advent of the 45s, there were three incompatible formats: 78s, 45s, and LPs. Fortunately, record-player manufacturers came to the rescue by producing players that had variable speed controls. Before long, and well into the 1970s, record players could play all three types of records. Manufacturers eventually dropped the 78 speed, as that format became extinct by the '50s. The LPs and 45s managed to coexist, since the two served different functions. Of course, once the compact disc (CD) came out, the days of the vinyl record were numbered.



Front left to right:
8mm Video, VHS
Back l-r: Laserdisc,
DVD

CDs weren't the first competition that records had to contend with. Remember tapes? Of course you do, cassettes are still around (but for how long?). But before cassettes, we had reel-to-reel, four-track, and eight-track cartridges. And of course there was digital audiotape (DAT). But how many of you remember DCC, digital compact cassettes? They were invented by Philips, the same company that invented cassettes. Some record companies even released prerecorded DCCs, which had a life span of approximately six months.

The DCCs, which originated in 1992, competed against Sony's MiniDisc, a tiny recordable CD. Sony even released prerecorded MiniDiscs in an effort to make it the new standard. Of course, it never became the standard, and while the prerecorded MiniDiscs have gone to the great discount table in the sky, Sony continues to market the MiniDiscs. And, of course, they compete against the incompatible recordable CDs, which will probably throw the incompatible audiocassettes into obsolescence. And so it goes. Video game consoles may be incompatible, but they continue to thrive together. That is, at least, until companies (Nintendo) release new systems (GameCube), which will render their elder incompatible ones (N64) obsolete.