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May 15, 2006

DOCKET NUMBER
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Office of the Secretary
Int'l Trade Commission

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VIA MESSENGER

The Honorable Marilyn Abbott
Secretary
U.S. International Trade Commission
500 E Street, S.W.
Washington, D.C. 20436

Re: ***Certain Portable Digital Media Players, Components Thereof, and Products Containing Same***

Dear Secretary Abbott:

Enclosed for filing on behalf of Complainants Creative Labs, Inc. and Creative Technology Ltd. (collectively "Complainants") are the following documents in support of Complainants' request that the Commission commence an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended. A separate request for confidential treatment of Confidential Exhibit 8 is included with this filing.

Accordingly, Complainants submit the following documents for filing:

1. An original and twelve (12) copies of the verified Complaint and an original and six (6) copies of the accompanying exhibits, with Confidential Exhibit 8 segregated from the other material submitted (original and (1) copy unbound, without tabs). (Rules 201.6(c), 210.4(f)(3)(i), and 210.8(a));

2. One (1) additional copy of both the Complaint and accompanying non-confidential exhibits for service upon the proposed respondent (Rules 210.4(f)(3)(i), 210.8(a) and 210.11(a));

3. One (1) additional copy of the Confidential Exhibit 8 for service upon the proposed respondent;

4. Certified copies of United States Patent No. 6,928,433 ("the '433 patent"), included as Exhibit 1 in the original Complaint, and copies thereof included as Exhibit 1 in all copies of the Complaint;

5. Certified copies of the assignments involving the '433 patent included as Exhibit 2 in the original Complaint, and copies thereof included as Exhibits 2 in all copies of the Complaint;

6. Certified copy and three (3) copies thereof of the prosecution history of the '433 patent included as Appendix A (Rule 210.12(c)(2));

7. Four (4) copies of each reference document mentioned in the prosecution history of the application leading to the issuance of the '433 patent included as Appendix B;

8. One (1) Creative's Zen Vision: M™ portable MP3 player (in box with original packaging) as Appendix C;

9. One (1) Apple iPod (in box with original packaging) as Appendix D;

10. One (1) Apple iPod Nano (in box with original packaging) as Appendix E; and

11. A notarized letter and certification pursuant to Commission Rules 201.6(b) and 210.5(d) requesting confidential treatment of Confidential Exhibit 8.

Thank you for your attention to this matter.

Respectfully submitted,

Mark G. Davis

MGD/ta

Enclosures
WDC99 1229636-1.065985.0014

UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

In the Matter of **CERTAIN PORTABLE DIGITAL MEDIA PLAYERS, COMPONENTS THEREOF, AND PRODUCTS CONTAINING SAME**	**Investigation No. 337-TA-_____**

COMPLAINT UNDER SECTION 337 OF THE TARIFF ACT OF 1930, AS AMENDED

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I. INTRODUCTION

1. This Complaint is filed by Creative Technology Ltd. and its wholly owned subsidiary Creative Labs, Inc. (collectively "Creative") under Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, based on the unlawful importation into the United States, the sale for importation, and/or the sale within the United States after importation, by manufacturers, importers, or consignees of portable digital media players that use the claimed method that infringe claims 2, 3, 4, 5, 7, 11, 12, 13, 15 and 16 of United States Letters Patent No. 6,928,433 ("the '433 Patent" or "Asserted Patent").

2. The proposed Respondent is Apple Computer, Inc. ("Apple"). Upon information and belief, Apple manufactures, sells for importation, imports and/or sells after importation portable digital media players configured for use in ways that infringe the claimed methods.

3. A certified copy of the Asserted Patent is attached as Exhibit 1.

4. Creative Technology Ltd. owns all right, title, and interest in the Asserted Patent. A certified copy of the recorded assignments for the Asserted Patent is attached as Exhibit 2.[1]

5. An industry as required by 19 U.S.C. § 1337(a)(2) and (3) exists in the United States relating to the technology protected by the Asserted Patent.

6. Creative seeks as relief a permanent exclusion order barring from entry into the United States infringing portable digital media players, components thereof, and products containing same. Creative also seeks as relief a cease and desist order prohibiting importation, sale after importation, marketing, advertising, demonstrating, warehousing inventory for distribution, offering for sale, selling, distributing, licensing, or use of infringing portable digital media players.

II. COMPLAINANTS

7. Creative Technology Ltd. is a public company organized under the laws of Singapore, with its principal place of business located at 31 International Business Park, Creative Resource, Singapore 609921. Creative Technology Ltd. is listed on the NASDAQ Stock Exchange under the symbol CREAF. Creative Labs, Inc. is a wholly owned subsidiary of Creative Technology Ltd., and is incorporated under the laws of California. Creative Labs, Inc. has its primary location at 1901 McCarthy Boulevard in Milpitas, California where operations include sales, marketing, product development, testing and compliance. Creative Labs, Inc. also has facilities in Stillwater, Oklahoma which is Creative's customer support and product testing center in the United States; and in Fremont, California, which is an operations and distribution center. Creative's primary research and development in the United States is conducted at Creative Advanced Technology Center in Scotts Valley, California, under the corporate name of Silicon Engineering, Inc., d.b.a. Creative Advanced Technology Center, a wholly owned subsidiary of Creative Technology Ltd. Creative Advanced Technology Center also has a satellite office in Boulder, Colorado.

III. PROPOSED RESPONDENT

8. On information and belief, proposed respondent Apple is incorporated in California with a principal place of business located at 1 Infinite Loop, Cupertino, CA 95014. Exhibit 3. On information and belief, Apple has manufacturing sites in Europe, Japan, Canada and the Asia Pacific region. Exhibit 3.

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[1] Creative has been informed by the PTO that a Certificate of Correction adding David Bristow as a co-inventor will issue shortly.

IV. THE TECHNOLOGY AND PRODUCTS AT ISSUE

9. Creative was one of the first companies to invest in the research, development and commercialization of portable digital media players, commonly referred to as MP3 players. Creative's first digital media players used flash memory as the storage medium. One drawback of these players was that the storage capacity of flash memory was limited at that time to an hour or two of music. Creative envisioned the market potential for significantly higher capacity portable digital media players and began development of the NOMAD® Jukebox using a high capacity hard drive as the storage medium. The number of songs that could be stored on this portable digital media player was dramatically greater than the flash based players — up to 1000 songs. However, the large number of tracks/songs presented a significant and pressing challenge — how to conveniently organize and access the ever growing number of songs stored on these devices in view of their small display screens and limited controls.

10. Excited by the market potential and need for a user interface for organizing, navigating and accessing music on portable digital players, Creative seized the opportunity to invent a solution — a way to manage a large amount of music in a manner that allows end users to access songs in a logical and user-friendly manner through sequential steps displayed on the small screen of a player. After months of ongoing work and development, a team of Creative's engineers in Scotts Valley, California invented a user-friendly interface that simplified navigation on portable digital media players. This now-patented invention is directed to methods of accessing media tracks (e.g. music) stored on a portable digital media player by navigating through a hierarchical categorization such as artist, artist name and song title or genre, genre type and song title.

11. Eager to market and benefit from the invention, Creative announced its anticipated release of the NOMAD Jukebox and presented the first prototype devices at the

Consumer Electronics Show (CES) in January, 2000. With a 6GB storage capacity, the Creative NOMAD Jukebox could store more than 100 hours of digital media and up to 1000 songs. More importantly, the NOMAD Jukebox used the revolutionary accessing methods claimed in the '433 Patent to provide users with a convenient interface for managing and accessing all those songs. The NOMAD Jukebox and the user interface encompassed by the '433 Patent set the standard for this new industry of portable digital players.

12. On January 16, 2001, Creative announced that it had already shipped 100,000 units of the NOMAD Jukebox portable digital media player. By 2006, Creative's portable digital media players featuring its patented user interface had won numerous prestigious awards worldwide, including: The "Best of CES" awards in 2004, 2005 and 2006 and the overall "Best in Show" award at CES in 2006; Best of Show awards in each of the first two, 2004 and 2005, DigitalLife consumer shows; Editor's Choice or other top editorial awards from PC Magazine, PC Gamer, Laptop, Maximum PC, PC World, Computer Shopper, CNET.com, Sound & Vision magazine and many others.

13. Creative's success and leadership in providing portable digital media players for Apple users did not go unnoticed. On January 9, 2001, Apple released an updated version of its Macintosh Computers and iTunes software that supported Creative's NOMAD Jukebox that practiced the '433 Patent. In order to integrate iTunes with Creative's products and to facilitate this interface, Creative and Apple executed a Driver Code License and Distribution Agreement, granting Apple a license to Creative's driver source code. In January 2001, Steve Jobs, the co-founder and CEO of Apple, approached a Creative employee, at the MacWorld tradeshow to extol the virtues of the NOMAD Jukebox. They then discussed a possible meeting between Creative and Apple. Mr. Jobs indicated that Apple wanted a smaller version of the NOMAD Jukebox digital music player.

14. Shortly thereafter, on or about February 8, 2001, Creative met with Apple representatives, including Steve Jobs, to further explore ways in which the companies could work together. Creative showed Apple several prototype portable digital media players that showed the patented interface.

15. Despite initially leading Creative to believe that Apple and Creative could explore joint business opportunities, Apple abruptly indicated that there was not enough financial room in the portable digital media player market for two companies, with margins stacked one on top of the other, and therefore proposed that Creative license its technology to Apple. Apple further proposed that Creative spin off its portable digital media player business into a separate company and that Apple would then invest in that entity. Creative declined the offer.

16. Then on October 23, 2001, Apple announced the introduction of its first iPod. Apple, in its press release, stated that it "has applied its legendary expertise in human interface engineering to make iPod the easiest to use digital device ever." Apple further touted the iPod's capability to access a huge collection of music by selecting and clicking on playlists, artists or songs.

17. Apple and others acting on its behalf manufacture, sell for importation, import and sell after importation portable digital media players, such as the iPod and iPod Nano that infringe the Asserted Patent. Exhibit 4. As set forth in Apple's 2005 Form10-K [Annual Report] filed with the SEC, "final assembly of substantially all of the Company's portable products including ... iPods are performed by third-party vendors in China." Exhibit 3. On information and belief, in addition to operating www.apple.com and 1-800-My-Apple, Apple has 116 retail stores in the United States that offer for sale or sell infringing portable digital media players. In addition, on information and belief, Apple resellers offer for sale, sell for importation or sell after importation infringing portable digital media players. Exhibit 3.

18. The Accused products include at least the iPod (MA002LL/A (30GB white), MA146LL/A (30GB black), MA003LL/A (60GB white), and MA147LL/A (60GB black)), the iPod Nano (MA350LL/A (1GB white), MA352LL/A (1GB black), MA004LL/A (2GB white), MA099LL/A (2GB black), MA005LL/A (4GB white), and MA107LL/A (4GB black)), as well as other portable digital media players sold by or under license from Apple. *See* www.apple.com\itunes\.

V. THE PATENT-IN-SUIT AND NON-TECHNICAL DESCRIPTION OF THE INVENTION

A. Overview and Ownership of the Asserted Patent

19. Creative Technology Ltd. owns by assignment the entire right, title, and interest in and to the Asserted Patent. Exhibit 2.

20. Pursuant to Commission Rule 210.12(c), this Complaint includes a certified copy and three copies thereof of the prosecution histories of the Asserted Patent. *See* Appendix A for the prosecution history of the '433 Patent. Pursuant to Commission Rule 210.12(c), this Complaint includes four copies of each reference mentioned in the Asserted Patent and/or its prosecution history. Appendix B.

B. The '433 Patent

1. Identification of the '433 Patent and Asserted Claims

21. United States Letters Patent No. 6,928,433 entitled "Automatic Hierarchical Categorization of Music by Metadata" issued on August 9, 2005. The '433 Patent expires on November 24, 2021 and is based on United States patent application No. 09/755,723 filed on January 5, 2001.

22. The '433 Patent has one (1) independent claim and fifteen (15) dependent claims.

2. Non-Technical Description of '433 Patent.

23. The Asserted Patent claims various methods for accessing different types of data (such as music or video files) on devices such as a portable digital media player.

24. To permit ease of use, the claimed methods utilize data about each music file, referred to as metadata. Metadata can include information about the artist, album, song name, genre, etc. associated with each track. A hierarchical categorization is created that has at least three levels: category, subcategory and item. The songs are populated throughout the branches of the hierarchy using the tracks' associated metadata such that an individual song can be reached through different routes. Access is provided through a user-friendly interface that has three screens which are displayed sequentially.

25. By utilizing the metadata and combining a set of display screens, the claimed methods allow a user to navigate to individual songs and to play or add songs, or groups of songs, to playlists. Likewise, if the user desires to play a particular song or list of songs, the hierarchical categorizations can be used to locate and select the song or songs to be played.

C. Foreign Counterparts to the Asserted Patent

26. There are no foreign patents, foreign patent applications, or foreign patent applications that have been denied that correspond to the Asserted Patent.

D. Licenses

27. The Asserted Patent has not been licensed.

VI. UNLAWFUL AND UNFAIR ACTS OF RESPONDENT—PATENT INFRINGEMENT

28. On information and belief, portable digital media players are sold for importation, imported, and sold after importation in the United States by or on behalf of Apple under at least the brand names iPod and iPod Nano. On information and belief, these products infringe claims 2, 3, 4, 5, 7, 11, 12, 13, 15 and 16 of the '433 Patent.

29. A chart comparing representative claim 5 of the '433 Patent to Apple's iPod Nano is attached as Exhibit 4.

A. Direct Infringement

30. Apple directly infringes Creative's '433 Patent by practicing the claimed methods of the '433 Patent through activities such as use, testing, and product support of the accused products.

B. Contributory Infringement

31. Apple's activities with respect to the accused devices also contribute to the direct infringement of Creative's '433 Patent in violation of 35 U.S.C. § 271(c). Apple knows of the '433 Patent through actual notice provided by Creative.

32. The iPods and iPod Nanos sold by Apple are specifically configured to access and display music loaded by the user in ways that infringe the Asserted Patent. The iPods and iPod Nanos are not staple articles of commerce and Apple knows or should know that these players have no substantial non-infringing uses.

C. Inducement of Infringement

33. Apple also actively and knowingly aids and abets the direct infringement of Creative's '433 Patent by Apple's customers, constituting active inducement to infringe under 35 U.S.C. § 271(b).

34. Apple induces infringement of the method claims of the '433 Patent by actively inducing its customers in the United States to operate iPods and iPod Nanos in direct infringement of the asserted claims. For example, the operating manual that accompanies iPod and iPod Nano instructs and directs the purchaser on how to use the hierarchical categorization of music as claimed in the '433 Patent. *See, e.g.,* Exhibit 5 (*iPod User Manual*), Exhibit 6 (*iPod Nano User Manual*).

35. Apple engages in these unlawful acts despite its actual knowledge of the '433 Patent.

VII. SPECIFIC INSTANCE OF UNFAIR IMPORTATION AND SALE

36. On information and belief, Apple imports, sells for importation into the United States, and/or sells within the United States after importation, portable digital media players that infringe the asserted claims of the '433 Patent. Exemplary products are the iPod products, including the iPod and iPod Nano.

37. As indicated above, Apple's most recent 10-K Report states that substantially all of its iPods are assembled in China. Exhibit 3. Similarly, Exhibit 7 shows the packaging of an iPod purchased in the United States from Apple through its www.apple.com web site. Exhibit 7 shows that the iPod was assembled in China. Included with the device is an instructional manual directing the user on use of the product. Exhibits 5 and 6. In addition, Apple directs the user to consult www.apple.com for additional information concerning use of the product. Exhibits 5 and 6.

VIII. HARMONIZED TARIFF SCHEDULE ITEM NUMBERS

38. On information and belief, the infringing processors, processing systems, and products containing same have been imported into the United States under, at a minimum, section 8519 and its subsections of the United States Harmonized Tariff Schedule.

IX. RELATED LITIGATION

39. There is no related litigation involving the Asserted Patent at this time. Creative will be filing a concurrent district court action, however.

X. THE DOMESTIC INDUSTRY

40. A domestic industry exists as defined under 19 U.S.C. § 1337(a)(3)(A), (B), and (C) comprised of investment in employment of land, labor, and capital devoted to the

exploitation of the patented technology through activities such as research and development, engineering, and support of products that practice the Asserted Patent.

A. United States Investments in Plant and Equipment, Labor and Capital

41. Creative has made substantial investments in the United States in plants, equipment, labor and capital, both directly and through its wholly owned subsidiaries, Creative Labs, Inc. and Creative Advanced Technology Center, in products that practice the claimed invention. Although the products themselves are made abroad, Creative's investments in the United States devoted to the patented technology include the following facilities that provide development and/or support for products that practice the patent: Creative Advanced Technology Center in Scotts Valley, California and Boulder, Colorado, and Creative Labs, Inc., with facilities in Milpitas and Fremont, California, and in Stillwater, Oklahoma. Creative Advanced Technology Center is a research and development center where the patented technology was invented and where Creative researches ways to improve products that practice the '433 Patent. The Stillwater facility provides customer support with other testing and refurbishing services for portable digital media players that practice the '433 Patent. The Milpitas location provides additional product development and testing, including regulatory compliance testing and compatibility testing. Finally, the Fremont facility provides product servicing and quality assurance for portable digital media players that practice the '433 Patent. These investments are itemized in Confidential Exhibit 8.

B. Representative Claim Chart for the Creative Zen Vision:M™ Portable MP3 player

42. Exhibit 9 is a list of Creative products that practice one or more of the asserted claims. Exhibit 10 is an exemplary claim chart showing how Creative's Zen Vision:M™ portable MP3 player practices at least claim 5 of the '433 Patent.

XI. RELIEF REQUESTED

43. WHEREFORE, by reason of the foregoing, Complainants Creative Technology Ltd. and Creative Labs, Inc. respectfully request that the United States International Trade Commission:

(a) Institute an immediate investigation, pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337(a)(1)(B)(i) and (b)(1), with respect to violations of Section 337 based upon the importation, sale for importation, and sale after importation, into the United States of all Apple products or products made on behalf of Apple that infringe one or more of the asserted claims of Creative's United States Letters Patent No. 6,928,433;

(b) Schedule and conduct a hearing on said unlawful acts and, following said hearing;

(c) Issue a permanent exclusion order pursuant to 19 U.S.C. § 1337(d)(1) barring from entry into the United States all products made by or on behalf of Apple, that infringe one or more asserted claims of Creative's United States Letters Patent No. 6,928,433;

(d) Issue permanent cease and desist orders, pursuant to 19 U.S.C. § 1337(f), directing Apple and others acting on its behalf, to cease and desist from importing, marketing, advertising, demonstrating, warehousing inventory for distribution, offering for sale, selling, distributing, licensing, or using portable digital media players that infringe one or more asserted claims of Creative's United States Letters Patent No. 6,928,433; and

(e) Grant such other and further relief as the Commission deems just and proper based on the facts determined by the investigation and the authority of the Commission.

Date: May 15, 2006

Respectfully Submitted,

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Counsel for Complainants
Creative Technology Ltd. and
Creative Labs, Inc.

WDC99 1208799-8.065985.0014

VERIFICATION OF COMPLAINT

I, Craig McHugh, declare, in accordance with 19 C.F.R. §§ 210.4 and 210.12(a), under penalty of perjury, that the following statements are true:

1. I am currently the President of Creative Labs, Inc., and am duly authorized to sign this Complaint;

2. I have read the foregoing Complaint;

3. To the best of my knowledge, information, and belief, based upon reasonable inquiry, the foregoing Complaint is well founded in fact and is warranted by existing law or by a nonfrivolous argument for the extension, modification, or reversal of existing law or the establishment of new law;

4. The allegations and other factual contentions have evidentiary support or are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery; and

5. The foregoing Complaint is not being filed for an improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of litigation.

Executed this 12th day of May 2006.

Craig McHugh
President

TABLE OF EXHIBITS

Exhibit 1:	Public	Certified copy of United States Patent No. 6,928,433
Exhibit 2:	Public	Certified copy of the recorded assignments for the '433 patent . Reel: 011788 / Frame: 0174 (assignment of Ron Goodman and Howard Egan) . Reel: 015640 / Frame: 0748 (assignment of David Bristow)
Exhibit 3:	Public	Selected Pages From Apple Computer, Inc.'s 2005 Form 10-K
Exhibit 4:	Public	Representative claim chart comparing claim 5 to Apple's iPod
Exhibit 5:	Public	iPod User's Manual
Exhibit 6:	Public	iPod Nano User's Manual
Exhibit 7:	Public	Photographs of iPod and iPod Nano packaging
Exhibit 8:	Confidential	Itemized investments by Creative in the United States
Exhibit 9:	Public	Creative products that practice one or more of the asserted claims
Exhibit 10:	Public	Exemplary claim chart comparing claim 5 to Creative's Zen Vision:M® portable MP3 player
Exhibit 11:	Public	http://www.apple.com/support/ipod101/anatomy/1/
Exhibit 12	Public	http://www.apple.com/support/ipod101/anatomy/2/
Exhibit 13:	Public	http://www.apple.com/support/ipod/tutorial/ip_gettingstarted_t1.html
Exhibit 14:	Public	http://download.info.apple.com/Apple_Support_Area/Manuals/hardware/0342141iPodUserGuideMac.PDF
Exhibit 15:	Public	http://www.apple.com/support/ipod/tutorial/ip_gettingstarted_t4.html
Exhibit 16:	Public	http://www.apple.com/support/ipod/tutorial/ip_gettingstarted_t5.html

Exhibit 17:	Public	http://manuals.info.apple.com/en/iPod_User_Guide_(color_display).pdf

APPENDICES AND PHYSICAL SAMPLES

App. A	Public	Certified Copy of the prosecution history for U.S. Patent No. 6,928,433.
App. B	Public	Four copies of each reference mentioned in the '433 patent.
App. C	Public / Physical	Creative's Zen Vision:M® portable MP3 player (in box with packaging)
App. D	Public / Physical	Apple iPod (in box with packaging)
App. E	Public / Physical	Apple iPod Nano (in box with packaging)

EXHIBIT 1

U 796650

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

January 25, 2006

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF:

U.S. PATENT: *6,928,433*
ISSUE DATE: *August 09, 2005*

By Authority of the
Under Secretary of Commerce for Intellectual Property
and Director of the United States Patent and Trademark Office

M. K. CARTER
Certifying Officer

CL 000001

US006928433B2

(12) **United States Patent**
Goodman et al.

(10) **Patent No.: US 6,928,433 B2**
(45) **Date of Patent: Aug. 9, 2005**

(54) **AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA**

(75) Inventors: **Ron Goodman**, Santa Cruz, CA (US); **Howard N. Egan**, Capitola, CA (US)

(73) Assignee: **Creative Technology LTD**, Singapore (SG)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 323 days.

(21) Appl. No.: **09/755,723**

(22) Filed: **Jan. 5, 2001**

(65) **Prior Publication Data**

US 2002/0147728 A1 Oct. 10, 2002

(51) **Int. Cl.**[7] **G06F 17/30**
(52) **U.S. Cl.** **707/4**; 707/3; 707/102; 386/46
(58) **Field of Search** 84/609, 601, 602, 84/611–614; 707/104.1, 3, 4, 102; 386/46

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Web page on "Can you carry your CD collection in your pocket? Yes, you can." Compaq web site, 3 pages, http://research.compaq.com/SRC/pjb/, Printed on Apr. 30, 2004.

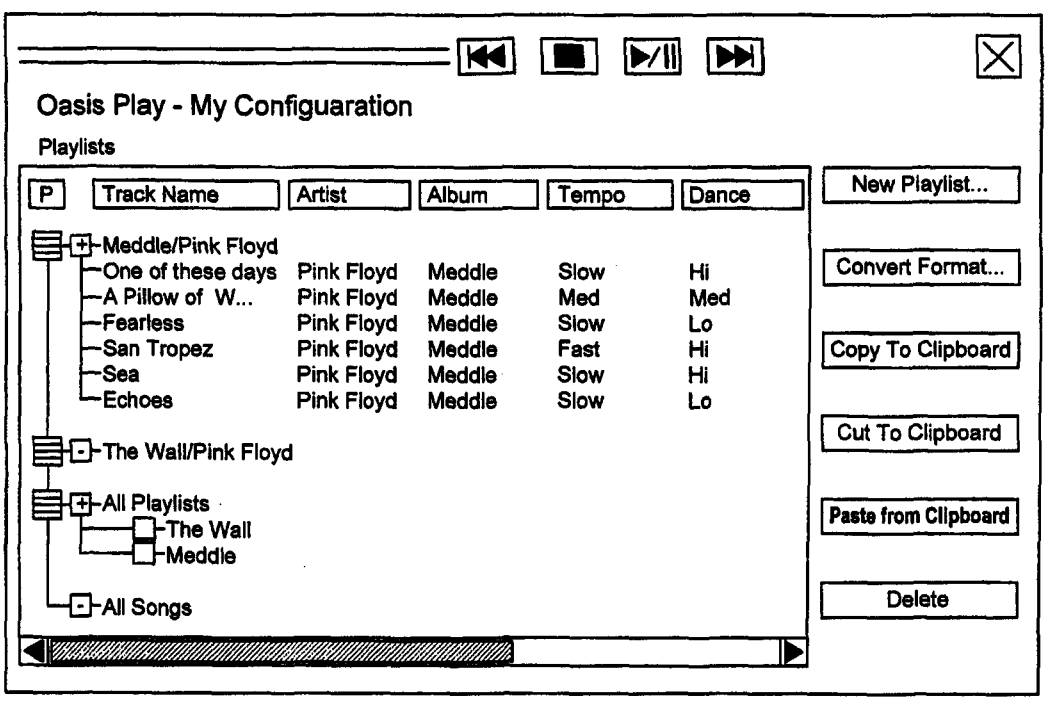
* cited by examiner

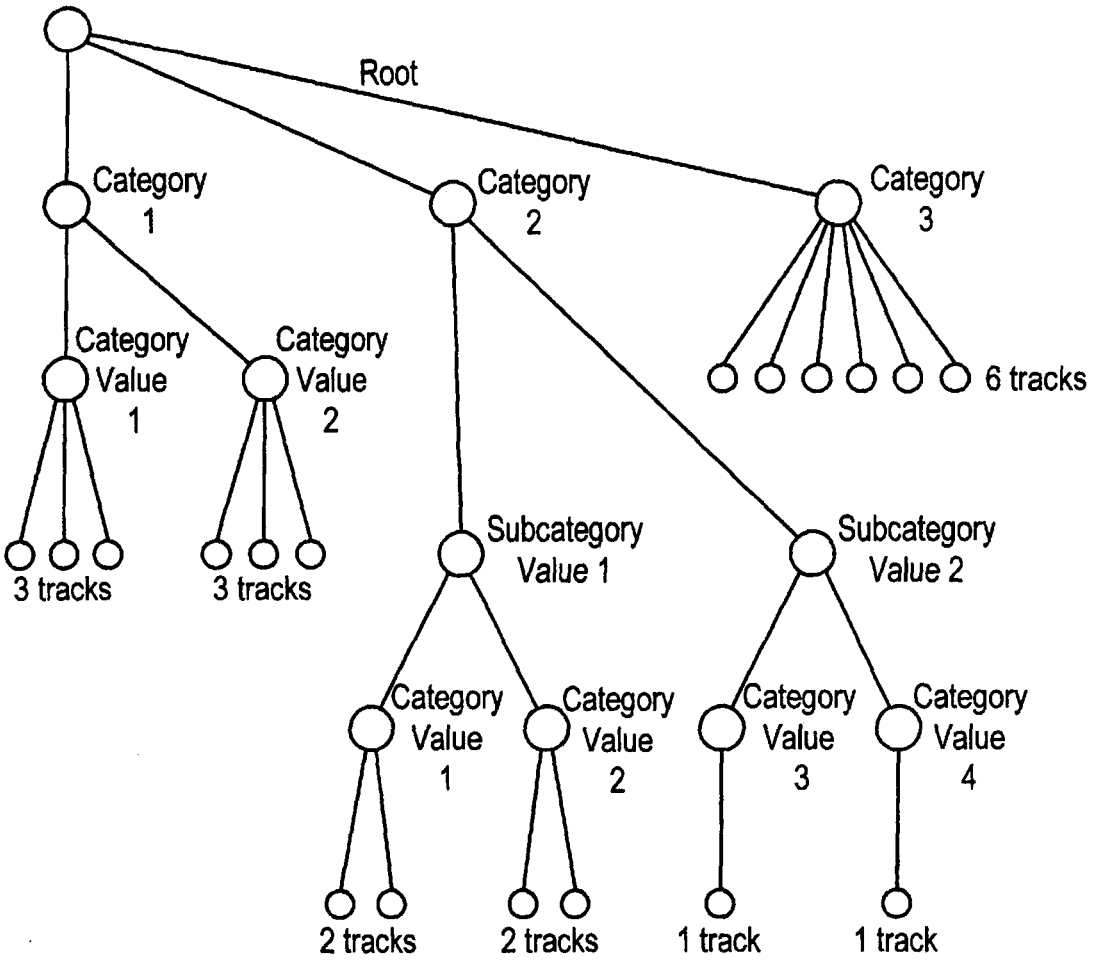
Primary Examiner—Charles Rones
(74) *Attorney, Agent, or Firm*—Russell N. Swerdon; Creative Technology LTD

(57) **ABSTRACT**

A method, performed by software executing on the processor of a portable music playback device, that automatically files tracks according to hierarchical structure of categories to organize tracks in a logical order. A user interface is utilized to change the hierarchy, view track names, and select tracks for playback or other operations.

16 Claims, 12 Drawing Sheets





For example:

Category 1 = Album Name

Category Value 1 = Abbey Road

Category Value 2 = Hits from the 60's

Category 2 = Artist Name

Subcategory Value 1 = British Artists

Subcategory Value 2 = American Artists

Category Value 1 = The Beatles

Category Value 2 = Petula Clark

Category Value 3 = Mamas and the Papas

Category Value 4 = Nick Drake

Category 3 = All tracks

FIG. 1.

V1.0
Albums|0x01|BLBN
Artists|0x01|BCBMBN
All Tracks|0x01|BN

FIG. 2.

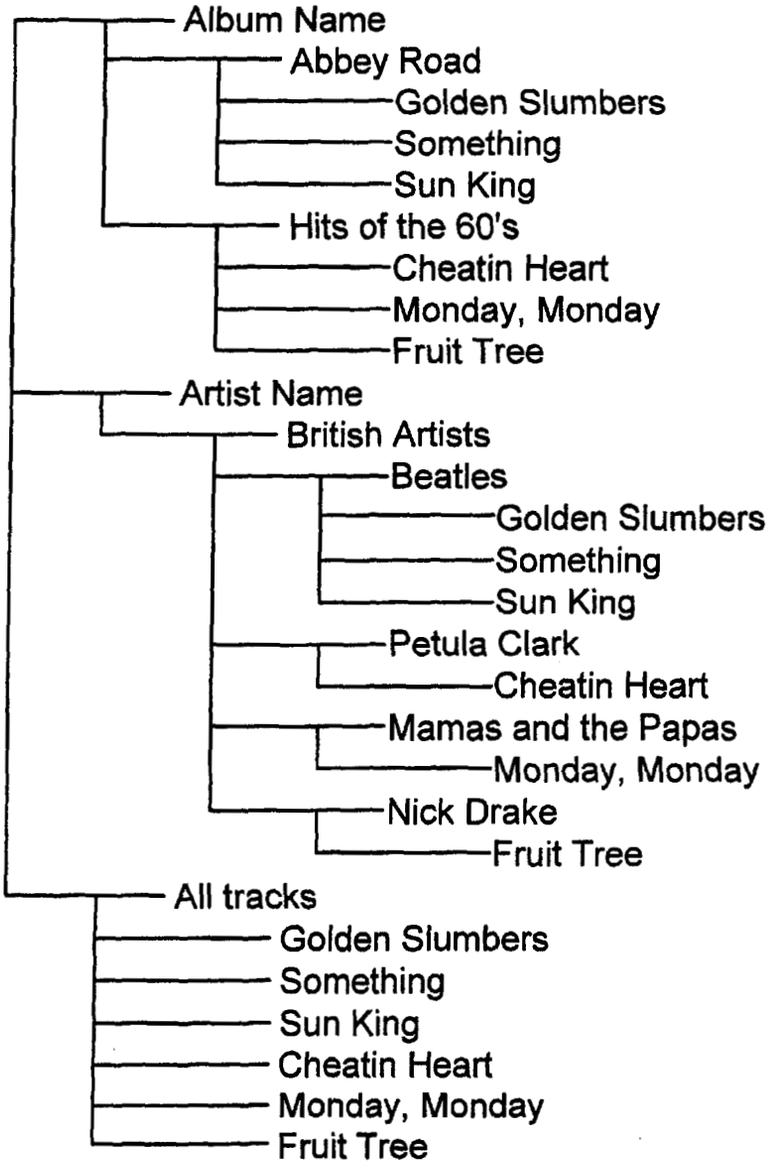


FIG. 3.

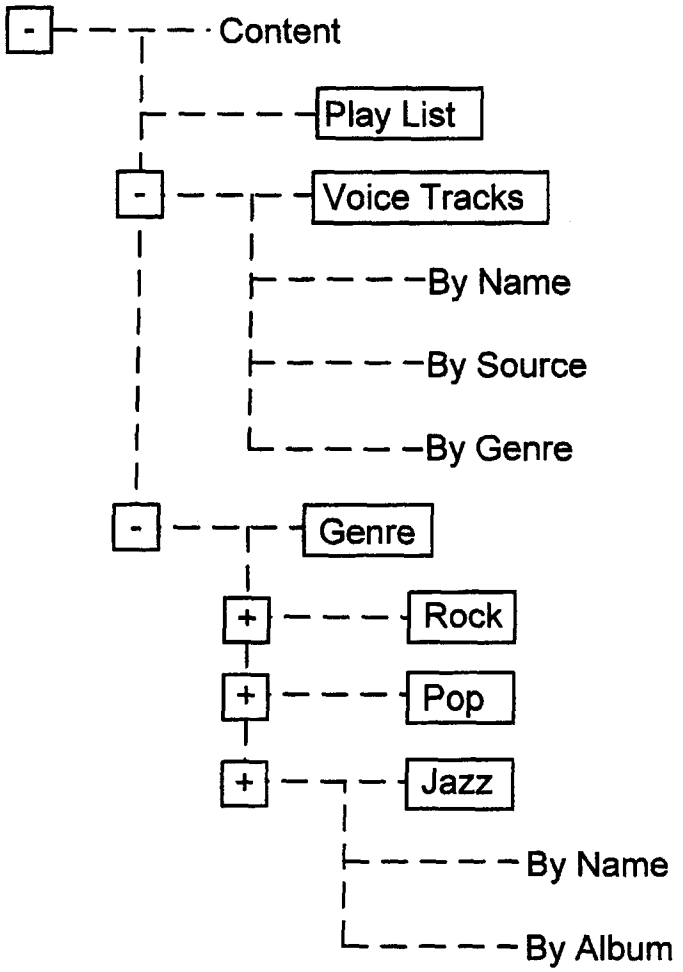


FIG. 4.

file data	album	name	genre	type

FIG. 5.

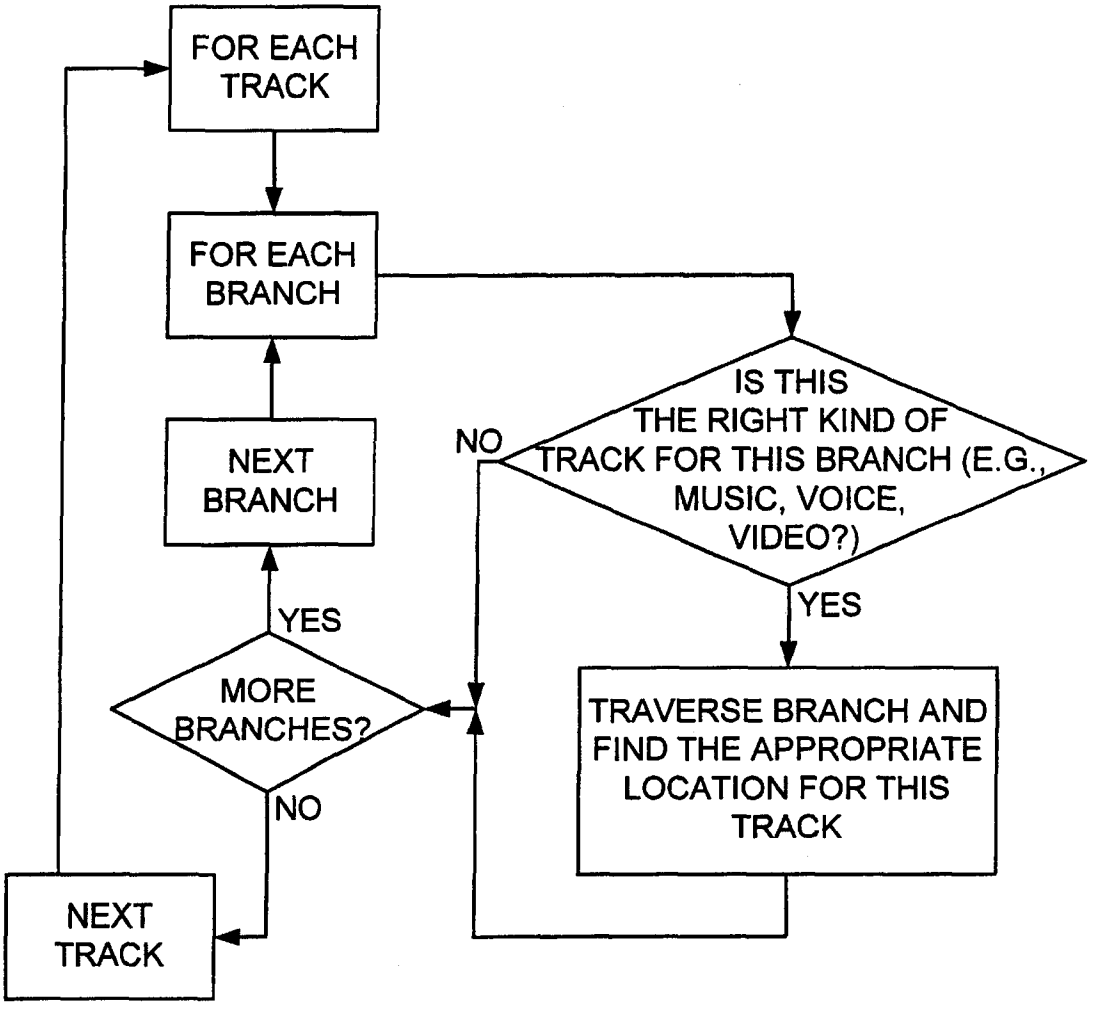


FIG. 6.

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Albums	Full Moon Fever	Free Falling	
		I Won't Back Down	
		Love Is A Long Road	
	Graceland	The Boy In The Bubble	
		Graceland	
	Hotel California	Hotel California	
		New Kid In Town	
	Unknown (Created for items without Album attribute)	Track 1	
		Stardust	
Artist	Tom Petty	Full Moon Fever	Free Falling
			I Won't Back Down
			Love Is A Long Road
	Eagles	Hotel California	Hotel California
		New Kid In Town	
	Paul Simon	Graceland	The Boy In The Bubble
			Graceland
Genre	Rock	Full Moon Fever	Free Falling
			I Won't Back Down
			Love Is A Long Road
		Hotel California	Hotel California
		New Kid In Town	
		Graceland	The Boy In The Bubble
			Graceland

FIG. 7.

CL 000007

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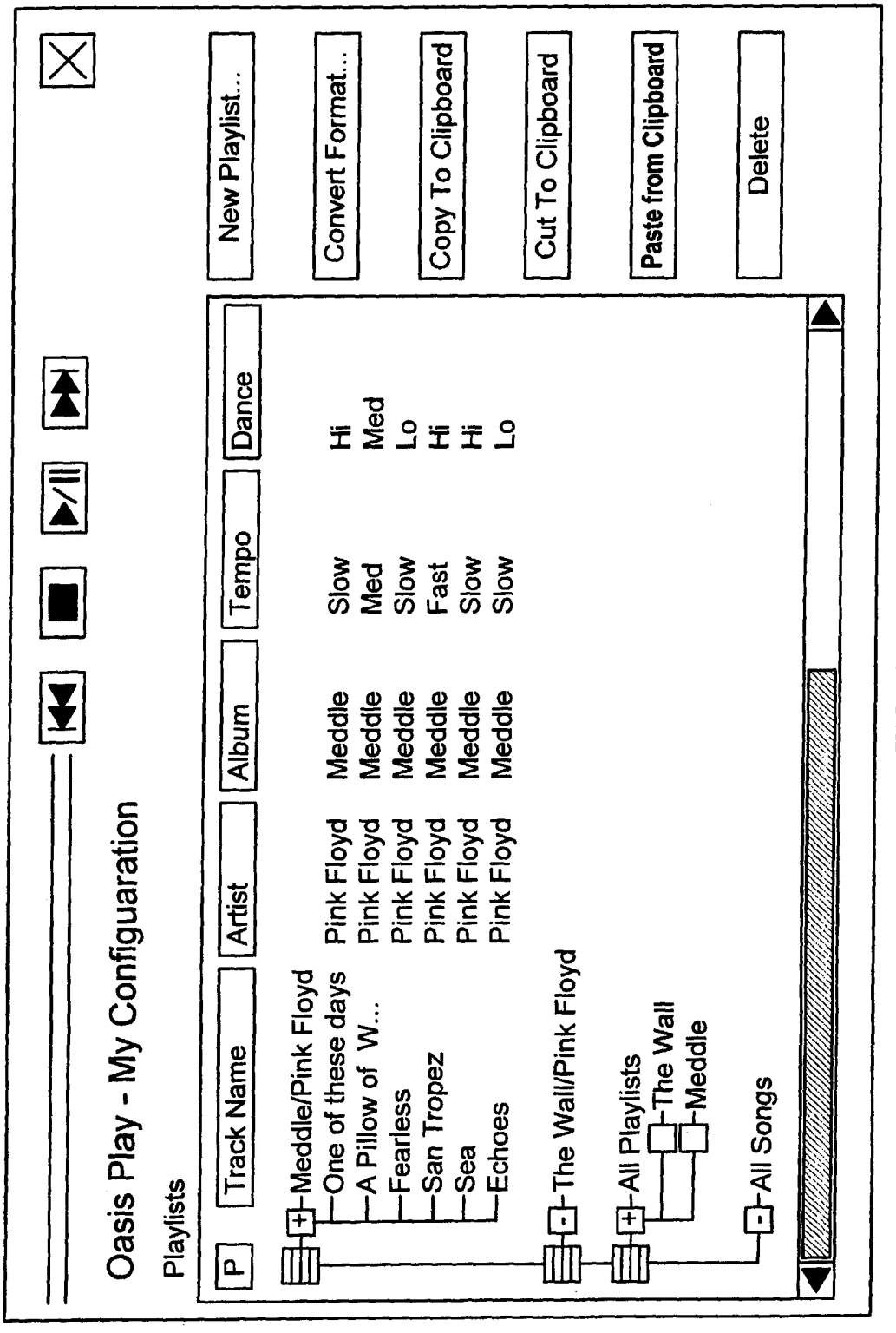

FIG. 8.

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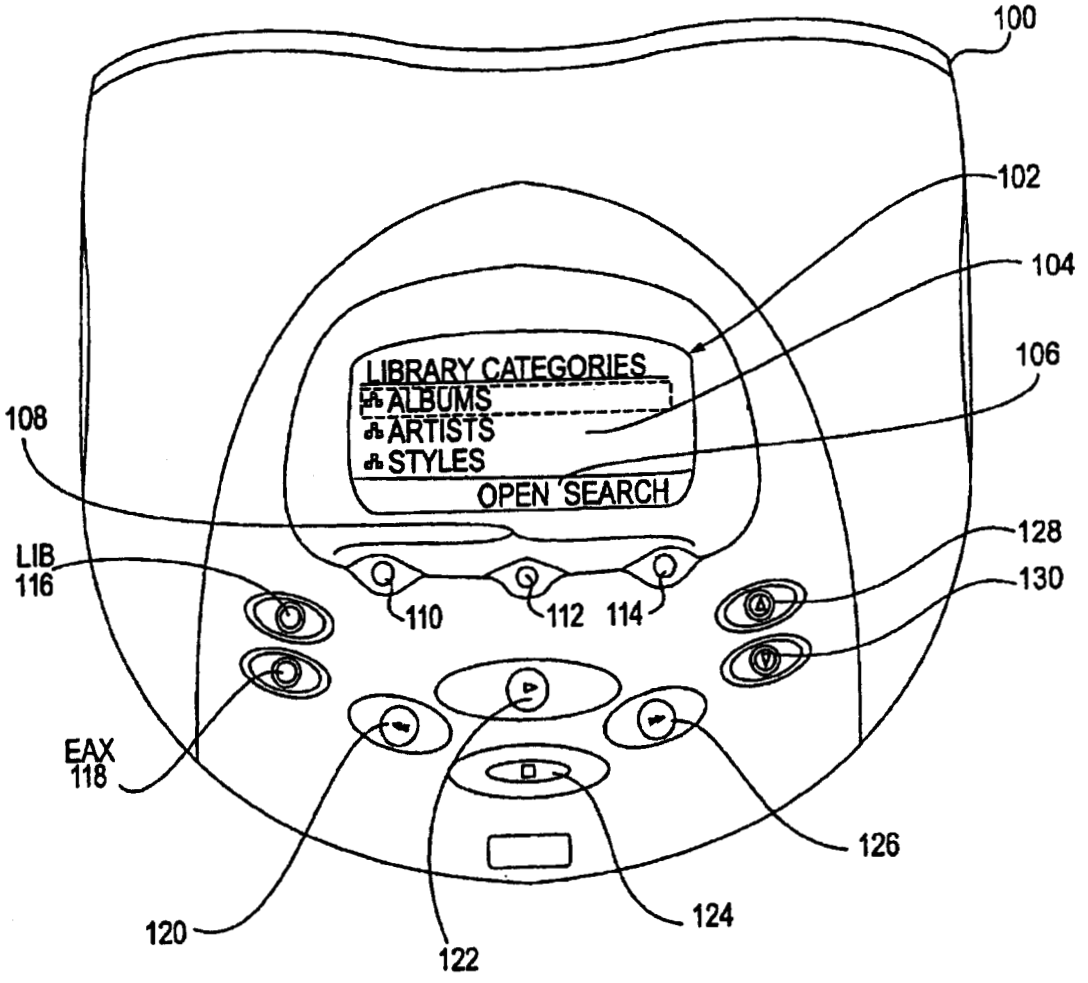

FIG. 9

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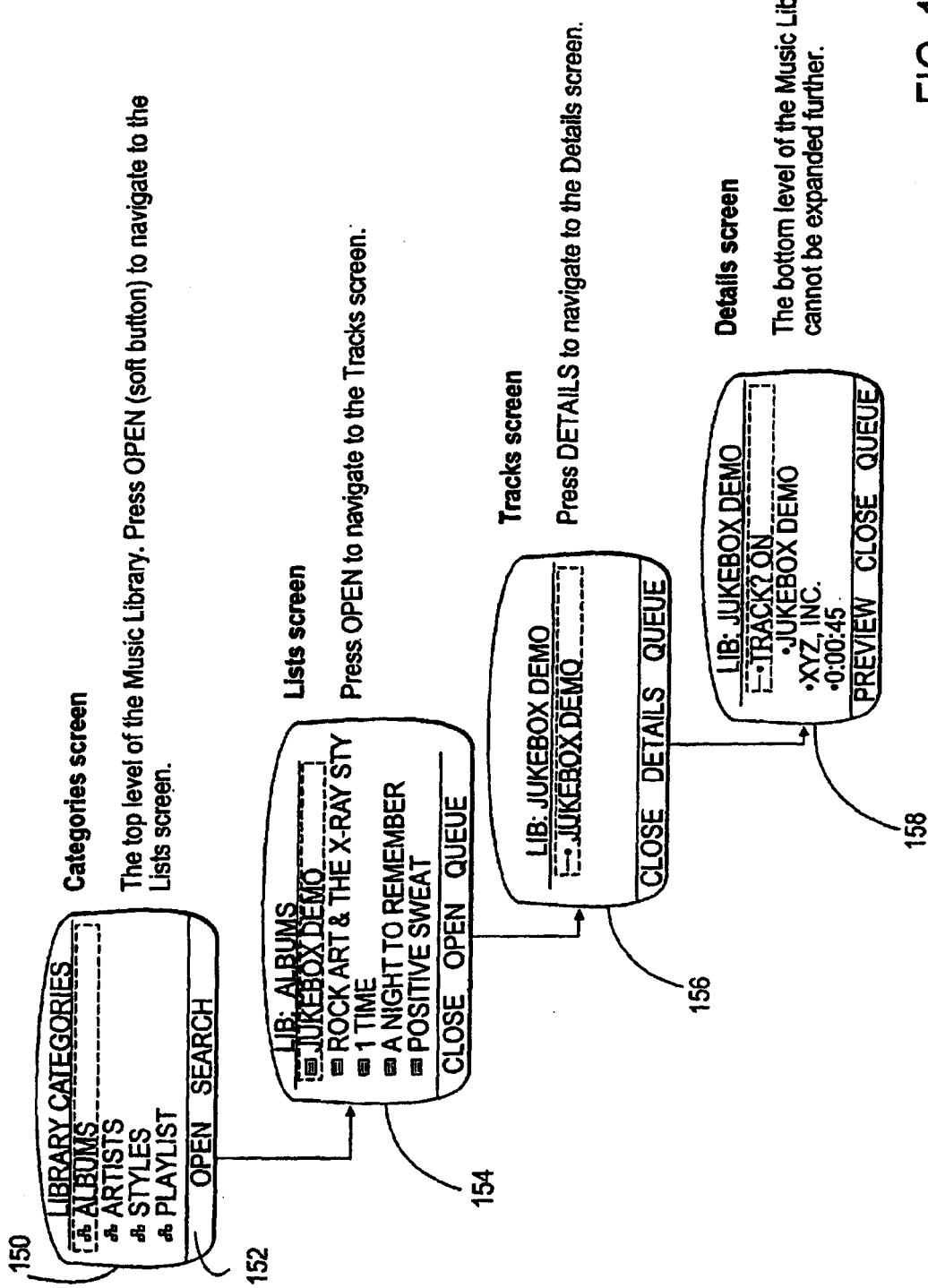
Categories screen
The top level of the Music Library. Press OPEN (soft button) to navigate to the Lists screen.
LIBRARY CATEGORIES
ALBUMS
ARTISTS
STYLES
PLAYLIST
OPEN SEARCH
150
152
Lists screen
Press OPEN to navigate to the Tracks screen.
LIB: ALBUMS
JUKEBOX DEMO
ROCK ART & THE X-RAY STY
1 TIME
A NIGHT TO REMEMBER
POSITIVE SWEAT
CLOSE OPEN QUEUE
154
Tracks screen
Press DETAILS to navigate to the Details screen.
LIB: JUKEBOX DEMO
JUKEBOX DEMO
CLOSE DETAILS QUEUE
156
Details screen
The bottom level of the Music Library; cannot be expanded further.
LIB: JUKEBOX DEMO
TRACK? ON
•JUKEBOX DEMO
•XYZ, INC.
•0:00:45
PREVIEW CLOSE QUEUE
158

FIG. 10

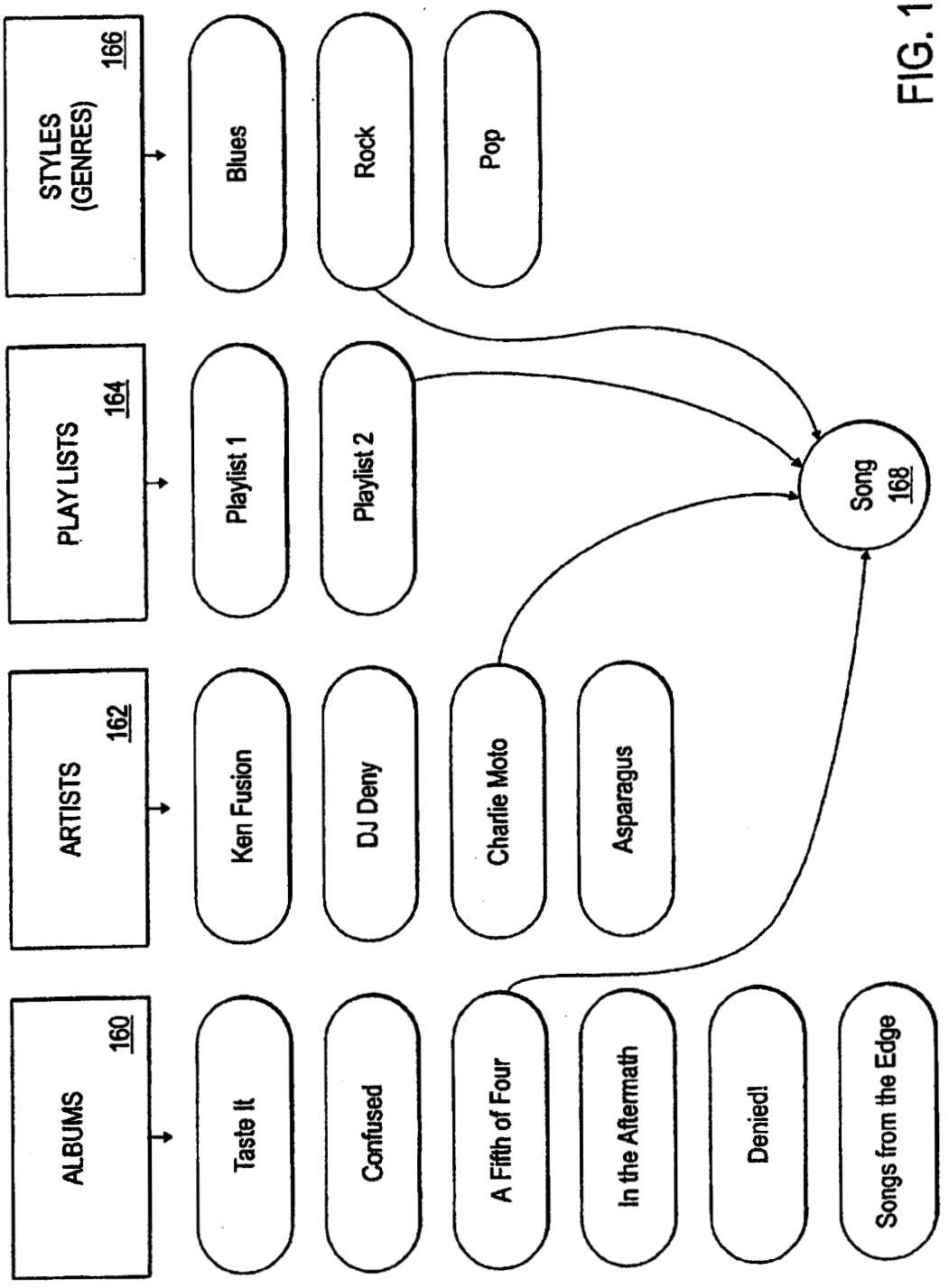
ALBUMS 160
ARTISTS 162
PLAY LISTS 164
STYLES (GENRES) 166
Taste It
Confused
A Fifth of Four
In the Aftermath
Denied!
Songs from the Edge
Ken Fusion
DJ Deny
Charlie Moto
Asparagus
Playlist 1
Playlist 2
Blues
Rock
Pop
Song 168

FIG. 11

LIBRARY CATEGORIES
ALBUMS
ARTISTS
STYLES
PLAYLIST
OPEN SEARCH
180
1. Press SCROLL UP/DOWN buttons to select ALBUMS.
2.Press SEARCH to access the SEARCH FOR ALBUMS screen.
Search for Albums
A
A NIGHT TO REMEMBER
GO! PLUS MINUS
182
3. Press PLUS/MINUS to change the letter and then press the SCROLL UP/DOWN buttons to move the letter entry position (indicated by a ^).
Search for Albums
BB
BEST OF BACH
GO! PLUS MINUS
184
NOTE: As each letter is entered, the letters are compared with the ALBUMS list. The ALBUM with the nearest match is displayed.
LIB: ALBUMS
BANNED IN DA SINGAPURA
BASSETT HOUND
BEST OF BACH
BEST OF BEETHOVEN
BEST OF BIZET
CLOSE OPEN QUEUE
186
4. Press GO! to jump to the nearest match. The album appears on the screen.

FIG. 12

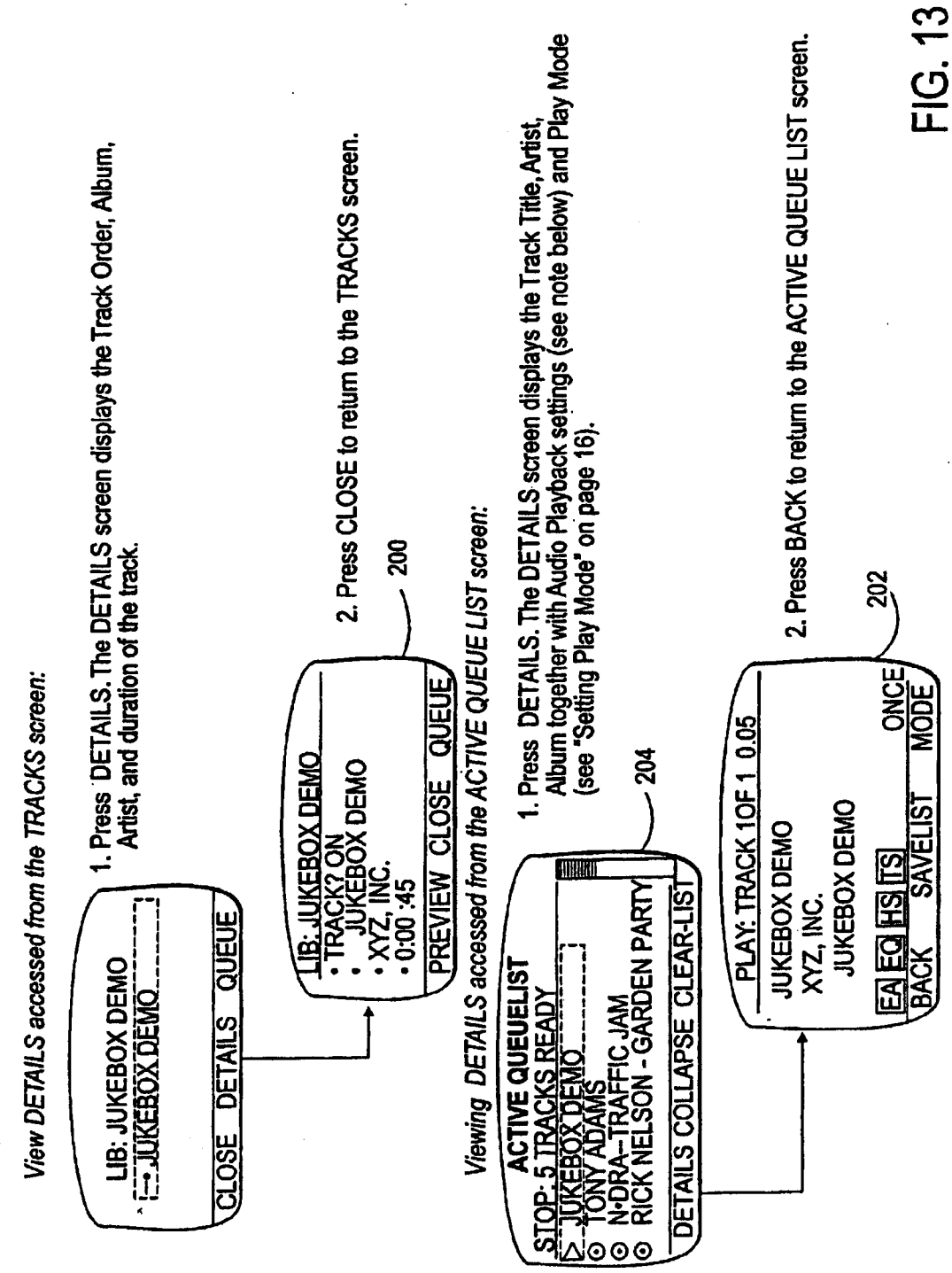
View DETAILS accessed from the TRACKS screen:
1. Press DETAILS. The DETAILS screen displays the Track Order, Album, Artist, and duration of the track.
LIB: JUKEBOX DEMO
JUKEBOX DEMO
CLOSE DETAILS QUEUE
LIB: JUKEBOX DEMO
• TRACK? ON
• JUKEBOX DEMO
• XYZ, INC.
• 0:00 :45
PREVIEW CLOSE QUEUE
2. Press CLOSE to return to the TRACKS screen.
200
Viewing DETAILS accessed from the ACTIVE QUEUE LIST screen:
1. Press DETAILS. The DETAILS screen displays the Track Title, Artist, Album together with Audio Playback settings (see note below) and Play Mode (see "Setting Play Mode" on page 16).
ACTIVE QUEUELIST
STOP: 5 TRACKS READY
JUKEBOX DEMO
TONY ADAMS
N-DRA-TRAFFIC JAM
RICK NELSON - GARDEN PARTY
DETAILS COLLAPSE CLEAR-LIST
204
PLAY: TRACK 1OF 1 0.05
JUKEBOX DEMO
XYZ, INC.
JUKEBOX DEMO
EA EQ HS TS
ONCE
BACK SAVELIST MODE
2. Press BACK to return to the ACTIVE QUEUE LIST screen.
202

FIG. 13

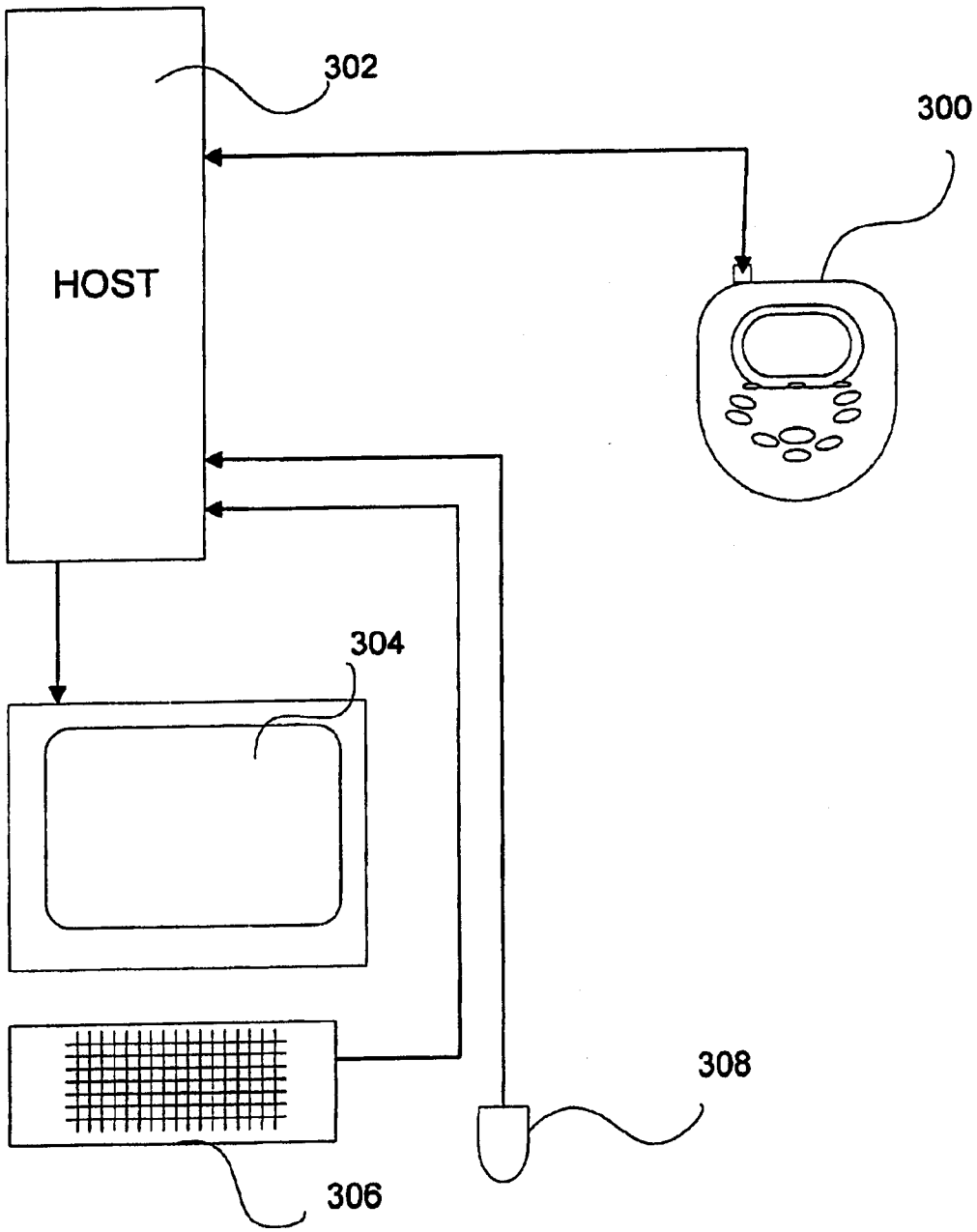

FIG. 14

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

CROSS-REFERENCES TO RELATED APPLICATIONS

This application is related to Application Ser. No. 09/755,629, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," now abandoned and Application Ser. No. 09/755,367, entitled "Audioplayback Device with Power Savings Storage Access Mode," issued as U.S. Pat. No. 6,590,730, all filed Jan. 5, 2001, the disclosures of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

Today, portable consumer electronic devices are more powerful than ever. For example, small, portable music playback devices can store hundreds, even thousands, of compressed songs and can play back the songs at high quality. With the capacity for so many songs, a playback device can store many songs from different albums, artists, styles of music, etc.

Music jukeboxes implemented in software executed by a digital computer and portable MP3 and CD players both provide facilities for forming playlists. For example, the OOZIC player, distributed by the assignee of the present application, runs on a host PC and has a playlist feature that allows selection of tracks from the PC's hard disk to be included in the playlist.

As storage capacity increases and songs are compressed to shorter file lengths the number of songs that can be stored increases rapidly. Major problems facing the consumer are organizing and accessing the tracks.

Typically, portable devices have a user interface including a small screen and buttons. Such a display screen might be, e.g., 1"×2". This small display size is necessary because of the physical size of the device which is typically carried in the hand. The small size also limits the number, size, shape, and types of user input controls that can be mounted on the device. For example, a few pushbuttons are usually provided to perform all of the device's control functions. Using such a compact user interface to navigate and select among hundreds of songs is inefficient and often frustrating. The display screen can only show a few song titles at one time, and the limited controls make it difficult for a user to arbitrarily select, or move among, the songs.

The creation of playlists is one technique to organize the playing of songs. A set of songs can be included in a playlist which is given a name and stored. When the playlist is accessed, the set of songs can be played utilizing various formats such as sequential play or shuffle.

However, the creation of playlists itself becomes problematic as the number of songs increases, since the user often arbitrarily selects songs from a large number of tracks to form a playlist. This selection mechanism: can be fairly tedious; does not necessarily produce playlists that are of interest to the user over the course of time; may not remain up-to-date if new songs are added that logically fit into a previously created playlist (e.g. "Favorites by Band X" might become out of date if a new favorite by Band X is added after the playlist was created); and leads to "lost" songs that are not members of any playlist.

Accordingly, improved techniques for organizing and grouping tracks useful in a portable music player are needed.

Further, it is desirable to provide a user interface suitable for a small device. The user interface should allow a user to efficiently navigate among, and select from, many items stored in the device.

SUMMARY OF THE INVENTION

The present invention provides an efficient user interface for a small portable music player. The invention is suitable for use with a limited display area and small number of controls to allow a user to efficiently and intuitively navigate among, and select, songs to be played. By using the invention, very large numbers of songs can be easily accessed and played.

One aspect of the invention includes an overlapping hierarchy of categories. Categories include items that can also be included in other categories so that the categories "overlap" with each other. Thus, a song title can be accessed in multiple different ways by starting with different categories. For example, a preferred embodiment of the invention uses the top-level categories "Albums", "Artists", "Genres" (or styles), and "Play Lists". Within the Albums category are names of different albums of songs stored in the device. Within each album are the album tracks, or songs, associated with that album. Similarly, the Artists category includes names of artists which are, in turn, associated with their albums and songs. The Genre category includes types of categories of music such as "Rock", "Hip Hop", "Rap", "Easy Listening", etc. Within these sub-categories are found associated songs. Finally, the "Play Lists" category includes collections of albums and/or songs which are typically defined by the user.

Advantageous use is made of the overlapping hierarchy to allow the user to quickly designate a song for playback. The device uses three "soft" pushbuttons that have assignable functions. The interface maintains consistent button functionality whenever possible and uses uniform command names and operations in different types of items so that the interface is more intuitive. For example, the user can open and queue both albums and songs with predictable results.

The interface also provides for multiple functions for a single control. For example, a "Play" button can act, in a first function, to play a currently-selected song. The Play button can act, in a second function, to cycle through different playback modes. The modes can be, e.g., (1) playback of songs from a hard disk; (2) playback of music from a radio receiver built into the device; and (3) playback of voice messages. The first function for the Play button can be activated by momentarily depressing the Play button for a short period of time. The second function is invoked by depressing the Play button for a longer period of time whereupon the device cycles through the different modes. Other ways of invoking the functions are possible such as where the second function is automatically entered from a powered-down state.

In one embodiment, the invention provides a method for selecting songs to be played in an electronic audio device, wherein the device includes a display and one or more user input controls, wherein songs are organized into categories, albums, wherein songs and albums are associated with artist names. The method includes steps of displaying categories on the display; accepting signals from a user input control to select a category; displaying one or more songs in the selected category on the display; accepting signals from a user input control to select a displayed song; and entering selected songs into a playlist queue, wherein the device plays back songs in the playlist queue.

According to one aspect of the present invention, a technique is provided for organizing tracks on a portable music player by automatically filing tracks in a hierarchical order based on attributes of the tracks.

According to another aspect of the invention, metadata is associated with each track that is used to automatically define the track's appropriate place in the hierarchy.

According to another aspect of the invention, the hierarchy is displayed on the portable music player so that a user can traverse the organizational hierarchy to find individual tracks or find playlists composed of logical groups of tracks.

According to another aspect of the invention, the hierarchy is derived by using metadata associated with the audio content that was obtained through any source of metadata (e.g. CDDB metadata, id3v2 metadata, other obtainable metadata) and subsequently stored with or alongside the file that stores the track.

According to another aspect of the invention, a file is formatted so that an unaltered track is stored as file data and information about the track is stored in file attribute files.

Other features and advantages of the invention will be apparent in view of the following detailed description and appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a schematic diagram of a tree structure for hierarchical filing of tracks;

FIG. **2** is a definition file that specifies the hierarchy depicted in FIG. **1**;

FIG. **3** is a user's view of the hierarchy;

FIG. **4** is a schematic diagram of a user interface displaying the hierarchical category structure;

FIG. **5** is a diagram of a file format for storing filed data and file attributes;

FIG. **6** is a flow chart depicting steps for filing tracks according to the hierarchical tree structure;

FIG. **7** depicts a tree resulting from searching the tracks; and

FIG. **8** depicts a format for a user interface;

FIG. **9** illustrates the NOMAD Jukebox and its user interface controls;

FIG. **10** illustrates a sequence of display screens describing how to navigate to lower levels;

FIG. **11** illustrates associations among items;

FIG. **12** shows display screens used to search for a song or other item;

FIG. **13** illustrates details of different items; and

FIG. **14** illustrates a playback device coupled to a host computer system.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A preferred embodiment of the invention will now be described in the context of a portable personal player that plays audio files stored in memory. The files may be in MP3, wav. or other digital formats.

In the presently described embodiment, users are able to see the tracks on their player in some organized fashion other than as a single list of tracks. As will be described in more detail below, in one embodiment tracks are sorted utilizing a tree structure having branches labeled according to types of metadata associated with the tracks

For example, a track recorded as "Golden Slumbers" by the Beatles that appears on their album "Hey Jude" might appear as a track under the album "Abbey Road" as well as a track under the list of tracks by the Beatles. It might appear as a track under the genre "Pop Rock" as well as "Songs from the 60's." Furthermore, the organization can have more complex hierarchies. For example, the category of "Pop Rock" might contain subcategories "British Musicians," "American Musicians" and "Other Musicians". In all cases, the track is automatically filed into all appropriate locations without requiring user interaction.

In the currently defined embodiment, a tree structure is defined by a file having the following structure.

The first line of a TreeDef.inf file contains a version number:

V1.0

Each subsequent line (at least in v1.0) contains lines of the following format:

CATEGORY_NAME|TRACK_TYPE MASK|CATEGORY_STRUCTURE

CATEGORY_NAMEs are the top-level names of the branch under which tracks are sorted. They include things like "Album," "Artist," "Voice Tracks," "All Tracks," etc.

TRACK_TYPE_MASKs tell which types of tracks are to be filed under this particular branch. The actual value is a hexadecimal numerical value (in '0X' format, e.g. 0X01) generated by ORing the following flags together as appropriate:

```
enum tTrackType
{
    kTTNothing=0x00,
    kTTSong=0x01,
    kTTVoice=0x02,
    kTTBook=0x04,
    kTTMacro=0x08,
    kTTPlaylist=0x10
};
```

So, for example, the "Album" branch has a TRACK_TYPE_MASK of kTTSong, because only songs are filed under that branch, but the "All Tracks" branch has a TRACK_TYPE_MASK of (kTTSong|kTTVoice|kTTBook).

Other elements might be added to tTrackType (e.g. kTTVideo) as appropriate.

CATEGORY_STRUCTUREs tell how to file the songs based on their metadata information. The CATEGORY_STRUCTURE is a string of characters that tell, from left to right, the order of hierarchy. The characters come from the following enum constants:

```
enum tFileTag
{
    kFTNone='@',
    kFTTrackType='T',
    kFTTitle='N',
    kFTAudioFile='F',
    kFTArtist='M',
    kFTAlbum='L',
    kFTGenre='G',
    kFTSource='S',
    kFTYear='Y',
    kFTArtistCountry='C'
};
```

Thus, a CATEGORY_STRUCTURE of LN tells to create a subcategory that is a list of Albums, each of which contains a list of Tracks.

In total, a line like:

Album|0x01|LN

Says to create a branch called "Album" which contains tracks of type kTTSong organized first by album name, and then by track name.

The following is an example of a tree definition file similar (though not identical) to the hierarchy presented in the Nomad Jukebox product (the 'B' before each FileTag was used to identify that these are basic tags so that we wouldn't run out of letters in the alphabet as we included more complex metadata—thus each group of two letters represents a level in the hierarchy):

```
V1.0
Album|0x01|BLBN
Artist|0x01|BMBN
Genre|0x01|BGBN
Voice Tracks|0x02|BSBGBN
Playlists|0x10|BN
Macros|0x08|BN
All Tracks|0x07|BN
```

FIG. 1 depicts a hypothetical organization hierarchy. The tree shows how tracks might be listed (as leaves in the tree) after having been organized. Example values for nodes in the tree are shown as well. The same track may appear more than once as a leaf in the tree, as described above, if it fits into multiple categories (e.g. a song that appears on the Abbey Road branch would also appear in the Beatles branch). In the example shown, the first branch contains tracks organized by album. As shown in the example, this music collection contains three tracks from "Abbey Road" and three tracks from "Hits from the 60's". The second branch contains tracks organized by artist, and sub organized by where the artist is from. Thus, a user browsing would first select the "Artists" branch and then choose between "British Artists" and "American Artists". Finally, they would select the particular artist. In the third branch, all tracks are shown.

The tree definition file that would specify the hierarchy shown in FIG. 1 is shown in FIG. 2.

The first line identifies the version of the tree definition file.

The second line defines the "Albums" branch. The first part of the line, "Albums" defines the name of the branch. The second part, "0x01," defines that all musical tracks should be categorized on this branch. The third part, "BLBN," defines that the branch lists first the names of all albums (BL) and then tracks on those albums (BN).

The third line defines the "Artists" branch. The first part of the line "Artists" defines the name of the branch. The second part, "0x01, " defines that all musical tracks should be categorized on this branch. The third part, "BCBMBN," defines that the branch lists first the names of all countries where artists in this collection come from (BC) and under those items, the artists' names (BM), and then tracks by those artists (BN).

FIG. 3 shows what a user's view of this hierarchy might be if he/she were shown a fully expanded view of the 6-song tree. Notice that each song appears three times, once in each branch.

In consumer products the tree define file is not edited directly but through a user interface, one example of which is depicted in FIG. 4. An example of a user interface for viewing songs by category and editing the tree structure is depicted in FIG. 4.

An embodiment of the invention is utilized in the Nomad® Jukebox, manufactured by the assignee of the present invention, and described more fully in the copending application, filed on the same date as the present application, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Attny. Docket No. 17002-020800).

In a preferred embodiment, metadata is associated with each track and includes such information as title, genre, artist name, type, etc. In the preferred embodiment, software stored in a portable player and executed by the onboard processor automatically files each track in the correct category utilizing the associated metadata and the tree define file. The program code can be stored in any computer readable medium including magnetic storage, CD ROM, optical media, or digital data encoded on an electromagnetic signal.

Thus, the user is automatically provided with a powerful and flexible tool for organizing and categorizing the tracks stored on the portable player.

If the tracks are formatted in MP3 format the metadata can be stored in ID3 tags included in the MP3 file. In one embodiment of the invention, the tracks are stored in alternate file format including file data and file attributes. The file data is the music track itself and the file attributes part of the file includes fields of arbitrary size which are used to store metadata characterizing the track stored as the file data. Again this metadata includes information about the track such as title, genre, artist name, type, etc.

There are several advantages to using the alternate file format. Metadata of types not easily included in an ID3 tag can be utilized. Further, the original track format is not changed, so that error correction data such as checksums are valid. Finally, any file format can be used (e.g. WAV, WMA, etc.) because the metadata is stored separately, and thus audio formats that have limited support for metadata can still be stored on the portable player in native format without transcoding. The formatted files are formed by software stored in the portable music player and executed by an on-board processor.

The metadata for each track is utilized to file each track, using the categories defined in the hierarchical structure as described above, without any input from the user.

FIG. 5 is a schematic diagram of the alternative file format including file data in the form of an MP3 track, and metadata fields for holding data indicating the name of the album the track is from, the name of the song, the genre of the song, and the type of track.

A particular embodiment of a file format will now be described. All tracks are created with some set of attributes as shown below:

Definition of TrackInfo Data Field

Field	Offset	Size	Description
Attribute Count	0	2	The number of attribute follow for the track
Attr 1 type	2	2	Binary = 0, ASCII = 1
Attr 1 name len	4	2	Length of attribute name string
Attr1 data len	6	4	Length of attribute data
Attr1 Name	10	N	Attribute name string
Attr 1 Data	10 + N	M	Attribute data
. . .			
. . .			
Attr N type			
Attr 1 name len			
Attr1 data len			
Attr1 Name			
Attr 1 Data			

-continued

Required Attributes		
Attribute Name	Value(s)	Remarks
TITLE	ASCII string	RequiredByJukebox
CODEC	"MP3", "WMA", "WAV"	RequiredByJukebox
TRACK ID	DWORD	Set By Jukebox
ALBUM	ASCII string	Optional
ARTIST	ASCII string	Optional
GENRE	ASCII string	Optional
LENGTH	In seconds	Optional
TRACK SIZE	In bytes	Optional
TRACK NUM	1–n (track within album)	Optional

These attributes can be subsequently changeable via a host application, running on a personal computer connected to the portable music player.

FIG. **6** shows a flow chart of an embodiment the process used to build the hierarchical database of tracks. It starts by iterating through each track, and, for each track, iterating through each branch to find if the track belongs on the branch, and, if so, where. In this case, the term track could refer to any content, e.g. a music track, a spoken word track, or even a video track.

Also, the hierarchical catalog of tracks can be used to form playlists in a structured manner. For example, if a user wants to hear Jazz and Blues the entire sub-categories can be selected to form one playlist.

An alternative hierarchical catalog generation technique will now be described. In this alternative embodiment, at system startup and as tracks are added or changed, the hierarchy is generated as an in-memory tree structure. Each track is added to the tree using the categories ALBUM, ARTIST and GENRE.

The following example shows the algorithm for adding a track. For clarity, only the attributes used by the tree are shown.

TITLE	"Free Falling"
ALBUM	"Full Moon Fever"
ARTIST	"Tom Petty"
GENRE	"Rock"
TRACK NUM	1

The following function is executed to build the in-memory memory tree.

```
Build Tree( )
For each track,
    Add Track To Category(Album, Track)
    Add Track To Category(Artist, Track)
    Add Track To Category(Genre,Track)
End of Build Tree
```

FIG. **7** depicts a tree which could result from implementing Build Tree( ) function. Note that "Stardust" does not have any entries for Album or Artist. The host software running on a computer connected to the portable music player could be utilized to add missing attributes to the "Stardust" track and, optionally, edit the title attribute. The Build Tree( ) function would then reinsert this track in the correct location in the tree.

FIG. **8** is an embodiment of a user interface according to another embodiment of the invention. In this example the root node is labeled "My Configuration" and the Playlist category has been selected and the Playlist subcategory "Meddle" has been selected. Note that the types of Metadata, in this example, Track Name, Artist, Album, Tempo and Dance, are listed across the top of the screen, and the attribute values for each track are listed in a row across the screen. Various control buttons are displayed to the right of configuration window that facilitate quickly invoking selected processing on a selected track.

As noted above, a preferred embodiment of the present invention is incorporated into a product manufactured and distributed by Creative Technology, Ltd. The product is called the "NOMAD Jukebox." The following description describes further details of the display screens and interface controls.

FIG. **9** illustrates the NOMAD Jukebox and its user interface controls.

In FIG. **9**, electronic audio device **100** measures about 5.5" wide by 5.5" tall by 1" thick. Display screen **102** is about 2" wide by 1" tall. Display screen **102** includes different regions such as main region **104** and soft button function description region **106**.

Three soft buttons are located at **108**; including buttons **110**, **112** and **114**. The specific command, or function, that any of the soft buttons perform when depressed is indicated by the label in soft button function description region **106**. Thus, the function of soft button **112** (as shown in FIG. **9**) is "open," the function of soft button **114** is "search" while soft button **110** is currently not assigned a function.

The other eight buttons on device **100** perform essentially the same functions at all times. In other words, they are not subject to function changes according to soft button function description area **106**. These button include Library button **116**, EAX and System button **118**, Skip Backward button **120**, Play button **122**. Stop button **124**, Skip Forward Button **126**, Scroll Up button **128** and Scroll Down button **130**. However, as discussed below, these buttons (or any type of controls used with the device) can include alternate functionality that is invoked in different ways.

The device uses visual cues, or indicators, in the display. When an item is highlighted it indicates that the item is the "current" item, or currenty-selected item, which is susceptible to be operated on by a subsequent user action—such as playback, or expansion of the item. In FIG. **1**, screen **102** shows that the item, "ALBUMS," is highlighted. The highlighted item can be acted upon by using the soft buttons, or another button, as decribed below. The current item can be changed by using Scroll Up button **128** and Scroll Down button **130** to move the highlight up or down, respectively, throughout a list of displayed items.

Icons are used to provide additional visual cues for an item. In FIG. **1**, each of the categories has a category icon to the left of it. The category icon, which may not be distinctly visible in the Figure, illustrates a first box connected by lines to additional boxes below the first box. The icon depicts a hierarchy and illustrates the property of categories, i.e., that categories can contain additional categories, songs or other items.

FIG. **10** illustrates a sequence of display screens describing how to navigate to lower levels.

In FIG. **10**, library category screen **150** shows the display as it appears when the user depresses library button **116** of FIG. **9**. A preferred embodiment of the device uses 4 first-level categories. These are "Albums", "Artists," "Styles" and "Play Lists". Each of these categories can "contain," or be associated with, other categories, songs, or items.

Note that in library category screen **150** ALBUMS is currently highlighted. By depressing soft button **112** of FIG.

9, the "open" command is performed on the highlighted category, as indicated by the labeling of soft button **112** and soft button function description area **152** of FIG. **10**.

Lists screen **154** is displayed as a result of a user opening Album category of library category screen **150**. Lists screen **154** shows items within the Albums category such as commercial albums of multiple songs from a record label, pre-made lists or collections created by a user, or other predefined lists or collections of songs or recordings.

In FIG. **10**, lists screen **154** shows each item as a list of songs. This is shown visually by the icon to the left of each item which depicts a miniature list. Possible soft button commands are "Close", "Open" and "Queue". These commands correspond to soft button **110**, **112** and **114**, respectively. If the user selects the Close command, the display reverts to library category screen **150**. If the user selects the Open command, the display shows tracks screen **156**. Alternatively, the user can select the Queue command to instruct the device to place all the songs from the selected (i.e., highlighted) list into the play list for eventual playback. Yet another option allows the user to press play button **122** of FIG. **9** to cause any currently-selected songs or a list of songs (e.g., an album) to immediately be played.

Returning to FIG. **10**, tracks screen **156** shows that a single song called "JukeBox Demo" is in the list. The list is also called JukeBox Demo as shown in lists screen **154**. Tracks screen **156** shows possible soft commands assigned to buttons, namely "Close", "Details" and "Queue." The Close button performs the same function as before—it returns the user to the previous screen which, in this case, is lists screen **154**. The user can also select the Details command to cause details of the song JukeBox Demo to be displayed in details screen **158** as shown in FIG. **10**. The user can select the Queue command by soft butto **114** to enter the selected song into the play list queue. As before, the user can also depress play button **122** of FIG. **9** to cause immediate playback of the selected song.

Details screen **158** shows information about the selected song including the name of the song, album (or list) name containing the song; the track number, if applicable, and track duration. Note that other information can be included. The user can preview the song, close the Details screen to return to the Tracks screen or queue the song on the play list queue.

The device provides the ability to "preview" audio files even while a current song, or playlist, is being played. When a user chooses to preview an audio file, the audio file is played for about 10 seconds while any currently-played file or playlist is suspended. After previewing is complete, the suspended file or playlist resumes playback. In other embodiment, the preview duration can vary, or be stopped by user selection.

FIG. **11** illustrates associations among items.

In FIG. **11**, song **168** is one of many songs stored in the device. Categories such as albums **160**, artists **162**, play lists **164** and genres **166** each include sub-categories. For example, albums **160** includes the names of various albums. Songs are associated with albums, genres and playlists. Such association can be by using pointers, a data structure including items to be associated, etc. "Association" as used herein, includes a first item associated with a second item; and the second item associated with the first item. In other words, albums can be associated with one or more songs in the database of the device so that an utomated search to find all songs associated with an album is easier. The direction of arrow pointers in FIG. **11** is not intended to limit the manner of associations among items in the present invention.

Similar to albums, the category of artists **162** includes names of artists, or performers, of songs. Each artist name is associated with one or more songs in the database. Playlists **164** includes names of playlists. These are collections of songs that can be defined by the user, the device manufacturer, or others. Each playlist can be associated with one or more songs. Genres **166** includes various styles of music which are associated with one or more songs. Genres **166** includes various styles of music which are associated with one or more songs in the database. Note that items can exist without being associated with a song. Also, items can be associated with other items as where an artist name is associated with the albums containing the songs that the artist has created.

Although not shown in FIG. **11**, items can have additional information, such as properties, details, etc., associated with the item. For example, a song can have information such a play time, artist name, artist album, copyright owner, etc., associated with the song.

FIG. **12** illustrates display screens used to search for a song or other item.

In FIG. **12**, screen **180** is the initial library screen, as discussed above. If the user invokes the Search command (via the appropriate soft button) with Albums selected then screen **182** is displayed. Note that the search function can be applied to any of the categories. The user can depress the Plus or Minus soft buttons to cycle through the alphabet and change the character in the current location as indicated by the cursor. The cursor position is changed by using the scroll up/scroll down buttons **128** and **130**, respectively, of FIG. **9**. As each letter is entered the letters are compared and the nearest match of the stored albums' names is displayed as shown in screen **184**. When the desired match is displayed the user selects the Go! command. Screen **186** shows the result of selecting the Go! command. A list of albums is displayed with the matched album centered and selected. The user can close, open or queue the album as discussed above.

FIG. **13** illustrates details of different items.

In FIG. **13**, screen **200** illustrates details displayed as a result of selecting the "Details" command from soft button **1A** track is selected. Screen **200** shows that details of the track "JukeBox Demo" shows the name of the album that the track resides on, the creator, or copyright owner, of the track, and the playing time of the track.

Screen **202** illustrates details of an item on the active queue list. Items are placed onto the active queue list be selecting the "Queue" command when an album, song, track, or other item is selected, as discussed above. For example, screen **204** shows the active queuelist where the track "JukeBox Demo" is selected. By invoking the "Details" command screen **202** is brought up to show details of the Jukebox Demo track.

As shown in screen **202**, the Detail screen shows what track number the selected track is, which album the track is from; the creator, or copyright owner, of the track, and the title of the track. Additionally, the details for an item on the queue list also show playback settings. These are shown by two-letter abbreviations at the bottom of the screen. The settings are as shown in Table I, below.

TABLE I

EA	Environmental Preset
EQ	Parametric EQ
HS	Headphone Spatialization
TS	Time Scaling

TABLE I-continued

4S	Four Channel Speaker Sound (only if speakers are connected)

These settings have their common meanings, as is known in the art. Note that the setting 4S is not shown in screen **202** as it is not currently active.

FIG. **14** illustrates the Nomad Jukebox coupled to a host computer system.

In FIG. **14**, device **300** (e.g., the Nomad Jukebox) is coupled to host system **302**. In a preferred embodiment host system **302** is a personal computer, such as an IBM-PC compatible computer. Host sytem **302** includes a user interface having display **304** and user input devices such as keyboard **306** and mouse **308**. In other embodiments the host system need not be a full computer system. Any type of processing system having a user interface is possible. For example, it is possible to couple the device to a laptop computer, game console, web-enabled television, or any consumer electronic device or digital platform, in general. The host user interface need not provide a display and can be much more minimal than the keyboard and mouse shown in FIG. **14**. A preferred embodiment of the invention uses a Universal Synchronous Bus (USB) connection but any type of connection such as IEEE 1394 (FireWire), Ethernet, Serial Port, etc. can be used. A wireless (i.e., optical or radio frequency) connection can be used.

Once device **300** is coupled to host system **302**, a user of host system **302** can launch a bridge interface to allow for the transfer of files between device **300** and host system **302**. In a preferred embodiment, once the bridge interface is launched, the controls of device **300** are inoperable. The user interface of host sytem **302** is used to operate the bridge interface to transfer files.

The invention has now been described with reference to the preferred embodiments. Alternatives and substitutions will now be apparent to persons of skill in the art.

What *is claimed is:*

1. A method of selecting at least one track from a plurality of tracks stored in a computer-readable medium of a portable media player configured to present sequentially a first, second, and third display screen on the display of the media player, the plurality of tracks accessed according to a hierarchy, the hierarchy having a plurality of categories, subcategories, and items respectively in a first, second, and third level of the hierarchy, the method comprising:

selecting a category in the first display screen of the portable media player;

displaying the subcategories belonging to the selected category in a listing presented in the second display screen;

selecting a subcategory in the second display screen;

displaying the items belonging to the selected subcategory in a listing presented in the third display screen; and

accessing at least one track based on a selection made in one of the display screens.

2. The method of selecting a track as recited in claim **1** wherein the accessing at least one track comprises selecting a subcategory in the second display screen and playing a plurality of tracks associated with the selected subcategory.

3. The method of selecting a track as recited in claim **1** wherein the accessing at least one track comprises selecting a subcategory and adding the tracks associated with the selected subcategory to a playlist.

4. The method of selecting a track as recited in claim **1** wherein the accessing at least one track comprises selecting an item in the third display screen and playing at least one track associated with the selected item.

5. The method of selecting a track as recited in claim **1** wherein the accessing at least one track comprises selecting an item in the third display screen and adding at least one track associated with the selected item to a playlist.

6. The method of selecting a track as recited in claim **1** wherein the accessing at least one track comprises one of playing or adding to a playlist at least one track associated with a selected one of the category, subcategory, and item.

7. The method of selecting a track as recited in claim **1** wherein the accessing at least one track is made after the presentation of the third display screen by reverting back to one of the second and first display screens, the second display screen presented sequentially after the third display screen.

8. The method of selecting a track as recited in claim **1** further comprising selecting one of the items displayed in the third display screen and presenting a listing of items associated with the selected item in a fourth sequentially presented display screen.

9. The method of selecting a track as recited in claim **1** wherein the category genre is selected in the first display screen from available categories that include at least artist, album, and genre; and the subcategories listed in the second display screen comprise a listing of at least one genre type and one of the at least one genre type is selected.

10. The method of selecting a track as recited in claim **9** further comprising displaying in the third display screen at least one album associated with the selected genre type and selecting one of the at least one albums displayed in the third display screen and presenting a listing of tracks associated with the selected album in a fourth sequentially presented display screen.

11. The method of selecting a track as recited in claim **1** wherein the category artist is selected in the first display screen from available categories that include at least artist, album, and genre; the subcategories listed in the second display screen comprise a listing of names of artists and a first artist name is selected; and the items displayed in the third display screen comprises at least one album associated with the first artist name.

12. The method of selecting a track as recited in claim **1** wherein the track is a music track, accessing at least one track comprises accessing a track title in the third display screen, and the track is played in response to the access.

13. The method of selecting a track as recited in claim **1** wherein receipt of the selection in the first display screen results in an automatic transition of the first display screen into the second display screen and receipt of the selection in the second display screen results in an automatic transition of the second display screen into the third display screen.

14. The method of selecting a track as recited in claim **1** wherein the category selected in the first display screen is from a top level of the hierarchy.

15. The method of selecting a track as recited in claim **1** wherein the category selected in the first display screen is a category from a level at least one level below the top level of the hierarchy.

16. The method of selecting a track as recited in claim **1** wherein the plurality of categories comprise a list of artist names, the plurality of subcategories comprise a list of album names and the plurality of items comprise a list of track names.

* * * * *

EXHIBIT 2

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Charles E. Krueger — Name of Person Signing

Signature

April 17, 2001 — Date

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ASSIGNMENT OF PATENT APPLICATION

WHEREAS, RON GOODMAN, of 226 Jeter Street, Santa Cruz, CA 95060; HOWARD N. EGAN, of 219 Elinor Street, Capitola, CA 95010; hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention:	AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA
Date(s) of Execution:	
Filing Date:	January 5, 2001
Application No.:	09/755,723; and

WHEREAS, CREATIVE TECHNOLOGY LTD., located at 31 International Business Park, Creative Resource, Singapore, 609921, hereinafter referred to as "ASSIGNEE," is desirous of acquiring ASSIGNORS' interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto the said Assignees, and Assignees' successors and assigns, all their right, title and interest in and to the said invention and application, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignees as fully and exclusively as it would have been held and enjoyed by said Assignors had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 3/14/2001

RON GOODMAN

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) ss.
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On March 14, 2001, before me, Jacqueline W. Bazzano, personally appeared RON GOODMAN, personally known to me ~~(or proved to me on the basis of satisfactory evidence)~~ to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/~~she~~ executed the same in his/~~her~~ authorized capacity, and that by his/~~her~~ signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

JACQUELINE W. BAZZANO
Commission # 1132234
Notary Public — California
Santa Cruz County
My Comm. Expires Apr 2, 2001

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My Commission Expires: 4/2/2001

Dated: 3-22-2001

HOWARD N. EGAN

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On March 22, 2001, before me, Jacqueline W Bazzano (Notary Public) personally appeared HOWARD N. EGAN, personally known to me ~~(or proved to me on the basis of satisfactory evidence)~~ to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/~~she~~ executed the same in his/~~her~~ authorized capacity, and that by his/~~her~~ signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

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Commission # 1132234
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☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. *(Designation must be a separate document from Assignment.)*

Application Number(s) or Patent Number(s)

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)			Patent Number(s)		

SF 1219084 v1

Attorney Docket No.: 17002-022400US

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, ANDREI VELTCHEV, of 1839 Alice Street, Santa Cruz, CA 95062; GIRAULT JONES, of 185 Lake Drive, Boulder Creek, CA 95006; HOWARD N. EGAN, of 219 Elinor Street, Capitola, CA 95010; and DANIEL FREEMAN, of 224 Caledonia Street, Santa Cruz, CA 95062; hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: SYSTEM FOR MANAGING POWER IN A PORTABLE MUSIC PLAYER

Date(s) of execution of Declaration:

Filing Date: January 5, 2001

Application No.: 09/755,367; and

WHEREAS, CREATIVE TECHNOLOGY LTD., a corporation of the Republic of Singapore, located at 31 International Business Park, Creative Resource, Singapore, Republic of Singapore 609921, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and to and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: April 23, 2001 — ANDREI VELTCHEV

Dated: 4-24-2001 — GIRAULT JONES

Dated: 4-25-2001 — HOWARD N. EGAN

Dated: 4/24/2001 — DANIEL FREEMAN

A 796650

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

January 27, 2006

THIS IS TO CERTIFY THAT ANNEXED IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF A DOCUMENT RECORDED ON July 15, 2004.

By Authority of the
Under Secretary of Commerce for Intellectual Property
and Director of the United States Patent and Trademark Office

T. WALLACE
Certifying Officer

CL 000035

07-19-2004

7.15.04

Form PTO-1595 (Rev. 06/04)
OMB No. 0651-0027 (exp. 6/30/2005)

U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

102793378

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)/Execution Date(s):

David Bristow

Execution Date(s) July 7, 2004

Additional name(s) of conveying party(ies) attached? ☐ Yes ☑ No

2. Name and address of receiving party(ies)

Name: Creative Technology Limited

Internal Address:

Street Address: 31 International Business Park
Creative Resource

City:

State:

Country: Singapore Zip: 609921

Additional name(s) & address(es) attached? ☐ Yes ☑ No

3. Nature of conveyance:

☑ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other

4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)
09/755,723

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☑ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Creative Labs, Inc.

Internal Address: Corporate Legal Department
Attn: Russell N. Swerdon

Street Address: 1901 McCarthy Boulevard

City: Milpitas

State: CA Zip: 95035

Phone Number: (408) 546-6417

Fax Number: (408) 428-6699

Email Address: russ_swerdon@creativelabs.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) $ 40.00

☐ Authorized to be charged by credit card
☐ Authorized to be charged to deposit account
☑ Enclosed
☐ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers
Expiration Date

b. Deposit Account Number

Authorized User Name

9. Signature:

Russell N. Swerdon 2.1.05

Signature Date July 12, 2004

Russell N. Swerdon, Reg. No. 36,943
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 3

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

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700150404

PATENT
REEL: 015640 FRAME: 0748

CL 000036

Attorney Docket No. 6407P212

ASSIGNMENT

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned:

BRISTOW, David, 5988 NE Tolo Road, Bainbridge Island, Washington 98110

hereby sells, assigns, and transfers to Creative Technology Limited, a corporation of Singapore, having a principal place of business at 31 International Business Park, Creative Resource, Singapore 609921, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the application for the United States patent that has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below and is entitled AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA filed as Application No. 09/755,723 on January 5, 2001

and in and to said application and all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said Assignee may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Attorney Docket No. 6407P212

Each Inventor: Please Sign and Date Below:		Each Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:
July 7, 2004 Date	BRISTOW, David	July 7, 2004 Date
July ____, 2004 Date	_____	July ____, 2004 Date
July ____, 2004 Date	_____	July ____, 2004 Date

Rev. 09/01/2002 (A1)

EXHIBIT 3

Store | iPod + iTunes | .Mac | QuickTime | Support | Mac OS X
Hot News | Switch | Hardware | Software | Made4Mac | Education | Pro | Business | Developer | Where to Buy

Investor Relations

Stock Info | Earnings Releases | SEC Filings | Financial History | Governance | FAQ | Calendar | Contact Us

SEC Filings

10-K

APPLE COMPUTER INC Filed This 10-K On Dec. 01. 2005

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended September 24, 2005

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number 0-10030

APPLE COMPUTER, INC.

(Exact name of registrant as specified in its charter)

CALIFORNIA	**942404110**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1 Infinite Loop, Cupertino, California	**95014**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(408) 996-1010**

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, no par value
(Titles of classes)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K

(section 229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes ☒ No ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant, as of March 26, 2005, was approximately $29,434,521,480 based upon the closing price reported for such date on the NASDAQ National Market. For purposes of this disclosure, shares of Common Stock held by persons who hold more than 5% of the outstanding shares of Common Stock and shares held by executive officers and directors of the registrant have been excluded because such persons may be deemed to be affiliates. This determination of executive officer or affiliate status is not necessarily a conclusive determination for other purposes.

842,767,948 shares of Common Stock Issued and Outstanding as of November 18, 2005

PART I

The Business section and other parts of this Annual Report on Form 10-K ("Form 10-K") contain forward-looking statements that involve risks and uncertainties. Many of the forward-looking statements are located in "Management's Discussion and Analysis of Financial Condition and Results of Operations." Forward-looking statements can also be identified by words such as "anticipates," "expects," "believes," "plans," "predicts," and similar terms. Forward-looking statements are not guarantees of future performance and the Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in the subsection entitled "Factors That May Affect Future Results and Financial Condition" under Part II, Item 7 of this Form 10-K. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

Item 1. Business

Company Background
Apple Computer, Inc. ("Apple" or the "Company") was incorporated under the laws of the State of California on January 3, 1977. The Company designs, manufactures, and markets personal computers and related software, services, peripherals, and networking solutions. The Company also designs, develops, and markets a line of portable digital music players along with related accessories and services including the online distribution of third-party music, audio books, music videos, short films, and television shows. The Company's products and services include the Macintosh line of desktop and notebook computers, the iPod digital music player, the Xserve G5 server and Xserve RAID storage products, a portfolio of consumer and professional software applications, the Mac OS X operating system, the iTunes Music Store, a portfolio of peripherals that support and enhance the Macintosh and iPod product lines, and a variety of other service and support offerings. The Company sells its products worldwide through its online stores, its own retail stores, its direct sales force, and third-party wholesalers, resellers, and value added resellers. The Company also sells a variety of third-party products that are compatible with the Company's Macintosh and iPod product lines, including computer printers and printing supplies, storage devices, computer memory, digital camcorders and still cameras, personal digital assistants, iPod accessories, and various other computing products and supplies through its online and retail stores. The Company's fiscal year ends on the last Saturday of September. Unless otherwise stated, all information presented in this Form 10-K is based on the Company's fiscal calendar.

Business Strategy
The Company is committed to bringing the best personal computing and music experience to students, educators, creative professionals, businesses, government agencies, and consumers through its innovative hardware, software, peripherals, services, and Internet offerings. The Company's business strategy leverages its unique ability, through the design and development of its own operating system, hardware, and many software applications and technologies, to bring to its customers new products and solutions with superior ease-of-use, seamless integration, and innovative industrial design. The Company believes continual investment in research and development is critical to facilitate innovation of new and improved products and technologies. Besides updates to its existing line of personal computers and related software, services, peripherals, and networking solutions, the Company continues to capitalize on the convergence of digital consumer electronics and the computer by creating innovations like the iPod and iTunes Music Store. The Company's strategy also includes expanding its distribution network to effectively reach more of its targeted customers and provide them a high-quality sales and after-sales support experience.

Digital Hub
The Company believes personal computing is in an era in which the personal computer functions for both professionals and consumers as the digital hub for advanced new digital devices such as the Company's

iPod digital music players, personal digital assistants, cellular phones, digital camcorders and still cameras, CD and DVD players, televisions, and other consumer electronic devices. The attributes of the personal computer include a high quality user interface, relatively inexpensive data storage, and the ability to run complex applications and easily connect to the Internet. Apple is the only company in the personal computer industry that controls the design and development of the entire personal computer—from the hardware and operating system to sophisticated applications. Additionally, the Company's products provide innovative industrial design, intuitive ease-of-use, and built-in networking, graphics and multimedia capabilities. Thus, the Company is uniquely positioned to offer integrated digital hub products and solutions.

The Company develops products and technologies that adhere to many industry standards in order to provide an optimized user experience through interoperability with peripherals and devices from other companies. The Company has played a role in the development, enhancement, promotion, and/or use of numerous of these industry standards.

Expanded Distribution
The Company believes that a high quality buying experience with knowledgeable salespersons who can convey the value of the Company's products and services is critical to attracting and retaining customers. The Company sells many of its products and resells certain third-party products in most of its major markets directly to consumers, education customers, and businesses through its retail and online stores in the U.S. and internationally. The Company has also invested in programs to enhance reseller sales, including the Apple Sales Consultant Program, which consists of the deployment of Apple employees and contractors to selected third-party reseller locations. The Company believes providing direct contact with its targeted customers is an efficient way to demonstrate the advantages of its Macintosh computer and other products over those of its competitors. The Company has significantly increased the points of distribution for the iPod product family in order to make its products available at locations where its customers shop.

From inception of the retail initiative in 2001 through 2005, the Company had opened 116 retail stores in the U.S. and 8 international stores in Canada, Japan, and the U.K. The Company opened 2 additional stores in October 2005. The Company has typically located its stores at high traffic locations in quality shopping malls and urban shopping districts.

One of the goals of the retail initiative is to bring new customers to the Company and expand its installed base through sales to computer users who currently do not own a Macintosh computer and first time personal computer buyers. By operating its own stores and building them in desirable high traffic locations, the Company is able to better control the customer retail experience and attract new customers. The stores are designed to simplify and enhance the presentation and marketing of personal computing products. To that end, retail store configurations have evolved into various sizes in order to accommodate market demands. The stores employ experienced and knowledgeable personnel who provide product advice and certain hardware support services. The stores offer a wide selection of third-party hardware, software, and various other computing products and supplies selected to complement the Company's own products. Additionally, the stores provide a forum in which the Company is able to present computing solutions to users in areas such as digital photography, digital video, music, children's software, and home and small business computing.

Education
For more than 25 years, the Company has focused on the use of technology in education and has been committed to delivering tools to help educators teach and students learn. The Company believes effective integration of technology into classroom instruction can result in higher levels of student achievement, especially when used to support collaboration, information access, and the expression and representation

of student thought and ideas. The Company creates solutions that enable new modes of curriculum delivery, better ways of conducting research, and opportunities for professional development of faculty, students, and staff. The Company has designed a range of products and services to help schools maximize their investments in technology. This is manifested in many of the Company's products and services that are designed to meet the needs of education customers. These products and services include the eMac™, iMac™, and the iBook®, video creation and editing solutions, wireless networking, student information systems, high-quality curriculum and professional development solutions, and one-to-one (1:1) learning solutions (primarily in K-12). 1:1 learning solutions typically consist of iBook portable computers for every student and teacher along with a wireless network connected to a central server.

Creative Professionals
Creative professionals constitute one of the Company's most important markets for both hardware and software products. This market is also important to many third-party developers who provide Macintosh-compatible hardware and software solutions. Creative customers utilize the Company's products for a variety of creative activities including digital video and film production and editing; digital video and film special effects, compositing, and titling; digital still photography and workflow management; graphic design, publishing, and print production; music creation and production; audio production and sound design; and web design, development, and administration.

The Company designs its high-end hardware solutions, including servers, desktops, and portable Macintosh systems, to incorporate the power, expandability, and features desired by creative professionals. The Company's operating system, Mac OS X, incorporates powerful graphics and audio technologies and features developer tools to optimize system and application performance when running powerful creative solutions provided by the Company or third-party developers. The Company also offers various software solutions to meet the needs of its creative customers.

Business Organization
The Company manages its business primarily on a geographic basis. The Company's reportable operating segments are comprised of the Americas, Europe, Japan, and Retail. The Americas, Europe, and Japan reportable segments do not include activities related to the Retail segment. The Americas segment includes both North and South America. The Europe segment includes European countries as well as the Middle East and Africa. The Retail segment currently operates Apple-owned retail stores in the U.S., Canada, Japan, and the U.K. Other operating segments include Asia-Pacific, which includes Australia and Asia except for Japan, and the Company's subsidiary, FileMaker, Inc. Each reportable geographic operating segment provides similar hardware and software products and similar services. Further information regarding the Company's operating segments may be found in Part II, Item 7 of this Form 10-K under the heading "Segment Operating Performance," and in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements at Note 11, "Segment Information and Geographic Data."

Hardware Products
The Company offers a range of personal computing products including desktop and notebook computers, server and storage products, related devices and peripherals, and various third-party hardware products. The Company's entire line of Macintosh® systems, excluding servers and storage systems, features the Company's Mac OS® X Version 10.4 Tiger™ and iLife® suite of software for digital photography, music, movies, and music creation.

Macintosh® Computers
In June 2005, the Company announced its plan to begin using Intel microprocessors in its Macintosh computers. The Company plans to begin shipping certain models with Intel microprocessors by June 2006

and to complete the transition of all of its Macintosh computers to Intel microprocessors by the end of calendar year 2007. The Company also announced its new translation technology, Rosetta™, which will allow most PowerPC-based Macintosh applications to run on new Intel-based Macintosh computers. There are potential risks and uncertainties associated with this transition, which are further discussed in Part II, Item 7 of this 10-K under the heading "Factors That May Affect Future Results and Financial Condition."

Power Mac®
The Power Mac line of desktop personal computers is targeted at business and professional users and is designed to meet the speed, expansion, and networking needs of the most demanding Macintosh user. Powered by the PowerPC G5 processor, the Power Mac G5 utilizes 64-bit processing technology for memory expansion up to 16GB and advanced 64-bit computation while also running existing 32-bit applications natively. In October 2005, the Company updated the Power Mac G5 product line, which now comes in three processor configurations—dual 2.0GHz, dual 2.3GHz, and a quad 2.5GHz that features two 2.5GHz dual processors. All Power Mac G5 desktops feature a SuperDrive™ and a NVIDIA GeForce 6600 graphics card. In addition, all Power Mac G5 desktops deliver connectivity and high-performance input/output (I/O), including dual Gigabit Ethernet, FireWire® 800 and FireWire 400 ports, USB 2.0 ports, optical digital I/O, PCI Express expansion, and optional AirPort® Extreme wireless networking and Bluetooth connectivity. The new Power Mac G5 product line also includes Mighty Mouse, the Company's next generation mouse, featuring up to four programmable buttons and a Scroll Ball that lets users scroll vertically, horizontally, and diagonally.

Xserve® and Xserve RAID Storage System
Xserve is a rack-mount server product designed for simple setup and remote management of intensive I/O applications such as digital video, high-resolution digital imagery, and large databases. In January 2005, the Company upgraded Xserve G5, which is now available with either a single 2.0GHz or dual 2.3GHz PowerPC G5 processor. Xserve G5 includes a system controller with up to 16GB of PC3200 error correcting code memory; three hot-plug Serial ATA drive modules that deliver up to 1.5TB of storage; and dual on-board Gigabit Ethernet for high-performance networking. The Company's Xserve RAID storage system was updated in September 2005 to deliver up to 7 terabytes of storage capacity and also expanded support for heterogeneous environments. The dual independent RAID controllers with 512MB cache per controller offer sustained throughput of over 385 Mbps—high enough to support media production environments using protected RAID level 5.

iMac®
The iMac line of desktop computers is targeted at consumer and education markets. In October 2005, the Company introduced the new iMac G5, featuring the PowerPC G5 processor, a built-in iSight™ video camera, and a design that integrates the entire computer into either a 17-inch or 20-inch widescreen LCD flat-panel display. The 17-inch and 20-inch models come with 1.9GHz and 2.1GHz PowerPC G5 Processors, respectively. The iMac G5 offers 512MB of 533MHz DDR2 memory expandable to 2.5GB and 7200 rpm Serial ATA drives expandable up to 500GB. The iMac G5 comes standard with ATI Radeon X600 Pro or XT graphics, video memory, a SuperDrive, built-in Airport Extreme wireless networking, an internal Bluetooth module, built-in stereo speakers and microphone, and Mighty Mouse. The iMac G5 also offers built-in Ethernet (10/100/1000BASE-T), three USB 2.0 and two FireWire 400 ports. The iMac G5 also features Front Row media experience with the Apple Remote, which allows users to play music and view photos and videos via a remote control.

eMac™
The eMac, a desktop personal computer targeted at the Company's education customers, features a PowerPC G4 processor, a high resolution 17-inch flat cathode ray tube display, and preserves the all-in-one

compact design of the original iMac. The eMac offers PowerPC G4 processors running at up to 1.42GHz, 333MHz DDR memory, an optional SuperDrive, built-in modem and Ethernet (10/100BASE-T), ATI Radeon graphics, AirPort Extreme-ready, and USB 2.0 and 1.1 ports for connectivity to peripherals.

Mac® mini
In January 2005, the Company introduced Mac mini, a desktop personal computer with a starting price of $499 and weighing as little as 2.9 pounds. In July 2005, the Company updated its Mac mini lineup, expanding to three models and increasing memory to 512MB. The first model includes a 1.25GHz PowerPC G4 processor, a 40GB hard drive, and a Combo drive. The second model includes a 1.42GHz PowerPC G4 processor, an 80GB hard drive, and a Combo drive. The third model includes a 1.42GHz PowerPC G4 processor, an 80GB hard drive, and a SuperDrive. All models include ATI Radeon 9200 graphics with 32MB of dedicated DDR memory, built-in Ethernet (10/100 BASE-T), one FireWire 400 and two USB 2.0 ports, and a DVI interface that also supports VGA so consumers can connect to LCD or CRT displays. The 1.42GHz models of the Mac mini also include built-in AirPort Extreme for 54 Mbps 802.11g wireless networking along with an internal Bluetooth module.

PowerBook®
The PowerBook family of portable computers is designed to meet the mobile computing needs of professionals and advanced consumer users. In October 2005, the Company updated its PowerBook G4 notebooks with extended battery life as well as higher resolution displays, including 1440 by 960 pixels in the 15-inch model and 1680 by 1050 pixels in the 17-inch model. Both the 15-inch and 17-inch PowerBook G4 offer a 1.67GHz PowerPC G4 processor and the ATI Mobility Radeon 9700 graphics processor. The 12-inch PowerBook G4 features a 1.5GHz PowerPC processor, and the NVIDIA GeForce FX Go5200 graphics processor. Every PowerBook G4 notebook comes with a SuperDrive, 512MB of DDR memory, built-in AirPort Extreme wireless networking, an internal Bluetooth module for wireless connectivity, as well as a full complement of I/O ports including FireWire 400, USB 2.0, and a built-in 56K V.92 modem and Ethernet (10/100BASE-T), for connectivity to a wide range of peripherals. The 15-inch and 17-inch PowerBook G4 models also include built-in Gigabit Ethernet and FireWire 800.

iBook®
The iBook is designed to meet the portable computing needs of education and consumer users. In July 2005, the Company upgraded its iBook® G4 line to include faster PowerPC G4 processors running up to 1.42GHz, built-in AirPort Extreme 54 Mpbs 802.11g wireless networking and an available slot-load SuperDrive. The 12-inch model features a 1.33GHz PowerPC G4 processor and a slot-load Combo drive, while the 14-inch model includes a 1.42GHz G4 processor and a SuperDrive. All iBook G4 models offer a full complement of I/O ports including FireWire 400, USB 2.0, a built-in 56K V.92 modem and Ethernet (10/100BASE-T), as well as a built-in internal wireless Bluetooth module, for connectivity to a wide range of peripherals.

Music Products and Services
The Company offers its iPod® line of digital music players and related accessories to Macintosh and Windows users. The Company also provides an online service to distribute third-party music, audio books, music videos, short films, and television shows through its iTunes Music Store®.

iPod®
The iPod is the Company's portable digital music player, featuring the Company's patent pending Click Wheel, which combines a touch-sensitive wheel with five push buttons for one-handed navigation. In October 2005, the Company introduced the new iPod containing a 2.5-inch color screen that can display album artwork and photos and play video including music videos, video podcasts, home movies, short films, and television shows. The iPod lineup includes a 30GB model holding up to 7,500 songs, 25,000 photos, or

75 hours of video, and a 60GB model holding up to 15,000 songs, 25,000 photos, or 150 hours of video. The iPod features the Company's patent pending Auto-Sync technology that automatically downloads digital music, podcasts, photos, audio books, home movies, music videos, short films, and television shows onto the iPod and keeps it up-to-date whenever it is plugged into a Macintosh or Windows computer using USB. The iPod also features Shuffle Songs, which randomly plays songs in a selected playlist or across the entire library. All iPods work with the Company's iTunes® digital music management software on either a Macintosh or Windows computer.

The iPod's functionality extends beyond playing music, listening to audio books, and watching music videos, short films, home movies, and television shows. Other key capabilities include data storage, calendar and contact information utility, and a selection of games. With the addition of third-party iPod peripherals, the capabilities of certain iPods can be enhanced to include photo downloading directly from certain digital cameras. The Company has also entered into alliances with many automobile manufacturers to offer seamless integration of the iPod in certain automobiles. Along with the iPod, the Company has developed the iTunes software and the iTunes Music Store, a service that consumers may use to purchase third-party music, audio books, music videos, short films, and television shows over the Internet.

iPod® nano
In September 2005, the Company introduced iPod nano, a flash-memory based digital music player. The iPod nano is available in either a 2GB model holding up to 500 songs or 25,000 photos, or a 4GB model holding up to 1,000 songs or 25,000 photos. The iPod nano, which weighs as little as 1.5 ounces and is .27 inches thin, features a color screen and the Company's patent pending Click Wheel.

iPod® shuffle
In January 2005, the Company introduced iPod shuffle, a flash-memory based digital music player, which is based on iPod's shuffle feature that randomly selects songs from the user's music library or playlists. iPod shuffle works with iTunes and its patent-pending AutoFill feature that automatically selects songs to fill iPod shuffle from a user's music library on their computer. iPod shuffle can also be used as a portable USB flash drive with up to 1GB of storage space. It is available in a 512MB model holding up to 120 songs and a 1GB model holding up to 240 songs.

iTunes Music Store®
The Company's iTunes Music Store, available for both Windows-based and Macintosh computers, is a service that allows customers to find, purchase, and download third-party digital music, audio books, music videos, short films, and television shows. The iTunes Music Store also offers Podcast Directory that allows users to search for and download audio programs to their computer and automatically receive new episodes over the Internet. Users can search the contents of the store catalog to locate works by title, artist, or album, or browse the entire contents of the store by genre and artist. Users can also listen to a free 30-second preview of content available through the store. The iTunes Music Store was originally introduced in the U.S. in April 2003 and now serves customers in 21 countries.

The iTunes Music Store is fully integrated directly into the iTunes software allowing customers to preview, purchase, download, organize, share, and transfer digital content to an iPod using a single software application. Further discussion on the iTunes software may be found below under the heading "Software Products and Computer Technologies." The iTunes Music Store offers customers a broad range of personal rights to the third-party content they have purchased. Content purchased through the store may also be used in certain applications such as iPhoto®, iMovie®, and iDVD®. Additional features of the iTunes Music Store include gift certificates that can be sent via e-mail; prepaid gift cards; an "allowance" feature that enables users to automatically deposit funds into an iTunes Music Store account every month; online gift options that let customers give specific songs, albums, music videos, or their own playlists to anyone with an email address; parental controls; and album reviews.

Peripheral Products
The Company sells various Apple-branded computer hardware peripherals, including iSight™ digital video cameras and a range of high quality flat panel TFT active-matrix digital color displays. The Company also sells a variety of third-party Macintosh compatible hardware products directly to end users through both its retail and online stores, including computer printers and printing supplies, storage devices, computer memory, digital video and still cameras, personal digital assistants, and various other computing products and supplies.

iSight™
The Company's iSight digital video camera enables video conferencing over broadband connections. iSight is a small, portable aluminum alloy camera with all audio, video, and power provided by a single FireWire cable. iSight is designed to be center-mounted on the top of a computer screen and uses its integrated tilt and rotate mechanism to easily position the camera for natural, face-to-face video conferencing. iSight features an auto focusing auto exposure F/2.8 lens that captures high-quality pictures and full-motion video. With its on-board processor, iSight automatically adjusts color, white balance, sharpness and contrast to provide high-quality images with accurate color reproduction in most lighting conditions. iSight also includes a dual-element microphone that suppresses ambient noise for clear digital audio.

Displays
The Company offers a family of widescreen flat panel displays featuring the 30-inch Apple Cinema HD Display™, a widescreen active-matrix LCD with 2560-by-1600 pixel resolution, a 23-inch widescreen Apple Cinema Display with 1920-by-1200 pixel resolution and a 20-inch widescreen Apple Cinema Display® with 1680-by-1050 pixel resolution. The displays feature dual FireWire and dual USB 2.0 ports built into the display and use the industry standard DVI interface for a pure digital connection with the Company's latest Power Mac and PowerBook systems. The Cinema Displays feature an aluminum design with a very thin bezel, suspended by an aluminum stand that allows viewing angle adjustment.

Software Products and Computer Technologies
The Company offers a range of software products for education, creative, consumer and business customers, including Mac OS X, the Company's proprietary operating system software for the Macintosh; server software and related solutions; professional application software; and consumer, education and business oriented application software.

Operating System Software
In April 2005, the Company began shipping Mac OS X Tiger, the Company's fifth major version of Mac OS X. Tiger incorporates more than 200 new features and innovations including Spotlight™, a desktop search technology that lets users find items stored on their Macintosh computers, including documents, emails, contacts and images; and Dashboard, a new way to instantly access information such as weather forecasts and stock quotes, using a new class of mini-applications called widgets. The server version of the Mac OS operating system, Mac OS X Server version 10.4, also began shipping in April 2005.

Server Software and Server Solutions
Apple Remote Desktop™ 2 is the second generation of the Company's asset management, software distribution, and help desk support software. Apple Remote Desktop 2 includes more than 50 features for centrally managing Mac OS X systems. Apple Remote Desktop 2 can perform a wide range of desktop management tasks such as installing operating system and application software, running hardware and software inventory reports, and executing commands on one or more remote Mac OS X systems on the network. Remote software installation tools allow IT professionals to install single or multiple software packages immediately or at specific dates and times. Comprehensive hardware and software reports based on more than 200 system information attributes allow administrators to keep track of their Mac OS X

systems. In addition, built-in real-time screen sharing enables help desk professionals to provide online assistance by observing and controlling the desktops of any remote Macintosh or Virtual Network Computing-enabled computer, including Windows and Linux systems.

Xsan®, the Company's enterprise-class Storage Area Network (SAN) file system, began shipping in January 2005. Xsan is a 64-bit cluster file system for Mac OS X that enables organizations to consolidate storage resources and provide multiple computers with concurrent file-level read/write access to shared volumes over Fibre Channel. Advanced features such as metadata controller failover and Fibre Channel multipathing ensure high availability; file-level locking allows multiple systems to read and write concurrently to the same volume which is ideal for complex workflows; bandwidth reservation provides for effective ingestion of bandwidth-intensive data streams, such as high resolution video; and flexible volume management results in more efficient use of storage resources. Since Xsan is interoperable with ADIC's StorNext File System, it can be used in heterogeneous environments that include Windows, UNIX, and Linux server operating system platforms.

Professional Application Software
In April 2005, the Company announced Final Cut Studio™, a High Definition (HD) video production suite that features Final Cut Pro® 5, the Company's editing software for Digital Video (DV), Standard Definition (SD), HD, and film. Final Cut Studio also includes tools that complement Final Cut Pro 5 such as Soundtrack® Pro, a new application that gives audio and video professionals a way to create, control and repair audio; Motion 2, an application that allows real-time motion graphics design; and DVD Studio Pro® 4, DVD authoring software that burns DVDs, including high definition DVDs to the latest HD DVD specification. These components of Final Cut Studio are also sold separately.

Final Cut Pro® 5, the latest version of the Company's video editing software, which began shipping in April 2005, includes editing tools that work with most formats, from DV and native High Definition Video (HDV) to fully uncompressed HD. Final Cut Pro 5 acquires HDV media via FireWire and keeps it in the original format, transferring it into the system without any generation loss. With a real-time multi-stream effects architecture, multicam editing tools, and advanced color correction, Final Cut Pro 5 enables users to view and cut from multiple sources in real time, group up to 128 sources together into multi-clips, then add or subtract cameras at any time. Final Cut Pro 5 allows users to use external audio control surfaces to mix and record multiple fader automations simultaneously.

Soundtrack® Pro is a new audio editing and sound design application that gives audio and video professionals a way to create, control, and repair audio. Soundtrack Pro features a waveform editor with flexible Action Layers that allow users to re-order, bypass, or change any edit, effect, or process. Find-and-Fix features identify and repair common audio problems such as background noise, pops, clicks, and hum. An integrated multitrack mixer allows editors to apply common effects to multiple tracks and group common tracks using busses. Soundtrack Pro also features over 50 professional plug-ins for creating sounds, over 5,000 loops, an integrated mixer, and integration with Final Cut Studio.

Motion 2 is a real-time motion graphics software that enables Final Cut Pro editors to add motion graphics to their projects. Motion 2 features interactive animation of text and graphics for DVD motion menus, video or film in real time, and quick output rendering by built-in GPU acceleration at 8-bit, 16-bit, or 32-bit float film quality. With Motion 2's new design tool, Replicator, users can automatically generate and animate multiple copies of a graphic, shape, or movie.

DVD Studio Pro® 4 is the latest version of the Company's professional DVD authoring application. With DVD Studio Pro 4 and its integrated, scalable H.264 encoding, users can author SD or HD DVDs. DVD Studio Pro 4 allows users to preview HD content in real time with a second Digital Cinema Desktop and audition surround sound using S/PDIF (digital audio) out to an external DTS or Dolby Digital (AC-3) decoder. Its interactive graphical view also enables users to edit/display menus, tracks, slideshows, scripts,

and stories of a DVD project in a storyboard layout. DVD Studio Pro 4 includes Compressor 2, a full-featured video and audio compression application. Compressor gives users control over encoding, including the ability to encode several clips in one batch operation to a wide variety of formats and perform advanced format conversions at the same time.

In April 2005, the Company announced Shake® 4, an upgrade to the Company's compositing software, which began shipping in June 2005. Used to create visual effects for film and television, Shake 4 features 3D multi-plane compositing, optical flow image processing and integration with Final Cut Pro 5. Users can composite live action and 3D CGI layers with added realism using OpenGL accelerated 3D multi-plane compositing node. Other features include advanced optical flow technology that uses pixel-by-pixel image analysis to create smooth retiming and automatic stabilization. Shake 4 also integrates Truelight monitor calibration to maintain color consistency between the computer screen and the final look on film.

Logic® Pro 7 is used by musicians around the world and by professionals in music production and film scoring. It combines digital music composition, notation, and audio production facilities in one comprehensive product and includes software instruments such as Sculpture, a component-modeling based synthesizer; UltraBeat™, a drum synthesizer with built-in step sequencer; and digital signal processing (DSP) plug-ins including Guitar Amp Pro, a full-featured guitar amplifier simulator. Along with workflow enhancements, mastering plug-ins, and support for Apple Loops, Logic Pro 7 adds distributed audio processing, a technology that allows professionals to utilize multiple Macintosh systems to expand available DSP power via an Ethernet network.

In October 2005, the Company announced Aperture™, began shipping in November 2005. Aperture is an application designed to provide professional photographers with post-production tools to manage, edit, and publish digital pictures. Features include compare and select tools, nondestructive image processing, color managed printing, and custom web and book publishing. Compare and select tools in Aperture allow photographers to sift through photo projects and identify their final selections. RAW images are maintained natively throughout Aperture without any intermediate conversion process, and can be retouched using a suite of adjustment tools designed especially for photographers. Print options include customizable contact sheets, high-quality local printing, and color-managed online prints. Aperture also provides a layout environment where photographers can create and order custom books and publish web galleries.

Consumer, Education and Business Oriented Application Software
iLife® '05
In January 2005, the Company introduced iLife '05, an upgrade to its digital lifestyle suite, which features iPhoto®, iMovie®, iDVD®, GarageBand™, and iTunes®.

iPhoto® 5 is the Company's consumer-oriented digital photo software application. iPhoto 5 includes advanced editing tools, adds support for uncompressed RAW photos, and includes a slideshow builder allowing users to apply effects, transitions and durations to each individual slide. iPhoto 5 allows users to create and order hardcover and softcover photo books using a variety of book layouts with double-sided printing, directly within the application.

iMovie® HD, a consumer-oriented digital video editing software application, enables users to import HDV from HDV camcorders and edit digital videos on their Macintosh computers. iMovie HD also includes Magic iMovie, which automatically imports video into separate clips and adds titles, transitions and music. iMovie HD imports video from HDV and standard DV camcorders, and from video cameras that generate MPEG-4 video.

iDVD® is a consumer-oriented software application that enables users to turn iMovie files, QuickTime® files, and digital pictures into DVDs that can be played on most consumer DVD players. iDVD 5 includes 15 new themes featuring moving drop zones that can display video clips or photos in motion across DVD menus. iDVD 5 also features OneStep DVD, which automatically creates a DVD from footage directly from a user's camcorder. With a compatible SuperDrive™, iDVD 5 supports all recordable single-layer and double-layer DVD format standards.

GarageBand™ is a consumer-oriented music creation software application. GarageBand 2 adds 8-track recording so that users can record multiple digital audio tracks at once. GarageBand 2 can improve out-of-tune notes and timing in both vocal and real-instrument recordings. GarageBand 2 displays and edits musical notation in real time for software instrument tracks for people who know how to read and write music or want to learn. With GarageBand Jam Packs, including the latest, Jam Pack 4: Symphony Orchestra, GarageBand users can create music in their favorite genres.

iLife '05 also includes iTunes, the Company's digital music jukebox software application that allows users to purchase a variety of digital content available through the Company's iTunes Music Store. iTunes organizes content using searching, browsing, and playlists, and also includes features such as iMix playlist sharing and provides integration with the complete family of iPods. In October 2005, the Company introduced iTunes 6, the latest version of its iTunes software. iTunes 6 allows users to purchase and download music videos, short films, and television shows from the iTunes Music Store, watch them on their computers, and Auto-Sync them onto their iPod.

In September 2005, the Company, Motorola Inc., and Cingular Wireless LLC announced the availability of a mobile phone with iTunes software (Motorola ROKR), enabling users to transfer up to 100 songs from the iTunes library on their Macintosh or Windows-based computers to their Motorola ROKR mobile phones.

iWork™ '05

In January 2005, the Company introduced iWork '05, productivity software designed to take advantage of both Mac OS X and iLife '05 to help users create, present, and publish documents and presentations. iWork '05 introduced Pages™, a word processor, and also features Keynote™ 2, an updated version of the Company's presentation software.

Pages™ gives users the tools to create letters, newsletters, reports, brochures and resumes with advanced typography, multiple columns, footnotes, tables of content and styles. With features like dynamic text wrapping and alignment guides, Pages lets users create free-form arrangements of text, graphics, photos, tables, and charts. An integrated iLife media browser lets users drag and drop photos from the iPhoto library directly into documents.

Keynote™ 2 is the Company's presentation software that gives users the ability to create presentations, portfolios, interactive slideshows, and storyboards. Keynote 2 contains slide animations to synchronize the movement of multiple objects and cinematic real-time animated text. The iLife media browser within Keynote allows users to insert photos, movies, and music directly into presentations, and with image masking, users can frame the exact part of the photo they want to display. Keynote 2 can also work with a second monitor to display upcoming slides, notes, and a timer.

In January 2005, the Company announced Final Cut® Express HD, an update to Final Cut Express, which began shipping in February 2005. Final Cut Express HD enables users to capture, edit, and output HDV over a single FireWire cable, and supports Digital Cinema Desktop with multiple displays. Final Cut Express HD features sound editing tools including 99 audio tracks, real-time volume and audio filter adjustment, a voice-over tool, and Soundtrack music creation software that allows users to compose musical scores for their videos. Final Cut Express HD includes LiveType™, which can add HD-quality

animated text and motion graphics to videos. In addition, iMovie projects can be imported directly into Final Cut Express HD with all of their effects, transitions, and audio levels intact.

Logic® Express 7 is a streamlined version of Logic Pro 7 that provides a basic set of professional tools to compose and produce music for students, educators, and advanced hobbyists. Its high-resolution audio of up to 24-bit/96kHz, the adaptive self-configuring track mixer, and 32-bit floating-point math provide professional sound quality. Logic Express 7 comes with support for projects from GarageBand offering users a smooth migration path to high-end audio production.

FileMaker, Inc., a wholly owned subsidiary of the Company, develops, publishes, and distributes desktop-based database management application software for either a Macintosh or Windows-based computer. The FileMaker® Pro database software and related products offer relational databases and desktop-to-web publishing capabilities. FileMaker Pro 8, the newest version of the desktop database introduced in August 2005, features new ways to share and manage information of various types. FileMaker Pro 8 allows users to convert graphic-rich reports of their data into alternative file formats, which can be emailed for sharing with non-FileMaker users.

Internet Software and Services
The Company is focused on delivering seamless integration with and access to the Internet throughout the Company's products and services. The Company's Internet solutions adhere to many industry standards in order to provide an optimized user experience through interoperability.

Safari™
Safari, the Company's Mac OS X compatible web browser, uses the advanced interface technologies underlying Mac OS X and includes built-in Google search; SnapBack™ to instantly return to search results; a way to name, organize and present bookmarks; tabbed browsing; and automatic "pop-up" ad blocking.

QuickTime®
QuickTime, the Company's multimedia software for Macintosh or Windows-based computers, features streaming of live and stored video and audio over the Internet and playback of high-quality audio and video on computers. QuickTime 7 features a new video codec called H.264, which delivers high video quality at low data rates. QuickTime 7 automatically determines a user's connection speed to ensure they are getting the highest-quality content stream possible. QuickTime 7 also delivers multi-channel audio and supports audio formats, including AIFF, WAV, MOV, MP4 (AAC only), CAF, and AAC/ADTS.

The Company offers several other QuickTime products. QuickTime 7 Pro, a suite of software tools, allows creation and editing of Internet-ready audio and video files. QuickTime 7 Pro allows users to create H.264 video, capture audio and video, create multi-channel audio, and export multiple files while playing back or editing video. QuickTime Streaming Server facilitates the broadcasting of streaming digital video. QuickTime Broadcaster allows users to produce professional-quality live events for online delivery.

.Mac™
The Company's .Mac offering is a suite of Internet services that for an annual fee provides Macintosh users with a powerful set of Internet tools. .Mac services include: HomePage, for personal web sites; iDisk, a virtual hard drive accessible anywhere with Internet access; .Mac Sync, which keeps Safari bookmarks, iCal® calendars, Address Book information, Keychain® (passwords), and Mac OS X Mail preferences up-to-date across multiple Macintosh computers and available via web browser when users are away from their Mac; .Mac Mail, an ad-free email service; and Learning Center, featuring tutorials for certain software applications. The current version of .Mac includes .Mac Groups, a service that helps members communicate, coordinate schedules, and stay in sync with private groups of friends or colleagues; an

updated version of .Mac Backup software that allows members to archive the content of their iLife Home folder; and a four-fold increase in combined iDisk and email storage to 1GB for individuals and 2GB for families.

Wireless Connectivity and Networking

AirPort Extreme®
AirPort Extreme is the Company's next generation Wi-Fi wireless networking technology. AirPort Extreme is based on the 802.11g standard, which supports speeds up to 54 Mbps, and is fully compatible with most Wi-Fi devices that use the 802.11b standard. AirPort Extreme Base Stations can serve up to 50 Macintosh and Windows users simultaneously, provide wireless bridging to extend the range beyond just one base station, and support USB printer sharing to allow multiple users to wirelessly share USB printers connected directly to the base station.

AirPort® Express
AirPort® Express is the first 802.11g mobile base station that can be plugged directly into the wall for wireless Internet connections and USB printing. Airport Express also features analog and digital audio outputs that can be connected to a stereo and AirTunes™ music networking software which works with iTunes, giving users a way to wirelessly stream iTunes music from their Macintosh or Windows-based computer to any room in the house. AirPort Express features a single piece design weighing 6.7 ounces.

Other Connectivity and Networking Solutions
Mac OS X includes capabilities for Bluetooth technology. Bluetooth is an industry standard for wirelessly connecting computers and peripherals that supports transmission of data at up to 3 Mbps within a range of approximately 30 feet. The Company's Bluetooth technology for Mac OS X lets customers wirelessly share files between Macintosh systems, synchronize and share contact information with Palm-OS based PDAs, and access the Internet through Bluetooth-enabled cell phones. A Bluetooth USB adaptor can Bluetooth-enable any USB-based Macintosh computer running in Mac OS X version 10.1.4 or higher.

Bonjour™, the Company's zero configuration networking technology, is based on open Internet Engineering Task Force (IETF) Standard Protocols such as IP, ARP, and DNS and is built into Mac OS X. This technology uses industry standard networking protocols and zero configuration technology including Ethernet or 802.11-based wireless networks like the Company's AirPort products. The source code for this technology also includes software to support UNIX, Linux, and Windows-based systems and devices.

The Company developed FireWire technology, also referred to as IEEE 1394, which is a high-speed serial I/O technology for connecting digital devices such as digital camcorders and cameras to desktop and portable computers. With its high data-transfer speed and "hot plug-and-play" capability, FireWire has become an established cross-platform industry standard for both consumers and professionals. FireWire is currently integrated in all Macintosh systems.

Product Support and Services
AppleCare® offers a range of support options for the Company's customers. These options include assistance that is built into software products, printed and electronic product manuals, online support including comprehensive product information as well as technical assistance, and the AppleCare Protection Plan. The AppleCare Protection Plan is a fee-based service that typically includes three years of phone support and hardware repairs, dedicated web-based support resources, and user diagnostic tools.

Markets and Distribution
The Company's customers are primarily in the education, creative, consumer, and business markets. The Company distributes its products through wholesalers, resellers, national and regional retailers and

cataloguers. No individual customer accounted for more than 10% of net sales in 2005, 2004, or 2003. The Company also sells many of its products and resells certain third-party products in most of its major markets directly to consumers, education customers, and businesses through its retail and online stores in the U.S. and internationally. Over 12% of the Company's net sales in 2005 were through its U.S. education channel, including sales to elementary and secondary schools, higher education institutions, and individual customers.

Competition

The Company is confronted by aggressive competition in all areas of its business. The market for personal computers and related software and peripheral products is highly competitive. This market continues to be characterized by rapid technological advances in both hardware and software that have substantially increased the capabilities and use of personal computers and have resulted in the frequent introduction of new products with competitive price, feature, and performance characteristics. Over the past several years, price competition in the market for personal computers has been particularly intense. The Company's competitors who sell personal computers based on other operating systems have aggressively cut prices and lowered their product margins to gain or maintain market share. The Company's results of operations and financial condition can be adversely affected by these and other industry-wide downward pressures on gross margins.

The principal competitive factors in the market for personal computers include price, relative price/performance, product quality and reliability, design innovation, availability of software, product features, marketing and distribution capability, service and support, availability of hardware peripherals, and corporate reputation. Further, as the personal computer industry and its customers place more reliance on the Internet, an increasing number of Internet devices that are smaller, simpler, and less expensive than traditional personal computers may compete for market share with the Company's existing products.

The Company is currently taking and will continue to take steps to respond to the competitive pressures being placed on its personal computer sales as a result of innovations from competing platforms. The Company's future operating results and financial condition are substantially dependent on its ability to continue to develop improvements to the Macintosh platform in order to maintain perceived functional and design advantages over competing platforms.

The Company's services and products relating to music and other creative content have already encouraged significant competition from other companies, many of whom have greater financial, marketing, and manufacturing resources than those of the Company. The Company faces increasing competition from other companies promoting their own digital music products and distribution services, subscription services, and free peer-to-peer music services. The Company anticipates that competition will intensify as hardware, software, and content providers work more collaboratively to offer integrated products competing with the Company's offerings. However, the Company believes it currently maintains a competitive advantage by more effectively integrating an entire solution, including the hardware (iPod), software (iTunes), and distribution of third-party digital content (iTunes Music Store).

Raw Materials

Although most components essential to the Company's business are generally available from multiple sources, certain key components (including microprocessors and application-specific integrated circuits ("ASICs")) are currently obtained by the Company from single or limited sources. Some other key components, while currently available to the Company from multiple sources, are at times subject to industry-wide availability constraints and pricing pressures. In addition, the Company uses some components that are not common to the rest of the personal computer and consumer electronics industries, and new products introduced by the Company often initially utilize custom components

obtained from only one source until the Company has evaluated whether there is a need for, and subsequently qualifies, additional suppliers. If the supply of a key or single-sourced component to the Company were to be delayed or curtailed or in the event a key manufacturing vendor delays shipments of completed products to the Company, the Company's ability to ship related products in desired quantities and in a timely manner could be adversely affected. The Company did experience such delays during 2004 and 2005 related to PowerPC G5 processors, which resulted in the constrained availability of certain products. The Company's business and financial performance could also be adversely affected depending on the time required to obtain sufficient quantities from the original source, or to identify and obtain sufficient quantities from an alternative source. Continued availability of these components may be affected if producers were to decide to concentrate on the production of common components instead of components customized to meet the Company's requirements. In June 2005, the Company announced its intention to transition its Macintosh computers using the PowerPC G5 and G4 microprocessors, which are currently single-sourced, to Intel microprocessors by the end of calendar year 2007. The announcement of this transition may impact the continued availability on acceptable terms of certain components and services, including PowerPC G5 and G4 microprocessors. The Company attempts to mitigate these potential risks by working closely with these and other key suppliers on product introduction plans, strategic inventories, coordinated product introductions, and internal and external manufacturing schedules and levels. Consistent with industry practice, the Company acquires components through a combination of formal purchase orders, supplier contracts, and open orders based on projected demand information. The Company's purchase commitments typically cover its requirements for periods ranging from 30 to 150 days.

The Company believes there are several component suppliers and manufacturing vendors whose loss to the Company could have a material adverse effect upon the Company's business and financial position. At this time, such vendors include Agere Systems, Inc., Ambit Microsystems Corporation, ASUSTeK Corporation, ATI Technologies, Inc., Broadcom Corporation, Cypress Semiconductor Corporation, Freescale Semiconductor, Inc., Hitachi Global Storage Technologies, Hon Hai Precision Industry Co., Ltd., IBM Corporation, Intel Corporation, International Display Technology, Inventec Appliances Corporation, LG. Phillips Co., Ltd., Matsushita, Mitsubishi Electric Corporation, NVIDIA Corp., PortalPlayer, Inc., Quanta Computer, Inc., Samsung Electronics, Synaptics, Inc., and Toshiba Corporation.

Research and Development

Because the personal computer and consumer electronics industries are characterized by rapid technological advances, the Company's ability to compete successfully is heavily dependent upon its ability to ensure a continuing and timely flow of competitive products and technology to the marketplace. The Company continues to develop new products and technologies and to enhance existing products in the areas of hardware and peripherals, consumer electronic products, system software, applications software, networking and communications software and solutions, and the Internet. The Company may expand the range of its product offerings and intellectual property through licensing and/or acquisition of third-party business and technology. The Company's research and development expenditures totaled $534 million, $489 million, and $471 million in 2005, 2004, and 2003, respectively.

Patents, Trademarks, Copyrights and Licenses

The Company currently holds rights to patents and copyrights relating to certain aspects of its computer systems, iPods, peripherals and software. In addition, the Company has registered, and/or has applied to register, trademarks and service marks in the U.S. and a number of foreign countries for "Apple," the Apple logo, "Macintosh," "iPod," "iTunes," "iTunes Music Store," and numerous other trademarks and service marks. Although the Company believes the ownership of such patents, copyrights, trademarks and service marks is an important factor in its business and that its success does depend in part on the

ownership thereof, the Company relies primarily on the innovative skills, technical competence, and marketing abilities of its personnel.

Many of the Company's products are designed to include intellectual property obtained from third-parties. While it may be necessary in the future to seek or renew licenses relating to various aspects of its products and business methods, the Company believes that, based upon past experience and industry practice, such licenses generally could be obtained on commercially reasonable terms; however, there is no guarantee that such licenses could be obtained at all. Because of technological changes in the computer industry, current extensive patent coverage, and the rapid rate of issuance of new patents, it is possible certain components of the Company's products and business methods may unknowingly infringe existing patents of others. From time to time, the Company has been notified that it may be infringing certain patents or other intellectual property rights of third-parties.

Foreign and Domestic Operations and Geographic Data
The U.S. represents the Company's largest geographic marketplace. Approximately 60% of the Company's net sales in 2005 came from sales to customers inside the U.S. Final assembly of products sold by the Company is conducted in the Company's manufacturing facility in Cork, Ireland, and by external vendors in Fremont, California, Fullerton, California, Taiwan, Korea, the People's Republic of China, and the Czech Republic. Currently, manufacture of many of the components used in the Company's products and final assembly of substantially all of the Company's portable products including PowerBooks, iBooks, and iPods are performed by third-party vendors in China. Margins on sales of the Company's products in foreign countries, and on sales of products that include components obtained from foreign suppliers, can be adversely affected by foreign currency exchange rate fluctuations and by international trade regulations, including tariffs and antidumping penalties.

Information regarding financial data by geographic segment is set forth in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements at Note 11, "Segment Information and Geographic Data."

Seasonal Business
The Company has historically experienced increased net sales in its first and fourth fiscal quarters compared to other quarters in its fiscal year due to seasonal demand related to the holiday season and the beginning of the school year. This historical pattern should not be considered a reliable indicator of the Company's future net sales or financial performance.

Warranty
The Company offers a basic limited parts and labor warranty on its hardware products. The basic warranty period for hardware products is typically one year from the date of purchase by the end-user. The Company also offers a 90-day basic warranty for its service parts used to repair the Company's hardware products. In addition, consumers may purchase extended service coverage on most of the Company's hardware products in all of its major markets.

Backlog
In the Company's experience, the actual amount of product backlog at any particular time is not a meaningful indication of its future business prospects. In particular, backlog often increases in anticipation of or immediately following new product introductions because of over-ordering by dealers anticipating shortages. Backlog often is reduced once dealers and customers believe they can obtain sufficient supply. Because of the foregoing, backlog should not be considered a reliable indicator of the Company's ability to achieve any particular level of revenue or financial performance.

Environmental Laws
Compliance with federal, state, local, and foreign laws enacted for the protection of the environment has to date had no material effect on the Company's capital expenditures, earnings, or competitive position. In the future, these laws could have a material adverse effect on the Company.

Production and marketing of products in certain states and countries may subject the Company to environmental and other regulations including, in some instances, the requirement that the Company provide consumers with the ability to return to the Company product at the end of its useful life, and place responsibility for environmentally safe disposal or recycling with the Company. Such laws and regulations have recently been passed in several jurisdictions in which the Company operates, including various European Union member states, Japan, and California. In the future, these laws could have a material adverse effect on the Company.

Employees
As of September 24, 2005, the Company had approximately 14,800 full-time equivalent employees and an additional 2,020 temporary employees and contractors.

Available Information
The Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are available on its website at http://www.apple.com/investor when such reports are available on the U.S. Securities and Exchange Commission (SEC) website. The public may read and copy any materials filed by the Company with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Room 1580, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at http://www.sec.gov. The contents of these websites are not incorporated into this filing. Further, the Company's references to the URLs for these websites are intended to be inactive textual references only.

Item 2. Properties

The Company's headquarters are located in Cupertino, California. The Company has manufacturing facilities in Cork, Ireland. As of September 24, 2005, the Company leased approximately 3.6 million square feet of space, primarily in the U.S., and to a lesser extent, in Europe, Japan, Canada, and the Asia Pacific region. The major facility leases are for terms of 5 to 15 years and generally provide renewal options for terms of 3 to 5 additional years. Leased space includes approximately 902,000 square feet of retail space, a majority of which is in the U.S. Lease terms for retail space range from 5 to 20 years, the majority of which are for 10 years, and often contain multi-year renewal options.

The Company owns a 352,000 square-foot manufacturing facility in Cork, Ireland that also houses a customer support call center. The Company also owns a 752,000 square-foot facility in Sacramento, California that houses warehousing and distribution operations as well as a customer support call center. In addition, the Company owns approximately 942,000 square feet of facilities located in Cupertino, California, used for research and development and corporate functions. Outside the U.S., the Company owns additional facilities totaling approximately 169,000 square feet.

The Company believes its existing facilities and equipment are well maintained and in good operating condition. The Company has invested in internal capacity and strategic relationships with outside manufacturing vendors, and therefore believes it has adequate manufacturing capacity for the foreseeable future. The Company continues to make investments in capital equipment as needed to meet anticipated demand for its products.

EXHIBIT 4

EXHIBIT 4

Exemplary claim chart showing infringement of claim 5 of United States Patent No. 6,928,433 B2 by Apple Computer's iPod.

United States Patent No. 6,928,433 B2	**Apple iPod**
1. A method of selecting at least one track from a plurality of tracks stored in a computer-readable medium of a portable media player configured to present sequentially a first, second, and third display screen on the display of the media player, the plurality of tracks accessed according to a hierarchy, the hierarchy having a plurality of categories, subcategories, and items respectively in a first, second, and third level of the hierarchy, the method comprising:	The iPod is a portable music player with a display screen and an input device. The iPod automatically updates with music files contained on the user's iTunes application. The iPod uses metadata to categorize the stored music under one or more menu options that have at least three levels corresponding to a category, subcategory and item. The music is accessed using a menu. The menu options are displayed on the iPod's screen, wherein each menu level shown in a display screen is presented sequentially. The menu options corresponding to the display screens, include the following: o Playlists (Music > Playlists > your playlists > songs in the playlist); o Artists (Music > Artists > artist's albums > songs on album); o Albums (Music > Albums > songs on album); o Songs (Music > Songs > all song titles); o Podcasts (Music > Podcasts > all podcast episodes); o Genres (Music > Genres > corresponding artists > artist's albums > songs on album); o Composers (Music > Composers > corresponding albums > corresponding songs on album); o Audiobooks (Music > Audiobooks > all audiobook titles) **Source:** Exhibit 5 (iPod + iTunes Quickstart) at Steps 1-4; Exhibit 11 at iPod with Color display; Exhibit 12 at "Lesson 2: What's on the Menu?," "The Main Menu" and "The Music Menu"; Exhibit 13 ("iTunes automatically transfers the music to your iPod."); Exhibit 14 at 1, 2, 4 and 5; Exhibit 15; and

	Exhibit 17 at 8-11, 13-15 and 17.
selecting a category in the first display screen of the portable media player;	The main menu is the default menu on the iPod. The user is directed to use the "Click Wheel" to move between items in the menu, to use the "Select" button to select an item in a menu, and click the "Play/Pause" button to play or select a song. The iPod's first display screen can include, but is not limited to, the default menu, the artist menu, the playlist menu, or the genre menu. **Source:** Exhibit 5 (iPod + iTunes Quickstart) at Step 4 and "Using the Controls" – "Choose a menu item"; Exhibit 11 at iPod with Color display – "Center button"; Exhibit 12 at "Lesson 2: What's on the Menu?," "The Main Menu" and "The Music Menu"; Exhibit 14 at 2; and Exhibit 17 at 11.
displaying the subcategories belonging to the selected category in a listing presented in the second display screen;	When a selection is made in the first display screen the iPod automatically transitions to a second display screen that lists a subcategory of the first display screen. The iPod's second display screen can include, but is not limited to, the playlist menu, the playlist names menu, the artist menu, the artist names menu, the album menu, the album names menu, the song menu, the genre menu, or the genre types menu. Source: Exhibit 5 (iPod + iTunes Quickstart) at Step 4; Exhibit 11 at iPod with Color display – "Center button"; Exhibit 12 at "Lesson 2: What's on the Menu?," "The Main Menu" and "The Music Menu"; Exhibit 14 at 2; and Exhibit 17 at 11.
selecting a subcategory in the second display screen;	The user is directed to use the "Click Wheel" to move between items in the menu, to use the "Select" button to select an item in a menu, and click the "Play/Pause" button to play or select a song.

	Source: Exhibit 5 (iPod + iTunes Quickstart Step 4 and "Using the Controls" – "Choose a menu item"); Exhibit 11 at iPod with Color display – "Center button"; Exhibit 12 at "Lesson 2: What's on the Menu?," "The Main Menu" and "The Music Menu"; Exhibit 14 at 2; and Exhibit 17 at 11.
displaying the items belonging to the selected subcategory in a listing presented in the third display screen; and	When a selection is made in the second display screen, the iPod automatically transitions to a third display screen that lists items within the selected subcategory of the second display screen. The iPod's third display screen can include, but is not limited to, the playlist names menu, the list of songs in a playlist, the artist names menu, albums associated with an artist name, songs associated with an artist name, songs associated with an album name, song names, or artists associated with a genre type. **Source:** Exhibit 5 (iPod + iTunes Quickstart) at Step 4; Exhibit 11 at iPod with Color display – "Center button"; Exhibit 12 at "Lesson 2: What's on the Menu?," "The Main Menu" and "The Music Menu"; Exhibit 14 at 2; and Exhibit 17 at 11.
accessing at least one track based on a selection made in one of the display screens.	Users are directed to click the "Play/Pause" button to play a selected song or group of songs. Users are directed to press and hold the "Select" button until it flashes to add a song or group of songs to the on-the-go playlist, which can be subsequently accessed through the menu. **Source:** Exhibit 5 (iPod + iTunes Quickstart) at Step 4 and "Using the Controls" – "Choose a menu item"; Exhibit 11 at iPod with Color display – "Play/Pause button"; Exhibit 14 at 4; Exhibit 15; Exhibit 16; and

	Exhibit 17 at 11 and 17.
5. The method of selecting a track as recited in claim 1 wherein the accessing at least one track comprises selecting an item in the third display screen and adding at least one track associated with the selected item to a playlist.	Users are directed to press and hold the "Select" button until it flashes to add a song to the on-the-go playlist, which can be subsequently accessed through the menu. **Source:** Exhibit 5 (iPod + iTunes Quickstart) at Step 4 and "Using the Controls" – "Add a song to the On-The-Go playlist"; Exhibit 14 at 4; Exhibit 16; and Exhibit 17 at 17.

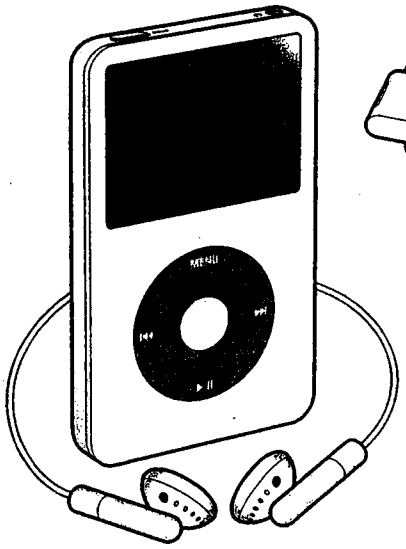
EXHIBIT 5

iPod

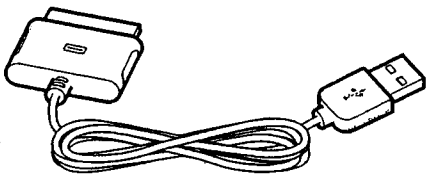
iPod + iTunes
Quick Start

Welcome

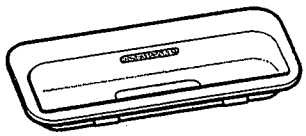
Congratulations on purchasing your new iPod.



Apple Earphones



iPod Dock Connector to USB 2.0 Cable

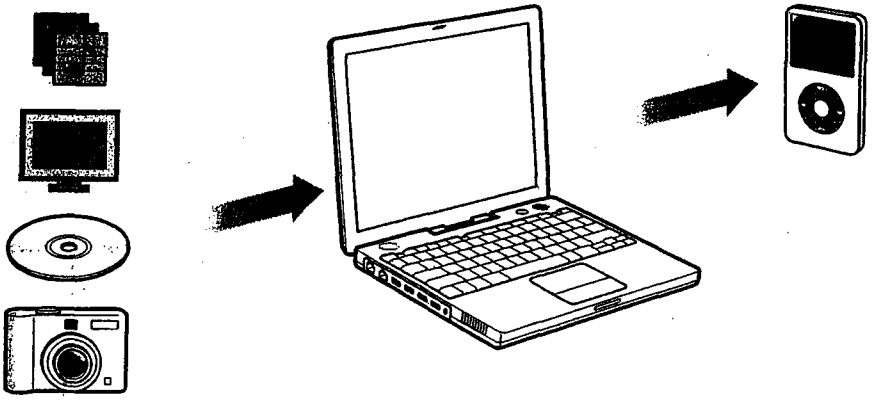


iPod Dock Adapter
(for use with iPod accessories,
such as the iPod Universal Dock,
available separately)

Your iPod also includes a case (not pictured).

Getting Started

To use iPod, you put music, videos, podcasts, photos, and other files on your computer and then transfer them to iPod.



Read on to get started playing music and watching videos in four easy steps. For more information about what you can do with iPod, see the *iPod Features Guide*, available on the web at www.apple.com/support/manuals/ipod or, where available, on the iPod CD and in iPod Help (in iTunes, choose Help > iPod Help).

Step 1: Install the Software

Put the iPod CD in your computer and install the iTunes and iPod software.

If you already have iTunes and iPod software on your computer, it's best to install the latest software from the CD included with iPod or from the web at www.apple.com/ipod.

Step 2: Put Music and Videos on Your Computer

Do this step if you don't already have music in iTunes on your computer.

To import music from your CDs into iTunes:

1. Put a CD in your computer. iTunes opens.
2. Deselect any songs you don't want, and then click Import.

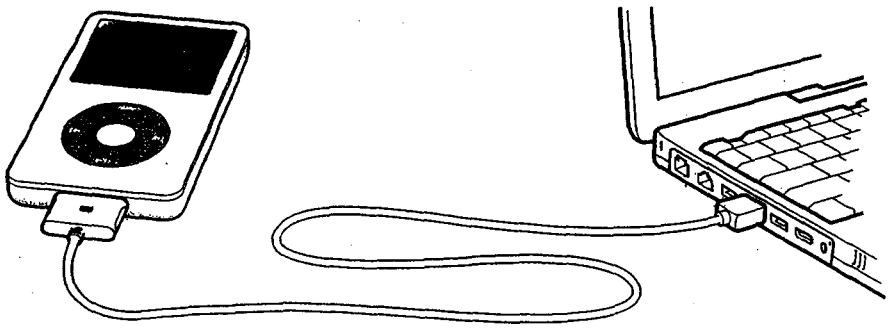
To buy music and videos from the iTunes Music Store (available only in some countries):

1. Open iTunes and click Music Store.
2. Click the Account button and follow the onscreen instructions to set up an account, or enter your Apple account or AOL account information (you can use your AOL account information only in some countries).

Step 3: Download Music and Charge the Battery

Connect iPod to a USB port on your computer using the included cable.

Note: USB 2.0 is recommended. The port on your keyboard doesn't provide enough power; don't use it to connect your iPod.

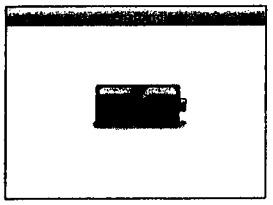


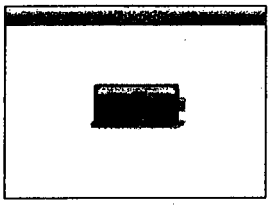
To download music and videos to iPod:
When you connect iPod, iTunes opens. Follow the simple onscreen instructions to download songs and videos to iPod.

You can download songs and videos to iPod while your battery is charging.

To charge the battery:
When iPod is connected to your computer, the battery charges.

For best results, the first time you use iPod, let it charge for about four hours or until the battery icon shows that the battery is fully charged.





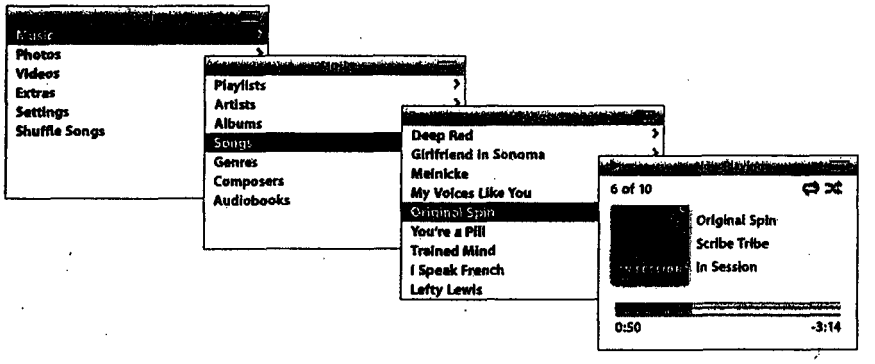
Step 4: Play Music and Videos

When you finish downloading songs and videos and you're ready to disconnect iPod, click the Eject (⏏) button next to iPod in the iTunes Source list. Then squeeze both sides of the connector at the end of the cable and unplug it.

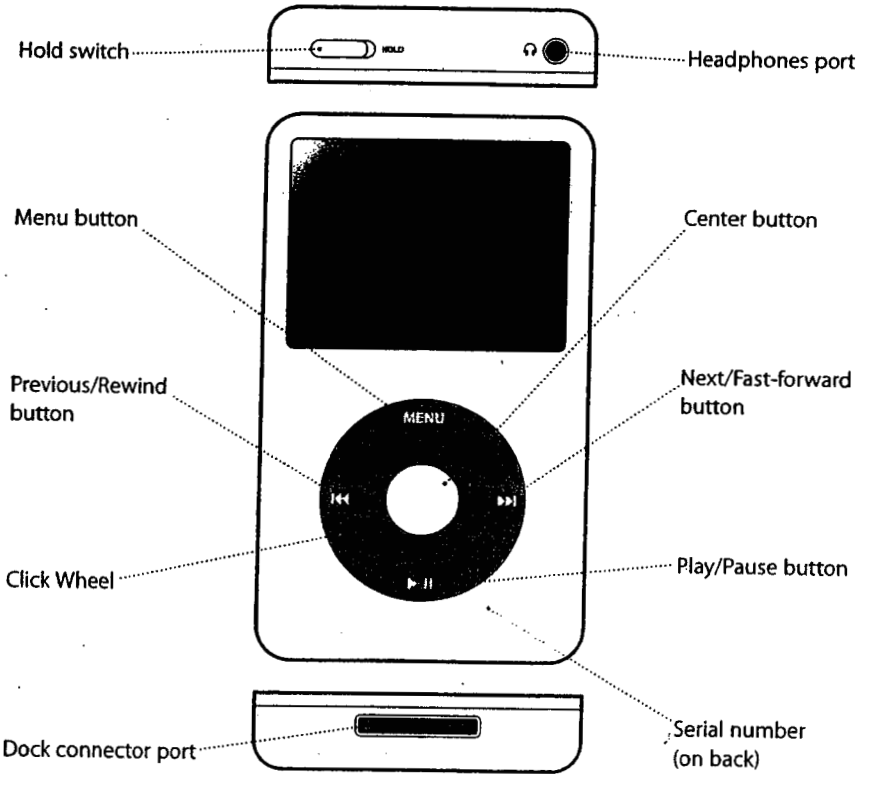
To browse for and play a song or video:

Move your thumb lightly around the Click Wheel to select a menu item. To choose an item, press the Center button. To go back to the previous menu, press Menu on the Click Wheel.

When you find the song or video you want, press Play (▶II) and enjoy!



Using the Controls



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To	Do This
Reset iPod (if your iPod isn't responding)	Set the Hold switch to Hold and then turn it off again. Press the Menu and Center buttons at the same time for about 6 seconds, until the Apple logo appears.
Turn on iPod	Press any button.
Turn off iPod	Press and hold Play/Pause (▶II).
Turn on the backlight	Press any button or use the Click Wheel.
Disable the iPod buttons (in case you press them accidentally)	Set the Hold switch to Hold (an orange bar appears).
Choose a menu item	Move your thumb around the Click Wheel to scroll to the item, and then press the Center button.
Go back to the previous menu	Press Menu.
Go directly to the main menu	Press and hold Menu.
Browse for a song	Choose Music from the main menu.
Browse for a video	Choose Videos from the main menu.
Play a song or video	Select the song or video and press the Center or Play/Pause (▶II) button. iPod must be ejected from your computer to play songs.
Pause a song or video	Press Play/Pause (▶II) or unplug your headphones.

To	Do This
Change the volume	From the Now Playing screen, move your thumb around the Click Wheel.
Play all the songs in a list	Select the list title (an album title or the title of a playlist, for example) and press Play/Pause (▶II).
Play all songs in random order	From the main menu, choose Shuffle Songs.
Skip to any point in a song or video	From the Now Playing screen, press the Center button to show the scrubber bar. Then scroll to any point in the song or video.
Skip to the next song or video	Press Next/Fast-forward (▶▶I).
Start a song or video over	Press Previous/Rewind (I◀◀).
Play the previous song or video	Press Previous/Rewind (I◀◀) twice.
Fast-forward or rewind a song or video	Press and hold Next/Fast-forward (▶▶I) or Previous/Rewind (I◀◀).
Add a song to the On-The-Go playlist	Select a song, and then press and hold the Center button until the song title flashes.

Frequently Asked Questions

How do I know if my computer is compatible with iPod?

Check the system requirements on the iPod box to see if your computer and software are compatible. Make sure you install the software that comes on the iPod CD.

How do I know if my computer has a USB 2.0 port?

If songs transfer very slowly to your iPod, it's probably connected to a USB 1.1 port. A USB 1.1 port looks just like a USB 2.0 port.

To find out if your computer has a USB 2.0 port, see the documentation that came with your computer.

What if my computer doesn't have a USB 2.0 port?

Although you can connect your iPod to a USB 1.1 port, a high-power USB 2.0 port is recommended for best performance. If your Windows PC doesn't have a USB 2.0 port, you can purchase and install a USB 2.0 card. For more information about compatible USB 2.0 cards, go to www.apple.com/ipodstore.

What if I connect my iPod but don't see it in iTunes?

Try connecting to another USB port on your computer.

What if my iPod isn't responding?

Most problems with iPod can be solved by resetting it.

To reset iPod:

1. Connect iPod to your computer.
2. Set the Hold switch to Hold, and then turn it off again.
3. Press and hold the Center and Menu buttons for at least 6 seconds, until the Apple logo appears.

Learn to Use iPod

To learn to use all the features of your iPod, see the *iPod Features Guide.*

The features guide has detailed instructions on using iPod, answers to common problems, and important safety and compliance information. It can be found on the web at www.apple.com/support/manuals/ipod and, where available, on the iPod CD and in iPod Help (in iTunes, choose Help > iPod Help). To view the latest tutorials on how to make the most of your iPod experience, go to www.apple.com/support/ipod. To register your iPod, go to www.apple.com/register.

www.apple.com/ipod

www.apple.com/support/ipod

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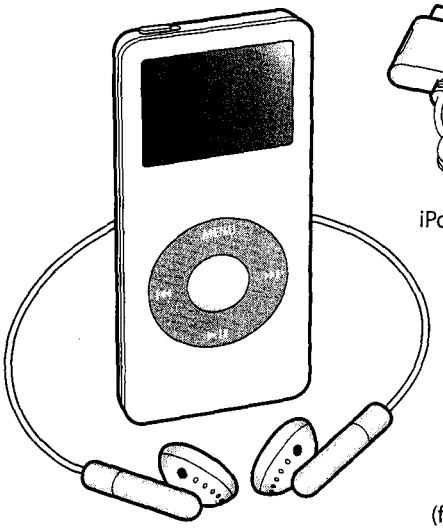
EXHIBIT 6

iPod
nano

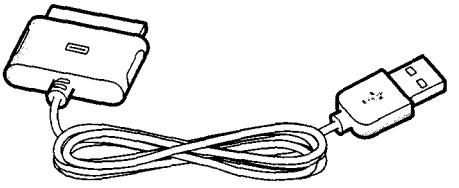
iPod nano + iTunes
Quick Start

Welcome

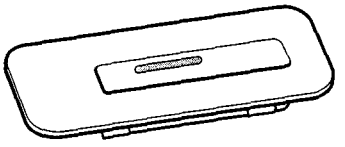
Congratulations on purchasing your new iPod nano.



Apple Earphones



iPod Dock Connector to USB 2.0 Cable

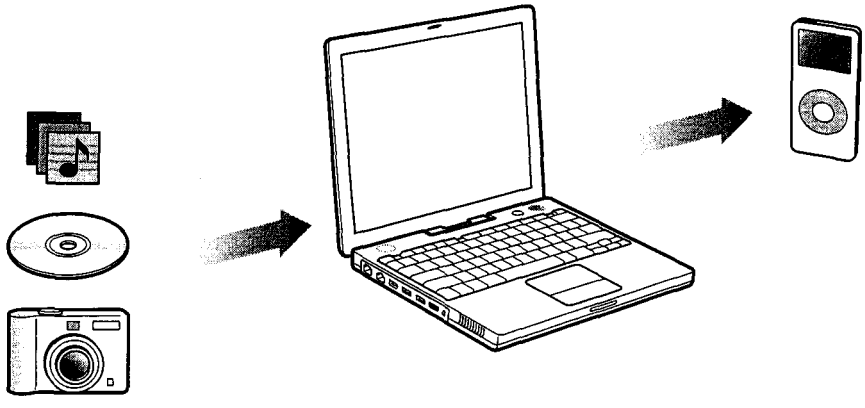


iPod Dock Adapter
(for use with iPod accessories, such as
the iPod Universal Dock, available separately)

Your iPod nano also includes a case (not pictured).

Getting Started

To use iPod nano, you put music, photos, and other files on your computer and then transfer them to iPod nano.



Read on to get started playing music in four easy steps. For more information about what you can do with iPod nano, see the *iPod nano Features Guide,* available on the web at www.apple.com/support/manuals/ipod or, where available, on the iPod CD and in iPod Help (in iTunes, choose Help > iPod Help).

Step 1: Install the Software

Put the iPod CD in your computer and install the iTunes and iPod software.

If you already have iTunes and iPod software on your computer, it's best to install the latest software from the CD included with iPod nano or from the web at www.apple.com/ipodnano.

Step 2: Put Music on Your Computer

Do this step if you don't already have music in iTunes on your computer.

To import music from your CDs into iTunes:

1. Put a CD in your computer. iTunes opens.
2. Deselect any songs you don't want, and then click Import.

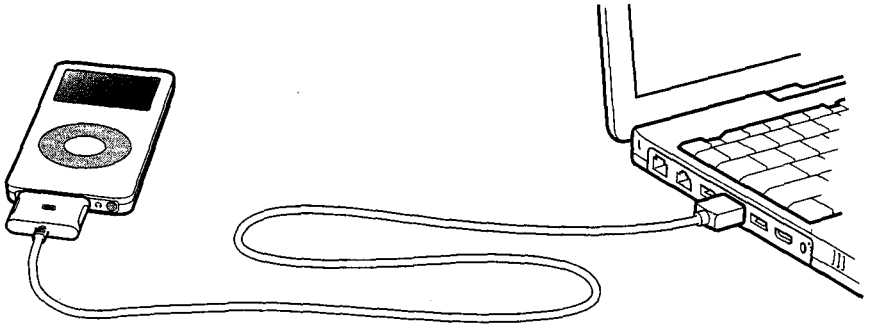
To buy music from the iTunes Music Store (available only in some countries):

1. Open iTunes and click Music Store.
2. Click the Account button and follow the onscreen instructions to set up an account, or enter your Apple account or AOL account information (you can use your AOL account information only in some countries).

Step 3: Download Music and Charge the Battery

Connect iPod nano to a USB port on your computer using the included cable.

Note: USB 2.0 is recommended. The port on your keyboard will not provide enough power; do not use it to connect your iPod nano.

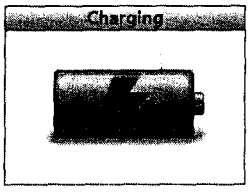


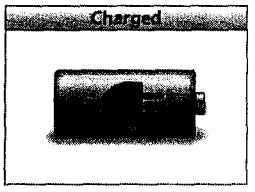
To download music to iPod nano:
When you connect iPod nano, iTunes opens. Follow the simple onscreen instructions to download songs to iPod nano.

You can download songs to iPod nano while your battery is charging.

To charge the battery:
When iPod nano is connected to your computer, the battery charges.

For best results, the first time you use iPod nano, let it charge for about three hours or until the battery icon shows that the battery is fully charged.





Step 4: Play Music

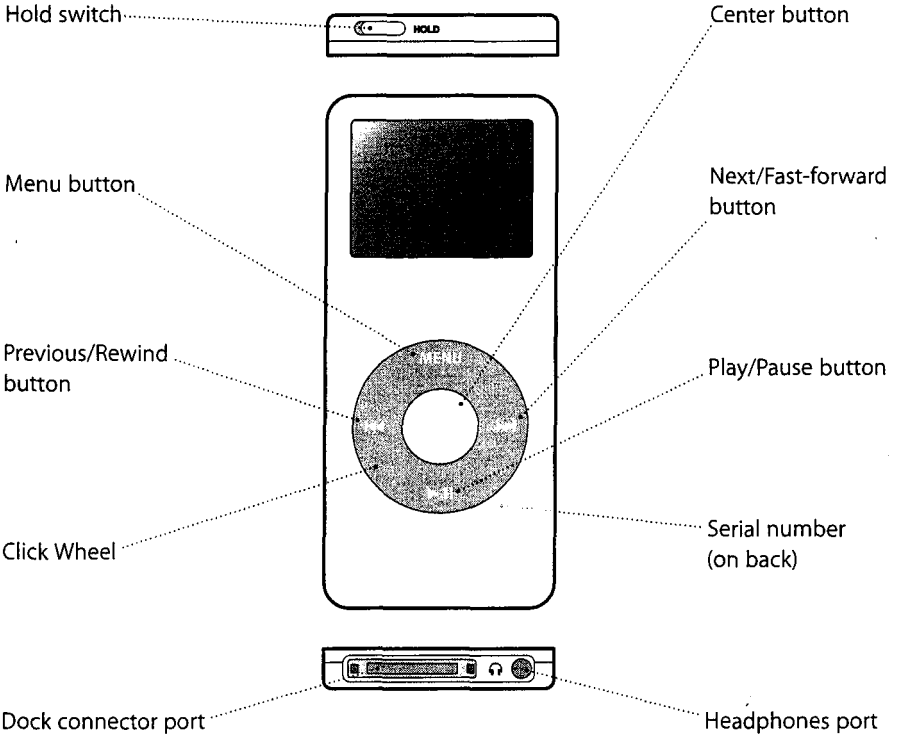
When you finish downloading songs and you're ready to disconnect iPod nano, click the Eject (⏏) button next to iPod nano in the iTunes Source list. Then squeeze both sides of the connector at the end of the cable and unplug it.

To browse for and play a song:

Move your thumb lightly around the Click Wheel to select a menu item. To choose an item, press the Center button. To go back to the previous menu, press Menu on the Click Wheel.

When you find the song you want, press Play (▶II) and enjoy!

Using the Controls



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To	Do This
Reset iPod nano (if your iPod nano isn't responding)	Set the Hold switch to Hold and then turn it off again. Press the Menu and Center buttons at the same time for about 6 seconds, until the Apple logo appears.
Turn on iPod nano	Press any button.
Turn off iPod nano	Press and hold Play/Pause (►II).
Turn on the backlight	Press any button or use the Click Wheel.
Disable the iPod nano buttons (in case you press them accidentally)	Set the Hold switch to Hold (an orange bar appears).
Choose a menu item	Move your thumb around the Click Wheel to scroll to the item, and then press the Center button.
Go back to the previous menu	Press Menu.
Go back to the main menu	Press and hold Menu.
Browse for a song	Choose Music from the main menu.
Play a song	Select the song and press the Center or Play/Pause (►II) button. iPod nano must be ejected from your computer to play songs.
Pause a song	Press Play/Pause (►II) or unplug your headphones.

To	Do This
Change the volume	From the Now Playing screen, move your thumb around the Click Wheel.
Play all the songs in a list	Select the list title (an album title or the title of a playlist, for example) and press Play/Pause (▶II).
Play all songs in random order	From the main menu, choose Shuffle Songs.
Skip to any point in a song	From the Now Playing screen, press the Center button to show the scrubber bar. Then scroll to any point in the song.
Skip to the next song	Press Next/Fast-forward (▶▶I).
Start a song over	Press Previous/Rewind (I◀◀).
Play the previous song	Press Previous/Rewind (I◀◀) twice.
Fast-forward or rewind a song	Press and hold Next/Fast-forward (▶▶I) or Previous/Rewind (I◀◀).
Add a song to the On-The-Go playlist	Select a song, and then press and hold the Center button until the song title flashes.

Frequently Asked Questions

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Check the system requirements on the iPod nano box to see if your computer and software are compatible. Make sure you install the software that comes on the iPod CD.

How do I know if my computer has a USB 2.0 port?

If songs transfer very slowly to your iPod nano, it's probably connected to a USB 1.1 port. A USB 1.1 port looks just like a USB 2.0 port.

To find out if your computer has a USB 2.0 port, see the documentation that came with your computer.

What if my computer doesn't have a USB 2.0 port?

Although you can connect your iPod nano to a USB 1.1 port, a high-power USB 2.0 port is recommended for best performance. If your Windows PC doesn't have a USB 2.0 port, you can purchase and install a USB 2.0 card. For more information about compatible USB 2.0 cards, go to www.apple.com/ipodstore.

What if I connect my iPod nano but don't see it in iTunes?

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What if my iPod nano isn't responding?

Most problems with iPod nano can be solved by resetting it.

To reset iPod nano:

1. Connect iPod nano to your computer.
2. Set the Hold switch to Hold, and then turn it off again.
3. Press and hold the Center and Menu buttons for at least 6 seconds, until the Apple logo appears.

Learn to Use iPod nano

To learn to use all the features of your iPod nano, see the *iPod nano Features Guide.*

The features guide has detailed instructions on using iPod nano, answers to common problems, and important safety and compliance information. It can be found on the web at www.apple.com/support/manuals/ipod and, where available, on the iPod CD and in iPod Help (in iTunes, choose Help > iPod Help). To view the latest tutorials on how to make the most of your iPod experience, go to www.apple.com/support/ipod. To register your iPod nano, go to www.apple.com/register.

www.apple.com/ipodnano
www.apple.com/support/ipod

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