

iPod

SINCE APPLE'S DIGITAL MUSIC PLAYER hit the market in 2001, four million units have sold. Both the device and the software that lets users manage its content work with Macintosh and Windows computers. The iPod connects to the computer via a cable or a dock that gives it access to the user's iTunes library and Apple's iTunes Music Store website. The site, launched in April 2003, has made legally downloadable music files a viable business, selling more than 100 million tracks. About ten thousand tracks fit on a 40-gigabyte iPod. Here's how it works. **TEXT AND ART BY 5W INFOGRAPHIC**

PLAYTIME

1. The user places the iPod in the dock, which connects to a Macintosh or Windows computer. With the iTunes software, the user can then load the iPod with digitally compressed music files—such as MP3s or Advanced Audio Code (AAC) tracks, which take up less space—from his or her iTunes library or from the iTunes Music Store website.

2. The device stores the songs on its hard drive and organizes them by album, artist, genre, and so on. The four-gigabyte iPod Mini can hold about 1,000 songs, while a 40-gigabyte iPod can hold about 10,000 songs in the AAC format.

3. When the user selects a song and presses "play," the iPod copies the digital music file from the hard drive to a memory chip*.

4. A microprocessor pulls the song from the memory chip and decompresses it.

5. A digital-to-analog converter turns the digital data into an analog signal.

6. An amplifier increases the strength of the signal and sends it to an audio port, which can serve as a headphone jack.

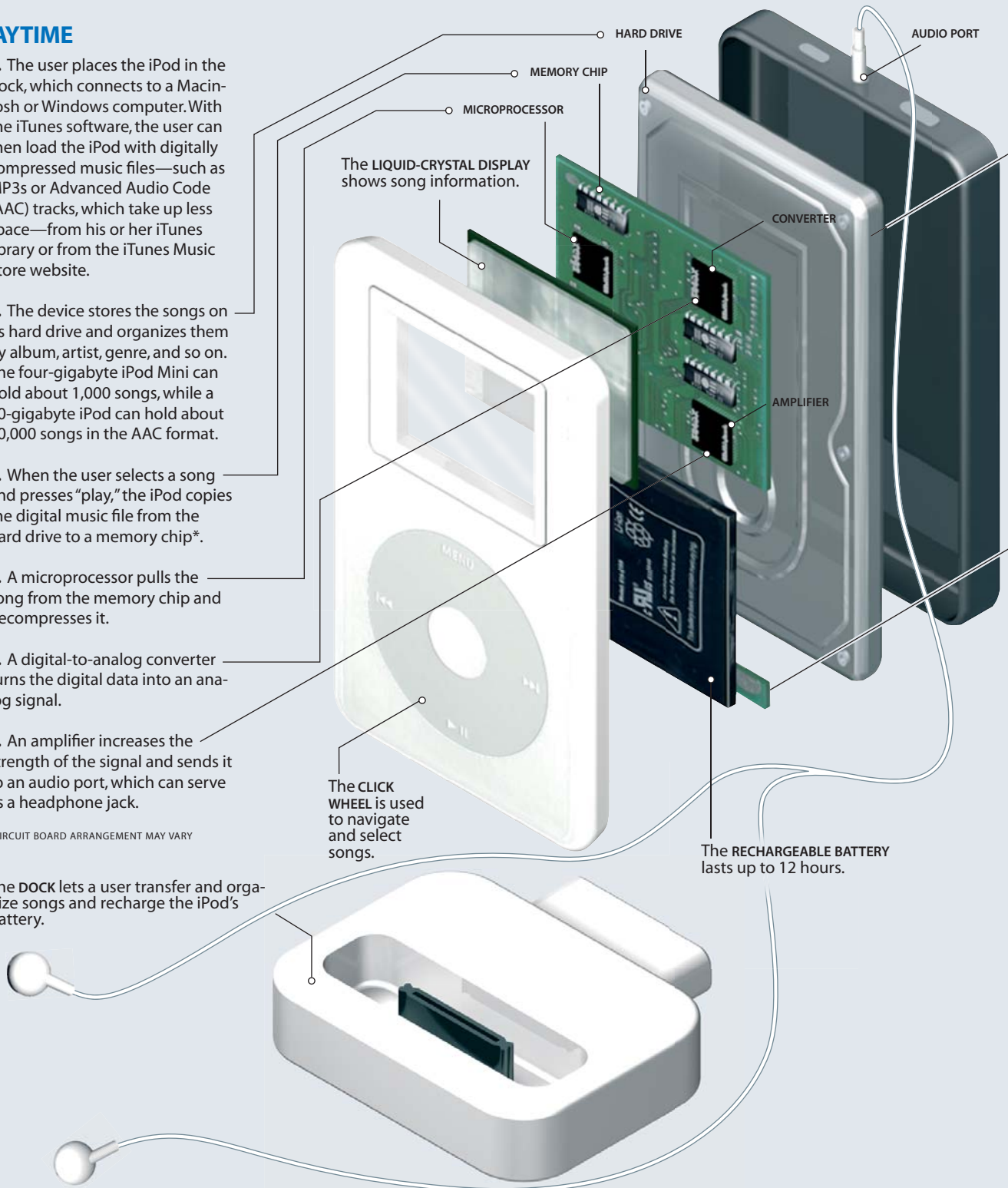
*CIRCUIT BOARD ARRANGEMENT MAY VARY

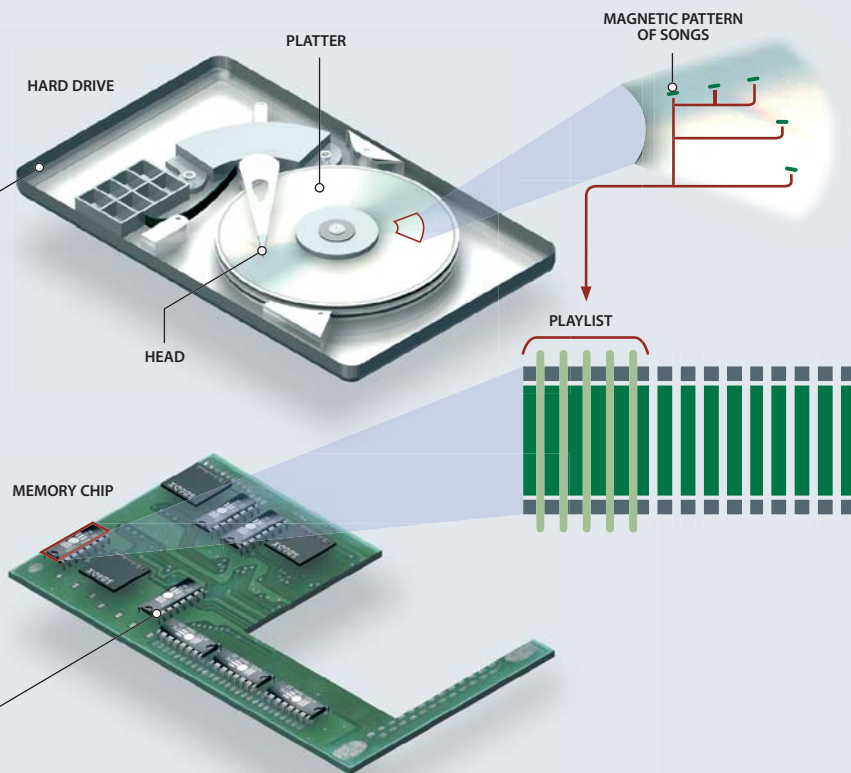
The DOCK lets a user transfer and organize songs and recharge the iPod's battery.

The LIQUID-CRYSTAL DISPLAY shows song information.

The CLICK WHEEL is used to navigate and select songs.

The RECHARGEABLE BATTERY lasts up to 12 hours.





SKIPPING OUT

If the iPod played music from its hard drive, the user's movements could jolt the components and cause a song to skip. So the iPod plays music from its memory chip, instead.

The iPod stores downloaded music files as magnetic patterns on a spinning platter. During playback, the device copies a "playlist"—about 32 megabytes, or 25 minutes, of music—from the hard drive to the memory chip. The hard drive then turns off until all of the music has played. The memory chip has no moving parts, so music files travel from it to the other electronic components without delay or error, even while a user is in motion.

MUSIC MANAGER

With the iPod connected to a computer, a user can easily change a playlist or purchase songs over the Internet.

Internet music stores

Simply by launching the iTunes music software, users with Internet connections can access the iTunes Music Store website, which is listed as a menu item. It offers approximately one million songs that cost about a dollar each; most albums cost \$10 each. Users may burn downloads onto an unlimited number of CDs and transfer them to an unlimited number of iPods, and they can play downloads on up to five computers.



To and from CDs

In one fell swoop, the iTunes software can copy a track from a CD and compress it into MP3, AAC, or another format. Once the user adds the song to her library, she can transfer tracks to her iPod and create new playlists.



In sync

Every time the user connects the iPod to her computer, the iTunes software opens automatically. Playlist changes made on the computer are updated on the iPod, and vice versa.

