SUBJECT: DATE:

TI. Conference Call 11/13/01

Danny Mitchell
Randy Lawson
Keith Quiring

- Reference Schematic ~ TI. will send.
- Mode 6 - No good because doesn't support CRC, which is required by the drive.
- Next Rev of the iSphinx will support iSPhinx.
- Current customers:
  1. BD → Processor, DMA twice.
  2. SCSI DMA controller. (Mode H?) Double DMA.
- TI. has an FPGA implementation which implements the CRC generation. Implemented in graphical format.
- Mode G: 16MB/s Max capability of iSphinx II.
- Should be able to load data into DTF/DRF & read via host interface via _____ register.

→ Kquiring@ti.com HW contact

192

SUBJECT: T.I. Conf Call (Cont'd) DATE: 11/13/01

Sphinx 3 features summary:

- CRC
- Endian Features
- 32 bit Host I/F
- Fix errata
- Power-down modes / remove reqm't for external resistors

Schedule: Q3 CY 2002. (Bill-Park)

→ TI - Provide schematics
→ ME - Provide Block diagram to Keith Q.
→ TI - Provide timing waveforms

11/20/01

DAISY MTG

Requirements changes:

- Daisy is only for KS1000A / KS2000.
- KS2000 MRD is MKTG wish list.
- Daisy changes:
  - 120 M DSP, NO expansion SRAM
  - 60MHZ ARM + All other periphs.
  - Dump Data cache
  - USB is Device-only
  - SDRAM is only expansion RAM.
  - Eliminate LCD CNTLR.
  - Eliminate SDMA
  - Scratch mem increased to 64KB

SUBJECT: DATE:

- Eliminate PWR MGMT

Dan:

① Draw critical timing diagrams for Host & DMA interfaces

② Finish pin list & distribute

Daisy Bus I/F Meeting 12/5/01

Sanjiv, David W, Ray L, Paul B.

Questions for TI.

① What is max bus cycle time on Host xfers. (224 ns)

ACTION ITEMS

① Dan: Update Timing diagrams to show delays on actual diagrams

② Dan: Nuke 1394 HWAITN, IORDY pins.

③ Paul, Sanjiv: Sanity check on timing diagrams

④ Draw diagram of BUFOEN & BUFOIR.

SUBJECT: DATE:

Action Items (cont) CONT

⑤ Dan - ask Charlene about S/PDIF in & CDIF in stream detection & selection

12/6/01

Portal Player Meeting

Jeff Hawkey - VP HW Eng
Subir Ghosh - CTO
George Fang - VP Sales
Tyler Stevens - Premier Technical Sales

PP5001, PP5002 - Currently in Production

Future: PP5003. Network capable, high-speed encoding. Pin & resister compatible with PP5002.

MP3 decode: 25 mHz.

5002: ARM's run at 90MHz.

5003: 2X encode.

Ampire: Smart LCD panels.
Varitronix " " "

Development tools: ARM ADS.

Source code provided for GUI layer.
Development Board: 6002.

SUBJECT: DATE: 12/6/01

(cont)

- SIXX family: 2003. will use dual ARM 9E processors. Not 946E or 920T due to desire to keep existing Vector coprocessor in architecture.

- 5003: Samples April.
  → 1st production: June (10K qtys)
  If set early commitment for production.

Kodak OLED Display Meeting 12/14/01

presenter: Rogelio Sobers
Sr. product MGR
(925) 998 1622

awesome 5.5" color Display - Demo is DVD playback.
Lots of smaller displays.
Pioneer, Alpine car stereos use OLEDs.
Brightness up to 1200D
Developers kit will be available.

TI Meeting Conf Call 12/14/01

Lee Ratliff
Danny Mitchell

- CE-lynx Questions
- isphinx Questions I submitted
- isphinx $4-5 range. ice Lynx - $13
- Celynx - 4.50 + $2 phy

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[redacted]

SUBJECT: DATE:

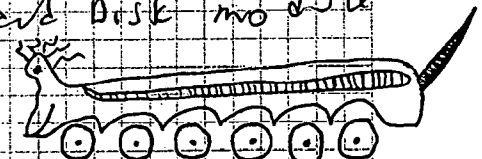
TI cont (all) (con't) 12/14/01

- Icelynx micro- samples March 2002.
- We would do board development on celynx, transition to icelynx later.
- Celynx- 4 major product designwins.
- phy chip: 2-POA. TSB41AB2
- App note on web site on EMI compliance issues.
- Conductive coatings might be req'd to pass FCC in plastic case.
- 18 months to production - Celynx + phy.

Deserted Island

12/14/01

- Need 0.9 MRD for stack by end of February 2002.
- ~~Erik~~ Steve Erickson thinks ATC has primary responsibility for Stack Architecture.
- We will develop HW for Hard Disk module & FSxxx module.



Gilligan's Island

- PBU's: Product Business Units
  - CVP - CY (PDE)
  - AVP - Steve Erickson (sound cards)
  - MSP - Chua (speakers)
- RSU's: Regional Sales Units.

SUBJECT: DATE: 11 April 2001

Daisy Feature Requirements

- USB Master/Slave port
- 4 I2S Inputs 24/96
- 4 I2S outputs 24/96, 2 ch 24/192K?
- 1 S/PDIF INPUTS (Sample Rate Trackers? or SRC)
- 4 S/PDIF OUTPUTS
- LCD I/F
- 32 GPIO - Some should drive LED's
- 1394 LINK
- PCI I/F
- IRDA (FAST IRDA)
- UARTS (wired Remote, MIDI, IR remote,)
- SPI MASTER/SLAVE
- 2.5V I/O, 3.3V Tolerant.
- External I/F Bus with bus-cycle extension capability
- Boot from Serial port
- JTAG Reset on DSP does not reset ARM.
- Direction & enable controls for bus buffers.
- Jog Dial support.

SUBJECT: DATE:

12 April 2001

Daisy LCD controller spec.

---

16 April 2001

Reset Island Meeting

- will use user-centric design methodologies to spec & implement D.I.

Prototyping Tasks: HW

- 1394 Experience w/I/F
  EMI
  Stack integration
  Packing I/F
  Host + Peer SW Development
- Power
  Battery Technology
  Peak leveling experiment.
  More efficient power supplies
- Display
  Touch screen
  EL Backlight
  Controller Solutions
- User control interface
  Jog Wheels
  Touch screen controller
  "Bristow button test" (what buttons are dedicated)
  Dedicated Processor (Management Subsystem)
  Remote control(s)

Audio
- Mic input
- 2VRMS outputs

(cont here)

SUBJECT: DATE:

12 April 2001

Desert Island Prototype Feature List

- Mondo FPGA to prototype Daisy modules, i.e. LCD controller?

Cont - Desert Island Meeting 12 April 2001

- Docking Interface
  - 1394
  - Power
  - EMI

Prototyping Tasks: SW

- 1394 stack integration
- RTOS integration
- Development tools.

SUBJECT: DATE:

Desert Island Meeting (cont) 16 April 2001

- User centric - UI usage.
  Host SW prototype
  Marketing

---

23 April 2001

Clover Meeting Howard, MarthH, Lee M, Jerry, Pete J, Andrei, Howard, Ray

Agenda

1. DEV tools - ARM vs. GNU, Talking tools.
2. CLOVER DEMO SUPPORT
3. CLOVER DVT SUPPORT
4. KAOS & TAMBA SUPPORT
5. Howards Agenda.

① Will use ARM Multi-Ice for KAOS. No commitment for Tamba. Pete will assist getting a bootloader implemented in Flash, etc. Need another Talking DSP emulator. Jerry will fill out P.O.

② MarthH will hand off Demo to Jerry. Jerry will complete SW for Clover Demo.

③ Pete working on code to support Power consumption tests. Preparing Dhrystone Memory performance tests for the various memory locations. IrDA will not be tested. Serial port being tested.

④ Support from Pete & Martin - KAOS is priority over DVT & Demo.

SUBJECT: DATE:

24 April 2001

Grant Jones
195 Lake Dr
Boulder Creek, CA 95006
831 338 3461

Mic Input Specs for Desert Island:

(1) a -45 dBu mic input level will just clip the input if max gain selected

(2) a +22 dBu input level will clip the input if min gain selected.

(3) Accommodate +13 dBu max input for differential input signal, +7 dBu for single-ended signal.

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30 April 2001

FS1000 HW Design Review

- Must have 24/96 S/PDIF support.
- No need for seperate Headphones path.
- Need SW mute for S/PDIF out. (No change to FPGA/GA spec)
- Update Signal Path diagram Prologic Recording + monitoring + mixing with MIC In.
  → FPGA Support - Mute output data but don't turn off S/PDIF stream.
- Need Feedback from Danny G on preferred pinout on BGA.

SUBJECT: DATE:

2 May 2001

Daisy Meeting

- Jane, Phil, Curt, Martin & Pete have resigned.
- IP purchases not approved - Dave's didn't go to the GM meeting.
- David Watson starts Tuesday 5/8/01.
- Someone from Conexant might start in June.
- Steve Ericson very interested in Daisy for KS1000 follow-on product → 1394, PCI not needed. Might could do KS2000 chip before Daisy, might be more suitable project to do given the reduced VLSI staff.
- Big discussion about replacing AHB bus with VCI bus. VCI bus gives best performance for Daisy. Resistance to using bus by Paul B & Mishp.
- Designers need to estimate time to convert their AHB-based modules to VCI-based modules.
- JTAG Ports - Daisy web site posting incorrectly reports that JTAG ports will be removed from Daisy.
- Might need 3rd JTAG Port to access test modes? → function of vendor requirements & requirements from Singapore
- Got quote from ST. Quote was high.
- Expecting quotes from LSI & Philips
- No word from Agere, won't return Rick's phone calls

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SUBJECT: DATE:

KS1000 Meeting 2 May 2001

- Craig McHugh is reviewing the MRD. Waiting for his signature.
- 2 ID Skews - One with text on controls & Jacks, one with symbols/icons.
- Only things that can affect spec: Competition, market, cost, schedule.
- $73 cost FOB Singapore
- Core logic (electrical) design: Leng sent prelim schematics. Design review held.
- DSP SW Spec in sync with MRD & HW Specs.
- Base Array: Samsung is selected vendor

KS1000 Base Array Meeting - 7 May 2001

S/PDIF RCVR implementation

Scott F

- Needs 8X oversampling clock to recover S/PDIF.
- Scott's module gives:
  - Data
  - Data Strobe
  - Stereo bit
  - Lock bit.
- Needs 14 bits of pitch estimate to do SRC

SUBJECT: DATE: 7 May 2001

• Want a "How full" Fifo. Then can get frequent pitch info readings.

• Address generators should be gray code. Then can compare asynchronous addresses to determine how full.

• Better idea: small random logic FIFO (4 or 8 deep) to cross clock domains, then Big synchronous Fifo from one clock.

• Can do up converter for 96K output with 256x clock. 0.01dB ripple, .005% THD+N (83dB)

• 2x oversampling filter, 4th order uses 32x32 bits = 1K ⇒ use Flip Flops, not memory.

20K1 Meeting - Brent Elder 7 May 2001

• Want EMU32 Input (Priority) & outputs if possible. } Scott F says probably not.
• Varispeed? Yes. Reqd. } provide spec, Scott will ask vendor
• AC97 Codec support? } Yes up to 2 of them, 6 ch each
• Details on AC3 support? Can bring in data, use MIPS to decode it if have memory in chip, can encode.
• Extended memory for Embedded mode >128 MB → NO 32MB on-chip Max Logical space. VDA driver has hooks. not shipped
• Page-mode ROM, SDRAM, DDRAM support?
  SDRAM ↑ Only 128 MB max

SUBJECT: DATE:

9 May 2001

Desert Island Proposal Review

Problem changes since last meeting:

- Employ user-centric design methodology
- RTOS & 1394 support
- Device Drivers
- command protocol
- Power Management

Other items:

- Docking I/F will be implemented
  - user experience
  - mechanical study
  - EMI compliance
  - Overall functionality
- Add IR development: External board that connects to wired remote I/F
- Get wired remote design from Johnson.
- Accommodate Removable Battery/power supply module

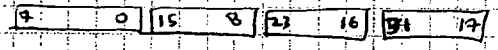
SUBJECT: DATE:

Daisy DMA Review 9 May 2001

Mike S, Shawn S, Paul B, Pzk, Howard,

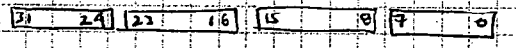
Little Endian

00	LSB	LSW
01	MSB	
10	LSB	MSW
11	MSB	

1000 

BIG ENDIAN

00	MSB	MSW
01	LSB	
10	MSB	LSW
11	LSB	

1000 

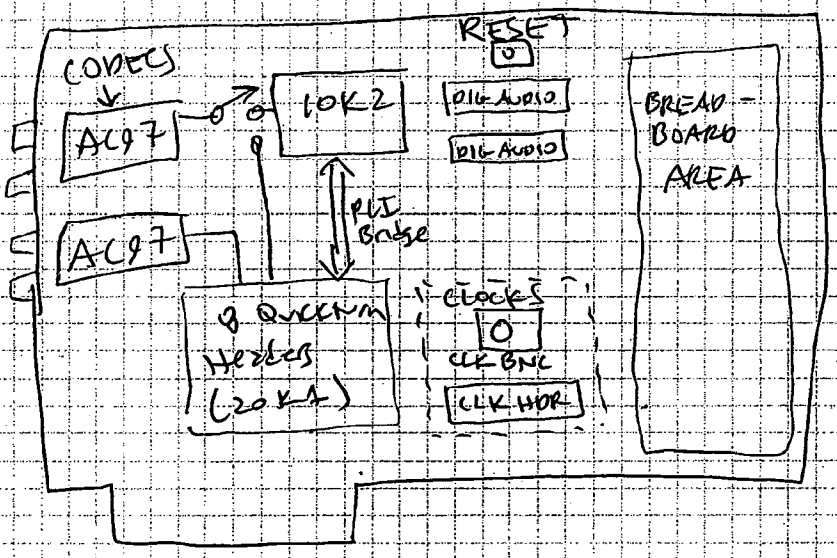
SUBJECT: DATE:

17 May 2001

20K1 HW meeting

Swift, Tom S, Dan F.

Want 20K1 reference board for Quickium Emulator. See "EMU20K1 Quickium Evbl PCB Requirements" doc.



20K1
- Reset = PCI RESET OR PUSHBUTTON RESET

SUBJECT: DATE:

17 May 2001

20K1 SW Meeting

John K, Mike G, Claudio, Rick, Steve Y, Sam Dicker

- 20K1 User Team Meetings. Goal was to identify reqmts of 20K1. Target price was $10, 1st estimated cost was $21. Want to trim features to reduce cost.
- Darby is Targeted chip for KS2000
- "Way away" from having a schedule
- LTR wants 20K1 product for XMAS 2002.

21 May 2001

SB Live Model SB9020

chips on board:

Sigmatel STAC9708T

TI TSB41AB2

SUBJECT: DATE:

24 May 2001

KS1000 Schematic Design Review

Paul B, Dan F, Mihai, Niel W, Shawn S, John Keith, Leng O.

Notes:

1. USB IRQ from Philips USB chip not yet tested.
2. Action item Shawn: OK to tie Masterpower low? Or must have transition after reset? Run 6MHz clock to Masterpower?
3. Masterpower should not have off page connector
4. HDDIORN does not need to be terminated.
5. HDDIORDY needs to be pulled high.
6. Action item Leng: Make sure JTAG ports are terminated correctly. Make sure and refer to redlined 1000 over board schems
7. LCD Data bus needs to be terminated.
8. Series-terminate ASYNCUBYTEN, ASYNCLBYTEN (CAN USE R97, R205)
9. Terminate USBPLUS, USBMINUS. (TO GND)
10. Terminate UARTCTS
11. Terminate U205 unused inputs.
12. Need final schematics & need another design review.
13. GPIO6 does not have enough current to drive an LED? Add buffer?
14. If connect data bus from ARM to ZORAN through 0 ohm R's, ARM data bus will be shorted to virtual GND until VCC3.3V_SHDN is powered up. (Zoran page)
15. Can you leave DII-DI5 on Zoran floating?

SUBJECT: DATE:

JST Connector Meeting

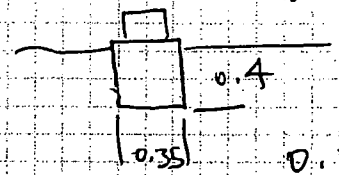
5/30/01

Kiyoshi Ishii
MKT MGR

Jonathan Ando
Proj Eng.
jando@jst.com

MINI USB CONNS.

1394A device side:



Hirose connectors

JAV connector - 1.5 mm mating height

JAS " 4 mm .3A 30V 30mΩ

JMD " 4.5 mm .5A 50V 50mΩ

Program Review Meeting 5/31/01

Dave S, Mark D, Lee M, Dan F, Howard E, Huck L, Ray L, Michael L.

AGENDA:
1. DAISY
2. DESERT ISLAND
3. RAINBOW
4. 20K1
5. AUDIO FINGERPRINTING

DAISY, FANG

- Not much progress. Daisy team working on FANG FPGA & ASIC
- Fang: finishing up verification. On schedule. Samsung 0.35u
- FPGA being done to facilitate SW development
- ASIC Available 2nd week in July.

SUBJECT: DATE: 30 May 2001

- Ray, Shawn, Paul, Charlene, JoAnn now working on it.
- Lots of Feature Creep. 24/96 support, S/PDIF I/O, etc.
- $2.60/ea, $60K NRE, for QTY 50K/month.
- First pass at ASIL synthesis happened yesterday- anticipate clean synthesis run in a few days.

(Dare sparks) 1st priorities:

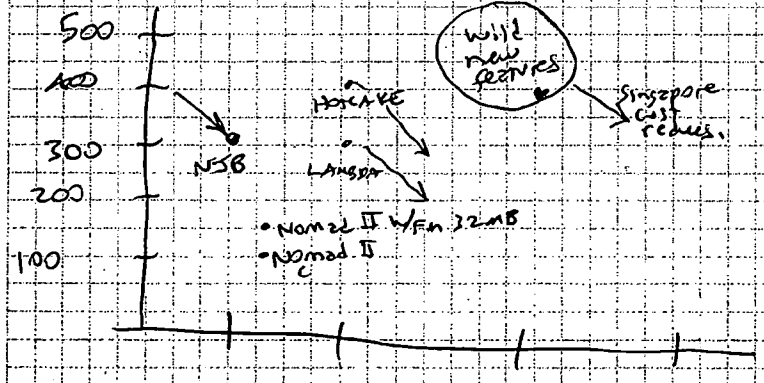
① AUDIGY

② KS1000

DESERT ISLAND

Hook: Singapore is taking what we have done (Jukebox) and value engineering it further (smaller, battery life, etc).

- Wants us to focus on wild new features.
- Field recorder market much smaller than Player market. Don't focus lots of effort on this.
- We will need to sell the RBU's on something.



180

SUBJECT: DATE: 30 May 2000

UNIT

- Could be good to generate a list of wild new features that we could use to sell RBU's.
- Localization has been important to sale. Example we sold 4K NJB's to supermarket chain in German.
- Contextual functionality: Pack the unit, functionality increases.
- Voice Navigation important.
- Women have differences in opinion on some features - they don't like to use jog wheels on computer mice.
- Mediabolic - Networking of some sort.
- Content Navigation important.
- Apple will come into this market.
- Must balance new concepts with cost factors.

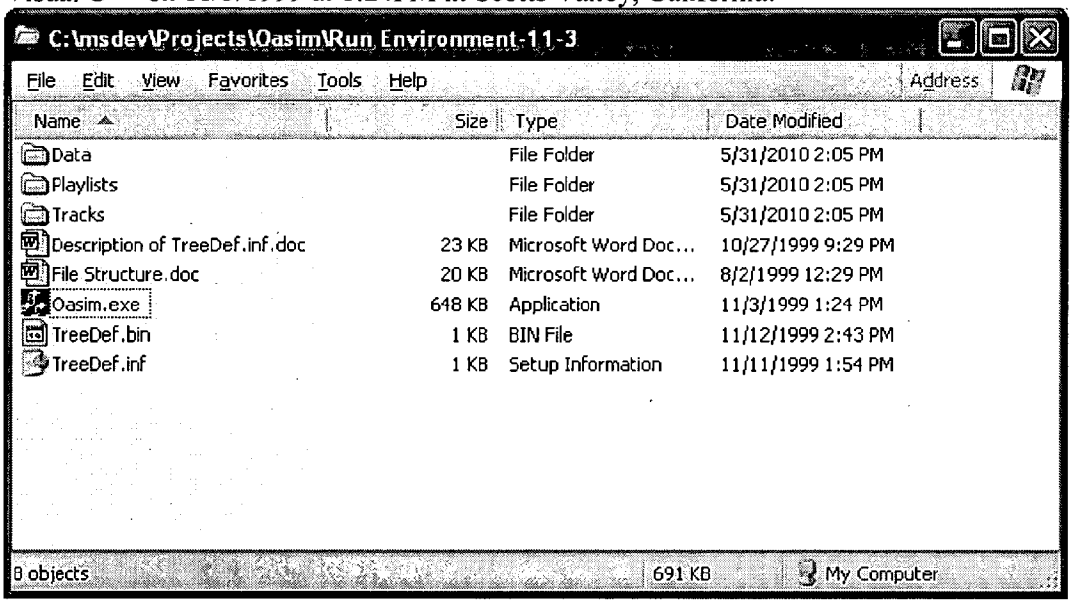
→ Involve Steve & Jim (Mosher, Carlson) in deciding the "wow" features we want to go after.

PGM Review Meeting 6/1/01

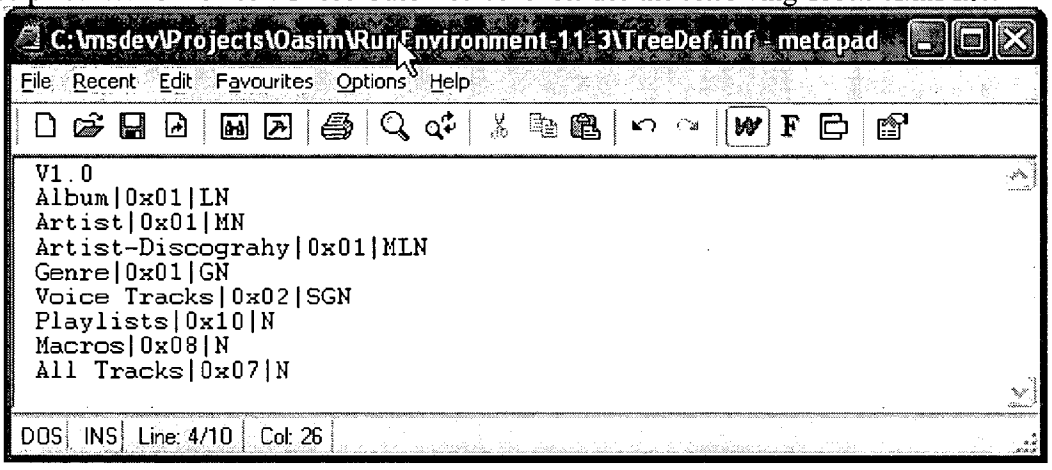
EXHIBIT
RR

This document was prepared by Ron Goodman on 5/31/2010. It shows screenshots from the Oasim simulator which simulates the operation of a hardware MP3 player that incorporates the systems described in the 6,928,433 patent.

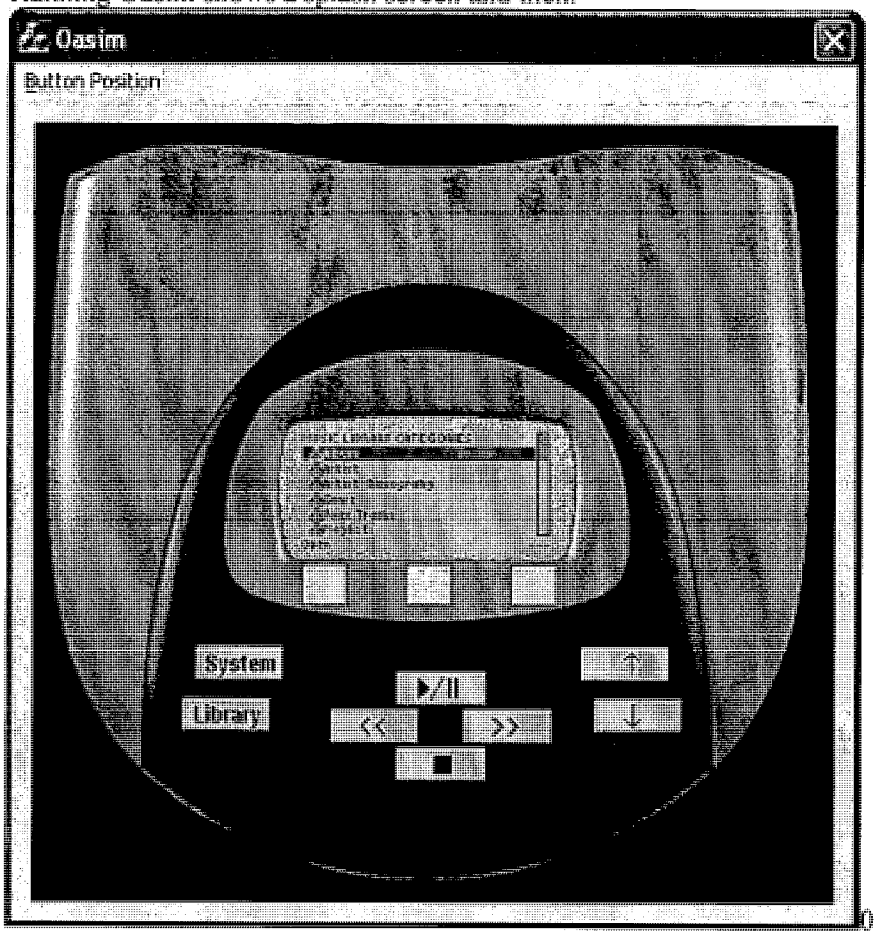
The version of the Oasim simulator use to prepare these screenshots was compiled in Visual C++ on 11/3/1999 at 1:24PM in Scotts Valley, California:



Oasim uses a TreeDef.inf file to define the desired organizational hierarchy that should be presented to the user. These Oasim screenshots use the following TreeDef.inf file.



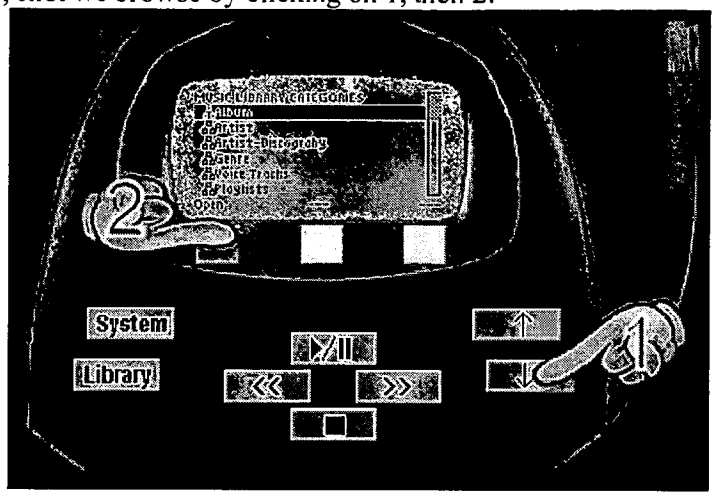
Running Oasim shows a splash screen and then:



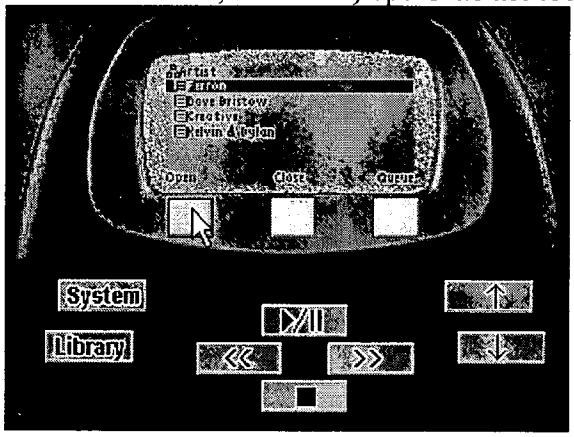
This opening screen is dynamically built based on the TreeDef.inf file and shows that a user can browse audio by:

- Album, and then specific track(s) on the selected album
- Artist, and then track(s) by the selected artist
- Artist, and then albums by the selected artist, and then track(s) on the album by the selected artist
- Genre of music, and then track(s) within that genre
- Voice (i.e. spoken) tracks, then by genre of spoken track, and then the specific track(s)
- Playlists of tracks

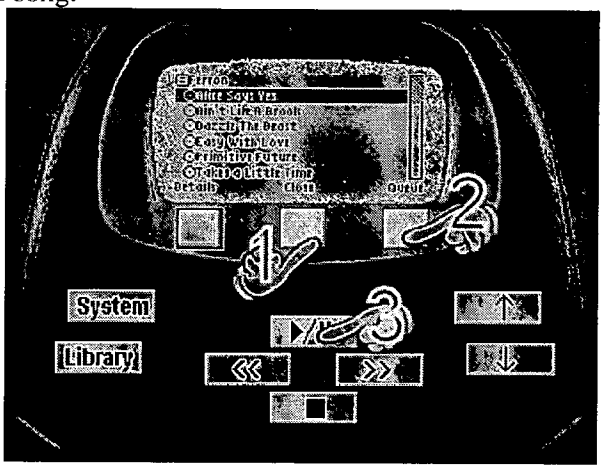
As an example, first we browse by clicking on 1, then 2:



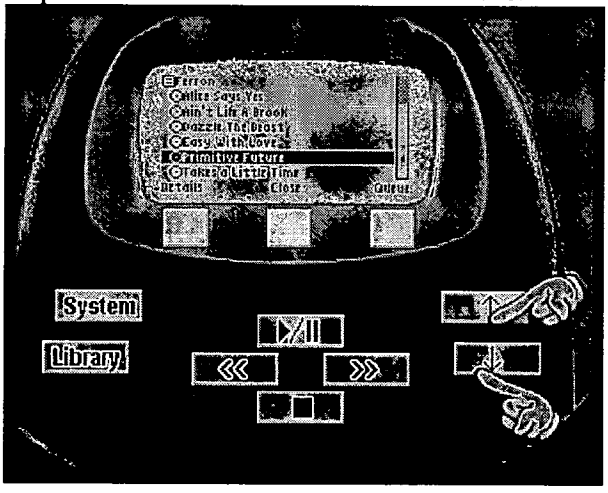
This brings us 1) to the Artist selection, and then 2) opens the list of Artists.



Clicking on the open button again, shows a list of tracks by the selected artist (Ferron). Clicking on the 1) Close button returns to the list of Artists. Clicking on the 2) button adds the selected song to the currently playing playlist (or starts the song if no songs are playing yet). Clicking on 3) stops any currently playing music and immediately starts playing the selected song.

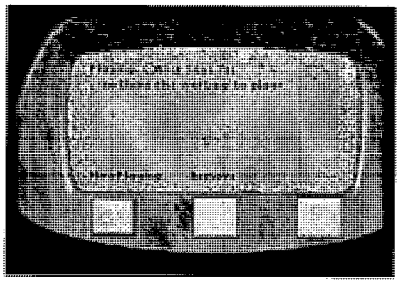


You can also use the up and down arrows to select other tracks.

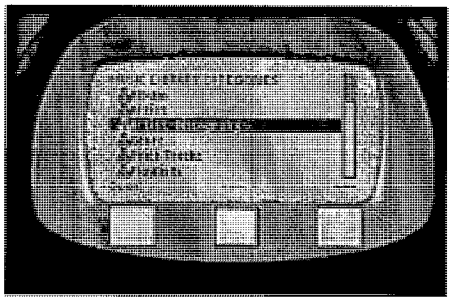


Clicking Play on a track shows the play screen and actually plays the song through the computer speakers (of the computer running the simulation).

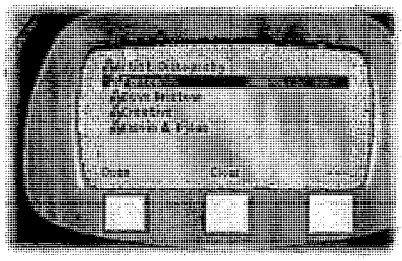
Clicking on Q-List shows the current playlist and lets you dynamically add other songs that you browse to.



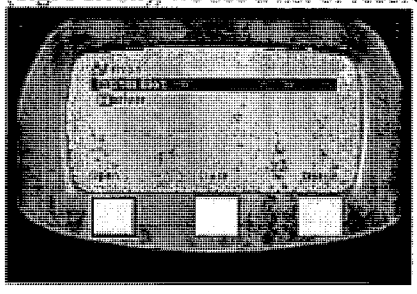
Returning to the home page (by clicking Library), you can select another view of music-by-artist:



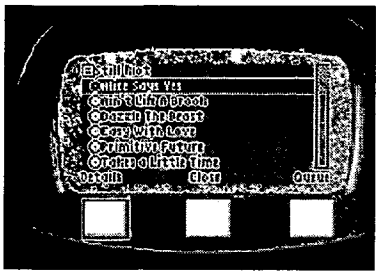
In this view, we see a list of artists:



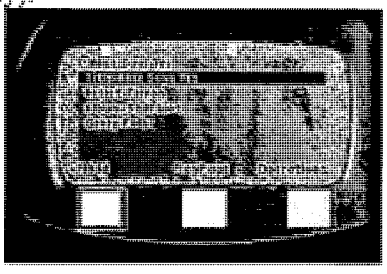
Then, if we select the artist (e.g. Ferron), we see a list of records by the artist):



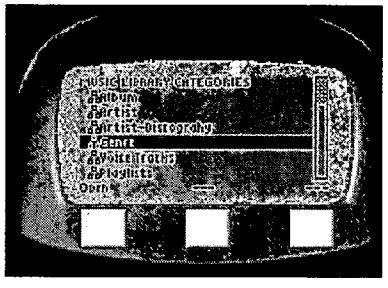
And clicking Open again shows the track list for that record.



Selecting a song and clicking Details shows detailed information about the song (i.e. what places it in the hierarchy).



Back at the home page, you could select Genre to see a list of Genres.



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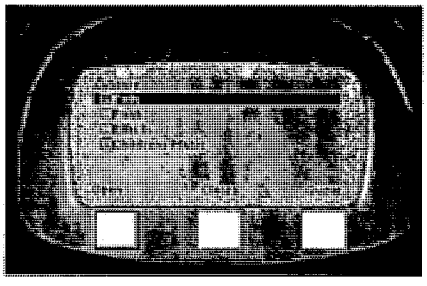
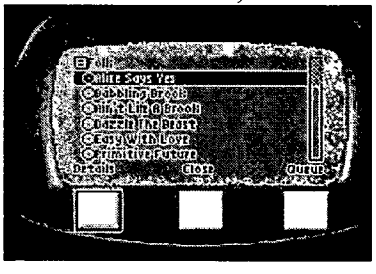


And within a Genre, see the songs from that Genre.



If you wanted to see a list of Artists with songs in that Genre, you could add a line to the TreeDef.inf file:

Genre by Artist|0x01|GMN

MCHUGH DECLARATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent No.:	**6,928,433**	Reexam Control No.:	**95/001,274**
Original Issue Date:	August 9, 2005	Examiner:	STEELMAN, MARY J.
Original Serial No.:	09/755,723	Group Art Unit:	3992
Original Filing Date:	January 5, 2001	Confirmation No.:	6990
By:	Ron Goodman, Howard N. Egan, David Bristow		
For:	AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA		

Mail Stop *Inter Partes* Reexam
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF CRAIG MCHUGH UNDER 37 CFR § 1.132

State of California

I, Craig McHugh, being duly sworn, depose and say:

1. I am the president and chief operating officer of Creative Labs, Inc. ("Creative Labs"), which is incorporated under the laws of California, and which has its primary location in Milpitas, California. Creative Labs is a wholly owned subsidiary of Creative Technology Ltd., which is a public company organized under the laws of Singapore. Another wholly owned subsidiary of Creative Technology Ltd. is the Creative Advanced Technology Center ("Creative ATC"), located in Scotts Valley, California. Throughout the remainder of this document, a reference to "Creative" alone means collectively Creative Technology Ltd., Creative Labs, and Creative ATC.

2. Creative is one of the original pioneers in the field of portable media players (*e.g.*, MP3 players). Much of Creative's research and development activity for portable media players was conducted by engineers and scientists working at Creative ATC. Operations at Creative Labs include sales, marketing, finance, operations, product management, testing and compliance.

3. I joined Creative in November, 1993 to help build the company's worldwide original equipment manufacturing ("OEM") business, and I subsequently served as vice president of Sales and Marketing. I served as general manager of Creative Labs starting in January, 1996. I was promoted to president of Creative Labs on July 1, 1998. Prior to joining Creative, I spent eight years at Trace, Inc., a disk manufacturer, where I held the position of vice president, Sales and Marketing. I have served on the Boards of THX, Cambridge SoundWorks, Trace Inc., and Nakamimichi USA. I earned a Bachelor of Science degree in Business Administration and a Bachelor of Arts degree in Economics from St. Mary's College in Moraga, California where I graduated magna cum laude in 1980.

4. In my capacity as president and chief operating officer of Creative Labs, I oversee strategic development and operations for sales, marketing and distribution of Creative's products in North America, South America and Europe. Since 1999, I have overseen operations for sales, marketing and distribution of a number of portable media players sold by Creative, including the Creative NOMAD® Jukebox products and the Creative Zen products, which are further discussed below.

5. Attached as Exhibit A is a copy of U.S. Patent No. 6,928,433 (the "'433 Patent"). I am very familiar with the inventions claimed in the '433 Patent because they were used in Creative's NOMAD® and Zen portable media players, which have enjoyed great commercial success, as well as in our current family of Zen portable media players. For reasons explained herein, the success of these Creative products is directly attributable the advantages of the inventions of the '433 Patent. Indeed, the '433 patent is well known throughout the entire portable media player industry as the "Zen Patent" because of its association with the Zen portable media players.

6. The inventions of the '433 Patent imparted easy to use navigational qualities that had not been present in other portable media players prior to the invention. These inventions were an essential element to the efficient accessing of tracks on high capacity portable media players; they enabled the development, release, and commercial sales success of the Creative NOMAD® and Zen portable media players as well as the commercial success of portable media players made by Creative's competitors subsequent to the release of the Nomad Jukebox.

7. As explained herein, the inventions of the '433 Patent have been used in portable media players sold by Apple Computer, Inc. ("Apple"). In particular, the famous iPod products from Apple use the inventions claimed in the '433 Patent.

8. I submit this declaration, along with the attached exhibits, in support of facts and evidence demonstrating that the inventions claimed in the '433 Patent have enjoyed great commercial success, and further that the '433 Patent has been licensed to Apple.

9. Also in this declaration, I will explain and provide evidence showing that: (1) the inventions of the '433 Patent have been used in many of Creative's NOMAD® and ZEN portable media players, and also in many portable media player products sold by Apple under the brand name iPod; (2) the NOMAD®, ZEN, and iPod portable media player products have enjoyed great commercial success; and (3) the commercial success of the NOMAD®, ZEN, and iPod products is attributed to the advantages provided by the inventions claimed in the '433 Patent for purposes of allowing a user to efficiently and intuitively organize and access a large number of songs stored on a high capacity portable media player, which has a small display screen and limited controls.

10. In preparation of this declaration, I have considered the following documents, which are attached hereto as exhibits listed below.

Exhibit	Document Description
A	U.S. Patent No. 6,928,433
B	August 30, 2005 Press Release from Creative, entitled "Creative Awarded U.S. Patent on Its Invention of User Interface for Portable Media Players"
C	January 5, 2000 Press Release from Creative, entitled "Creative Expands Nomad Family With New Portable Digital Audio Players"
D	January 28, 2000 Press Release from Creative, entitled "Creative Technology Posts Better Than Expected Q2 FY00 Earnings"
E	September 18, 2000 Press Release from Creative, entitled "Creative's NOMAD Jukebox Hits The Road With Entire Music Collections"
F	Transcript of Speech by Craig McHugh, President of Creative Labs, at the Press Conference Call on the ZEN Patent held on 30 August, 2005
G	January 16, 2001 Press Release from Creative, entitled "Creative Ships 100,000th NOMAD Jukebox"
H	May 8, 2003 Press Release from Creative, entitled "Creative Technology Announces Third Quarter Fiscal 2003 Results In-Line With Expectations"
I	October 25, 2002 Press Release from Creative, entitled "Creative Technology Announces First Quarter FY 2003 Revenues And Operating Profit At Top End Of

Exhibit	Document Description
	Expectations"
J	October 20, 2004 Press Release from Creative, entitled "Creative ZEN MICRO Wins 'Best of DigitalLife 2004' Award"
K	October 19, 2005 Press Release from Creative, entitled "Creative Zen Vision Wins 'Best of Show' Award at DigitalLife 2005"
L	Web-pages from Creative Website (www.creative.com) Listing Awards and Reviews of Creative Products for the Year 2002
M	Web-pages from Creative Website (www.creative.com) Listing Awards and Reviews of Creative Products for the Year 2004
N	Web-pages from Creative Website (www.creative.com) Listing Awards and Reviews of Creative Products for the Year 2005
O	Complaint Under Section 337 of The Tariff Act of 1930, As Amended, as filed with the International Trade Commission ("ITC") by Creative Labs, Inc. and Creative Technology Ltd. on May 15, 2006.
P	Response of Apple Computer, Inc. To The Complaint of Creative Labs, Inc. And Creative Technology Ltd., as filed with the ITC on July 6, 2006 under ITC Investigation No. 337-TA-573.
Q	Joint Motion To Terminate The Investigation Based On A Binding Term Sheet, as filed with the ITC on August 29, 2006 under ITC Investigation No. 337-TA-573
R	"Inside look at Birth of the iPod," *Wired* Magazine, July 21, 2004 http://www.wired.com/gadgets/mac/news/2004/07/64286?currentPage=all
S	"iPod UI: Love it or hate it?" by Jason D. O'Grady, zdnet.com, June 9, 2006 http://www.zdnet.com/blog/apple/ipod-ui-love-it-or-hate-it/214
T	"Nokia to Introduce Digital Music Service," by Eric Pfanner, August 30, 2007 © 2007 The New York Times Company
U	"Audio navigation for your iPod," by Staska, May 4, 2006, unwiredview.com http://www.unwiredview.com/2006/05/04/apples-ipod-audio-interface/
V	January 10, 2005 Press Release from Creative, entitled "Creative Zen Micro Photo Wins 'Best of CES' Award"
W	January 9, 2006 Press Release from Creative, entitled "Creative ZEN VISION:M Wins 'Best of CES' in MP3 and Portable Video Category and Also Wins Overall 'Best in Show' Award"

11. Creative was one of the first companies to invest in the research, development and commercialization of portable media players. Creative's first portable media players, sold in the late 1990's, used flash memory as a 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 higher capacity portable

media players and began development of the NOMAD® Jukebox using a high capacity hard drive as the storage medium. *See, e.g.*, Exhs. B, C, D and E. The number of songs that could be stored on this portable digital media player was dramatically greater than the flash based players. *Id.* However, the large number of songs presented a significant technological hurdle - how to organize and efficiently access the large and rapidly growing number of songs stored on these devices in view of their small display screens and limited controls.

12. In addressing the above-described hurdle, and while developing the first NOMAD® Jukebox product, a team of Creative's engineers at Creative ATC in Scotts Valley, California invented a user-friendly interface that provided efficiency and intuitive navigation for the organization and access of songs stored on a portable media player. *See* Exh. A. This invention led to a patent application that matured into the '433 Patent. *See* Exhs. A. and B; *see also* Exh. O at ¶¶ 9-13, and exhibits 9-10.

13. Portable media players available from Creative evolved from the now-dormant "NOMAD®" brand to the "Zen" brand. *See, e.g.*, Exh. H. Upon personal knowledge and also upon information and belief, the NOMAD® Jukebox and Zen portable media player products have used the methods claimed in the '433 Patent to provide users with a convenient and efficient user interface for managing and accessing a large number of songs in a portable media player. *See* Exhs. A, B and F; Exh. O at ¶¶ 9-13, and exhibits 9-10.

14. Upon personal knowledge and also upon information and belief, a number of NOMAD® Jukebox products have used the methods claimed in the '433 Patent, including: NOMAD Jukebox 3; NOMAD Jukebox 2; and NOMAD Jukebox. *See* Exhs. A, B and F; *see also* Exh. O at ¶¶ 9-13 and 42, and exhibits 9-10. These products are hereinafter referred to as the "NOMAD® commercial embodiments."

15. Upon personal knowledge and also upon information and belief, a number of Zen products have used the methods claimed in the '433 Patent, including: Zen Vision: M; Zen Sleek Photo; Zen Micro, Zen Micro Photo; Zen Vision; Zen Sleek; Zen Micro; Zen Touch; Zen Xtra; Zen NX; Zen 2 (NOMAD Jukebox Zen USB 2.0); and Zen (NOMAD Jukebox Zen). *See* Exhs. A, B and F; *see also* Exh. O at ¶¶ 9-13 and 42, and exhibits 9-10. These products are hereinafter referred to as the "Zen commercial embodiments." Because the '433 Patent covers the Zen commercial embodiments, the '433 Patent has

become known in the field of portable media players as the "Zen Patent." *See* Exhs. A, B and F.

16. Creative first announced the release of the NOMAD® Jukebox and presented the first prototype devices at the Consumer Electronics Show ("CES") in January, 2000. *See* Exhs. C and D. With a 6GB storage capacity, the Creative NOMAD® Jukebox could store "an entire music collection (over 150 albums)." *See* Exhs. C, E and F. The NOMAD® Jukebox presented at CES in January, 2000 practiced the invention of the '433 Patent. I was present at the Consumer Electronics Show in Las Vegas, NV in January of 2000, and I participated in presenting the NOMAD® Jukebox to attendees at the show. Even before Creative began shipping the NOMAD® Jukebox, it was already enjoying critical acclaim, including the Editor's Choice award for technical innovation from *Popular Mechanics* magazine. *See* Exh. D.

17. Creative began shipping the NOMAD® Jukebox in the U.S. on September 18, 2000. See Exh. E. By January 16, 2001, less than four months later, Creative announced that it had already shipped 100,000 units of the NOMAD Jukebox portable media players. *See* Exh. G. This demonstrates incredible commercial success because it is rare for a technologically forward product to sell so many units in such a short time period, even more impressive in view of the fact that the NOMAD players were at a price point several times higher than the existing flash based mp3 players.

18. By January of 2001, the NOMAD Jukebox had won several awards, including: Product of the Year from *etown.com*; the *CNET* Editor's Choice award; and the prestigious Gadget of the Month award from *PC* Magazine. *See* Exh. G. The NOMAD® commercial embodiments continued to win awards in 2002, including Editor's Choice awards from both *PC Gamer* and *Computer Shopper*. *See* Exh. L. The NOMAD® commercial embodiments also won numerous awards in 2003, including Editor's Choice awards from *Computer Shopper* and *DV*® magazine. *See* Exh. H.

19. The NOMAD Jukebox Zen, which was sold primarily in 2003, was the first player to include the "Zen" branding. *See, e.g.,* Exhs. H and I. The NOMAD Jukebox Zen won awards in 2003 including highest ratings from *TechEdge* magazine and *Laptop* magazine. *Id.*

20. In 2004 and 2005, the Zen commercial embodiments won numerous prestigious awards worldwide, including: the Best of DigitalLife 2004 award in the Portable Music

Player category; the Editor's Choice Award from *PC* magazine; the "Best of Show" award in the "Portable Gear" category at the 2005 DigitalLife consumer show; the Editor's Choice Award from *Laptop* magazine; and many others. *See* Exhs. J, K, M, N.

21. In 2005, the Zen Micro Photo won the prestigious "Best of CES" 2005 award in the "Audio to Go" category. *See* Exh. V. The Zen Micro Photo included all the features of the award-winning Zen Micro MP3 player. *Id.*

22. In 2006, the Zen Vision:M portable media player won the "Best of CES" 2006 award in the MP3 and Portable Video category, and it also won the overall "Best in Show" award over entries from more than 2300 companies exhibiting at the 2006 Consumer Electronics Show. *See* Exh. W.

23. The '433 patent (also called the "Zen Patent") issued on August 9, 2005. *See* Exh. A. On August 30, 2005, I gave a speech at a press conference call concerning the Zen Patent. *See* Exhs. B and F. In that speech, I pointed out that Creative was one of the global leaders in the MP3 player market, and that Creative had been an innovator in the field of portable media players. *Id.* In the three fiscal quarters preceding this speech, Creative had sold more than six million MP3 players. *Id.*

24. I believed in 2005, as I do now, that the commercial success of the NOMAD® and Zen commercial embodiments is due to their use of the methods claimed in the Zen Patent. *See* Exh. F. I explained at the press conference on August 30, 2005 that the method claimed in the Zen patent enables users of portable media players to efficiently and intuitively navigate and select from a large number of tracks stored on a portable media player having a very small display screen. *Id.* I also stated that the claimed method was being used in many of the Creative ZEN and NOMAD Jukebox MP3 players. *Id.* In addition, I announced on August 30, 2005 that some competing portable media players (*i.e.*, the iPod and iPod mini sold by Apple Computer, Inc.) also practice the methods claimed in the '433 Patent. *Id.*

25. At the same press conference on August 30, 2005, I presented a series of slides showing exactly how the Zen Micro MP3 player practices an example of the hierarchical navigation method, as claimed in the ZEN Patent. *See* Exh. F. The example I covered illustrates how a user of the patented method may experience the user interface upon going from menu to artists, to albums, to a list of tracks. *Id.* I also explained that, alternatively, a user might start by selecting Genres from a display screen to show a

listing of various genres, which could lead to a listing of artists, which could lead to a listing of albums and then to a listing of tracks. *Id.* The point was to show that the claimed method is very intuitive and efficient in allowing a user to navigate and select from a large number of tracks stored in a high capacity portable media player. *Id.*

26. For over ten years, I have closely watched the portable media players industry. In this time period, I have observed that the most successful portable media player products have been the ones using the invention of the '433 Patent. These include Apple's iPod products, which have largely dominated the market in recent years.

27. In January 2001, Steve Jobs, the cofounder and CEO of Apple, approached a Creative employee, at the MacWorld tradeshow to extol the virtues of the NOMAD Jukebox. *See* Exh. O, ¶ 13. Mr. Jobs then discussed a possible meeting between Creative and Apple. *Id.* 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. *See* Exh. O, ¶ 14; Exh. P, ¶ 14. Creative showed Apple several prototype portable digital media players that showed the patented interface. *Id.* Then on October 23, 2001, Apple announced the introduction of its first iPod, having a user interface that practices the invention of the '433 Patent. *See* Exh. O, ¶ 16; Exh. P, ¶ 16; Exh. O, ¶¶ 1, 17-18, and 28-35; and Exhibit 4. An Apple insider was later quoted as saying "Apple also wanted a new interface, which it designed in-house in about three months." *See* Exh. R.

28. On May 15, 2006, Creative filed a "Complaint Under Section 337 of The Tariff Act of 1930, As Amended" (the "Complaint") with the International Trade Commission ("ITC") alleging that Apple Computer, Inc. ("Apple") infringed the '433 Patent by selling and importing its iPod and iPod Nano products. *See* Exh. O, ¶¶ 1, 17-18, and 28-35. I personally verified and signed this Complaint. *See* Exh. O, Verification of Complaint.

29. The Complaint shows how Apple's iPod is covered by the '433 Patent. Along with the Complaint, Creative provided an exemplary claim chart showing infringement of claims 1 and 5 of the '433 Patent by Apple's iPod. *See* Exh. O, ¶¶ 1, 17-18, and 28-35; and Exhibit 4. The claim chart attached as exhibit 4 to the Complaint shows how Apple's iPod practices each and every element of claims 1 and 5 of the '433 Patent. *Id.*

30. The Complaint also shows how Creative's NOMAD® commercial embodiments and Zen commercial embodiments are covered by the '433 Patent. Along with the

Complaint, Creative provided a "Non-Exclusive List of Creative Products That Practice One of More of the Asserted Claims," including claims 1 and 5. *See* Exh. O at ¶¶ 9-13 and 42, and exhibit 9. In addition, Creative provided an exemplary claim chart showing how Creative's Zen Vision:M™ portable MP3 player practices at least claims 1 and 5 of the '433 Patent. *See* Exh. O at ¶¶ 9-13 and 42, and exhibit 10.

31. On July 6, 2006, Apple filed a "Response of Apple Computer, Inc. To The Complaint of Creative Labs, Inc. And Creative Technology Ltd." ("Response") in ITC Investigation No. 337-TA-573. *See* Exh. P. In the Response, Apple denied infringement based on its own interpretation of certain claim terms. *See* Exh. P, pp. 14-18.

32. However, less than two months after filing its Response in ITC Investigation No. 337-TA-573, Creative and Apple reached an agreement under which Apple agreed to pay one hundred million dollars ($100,000,000) to Creative in exchange for a license to the '433 Patent and other consideration. *See* Exh. Q, ¶¶ 6 and 13.

33. Upon information and belief, and in my own opinion, the user interface of Apple's iPod, which practices the inventions of the '433 Patent, has been the main driving force for the huge commercial success of the iPod. Other in the industry have cited the ease of use of the iPod user interface as the reason for its success. On June 9, 2006, one industry follower stated:

> **One of the reasons that the iPod is so successful**, it can be argued, is because **the interface is drop dead simple**. So simple in fact that young children and seniors alike can pick it up with ease.

See Exh. S, p. 1.

34. On May 4, 2006, another reviewer stated that "[o]ne of the **key factors in Apple's iPod success was it's convenient user interface** for navigating through the huge music libraries stored inside the player." *See* Exh. U, p. 1 (emphasis added).

35. On August 30, 2007, another major manufacturer of portable media players – Nokia - announced that it would introduce a digital music service "along with an **easier-to-use Apple-style mobile interface.**" *See* Exh. T, p. 1 (emphasis added). As explained above, the commercial appeal of the iPod user interface is derived from the inventions of the '433 Patent, which allow a user to access songs in a logical and user-friendly manner. *See* Exh. O, ¶¶ 1, 17-18, and 28-35; and Exhibit 4.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code.

Executed May 27, 2010 at Milpitas, California.

Craig McHugh
President and Chief Operating
Officer Creative Labs, Inc.

EXHIBIT
A

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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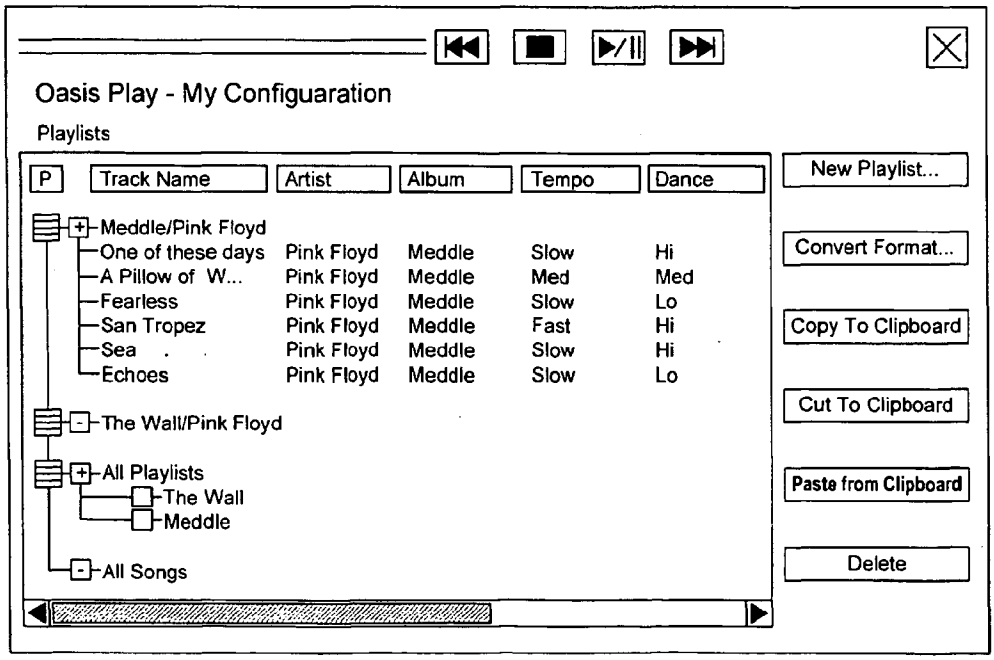
* cited by examiner

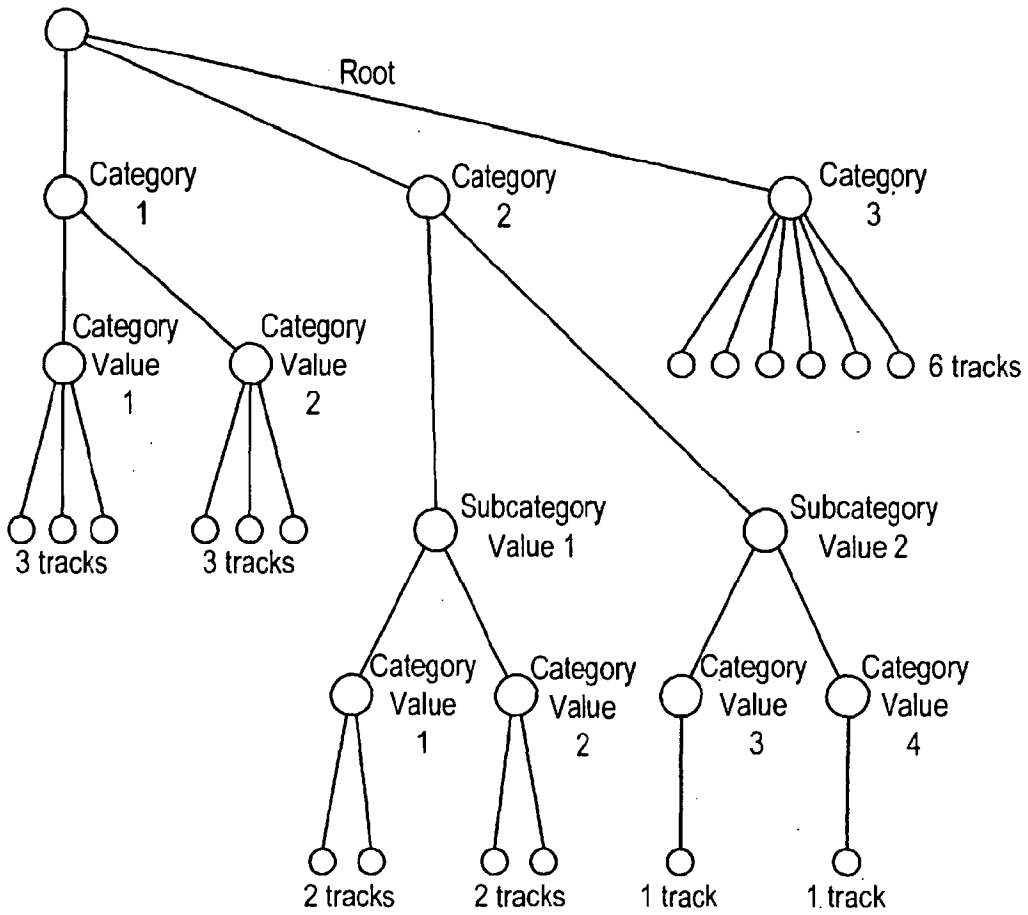
Primary Examiner—Charles Rones
(74) *Attorney, Agent, or Firm*—Russell N. Swerdon; Creative Technology LTD

(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.

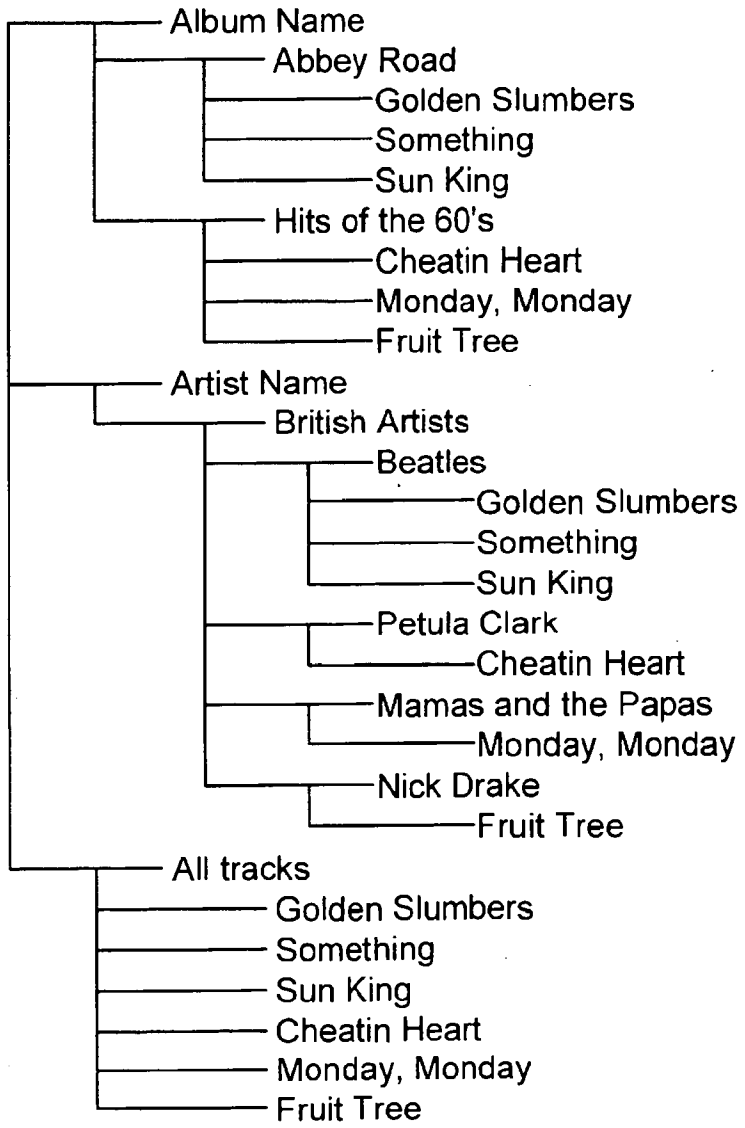


FIG. 3.

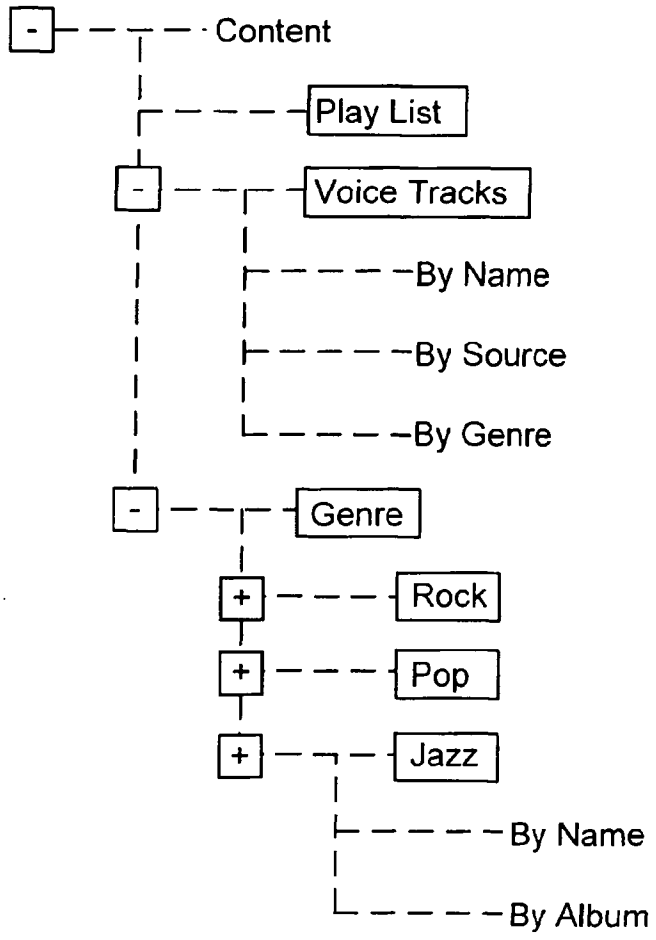


FIG. 4.

file data	album	name	genre	type

FIG. 5.

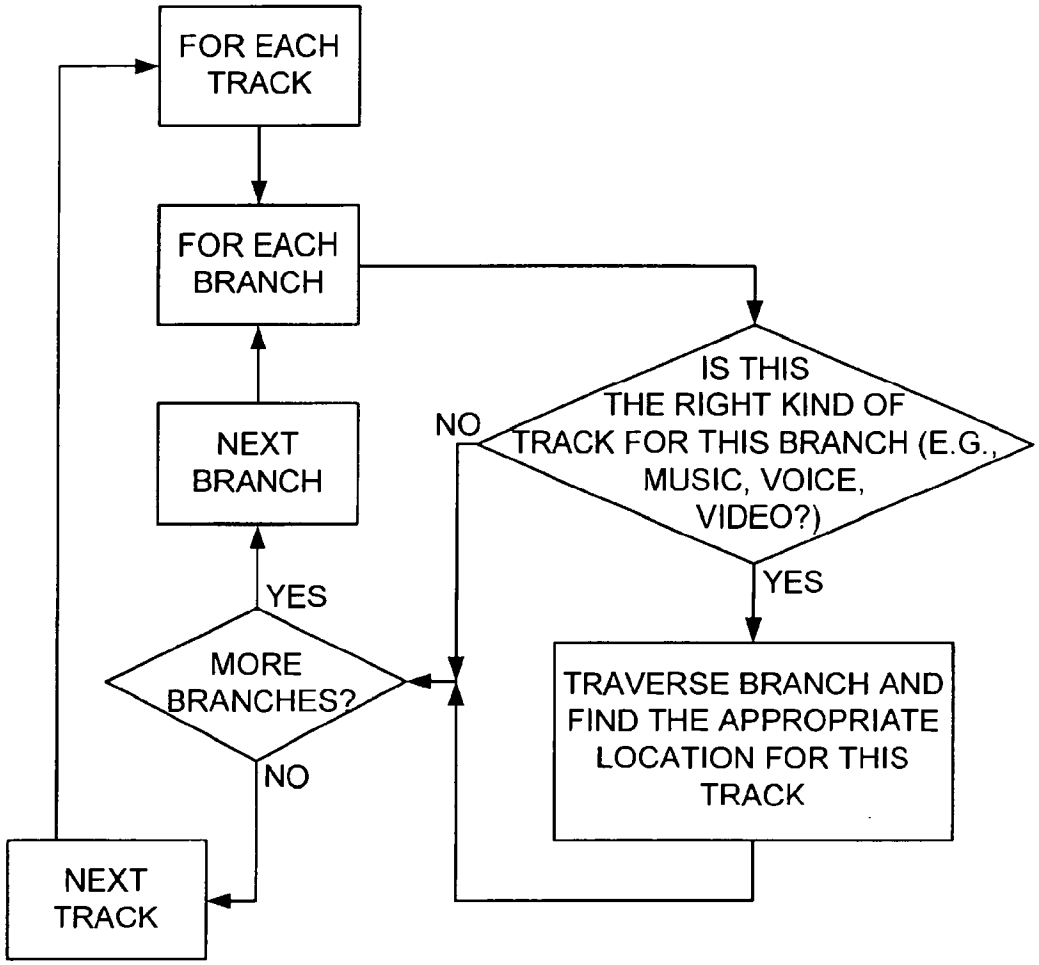

FOR EACH TRACK
FOR EACH BRANCH
IS THIS THE RIGHT KIND OF TRACK FOR THIS BRANCH (E.G., MUSIC, VOICE, VIDEO?)
NO
YES
NEXT BRANCH
YES
MORE BRANCHES?
NO
TRAVERSE BRANCH AND FIND THE APPROPRIATE LOCATION FOR THIS TRACK
NEXT TRACK

FIG. 6.

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.

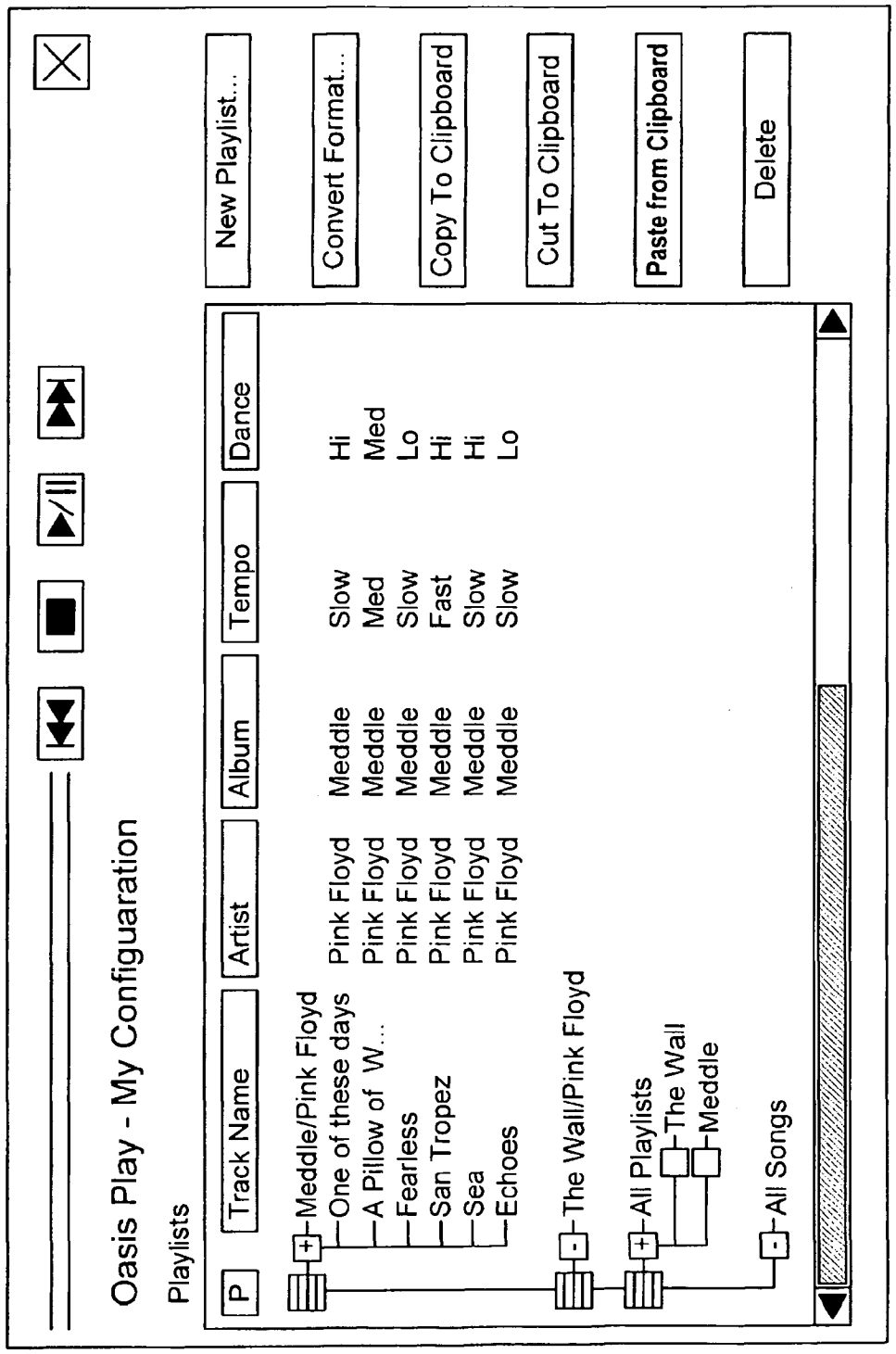

Oasis Play - My Configuaration
Playlists
P
Track Name
Artist
Album
Tempo
Dance
Meddle/Pink Floyd
One of these days
A Pillow of W...
Fearless
San Tropez
Sea
Echoes
The Wall/Pink Floyd
All Playlists
The Wall
Meddle
All Songs
Pink Floyd
Meddle
Slow
Med
Fast
Hi
Lo
New Playlist...
Convert Format...
Copy To Clipboard
Cut To Clipboard
Paste from Clipboard
Delete

FIG. 8.

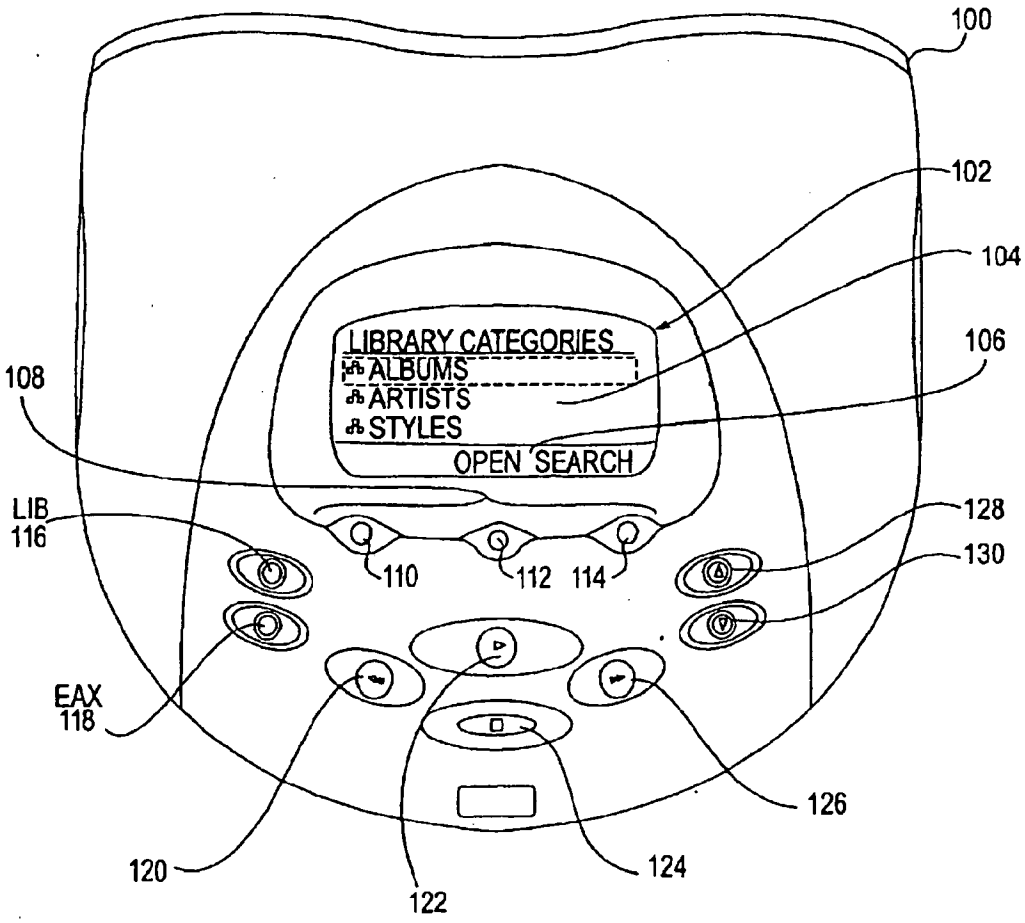

100
102
104
106
108
LIBRARY CATEGORIES
ALBUMS
ARTISTS
STYLES
OPEN SEARCH
LIB
116
110
112
114
128
130
EAX
118
120
122
124
126

FIG. 9

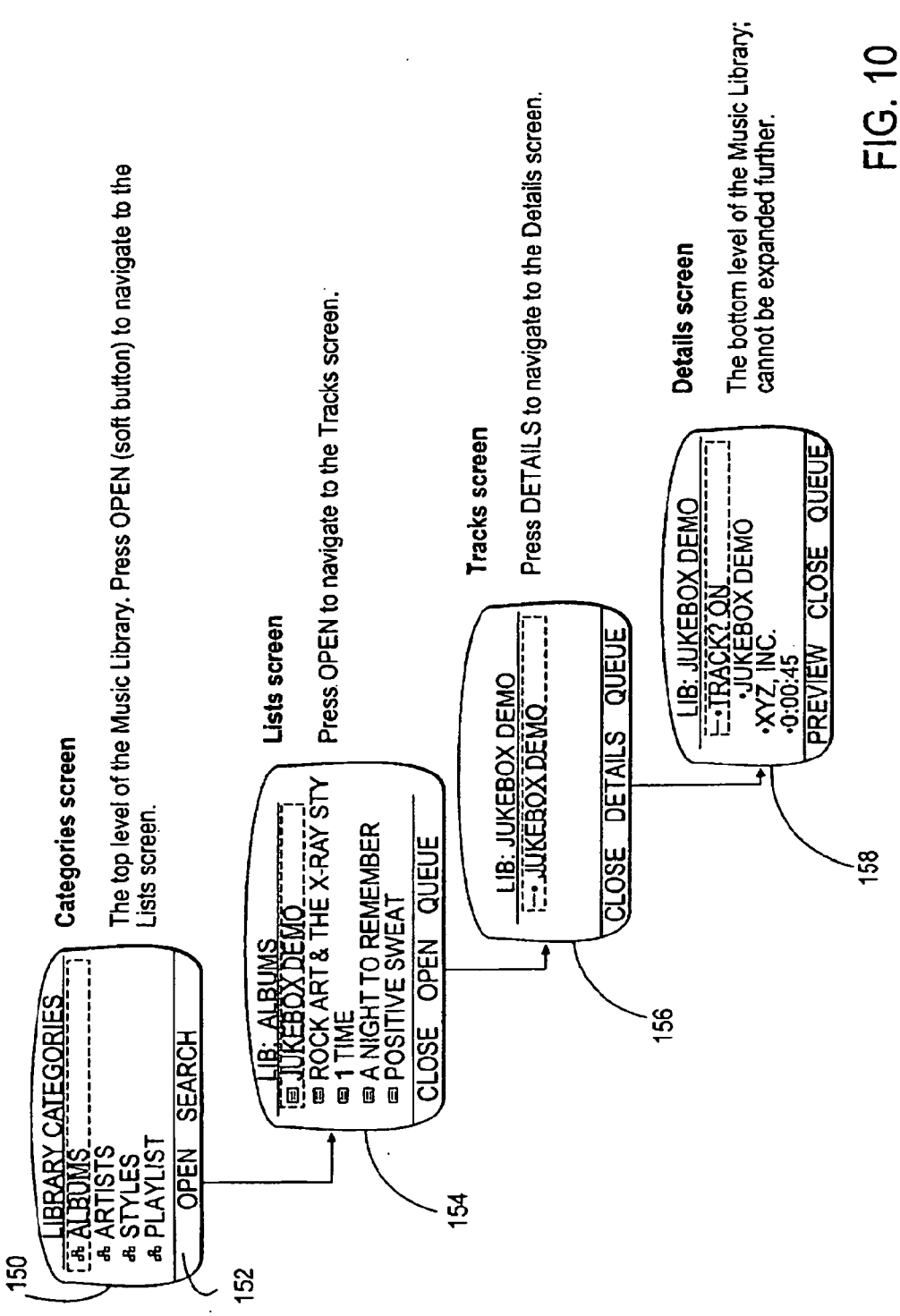

150
LIBRARY CATEGORIES
ALBUMS
ARTISTS
STYLES
PLAYLIST
OPEN SEARCH
152
Categories screen
The top level of the Music Library. Press OPEN (soft button) to navigate to the Lists screen.
LIB: ALBUMS
JUKEBOX DEMO
ROCK ART & THE X-RAY STY
1 TIME
A NIGHT TO REMEMBER
POSITIVE SWEAT
CLOSE OPEN QUEUE
154
Lists screen
Press OPEN to navigate to the Tracks screen.
LIB: JUKEBOX DEMO
JUKEBOX DEMO
CLOSE DETAILS QUEUE
156
Tracks screen
Press DETAILS to navigate to the Details screen.
LIB: JUKEBOX DEMO
TRACK1.ON
JUKEBOX DEMO
XYZ, INC.
0:00:45
PREVIEW CLOSE QUEUE
158
Details screen
The bottom level of the Music Library; cannot be expanded further.

FIG. 10

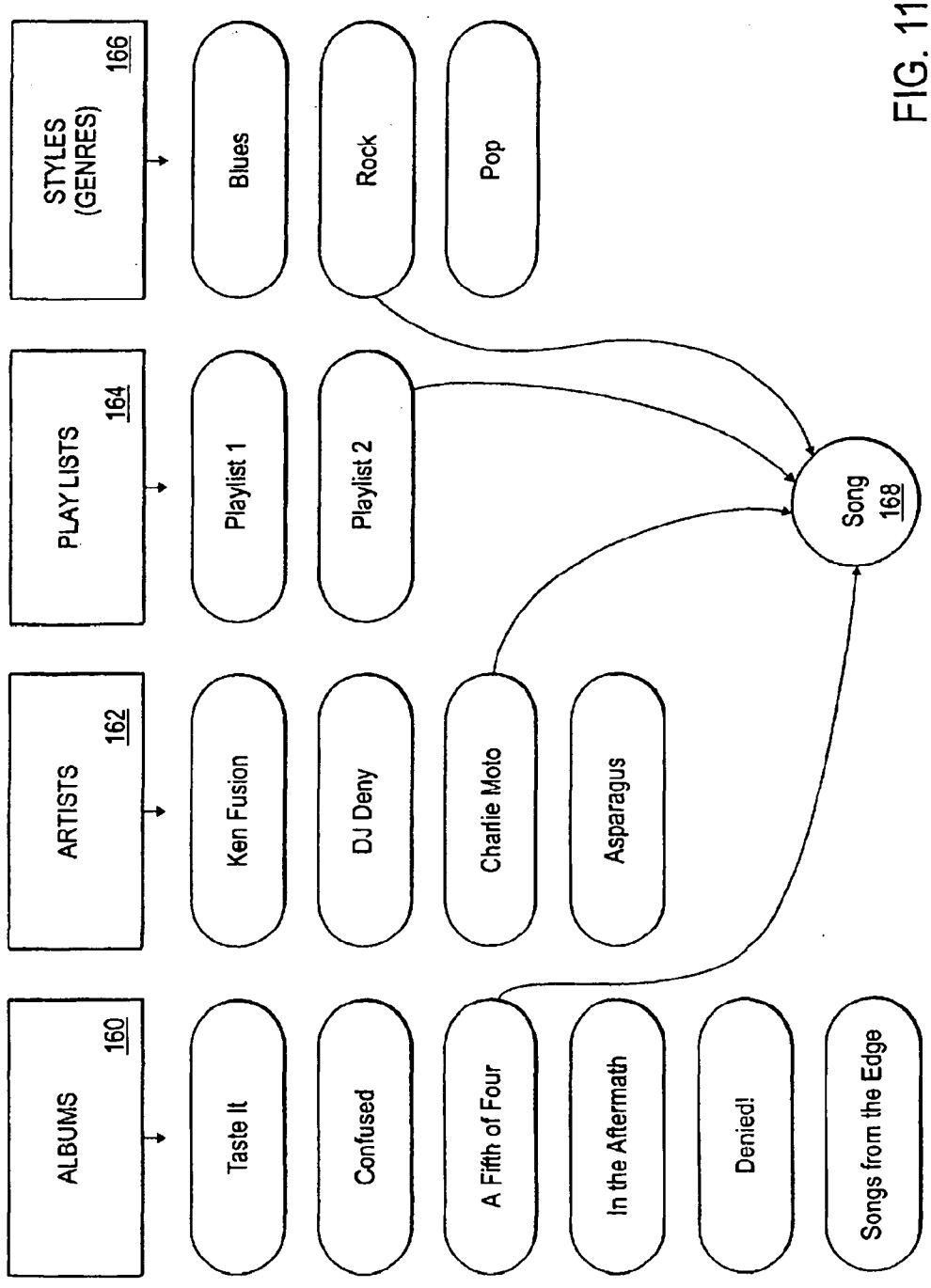

STYLES (GENRES) 166
Blues
Rock
Pop
PLAY LISTS 164
Playlist 1
Playlist 2
ARTISTS 162
Ken Fusion
DJ Deny
Charlie Moto
Asparagus
ALBUMS 160
Taste It
Confused
A Fifth of Four
In the Aftermath
Denied!
Songs from the Edge
Song 168

FIG. 11

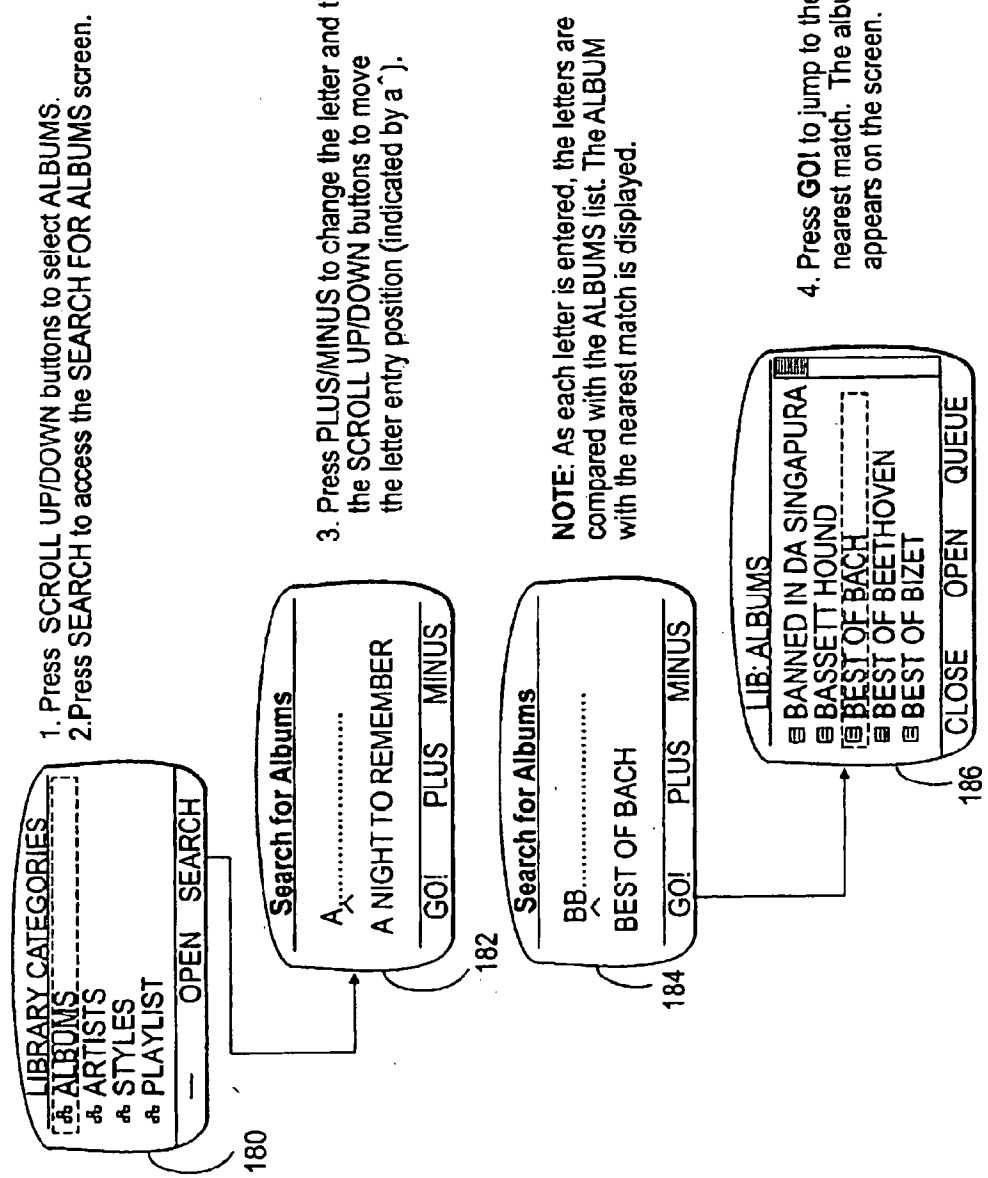

1. Press SCROLL UP/DOWN buttons to select ALBUMS.
2.Press SEARCH to access the SEARCH FOR ALBUMS screen.
LIBRARY CATEGORIES
ALBUMS
ARTISTS
STYLES
PLAYLIST
OPEN SEARCH
180
3. Press PLUS/MINUS to change the letter and then press the SCROLL UP/DOWN buttons to move the letter entry position (indicated by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

FIG. 12

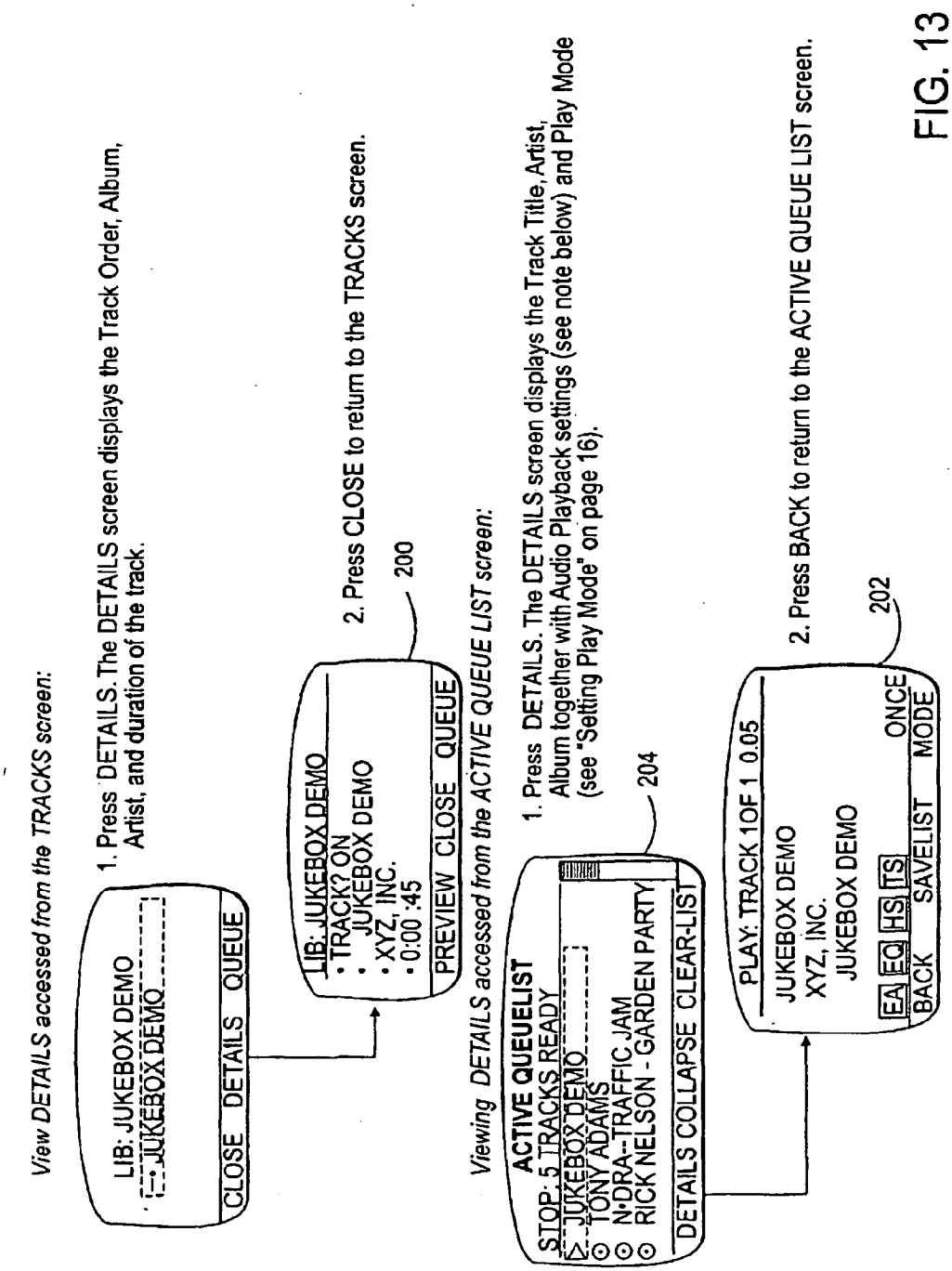

View DETAILS accessed from the TRACKS screen:
1. Press DETAILS. The DETAILS screen displays the Track Order, Album, Artist, and duration of the track.
LIB: JUKEBOX DEMO
JUKEBOX DEMO
CLOSE DETAILS QUEUE
LIB: JUKEBOX DEMO
• TRACK7 ON
• JUKEBOX DEMO
• XYZ, INC.
• 0:00 :45
PREVIEW CLOSE QUEUE
2. Press CLOSE 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).
204
ACTIVE QUEUELIST
STOP: 5 TRACKS READY
JUKEBOX DEMO
TONY ADAMS
N•DRA--TRAFFIC JAM
RICK NELSON - GARDEN PARTY
DETAILS COLLAPSE CLEAR-LIST
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

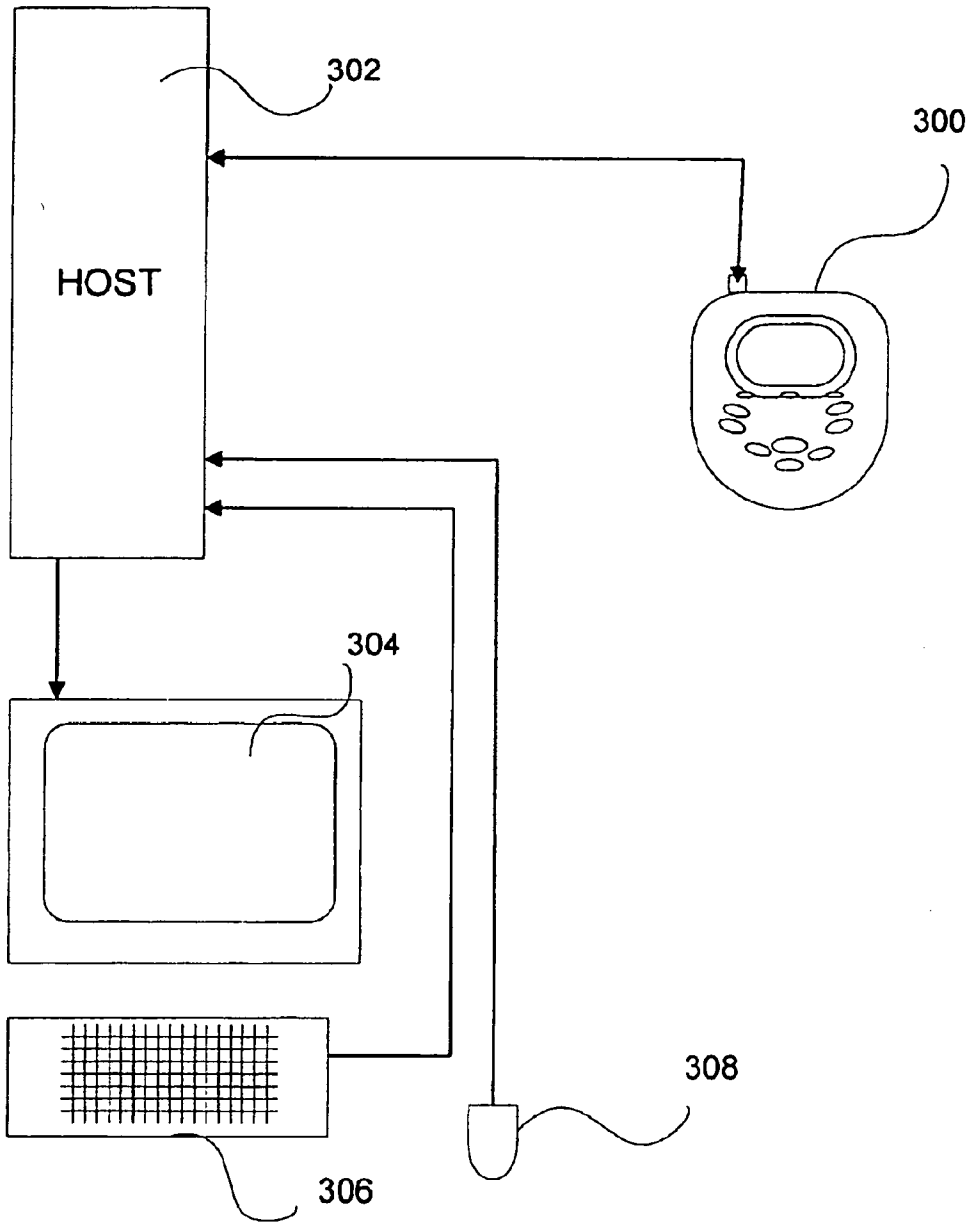


FIG. 14

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.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
Certificate

Patent No. 6,928,433 B2 Patented: August 9, 2005

On petition requesting issuance of a certificate for correction of inventorship pursuant to 35 U.S.C. 256, it has been found that the above identified patent, through error and without any deceptive intent, improperly sets forth the inventorship.

Accordingly, it is hereby certified that the correct inventorship of this patent is: Ron Goodman, Santa Cruz, CA (US); Howard N. Egan, Capitola, CA (US); and David Bristow, Bainbridge Island, WA (US).

Signed and Sealed this Sixteenth Day of May 2006.

CHARLES RONES
Supervisory Patent Examiner
Art Unit 2164

EXHIBIT
B

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CREATIVE AWARDED U.S. PATENT ON ITS INVENTION OF USER INTERFACE FOR PORTABLE MEDIA PLAYERS

"ZEN Patent" Granted for Invention of its User Interface for Portable Media Players Including Many of Creative's ZEN and NOMAD Jukebox MP3 Players and Found in Some Competing Players Such as the Apple iPod and iPod mini

Singapore - August 30, 2005 - Creative Technology Ltd. (NASDAQ: CREAF), a worldwide leader in digital entertainment products, today announced that it has been awarded U.S. Patent 6,928,433, which Creative is referring to as the "ZEN™ Patent." The ZEN Patent was awarded to Creative for its invention of the user interface for portable media players, including many of the Creative ZEN and NOMAD® Jukebox MP3 players, and found in some competing players, such as the Apple iPod and iPod mini. The ZEN Patent covers the user interface that enables users of portable media players to efficiently and intuitively navigate among and select tracks on the players. Creative applied for the ZEN Patent on January 5, 2001 and it was awarded on August 9, 2005.

Creative's invention for the user interface for portable media players enables selection of at least one track in a portable media player as a user sequentially navigates through a hierarchy using three or more successive screens on the display of the player. One example would be the sequence of screens that could display artists, then albums, and then tracks. When the user selects an artist, the player displays a list of albums for that artist. Selection of one of the listed albums then displays a list of tracks on the album.

"The user interface covered by the ZEN Patent was invented by Creative research and development engineers in our Advanced Technology Center in Scotts Valley, California," said Sim Wong Hoo, chairman and CEO of Creative. "The first portable media player based upon the user interface covered in our ZEN Patent was our NOMAD Jukebox MP3 player. We shipped the NOMAD Jukebox to U.S. retail customers in September of 2000, and by November of 2000, it was already ranked as the top revenue-generating product in the U.S. in the digital audio player category, according to PC Data. By January of 2001, we announced that we had already sold 100,000 NOMAD Jukeboxes. The Apple iPod was only announced in October 2001, 13 months after we had been shipping the NOMAD Jukebox based upon the user interface covered by our ZEN Patent."

"I am very excited that we were awarded the ZEN Patent, which helps to protect our invention and recognizes our innovation in portable media players," said Sim. "After a major investment of time and effort by a group of our research and development engineers, we developed a way for a user to efficiently and intuitively navigate and select tracks from a significant number of tracks stored on a player. Before this invention, there was no intuitive and efficient way to deal with the large number of tracks that could be stored on a high-capacity player."

"There has been press coverage recently regarding the rejection of Apple's patent application, published as Pub. No. U.S. 2004/0055446 for a user interface in a multimedia player. This Apple patent application was filed on October 28, 2002. A related provisional application was filed by Apple on July 30, 2002, eighteen months after our filing date for the ZEN Patent and over twenty months after our NOMAD Jukebox based upon our user interface was on the market," added Sim.

"We continue to innovate in digital media players with the introduction of the ZEN Vision, which adds high-quality video playback to its MP3 music and digital photo viewing features. The ZEN Vision, as well as the upcoming ZEN Micro Photo with a color OLED screen and many more new products, will be based upon the user interface covered by the ZEN Patent," noted Sim.

The full text and images of the ZEN Patent, U.S. 6,928,433 are available at www.uspto.gov by doing a patent number search under issued patents.

About Creative

Creative (NASDAQ: CREAF) is a worldwide leader in digital entertainment products for PC users. Famous for its Sound Blaster® sound cards and for launching the multimedia revolution, Creative is now driving digital entertainment on the PC platform with products like its highly acclaimed MuVo® and ZEN portable audio players. Creative's innovative hardware, proprietary technology, applications and services leverage the Internet, enabling consumers to experience high-quality digital entertainment -- anytime, anywhere.

Safe Harbor for Forward-Looking Statements:

This press release contains forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause Creative's actual results to differ materially. Such risks and uncertainties include: Creative's ability to timely develop new products that gain market acceptance and to manage frequent product transitions; competitive pressures in the marketplace; exposure to excess and obsolete inventory; accelerated declines in the average selling prices of Creative's products; Creative's ability to successfully integrate acquisitions; potential fluctuations in quarterly results due to the seasonality of Creative's business and the difficulty of projecting such fluctuations; possible

disruption in commercial activities caused by factors outside of Creative's control, such as terrorism, armed conflict and labor disputes; a reduction in demand for computer systems, peripherals and related consumer products as a result of poor economic conditions, social and political turmoil; major health concerns; the proliferation of sound functionality in new products from competitors at the application software, chip and operating system levels; the deterioration of global equity markets; Creative's reliance on sole sources for many of its chips and other key components; component shortages which may impact Creative's ability to meet customer demand; Creative's ability to protect, enforce or exploit its proprietary rights; a reduction or cancellation of sales orders for Creative products; Creative's ability to successfully manage its expanding operations; the vulnerability of certain markets to current and future currency fluctuations; the effects of restricted fuel availability and rising costs of fuel; fluctuations in the value and liquidity of Creative's investee companies; and the potential decrease in trading volume and value of Creative's Ordinary Shares as a result of the Flow Back Restriction that commenced on June 1, 2003 and Creative's previous plan and any future plans to delist from NASDAQ and to eliminate its U.S. reporting obligations. For further information regarding the risks and uncertainties associated with Creative's business, please refer to its filings with the SEC, including its Form 20-F for fiscal 2004 filed with the SEC. Creative undertakes no obligation to update any forward-looking statement to conform the statement to actual results or changes in Creative's expectations.

EXHIBIT C

CONTACT INFORMATION:

Hector Marinez
Creative Labs, Inc.
hmarinez@creative.com

Gary Brotman
Golin/Harris International
gbrotman@golinharris.com

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Creative Expands Nomad Family With New Portable Digital Audio Players

NOMAD Jukebox and NOMAD II MG To Be Available Spring 2000

MILPITAS, CA - January 5, 2000 - Creative Technology Ltd. (Nasdaq: CREAF), the leading provider of market-leading multimedia solutions for personal entertainment, today announced two new additions to its growing family of Personal Digital Entertainment (PDE) products, the NOMAD Jukebox and NOMAD II MG. Building on the success of Creative's NOMAD and the anticipation of the NOMAD II portable digital audio devices, the NOMAD Jukebox and NOMAD II MG players will be available to consumers in Q2 of this year. The NOMAD Jukebox and NOMAD II MG include USB support, are programmable and both support multiple compressed audio formats including MP3 and WMA file formats.

According to projections made by Forrester Research, portable digital audio player sales are expected to hit 32 million units in the United States by 2003.

"When Creative first introduced the NOMAD player last year, the company announced that it would make available an entire suite of portable digital audio players and introduce its customers to exciting and revolutionary new portable audio technologies in the coming months," said Hock Leow, chief technology officer for Creative. "We have successfully delivered on that promise today with the introduction of such feature-rich products as the NOMAD Jukebox and NOMAD II MG. We are thrilled to deliver two unique and innovative products to digital audio and technology enthusiasts and look forward to continue growing the company's PDE Internet Solutions."

Creative NOMAD Jukebox

The Creative NOMAD Jukebox is a USB, multi-format portable audio player/recorder. This new light-weight (14oz.) digital audio player, in the size of a CD disc player, features high capacity storage capabilities with 6GB of built-in storage that holds an entire music collection (over 150 albums) or up to 2,600 hours of spoken word. It features a Line-In for analog recording from external sources and dual Line-Out connections ideal for connecting a four-speaker system such as Cambridge SoundWorks, Inc.'s FourPointSurround FPS2000 Digital. Unlike other hardware-based solutions, the NOMAD Jukebox also features an onboard real-time digital signal processor (DSP) for superior audio playback and customization. A Headphone-Out jack supports headphone spatialization and equalizer effects. This SDMI-capable portable digital audio player supports multiple formats including MP3, WMA and WAV file formats. Unlike other hardware-based solutions, the NOMAD Jukebox also features an onboard real-time effects processor for superior audio playback and customization. The NOMAD Jukebox also supports downloadable features including

new effects algorithms, security features, and auto playlist generators.

Creative NOMAD II MG
Like its predecessor, the Creative NOMAD, the NOMAD II MG is encased in a compact, sleek magnesium case for extreme durability and a professional look and feel. The NOMAD II MG is the first digital audio device to boast time compression/expansion implementation for interactive speed control playback of voice recording, a key feature for the mobile professional. In addition, the NOMAD II MG includes a FM tuner with preset support and voice-record capabilities for storing up to four hours of dictation, messages or personal notes. A bundled docking station provides users with cable-free desktop connectivity and recharges batteries. The NOMAD II MG also comes with an electro-luminescent (EL) backlit LCD increasing the quality of viewing anywhere it is taken.

The classic design of this portable USB digital audio player comes with 64MB of flash memory onboard with an open SmartMedia™ slot for additional memory that can bring the total user-accessible memory to 128MB or 2 hours of music. In addition to being SDMI-compliant capable, the NOMAD II MG has adjustable bit-rate and multi-codec support.

Destination NomadWorld.com
As part of Creative's PDE Internet Services, visitors to NomadWorld.com will find the latest tools, technologies, accessories and featured content to maximize their digital audio experience. Because the NOMAD II, NOMAD II MG and NOMAD Jukebox are programmable, www.nomadworld.com is the only site where users can download authentic NOMADWare updates to keep their player up-to-date with the latest digital audio formats, standards, and software extensions.

Personal Digital Entertainment (PDE) Internet Solutions
Creative's PDE Internet Solutions category is comprised of Internet devices, Internet applications and Internet services. Creative's PDE Internet Solutions leverage the power of the PC to create enhanced audio and video entertainment experiences. Creative's NOMAD, NOMAD II, NOMAD Jukebox, NOMAD II MG, WebCam Go, and LAVA! MusicVideo Player are all key components of Creative's PDE Internet solutions geared towards PC and Internet enthusiasts. Creative's family of PDE Internet solutions consists of:

- PDE Internet Devices: Products that enhance the PC Internet experience and can function when detached from the PC such as Creative's Video Blaster WebCam Go and the entire line of NOMAD digital audio players
- PDE Internet Applications: Software entertainment solutions like the LAVA! Player that enhance the entertainment experience when used in combination with Creative's Internet devices
- PDE Internet Services: Creative plans to offer Internet services that complement both its PDE Internet Devices and applications

About Creative
Creative Technology Ltd. develops, manufactures and markets a wide array of advanced multimedia solutions for the PC, entertainment, education, music and productivity tools markets. Creative's products are marketed through the OEM, systems integrator and retail channels under a variety of trademarks, including the "Blaster" family name. With the new Sound Blaster® PCI

standard, Creative has produced a solution that utilizes a combination of hardware and software for near-perfect compatibility with existing DOS and Windows titles. Creative's corporate headquarters and primary manufacturing are based in Singapore, with sales, distribution and research and development being carried out through an extensive, global network of subsidiaries located in North America, Europe, Asia and Africa.

Safe Harbor Statements Under The Private Securities Litigation Reform Act of 1995

Except for the historical information contained herein, the matters set forth herein (including statements using the words or phrases "will", "we believe will", "going to" and including any guidance on future products, future marketing efforts, future effects of Year 2000 issues, and future revenues, margins, expenses, and earnings) are forward-looking statements that are subject to certain risks and uncertainties that could cause actual results to differ materially from those set forth in the forward looking statements. Such risks and uncertainties include, among others: potential fluctuations in quarterly results due to the seasonality of Creative's business and the difficulty of projecting such fluctuations; the vulnerability of certain markets to currency fluctuations and credit shortages; reductions in the market value of products sold by Creative, including increases in supply or declines in demand or prices for CD-ROM or DVD drives, board and chip-level products, and software products; the short product cycles that characterize most of Creative's products; the increasing proliferation of sound functionality in new products from new and existing competitors and at the application software, chip and operating system levels; the increasing assertion of patents and other litigation claims affecting Creative and/or its suppliers, in areas including 3-D graphics and audio chip designs; Creative's reliance on sole sources or near-sole sources for many of its chips and other key components and possible limitations on future availability of graphic chips, memory chips, and passive components used in Creative's products; the timely ramp, delivery and market acceptance of new products, including Creative's next generation audio, graphics accelerator, CD-ROM and DVD drives and communications products; the volatility of share prices for companies in Creative's industry and the effect of those prices or other events beyond Creative's control; the uncertainties inherent in identifying and correcting all Year 2000 issus in computer codes used by Creative and its suppliers and vendors; and other risk factors described in Creative's Annual Report on Form 20-F for fiscal 1999 filed with the US Securities and Exchange Commission. Creative undertakes no obligation to publicly release the results of any revisions to such forward-looking statements which may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

###

This announcement relates to products launched in the United States of America. The product names, contents, prices and availability may differ elsewhere in the world according to local factors and requirements.

EXHIBIT
D

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CREATIVE TECHNOLOGY POSTS BETTER THAN EXPECTED Q2 FY00 EARNINGS

Value-Added Venture Fund Generates Over $150 Million in Unrealized Gains

SINGAPORE - January 28, 2000 - Creative Technology Ltd. (NASDAQ: CREAF), the world's leading provider of multimedia solutions for personal entertainment, today announced financial results for the second quarter of fiscal year 2000, ended December 31, 1999.

Sales for the second quarter were a record US$436.8 million - the highest quarterly revenue ever reported by Creative. This compares to US$428.7 million for the same quarter last year. Net income was US$44.5 million dollars and earnings per share were US$0.52, including investment gains of US$9.2 million or US$0.11 per share. This compares to net income of US$60.6 million and earnings per share of US$0.64 for the same quarter last year.

Sales for the first six months of fiscal 2000 were US$705.9 million, compared to US$707.7 million for the same period last year. Net income for the first six months of fiscal 2000 was US$55.3 million or US$0.65 per share, including investment gains of US$13.6 million or US$0.16 per share. This compares to US$82.1 million or US$0.86 per share for the same period last year.

During the quarter, Creative continued its stock buy-back program, purchasing approximately 1.7 million shares at a cost of US$25.3 million.

"The second quarter was full of key accomplishments for Creative," said Craig McHugh, president of Creative Labs, Inc. "Our earnings exceeded expectations, and we significantly strengthened our balance sheet. It's important to note that in this quarter, we incurred about $16 million in operating expenses for our Internet initiatives - bringing our total for the first six months of fiscal 2000 to over $25 million invested in advertising, marketing, R&D and infrastructure to develop our Internet-related businesses. We continue to hit key milestones in our PDE and Internet strategies, highlighted by the successful launch of hifi.com in mid-October."

"The strong financial results we have delivered are just the beginning of the story," said Sim Wong Hoo, chairman and CEO. "Our value-added venture fund invested in more Internet, broadband and PDE companies during the quarter, bringing the total to over 20 companies and over $70 million invested since we set up the fund. The financial gains the fund has begun to produce can bring additional value to our shareholders - as reflected by this quarter's increase of $154 million in unrealized gains from quoted investments on our balance sheet."

"Since we defined and created the Personal Digital Entertainment category a year ago, we have moved at net speed to transform the entire company to a PDE and Internet company. Creative has become the leader in PDE, just as we did a decade ago with audio. Going forward, there will be five product and service areas which will allow us to focus on the opportunities we see: our PDE Desktop Solutions; PDE Internet Appliances; PDE Internet services and applications; E-Commerce; and, our Value-Added Venture Fund."

Second Quarter Review & Recent Highlights

- Creative expanded its PDE market focus to include support for Apple Computer's Mac platform and the Linux OS.
- Creative's Mac products were showcased for the first time at the MacWorld Expo in San Francisco, with honors going for **Sound Blaster Live! Platinum** with a "Best of Show" award.
- Creative and Corel Corporation announced a partnership to advance the development of Linux-based high-quality audio and video applications.
- The **NOMAD Jukebox** was introduced at the Consumer Electronics Show 2000 and received rave reviews and accolades. It was recently featured on ***CNNfn*** and ***CNBC's Power Lunch***. It garnered the "editor's choice" award for technical innovation from ***Popular Mechanics***.
- At the Consumer Electronics Show 2000, Creative also showcased the **Video Blaster DTV** card for desktop solutions under its Personal Digital Entertainment category. The Video Blaster DTV solution allows HDTV content to be played back through a consumer PC with simultaneous data casting.
- Creative launched the **LAVA! MusicVideo Player** enhancing it with new scenes, textures and import capabilities. LAVA! allows mainstream users to experience their MP3s accompanied by a LAVA! MusicVideo - an environment made up of 3D objects with user-definable textures, images and colors that move to the music. The LAVA! MusicVideo Player was recently featured on ***CNN's "Digital Jam."***

For more information on these and other announcements please visit the Creative press room at http://www.creative.com/

Awards and Recommendations

Creative's products continued to receive top ratings and recommendations from both traditional and on-line media:

- **Sound Blaster Live! Platinum** scored a "Gear of the Year" award for "Best Sound Card" from ***Maximum PC***. **Sound Blaster Live! X-Gamer** received a "9 out of 10" score from ***c/net gamecenter*** and ***All Games Network***. **Sound Blaster Live! MP3+** was highlighted in ***Fortune Magazine*** and in the ***San Francisco Chronicle***.
- **3D Blaster Annihilator Pro** garnered a "Kick Ass" and "Gear of the Year" award from ***MaximumPC*** and ***c/net Gamecenter's*** "Editor's Choice" award.
- **NOMAD** was honored with the prestigious "Design and Engineering 2000 award" from ***Popular Mechanics*** and garnered the "1999

Digital Machine of the Year" award from ***Time Digital***. **NOMAD** was also awarded the "Best Product of the Year" from ***Computer Shopper*** and the "Class Over Achiever" award from ***c/net***.

Safe Harbor Statement Under the Private Securities Litigation Reform Act of 1995

Except for the historical information contained herein or in the accompanying conference call, the statements herein and in the call (including information on future products, future marketing efforts, and future revenues, margins, expenses and earnings) are forward looking statements that are subject to certain risks and uncertainties that could cause actual results to differ materially from those set forth in the forward looking statements. Such statements are subject to the attached cautionary statements which are provided pursuant to The Private Securities Litigation Reform Act of 1995.

Creative Technology Ltd. is the leading provider of advanced multimedia solutions for personal computers. It develops, manufactures and markets a wide array of solutions for the PC, entertainment, education, music and productivity tools markets. Creative's products are marketed through the OEM, systems integrator and retail channels under a variety of trademarks, including the "Blaster" family name. With the new Sound Blaster® PCI standard, Creative has produced a solution that utilizes a combination of hardware and software for near-perfect compatibility with existing DOS and Windows titles. Creative's corporate headquarters and primary manufacturing are based in Singapore, with sales, distribution and research and development being carried out through an extensive, global network of subsidiaries located in North America, Europe, Asia and Africa.

# # # #

Safe Harbor for Forward Looking Statements:

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CONTACT INFORMATION:

Hector Marinez
Creative Labs, Inc.
(408) 546-6476
hmarinez@creative.com

Theresa Pulido
Creative Labs, Inc.
(408) 546-6416
tpulido@creative.com

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CREATIVE'S NOMAD JUKEBOX HITS THE ROAD WITH ENTIRE MUSIC COLLECTIONS

NOMAD Jukebox Makes Favorite Music Collections Portable in a Sleek, Compact Design - 150 CDs or Over 100 Hours of CD-Quality Music

MILPITAS, Calif. - September 18, 2000 - Creative Technology Ltd. (NASDAQ: CREAF), today announced it has begun shipping the NOMAD® Jukebox in the U.S., the most highly anticipated portable digital audio solution in its line of Personal Digital Entertainment (PDE) Internet Appliances. The NOMAD Jukebox features 6GB of storage in a sleek, portable design that holds over 100 hours of high-quality digital music, or the equivalent of about 150 CDs. The NOMAD Jukebox supports both PC and Macintosh operating systems and is available now for U.S. $499.99 at retail stores and e-tailers.

The NOMAD Jukebox allows consumers to take their favorite digital music collections from CDs, MP3s and other audio recordings, convert and transfer them from the PC to the NOMAD Jukebox. Featuring a line-in jack for DAT quality, dual-band recording, the NOMAD Jukebox can also be used for live, high-quality digital recordings. Built-in support for FourPointSurround™ speaker systems provides a surround-sound experience and built-in EAX™ audio technology allows consumers to adjust playback speed or customize their music environment with audio effects like auditorium, concert hall and jazz club, among other features. With support for downloadable music formats such as MP3, WMA, WAV files and upcoming new formats, the NOMAD Jukebox provides a programmable, highly flexible portable audio solution.

"The NOMAD Jukebox was designed to deliver an entirely new way to experience high-quality music anywhere," said Craig McHugh, president of Creative Labs, Inc. "Consumers are now able to navigate through their entire collections of favorite music in a portable solution that fits in the palm of your hand."

"With the NOMAD Jukebox we're addressing consumers' needs - the capacity to make favorite music collections portable, the flexibility to customize music and create playlists - all in a solution that is capable of supporting upcoming digital audio formats," said Hock Leow, Creative's chief technology officer. "We plan on continuing to empower our customers with new accessories, new features and support for new audio formats that will enable a personal digital entertainment experience."

Features & Benefits

Creative's NOMAD Jukebox includes the following features and benefits. For additional information, please visit

http://web.archive.org/web/20001214004800/http://www.nomadworld.com/.

- Creative PlayCenter™ 2 software provides a universal, intuitive interface for encoding, decoding and archiving high quality MP3 files, Windows Media files as well as converting unlimited numbers of CD tracks
- SoundJam MP the premier MP3 player and recorder for the Macintosh allows easy encoding, downloading of music, building of custom playlists and sorting of music by artist, track, song, genre and more
- Real-time DSP onboard for superior audio playback and customization
- Surround Sound Support including two line outs for FourPointSurround speaker systems
- Adjustable Playback Speed implementation for voice or music for optimized playback
- Parametric EQ allows control of treble, bass and mid-range settings
- Headphone-Out Jack supports headphone spatialization and equalizer effects
- 5 Minute Shock Protection Buffer for superior performance while on the move
- Preloaded with over 20 hours of music content and audio books including Mary Shelley's Frankenstein and Robinson Crusoe
- Includes accessories: set of stereo headphones, two 4-packs of AA NiMH batteries (1 spare), 1 universal AC power supply, 1 USB connector cable and a carrying pouch
- Future Support for upcoming downloadable features including new EAX Environmental Effects, security features, and auto playlist generators

About Creative

Creative Technology Ltd., a global leader in PC entertainment products, expands the power of the personal computer with Personal Digital Entertainment (PDE) Solutions, comprising desktop products, Internet appliances and Internet applications and services. Leveraging in-house technology, partnerships and value-added investments, Creative markets its solutions to consumers and system integrators, with worldwide distribution through traditional marketing channels, OEMs and the Internet. Creative's mission is to expand upon its leadership role in PDE, utilizing innovative technology, broadband and leading edge designs for technically progressive consumers and entertainment enthusiasts. Explore PDE at www.creative.com.

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ZEN PATENT

Transcript of Speech by Craig McHugh, President of Creative Labs, at the press conference call on the ZEN Patent held on 30 August 2005

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The Pink ZEN Micro with the display screen which has the name of the album we selected at the top and a list of tracks on that album that are loaded on the player. The user can scroll through and select any of these tracks.

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In this example selecting an album of Mozart Violin Concertos will bring up the display screen shown in the Pink ZEN Micro with a listing of tracks on the album that are loaded on the player. The user can scroll through and select any of these tracks.

The ZEN Patent covers this type of hierarchical navigation on portable media players.

This example we just covered of going from menu to artists, to albums, to a list of tracks, is just one way to experience our patented user interface. The user could, for example, alternatively start by selecting Genres from a display screen to show a listing of various genres, which could lead to a listing of artists, which could lead to a listing of albums and then to a listing of tracks.

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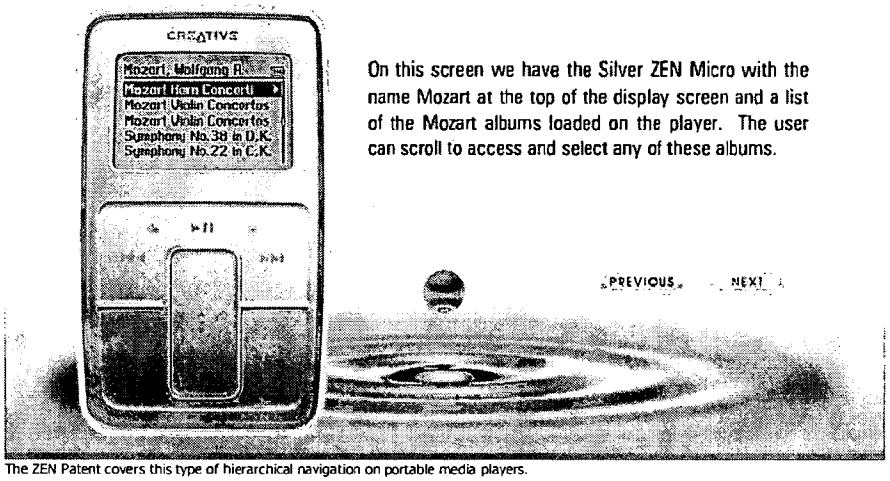

On this screen we have the Silver ZEN Micro with the name Mozart at the top of the display screen and a list of the Mozart albums loaded on the player. The user can scroll to access and select any of these albums.

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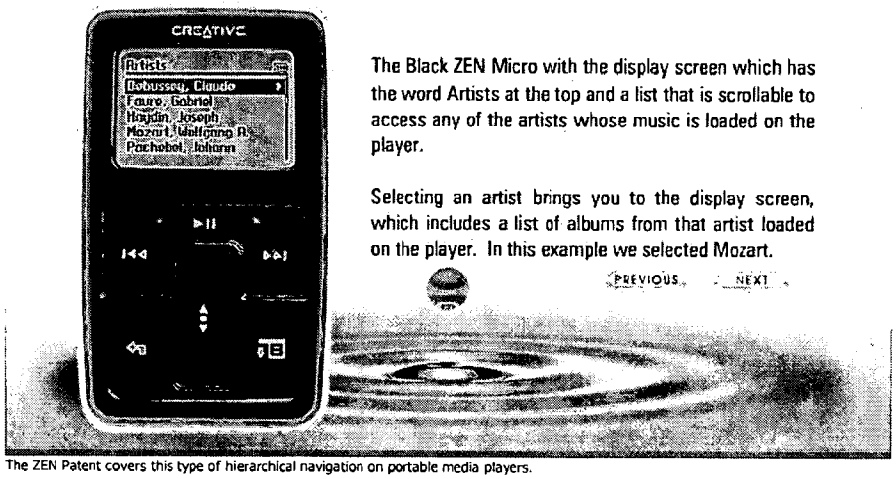

The Black ZEN Micro with the display screen which has the word Artists at the top and a list that is scrollable to access any of the artists whose music is loaded on the player.

Selecting an artist brings you to the display screen, which includes a list of albums from that artist loaded on the player. In this example we selected Mozart.

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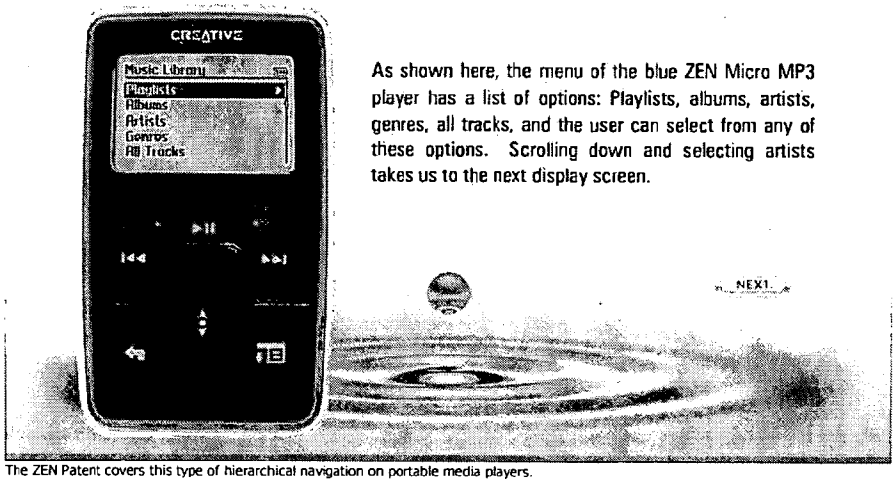

As shown here, the menu of the blue ZEN Micro MP3 player has a list of options: Playlists, albums, artists, genres, all tracks, and the user can select from any of these options. Scrolling down and selecting artists takes us to the next display screen.

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CONTACT INFORMATION:
Phil O'Shaughnessy
Creative Labs, Inc.
(408) 546-6773
poshaughnessy@creative.com

CREATIVE SHIPS 100,000th NOMAD JUKEBOX

SINGAPORE - January 16, 2001 - Creative (NASDAQ: CREAF), the worldwide leader in digital entertainment products for the personal computer and the Internet, today announced that it has shipped the 100,000th unit of the NOMAD Jukebox digital audio player since its initial shipment in late summer.

"The reception for the NOMAD Jukebox has been exceptional," noted Sim Wong Hoo, CEO of Creative. "Everybody wants one! At the Consumer Electronics Show in Las Vegas last week, people formed a line all the way around our booth, waiting longer than an hour for a chance to win a NOMAD Jukebox. We showcased more than 30 potential NOMAD Jukebox styles and concepts, telling everyone to expect more innovative designs and options in the near future on a range of NOMAD Jukeboxes from lower cost to ultra high-end models. Based on our success, we expect to double our focus and efforts on the Jukebox product line."

The latest full month of PC Data sales reports, from November 2000, reveals that the NOMAD Jukebox was embraced by holiday shoppers, ranking first in that month for overall revenue generated in the digital audio player category. Unlike flash-memory based digital audio players that hold as little as one hour of content, the NOMAD Jukebox features a six gigabyte hard drive that allows users to carry their entire music collection of up to 200 hours with them anyplace, anytime.

The NOMAD Jukebox has garnered tremendous critical acclaim, including the "Product of the Year" award from etown.com, CNET "Editor's Choice" award and the prestigious "Gadget of the Month" award from PC Magazine.

This lightweight (14oz.) digital audio player, which is the size of a portable CD disc player, features a line-in for analog recording from external sources and dual line-out connections. Unlike other hardware-based solutions, the NOMAD Jukebox also includes an onboard real-time digital signal processor (DSP) for superior audio playback, EAX (Environmental Audio Extensions) Technology and customization. A Headphone-Out jack supports headphone spatialization and equalizer effects. This firmware upgradable portable digital audio player supports multiple formats including MP3, WMA and WAV file formats. The NOMAD Jukebox also supports downloadable features including new effects algorithms, new compression standards, security features, and auto playlist generators and other personal storage capabilities.

About Creative
Creative (Nasdaq: CREAF) is the worldwide leader in digital entertainment products for the personal computer and the Internet. Famous for its Sound Blaster® sound card and for launching the multimedia revolution, Creative is now driving digital entertainment on the PC platform with products like its highly acclaimed NOMAD® Jukebox. The company's innovative hardware, proprietary technology, applications and services leverage the Internet, enabling consumers to experience high-quality digital entertainment -- anytime, anywhere.

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CREATIVE TECHNOLOGY ANNOUNCES THIRD QUARTER FISCAL 2003 RESULTS IN-LINE WITH EXPECTATIONS

SINGAPORE - May 8, 2003 - Creative Technology Ltd. (Nasdaq: CREAF), the worldwide leader in digital entertainment products for PC users, today announced financial results for the third quarter of fiscal year 2003, ended March 31, 2003. All financial results are stated in U.S. dollars.

Sales for the third quarter were $160.6 million, in line with the Company's guidance. This compares to sales of $193.4 million for the same quarter of last year. Creative achieved net income for the third quarter of $4.8 million, and earnings per share met the Company's expectations at $0.06. This compares to last year's third quarter net income of $15.2 million and EPS of $0.20.

Sales for the first nine months of fiscal year 2003 were $552.2 million, compared to $623.3 million for the same period last year. Net income for the first nine months of fiscal 2003 was $18.8 million or $0.23 per share, compared to net income of $28.6 million or $0.38 per share for the same period last year. Net income for the first nine months of fiscal 2003 includes net investment losses of $6.1 million or $0.07 per share. Net income for the first nine months of the previous year includes net investment losses of $15.6 million or $0.21 per share.

"Based on strong sales of our PDE products including our NOMAD® MP3 players and Webcams, we were able to achieve our guidance for revenue and EPS in a challenging quarter for the retail market" said Craig McHugh, president of Creative Labs, Inc. "The sales from our PDE products were up more than 80% from the previous year and helped offset declines in our low end sound card business. Overall, sales of our products that are outside the PC represented more than 50% of revenues in the period."

"I am excited about the growth in our PDE products, as I believe it reflects the much larger market opportunity we have in the future as we continue to expand our product offerings outside of the PC," said Sim Wong Hoo, chairman and CEO of Creative Technology. "We believe we are well-positioned in the high-growth MP3 market where we are the leader, having sold a cumulative total of more than one million NOMAD Jukeboxes and NOMAD MP3 digital audio players. We also see the potential to increase our market share in digital cameras and speakers. And with the introduction this week of the USB Sound Blaster® MP3+, we have added a low-priced offering that can enable mass market PCs to upgrade easily to premium sound."

Flow Back Restriction to Commence on June 1, 2003

In a separate press release on April 25, 2003, Creative announced that the previously announced Flow Back Restriction will commence on June 1, 2003.

Share Buyback Program

During the quarter, Creative did not repurchase any shares under its share buyback program.

Recent Announcements

- Creative introduced the Sound Blaster MP3+ and the Sound Blaster Go! portable USB Sound Blaster sound systems, for legendary Sound Blaster audio quality in an easy-to-use solution that's as small and light as a PDA.
- Creative introduced exciting new speaker systems to match the look of the Apple® iPod?. The sharp, white Creative I-Trigue 2.1 I3300 and the Creative TravelSound? I300 are a perfect companion at home or on the go for iPod or Mac users.
- Creative introduced the NOMAD Jukebox Zen 60GB, the highest capacity NOMAD Jukebox ever, with twice the storage capacity as the most expensive Apple iPod yet priced at $100 less.
- 3Dlabs® introduced the Wildcat® VP990 Pro, the world's first professional graphics accelerator with 512MB of onboard memory in a single-card solution.
- 3Dlabs introduced the Wildcat VP880 Pro, providing CAD and DCC professionals with a value-priced 256MB solution.

Awards & Accolades

- The Creative MegaWorks® THX® 6.1 650 speaker system won:
  - The "ExtremeTech Approved" award from Ziff-Davis *ExtremeTech*

- The Creative I-Trigue 2.1 3300 speaker system won:
  - The "Editor's Choice" award from *Computer Games* magazine
- The Creative Inspire® 6.1 6600 speaker system won:
  - The "Editor's Choice" award from *globetechnology.com*
- The Sound Blaster Audigy? 2 Platinum sound card won:
  - The "Hot Pick" award from *Computer Source* magazine
- The NOMAD Jukebox Zen portable audio player won:
  - A "5 out of 5" rating from *TechEdge* magazine
  - A "5 out of 5" rating from *Laptop* magazine
- The NOMAD Jukebox 3 portable audio player won:
  - The "Editor's Choice" award from *DV*® magazine
- The Creative CardCam? won:
  - The "Editor's Choice" award from *TechEdge* magazine
- The Creative PC-CAM 600 won:
  - The "Good Design" award from the Chicago Athenaeum Museum of Architecture and Design

Balance Sheets & Statements of Income

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About Creative

Creative (Nasdaq: CREAF) is a worldwide leader in digital entertainment products for PC users. Famous for its Sound Blaster audio cards and for launching the multimedia revolution, Creative is now driving digital entertainment on the PC platform with products like its highly acclaimed NOMAD Jukebox. Creative's innovative hardware, proprietary technology, applications and services leverage the Internet, enabling consumers to experience high-quality digital entertainment -- anytime, anywhere.

Safe Harbor for Forward-Looking Statements Under The Private Securities Litigation Reform Act of 1995:

Except for the historical information contained herein and in the corresponding conference call, the matters set forth in this release and in the call are forward-looking statements and are subject to certain risks and uncertainties that could cause actual results to differ materially. Such risks and uncertainties include: Creative's ability to timely develop new products that gain market acceptance and to manage frequent product transitions; competitive pressures in the marketplace; Creative's ability to successfully integrate acquisitions; potential fluctuations in quarterly results due to the seasonality of Creative's business and the difficulty of projecting such fluctuations; possible disruption in commercial activities caused by factors outside of Creative's control, such as terrorism, armed conflict and labor disputes; a reduction in demand for computer systems, peripherals and related consumer products as a result of poor economic conditions, social and political turmoil and major health concerns, such as the spread of Severe Acute Respiratory Syndrome, or SARS; the proliferation of sound functionality in new products from competitors at the application software, chip and operating system levels; the failure of cost-cutting measures to achieve anticipated cost reduction benefits; the continued deterioration of global equity markets; increased exposure to excess and obsolete inventory; Creative's reliance on sole sources for many of its chips and other key components; component shortages which may impact Creative's ability to meet customer demand; Creative's ability to protect its proprietary rights; a reduction or cancellation of sales orders for Creative products or other unexpected or unplanned events that could cause Creative to miss its revenue guidance, operating expense projections or negatively impact its margins; accelerated declines in the average selling prices of Creative's products; the vulnerability of certain markets to current and future currency fluctuations; the effects of restricted fuel availability and rising costs of fuel; fluctuations in the value and liquidity of Creative's investee companies; and the potential decrease in the trading volume and value of Creative's Ordinary Shares as a result of Creative's intended delisting from NASDAQ and elimination of its U.S. public reporting obligations. For further information regarding the risks and uncertainties associated with Creative's business, please refer to its filings with the SEC, including its Form 20-F for fiscal 2002 filed with the SEC. Creative undertakes no obligation to update any forward-looking statement to conform the statement to actual results or changes in Creative's expectations.

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CREATIVE TECHNOLOGY ANNOUNCES FIRST QUARTER FY 2003 REVENUES AND OPERATING PROFIT AT TOP END OF EXPECTATIONS

SINGAPORE - October 25, 2002 - Creative Technology Ltd. (Nasdaq: CREAF), the worldwide leader in digital entertainment products for PC users, today announced financial results for the first quarter of fiscal year 2003, ended September 30, 2002. All financial results are stated in U.S. dollars.
Sales for the first quarter were at the high end of the Company's guidance at $160.6 million. This compares to sales of $180.4 million for the same quarter of last year.

Creative achieved net income for the first quarter of $1.3 million or $0.02 per share before write-downs on listed investments of $6.3 million or $0.08 per share. Including the write-downs, the Company reported a net loss for the quarter of $5.0 million or $0.06 per share. Comparative results for the first quarter of last year were net income of $3.6 million or $0.05 per share before net investment write-downs of $16.4 million or $0.22 per share. Including the write-downs, the Company incurred a net loss of $12.8 million or $0.17 per share in the first quarter of last year.

The effects of the 3Dlabs acquisition in the quarter included: a revenue contribution of $13.0 million; gross profit of $6.1 million; and operating expenses of $10.7 million including $2.5 million for amortization of intangible assets.

Excluding the impact of the 3Dlabs acquisition and investment write-downs in the quarter, Creative achieved net income for the first quarter of $6.2 million or $0.08 per share. This compares to last year's first quarter net income of $3.6 million or $0.05 per share before investment write-downs.

"We came in at the top end of our revenue guidance with solid sales performance in a very tough economic climate," said Craig McHugh, president of Creative Labs, Inc. "We saw year-over-year growth of more than 50% in both our personal digital entertainment (PDE) and communications product categories. Overall, we achieved our highest quarterly gross margin percentage in many years, reflecting our year-long initiative to move away from lower margin, higher risk products and to concentrate on our higher-margin products and profitability. The high gross margins and our ongoing focus on reducing operating expenses were key contributors to our achieving EPS of eight cents per share for the first quarter, excluding the impact of 3Dlabs and investment write-downs, which is 60% ahead of last year's first quarter EPS of five cents."

"Creative has always had an enormously strong brand name within the PC industry," said Sim Wong Hoo, chairman and CEO of Creative Technology Ltd. "We are going to be enhancing that this quarter with the introduction of the Sound Blaster® Audigy® 2, which again takes audio to a whole new level - delivering to the PC platform an astounding 106dB SNR, 24-bit ADVANCED HD? and, for the first time ever, the new music industry audio standard, Advanced Resolution? DVD-Audio at 24-bit/192 kHz. We will extend our brand presence by offering our broadest and most exciting holiday lineup ever, with products that can transcend the traditional PC space and offer a compelling digital entertainment experience both when tethered to or away from the PC. With the breadth of our product offerings across a wide range of price points providing such great deals, I believe that even in these economically challenging times, consumers will buy a Creative product with unbeatable value to enrich their PC capabilities and create a fabulous digital entertainment experience."

Sim continued, "We have been directing our R&D resources toward innovation in both the technical product design and the visual industrial design (ID) of our products, as we significantly increase the overall number of product offerings. We have new offerings in our Creative Inspire? family of speakers including the Inspire 6.1 6600 series speaker system, the ideal combination with the Sound Blaster Audigy 2, and another soon-to-be-announced speaker brand with a sleek, new visual ID. In our PDE product category, we just announced the NOMAD® Jukebox 2 as well as the NOMAD Jukebox Zen, our first pocket-sized Nomad Jukebox, which will allow us to compete head-to-head with the Apple® iPod? but at a much lower price point and with significantly more features. These two new Nomad products join the NOMAD MuVo®, the world's smallest MP3 player and USB storage device, which was launched last quarter. With its compact size and innovative design, people just love the NOMAD MuVo, which is winning awards all over the world. We will also soon be adding two exciting new digital cameras to our expanding Creative WebCam family."

"This week we announced two new 3Dlabs workstation graphics products, the high-end Wildcat 4® AGP 8x optimized professional graphics accelerator and the entry-level, dual-screen Wildcat® VP560. The Wildcat VP560 is based on a new, lower-cost chip which utilizes our scalable visual processing architecture to deliver workstation-grade performance and functionality at a breakthrough price," said Hock Leow, president of 3Dlabs. "3Dlabs achieved very good gross margins of

47% during the first quarter through the acceptance of our high-end workstation products and, with the introduction of these two new products, we have extended our product offerings to address the broader workstation market."

Share Buyback Program

During the quarter, Creative did not repurchase any shares under its share buyback program.

Recent Announcements

- Creative set the new PC audio standard with the **Sound Blaster Audigy 2**, introducing 24-bit/192kHz DVD-Audio playback, and 6.1 surround sound at 106dB SNR with THX and Dolby Digital EX to the PC entertainment platform;
- The **Creative Inspire 6.1 6600** speaker system was introduced as the ideal companion for the **Sound Blaster Audigy 2**, providing stunning audio realism and clarity for Dolby Digital EX playback of DVD movies and 6.1 surround sound for PC gaming;
- Creative announced the **NOMAD Jukebox Zen**, with both USB and FireWire support for millions of PC users to enjoy a compact, stylish and feature-rich digital audio player that holds up to 8,000 songs for only $299.99 after rebate.

Awards & Accolades

- The **NOMAD MuVo** won:
  - The "Kick-Ass Award" from *Maximum PC*
  - "Gadget of the Month" from *PC Magazine*
  - "Gadget of the Week" from *Time.com*
  - The "Editor's Choice Award" from *Computer Shopper*
  - The "Editor's Choice Award" from *globetechnology.com*
  - "Best Retail Product" at the Latin Channels Show
  - The "PC Format Gold Award" from the U.K's *PC Format* magazine
- The **Creative NOMAD Jukebox 3** won:
  - The "Editor's Choice" Award from *Computer Shopper* magazine
- The **Sound Blaster Audigy** won:
  - "Best Hardware" at the Latin Channels Show
- The **Sound Blaster Audigy Platinum EX** won:
  - "Gear of the Year" from *Home Theater Buyer's Guide*
- The **Sound Blaster Extigy** won:
  - "Best Audio Hardware of 2002" from *Computer Shopper*
- The **Cambridge SoundWorks MegaWorks 510D** won:
  - "Best 5.1 Speaker System of 2002" from *Computer Shopper*
- The **3Dlabs Wildcat VP870** won:
  - 5 out of 5 Stars and a "Highly Recommended" from *Cadalyst* magazine

Balance Sheets & Statements of Income

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About Creative

Creative (Nasdaq: CREAF) is the worldwide leader in digital entertainment products for PC users. Famous for its Sound Blaster® audio cards and for launching the multimedia revolution, Creative is now driving digital entertainment on the PC platform with products like its highly acclaimed NOMAD® Jukebox. Creative's innovative hardware, proprietary technology, applications and services leverage the Internet, enabling consumers to experience high-quality digital entertainment -- anytime, anywhere.

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currency fluctuations; the effects of restricted fuel availability and rising costs of fuel; and fluctuations in the value and liquidity of Creative's investee companies. For further information regarding the risks and uncertainties associated with Creative's business, please refer to its filings with the SEC, its press release, dated March 11, 2002, announcing the signing of a definitive agreement to acquire 3Dlabs and its Form 20-F for fiscal 2002 to be filed with the SEC. Creative undertakes no obligation to update any forward-looking statement to conform the statement to actual results or changes in Creative's expectations.

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CREATIVE ZEN MICRO WINS "BEST OF DIGITALLIFE 2004" AWARD

New 5GB MP3/WMA Player Wins for "Portable Music Player" Category

SINGAPORE, October 20, 2004 - Creative, a worldwide leader in digital entertainment solutions, announced today that the new ZEN Micro MP3/WMA player, won the "Best of DigitalLife 2004" award for the "Portable Music Player" category, awarded Friday at DigitalLife. Presented by Ziff Davis Media in New York City, DigitalLife is a first of its kind consumer technology and entertainment event showcasing the latest in all things digital.

"Within a week of announcing the ZEN Micro MP3/WMA player, we have already won a major award," said Sim Wong Hoo, chairman and CEO of Creative. "Huge crowds of people swarmed our exhibit area at DigitalLife, where we featured a display of all the different colors of the ZEN Micro. The crowd was buzzing about which feature and what colors they liked best, and people lined up to place pre-orders."

Announced as the winner by PC Magazine Editor-in-Chief Michael Miller and First Looks Senior Editor Jamie Bsales, the ZEN Micro was hailed at the Best of Show awards ceremony for providing far superior features to the iPod mini.

"The tiny, stylish Creative Labs ZEN Micro should have your iPod mini-toting friends multicolored with envy," said Jamie Bsales, PC Magazine First Looks Senior Editor. "After all, for the same money they paid for a 4GB music player and not much else, you'll get a 5GB model that also has an FM tuner and recorder, voice recorder, swap-out battery with 12 hours of runtime, and Outlook-compatibility to sync your calendar, to-do list, and contacts."

Featuring more than twice the number of songs as iPod mini, ten different color choices, plus a removable 12-hour battery, the ZEN Micro drew consistent positive feedback from consumers and media throughout the four-day duration of DigitalLife. As show attendees picked up the player for the first time and tried the intuitive Touch Pad interface, many responded enthusiastically as they experienced the mesmerizing blue glow on the buttons and around the face of the different colored players.

With a smaller footprint than the iPod mini, the ergonomically designed ZEN Micro also stands apart with FM radio and high-quality digital voice recording, a calendar and "To Do List." The first ZEN Micro MP3/WMA players will be available for US$249.99 at Fry's Electronics, J&R and CompUSA in time for the holidays. Consumers can pre-order the ZEN Micro at amazon.com and us.creative.com today. For more information about the Creative ZEN Micro, visit www.creative.com.

About Creative

Creative (NASDAQ: CREAF) is a worldwide leader in digital entertainment products for PC users. Famous for its Sound Blaster® sound cards and for launching the multimedia revolution, Creative is now driving digital entertainment on the PC platform with products like its highly acclaimed MuVo® and ZEN portable audio players. Creative's innovative hardware, proprietary technology, applications and services leverage the Internet, enabling consumers to experience high-quality digital entertainment -- anytime, anywhere.

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CREATIVE ZEN VISION WINS "BEST OF SHOW" AWARD AT DIGITALLIFE 2005

New 30GB MP3 Player with 3.7-Inch SharpPix High-Resolution 262,144-Color Screen for Photo and Video Viewing Wins in "Portable Gear" Category

SINGAPORE - October 19, 2005 - Creative (NASDAQ: CREAF), a worldwide leader in digital entertainment solutions, announced today that the new ZEN Vision MP3 player, photo viewer and digital video player won the "Best of Show" award in the "Portable Gear" category at DigitalLife 2005. Produced by Ziff Davis Media in New York City, DigitalLife is a three-day consumer event dedicated to educating consumers on what the digital lifestyle means in every aspect of life - at work, home and play.

"We're thrilled that the ZEN Vision won a major award during its first public showing at DigitalLife," said Lisa O'Malley, senior brand manager for portable media at Creative. "We received a lot of positive feedback at the show about the broad scope of music service and video support on the ZEN Vision. The music download and subscription support is a big hit. You can purchase your favorite songs from sites like Yahoo! Music, Napster and Wal-Mart.com or select from over a million songs for your ZEN Vision with a monthly subscription to Yahoo! Music Unlimited, Rhapsody or Napster To Go. For video viewing, people are really excited about the support for TivoToGo™ to enable watching TV shows on the ZEN Vision's 3.7-inch high-resolution color screen."

Announced as the winner by PC Magazine Editor-in-Chief Michael Miller and First Looks Senior Editor Jamie Bsales, Creative was commended at the Best of Show awards ceremony for pioneering multimedia players that play music, digital photos and videos - first with the ZEN Portable Media Center and now with the ZEN Vision.

"Portable video was a big theme on the show floor, and the ZEN Vision was the best portable player we saw," said Jamie Bsales, PC Magazine First Looks Senior Editor. "It has a gorgeous 3.7-inch screen for viewing tens of thousands of photos or up to 120 hours of video."

The ZEN Vision holds up to 15,000 songs and supports a la carte music downloads from major Internet music stores, in addition to supporting music subscription services such as Napster To Go and Yahoo! Music Unlimited. The player also includes a built-in FM radio with 32 preset options, and FM recording and a host of other rich features.

The ZEN Vision can carry tens of thousands of digital photos. For sharing pictures with family and friends, a convenient composite video out connector enables stunning full-color image output on any size TV screen. The convenient Plug&View™ slot on the side of the player supports both Compact Flash Type I and Type II media. An optional Compact Flash Adapter plugs directly into the Compact Flash slot to accept the most popular memory card types including MultiMedia Card and Secure Digital, 17 variations in all.

The ZEN Vision supports a wide selection of video formats for enjoyment of movies downloaded from the Internet, including MPEG-2, MPEG-4 Simple Profile formats such as XviD, WMV, and MJPEG. The ZEN Vision also supports TiVoToGo for viewing TV content recorded on a TiVo personal video recorder, as well as digitized home movies transferred from the PC.

For more information about the ZEN Vision, visit www.creative.com.

About Creative

Creative (NASDAQ: CREAF) is a worldwide leader in digital entertainment products for PC users. Famous for its Sound Blaster® sound cards and for launching the multimedia revolution, Creative is now driving digital entertainment on the PC platform with products like its highly acclaimed MuVo® and ZEN portable audio players. Creative's innovative hardware, proprietary technology, applications and services leverage the Internet, enabling consumers to experience high-quality digital entertainment -- anytime, anywhere.

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By Year

- 2008
- 2007
- 2006
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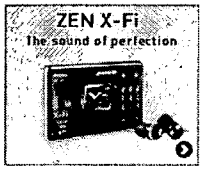
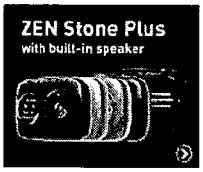
- 2003
- 2002





DECEMBER 2002

Jukebox 3
- 5 Stars - Raplh Men, Australia
- 4 out of 5 stars - T3 Magazine, Australia

NOVEMBER 2002

Jukebox 3
- Window's 50 Top Products - Windows User, United Arab Emirates
- Editor's Choice - PC Shopper , Taiwan

OCTOBER 2002

Jukebox 3
- Score of 88 - PC Games Zone, Australia
- 5 Stars - Smart House, Australia

SEPTEMBER 2002

Jukebox 3
- Editor's Choice Award - Computer Shopper , United States Of America
- Rating 4 out of 6 - PC Authority, Australia
- Editor's Choice Award - PC Gamer , United States Of America

AUGUST 2002

Jukebox 3
- Score 90% - PCGames Addict, Australia
- 90% out of 100% - PC Games Addict, Australia
- "HOT" Award with Rating - ATOMIC, Australia
- Rating 5 out of 5 with Cover Page Coverage - CHARGED Magazine, United Arab Emirates
- TC! Seal of Approval - Toronto Computes, Canada

JULY 2002

Jukebox 3
- 4 Stars - July T3 Magazine, Australia
- 9/10 - PCUser, Australia

JUNE 2002

Jukebox 3
- 4 Stars - Ease of use, Value for money - The Australian, Australia
- 5 Stars - Australian PC World, Australia
- Rating 5 out of 5 - e)mag Magazine, Australia
- 4 Stars out of 5 Stars - T3, Australia
- 3 Stars out of 5 Stars - Gravity, Singapore
- Editor's Choice Award - Australian Personal Computer, Australia
- 5 out of 5 - PCWorld, New Zealand
- 5 Star Review - PCWorld, Australia
- Editor's Choice - Windows User, United Arab Emirates
- Editor's Choice - Australian Personal Computer, Australia

GET STARTED

Download the Creative Centrale or Creative Media Lite to rip CDs, transfer files and access other essential functions.

› ZEN X-Fi
› ZEN MX
› ZEN Mozaic EZ300/EZ100
› ZEN Mozaic
› ZEN Stone/ ZEN Stone with built-in speaker
› ZEN Stone Plus/ ZEN Stone Plus with built-in speaker
› MuVo T200

Having problems with your MP3 player?

› Click here to resolve player problems.

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By Year

- 2008
- 2007
- 2006
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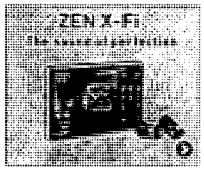
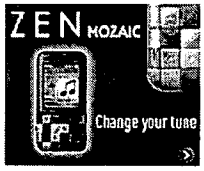
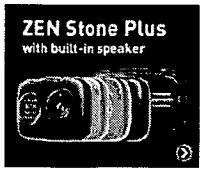
- 2004
- 2003
- 2002







DECEMBER 2004

ZEN Portable Media Center
- Tip Pick Award - tip, United States Of America

MuVo Slim
- 2004 Editor - PCShopper, Taiwan
- Top Product - Best Flash based MP3 Product - Australian PCUser, Australia

MuVo TX FM
- 2004 Best Buy - PCHome, Taiwan

MuVo²
- PC.Com Choice Award - PC.Com, Malaysia

ZEN Micro
- Editor's Choice - PCHome, Taiwan

MuVo²
- Top 10 Portable Music MP3 - Stuff Magazine, Malaysia

MuVo TX
- Top 10 Portable Music MP3 - Stuff Magazine, Malaysia
- Editor's Choice - Urban Climber, United States Of America

NOVEMBER 2004

MuVo Slim
- 4 out of 5 Stars - aLive, Taiwan

MuVo² FM
- Top 10 Portable Music MP3 - Stuff, Malaysia
- Editor's Choice - PCHome, Taiwan
- 4.5 out of 5 Stars - aLive, Taiwan

ZEN Touch
- Power Award - Australian PCPowerPlay, Australia
- Editor's Choice - Australian Personal Computer, Australia

MuVo Slim
- PC.Com Choice Award - PC.Com, Malaysia

ZEN Micro
- Editor's Choice & 8.7 out of 10 Rating - CNETAsia.com, Singapore
- Editor's Choice & 8.7 out of 10 Rating - CNET.com, United States Of America
- 5 out of 5 Star Rating - About.com, United States Of America

MuVo TX
- Best Midprice MP3 Player - Glamour, United States Of America

MuVo TX FM
- Best Flash-Based Music Player - Computer Shopper, United States Of America

ZEN Micro
- Editor's Choice - PCMag.com, United States Of America

OCTOBER 2004

ZEN Micro
- Best of DigitalLife 2004 - Portable Music Player category - DigitalLife, United States Of America

MuVo²
- Editor's Choice - , Taiwan

GET STARTED

Download the Creative Centrale or Creative Media Lite to rip CDs, transfer files and access other essential functions.

- ZEN X-Fi
- ZEN MX
- ZEN Mozaic EZ300/EZ100
- ZEN Mozaic
- ZEN Stone/ ZEN Stone with built-in speaker
- ZEN Stone Plus/ ZEN Stone Plus with built-in speaker
- MuVo T200

Having problems with your MP3 player?

- Click here to resolve player problems.

- Top 10 Portable Music MP3 - Stuff Magazine, Malaysia

MuVo TX
- Top 10 Portable Music MP3 - Stuff Magazine, Malaysia

ZEN Micro
- Best of Digital Life 2004 - Portable Music Player Category - Ziff Davis Media, United States Of America

ZEN Touch
- Greatest Value MP3 Player - Sync, United States Of America

SEPTEMBER 2004

MuVo Slim
- 5 out of 5 Stars - Stuff, Taiwan

MuVo TX FM
- 4.5 out of 5 Stars - aLive, Taiwan
- Editor's Choice - PCHome, Taiwan

ZEN Touch
- 4.5 out of 5 Stars - Editor's Choice aLive, Taiwan

ZEN Xtra
- 4.5 out of 5 Stars - Stuff, Taiwan

ZEN Touch
- Best Value - G4techTV.com, United States Of America

AUGUST 2004

MuVo Slim
- Laptop Buyer Choice - PCDIY, Taiwan
- Editor's Choice - Computer Shopper, United States Of America

JULY 2004

ZEN Xtra
- Editor's Choice - Trucos y Claves Windows, Spain

MuVo Slim
- 5 out of 5 Stars - Editor, Taiwan
- Value Award - Australian PCPowerPlay, Australia

ZEN Xtra
- 4 out of 5 Stars - www.musicamp3.com, Spain
- 4 out of 5 Stars - Stuff, Czech Republic

MuVo Slim
- 4 out of 5 Stars - PC Actual & Computer Idea, Spain
- 4 out of 5 Stars - T3, Spain
- Editor's Choice - Stuff, Spain
- Thumb of Computer Magazine - Computer, Czech Republic
- Tip Award - PC Space, Slovak Republic
- Editor's Choice - Globetechnology.com, Canada

MuVo TX
- 5 out of 5 Stars - Dealer World, United States Of America
- Mobile Choice Award - Mobile PC, United States Of America

MuVo TX FM
- 4 out of 5 Stars - Stuff, Spain

MuVo TX
- 5 out of 5 Stars - Dealer World, Spain

ZEN NX
- 4 out of 5 Stars - ON OFF, Spain
- Editor's Choice - BYTE, Spain

JUNE 2004

ZEN Portable Media Center
- Editor's Choice - Best Value - Maxim, United States Of America
- Editor's Choice - Best Value - Maxim, United States Of America

MuVo Slim
- Editor's Choice - aLive, Taiwan

ZEN Xtra
- 4 out of 5 Stars - T3, Spain
- 4 out of 5 Stars - PC Actual & Computer Idea, Spain

MuVo Slim
- BEST - PC Home, Taiwan
- HWM Silver Award & 8.5 out of 10 Rating - HWM, Malaysia
- 4.5 out of 6 Rating - Gadgets of PC.com, Malaysia
- Highly Recommended - Go Digital, Singapore

- Editors's Choice & 4 out of 5 Rating - PC Magazine, Singapore

MuVo²
- Editor's Choice & 5 Stars - PC 2000, Taiwan

MuVo TX FM
- Editor's Choice - CNET.com, United States Of America

MuVo²
- 4 out of 5 Stars - PC Actual & Computer Idea, Spain
- 4 Stars - Desktop, Australia

MuVo Slim
- 4.5 out of 5 Rating - Info Komputer, Indonesia
- 5 Stars - @live, Taiwan

ZEN Xtra
- 4 out of 6 Rating - Gadgets of PC.com, Malaysia
- 5 out of 5 Rating - Australian PC Authority, Australia

MAY 2004

ZEN Xtra
- 5 out of 5 Stars - Stuff, France

MuVo Slim
- Editor's Choice - CNET.com, United States Of America

ZEN Xtra
- 4 out of 5 Stars - SVM, France
- 9 out of 10 Rating - DT, Spain
- Best Buy - PC World, Brazil
- 5 out of 5 Stars - Stuff, Taiwan

MuVo TX
- 4 out of 5 Stars - PC Plus, Spain
- 83% out of 100% Rating - PC Games, Australia
- Kick Ass Award & 9 out of 10 Rating - Maximum PC, United States Of America
- Editor's Choice Silver Award - Anandtech.com, United States Of America

MuVo²
- 5 out of 5 Stars - Windows XP, France
- 92% out of 100% - PC Format, Poland
- 8 out of 10 Rating - PC Plus, Spain

MuVo TX
- 3 out of 5 Rating - Sydney Morning Herald, Australia

MuVo²
- 8.2 out of 10 Rating - PC Actual, Spain
- 4 out of 5 Stars - Canal Digital, Spain
- Editor's Choice - Guia del Comprador de ordenadores y Software, Spain
- 4 out of 5 Stars - PC Actual, Spain
- 4.5 out of 5 Stars - Stuff, Taiwan

ZEN NX
- 5 out of 5 Stars - Stuff, France

APRIL 2004

ZEN Xtra
- 8.5 out of 10 Rating - PC Achat, France
- 4 out of 5 Stars - SVM, France

MuVo TX
- 4.5 out of 5 Stars - clubic.com, France

MuVo² X-Trainer
- 4 out of 5 Stars - Dealer World, Spain
- Best Running Buddy - Stuff, United States Of America

MuVo²
- 4 out of 5 Stars - Stuff, France

ZEN Xtra
- 93 out of 100 Rating - PC Net, Turkey
- HWM Silver Award - HWM, Malaysia

MARCH 2004

MuVo²
- Editor's Choice - PC DIY, Taiwan

ZEN Xtra
- 4.5 out of 5 Rating - Globetechnology.com, Canada

MuVo²
- Editor's Choice - PCHome, Taiwan

- Editor's Choice & 5 out of 5 Rating - CHIP, Turkey

CD-MP3 M100 Portable Player
- 94 out of 100 Rating - PC Net, Turkey

MuVo²
- Gut - PC Magazine, Germany
- 4 out of 5 Stars - PC World, Spain
- 8.1 out of 10 Rating - PC World, Spain
- 5 out of 5 Stars - www.benchmark.pl, Poland
- La scelta del Mese - PC Pratico, Italy
- 4.5 out of 5 Stars - Power Unlimited, Netherlands
- 90 out of 100 Rating - BYTE, Turkey

ZEN NX
- Best Koop - De Digitale Consument, Netherlands
- Best Value MP3 Player - Unlimited, United States Of America

FEBRUARY 2004

ZEN Xtra
- Gizmo of the Month - Glamour, United States Of America
- Certyfikat Wprost 2004 - Wprost, Poland

MuVo²
- Best Recommended - PC Home, Taiwan
- HWM Silver Award - HWM, Malaysia
- PC Magazine Editors' Choice - PC Magazine, Malaysia

MuVo TX
- 9.3 out of 10 Rating - Highly Recommended Award - IGN.com, United States Of America

MuVo²
- Best Recommended - PC Home, Taiwan
- HWM Silver Award - HWM, Singapore
- PC.Com Choice Award - PC.Com, Malaysia

ZEN NX
- Seal of Excellence Award & 5out of 5 Rating - Animation Magazine, United States Of America
- Recommended Award - Personal Computer, Spain

JANUARY 2004

ZEN Portable Media Center
- Best of CES Award - Audio and Video Category - TechTV, United States Of America
- Best of CES Award - Audio and Video Category - TechTV, United States Of America

ZEN Xtra
- 5 Stars - Stuff, Czech Republic
- 5 Stars - Red Hot Magazine, Czech Republic
- 8.3 out of 10 Rating - PC Actual, Spain
- Compra Stuff - Stuff, Spain

ZEN Portable Media Center
- Top 10 Products of CES - CNET.com, United States Of America
- Top 10 Products of CES - CNET.com, United States Of America
- Pick of the Day - CNET.com, United States Of America
- Pick of the Day - CNET.com, United States Of America

MuVo² X-Trainer
- 89% out of 100% - PC Format, Poland

MuVo²
- 4.5 out of 5 Stars - PC Magazine, Taiwan
- 8 out of 10 rating - www.virgilio.it, Italy

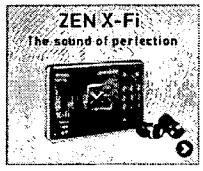
ZEN NX
- 9 out of 10 Rating - Gamer, Hungary
- 4 Stars - T3, Spain

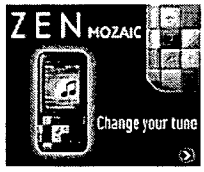
ZEN Xtra
- 3 out of 4 Rating - Rolling Stone (USA), United States Of America

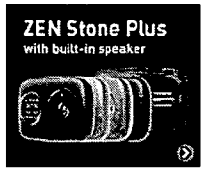
EXHIBIT N

By Year

- 2008
- 2007
- 2006
- 2005
- 2004
- 2003
- 2002







DECEMBER 2005

ZEN Micro
- 3 out of 5 Stars - T3 Singapore, Singapore

ZEN Vision
- 3 out of 5 Stars - T3 Singapore, Singapore
- 5 Stars out of 6 Stars - Australian PC Authority, Australia

ZEN Vision:M
- 4.5 out of 5 ticks - The New Paper, Singapore
- 8.2 out of 10 Rating - CNET Asia, Singapore

MuVo Micro N200
- 3 out of 5 Stars - T3 Singapore, Singapore

ZEN Touch
- 3 out of 5 Stars - T3 Singapore, Singapore

NOVEMBER 2005

ZEN Vision
- Winner in Personal Video Player for "100 Best Gadgets of 2005" - Gadget Magazine, Indonesia

ZEN MicroPhoto
- 8.3 out of 10 - CNET.com, United States Of America

ZEN Portable Media Center
- Runner Up in Personal Video Player for "100 Best Gadgets of 2005" - Gadget Magazine, Indonesia

ZEN Micro
- Runner Up in Micro Hard Drive MP3 Player for "100 Best Gadgets of 2005" - Gadget Magazine, Indonesia

MuVo TX FM
- Runner Up in Flash Memory MP3 Player for "100 Best Gadgets of 2005" - Gadget Magazine, Indonesia

MuVo Micro N200
- Winner in Ultracompact MP3 Player for "100 Best Gadgets of 2005" - Gadget Magazine, Indonesia

ZEN Neeon 5GB/ 6GB
- 9 out of 10 Stars, HWM Gold Award - HWM, Thailand

ZEN Touch
- Runner Up in Hard Drive MP3 Player for "100 Best Gadgets of 2005" - Gadget Magazine, Indonesia

OCTOBER 2005

ZEN Vision
- 4 out of 5 Stars - Stuff, Philippines
- Best of Digital Life 2005 - Portable Gear Category - Ziff Davis Media, United States Of America
- 4 Stars - Photo Video Imaging, Singapore
- 8 out of 10 with Editor's Choice - iDigital, Singapore
- 8 out of 10, HWM Silver Award - HWM, Singapore
- 8 out of 10, HWM Silver Award - HWM, Malaysia

ZEN Neeon 5GB/ 6GB
- 4 out of 5 Stars - Stuff, Philippines

SEPTEMBER 2005

ZEN Vision
- 9 out of 10 Stars - MonsterNet.Org, Singapore

GET STARTED

Download the Creative Centrale or Creative Media Lite to rip CDs, transfer files and access other essential functions.

- ZEN X-Fi
- ZEN MX
- ZEN Mozaic EZ300/EZ100
- ZEN Mozaic
- ZEN Stone/ ZEN Stone with built-in speaker
- ZEN Stone Plus/ ZEN Stone Plus with built-in speaker
- MuVo T200

Having problems with your MP3 player?

- Click here to resolve player problems.

ZEN Touch
- Group Winner in Best Award for Digital MP3 Players - InfoKomputer, Indonesia

ZEN Vision
- 88-VRMarks - VR-Zone.com, Singapore

ZEN Portable Media Center
- Editor's Choice - ONOFF, Spain

ZEN Vision
- Best Pocket Player - Scottish Daily Express, United Kingdom
- 4 out of 5 - Stuff, United Kingdom

ZEN Micro
- Platz 1 (Mp3 mit Microdrive bis 200 EUR) - Chip Test & Kauf, Germany
- 85% - PC Home, United Kingdom
- Editor's Choice - Pcactual, Spain

MuVo Sport C100
- Platz 3 (MP3-Flash bis 100 EUR) - Chip Test & Kauf, Germany
- Rating 4+ out of 5 - Click, Poland

MuVo TX FM
- Platz 2 (MP3-Flash bis 100 EUR) - Chip Test & Kauf, Germany

MuVo Micro N200
- Group Winner in Best Award for Digital MP3 Players - InfoKomputer, Indonesia

ZEN Neeon 5GB/ 6GB
- Top Buy Award - PC User, Australia

MuVo Micro N200
- 5 out of 5 - Stuff, United Kingdom

MuVo TX FM
- Top Buy Award - PC User, Australia

MuVo²
- Platz 3 (Mp3 mit Microdrive bis 300 EUR) - Chip Test & Kauf, Germany

ZEN Nano Plus
- Editor's Choice - PC Plus, Spain
- 5 out of 5 - Computeractive, United Kingdom

AUGUST 2005

ZEN Micro
- 9 out of 40 - ELLE Singapore, Singapore

MuVo TX FM
- Execellent - CHIP Komputer Test, Poland

ZEN Micro
- Best for music downloads - T3 Tomorrow's Technology Today, United Kingdom

MuVo V200
- Best Performance - CHIP Singapore, Singapore
- Execellent - CHIP Komputer Test, Poland

ZEN Vision
- Rating 8 out of 10 - Ere Numerique, France

ZEN Micro
- Rating 8 out of 10 - Ere Numerique, France
- Rating 4.5 out of 5 - MP3 Achat, France
- Rating 8.7 out of 10 - msn.fr, France
- Rating 18 out of 20 - Tygodnik Komputerowy, Poland
- Execellent - CHIP Komputer Test, Poland

MuVo Slim
- Good Purchase - CHIP Komputer Test, Poland

MuVo Micro N200
- Execellent - CHIP Komputer Test, Poland
- 5 etolies - Lesnumeriques.com, France

ZEN Nano Plus
- Rating 9 out of 10 - Ere Numerique, France

ZEN Neeon 5GB/ 6GB
- 8.5 out of 10 Stars, HWM Silver Award - HWM, Philippines
- 8.5 out of 10 Stars, HWM Silver Award - HWM, Indonesia

ZEN Vision
- Pick of the Week - Straits Times, Digital Life!, Singapore

ZEN Touch

- 5 out of 5 - What Hi-Fi? Sound & Vision, United Kingdom

JULY 2005

ZEN Touch
- 85% out of 100% - PC Basics, United Kingdom
- 4th in Top 10 Ranking - PC Welt, Germany
- Best Buy - CHIP Test & Kauf, Germany

ZEN Micro
- Choix de la redaction - Stuff, France

ZEN Nano Plus
- Editor's choice - TCN, Spain

ZEN Micro
- Gadget Star - Stuff, France

MuVo Slim
- Mobile World' Choice for Flash MP3 - Mobile World, Singapore

ZEN Touch
- Editor's choice - Audio Video Foto, Spain

ZEN Micro
- 4 sur 5 - PC Team, France
- 3 out of 5 - PC Home, United Kingdom
- 92% out of 100% - PC Basics, United Kingdom

MuVo Micro N200
- 7.5 out of 10 - Personal Computer & Internet, Spain

ZEN Xtra
- 1st in Top 10 Ranking - PC Welt, Germany

ZEN Micro
- Good - Stiftung Warentest, Germany

MuVo V200
- Coup de Coeur - Micro Pratique, France

MuVo Sport C100
- Best Buy - PC World in Belgium FR, Belgium
- Best Buy - PC World in Belgium NL, Belgium

ZEN Micro
- Silver Recommend - Try & Buy HDD Audio Player - Impress DOS/V Power Report, Japan

MuVo V200
- Product of the month - Mobimag, Turkey

MuVo Micro N200
- Recommendation - CD Info, Germany
- Recommendation - CD Austria, Austria

MuVo²
- Selection MP3 - Officiel du net, France

ZEN Neeon 5GB/ 6GB
- 3rd in Mobile World Readers' Choice (HDD) - Mobile World, Singapore
- 4th in Mobile World Editor's Choice (HDD) - Mobile World, Singapore
- 8.5 out of 10 Stars, HWM Silver Award - HWM, Singapore

ZEN Portable Media Center
- 5 out of 5 - PDA & Mobiles, France
- 7.4 out of 10 - Digital World, France

ZEN Touch
- 4th in Mobile World Readers' Choice (HDD) - Mobile World, Singapore
- 4.5 sur 5 - Ponit Net, France

MuVo Micro N200
- Editor's Choice - Portatiles Magazine, Spain

JUNE 2005

ZEN MicroPhoto
- Ottimo - PC Pratico, Italy

ZEN Micro
- 5 etoiles, 9.5 out of 10 - PC Achat, France

MuVo V200
- Editor's Choice - Enter, Poland
- 97 out of 100 with Grade 1 - PC Games Hardware, Germany

ZEN Micro
- Best Buy - PC Go!, Germany

- 3rd in Top 10 Ranking - CHIP Test & Kauf, Germany
- 92% out of 100% - PC Basics, United Kingdom
- 4 out of 5 - Micro Mart, United Kingdom
- 8 out of 10 - Lyd & Bilde, Norway
- 5 out of 6 - Hjemme PC, Norway
- 4 out of 6 - Dagbladet, Norway
- Stuff a choisi MP3 magazine Choix de la redaction Meilleur rapport qualite/prix - Stuff, France

MuVo Micro N200
- 4 out of 6 - Hjemme PC, Norway
- 4 out of 6 - Dagbladet, Norway

MuVo²
- Best Buy - CHIP Test & Kauf, Germany

ZEN Neeon 5GB/ 6GB
- Simply Her Best Value Award - Simply Her, Singapore
- 8 out of 10 Stars - MonsterNet.Org, Singapore
- 4 Stars - MIW, Singapore

ZEN Portable Media Center
- Editor's Choice - PVD, Spain
- 5 etoiles - PDA & Mobiles, France

ZEN Touch
- 85% out of 100% - PC Basics, United Kingdom

ZEN Vision
- 8 out of 10 - CNET.com, United States Of America

ZEN Touch
- 5 out of 5 Stars & Best Buy - Computer Shopper, United Kingdom
- 5 out of 5 - Micro Mart, United Kingdom
- 5 etoiles, 9.5 out of 10 - PC Achat, France

ZEN Micro
- 5 Stars - Stuff, Spain

MuVo V200
- 5 Stars & Best Web Price - Idea Web, Italy

MuVo Slim
- Top ten dei miglior player a memoria flash/ voto 9 - PC Open, Italy

ZEN Touch
- 8 out of 10 - Jack, Italy

ZEN Micro
- 1 posto voto qualita/prezzo - AFDigitale, Italy

MuVo Micro N200
- 83% - T3, Italy

ZEN Portable Media Center
- Buono - Computer Week, Italy

ZEN Micro
- 8 out of 10 - Ere Numerique, France

ZEN Nano Plus
- 9 out of 10 - Ere Numerique, France

MAY 2005

MuVo V200
- 4 stars - Gazet van Antwerpen, Belgium

MuVo TX
- 5 Stars & Best Buy - What Hi-Fi? Sound & Video, Ukraine

ZEN Touch
- 5 Stars & Best Buy - What Hi-Fi? Sound & Video, Ukraine

MuVo Micro N200
- 4 Stars & Best Buy - What Hi-Fi? Sound & Video, Ukraine

ZEN Micro
- 4 Stars - Stuff, Ukraine

ZEN Xtra
- 5 Stars & Best Buy - What Hi-Fi? Sound & Video, Ukraine
- 5 Stars Award for Top 10 Audio Players - Stuff, Ukraine
- 4 etoiles - Stuff, France

ZEN 20GB
- 7 out of 10 Stars - MosterNet.Org, Singapore

ZEN MicroPhoto

- 5 Stars - T3, Ukraine

MuVo V200
- 4 etoiles - Lesnumeriques.com, France
- 4 etoiles - SVM, France

ZEN Micro
- Favorite mini-HD player with Radio - HiFi & Musik, Sweden
- Le choix de la redaction - 4.5 out of 5 - MP3 Magazine, France
- Meilleur rapport qualite/prix - MP3 Magazine, France
- 4 etoiles - SVM, France

ZEN MicroPhoto
- 9 out of 10 - Jack, Italy

MuVo Micro N200
- 5 etoiles - Lesnumeriques.com, France

MuVo²
- 4 Stars Award for Top 10 Audio Players - Stuff, Ukraine
- Prijstip - CHIP, Netherlands

ZEN Portable Media Center
- 5 Stars & Best Buy - What Hi-Fi? Sound & Video, Ukraine
- 5 Stars - T3, Ukraine
- 82 out of 100 - PC UP, Italy

ZEN Touch
- Favorite HD player with Radio - HIFi & Musik, Sweden

ZEN Portable Media Center
- 4.5 out of 5 - Total Computer, Italy

ZEN Neeon 5GB/ 6GB
- 7.4 out of 10 with Good Rating - CNET Asia, Singapore

ZEN Portable Media Center
- 4 etoiles - Stuff, France

ZEN Touch
- 10 out of 10 - The Independent on Sunday: ABC, United Kingdom
- 5 out of 5 Stars & Best Buy - Computer Shopper, United Kingdom

MuVo Slim
- 4 Stars - MAXIM, Czech Republic

ZEN Micro
- 4 out of 5 - Home Entertainment, Italy

ZEN Portable Media Center
- 85% - Windows Facile, Italy

ZEN Micro
- 4 stars - T3, Portugal

ZEN Touch
- Best Performance - Exame Informatica, Portugal

ZEN Xtra
- 4 stars - Casa Digital, Portugal

ZEN Portable Media Center
- 4 stars - Casa Digital, Portugal
- Editor's choice - Digital World, Spain

MuVo Micro N200
- 5 out of 6 estrellas - PC Pro, Spain

ZEN Touch
- 5 out of 6 estrellas - PC PRO, Spain

ZEN Micro
- 6 out of 6 estrellas - PC Pro, Spain

MuVo Micro N200
- 9 out of 10n puntos - PC Life, Spain

ZEN Micro
- 5 Stars - PC Life, Spain
- MP3 Magasinet Bedst I Test! 86% - MP3 Magasinet, Denmark
- Gear Testvinder 5 out of 6 - Gear, Denmark

MuVo Micro N200
- Gear 4 out of 6 - Gear, Denmark

ZEN Micro
- 3 out of 4 - The Irish News (Belfast), United Kingdom
- 4 out of 6 Stars - PC Pro, United Kingdom

ZEN Touch
- 4 out of 6 stars. - PC Pro, United Kingdom

MuVo Micro N200
- 4 out of 6 Stars - Computer Buyer, United Kingdom

ZEN Micro
- 10 out of 10 - The Independent on Sunday: ABC, United Kingdom

MuVo Micro N200
- PC Answers Editor's Choice - PC Answers, United Kingdom

MuVo Slim
- 5 etoiles - Stuff, France

ZEN Touch
- 4 etoiles - Stuff, France

ZEN Micro
- Editorial Recommends - AGD-RTV Infoserwis, Poland
- 6.8 out of 10 - Enter, Poland
- 4.5 Stars - Mobile PC, Ukraine

MuVo TX
- 4 Stars Award for Top 10 Audio Players - Stuff, Ukraine

ZEN Touch
- 4 Stars - Comizdat.com, Ukraine

MuVo Slim
- 3.5 Stars - Comizdat.com, Ukraine

MuVo V200
- 4 Stars - Het Belang van Limburg, Belgium

APRIL 2005

ZEN Micro
- No. 1 Hot Buy - Stuff Singapore, Singapore

MARCH 2005

ZEN Micro
- HWM Gold Award, 9 out of 10 Rating - HWM Philippines, Philippines
- Editor's Choice - Revista Hoy, Spain

ZEN Portable Media Center
- 4 etoiles - Internet Pratique, France

ZEN Micro
- 4 out of 5 Stars - PC Magazine, Singapore

ZEN Portable Media Center
- 4 out of 6 Rating - HjemmePC, Norway
- 4 Stars - PC World Belgium, Belgium

MuVo Slim
- 5 etoiles - Stuff, France

MuVo V200
- 9 out of 10 Rating - PC Action, Italy

MuVo Micro N200
- M3 Rekommenderar - M3 Digital World, Sweden
- Testwinner 4 out of 6 Stars - Ekstrabladet, Denmark

ZEN Micro
- Rekommenderas av PC For Alla - PC For Alla, Sweden
- 5 etoiles - 8 out of 10 - PC Achat, France
- 5 etoiles - Stuff a choisi - Stuff, France

ZEN Portable Media Center
- 4 out of 5 Stars - Nanyang Chronicle, Singapore

ZEN Micro
- 5 Stars - Stuff, Spain
- 3 out of 5 Stars - T3, Spain
- Komputer for alle anbefaler 9/10 - Komputer for alle, Denmark
- Komputer for alle anbefaler 9/10 - Komputer for alle, Norway
- 5 out of 6 "E" - GEAR, Denmark
- 5 out of 5 Stars - FHM, Norway
- 90% out of 100% - PC Planet, Denmark
- Testwinner 5 out of 6 Stars - Ekstrabladet, Denmark
- Positive review - Diskidee, Belgium
- 7.5 out of 10 Rating - PC Pratico, Italy
- 91 out of 100 Rating - Easy Tech, Italy

ZEN Touch
- Prisvard / High value for price! - Hifi & Musik, Sweden
- 415 out of 500 Rating - Connexia, Belgium

ZEN Xtra
- 4 etoiles - Stuff, France

ZEN Touch
- 4 etoiles - Stuff, France
- Editor's choice - On Off, Spain
- 8 out of 10 Rating - Virgilio.it, Italy

MuVo TX FM
- Computer Bild - Vincitore del Test - Computer Bild, Italy

MuVo Sport C100
- 8.5 out of 10 Rating - PC Open, Italy
- 3 out of 5 Rating - PC World, Italy

FEBRUARY 2005

ZEN Micro
- 5 Stars - Stuff Singapore, Singapore
- 83% out of 100% - PC Gamer, United Kingdom
- Best for Fashionista - Stuff Singapore, Singapore
- 9 out of 10 Stars with GOLD Award - HWM, Singapore

MuVo Sport C100
- 4 out of 5 Stars - PC Magazine, Taiwan

MuVo Slim
- 2nd Best & Best Buy Award - PC Welt, Germany
- 8/10 Tres Bien - ZDNet Produits, France

MuVo TX
- 4 etoiles - Stuff, France

MuVo TX FM
- Top 10 - Metromania, France

MuVo V200
- 8 out of 10 Rating - Ere Numerique, France
- 4 out of 5 Stars - PC Magazine, Taiwan
- 7.3 out of 10 Rating, Good - CNETAsia, Singapore

MuVo Micro N200
- Good & Grade 1,7 Rating - SFT, Germany

ZEN Portable Media Center
- 4 out of 5 Rating - CRN & GDO, Italy

MuVo Micro N200
- Very Good & Grade 1 Rating - Bravo Screenfun, Germany

ZEN Portable Media Center
- 4.5 out of 5 Rating - Home Entertainment, Italy

MuVo Micro N200
- 18 out of 20 Rating - PC Direct, France

ZEN Portable Media Center
- Consigliato da PC Open - PC Open, Italy

MuVo Micro N200
- 4 out of 5 Rating - Digital Home, United Kingdom

ZEN Portable Media Center
- 90 out of 100 Rating - PC Up, Italy

MuVo Micro N200
- Editor's Choice - PC Home, Taiwan

ZEN Portable Media Center
- 5 out of 5 Rating - PC World, Italy

MuVo Micro N200
- 4 out of 5 Stars - aLive, Taiwan

ZEN Portable Media Center
- 89% out of 100% - T3, Italy
- 4 out of 5 Rating - Total Computer, Italy
- 89% out of 100% - PC Home, Italy

MuVo Micro N200
- 8.3 out of 10 Rating, Very Good - CNETAsia, Singapore

MuVo²
- 4 etoiles - Stuff, France

ZEN Touch
- Best Buy - ComputerBILD, Germany

ZEN Micro
- Best Buy - Bravo Screenfun, Germany
- Editor's Choice - Solo Furgo, Spain
- 5 etoiles for Design & 5 etoiles for Fonctions - HiFi Video Home Cinema, France
- 90% out of 100% - PC Team, France
- 5 etoiles - What Hi-Fi?, France
- Recommande par la redaction Tres bon - PDA Magazine, France
- 5 out of 6 Rating - PC Pro, United Kingdom
- 4 out of 5 Rating - Personal Computer World, United Kingdom
- 91% out of 100% - PC Format, United Kingdom
- 5 out of 5 Rating & Buy It Award! - Computeractive, United Kingdom
- 9 out of 10 Rating & GOLD Award - PC Advisor, United Kingdom
- 6 out of 6 dice - IT PRO, Norway
- BEST ID - ComputerDIY, Taiwan
- 5 out of 5 Stars - Editor's Choice, Taiwan
- Editor's Choice - LAPTOP, United States Of America
- Editor's Choice - Computer Shopper, United States Of America

ZEN MicroPhoto
- Editor's Choice - www.musicamp3.com, Spain

ZEN Xtra
- 5 etoiles - Stuff, France

MuVo V200
- 8 out of 10 Rating - Computer Week, Italy

ZEN Micro
- 4.5 out of 5 Rating - Home Entertainment, Italy
- 4 out of 5 Rating - Total Computer, Italy
- Vier sterren - HET, Netherlands

ZEN Portable Media Center
- 5 etoiles - Stuff, France
- 5 etoiles - What Hi-Fi?, France
- 4 Stars Award - Mobile PC, Ukraine
- Awards 2004 Winner - Most Innovative Digital - Personal Computer World, United Kingdom
- 4 out of 5 Stars - aLive, Taiwan
- Mention Bien - Micro Hebdo, France

ZEN Touch
- 4 etoiles for Design, 4 etoiles for Ergononic & 5 etoiles for Performance - HiFi Video Home Cinema, France
- 5 etoiles - What Hi-Fi?, France

ZEN Xtra
- 4 stars - T3, Portugal

ZEN Portable Media Center
- Vier sterren - HET, Netherlands

ZEN Touch
- Vier sterren - CHIP, Netherlands

JANUARY 2005

MuVo Sport C100
- 5 out of 5 Stars, Editor's Choice - aLive, Taiwan

MuVo Slim
- Gut (2,5) - test, Germany

MuVo TX
- Testsieger Platz 2 - PC Welt, Germany

MuVo TX FM
- Testsieger - ComputerBILD, Germany

MuVo V200
- 4.5 out of 5 Stars - aLive, Taiwan
- 5 Stars - BIT, Portugal
- Recommande par L'Ordinateur Individuel - L'Ordinateur Individuel, France
- Qualite/prix - Micro Hebdo, France

ZEN Micro
- 5 out of 5 Stars - Computeractive, United Kingdom
- 90% out of 100%, Gold Award - PC Format, United Kingdom
- Perfect Present - The Sunday Times, United Kingdom

ZEN Portable Media Center
- 90 out of 100 - Easy Tech, Italy

ZEN Micro
- 4 out of 5 Stars - Rip n Burn, United Kingdom

ZEN MicroPhoto
- Best of CES 2005 - Audio To Go Category - G4tech TV, United States Of America

ZEN Micro
- 5 out of 5 - Stuff, United Kingdom
- Gadgets of the week - The Independent, United Kingdom
- Recommande - Netcetera, Belgium
- 8 sur 10 - Windows News, France
- 90% out of 100% - PC Team, France
- 4 etoiles - SVM, France
- Aanrader - Netwerk, Belgium

ZEN Portable Media Center
- Computer Idee Aanrader - Computer Idee, Netherlands

ZEN Touch
- Star Choice for Hardisk Player - Mobile World, Singapore

ZEN Micro
- Wertung: 1,72 - PC Games, Germany

ZEN Touch
- Editor's Choice Award - E-Gear, United States Of America

ZEN Micro
- Testsieger - MP3-Flash, Germany
- 4 out of 5 Stars - Secretos de Windows XP, Spain
- 4 out of 5 Stars - hardware12v.com, Spain
- Editor's Choice - hardware12v.com, Spain
- 7.4 out of 10 Rating - Personal Computer & Internet, Spain
- Editor's Choice - www.noticias.com, Spain
- 9 out of 10 Rating - PC Plus, Spain

ZEN MicroPhoto
- Best of CES 2005 - Audio To Go Category - G4tech TV, United States Of America

ZEN Portable Media Center
- 5 stars - Megascore, Portugal

ZEN Touch
- 4.5 out of 5 Stars - Stuff, Taiwan
- Highly Recommended - Boys Toys, United Kingdom

ZEN Portable Media Center
- 4 Stars - Exame Informatica, Portugal
- 5 Stars - BIT, Portugal
- 4 out of 5 Stars - What Mobile, United Kingdom
- 80% out of 100% - PC Utilities, United Kingdom
- 4 out of 5 Stars - Secretos de Windows XP, Spain
- 5 out of 6 Stars - PC Pro, Spain

MuVo² FM
- Star Choice for Flash Player - Mobile World, Singapore

ZEN Touch
- 4 out of 5 Stars - HWM Philippines, Philippines

MuVo Slim
- Star Choice for Flash Player - Mobile World, Singapore

ZEN Xtra
- Star Choice for Hardisk Player - Mobile World, Singapore

ZEN Micro
- 95% out of 100% - www.games.telenet.be, Belgium

ZEN Xtra
- 4 out of 5 stars - Rip n Burn, United Kingdom

ZEN Portable Media Center
- 5 out of 5 stars - What Hi-Fi? Sound & Vision., United Kingdom

ZEN Touch
- Beste Koop - PCM, Netherlands
- Buy This - CM, Belgium
- Beste Koop - PC Consument, Netherlands
- Preistipp - MP3-Flash, Germany
- Highlight - Stereoplay, Germany
- Gut (2,4) - test, Germany

EXHIBIT
O

McDermott
Will&Emery

Boston Brussels Chicago Düsseldorf London Los Angeles Miami Munich
New York Orange County Rome San Diego Silicon Valley Washington, D.C.

Mark G. Davis
Attorney at Law
madavis@mwe.com
202.756.8364

CBI 06-315

May 15, 2006

DOCKET NUMBER
DN-2484
Office of the Secretary
Int'l Trade Commission

2006 MAY 15 AM 8:58
OFC OF THE SECRETARY
US INTL TRADE COMM

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

COMPLAINANTS

Creative Labs, Inc.
1901 McCarthy Boulevard
Milpitas, CA 95035
Telephone: (408) 428-6600
Facsimile: (408) 428-6611

Creative Technology Ltd.
31 International Business Park
Creative Resource
Singapore 609921
Telephone: 65-6895-4000
Facsimile: 65-6895-4999

PROPOSED RESPONDENT

Apple Computer, Inc.
1 Infinite Loop
Cupertino, CA 95014
Telephone: (408) 996-1010

COUNSEL FOR COMPLAINANTS

Mark G. Davis
John R. Fuisz
Stephen K. Shahida
McDERMOTT WILL & EMERY LLP
600 Thirteenth Street, N.W.
Washington, DC 20005
Telephone: (202) 756-8000
Facsimile: (202) 756-8087

Terrence P. McMahon
Lucy H. Koh
Catherine Shiang
McDERMOTT WILL & EMERY LLP
3150 Porter Dr.
Palo Alto, CA 94304-1212
Telephone: (650) 813-5000
Facsimile: (650) 813-5100

TABLE OF CONTENTS

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,

Mark G. Davis
John R. Fuisz
Stephen K. Shahida
McDERMOTT WILL & EMERY LLP
600 Thirteenth Street, N.W.
Washington, DC 20005
Telephone: (202) 756-8000
Facsimile: (202) 756-8087

Terrence P. McMahon
Lucy H. Koh
Catherine Shiang
McDERMOTT WILL & EMERY LLP
3150 Porter Dr.
Palo Alto, CA 94304-1212
Telephone: 650.813.5000
Facsimile: 650.813.5100

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

WDC99 1231665-1.065985.0014

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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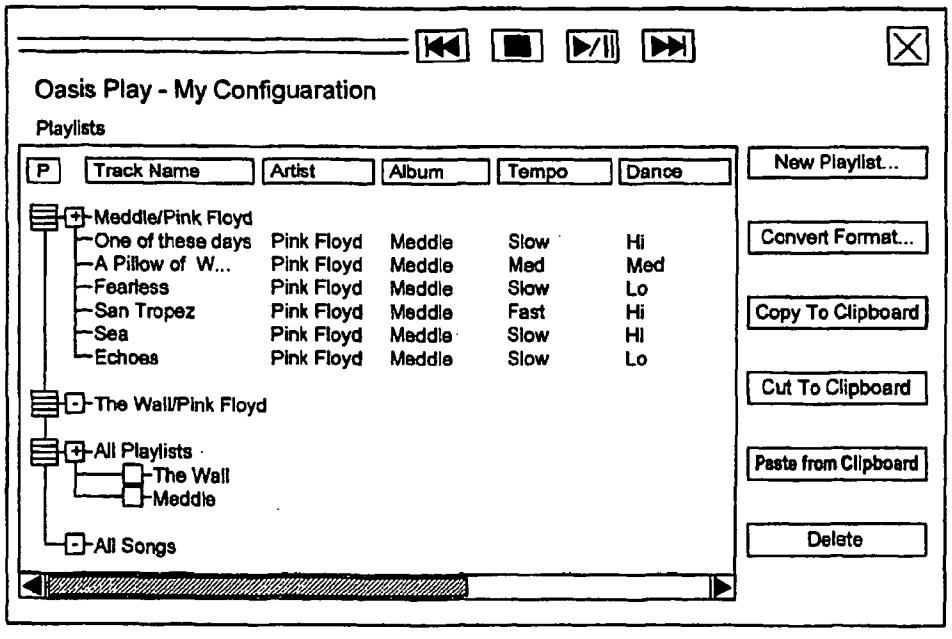
* cited by examiner

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

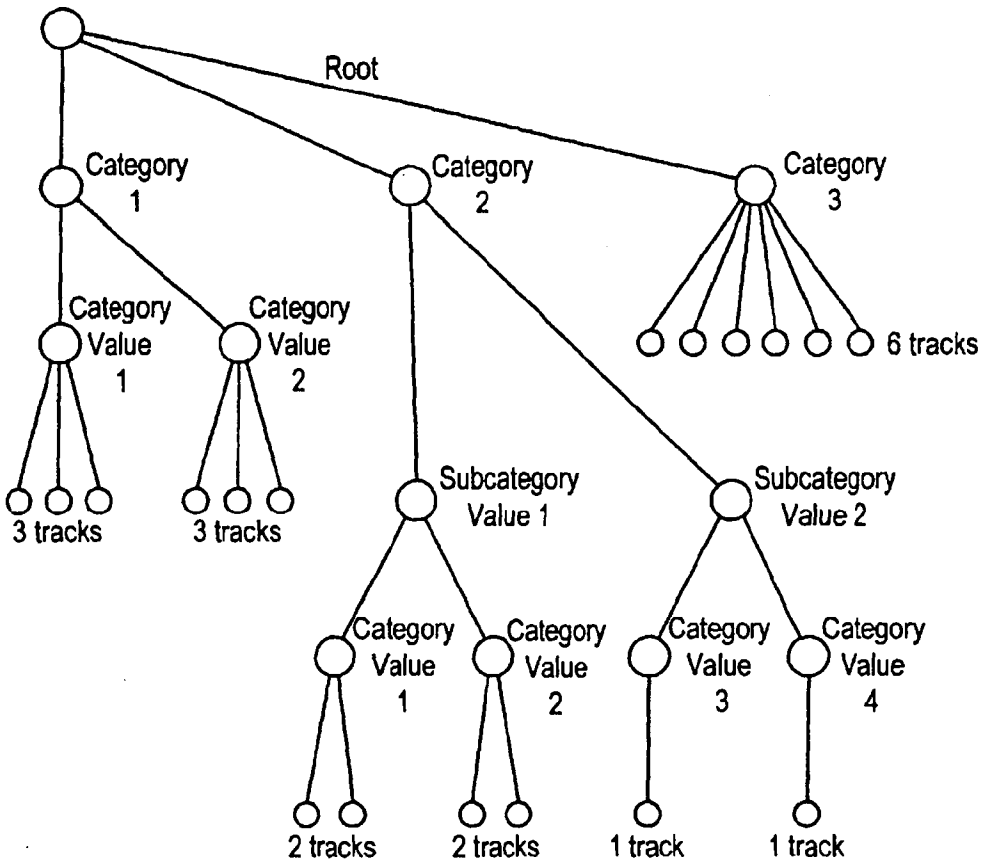
(57) **ABSTRACT**

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



CL 000002



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.

CL 000003

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

FIG. 2.

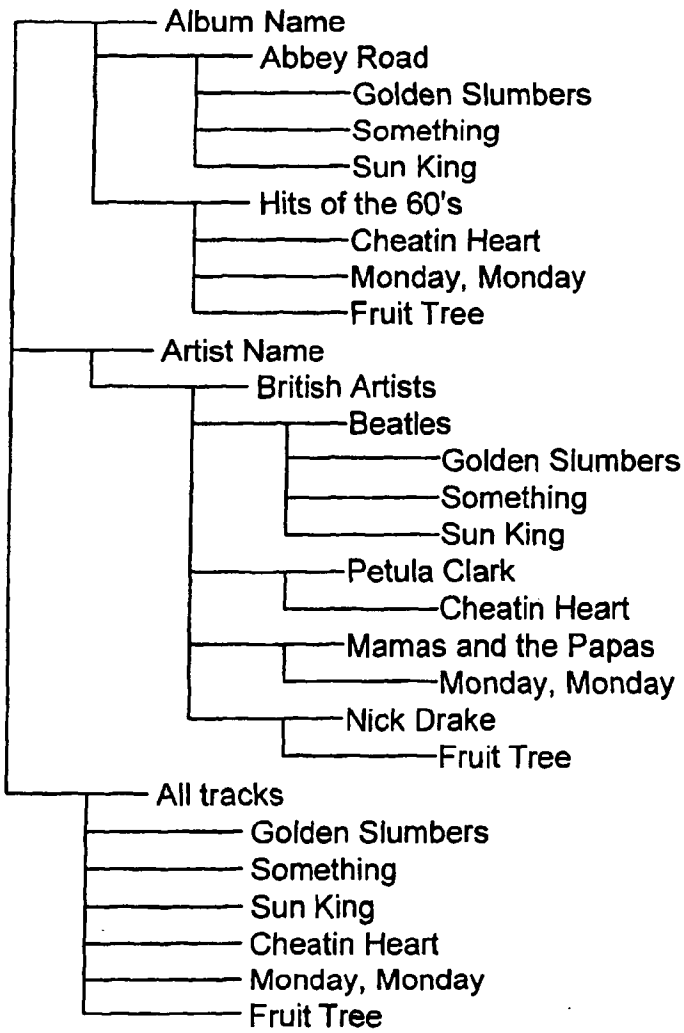


FIG. 3.

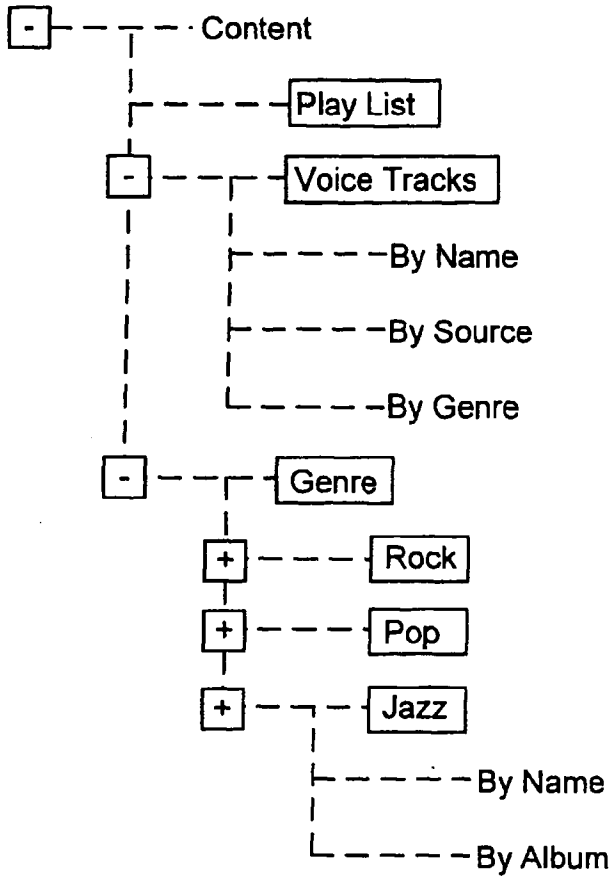


FIG. 4.

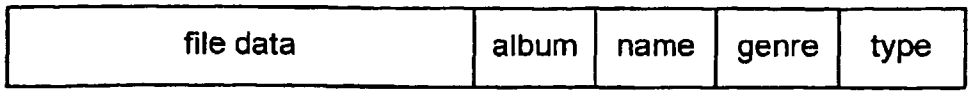


FIG. 5.

CL 000005

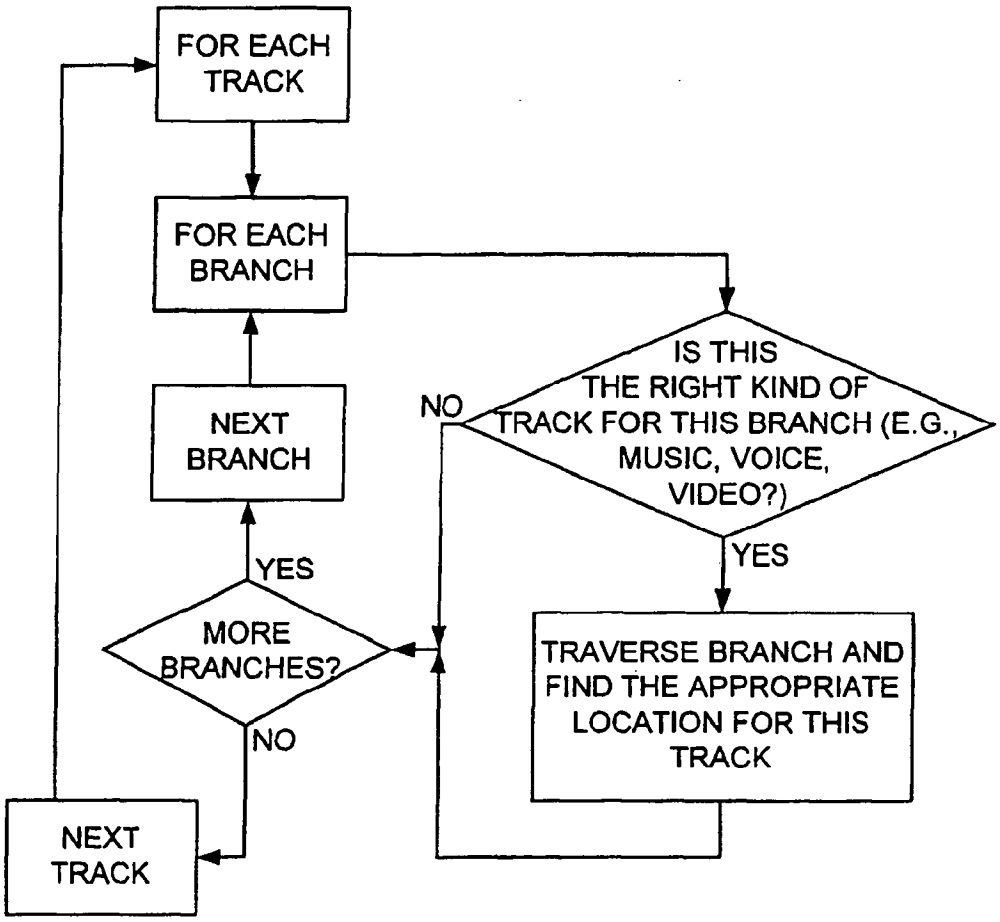


FIG. 6.

CL 000006

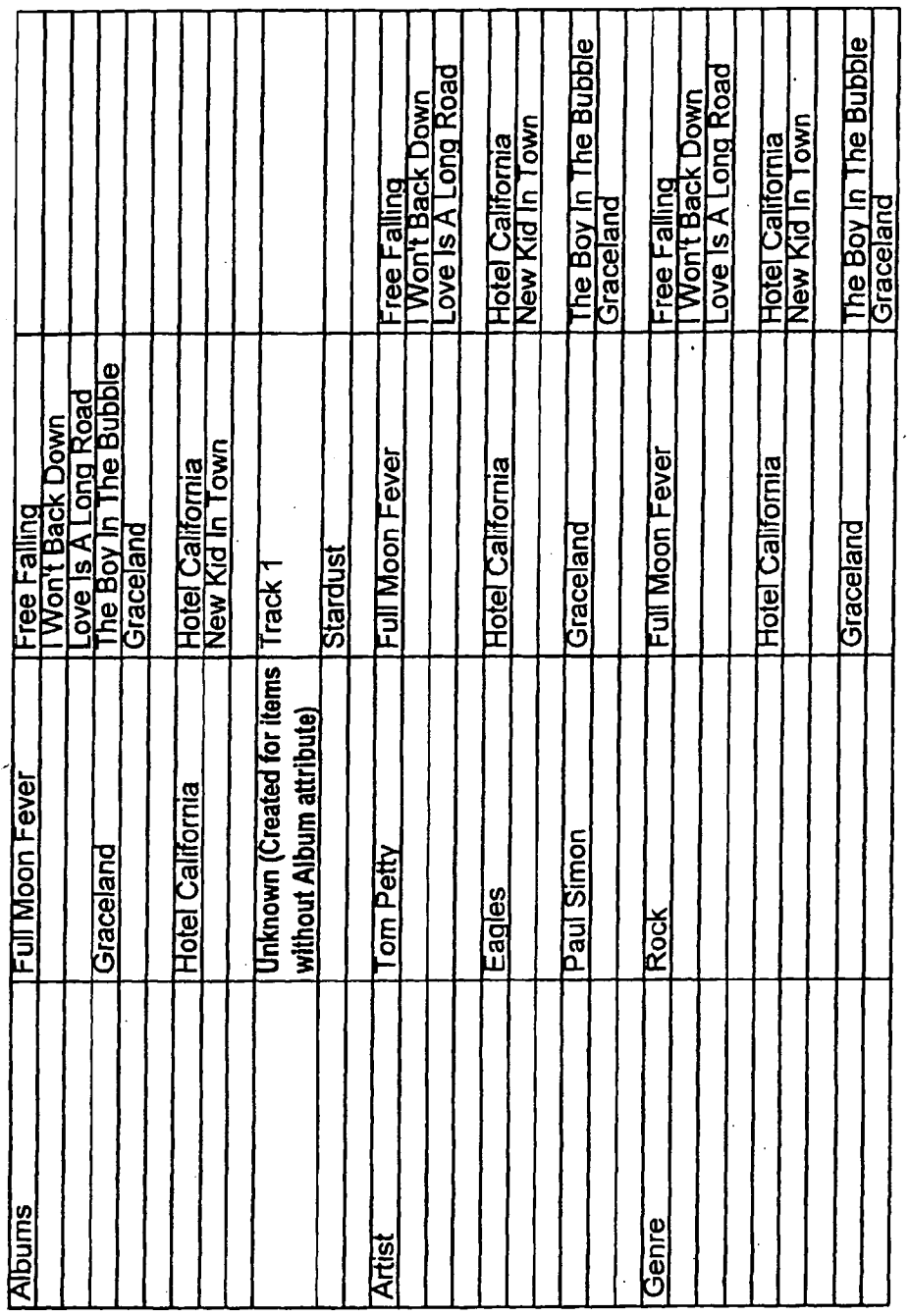


FIG. 7.

CL 000007

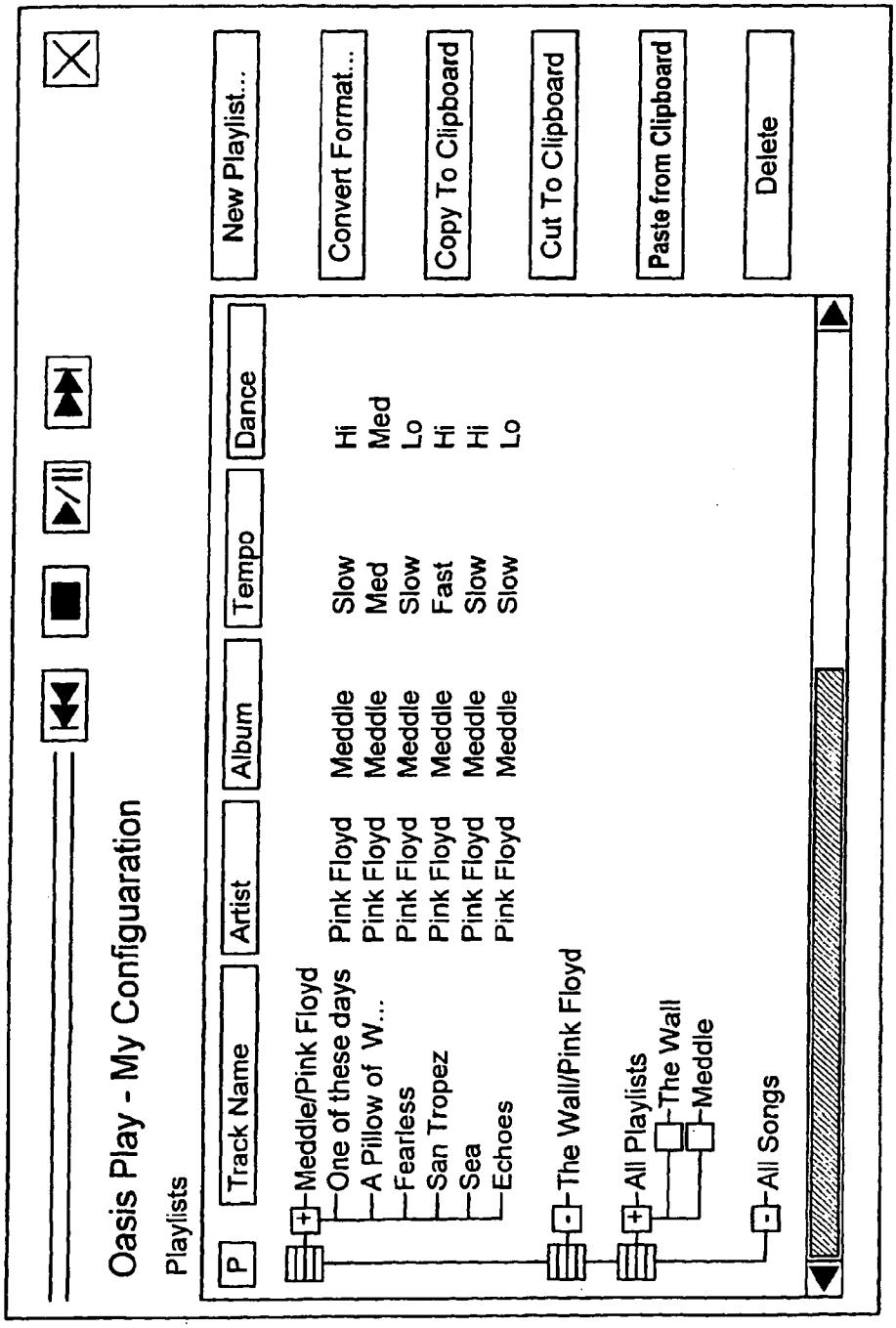


FIG. 8.

CL 000008

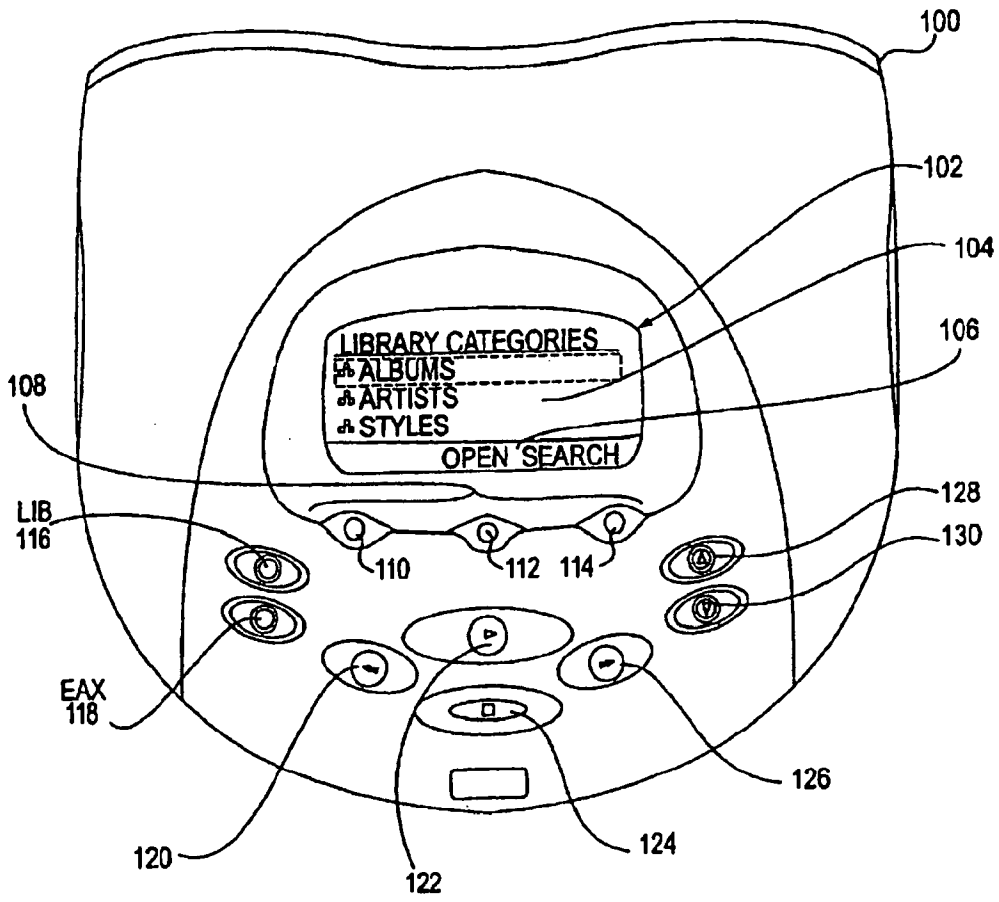


FIG. 9

CL 000009

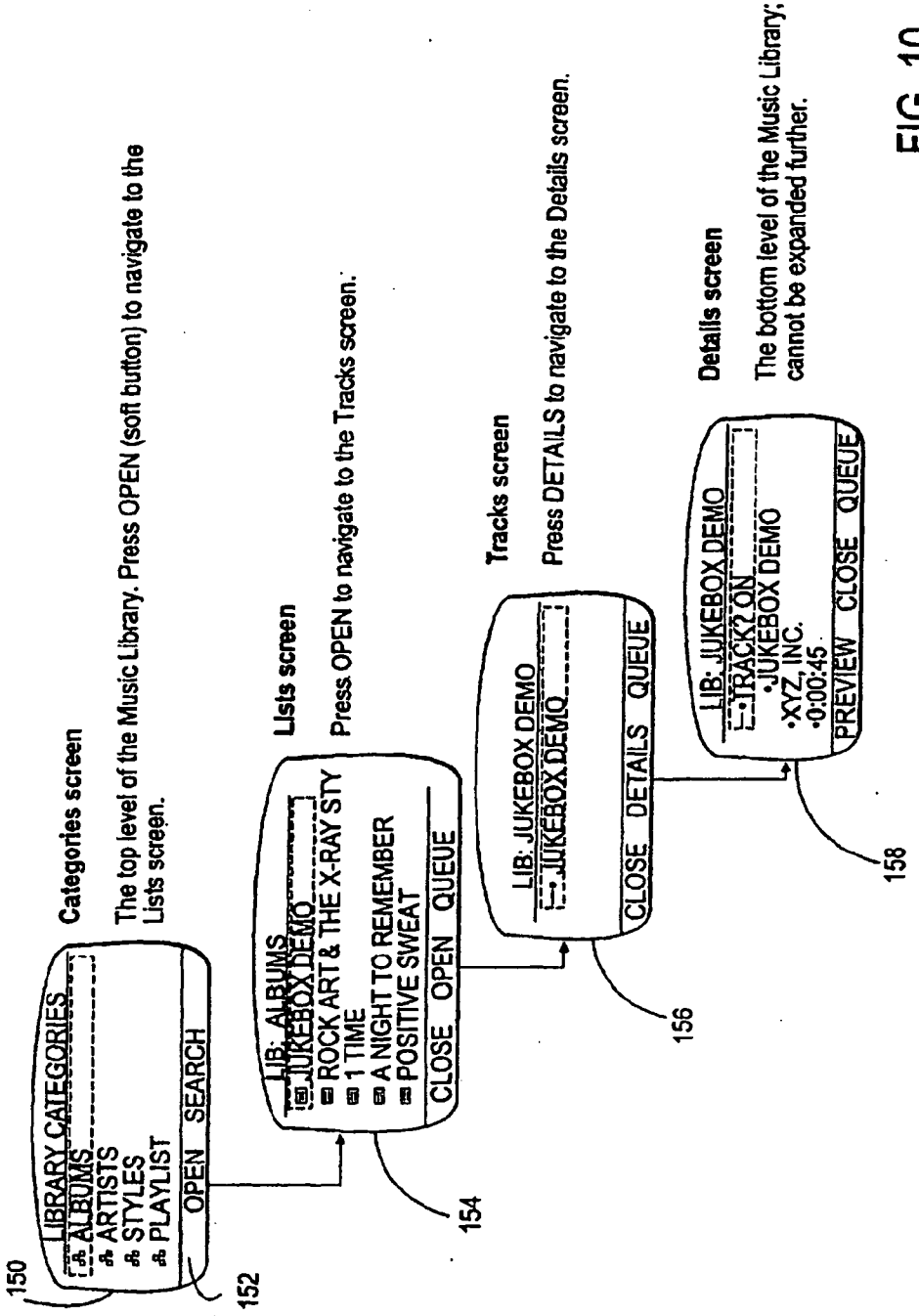


FIG. 10

CL 000010

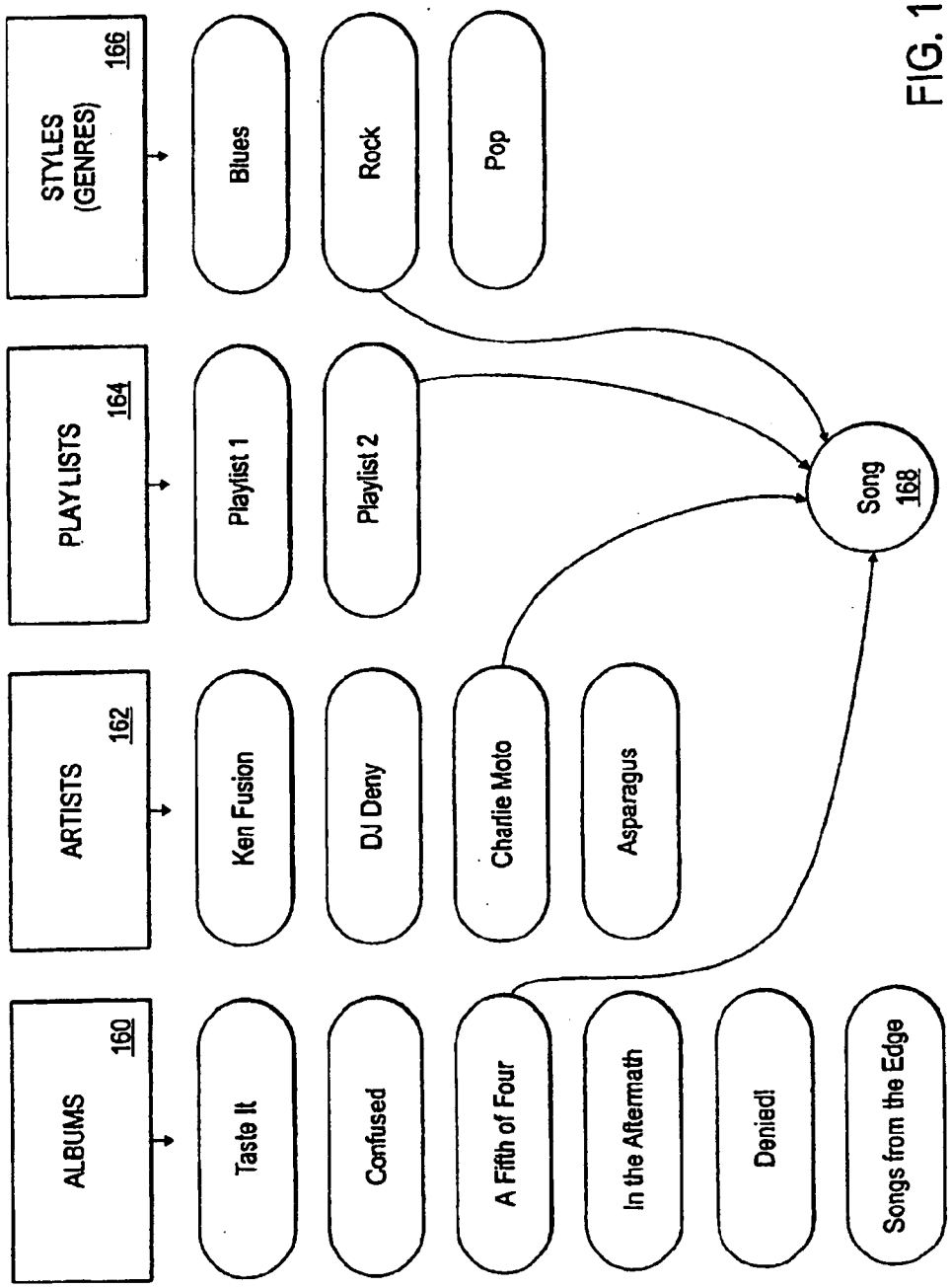

STYLES (GENRES) 166
Blues
Rock
Pop
PLAYLISTS 164
Playlist 1
Playlist 2
ARTISTS 162
Ken Fusion
DJ Deny
Charlie Moto
Asparagus
ALBUMS 160
Taste It
Confused
A Fifth of Four
In the Aftermath
Denied!
Songs from the Edge
Song 168

FIG. 11

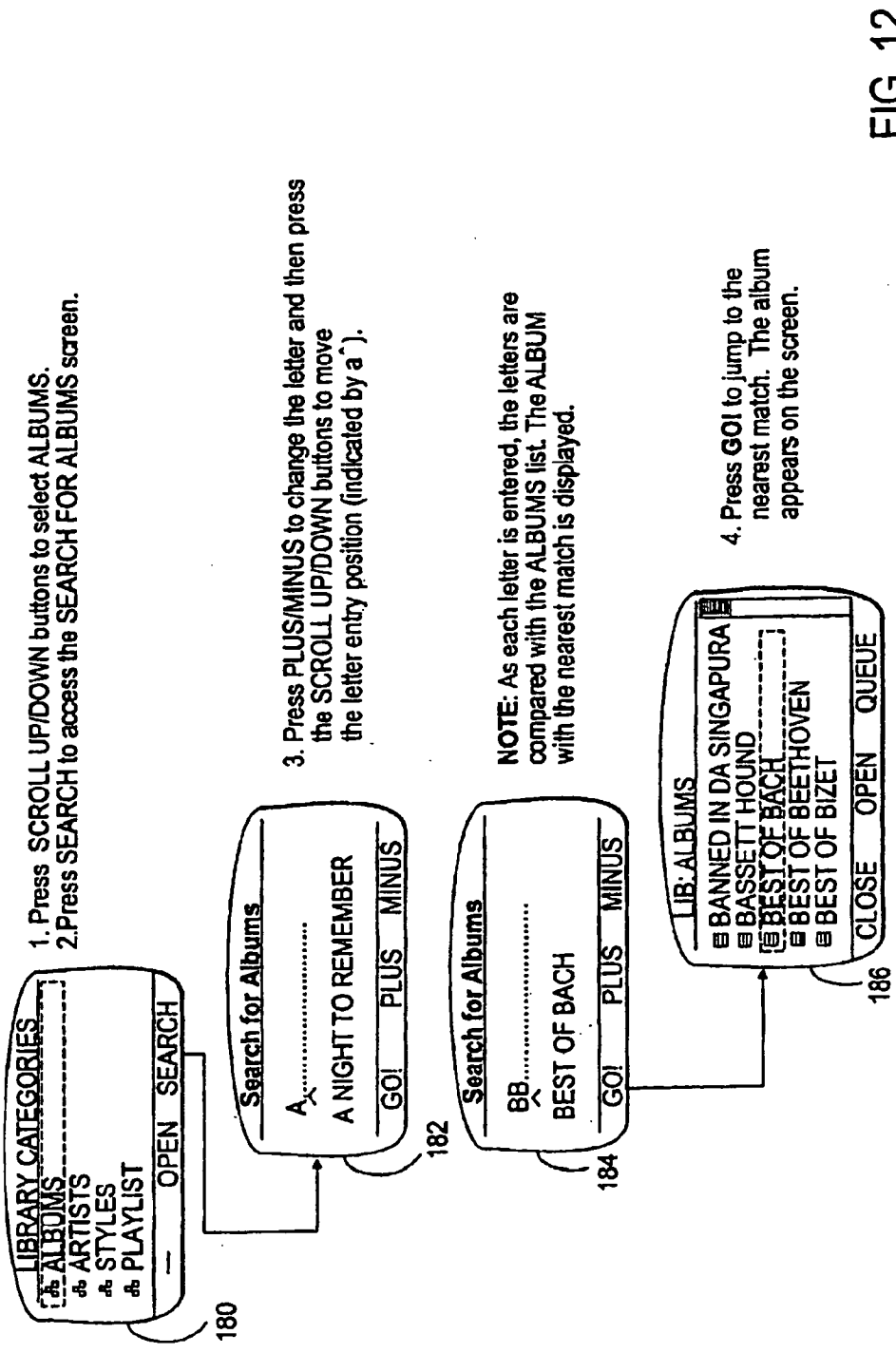


FIG. 12

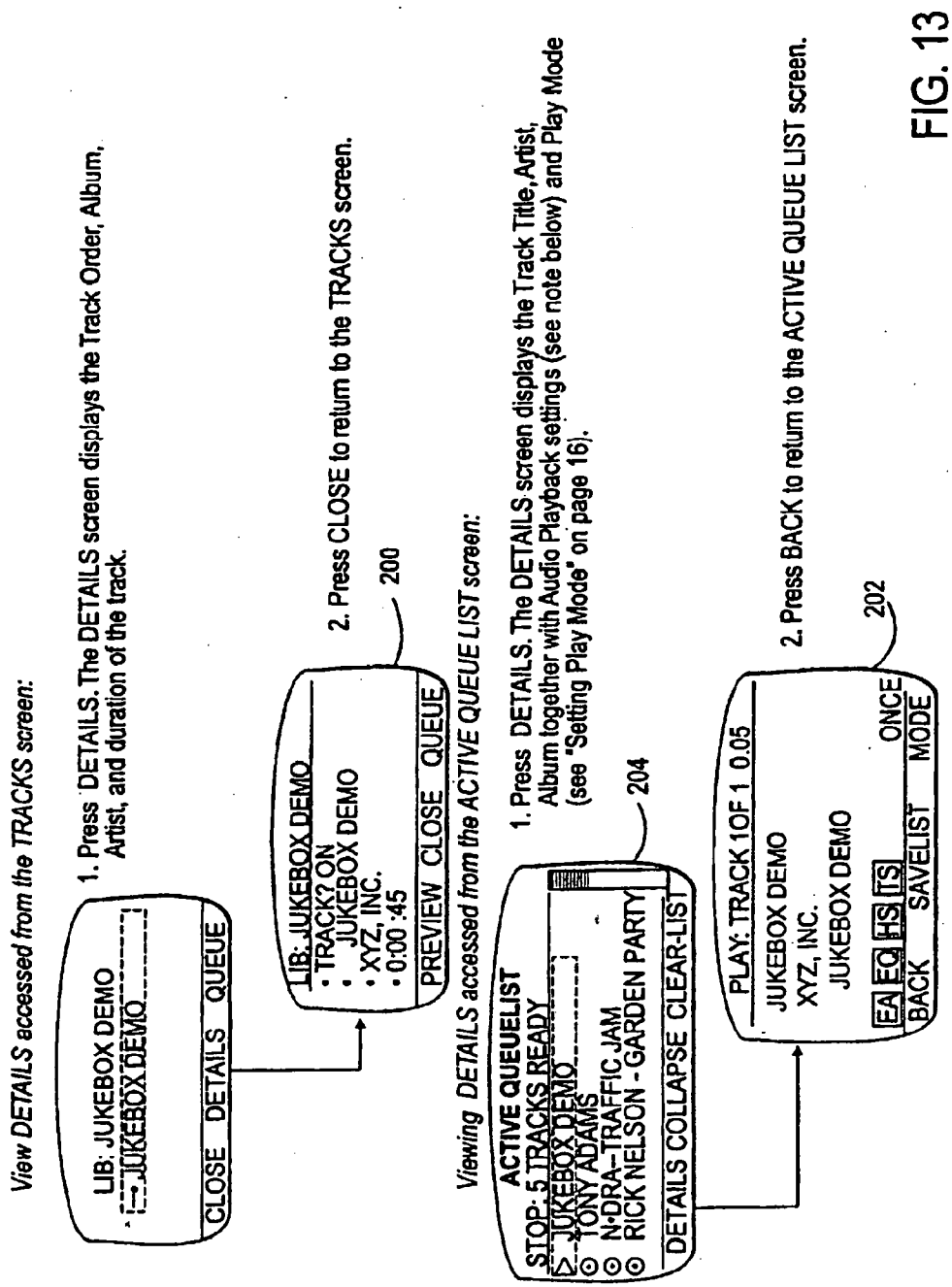


FIG. 13

CL 000013

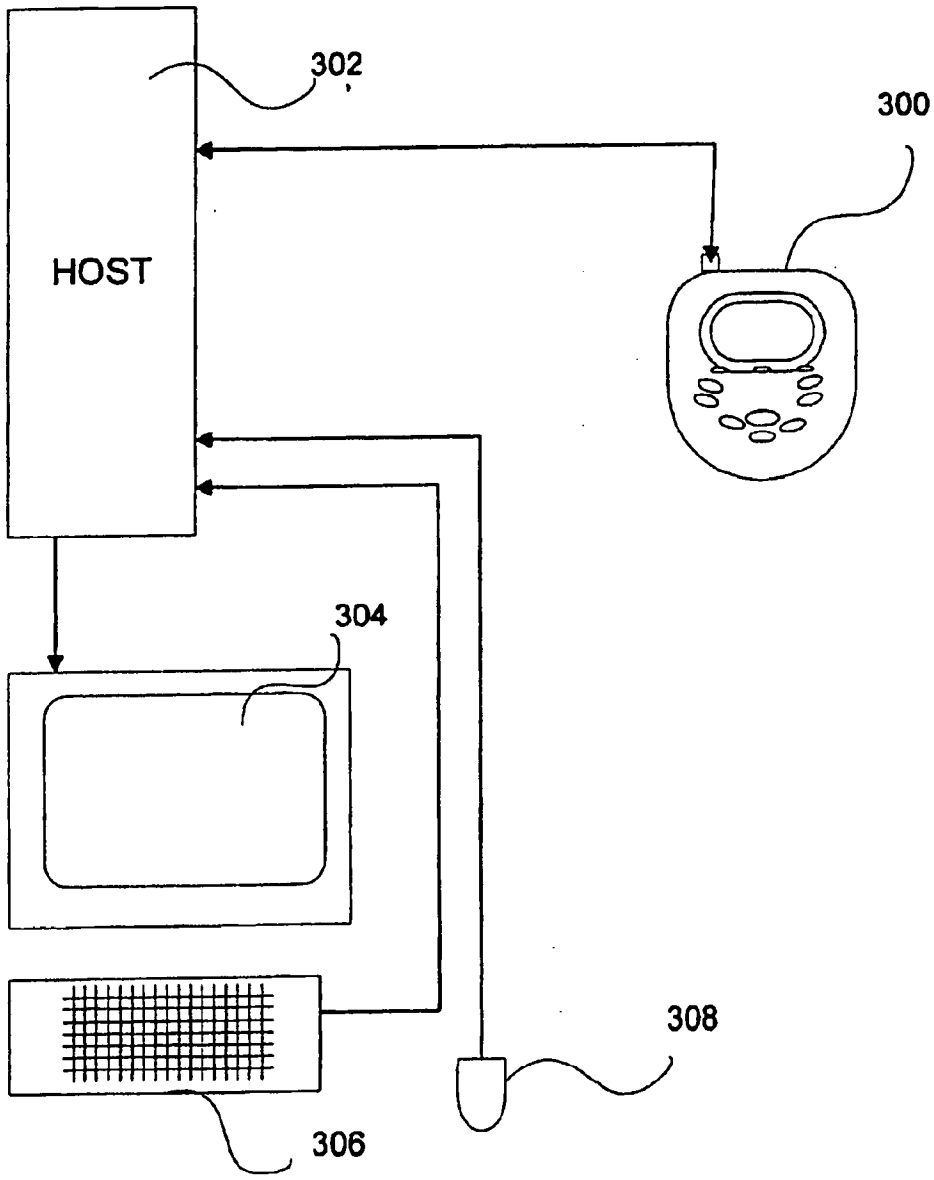


FIG. 14

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			

CL 000017

-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.

* * * * *

CL 000020

EXHIBIT 2

A 796650

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05-15-2001

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Name (line 2):

Second Party

Name (line 1): EGAN, HOWARD N. — Execution Date Month Day Year: 03 22 01

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Name (line 1): CREATIVE TECHNOLOGY LTD.

Name (line 2): a corporation of the Republic of Singapore

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Address (line 2): Creative Resource

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Correspondent Name and Address Area Code and Telephone Number 415-576-0200

Name: Charles E. Krueger

Address (line 1): Townsend and Townsend and Crew LLP

Address (line 2): Two Embarcadero Center

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Charles E. Krueger — Name of Person Signing

Signature

April 17, 2001 — Date

Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

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

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

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

NOTARY PUBLIC

My Commission Expires: 4/2/2001

Dated: 3-22-2001

HOWARD N. EGAN

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

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.

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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09/755,367					

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Name of Person Signing: Charles E. Krueger

Signature

Date: 5/10/01

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Name (line 2):

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Execution Date: Month 04 Day 24 Year 01

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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.

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CL 000032

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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

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☐ 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) 548-6417

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

07/16/2004 DBYRNE 00000027 09755723
01 FC:8021 40.00 OP

700150404

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)

CL 000039

EXHIBIT 3

10-K

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

<<Previous Page | Next Page>>

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.

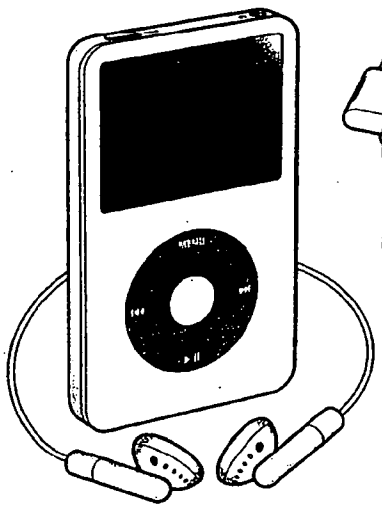
EXHIBIT 5

iPod

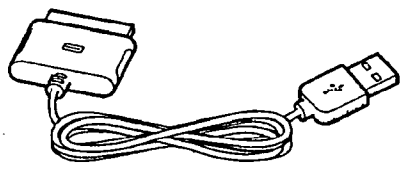
iPod + iTunes
Quick Start

Welcome

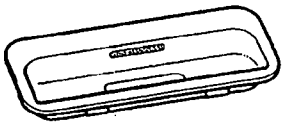
Congratulations on purchasing your new iPod.



Apple Earphones



iPod Dock Connector to USB 2.0 Cable

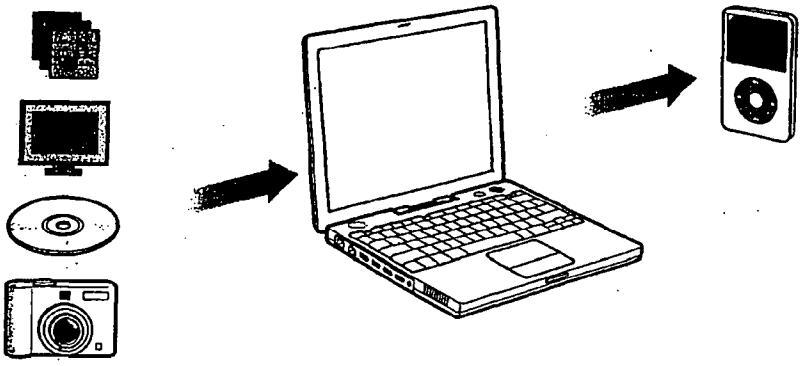


iPod Dock Adapter
(for use with iPod accessories, such as the iPod Universal Dock, available separately)

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.

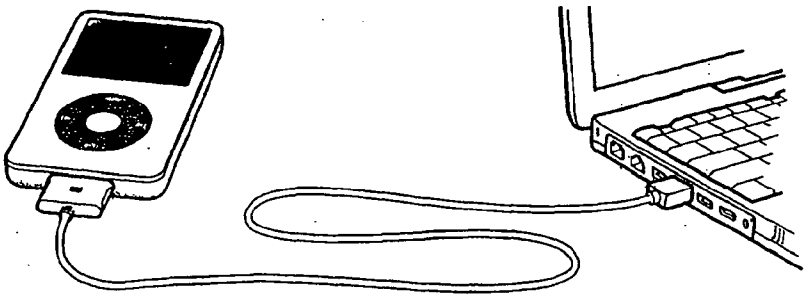
To buy music and videos from the iTunes Music Store (available only in some countries):

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.

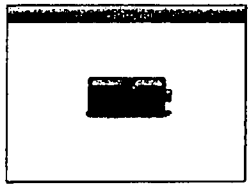


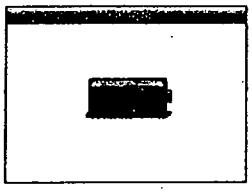
To download music and videos to iPod:
When you connect iPod, iTunes opens. Follow the simple onscreen instructions to download songs and videos to iPod.

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.





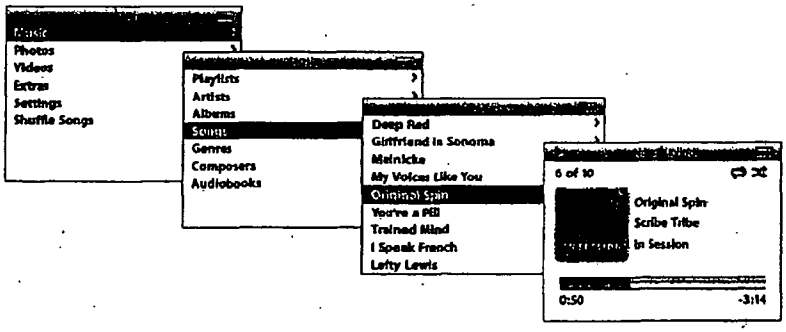
Step 4: Play Music and Videos

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.

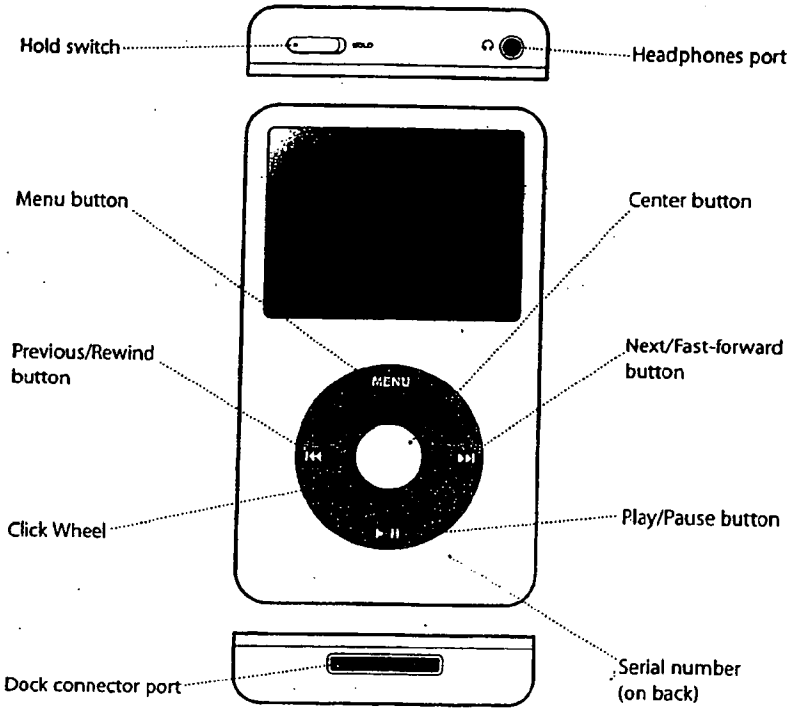
To browse for and play a song or video:

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



034-3594-A
Printed in China

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 (⏭).
Start a song or video over	Press Previous/Rewind (⏮).
Play the previous song or video	Press Previous/Rewind (⏮) twice.
Fast-forward or rewind a song or video	Press and hold Next/Fast-forward (⏭) or Previous/Rewind (⏮).
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

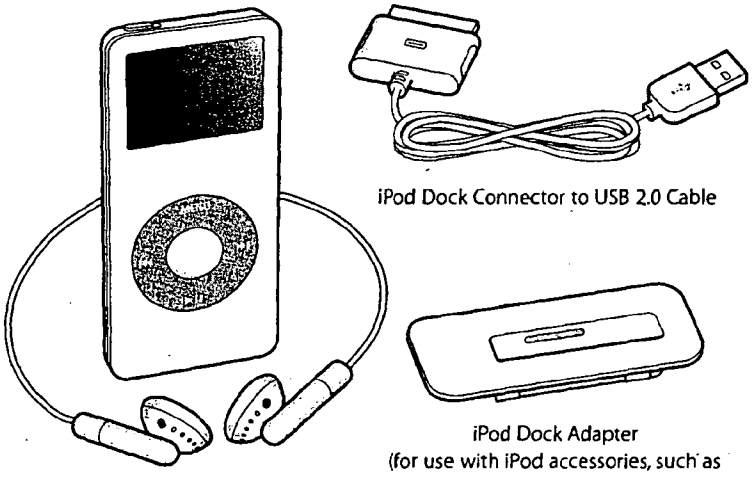
EXHIBIT 6

iPod
nano

iPod nano + iTunes
Quick Start

Welcome

Congratulations on purchasing your new iPod nano.



iPod Dock Connector to USB 2.0 Cable

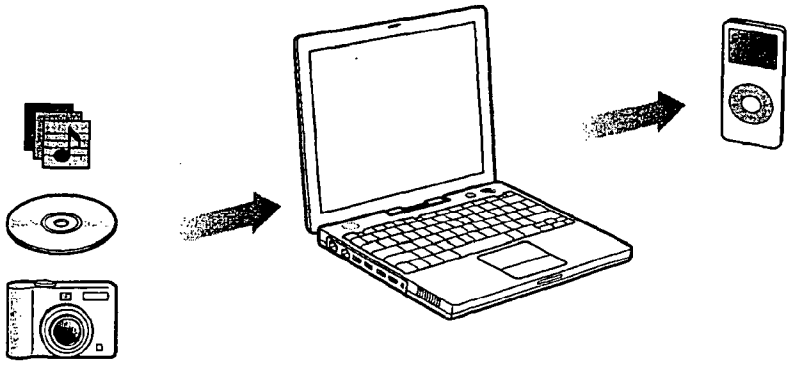
iPod Dock Adapter
(for use with iPod accessories, such as
the iPod Universal Dock, available separately)

Apple Earphones

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.

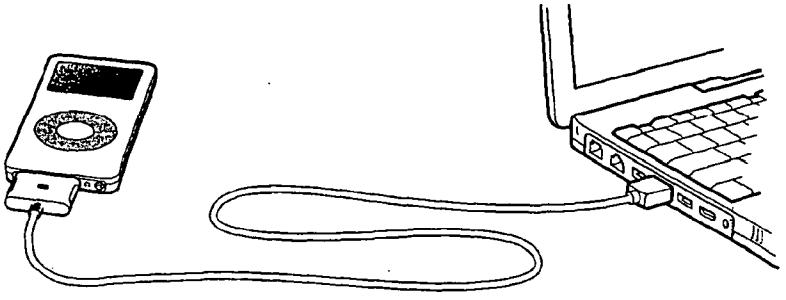
To buy music from the iTunes Music Store (available only in some countries):

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.

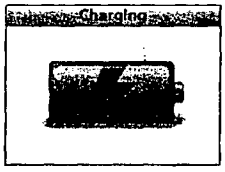


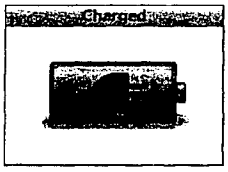
To download music to iPod nano:
When you connect iPod nano, iTunes opens. Follow the simple onscreen instructions to download songs to iPod nano.

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.





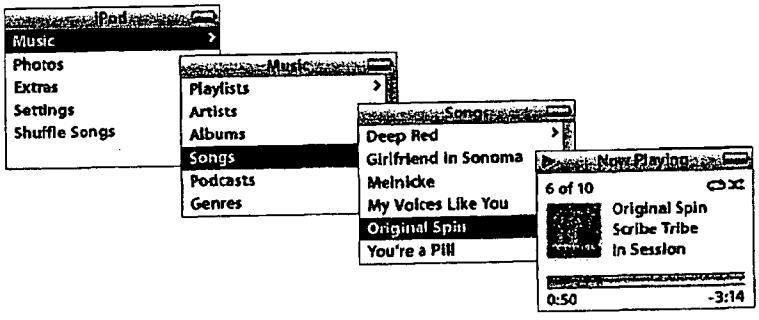
Step 4: Play Music

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.

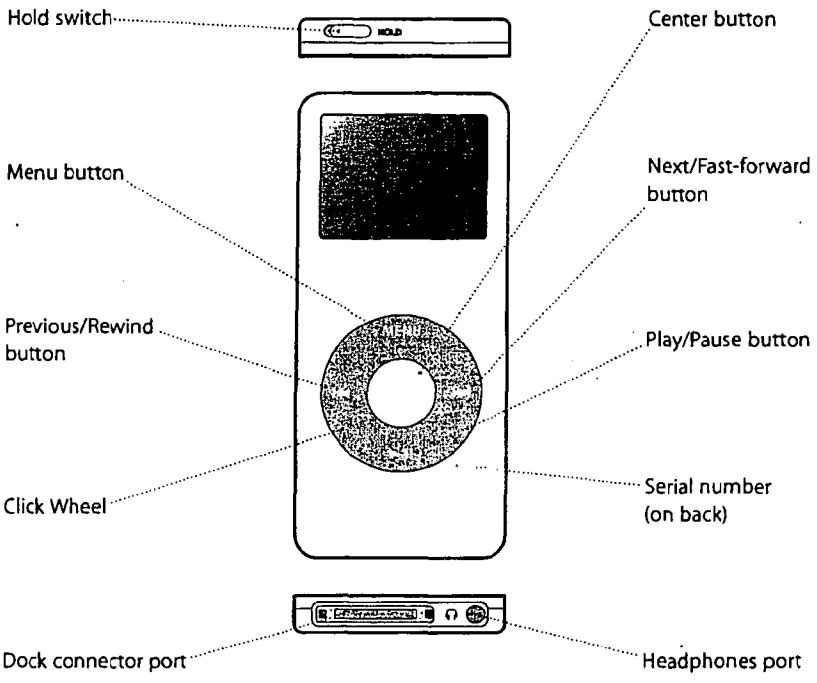
To browse for and play a song:

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



034-3580-A
Printed in China

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 (▶❚❚).
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 (▶▶❙).
Start a song over	Press Previous/Rewind (❙◀◀).
Play the previous song	Press Previous/Rewind (❙◀◀) twice.
Fast-forward or rewind a song	Press and hold Next/Fast-forward (▶▶❙) or Previous/Rewind (❙◀◀).
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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What if my iPod nano isn't responding?

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To reset iPod nano:

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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

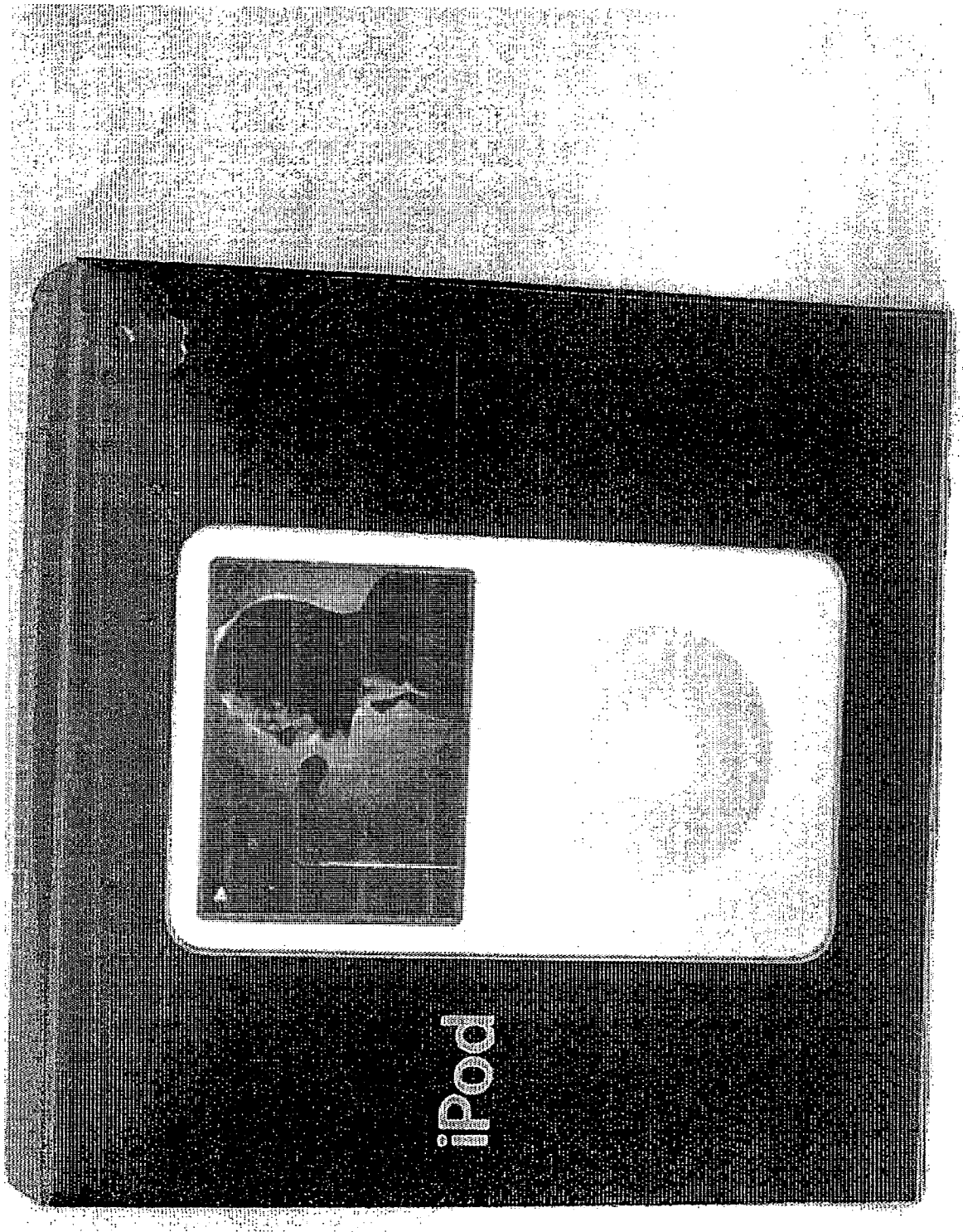
To learn to use all the features of your iPod nano, see the *iPod nano Features Guide.*

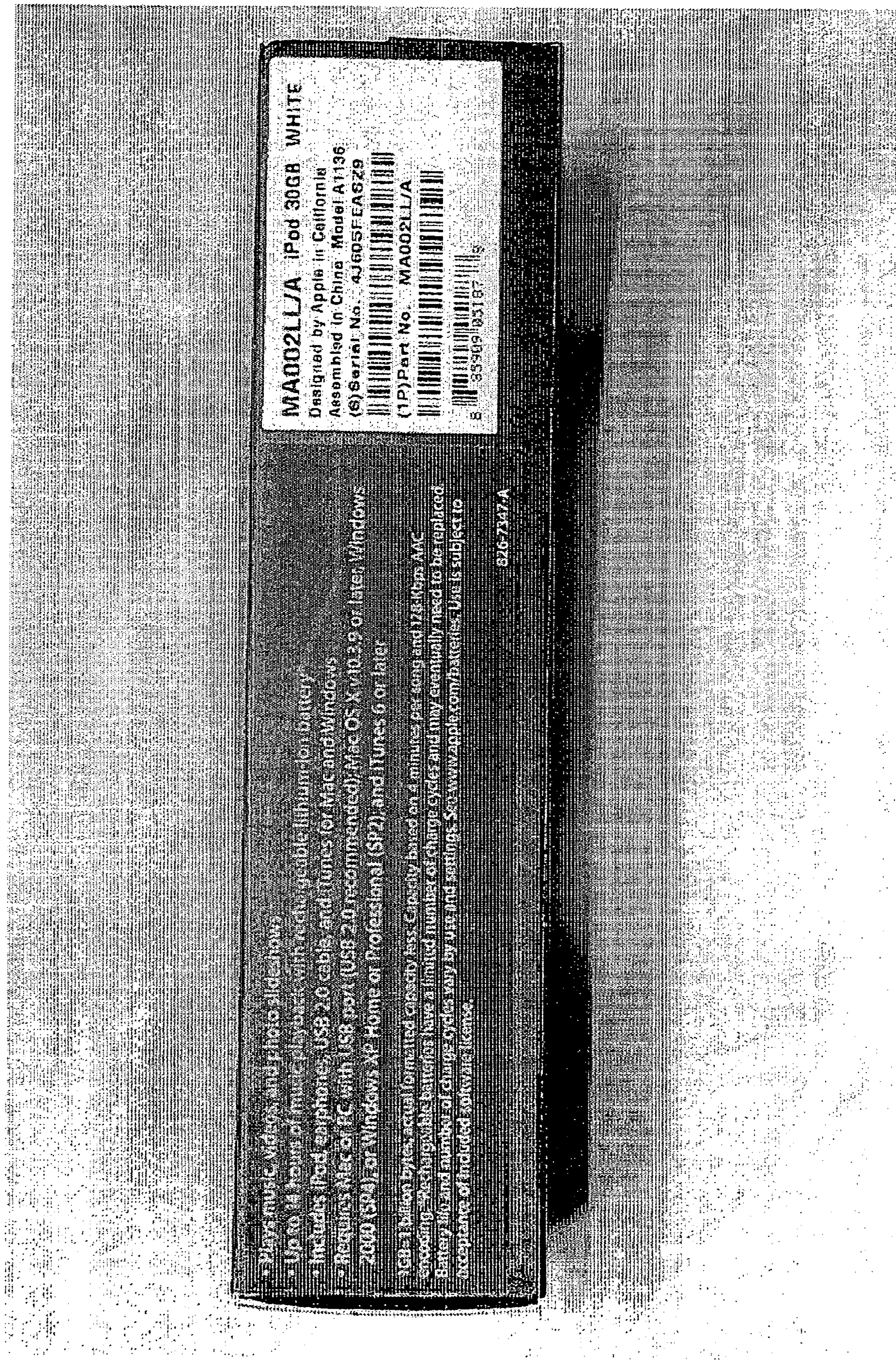
The features guide has detailed instructions on using iPod nano, answers to common problems, and important safety and compliance information. It can be found on the web at www.apple.com/support/manuals/ipod and, where available, on the iPod CD and in iPod Help (in iTunes, choose Help > iPod Help). To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

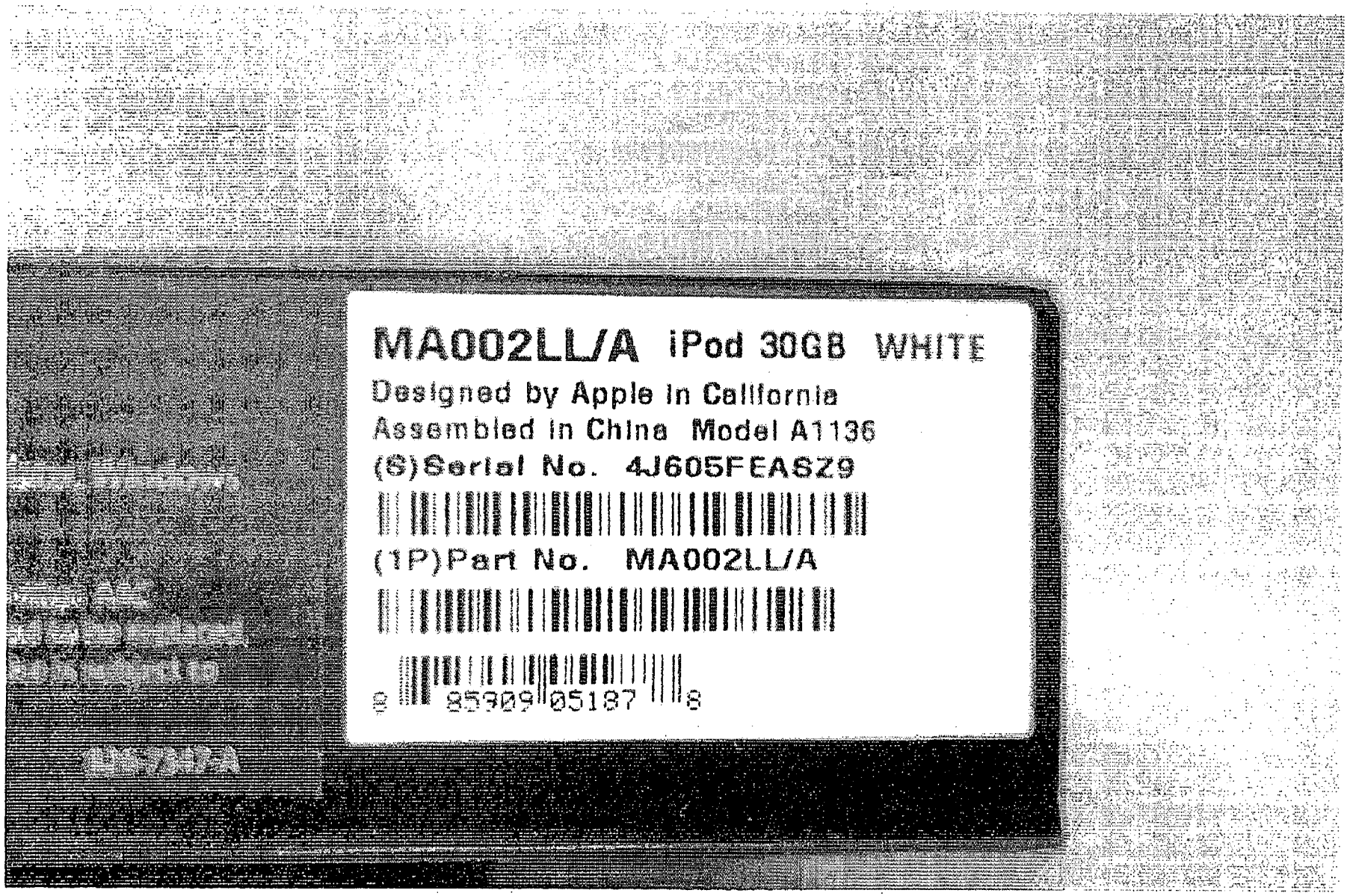
www.apple.com/ipodnano
www.apple.com/support/ipod

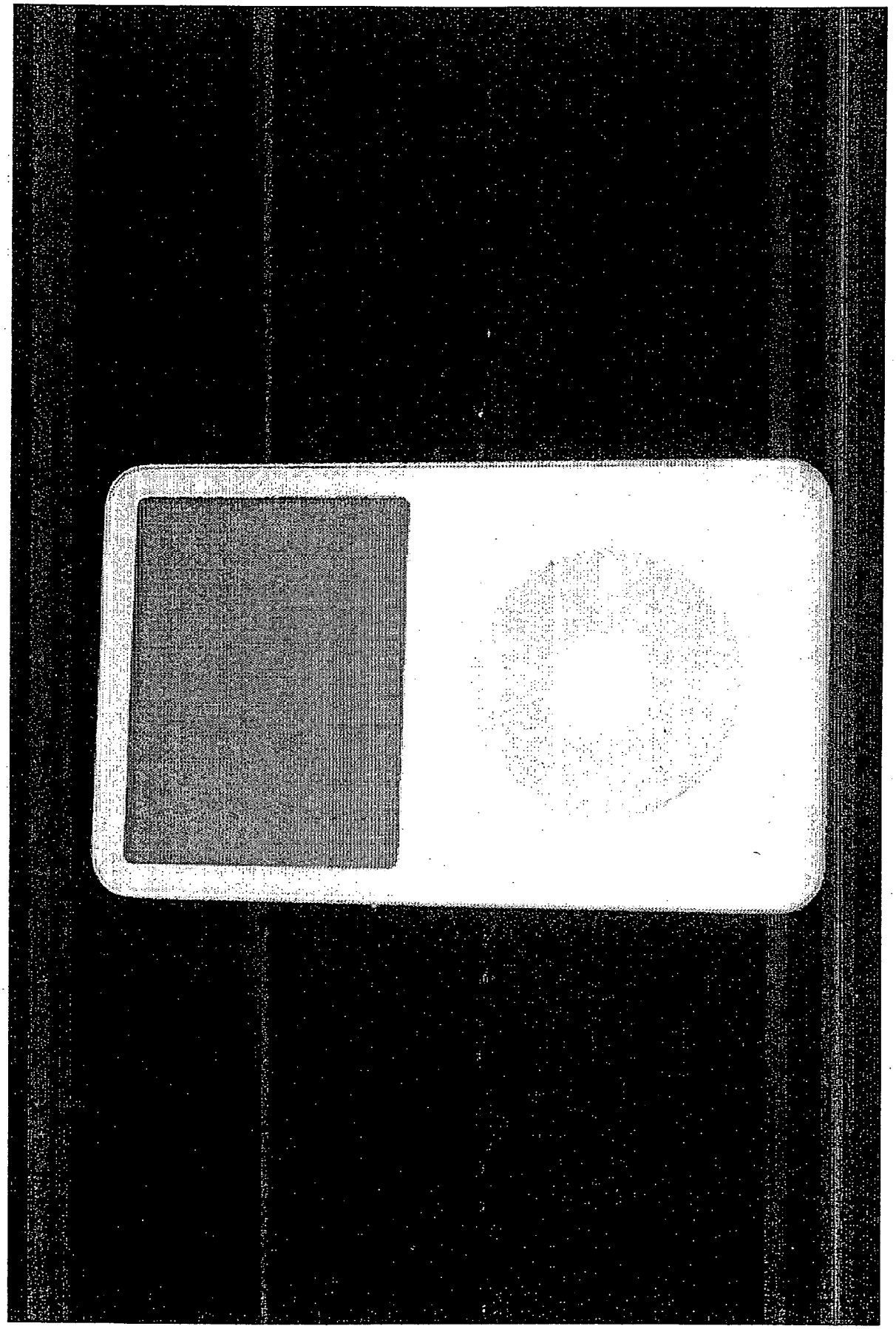
EXHIBIT 7

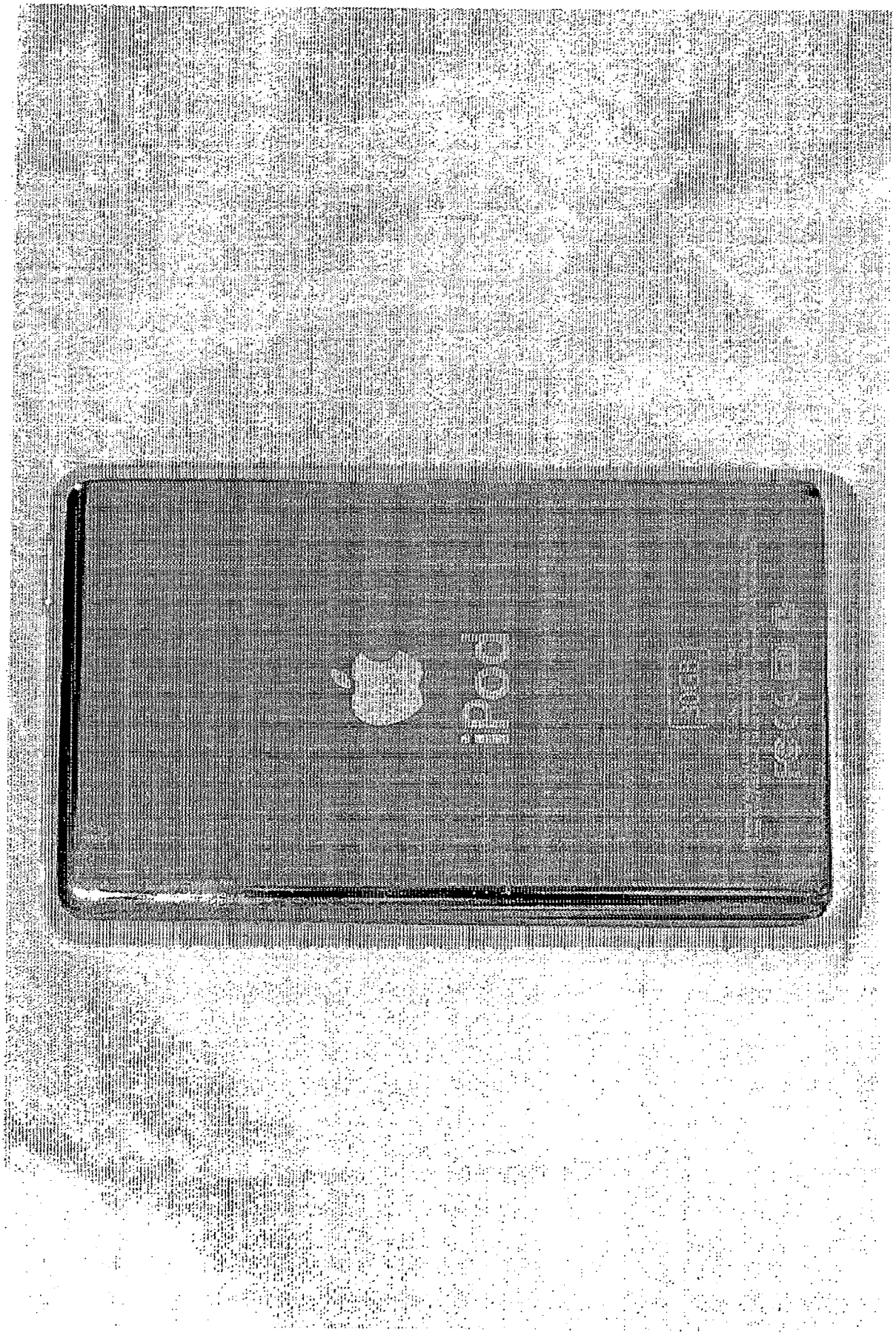
Now Playing
6 of 15
Feel Good Inc
Gorillaz
Demon Days
3:51
iPod

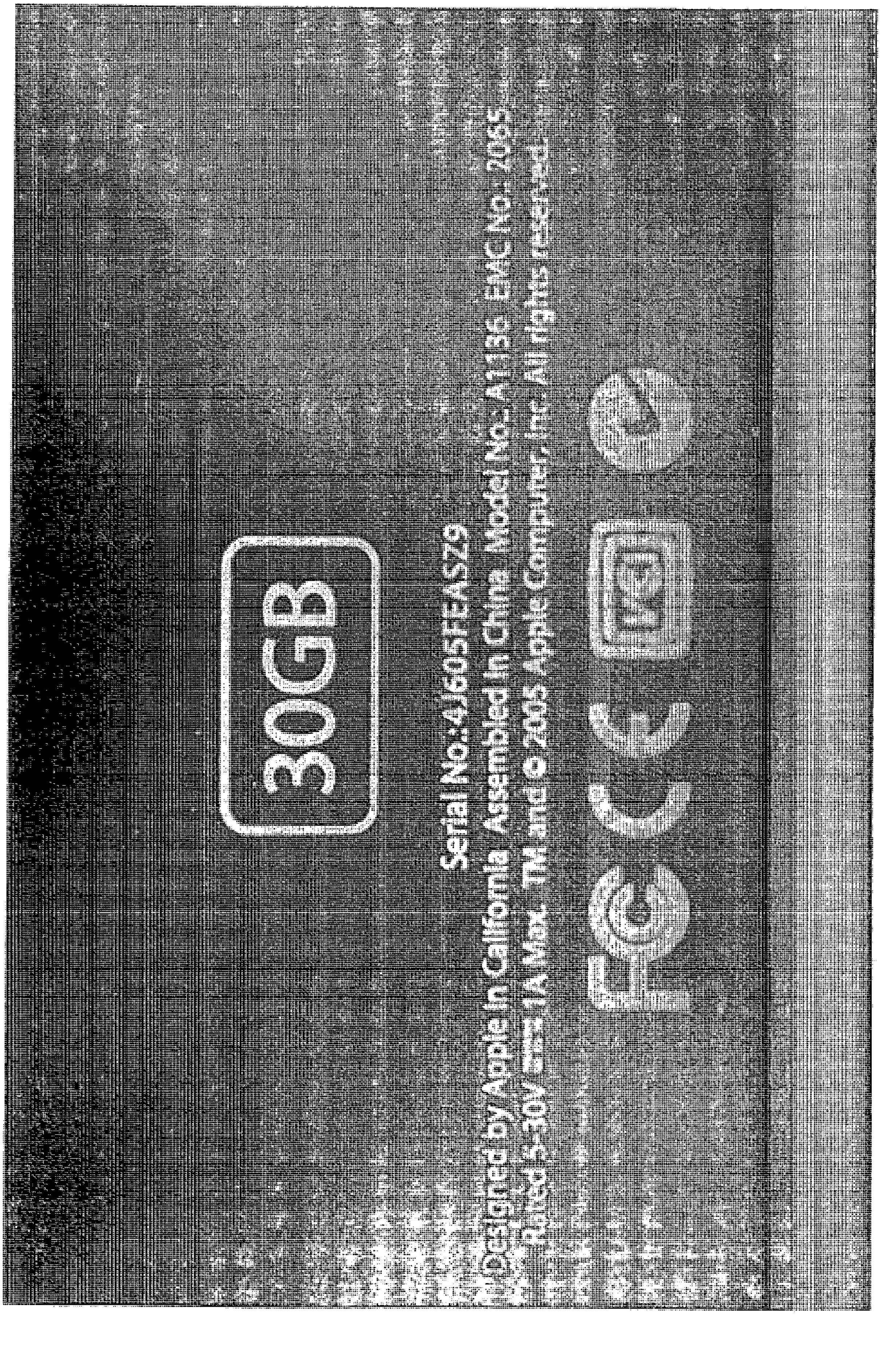

iPod


• Plays music, videos, and photo slideshows
• Up to 14 hours of music playback with rechargeable lithium-ion battery*
• Includes iPod, earphones, USB 2.0 cable, and iTunes for Mac and Windows
• Requires Mac or PC with USB port (USB 2.0 recommended); Mac OS X v10.3.9 or later; Windows 2000 (SP4), or Windows XP Home or Professional (SP2); and iTunes 6 or later
1GB=1 billion bytes; actual formatted capacity less. Capacity based on 4 minutes per song and 128-Kbps AAC encoding. *Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Battery life and number of charge cycles vary by use and settings. See www.apple.com/batteries. Use is subject to acceptance of included software license.
826-7347-A
MA002LL/A iPod 30GB WHITE
Designed by Apple in California
Assembled in China Model A1136
(S)Serial No. 4J605FEASZ9
(1P)Part No. MA002LL/A

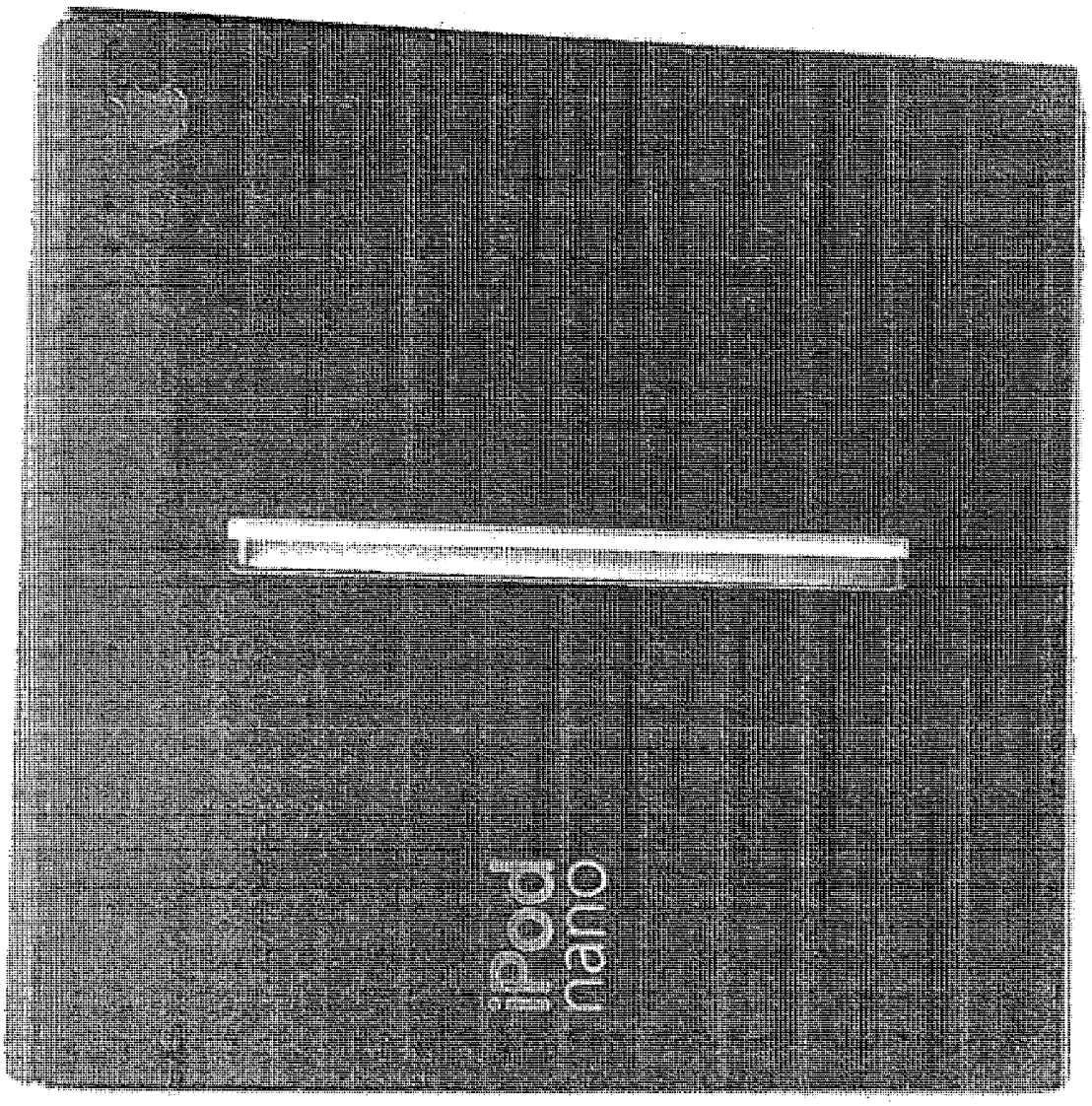




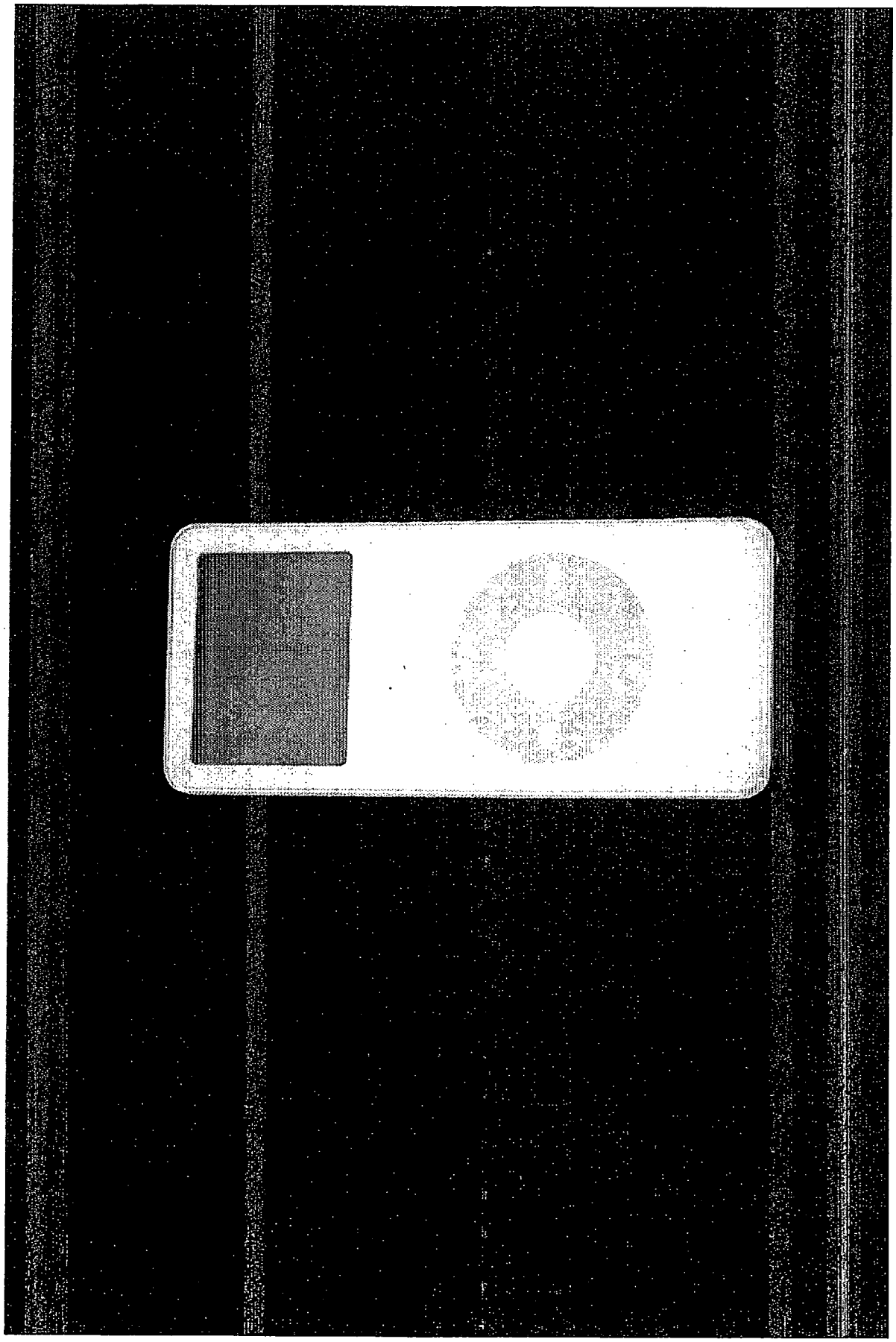


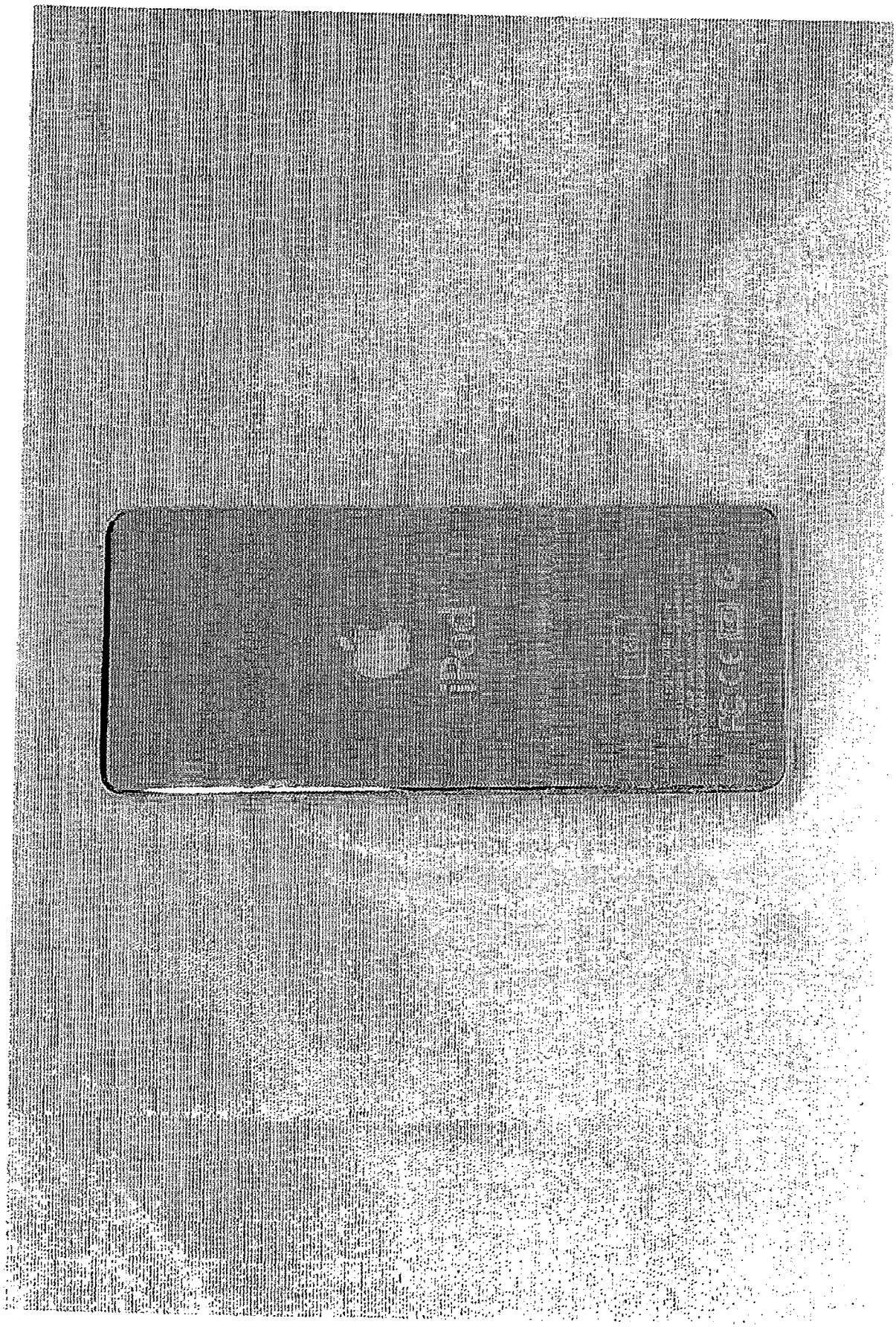

30GB
Serial No.:4J605FEASZ9
Designed by Apple in California Assembled in China Model No.: A1136 EMC No.: 2065
Rated 5-30V 1A Max. TM and © 2005 Apple Computer, Inc. All rights reserved.

Now Playing
3 of 14
Just Feel Better
Santana
All That I Am
3:46
-0:55
iPod
nano


nano

MA350LL/A iPod nano 1GB white
Designed by Apple in California
Assembled in China Model No. A1137
(S)Serial No. 6U6074ACUNA
(1P)Part No. MA350LL/A
0 85905 09062 1





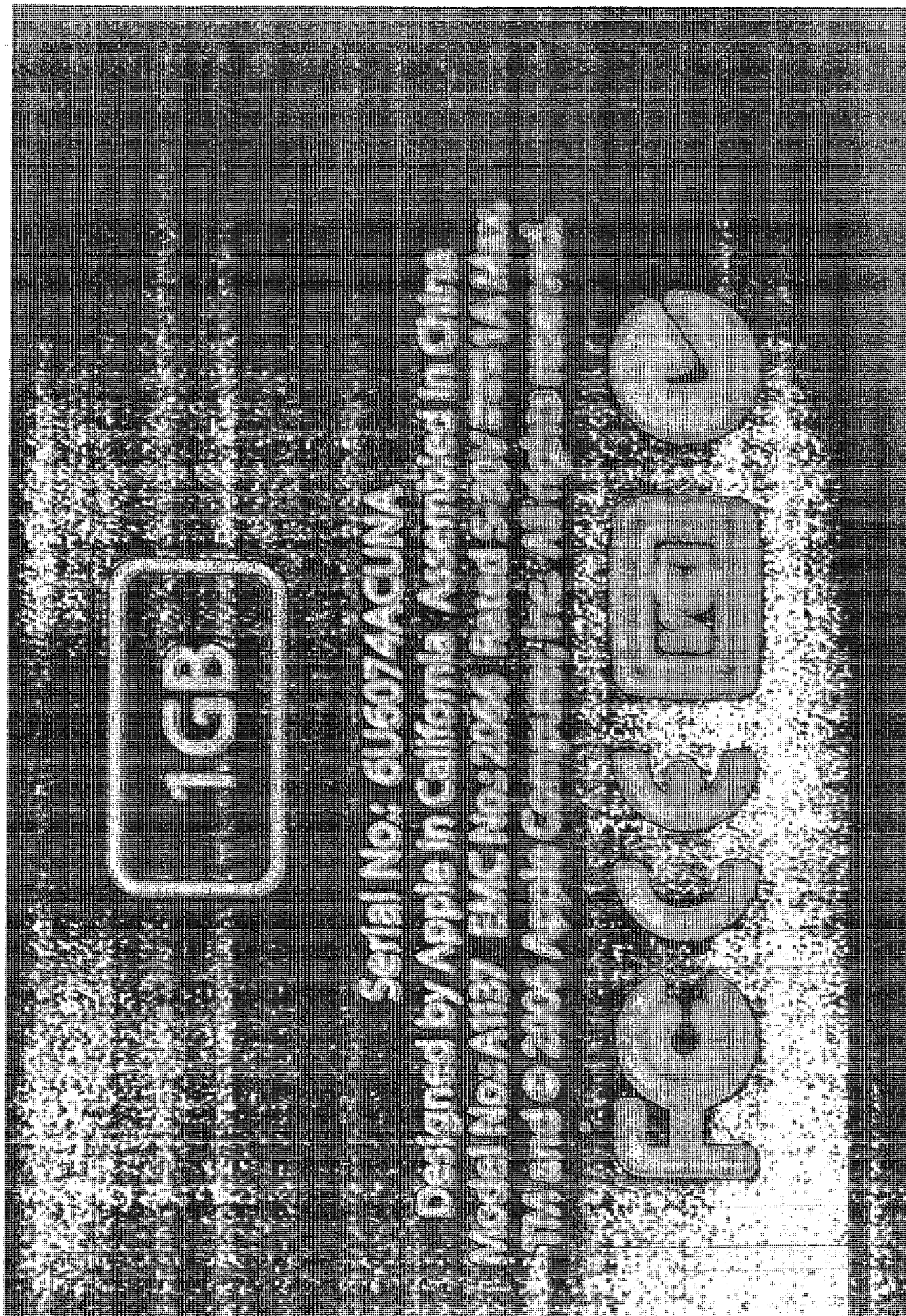

1GB
Serial No.: 6U6074ACUNA
Designed by Apple in California Assembled in China

EXHIBIT 8

EXHIBIT 8 REMOVED FROM PUBLIC VERSION – CONTAINS CONFIDENTIAL BUSINESS INFORMATION

EXHIBIT 9

Exhibit 9: Public

Non-Exclusive List of Creative Products That Practice One of More of the Asserted Claims

ZEN VISION: M
ZEN SLEEK PHOTO
ZEN MICROPHOTO
ZEN VISION
ZEN SLEEK
ZEN MICRO
ZEN TOUCH
ZEN XTRA
ZEN NX
ZEN 2 (NOMAD JUKEBOX ZEN USB 2.0)
ZEN (NOMAD JUKEBOX ZEN)
NOMAD JUKEBOX 3
NOMAD JUKEBOX 2
NOMAD JUKEBOX

EXHIBIT 10

EXHIBIT 10

Exemplary claim chart showing use by Creative's Zen Vision:M® product of claim 5 of United States Patent No. 6,928,433 B2.

United States Patent No. 6,928,433 B2	Creative Zen Vision:M
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 Zen Vision:M is a portable music player with a hard-drive, a display screen and an input device. The Zen Vision:M is designed to store music files. The Zen Vision:M 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 Zen Vision:M 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 Menu; o Now Playing; o Playlist; o Albums; o Artists; and o Genres.
selecting a category in the first display screen of the portable media player;	The main menu is the default menu on the Zen Vision:M. The user can use the input device to move between items in the menu, to select an item in a menu, and play a song or group of songs. The Zen Vision:M's first display screen can include, but is not

	limited to, the default menu, the artist menu, the playlist menu, or the genre menu.
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 Zen Vision:M automatically transitions to a second display screen that lists a subcategory of the first display screen. The Zen Vision:M'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 all tracks menu, the genres menu, or the genre types menu.
selecting a subcategory in the second display screen;	The user can use the input device to move between items in the menu, to select an item in a menu, and play a song or group of songs.
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 Zen Vision:M automatically transitions to a third display screen that lists items within the selected subcategory of the second display screen. The Zen Vision:M's third display screen can include, but is not limited to, the playlist names menu, the song list associated with 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.
accessing at least one track based on a selection made in one of the display screens.	Users can play a selected song or group of songs. Users can add a song or group of songs to a playlist, which can be subsequently accessed through the menu.

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 can add a song to a playlist, which can be subsequently accessed through the menu.

EXHIBIT 11

iPod 101

iPod Anatomy

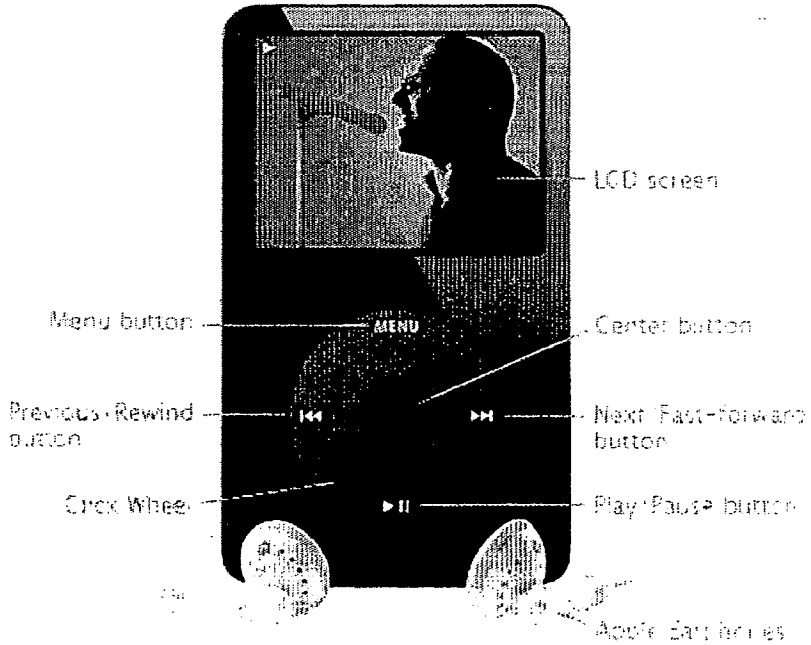
Lesson 1: The Lay of the Land

If you want to use your new iPod to its fullest, you should get familiar with its physical features first. We've mapped out three iPod model types—iPod with color display (includes iPod nano), iPod mini, and iPod shuffle—to show you what's what and what each doodad does. If you've adopted an older iPod, its physical attributes are similar to an iPod with a color display, so feel free to enjoy the ride too.

Ready for the grand tour? Just select your iPod...

- iPod with color display (including iPod nano)
- iPod mini
- iPod shuffle

iPod with color display (including iPod nano)



If you've got an iPod with a color display (we're showing the latest iPod with video model, though iPod nano controls are similar), here's a map of its main controls and features.

LCD screen
Fifth Generation iPod models feature a color 2.5-inch (diagonal) LCD screen to help you navigate and control

everything on your iPod. iPod nano features a 1.5-inch (diagonal) color LCD screen. Older iPod with color display models feature a 2-inch (diagonal) color LCD, while classic iPod models feature a 2-inch (diagonal) monochrome LCD. All iPods with a display feature a handy backlight to prevent you from fumbling around menus when the lights go out.

Any iPod with a color display can show off navigation menus, audio file attributes (file name, artist, genre, and more), photos, album art, playlists, volume, audio file progress, games, the time, personal contacts and calendars, notes, and more. iPod nano, in addition, displays a stopwatch, screen lock control, lyrics, and multiple world clocks, while iPod with video (aka Fifth Generation iPod) does what iPod nano does, plus puts video capabilities in your hands.

Click Wheel

This donut-shaped dial (on all current iPods with a display) doesn't physically spin; it's a touch-sensitive pad (much like a trackpad on a portable computer) that senses movement as you glide your finger across its surface. Just whirl your finger around the wheel to scroll through menus, crank up the volume, scrub through an audio track, eyeball your photo collection, and more, depending on where you're at in your iPod.

Although the Click Wheel doesn't actually rotate, it'll play an audible clicking sound through an internal speaker on your iPod while you scroll to let you know it's working (you can turn this sound off if you can't bear the clicking—we'll show you how in "Customize My Menu").

The wheel also serves as a 4-way controller; just press any control's label toward the edge of the wheel to activate it. Unlike the wheel, these buttons aren't touch-sensitive—pressing a label on the Click Wheel actually pushes a corresponding button underneath the wheel. You can play, pause, rewind, fast-forward, and skip songs, or go to other menus using the buttons on the Click Wheel.

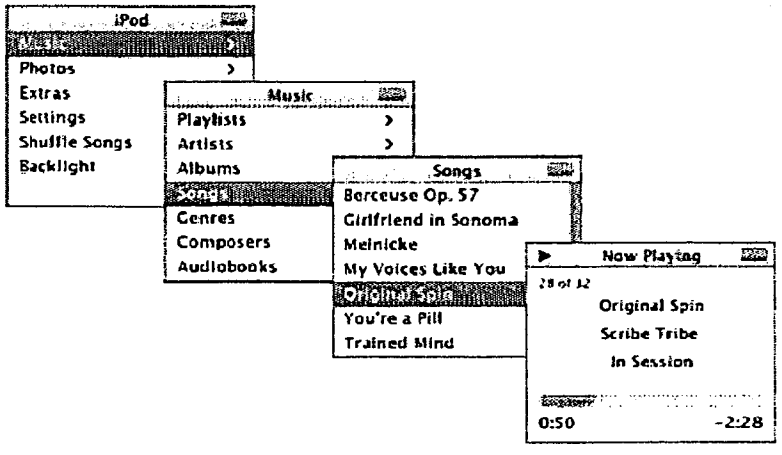
Where's the On and Off switch?

You won't find a dedicated switch to turn your iPod on and off. To turn it on, just press any button (and don't go looking for an "Any" button either, smartypants). Make sure that the Hold switch isn't engaged either. To turn off iPod, press and hold the Play/Pause button until iPod turns off.

Tip: To keep from accidentally turning on your iPod in transit, slide the Hold switch to the Hold position to lock the controls.

Center button

This button (formerly known as the Select button) in the middle of the Click Wheel (but separate from it) lets you select the currently highlighted menu item shown on the LCD. For example, if you're in the Music menu, you can whirl your finger around the Click Wheel until Songs is highlighted, then press the Center button to go to the Songs menu and see all the songs on your iPod (in iPod menu speak, you just selected **Music > Songs**). You can then highlight a song and press the Play/Pause button to hear it.



You can easily get to anything on your iPod by simply using the Click Wheel and Menu and Center buttons.

Menu button

This button takes you back to the previous menu. For example, if you're now playing a song (after following our

example for the Center button, above), pressing the Menu button will return you to the Songs menu. Press the Menu button again to go back to the Music menu, and one more time to return to the main (iPod) menu.

Previous/Rewind button
When a song (or audiobook or podcast) is playing (the Now Playing screen appears on the LCD), you can start the song over by pressing this button once, go to the previous song in the list by pressing the button twice, or rewind through the current song by holding down the button as long as you want.

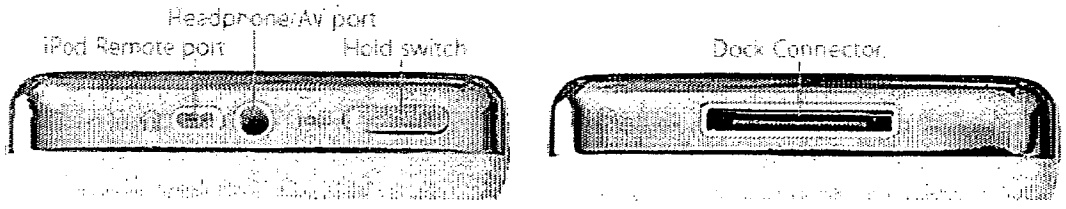
When you're browsing photos, pressing this button lets you go back to the previous screen of photos. If you're viewing a slideshow, press this button to go back to the previous photo in the slideshow.

Next/Fast-forward button
When a song (or audiobook or podcast) is playing (the Now Playing screen appears on the LCD), you can skip to the next song in the list by pressing this button once, or fast-forward through the current song by holding down the button as long as you want.

When you're browsing your photos, pressing this button lets you skip to the next screen of photos. If you're viewing a slideshow, press this button to skip to the next photo in the slideshow.

Play/Pause button
When you select a song, video, audiobook, or podcast, pressing this button will either play the selection or pause it if it's already playing. When you're viewing photos, you can select any photo or album and press this button to play a slideshow. Press it again to pause the slideshow. Pressing and holding the Play/Pause button also turns off iPod.

Apple Earphones
If you want to hear your music, you've got to plug some headphones into your iPod. The included Apple earbud-style headphones provide awesome sound with full frequency response (20 Hz to 20,000 Hz), and connect to iPod with a 3.5-mm stereo miniplug. If you have a hard time keeping these types of 'phones in your ears, feel free to plug in a different set of headphones.



Here's the bird's eye (left)—and bug's eye (right)—view of an iPod with color display. iPod nano features its headphone port on its bottom (next to the Dock Connector).

Headphone/AV port
This is the place to plug in your headphones—either the included Apple Earphones or your own (as long as it has a stereo 3.5-mm miniplug). iPod features the headphone jack/AV port up top, while iPod nano sports a headphone port on its bottom (it doesn't have AV capabilities).

When you're not feeling selfish and hogging your tunes to yourself, you can alternatively use a 3.5-mm stereo miniplug to dual RCA jack cable (not included) to connect your iPod or iPod nano to your home stereo and share your tunes with the neighbors. Or hook up a pair of powered speakers to the port.

If you've got photos or video on your iPod, you can also use this port to connect your iPod to a TV (this feature isn't available on iPod nano), then gather up family and friends to watch slideshows, music videos, movies—including your own home movies (see "Creating video for iPod" for instructions), and TV shows on the bigger screen. You'll need an Apple iPod AV Cable (optional) to make this connection.

Hold switch
Sliding this little switch to the Hold position allows you to lock all of the button and Click Wheel functions. This comes in handy when you want to avoid accidental button presses when you're, say, running around with your iPod in hand, or have it turned off and are transporting it in your pocket, bag, or purse (pressing any button turns on iPod). Slide the switch back to reclaim full control.

iPod Remote port
This port allows you to connect an optional remote control accessory to iPod to control playback. iPod nano and iPod with video do not feature this port.

Dock Connector
Flip your iPod upside-down and you'll see the Dock Connector. When you connect the included iPod Dock Connector to USB 2.0 cable to this port, you can feed your iPod battery a healthy dose of electrical current when you attach the USB side of the cable to an AC adapter that's plugged into an electrical socket. Or connect it to a high-powered USB port on your computer to charge the battery and sync music and more.

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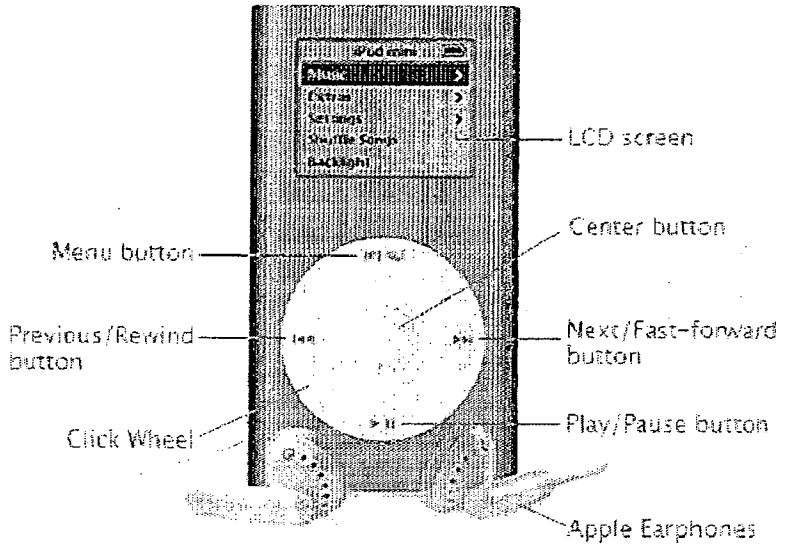
iPod mini



Whether your iPod mini is blue, pink, silver, or green, its main controls and features operate all the same.

LCD screen
All iPod mini models feature a 1.67-inch (diagonal) monochrome LCD to help you navigate and control your music, podcasts, audiobooks, and what have you. This screen can show off navigation menus, audio file attributes (file name, artist, genre, and more), playlists, volume, audio file progress, games, the time, personal contacts and calendars, notes, and more. It also features a handy backlight to prevent you from fumbling around menus when the lights go out.

Click Wheel
This donut-shaped dial doesn't physically spin; it's a touch-sensitive pad (much like a trackpad on a portable computer) that senses movement as you glide your finger across its surface. Just whirl your finger around the wheel to scroll through menus, crank up the volume, scrub through an audio track, and more, depending on where you're at in your iPod.

Although the Click Wheel doesn't actually rotate, it'll play an audible clicking sound through an internal speaker on your iPod mini while you scroll to let you know it's working (you can turn this sound off if you can't bear the clicking—we'll show you how in "Customize My Menu").

The wheel also serves as a 4-way controller; just press any control's label toward the edge of the wheel to activate it. Unlike the wheel, these buttons aren't touch-sensitive—pressing a label on the Click Wheel actually pushes a corresponding button underneath the wheel. You can play, pause, rewind, fast-forward, and skip songs, or go to other menus using the buttons on the Click Wheel.

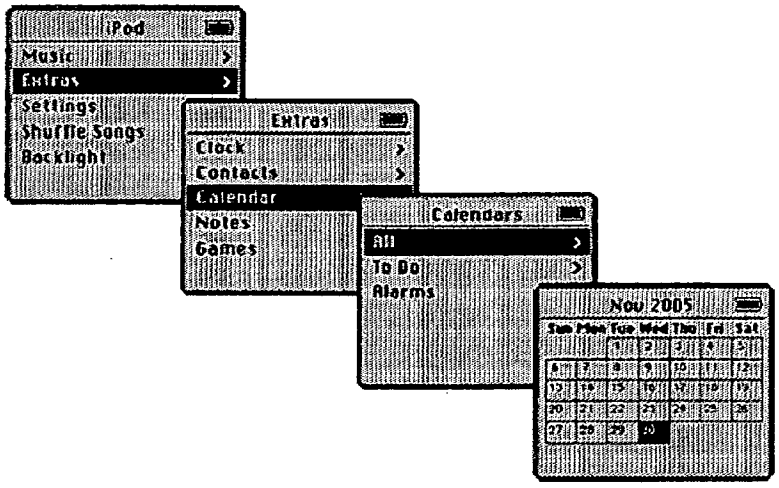
Where's the On and Off switch?

You won't find a dedicated switch to turn iPod mini on and off. To turn it on, just press any button (and don't go looking for an "Any" button either, smartypants). Make sure that the Hold switch isn't engaged either. To turn it off, press and hold the Play/Pause button until iPod mini turns off.

Tip: To keep from accidentally turning on your iPod mini in transit, slide the Hold switch to the Hold position to

lock the controls.

Center button
This button (formerly known as the Select button) at the center of the Click Wheel (but separate from it) lets you select the currently highlighted menu item shown on the LCD. For example, if you're in the Extras menu, you can whirl your finger around the Click Wheel until Calendar is highlighted, press the Center button to go to the Calendars menu, highlight All, and then press the Center button to see your calendars (in iPod menu speak, you just selected **Extras > Calendar > All**).



You can easily get to anything on your iPod by simply using the Click Wheel and Menu and Center buttons.

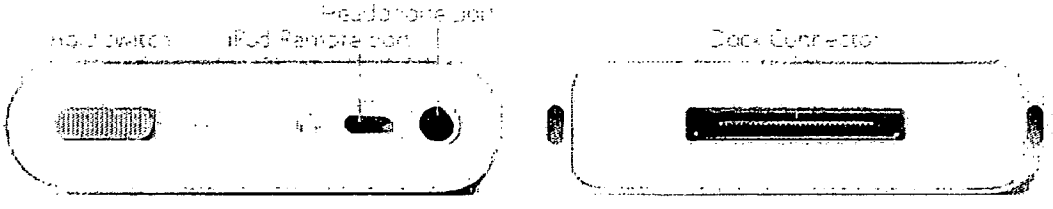
Menu button
This button takes you back to the previous menu. For example, if you're now looking at a calendar (after following our example for the Center button, above), pressing the Menu button will return you to the Calendars menu. Press the Menu button again to go back to the Extras menu, and one more time to return to the main (iPod mini) menu.

Previous/Rewind button
When a song (or audiobook or podcast) is playing (the Now Playing screen appears on the LCD), you can start the song over by pressing this button once, go to the previous song in the list by pressing the button twice, or rewind through the current song by holding down the button as long as you want.

Next/Fast-forward button
When a song (or audiobook or podcast) is playing (the Now Playing screen appears on the LCD), you can skip to the next song in the list by pressing this button once, or fast-forward through the current song by holding down the button as long as you want.

Play/Pause button
When you select a song, audiobook, or podcast, pressing this button will either play the selection or pause it if it's already playing. Pressing and holding the Play/Pause button also turns off iPod mini.

Apple Earphones
If you want to hear your music, you've got to plug some headphones into your iPod mini. The included Apple earbud-style headphones provide awesome sound with full frequency response (20 Hz to 20,000 Hz), and connect to iPod mini with a 3.5-mm stereo miniplug. If you have a hard time keeping these types of 'phones in your ears, feel free to plug in a different set of headphones.



Here's the bird's eye (left)—and bug's eye (right)—view of iPod mini

Headphone port
This is the place to plug in your headphones—either the included Apple Earphones or your own (as long as it has a stereo 3.5-mm miniplug). When you're not feeling selfish and hogging your tunes to yourself, you can alternatively use a 3.5-mm stereo miniplug to dual RCA jack cable (not included) to connect iPod mini to your home stereo and share your tunes with the neighbors. Or hook up a pair of powered speakers to the port.

Hold switch
Sliding this little switch to the Hold position allows you to lock all of the button and Click Wheel functions. This comes in handy when you want to avoid accidental button presses when you're, say, running around with your iPod mini in hand, or have it turned off and are transporting it in your pocket, bag, or purse (pressing any button turns on iPod mini). Slide the switch back to reclaim full control.

iPod Remote port
This port allows you to connect an optional remote control accessory to iPod mini to control playback.

Dock Connector
Flip your iPod mini upside-down and you'll see the Dock Connector. When you connect the included iPod Dock Connector to USB 2.0 cable to this port, you can feed your iPod mini battery a healthy dose of electrical current when you attach the USB side of the cable to an AC adapter that's plugged into an electrical socket. Or connect it to a high-powered USB port on your computer to charge the battery and sync music and more.

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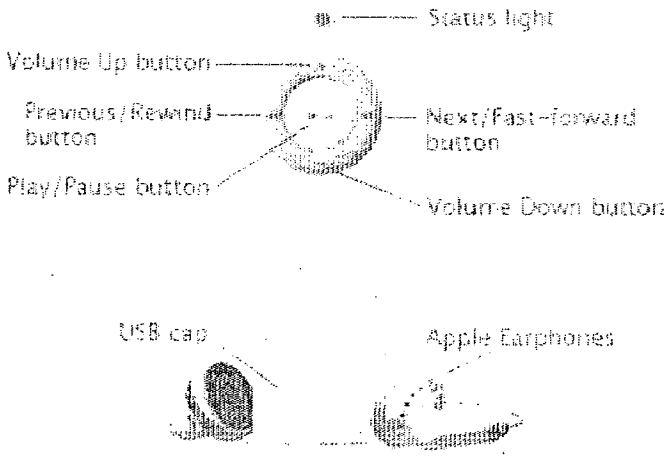
iPod shuffle



Here's everything you'll find on an iPod shuffle exterior, and what each thing does.

Status light
Although iPod shuffle doesn't have an LCD screen, it does have a front status light to communicate things to you. You can't see this light when it's not lit—it's actually concealed behind the iPod shuffle façade—but when it's shining in all its orange or green beauty, iPod shuffle is letting you know its status as follows:

When iPod shuffle is connected to your computer...

- Solid orange—iPod shuffle is charging but not in use; it's OK to disconnect it from your computer.
- Blinking orange—iPod shuffle is in use; do not disconnect it from your computer in this state.
- Solid green—iPod shuffle is fully charged and not in use; it's OK to disconnect it from your computer.
- No light—iPod shuffle is not charging, nor in use; it's OK to disconnect it from your computer.

When iPod shuffle is not connected to your computer...

- When you turn iPod shuffle on, the status light will be green for up to 3 seconds and then turn off.
- When you press the Play/Pause button to play music (or an audiobook or podcast), the status light will be green for 2 seconds and then turn off.
- When you press the Play/Pause button to pause music (or an audiobook or podcast), the status light will blink green for 1 minute. If iPod shuffle is paused for longer than a minute, the light will turn off.
- When you press and hold any iPod shuffle button, the status light will be green for as long as you hold down the button, unless Hold is activated.
- If the status light blinks orange and green when you press any button, iPod shuffle is letting you know that there's either an error, or it could be that you have no songs on the player. We'll tell you how to resolve this issue in our iPod troubleshooting section.

Put It on Hold

iPod shuffle features a Hold mode that allows you to temporarily disable the front buttons to avoid accidental presses while you're listening to your tunes. To turn on Hold, press and hold the Play/Pause button for 3 seconds; the status light will blink orange three times to let you know that iPod shuffle is on Hold. If you press a button when Hold is on, the status light will display orange, but the press will have no affect.

To turn off Hold, press the Play/Pause button for 3 seconds; the status light will blink green three times to let you know that the iPod shuffle buttons are free to be pressed at will. Alternatively, you can also turn off Hold by moving the switch on the back of iPod shuffle to the Off position.

Play/Pause button
This center button allows you to play or pause a song, audiobook, or podcast. Pressing this button will either start play or pause it if something is already playing.

Volume Up button
Press this button to crank up your tunes, audiobook, or podcast. Press this button multiple times to turn up the volume incrementally. Hold the button down to turn up the volume gradually.

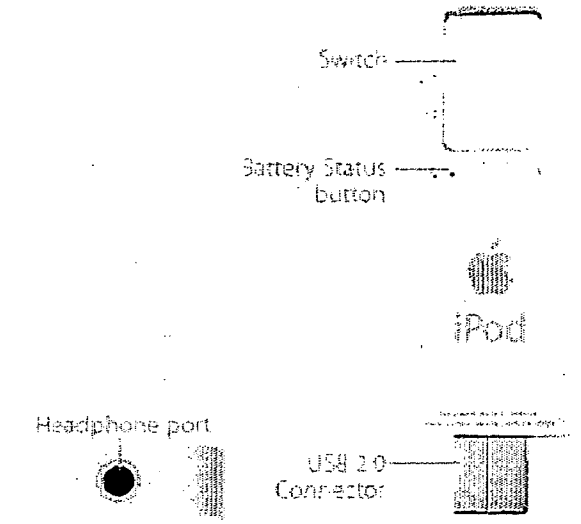
Volume Down button
Press this button to turn down your tunes, audiobook, or podcast. Press this button multiple times to turn down the volume incrementally. Hold the button down to turn down the volume gradually.

Previous/Rewind button
When a song (or audiobook or podcast) is playing, you can start the song over by pressing this button once, go to the previous song by pressing the button twice, or rewind through the current song by holding down the button as long as you want.

Next/Fast-forward button
When a song (or audiobook or podcast) is playing, you can skip to the next song in the list by pressing this button once, or fast-forward through the song by holding down the button as long as you want.

USB cap
This fashionable little cap can be used to conceal the USB 2.0 connector when iPod shuffle isn't connected to your computer.

Apple Earphones
If you want to hear your music, you've got to plug some headphones into your iPod shuffle. The included Apple earbud-style headphones provide awesome sound with full frequency response (20 Hz to 20,000 Hz), and connect to iPod shuffle with a 3.5-mm stereo miniplug. If you have a hard time keeping these types of 'phones in your ears, feel free to plug in a different set of headphones.



Here's the bird's eye (left)—and backside (right)—view of iPod shuffle.

Headphone port
This is the place to plug in your headphones—either the included Apple Earphones or your own (as long as it has a stereo 3.5-mm miniplug). When you're not feeling selfish and hogging your tunes to yourself, you can alternatively use a 3.5-mm stereo miniplug to dual RCA jack cable (not included) to connect iPod shuffle to your home stereo and share your tunes with the neighbors. Or hook up a pair of powered speakers to the port.

Switch
This switch on the back of iPod shuffle lets you turn the player on and off, and set whether iPod shuffle plays songs, audiobooks, and podcasts in order or in shuffle mode (total, random, free-for-all).

To turn on iPod shuffle, slide the switch to either the play in order position (the first slider setting with the arrows in an oval icon) or shuffle songs position (the second slider setting with the intersecting arrows icon). The switch will reveal a green strip when you turn iPod shuffle on to either position. To turn off iPod shuffle, slide the switch to the Off position (you won't see any green when iPod shuffle is turned off).

Please note that play positions are not determined by the alignment of the switch's edge to any icon or word; you should be able to sense two distinct positions when you slide the switch.

Battery Status button
This slim little button below the switch allows you to see how much battery power iPod shuffle has. Just press the button and feast your eyes on the color of its tiny LED light:

- Green—Good charge.
- Amber—Low charge (this LED color also lights to indicate that iPod shuffle is charging when connected to your computer).
- Red—Very low charge.
- No light—No charge.

Tip: If you want to check the battery status while iPod shuffle is charging, make sure that your computer isn't sleeping, then eject iPod shuffle from iTunes and press the Battery Status button.

USB 2.0 connector
iPod shuffle features a speedy USB 2.0 connector, though it can also transfer files over USB 1.1 if your computer isn't equipped with USB 2.0 ports. This connector allows you to charge the iPod shuffle battery and forge a connection with your computer simultaneously.

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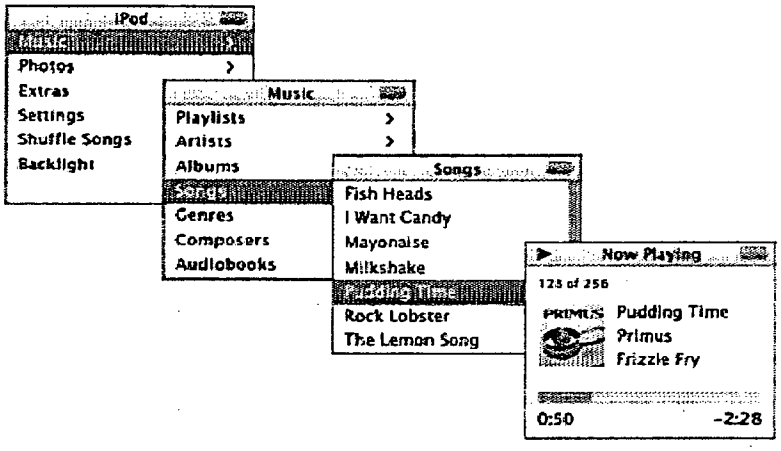
EXHIBIT 12

iPod 101

iPod Anatomy

Lesson 2: What's on the Menu?



Before you can dish it up, you've got to know what's on each menu first.

If you've got an iPod with a display, that LCD screen isn't just for looks—it serves as mission control into the inner workings of your iPod. (iPod shuffle customers can skip to the next lesson since you don't have a display screen.)

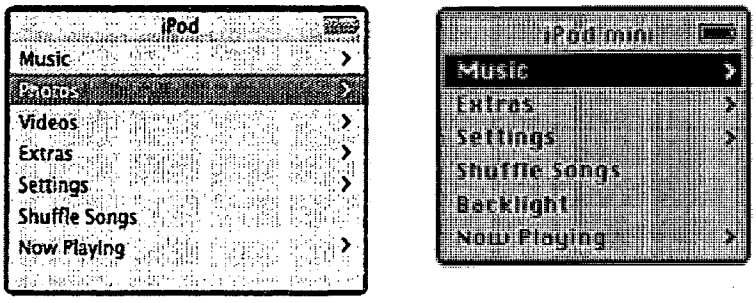
Menus allow you to navigate through your iPod content by simply scrolling the Click Wheel to highlight menu items, and pressing the Center button (the button formerly known as Select) to select that item.

The very first time you turn on your iPod (press any front button), you'll be greeted with a Language menu that lets you choose the language in which your iPod menus are displayed. Scroll the Click Wheel to highlight your preference, then press the Center button. You should now see the main menu.

The menus on an iPod with a color display and an iPod with a monochrome display are almost identical except that iPod with color display models include photo features—and video features on Fifth Generation iPods. Here's a guide to each menu, its submenus, and how to adjust the settings. We'll also show you how to customize the main menu for your needs (be sure to update your iPod with the latest iPod Software to access the features presented here).

1. On iPod with color display models only.
2. On Fifth Generation iPod models only.

The Main Menu



The main menu screen content for an iPod with color display (Fifth Generation iPod shown left) and iPod mini (right) are almost identical—can you spot the discrepancies (besides the color factor)?

The main menu is the first menu you see when you turn on your iPod, and serves as the starting point to get to what you want. The items in the screens above are the default menu items for that particular iPod model—the ones you'll see if you haven't futzed with any menu customization yet (sit tight—we'll show you how to do this at the end of this lesson).

Music, Photos (on iPod with color display models only), Videos (on Fifth Generation iPods only), Extras, and Settings are all menus in their own right, meaning they feature their own submenu items when you select them. If you see a right arrow (>) icon next to a menu item, that item has its own submenu.

Shuffle Songs and Backlight aren't menus (notice that they don't have the arrow icon?)—they're player features. If you scroll the Click Wheel to Shuffle Songs and then press the Center button to select it, one of the songs in your iPod will begin playing (if you have songs on your iPod), and all subsequent songs will be played in random order.

If you scroll to Backlight (this appears in all iPod main menus by default except the Fifth Generation iPod—you can turn on the Backlight menu display in Settings) and select it, you'll turn on the LCD's backlight, which allows you to see your screen in the dark. iPods with a color display turn on the backlight whenever you scroll the Click Wheel or press a button. Select Backlight again to turn it off, or do nothing for a set amount of time and the backlight will turn itself off automatically (see the Backlight Timer section in "The Settings Menu").

The Now Playing menu only appears if your iPod has a song playing or paused. When you select it, you'll see the Now Playing screen, which details your song's name, artist, album, and how far along it is in its progress. Of course, if you're listening to an audiobook or podcast, you'll see the details for those items (book author, podcast episode, or what have you).

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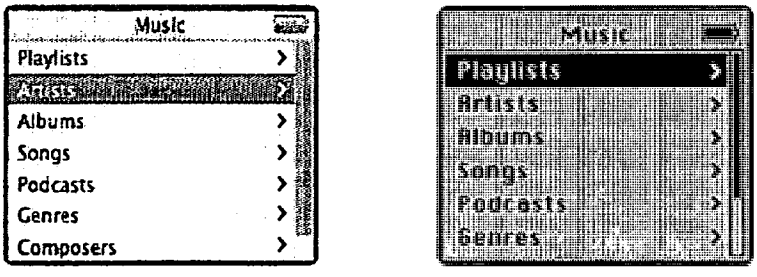
The Music Menu



Whether you're looking at an iPod with color display (left) or an iPod mini screen (right) you'll find identical items in the Music menu.

To view the Music menu, highlight Music in the main menu and press the Center button. This menu allows you to find all the songs, audiobooks, and podcasts on your iPod in a number of ways. From top to bottom, here are the submenu items in the Music menu along with the content that each submenu ultimately leads you to as you select items (we'll show you how to browse your audio content in "Play That Funky Music").

- Playlists (Music > Playlists > *your playlists* > *songs in the playlist*)
- Artists (Music > Artists > *artist's albums* > *songs on album*)
- Albums (Music > Albums > *songs on album*)
- Songs (Music > Songs > *all song titles*)
- Podcasts (Music > Podcasts > *all podcast episodes*)
- Genres (Music > Genres > *corresponding artists* > *artist's albums* > *songs on album*)
- Composers (Music > Composers > *corresponding albums* > *corresponding songs on album*)
- Audiobooks (Music > Audiobooks > *all audiobook titles*)

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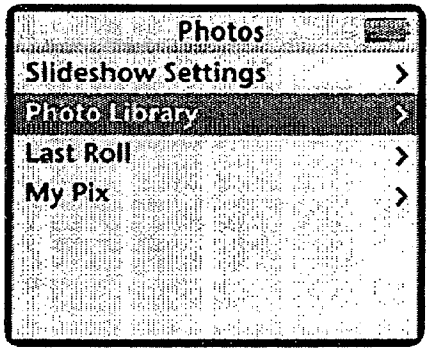
The Photos Menu



If you have an iPod with a color display, you'll see a Photos menu on your iPod that'll allow you to proudly show off your pictures to anyone who passes by.

If your iPod has a color display, your music player can do double-duty as a photo viewer from the Photos menu. To view the Photos menu, select Photos from the main menu. Depending on how you set your photo-syncing preferences in iTunes, your Photos menu content may vary from our screen above.

If you have photos on your iPod, you'll see Slideshow Settings and Photo Library displayed as the top two menu items. Any iPhoto (Mac), Adobe Photoshop Album (Windows), or Adobe Elements (Windows) photo albums and grouped content you've set to sync will appear below these two items. Here's where you'll wind up when you select items in each of these submenus (we'll cover all the photo features in detail in "Show Me My Photos and Videos").

- Slideshow Settings (Photos > Slideshow Settings > *customizable settings*)
- Photo Library (Photos > Photo Library > *thumbnails* > *full screen view*)
- Synced Photo Album or Folder (Photos > *synced photo album or folder* > *thumbnails* > *full screen view*)

When you highlight an image and press the Center button when viewing photos as *thumbnails*, small graphical representations of your photos, you'll see the selected thumbnail in full screen mode. If you press the Play/Pause button, your iPod will parade your photos as a slideshow.

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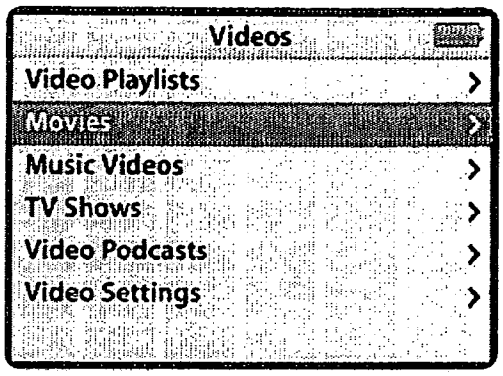
The Videos Menu



If you have the latest iPod, you can watch videos right on your player—just access the Videos menu.

If you have a Fifth Generation iPod, you can watch music videos, TV shows, movies, and even video podcasts right on your iPod. To view the Videos menu, select Videos from the main menu. Depending on what kind of videos you have on your iPod, your Videos menu content may vary from ours. Here's what you'll find in each of the Videos menu's submenus.

- Video Playlists (Videos > Video Playlists > *all video playlists*)
- Movies (Videos > Movies > *all movies*)
- Music Videos (Videos > Music Videos > Artists > *artist's videos*)
- TV Shows (Videos > TV Shows > *all TV shows*)
- Video Podcasts (Videos > Video Podcasts > *all video podcasts*)
- Video Settings (Videos > Video Settings > *customizable settings*)

To watch a video on your iPod, just select the type of video you want to watch in the Videos menu, select a video in the resulting screen and press the Play/Pause button (we'll cover the video features more in-depth in "Show Me My Photos and Videos").

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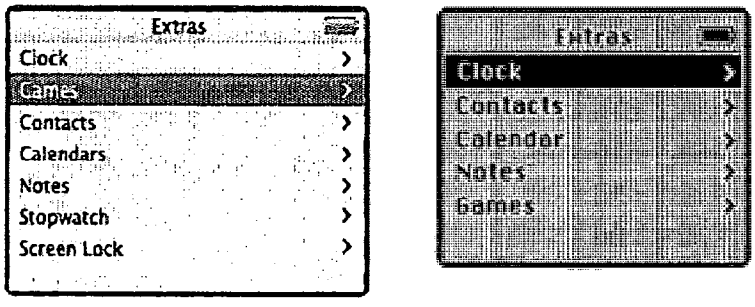
The Extras Menu



Older iPods such as older iPods with a color display and iPod mini, right) offer some cool Extras items, but Fifth Generation iPods and iPod nano (left) feature some extra Extras.

The Extras menu contains a whole host of features to take your iPod beyond just being your favorite music player. To view the menu, select Extras from the main menu (we'll go into more detail about some of the submenus in "Maximize My Experience"). Here's what you'll find in the Extras menu and where each will lead you to:

- Clock[1] (Extras > Clock > *the time and date*, Alarm Clock, Sleep Timer, and Date & Time *submenus*)
- Clock[2] (Extras > Clock > *world clocks* > Alarm Clock, Change City, Daylight Saving Time, Delete

This Clock, and Sleep Timer *submenus*)

- Games (Extras > Games > Brick, Music Quiz, Parachute, Solitaire > *selected game screen*)
- Contacts (Extras > Contacts > *contact names* > *contact information*)
- Calendars (Extras > Calendars > *calendar list, plus a* To Do *submenu and* Alarms *option*)
- Notes (Extras > Notes > *text files in the Notes folder*)
- Stopwatch[2] (Extras > Stopwatch > Timer, *session logs*)
- Screen Lock[2] (Extras > Screen Lock > Set Combination, Turn Screen Lock On *submenus*)

1. Older iPods with a color display and all monochrome iPods
2. Fifth Generation iPod and iPod nano only.

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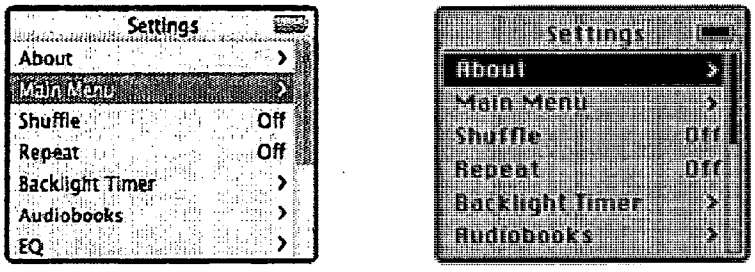
The Settings Menu



Though it's not apparent in this image, the Settings menu items in an iPod with color display (left) differ slightly from an iPod mini (right) due to some feature differences.

The Settings menu allows you to customize what your iPod displays and how. Just select Settings in the main menu to view a slew of items that you can tweak to your liking. Here's what you'll find in the Settings menus for iPod with color display models and iPod mini, what you'll get when you select an item, and what you can change.

- **About (Settings > About > *iPod information*)**—This screen displays information about your iPod, including the number of songs and photos[1] it contains, its capacity, how much space is left, software version number, the serial number, and the model type.
- **Main Menu (Settings > Main Menu > *list of all items in each menu*)**—This screen lets you determine which menu items to display in the main menu screen. For example, you can put Contacts in the main menu if you don't want to keep navigating to the Extras menu to get to it. We'll show you how to customize your main menu shortly.
- **Shuffle (Settings > Shuffle)**—Lets you toggle the shuffle feature to shuffle Songs or Albums, or turn the feature Off.
- **Repeat (Settings > Repeat)**—Lets you toggle the repeat feature to repeat a song over and over (select One), repeat all songs in the list (select All), or turn the feature Off.
- **Backlight Timer (Settings > Backlight Timer > *duration*)**—This screen lets you set how long the backlight displays before turning itself off. You can select Off, 2 Seconds, 5 Seconds, 10 Seconds, 15 Seconds, 20 Seconds, or Always On.

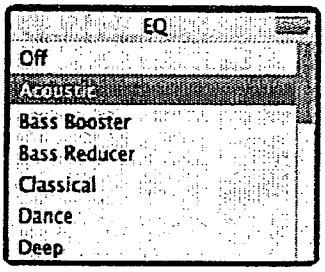
Alone in the dark?

You can easily turn on the LCD's backlight by pressing and holding the Menu button until the light turns on, rather than sticking the screen up to your eyeball as you hunt for the Backlight control. iPod with color display models always turn on the backlight when you press a button or scroll the Click Wheel. Of course, if you set the backlight to Off, you can turn it on with the same Menu button press.

- **Audiobooks (Settings > Audiobooks > *reading speed*)**—This screen allows you to vary the

reading speed when you're listening to an audiobook file—this is especially helpful if your book narrator is amped up on coffee or has the delivery of a turtle. You can select Slower, Normal, or Faster to suit your listening comprehension.

- **EQ (Settings > EQ > *preset equalizer settings*)**—This screen allows you to select an EQ preset to make your music sound even better. The presets cover a wide spectrum of music genres, including Acoustic, Bass Booster, Classical, Dance, Electronic, Flat, Hip Hop, Jazz, Latin, Lounge, Pop, R&B, Rock, Spoken Word, Treble Booster, Vocal Booster, and, of course, Off.



Whether you want to hear your music booming on the bottom or hear the singer's words loud and clear, you'll find plenty of presets in the EQ menu.

- **Compilations[1] (Settings > Compilations)**—Lets you enable the Compilations menu in the Music menu (select On) to browse songs that are grouped in compilations (if you have compilation albums). Select Off to disable this menu.
- **Sound Check (Settings > Sound Check)**—If you use the Sound Check feature in iTunes (it makes all songs play at the same volume) this lets you toggle the same feature On or Off for iPod play (Sound Check must have been activated in iTunes when you copied songs to your iPod for this iPod feature to have any effect).
- **Contrast[2] (Settings > Contrast > *contrast slider control*)**—This screen lets you adjust the contrast of your iPod mini (or older iPod with monochrome display) screen. Scroll the Click Wheel right to make the screen darker, or left to make the screen lighter.

  Clicker (Settings > Clicker)—The clicker is the sound you hear when you scroll the Click Wheel. By default, the Clicker is set to Speaker to make the sound emanate from the internal speaker on your iPod (and no, you can't play music through this speaker). You can also set this to Headphones (plays the sound only through connected headphones), Both (plays the sound through the speaker and headphones), or Off (gets rid of the sound altogether).
- **Date & Time (Settings > Date & Time > Set Time Zone, Set Date & Time, Time, Time in Title)**—This screen allows you to set the time and date on your iPod, as well as how this information should be displayed. Select the Set Time Zone submenu to select your time zone. Select the Set Date & Time submenu to set the date and time (of course!). The Time menu item lets you set the clock for 12-hour or 24-hour time. The Time in Title item lets you choose to have the time displayed in the menu title after briefly displaying a menu's title (select On) or not (select Off).

Your iPod also functions as a fine timepiece so you can keep track of the hours and days you spend in la la la land.

- **Contacts (Settings > Contacts > *sorting and display preferences*)**—This screen includes two menu items. Sort lets you set the criteria for the order in which your contacts appear in your iPod—either by first name (select "First Last") or last name (select "Last, First"). Display lets you set how your contacts' names are displayed in the Contacts menu (select "First Last" or "Last, First").
- **Language (Settings > Language > *languages*)**—All iPods with a display are multilingual,

meaning you can change the default language that appears in your iPod menus and screens. You can select English, German, French, Italian, Japanese, Spanish, or other language. Don't worry; your iPod will still display song titles in their native language no matter what default language you set (for example, English song titles, artists, and albums will still appear in English even if you switch the language to Japanese or Spanish).

- **Legal (Settings > Legal > *copyright, trademark, and other licensing information*)**—Here's where we give credit where credit is due. This screen displays all the copyright, trademark, and licensing information for the companies who've helped make iPod what it is. And it's a nifty place to go if you enjoy staring at the Apple logo.
- **Reset All Settings (Settings > Reset All Settings > *do it or abort*)**—If you get a little too carried away with all your menu customizing, settings tweaking, and whatnot, this screen is your ticket to putting everything back to where it was when you first got your iPod. Select Reset to reset all menus and settings back to the defaults (this doesn't affect any of your audio files, photos[1], contacts, and other data), or Cancel (or press the Menu button) if you want to abort your mission.

1. iPod with color display models only
2. iPod with monochrome display models only

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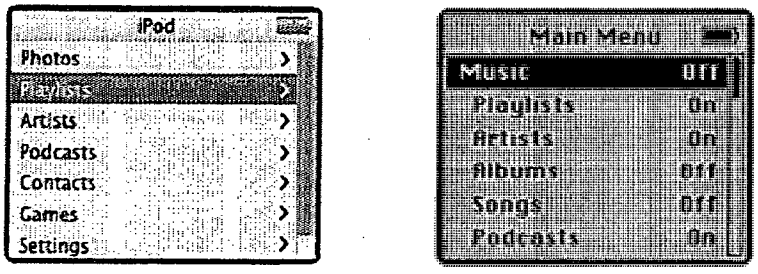
Customize My Menu



If you prefer to order stuff that's not on the main menu, select **Settings > Main Menu** (right) and create your own custom main menu (left).

We just gave you the grand tour through each of the menus on your iPod, but just because we lined up all the menus in this manner, it doesn't mean that you have to stick with our program. In fact, you can customize the content that appears in the main menu to get to the stuff you care about even faster. Here's how.

1. Select **Settings > Main Menu**. All main menu items (the stuff that appears in the main menu screen by default) appear near the left edge of the screen. Their submenu items appear as indented text below the corresponding menu (see the right screen in the image above).
2. Use the Click Wheel to scroll to any submenu item that you'd like to be able to access from the main menu.
3. Press the Center button to change its Off status to On. This submenu will now appear as a main menu item.
4. If you want to turn off a main menu item, scroll to an item whose status is On and select it to turn it to Off. For example, you might want to turn off the Extras menu and turn on Contacts and Calendars if those are the only Extras items you use.

Don't worry about turning off stuff and not being able to access that menu again. None of the Settings menu items appear in **Settings > Main Menu**, so you can't paint yourself into a corner. If you decide to, say, bring back the Extras menu because you miss Solitaire, just turn on Extras again in **Settings > Main Menu** (or turn on the Games submenu).

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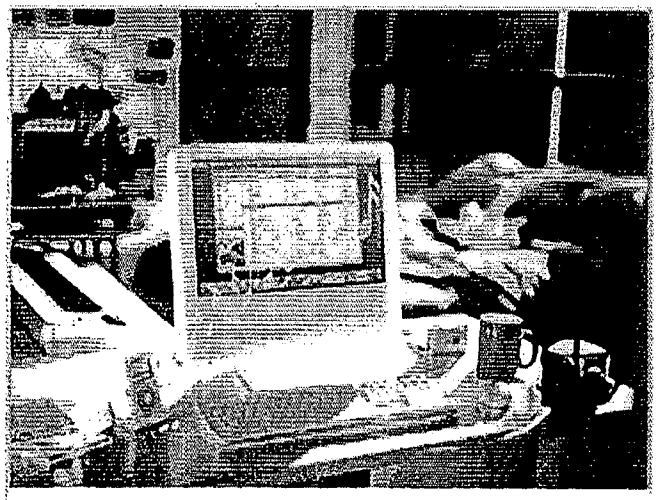
Take me back to the iPod Anatomy index **Take me to Lesson 3: Charging the Battery**

EXHIBIT 13

iPod Tutorial



Play the Movie Learn More

Transferring Your iTunes Music to Your iPod

When you get your iPod, you'll want to start listening to music right away. Transferring songs to your iPod starts with your computer and iTunes. If you don't have iTunes (and the iPod Software) installed on your computer, use the CD that came with your iPod to install it. Then, you can buy songs from the iTunes music store, or import CDs to your iTunes music library.

Once you have songs in your iTunes library, connect your iPod to your computer, and iTunes automatically transfers the music to your iPod. When you add new songs to iTunes, iTunes automatically updates your iPod with the new songs. Just connect your iPod to your computer, and you'll keep all your music updated.

Provide feedback

Home > Support > iPod > Tutorial > Transferring Your iTunes Music to Your iPod

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EXHIBIT 14

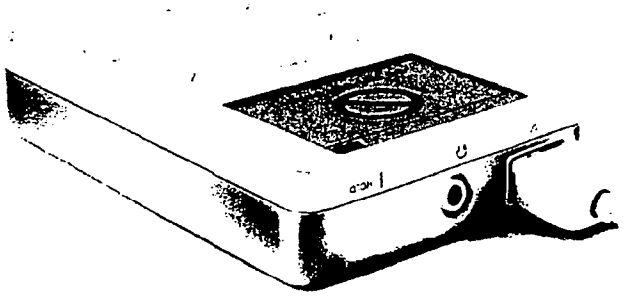

iPod

Getting started

iPod for Mac works with iTunes, included with your iPod. Use iTunes to organize music from your CD collection, then transfer songs to iPod for listening on the go. Read on to find out how to get started playing music with iPod.

Connect iPod.

Start up your Macintosh and connect iPod using the included FireWire cable. iPod's battery begins to charge. If you don't already have the latest version of iTunes, install it using the iPod CD.

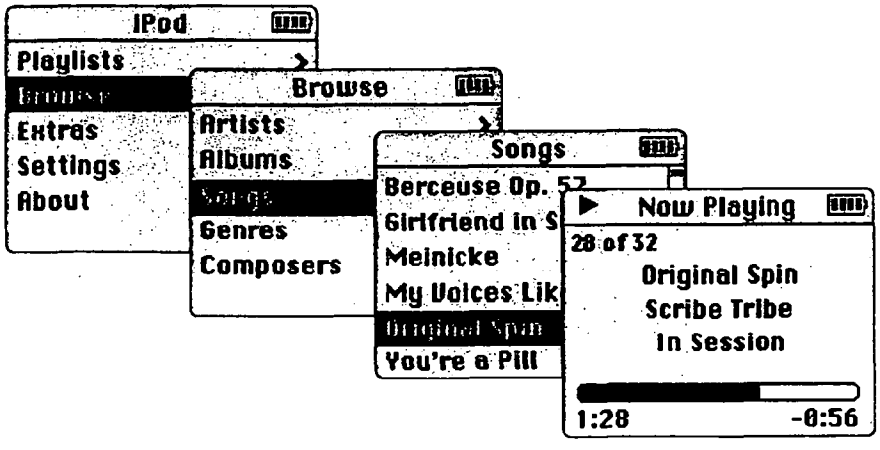


Transfer music.

When iTunes opens, it automatically transfers the songs in your music library to iPod. When the transfer is complete, a message says it's safe to disconnect iPod.

Play music.

Use iPod's scroll wheel and Select button to browse for a song. Then press the Play button and enjoy!



Using iPod

Once you transfer songs to iPod, it's easy to browse for and listen to songs. Read on for tips on using iPod. You can also find information about using iPod in iPod onscreen help and on the Web (see "Learning more, service, and support").

Turning iPod on and off

To turn iPod on, press any button. If a song is paused or no song is playing, iPod turns off automatically after two minutes. To turn iPod off immediately, press and hold the Play button for a few seconds.

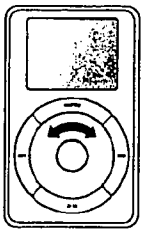
Disabling iPod's buttons using the Hold switch

If you're carrying iPod in your pocket and you don't want to press the buttons accidentally, set the Hold switch to make the buttons inactive.

Turning on the backlight

To turn iPod's backlight on or off, press and hold the Menu button.

Using iPod's controls



Use iPod's buttons and scroll wheel to navigate through iPod's onscreen menus. To select a menu item, use the scroll wheel to scroll to the item, then press the Select button (in the center of iPod). To go back to the previous menu, press the Menu button.

Playing a song

You can browse for songs by artist, album, title, genre, or composer. If you transfer playlists (songs you've organized into lists) from iTunes to iPod, you can also browse for songs in playlists.

Select Playlists or Browse in iPod's main menu, then navigate to a song and press the Select button to play the song. To play all the songs by an artist, on an album, or in a playlist, press the Play button when the artist, album, or playlist name is highlighted.

Changing the volume

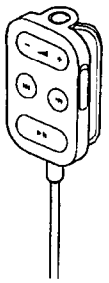
If you see the Now Playing screen, which shows the title of the song playing, you can use the scroll wheel to adjust the volume. If you don't see the Now Playing screen, select Now Playing in the main menu.

You can also use the Apple iPod Remote (available with some models) to adjust the volume.

Transferring music

By default, iPod is set to transfer music automatically when you connect it to your computer. You can also transfer and delete individual songs manually. To change iPod's settings, select its icon in iTunes and click the Options button.

Using the Apple iPod Remote



To use the iPod Remote, connect it to iPod's headphones port, then connect the Apple Earphones (or another set of headphones) to the remote. Use the remote to adjust volume, play or pause a song, fast-forward and rewind, and skip to the next or previous song. Set the remote's Hold switch to disable the remote's buttons.

The iPod Remote is included with some models of iPod and can be purchased separately at **www.apple.com/store**

Importing addresses and phone numbers

Your iPod can store up to a thousand contacts for viewing on the go.

1 Connect iPod and open your favorite email or contacts application. Importing contacts works with Mac OS X Address Book, Palm Desktop, and Microsoft Entourage, among others.
2 Drag contacts from the application's address book to iPod's Contacts folder. iPod must be enabled for use as a FireWire hard disk.
3 Unmount and disconnect iPod. Select Extras in the main menu, then select Contacts to view your contacts. For more information, see iPod Help, available in the iTunes Help menu.

Importing calendar events

Your iPod can store events from any calendar application that uses the standard "ical" format (file names end in .ics). Export calendar events and place them in the Calendars folder on iPod. To view calendar events, select Extras in iPod's main menu, then select Calendar.

Changing settings

Select Settings in iPod's main menu to change settings. You can set iPod to shuffle or repeat songs, change equalizer settings, set a backlight timer, and more (see "Learning more, service, and support" for more information).

Charging the battery

To charge iPod's battery, connect iPod to your Macintosh (turned on and not in sleep mode). Or connect it to the iPod Power Adapter (included) and plug the adapter into a working electrical outlet. iPod's battery is 80-percent charged in about an hour, and fully charged in 4 hours. If the battery icon on iPod's screen is not animated, its battery is fully charged.

Software Update

Apple periodically updates iPod's software to improve performance or add features. To download the iPod Software Updater application, go to **www.apple.com/ipod**

Tips and troubleshooting

Read on for advice about using and troubleshooting iPod.

What are the iPod for Macintosh system requirements?

You can use iPod with a computer and software that meet the following requirements:

- Macintosh computer with built-in FireWire
- Mac OS X v10.1.4 or later and iTunes 3 or later, or
- Mac OS 9.2.1 or later and iTunes 2 or later

My iPod won't turn on or respond.

- Make sure iPod's Hold switch is off.
- If you're using the Apple iPod Remote, make sure the remote's Hold switch is off.
- If that doesn't work, connect iPod to the iPod Power Adapter and connect the adapter to a working electrical outlet. Your iPod battery may need to be recharged.

- If that doesn't work, your iPod may need to be reset. While the iPod is connected to power, press and hold the Play and Menu buttons for at least 5 seconds, until the Apple logo appears.
- If that doesn't work, you may need to restore iPod's software. To download the iPod Software Updater application, go to **www.apple.com/ipod**

My iPod isn't playing music.

- Make sure the Hold switch is off.
- Make sure the earphone connector is pushed in all the way.
- Make sure the volume is turned up.
- If that doesn't work, push the Play/Pause button. Your iPod may be paused.

When I connect my iPod to my computer, nothing happens.

- Make sure you have the required system software and version of iTunes. See "What are the iPod for Macintosh system requirements?" above.
- Check the FireWire connections. Unplug the FireWire cable at both ends and make sure no foreign objects are in the FireWire ports. Then plug the cable back in securely. Use only the Apple 6-pin to 6-pin FireWire cable.

- If that doesn't work, restart your computer.
- If that doesn't work, your iPod may need to be reset. Connect iPod to the iPod Power Adapter and connect the adapter to a working electrical outlet. Then press and hold the Play and Menu buttons for at least 5 seconds, until the Apple logo appears.
- If that doesn't work, you may need to restore iPod's software. To download the iPod Software Updater application, go to **www.apple.com/ipod**
- For more information, go to the iPod support site at **www.apple.com/support/ipod**

My FireWire port cover came off.

- The FireWire port cover (available with some models of iPod) is designed to be removable. If it comes off, you can reinsert it.

My Apple iPod Remote isn't working.

- Make sure the remote's Hold switch is off.
- Make sure the remote is plugged firmly into iPod's headphones port, and that the Apple Earphones are plugged firmly into the remote.
- The iPod Remote is included with some models of iPod, and can be purchased separately at **www.apple.com/store**

Learning more, service, and support

There is a wealth of information about using iPod in onscreen help and on the Web.

iPod onscreen help

To access iPod Help, open iTunes and choose iPod Help from the Help menu.
In iPod Help, you can find information on

- transferring music and data files to iPod
- automatically updating iPod
- using playlists
- changing settings
- file types supported by iPod
- and more

Online resources

For the latest information on iPod, go to **www.apple.com/ipod**
For iPod service and support information, a variety of forums with product-specific information and feedback, and the latest Apple software downloads, go to **www.apple.com/support/ipod**
For international support, go to **www.apple.com/support** and choose your country from the pop-up menu at the bottom of the screen.

Obtaining warranty service

If the product appears to be damaged or does not function properly, please follow the advice in this booklet, the onscreen help, and the online resources. If the unit still does not function, go to **www.apple.com/support** for instructions on how to obtain warranty service.

Communications regulation information

For information on communications regulations, see the file on the iPod CD.

Safety and cleaning

Read on to learn about using iPod safely and cleaning iPod.

Important safety instructions

When setting up and using your iPod, remember the following:

- Read all the installation instructions carefully before you plug your iPod Power Adapter into a power outlet.
- Keep these instructions handy for reference by you and others.
- Follow all instructions and warnings dealing with your iPod.

Warning Electrical equipment may be hazardous if misused. Operation of this product, or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical product and do not permit them to handle any cables.

Avoid hearing damage

Warning Permanent hearing loss may occur if earphones or headphones are used at high volume. You can adapt over time to a higher volume of sound, which may sound normal but can be damaging to your hearing. Set your iPod's volume to a safe level before that happens. If you experience ringing in your ears, reduce the volume or discontinue use of your iPod.

Do not use while driving

Important Use of headphones while operating a vehicle is not recommended and is illegal in some areas. Be careful and attentive while driving. Stop listening to your iPod if you find it disruptive or distracting while operating any type of vehicle or performing any other activity that requires your full attention.

Using the power adapter

- Use only the power adapter that came with your iPod. Adapters for other electronic devices may look similar, but they may damage your iPod.
- The only way to shut off power completely to your power adapter is to disconnect it from the power source.
- Always leave space around your power adapter. Do not use this equipment in a location where airflow around the power adapter is confined, such as a bookcase.
- When connecting or disconnecting your power adapter, always hold the power adapter by its sides. Keep fingers away from the metal part of the plug.
- Before connecting the FireWire cable to the power adapter, make sure there are no foreign objects inside the adapter's FireWire port.
- The power adapter for your iPod is a high-voltage component and should not be opened for any reason, even when the iPod is off. If the power adapter needs service, see "Learning more, service, and support."
- Never force a connector into the power adapter FireWire port. If the connector and port do not join with reasonable ease, they probably don't match. Make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.

About operating and storage temperatures

- Operate your iPod in a place where the temperature is always between 0 and 35° C (32 to 95° F).
- Store your iPod in a place where the temperature is always between –20 and 45° C (-4 to 113° F).
- iPod's battery life may shorten in low-temperature conditions.
- When you are using your iPod or charging the battery, it is normal for the bottom of the case to get warm. The bottom of the iPod case functions as a cooling surface that transfers heat from inside the unit to the cooler air outside.

Avoid wet locations

Warning To reduce the chance of shock or injury, do not use your iPod in or near water or wet locations.

- Keep your iPod and power adapter away from sources of liquids, such as drinks, wash basins, bathtubs, shower stalls, and so on.
- Protect your iPod and the power adapter from direct sunlight and rain or other moisture.
- Take care not to spill any food or liquid on iPod or its power adapter. If you do, unplug iPod before cleaning up the spill.

Depending on what you spilled and how much of it got into your equipment, you may have to send your equipment to Apple for service. See "Learning more, service, and support."

Do not make repairs yourself

Warning Do not attempt to open your iPod or power adapter, disassemble it, or remove the battery. You run the risk of electric shock and voiding the limited warranty. No user-serviceable parts are inside.

For service, see "Learning more, service, and support."

Cleaning

Follow these general rules when cleaning the outside of your iPod and its components:

- Make sure your iPod is unplugged.
- Use a damp, soft, lint-free cloth. Avoid getting moisture in openings.
- Don't use aerosol sprays, solvents, alcohol, or abrasives.

About handling

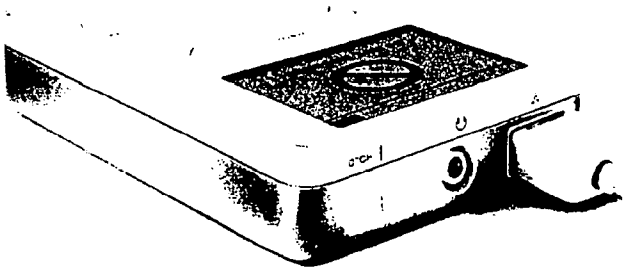
Your iPod may be damaged by improper storage or handling. Be careful not to drop your iPod when playing or transporting the device.

使用入門

iPod（Mac 版）可與 iTunes（iPod 隨附軟體）搭配使用。您可以使用 iTunes 來整理光碟收藏集中的音樂，然後將歌曲傳送至 iPod 供您隨身聆聽。請繼續閱讀以瞭解如何開始使用 iPod 播放音樂。

連接 iPod。

啟動 Macintosh 電腦並使用 FireWire 接線連接 iPod。iPod 的電池會開始充電。若電腦尚未安裝最新版的 iTunes，請使用 iPod 光碟進行安裝。

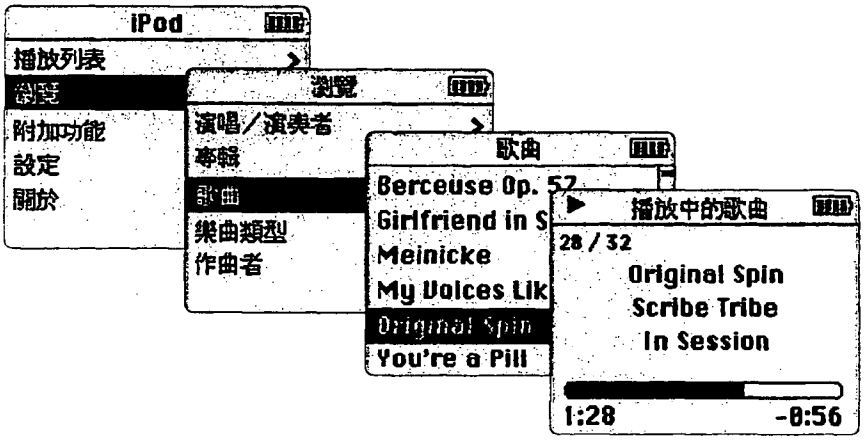


傳送音樂。

打開 iTunes 之後，它會自動將音樂資料庫的歌曲傳送到 iPod 上。傳送完畢後，會出現一個訊息告訴您可以拔下 iPod 的接線。

播放音樂。

使用 iPod 的轉盤和“選擇”按鈕來瀏覽歌曲。然後按下“播放”按鈕開始欣賞音樂！



使用 iPod

只要將歌曲傳送至 iPod，即可輕鬆地瀏覽和聆聽歌曲。請繼續閱讀以了解使用 iPod 的訣竅。您也可以在 iPod 的螢幕輔助說明和網站（請參閱“其他相關內容、服務和技術支援資訊”），查詢使用 iPod 的相關資訊。

啟動和關閉 iPod

按任意按鈕即可開啟 iPod。若暫停播放歌曲或未播放任何歌曲，iPod 會在兩分鐘後自動關閉。若要立即關閉 iPod，請按住“播放”按鈕數秒鐘。

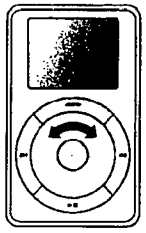
使用 Hold（鎖定）開關停用 iPod 的按鈕

若要將 iPod 放入置物袋隨身攜帶，但不希望在無意中按到按鈕，您可以使用 Hold（鎖定）開關來讓 iPod 上的按鈕暫時無法作用。

打開背光燈

您可以按住 Menu（選單）按鈕來打開或關閉 iPod 的背光燈。

使用 iPod 的控制項目



使用 iPod 的按鈕和轉盤來瀏覽 iPod 螢幕選單。若要選取選單上的項目，請使用轉盤轉動至該項目，然後按下“選擇”按鈕（位於 iPod 中央）。若要返回上一個選單，請按下 Menu（選單）按鈕。

播放歌曲

您可以依演唱 / 演奏者、專輯、歌曲名稱或作曲者來瀏覽歌曲。若將 iTunes 上的播放列表（已整理至列表的多首歌曲）傳送至 iPod 上，您也可以瀏覽此播放列表中的歌曲。

在 iPod 的主選單中選取“播放列表”或“瀏覽”，然後瀏覽歌曲並按下“選擇”來播放歌曲。 若要播放同一演唱 / 演奏者、專輯或播放列表上的所有歌曲，在反白選取演唱 / 演奏者、專輯或播放列表名稱時，請按下“播放”按鈕。

調整音量

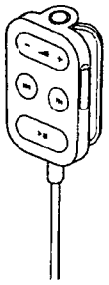
若出現“播放中的歌曲”螢幕（用來顯示正在播放歌曲的名稱），您可以使用轉盤來調整音量。若未出現“播放中的歌曲”螢幕，請在主選單中選取“播放中的歌曲”。

您也可以使用 Apple iPod Remote（某些 iPod 機型隨機配備）來調整音量。

傳送音樂

將 iPod 連接至電腦時，iPod 會依預設自動將音樂傳送至電腦上。您也可以手動傳送和刪除個別的歌曲。若要更改 iPod 的設定，請在 iTunes 中選取 iPod 圖像，並按“選項”按鈕一下。

使用 Apple iPod Remote



若要使用 iPod Remote，請將其連接至 iPod 的耳機埠，然後接上 Apple Earphones（耳機）或其他耳機。使用遙控器可以調整音量、播放或暫停歌曲、快轉和倒轉及跳至下一首或上一首歌曲。使用遙控器上的 Hold（鎖定）開關可以停用遙控器上的按鈕。

某些 iPod 機型隨機配備 iPod Remote，您可以參訪 **www.apple.com/store** 網站（英文）。如需購買，請聯絡蘋果授權經銷商。

輸入地址和電話號碼

iPod 可儲存上千筆的聯絡資料供您隨身檢閱。

1 連接 iPod 並打開喜好的電子郵件或通訊錄應用程式。輸入的聯絡資料可與 Mac OS X“通訊錄”、Palm Desktop、Microsoft Entourage 及其他應用程式搭配使用。

2 將應用程式上通訊錄的聯絡資料拖移至 iPod 的 Contacts 檔案夾。請先設定 iPod 作為 FireWire 磁碟使用。

3 卸除並拔下 iPod。在主選單中選取“附加功能”，然後選取“通訊錄”來檢視通訊錄。如需更多資訊，請參閱“iPod 輔助說明”（可於“iTunes 輔助說明”選單中取得）。

輸入行事曆事件

iPod 可儲存所有行事曆應用程式上使用標準“ical”格式（檔名以 .ics 結尾）的事件。輸出行事曆事件，並將其放置在 iPod 上的 Calendars 檔案夾。若要檢視行事曆事件，請在 iPod 主選單中選取“附加功能”，然後選取“行事曆”。

更改設定

在 iPod 的主選單中選取“設定”來更改設定。您可以設定 iPod 來亂序或重複播放歌曲、更改等化器設定、設定背光燈計時器和進行其他設定（請參閱“其他相關內容、服務和技術支援資訊”以瞭解更多資訊。）

為電池充電

若要為 iPod 的電池充電，請將 iPod 連接至 Macintosh 電腦，（電腦必須開啟，且未進入睡眠狀態）。或者將 iPod 連接至 iPod Power Adapter（隨機配備），並將轉換器接上可用的電源插座。iPod 可在約 1 小時的時間達到 80% 的充電量，約 4 小時左右可儲滿電量。若 iPod 螢幕上的電池圖像沒有閃動，則表示電池已完全充電。

軟體更新

蘋果電腦會定期更新 iPod 的軟體以提升效能和增加功能。若要下載最新版的 iPod Software Updater 應用程式，請參訪 **www.apple.com.tw/ipod** 網站。

使用訣竅與疑難排解

請繼續閱讀以瞭解使用 iPod 和解決 iPod 問題的建議。

iPod（Macintosh 版）的系統環境需求？

您可以將 iPod 與符合下列需求的電腦和軟體搭配使用：

- 內建 FireWire 的 Macintosh 電腦
- Mac OS X v10.1.4 或以上版本和 iTunes 3 或以上版本，或
- Mac OS 9.2.1 或以上版本和 iTunes 2 或以上版本

iPod 無法開啟或沒有回應。

- 確定 iPod 的 Hold（鎖定）開關為停用狀態。
- 若正在使用 Apple iPod Remote，請確定遙控器上的 Hold（鎖定）開關為停用狀態。
- 若上述方法無效，請將 iPod 連接至 iPod Power Adapter，並將轉換器接上可用的電源插座。iPod 的電池可能需要充電。

- 若上述方法無效，您必須重置 iPod。當 iPod 接上電源時，請按住“播放”和 Menu（選單）按鈕至少 5 秒鐘，直到蘋果圖像出現為止。
- 若上述方法無效，您必須重新安裝 iPod 的軟體。若要下載 iPod Software Updater，請參訪 **www.apple.com.tw/ipod** 網站。

iPod 無法播放音樂。

- 確定 Hold（鎖定）開關為停用狀態。
- 確定耳機接頭已插入到底。
- 確定音量已調高。
- 若上述方法無效，請按下“播放 / 暫停”按鈕。可能是已暫停使用 iPod 。

當 iPod 連接至電腦時，電腦沒有回應。

- 確定已安裝所需系統軟體和最新版的 iTunes。請參閱上述的“iPod（Macintosh 版）的系統環境需求？”。
- 檢查 FireWire 連線。拔下 FireWire 兩端的接線並確定 FireWire 埠中沒有異物。
  然後再將接線緊密的接上。只能使用蘋果電腦的 6 針對 6 針 FireWire 接線。

- 若上述方法無效，請重新開機。
- 若上述方法無效，您必須重置 iPod。請將 iPod 連接至 iPod Power Adapter，並將轉換器接上可用的電源插座。然後按住“播放”和 Menu（選單）按鈕至少 5 秒鐘，直到蘋果圖像出現為止。
- 若上述方法無效，您必須重新安裝 iPod 的軟體。若要下載 iPod Software Updater 應用程式，請參訪 **www.apple.com.tw/ipod** 網站。
- 若上述方法無效，請參訪 iPod 支援網站，網址：**www.apple.com/support/ipod**（英文）。

FireWire 埠保護蓋脫落。

- FireWire 埠的保護蓋（某些 iPod 機型隨機配備）是可拆卸的。如果保護蓋脫落，您可以重新將其裝上。

Apple iPod Remote 無法使用。

- 確定遙控器的 Hold（鎖定）開關為停用狀態。
- 確定遙控器已牢固地連接至 iPod 的耳機埠，且 Apple Earphones（耳機）已牢固地接上遙控器。
- 某些 iPod 機型隨機配備 iPod Remote，您可以參訪 **www.apple.com/store** 網站（英文）。如需購買，請聯絡蘋果授權經銷商。

其他相關內容、服務和技術支援資訊

您可以在 iPod 螢幕輔助說明和網站上找到關於使用 iPod 的豐富資訊。

iPod 螢幕輔助說明

若要取用“iPod 輔助說明”，請打開 iTunes 並在“輔助說明”選單中選取“iPod 輔助說明”。

在“iPod 輔助說明”中，您可以找到下列資訊：

- 將音樂和資料傳送至 iPod
- 自動更新 iPod
- 使用播放列表
- 更改設定
- iPod 可支援的檔案類型
- 其他相關內容

線上資源

如需關於 iPod 的最新資訊，請參訪 **www.apple.com.tw/ipod** 網站。

如需 iPod 服務和技術支援資訊、特定產品資訊的各式討論群組，及最新的蘋果軟體更新下載項目，請參訪 **www.apple.com/support/ipod** 網站（英文）。

如需國際性的支援服務，請參訪 **www.apple.com/support** 網站（英文），並在螢幕下方的彈出式選單中選取所在國家或地區。

取得保固服務

若產品出現損壞或功能不正常的情況，請遵循此手冊、螢幕輔助說明和線上資源的建議操作。

若還是無法正常操作，請參訪 **www.apple.com/support** 網站（英文），查詢如何取得保固服務的相關資訊。

通訊條例資訊

如需通訊條例的相關資訊，請參考 iPod 光碟上的檔案。

安全與清潔

請繼續閱讀以瞭解關於安全地使用 iPod 和清理 iPod 的資訊。

重要的安全指示

在設定和使用 iPod 時，請記住下列事項：

- 將 iPod Power Adapter 插入牆上插座之前，必須先仔細閱讀所有的安裝說明文件。
- 將這些說明文件置於隨手可取得的地方，以便您或其他人隨時參考。
- 使用 iPod 時請遵守所有的指示和警告事項。

【警告】電器用品若使用不當可能會發生危險。使用此種或類似產品時，必須有成年人在旁指導監督。請勿讓兒童接觸任何電器產品的內部組件，也不要讓他們處理接線。

避免聽力受損

【警告】使用耳機時如果音量過大，可能會導致永久性的聽力受損。如果您長時間在高音量的狀態下聆聽，您或許會因為習慣了這高音量而認為這是正常的音量，但這還是會對您的聽力造成損害。所以請將 iPod 的音量調整至安全適當的大小，以避免聽力受損。如果出現耳鳴的現象，請馬上降低音量或停止使用 iPod。

請勿在開車時使用

【重要事項】我們不建議您在操作機動車輛時使用耳機，此種行為在部份地區可能是違法的。如果您正在開車或從事其他必須全神專注的活動時，請不要使用 iPod，因為它會使您的注意力不能集中。

使用電源轉換器

- 只能使用 iPod 隨附的電源轉換器。其他電器設備的轉換器可能外型相似，但是會損害您的 iPod。
- 將電源轉換器的電力完全關閉的唯一方法就是停止其與電力來源之間的連接。
- 電源轉換器周圍必須留有一定的空間。請不要將電源轉換器置於周圍通風不順暢的地方（例如，在書櫃中）連接使用本設備。
- 連接或斷接電源轉換器時，請握住電源轉換器的邊緣，手指請勿碰觸到兩片金屬交流電插頭的部份。
- 將 FireWire 接線連接至電源轉換器時，請先確定轉換器的 FireWire 埠中沒有異物。
- iPod 的電源轉換器是一種高電壓的電子組件，即使在 iPod 關機時也不得因任何原因將其拆卸打開。如果電源轉換器需要維修服務，請參閱“其他相關內容、服務和技術支援資訊”部份。
- 請勿強行將接頭插入電源轉換器 FireWire 埠。如果接頭和電源轉換器埠無法順利接合，可能是它們不相容。請確定接頭和埠是相容的，並且將接頭對應到正確的連接埠上。

關於操作和存放溫度

- 請在溫度介於攝氏 0 和 35 度（華氏 32 至 95 度）的地方操作 iPod。
- 將 iPod 存放在溫度介於攝氏 -20 至 45 度（華氏 -4 至 113 度）的地方。
- 將 iPod 放置在低溫環境中，可能會縮短 iPod 的電池壽命。
- 當您在使用 iPod 或進行充電時，機殼底部產生微熱是正常的現象。iPod 的機殼底部就像是一個散熱板，將機體內部產生的熱量散發出去。

避免潮溼環境

【警告】為避免發生電擊或造成傷害，請勿在靠近水或潮濕的環境使用 iPod。

- 讓 iPod 和電源轉換器遠離液體或有水的地方，例如飲料瓶、臉盆、浴缸或淋浴間等。
- 讓 iPod 和電源轉換器遠離直接的陽光照射，並且避免因雨或其他因素而受潮。
- 請不要將食物或液體潑灑在 iPod 或電源轉換器上。如果發生此情形，請立即關閉 iPod 並拔掉電源再進行清理。

視潑灑和濺入機體的程度而定，您可能必須將設備送到蘋果的服務供應商進行維修。請參閱“其他相關內容、服務和技術支援資訊”部份。”

請勿自行維修

【警告】請勿嘗試打開 iPod 或電源轉換器、解體或拆卸電池。這樣可能會導致電擊和使產品的保固失效。iPod 本身沒有使用者可以自行維修的部份。

關於維修服務的相關資訊，請參閱“其他相關內容、服務和技術支援資訊”部份。

清潔

請依照以下的一般規則來清理 iPod 的外部及其組件：

- 請先確定 iPod 已經關機並拔掉電源。
- 使用微濕、柔軟且沒有線頭的布料輕輕擦拭。並避免讓機身的開口處受潮。
- 請勿使用噴霧劑、溶劑、酒精或研磨劑。

關於處理使用

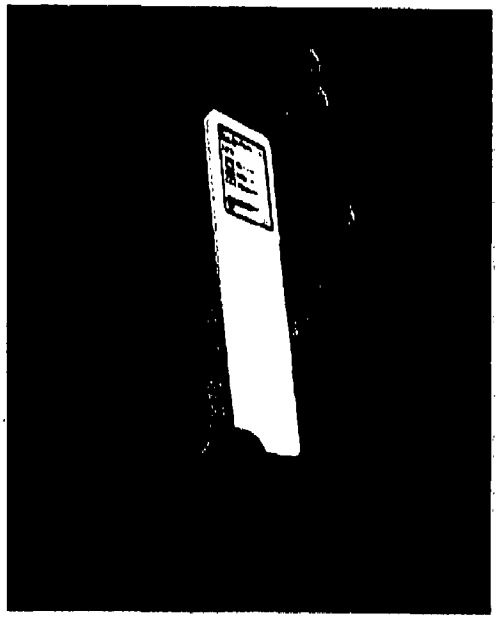
不適當的儲存或處理可能會對 iPod 造成損害。請小心播放或運送本設備，不要使其摔落地面。

apple.com

Z034-2141-A

EXHIBIT 15

iPod Tutorial



Play the Movie Learn More

Finding and Playing Songs on Your iPod

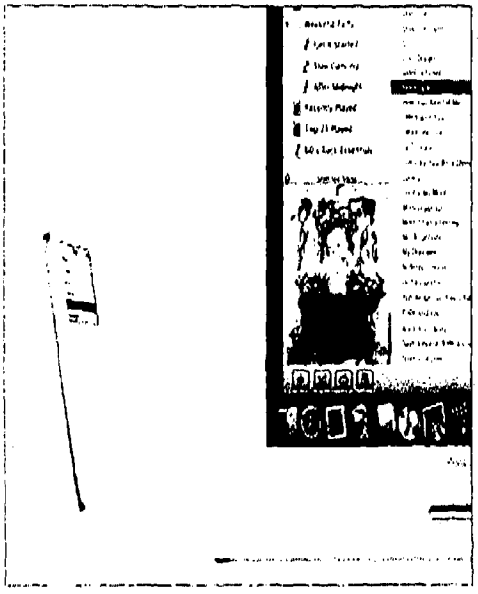
After you've transferred music from iTunes to your iPod, you'll want to start listening right away. No matter how many songs you have, you can find the right one with iPod's easy-to-use interface. Just use the Click Wheel to browse through your music by playlist, song, artist, album, or genre.

You can use the iPod controls to adjust the volume, jump to a specific location in a song, or customize settings. When you're on the move, use the hold switch to disable the controls so you don't accidentally press one of the buttons, interrupting your music.

Provide feedback

EXHIBIT 16

iPod Tutorial



Play the Movie

Learn More

Working with Playlists on Your iPod

One of the great things about iTunes is how easy it is to group songs from different albums and artists into playlists. It's like making a mix tape, but easier. You can create playlists with common themes or moods, or make a collection of dance songs for a party.

Listening to a workout playlist is a lot more convenient than trying to find the right song while you're at the gym. You can even create a special kind of playlist right on your iPod called an On-The-Go playlist.

Provide feedback

EXHIBIT 17

iPod

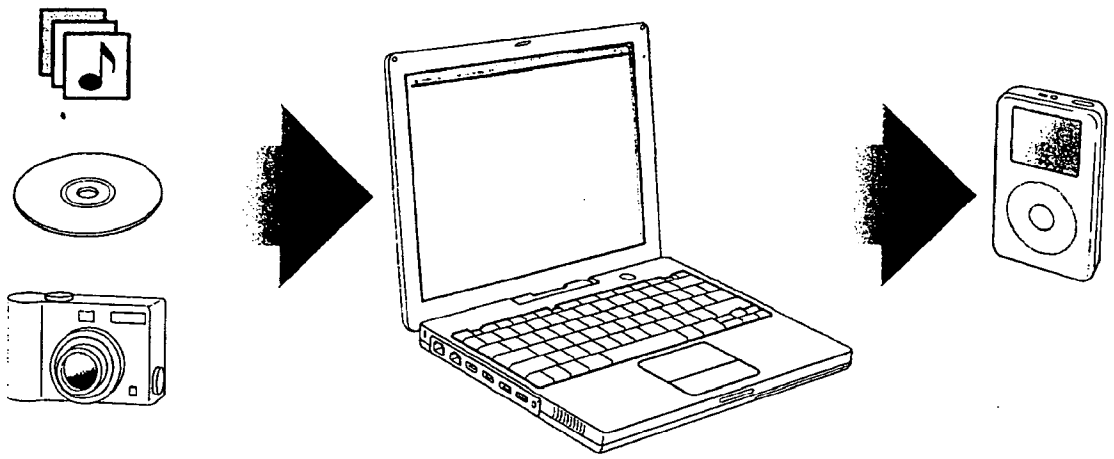
User's Guide

Contents

Quick Start

Congratulations on purchasing your iPod. Read this section to get started using iPod quickly.

iPod works with your computer. Import and organize songs and photos on your computer, then transfer them to iPod for listening and viewing on the go.



Learning to Use iPod

Read this chapter to set up iPod and get started playing music quickly. To learn more about playing music on iPod and using some of its other features, see "Using iPod" on page 12.

iPod Tutorial

For an interactive tutorial on transferring music to and playing music on iPod (available in some countries only), go to www.apple.com/support/ipod.

iPod Features

iPod is a music player and much more. With iPod, you can:

- Store thousands of songs from your music collection, for listening on the go
- Store thousands of digital photos, for backing up or viewing on the go
- Import photos directly from most digital cameras (using the optional iPod Camera Connector)
- View photos as a slideshow with music on a television, using the optional iPod AV Cable
- Listen to audiobooks purchased from the iTunes Music Store or audible.com
- Arrange your music in On-The-Go playlists
- Store or back up files and other data, using iPod as an external hard disk
- Change equalizer settings to make music sound better
- Store and synchronize contact, calendar, and to-do list information from your computer
- Record voice memos, using an optional microphone
- Play games, store text notes, set an alarm, and more

What You Need to Get Started

To use iPod with a Macintosh, you must have:

- A Macintosh with:
  - Built-in high-power USB 2.0
  - Or built-in FireWire and the optional iPod Dock Connector to FireWire Cable (available for purchase at www.apple.com/ipodstore)

High-power USB 2.0 port

6-pin FireWire 400 port

- Mac OS X v10.2.8, or Mac OS X v10.3.4 or later
- iTunes 4.7 or later (iTunes is included on the iPod CD)

  To be sure you have the latest version of iTunes, go to www.apple.com/itunes.
- iPod software (included on the iPod CD)
- iPhoto 4.0.3 or later (recommended for transferring photos and albums to iPod)

  Note: iPhoto may already be installed on your Mac. Check the Applications folder. iPhoto is also part of a suite of applications called iLife, available for purchase at www.apple.com/ilife. If you have iPhoto 4 you can update it by choosing Apple (🍎) > Software Update. This software is optional. iPod can also import digital photos from folders on your computer's hard disk, and directly from most digital cameras (using the optional iPod Camera Connector).

To use iPod with a Windows PC, you must have:

- A Windows PC with:
  - Built-in high-power USB 2.0 (or a high-power USB 2.0 card installed)
  - Or built-in FireWire (or a FireWire card installed) and the optional iPod Dock Connector to FireWire Cable (available for purchase at www.apple.com/ipodstore)

High-power USB 2.0 port

6-pin FireWire 400 port (IEEE 1394)

For more information about compatible FireWire and USB cards, go to www.apple.com/ipod.

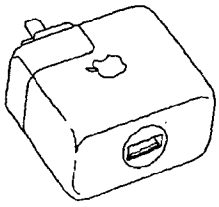
- Windows 2000 with Service Pack 4 or later, or Windows XP Home or Professional with Service Pack 2 or later
- iTunes 4.7 or later (iTunes is included on the iPod CD)

  To be sure you have the latest version of iTunes, go to www.apple.com/itunes.
- iPod software (included on the iPod CD)

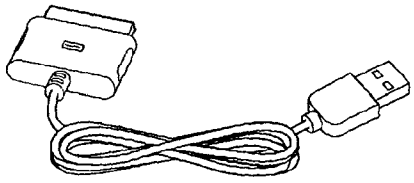
Note: iPod can import photo collections automatically from Adobe Photoshop Album 1.0 or later, and Adobe Photoshop Elements 3.0 or later, available at www.adobe.com. This software is optional. iPod can also import digital photos from folders on your computer's hard disk, and directly from most digital cameras (using the optional iPod Camera Connector).

Your iPod includes the following components:

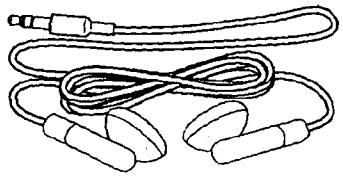
iPod



iPod USB Power Adapter



iPod Dock Connector to USB 2.0 Cable



Apple Earphones

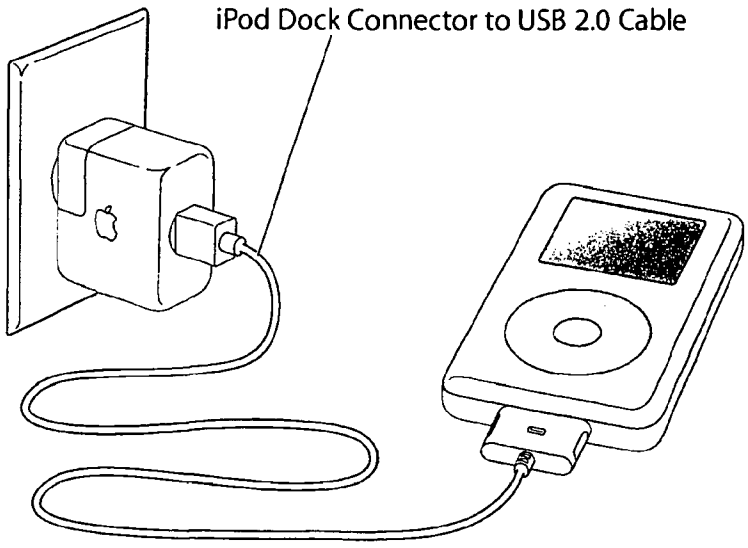
Setting Up iPod to Play Music

To set up iPod, you charge the battery, install software from the iPod CD, and import songs from your music CD collection or from the iTunes Music Store (available in some countries only). Then you transfer the songs to iPod for listening on the go.

To import and view photos on iPod, follow the instructions in this chapter to set up iPod, then see "Transferring and Viewing Digital Photos" on page 32.

Step 1: Charge the Battery

Connect iPod to the iPod Power Adapter using the iPod Dock Connector to USB 2.0 Cable. The built-in battery is 80-percent charged in about three hours, and fully charged in about five hours.



Step 2: Install the Software

Insert the iPod CD into your computer and install iTunes and the iPod software.

Step 3: Import Music to Your Computer

Complete this step if you haven't already transferred music to your computer. You can import music from your audio CDs, or if you have an Internet connection, you can buy music online and download it to your computer using the iTunes Music Store. You can browse over a million songs and listen to a 30-second preview of any song.

To import music to your computer from an audio CD:

1 Insert a CD into your computer.

iTunes opens automatically and the CD is selected in the iTunes Source list.

2 Deselect songs you don't want to transfer, then click Import.

3 Repeat for any other CDs with songs you'd like to import.

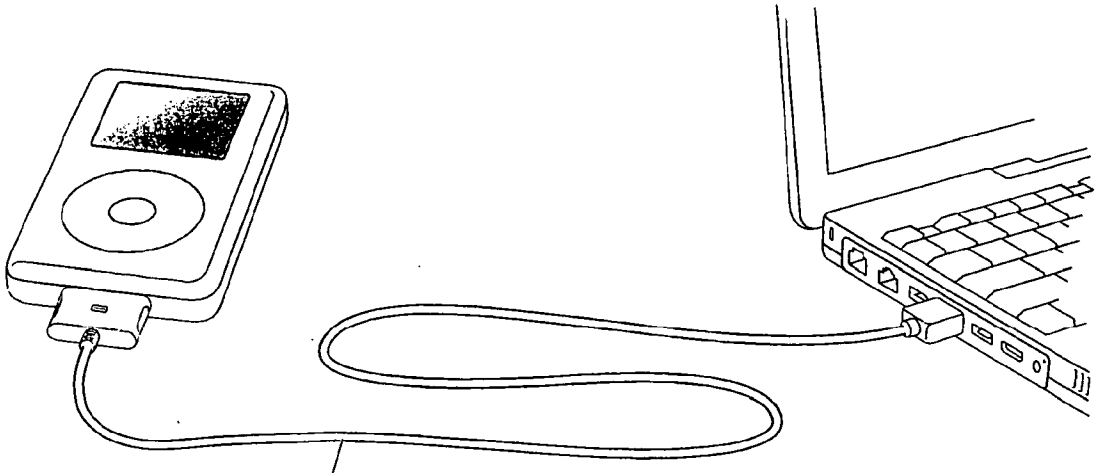
To buy music online:

1 Open iTunes and click Music Store in the Source list.

2 Click the Account button and follow the onscreen instructions to set up an account or enter your existing Apple Account or America Online (AOL) account information (this option is available in some countries only).

Step 4: Connect iPod and Transfer Music

Connect iPod to your computer using the included iPod Dock Connector to USB 2.0 Cable.



If you are connecting to a high-power USB 2.0 port, use the iPod Dock Connector to USB 2.0 Cable. If you are connecting to a FireWire 400 port, use an iPod Dock Connector to FireWire Cable (available separately).

To transfer songs to iPod:

When you connect iPod to your computer, iTunes opens. Follow the simple onscreen instructions to transfer songs and playlists to iPod.

Note: Be sure you have charged the battery using the iPod Power Adapter before you transfer songs to iPod. See "Charging the iPod Battery" on page 53 for more information.

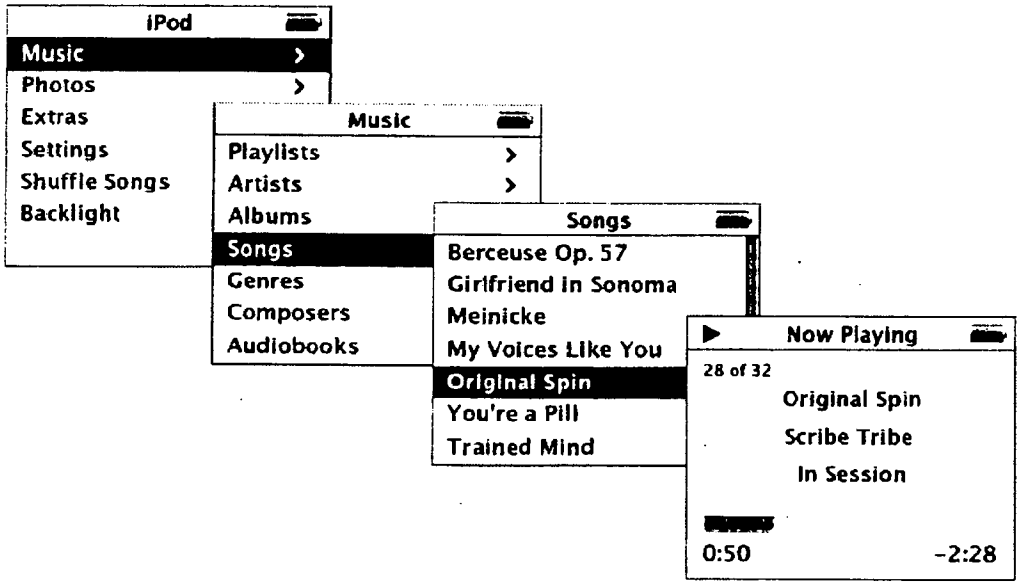
If your Windows PC doesn't have a high-power USB 2.0 port or a 6-pin FireWire 400 (IEEE 1394) port, you can purchase and install a USB 2.0 card or a FireWire card.

For more information on cables and compatible USB and FireWire cards, go to www.apple.com/ipod.

Step 5: Play Music

When the song transfer is complete, a message on the iPod screen says "OK to disconnect." Squeeze both sides of the Dock connector to disconnect the cable from iPod.

Then use the Click Wheel and Select button to browse for a song. Press the Play or Select button and enjoy!

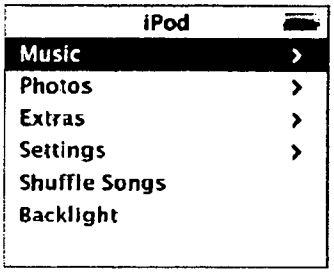


Using iPod

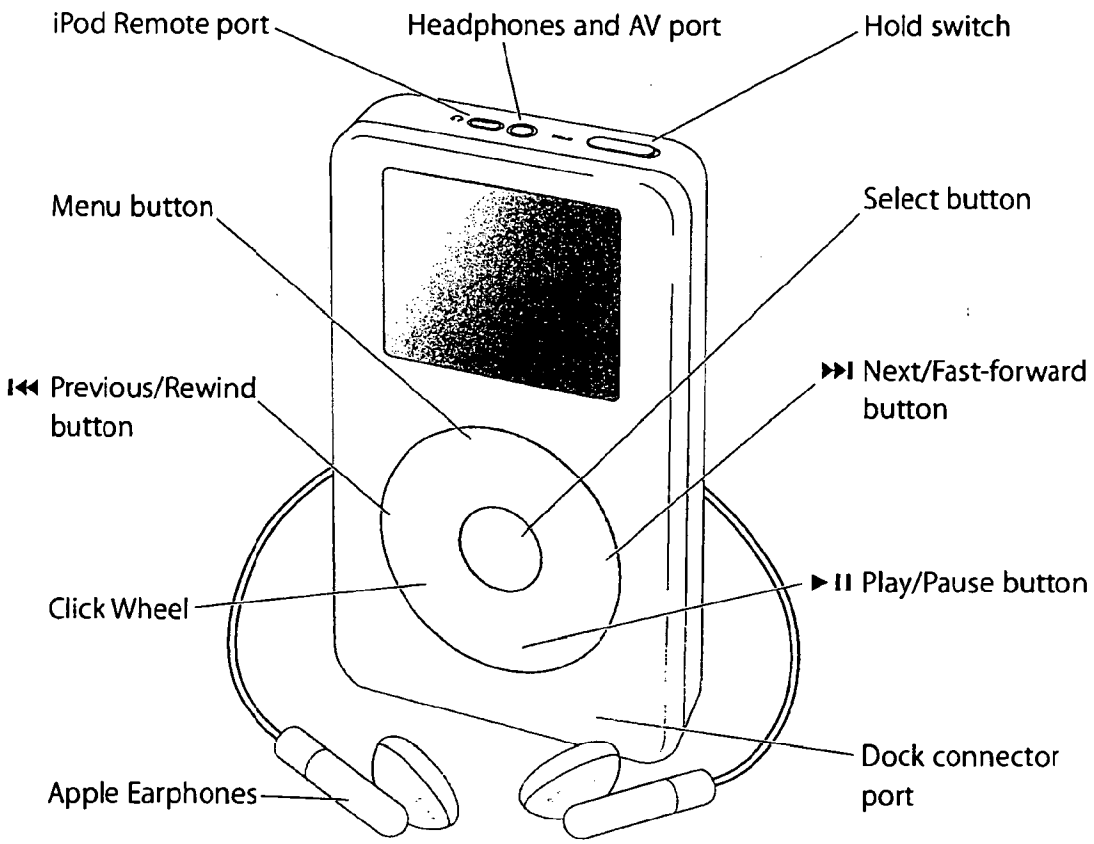
Read this section to learn about using iPod controls, transferring music, transferring and viewing photos, charging the battery, and using the extra features of your iPod.

Using iPod Controls

Press any button to turn on iPod. The main menu appears.



Use the Click Wheel and Select button to navigate through onscreen menus, play songs, change settings, and view information. Move your thumb lightly around the Click Wheel to highlight a menu item. To select the item, press the Select button. To go back to the previous menu, press Menu on the Click Wheel.



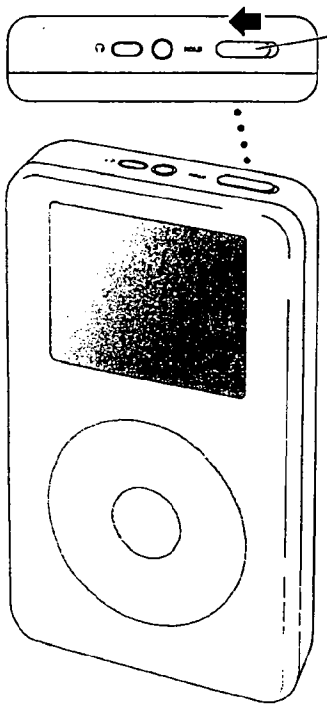
To do this...	Do this
Reset iPod (For use during troubleshooting)	Toggle the Hold switch (set it to Hold, then turn it off again). Then press the Menu and Select buttons simultaneously for about 6 seconds, until the Apple logo appears.
Turn on iPod	Press any button.
Turn off iPod	Press and hold Play/Pause.
Turn the backlight on or off	Press and hold Menu or select Backlight from the main menu.
Select a menu item	Scroll to the item by moving your thumb lightly around the Click Wheel, then press the Select button.
Go back to the previous menu	Press Menu.
Browse for a song	Select Music from the main menu.
Play a song	Highlight the song and press the Select or Play/Pause button. iPod must be ejected from your computer to play songs.
Play all the songs in a list	Highlight the list title (an album title, or the title of a playlist, for example) and press Play/Pause.
Change the volume	From the Now Playing screen, use the Click Wheel. You can also use the optional iPod Remote (available at www.apple.com/ipodstore) from any screen.
Pause a song	Press Play/Pause when no song or list is highlighted.

To do this...	Do this
Disable the iPod buttons (So you don't press them accidentally)	Set the Hold switch to Hold (an orange bar appears).
Skip to any point in a song	From the Now Playing screen, press the Select button to show the scrubber bar (if you see album artwork, press it again). Then scroll to any point in the song.
Skip to the next song	Press Next/Fast-forward.
Start a song over	Press Previous/Rewind.
Play the previous song	Press Previous/Rewind twice.
Fast-forward a song	Press and hold Next/Fast-forward.
Rewind a song	Press and hold Previous/Rewind.
Add a song to the On-The-Go playlist	Highlight a song, then press and hold the Select button until the song title flashes.
Scroll through photos	From any photo-viewing screen, use the Click Wheel to scroll back and forth through photos.
Skip to the next or previous screen of photos	From any photo-viewing screen, press Next/Fast-forward or Previous/Rewind.
Start a photo slideshow	Select any photo or album and press Play. Or select any full-screen photo and press the Select button. For more information, see page 32.
Skip to the next or previous photo in a slideshow	Press Next/Fast-forward or Previous/Rewind.

Disabling iPod Buttons Using the Hold Switch

If you're carrying iPod in your pocket and you don't want to press the buttons or turn it on accidentally, you can make the buttons inactive.

- Set the Hold switch to Hold.



Slide the switch toward the center (so you can see the orange bar) to disable the controls.

Making Playlists on iPod

You can set iPod to play the songs you want in the order you want. When you create a list of songs on your iPod, the songs appear in an On-The-Go playlist.

To create an On-The-Go playlist:

1 Highlight a song and press and hold the Select button until the song title flashes.

2 Repeat step 1 for other songs you want to add.

3 Select Music > Playlists > On-The-Go to view your list of songs.

You can also queue entire lists of songs at once. For example, to queue an album, highlight the album title and press and hold the Select button until the album title flashes.

To play songs in the On-The-Go playlist:

- Select Music > Playlists > On-The-Go and select a song.

To remove a song from the On-The-Go playlist:

- Highlight a song in the playlist, and hold down the Select button until the song title flashes.

To clear the entire On-The-Go playlist:

- Select Music > Playlists > On-The-Go > Clear Playlist.

To save On-The-Go playlists on your iPod:

- Select Music > Playlists > On-The-Go > Save Playlist > Save Playlist.

The first playlist is saved as "New Playlist 1" in the Playlists menu. The On-The-Go playlist is cleared. You can save as many On-The-Go playlists as you like.

To transfer On-The-Go playlists to your computer:

- If iPod is set to transfer songs automatically (see page 28), and you create an On-The-Go playlist, the playlist automatically transfers to iTunes when you connect iPod. You see the new On-The-Go playlist in the iTunes Source list. You can rename or delete the new playlist, just as you would any other playlist in iTunes.

Rating Songs

You can assign a rating to a song (from 1 to 5 stars) to indicate how much you like it. You can use song ratings to help you create playlists automatically in iTunes (see "About Smart Playlists" on page 27).

To rate a song:

1 Start playing the song.

2 From the Now Playing screen, press the Select button two or three times, until you see the rating screen (showing either bullet points, stars, or a combination of both).

3 Use the Click Wheel to select a rating.

Viewing Album Artwork on iPod

You can set iTunes to allow iPod to display album art, then view the album artwork on iPod.

To set iTunes to allow iPod to display album artwork:

1 Select iPod in the iTunes Source list and click the Options button.

Options button

2 Choose "Display album artwork on your iPod."

To see album artwork on your iPod:

1 Play a song that has album artwork.

2 From the Now Playing screen, press the Select button. If you don't see artwork, either that song doesn't have album artwork, or you need to set iTunes to allow iPod to display album artwork (see above).

For more information about album artwork, open iTunes and choose Help > iTunes Help.

Connecting and Disconnecting iPod

You connect iPod to your computer to transfer music and photos, and, in most cases, to charge the battery.

To connect iPod to your computer:

- Plug the included iPod Dock Connector to USB 2.0 Cable in to a high-power USB 2.0 port on your computer, then connect the other end to iPod.
- Or, if you have an iPod Dock (see page 22), connect the cable to a high-power USB 2.0 port on your computer and connect the other end to the Dock. Then put iPod in the Dock.

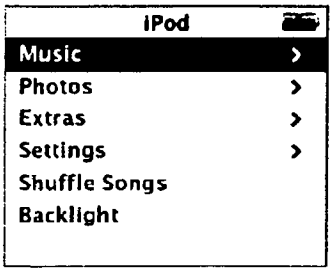
Note: If your computer doesn't have a USB 2.0 port but has a FireWire 400 (IEEE 1394) port, you can use an iPod Dock Connector to FireWire Cable (available for purchase at www.apple.com/ipodstore).

By default, iPod imports songs automatically when you connect it to your computer. When this automatic transfer is done, you can disconnect iPod.

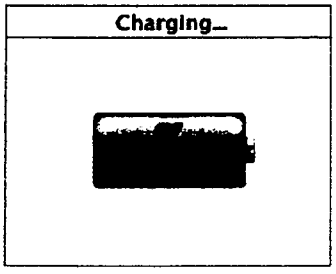
If you connect iPod to a different computer and it is set to transfer songs automatically, iTunes prompts you before transferring any music.

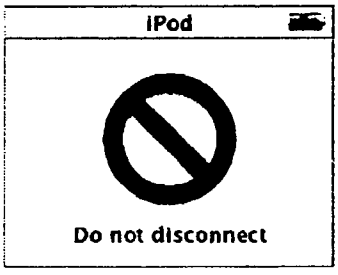
Disconnecting iPod

You shouldn't disconnect iPod while music is being transferred. You can easily see if it's OK to disconnect iPod by looking at the screen.



If you see the main menu or a large battery icon, you can disconnect iPod from your computer.





If you see this message, you must eject iPod before disconnecting it from your computer.

If you set iPod to transfer songs manually (see page 29) or enable iPod for disk use (see page 48), you must eject iPod before disconnecting it.

To eject iPod:

- Click the Eject button (⏏) next to iPod in the iTunes Source list.

  If you're using a Mac, you can also eject iPod by dragging the iPod icon on the desktop to the Trash.

  If you're using a Windows PC, you can eject iPod by clicking the Safely Remove Hardware icon in the Windows system tray and selecting your iPod.

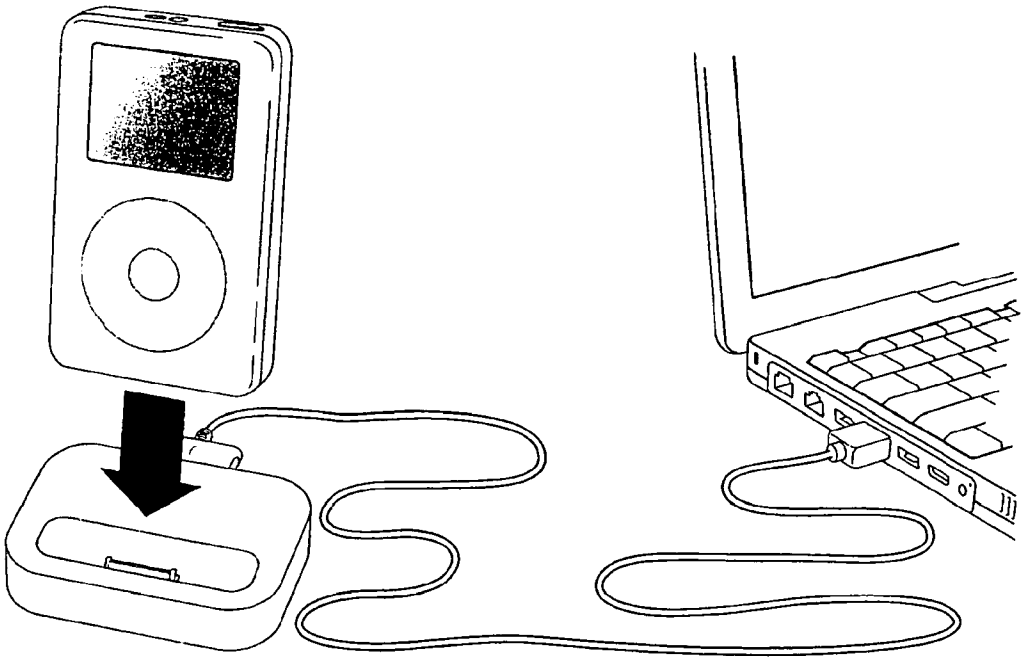
To disconnect iPod:

- *If iPod is connected to an iPod cable,* squeeze both sides of the Dock connector to disconnect the cable from iPod.
- *If iPod is in the Dock,* simply remove it.

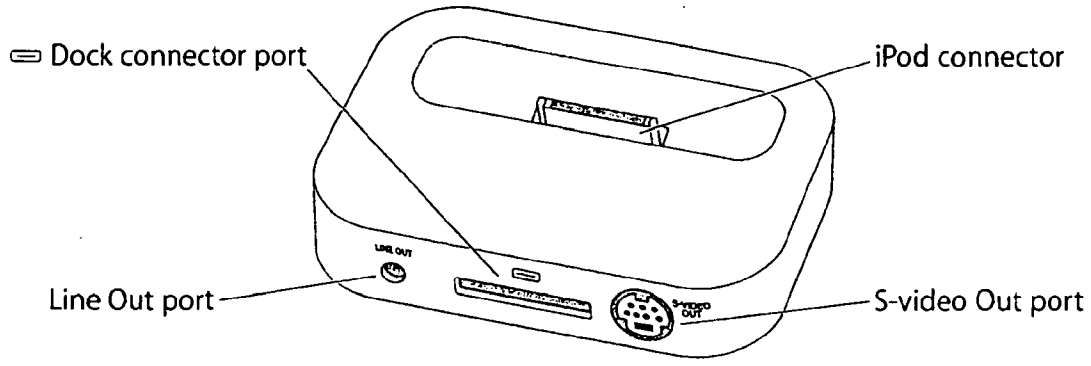
Important: Don't disconnect iPod if you see the "Do not disconnect" message. You could damage files on iPod. If you see this message, you must eject iPod before disconnecting it.

Connecting iPod Using the iPod Dock (Available Separately)

The iPod Dock holds iPod upright as it charges or transfers music. Connect the Dock to your computer using the iPod Dock Connector to USB 2.0 Cable, then put iPod in the Dock.



The optional iPod Dock (for iPod with color display) is available for purchase at www.apple.com/ipodstore.



Port	Use
Dock connector port	Connect the Dock to your computer or the power adapter using the included USB 2.0 cable.
iPod connector	Place iPod into the Dock to charge iPod, transfer songs, view photos, and listen to music.
Line Out port	Connect speakers using an audio cable with a standard 3.5 millimeter stereo miniplug (see page 24). Or connect the optional iPod AV Cable to view photos on a television (see page 32).
S-video Out port	Connect an S-video cable to view photos with enhanced clarity on an S-video-equipped television or video device (see page 32). You must use an additional audio cable to hear sound with a slideshow.

Using the optional iPod Dock, you can play music from iPod over external powered speakers or a home stereo. You need an audio cable with a standard 3.5 millimeter stereo miniplug (many external speakers have this type of cable attached).

To play music from iPod using the Dock:

1 Place iPod in the Dock.

2 Connect the speakers or stereo to the Dock Line Out port using an audio cable with a 3.5 millimeter stereo miniplug.

3 Use the iPod controls to play a song.

When the Dock is connected to an external audio source, use the volume controls on the external source to change the volume.

Organizing and Transferring Your Music

For instructions for getting started playing music on iPod, see "Setting Up iPod to Play Music" on page 8. Read on for more information about organizing and transferring your music.

About iTunes

iTunes is the software application you use to manage the music on your computer and transfer music to iPod. When you connect iPod to your computer, iTunes opens automatically.

Here are some of the things you can do with iTunes:

- Purchase and download songs and audiobooks from the iTunes Music Store
- Listen to CDs and digital music
- Add music from CDs to your music library, so you don't need to have the CD in the drive to play music
- Make your own CDs (if your computer has a CD burner)
- Publish your playlists, called "iMixes," to the iTunes Music Store
- Create dynamic "Party Shuffle" playlists
- Listen to Internet radio stations

This guide explains how to transfer songs to iPod using iTunes and manage songs on iPod. For information about using the other features of iTunes, open iTunes and choose Help > iTunes and Music Store Help.

About the iTunes Music Store

Using iTunes, you can preview, purchase, and download your favorite songs from the iTunes Music Store (available in some countries only). There are over a million songs available for purchase. You can use an Apple Account to purchase songs from the music store, or if you have an America Online (AOL) account, you can use that (this option is available in some countries only).

To browse for and purchase music:

1 Open iTunes and click Music Store in the Source list.

2 Click the Account button and follow the onscreen instructions to set up an account or enter your existing Apple Account or AOL account information.

You can only have music from five different Music Store accounts on one iPod.

For more information about the iTunes Music Store, open iTunes and choose Help > iTunes and Music Store Help.

Audio File Formats Supported by iPod

- AAC (M4A, M4B, M4P) (up to 320 Kbps)
- Apple Lossless (a high-quality compressed format)
- MP3 (up to 320 Kbps)
- MP3 Variable Bit Rate (VBR)
- WAV
- AA (audible.com spoken word, formats 2, 3, and 4)
- AIFF

A song encoded using Apple Lossless format has full CD-quality sound, but takes up only about half the amount of space as a song encoded using AIFF or WAV format. The same song encoded in AAC or MP3 format takes up even less space. When you import music from a CD using iTunes, it is converted to AAC format by default.

Using iTunes for Windows, you can convert nonprotected WMA files to AAC or MP3 format. This can be useful if you have a library of music encoded in WMA format. For more information, open iTunes and choose Help > iTunes and Music Store Help.

iPod does not support WMA, MPEG Layer 1, MPEG Layer 2 audio files, or audible.com format 1.

About Playlists

Using iTunes, you can organize songs into playlists. For example, you can create a playlist with songs to listen to while exercising or with songs for a particular mood.

You can create as many playlists as you like using any of the songs in your computer's music library. Putting a song in a playlist doesn't remove it from the library.

When you connect and update iPod, the playlists are transferred to iPod. To browse through playlists, select Music > Playlists on iPod.

About Smart Playlists

Using iTunes, you can automatically create customized Smart Playlists from the songs in your library. You can create a Smart Playlist that includes only certain genres of music, songs by certain artists, or songs that match particular criteria. For example, you could create a playlist that's no more than 3 gigabytes (GB) in size and includes only songs you have rated 3 stars or higher (see "Rating Songs" on page 18).

After you create a Smart Playlist, any songs on iPod that meet the Smart Playlist's criteria are automatically added to the Smart Playlist.

Creating Playlists on Your Computer

To create a playlist:

- In iTunes, click the Add (+) button and type a name for the playlist, then drag songs from the library or another playlist to the new playlist.

To create a Smart Playlist:

- In iTunes, choose File > New Smart Playlist and choose the criteria for your playlist. Any songs from your library that match the criteria you choose are automatically added to the playlist.

Transferring Songs and Playlists to iPod Automatically

By default, iPod updates automatically when you connect it to your computer.

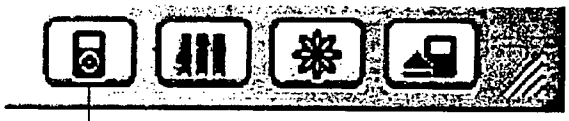
To transfer music to iPod automatically:

- Simply connect iPod to your computer using the included USB 2.0 cable.

iPod must be set to transfer music automatically.

To set iPod to transfer music automatically:

1 Select iPod in the iTunes Source list and click the Options button.



Options button

2 Select "Automatically update all songs and playlists."

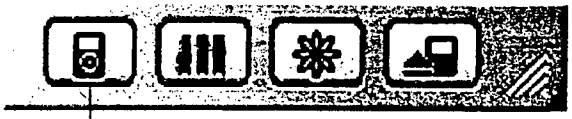
iTunes updates the iPod music library to match the songs and playlists in your computer's music library, transferring new songs to iPod and deleting songs from iPod that aren't in your music library.

You can set iPod to transfer only certain songs in your iTunes music library. This is useful if you have more music on your computer than will fit on your iPod.

To update iPod with only certain songs:

1 In iTunes, check the boxes next to songs you want to transfer (by default, all songs are checked).

2 Select iPod in the iTunes Source list and click the Options button.



Options button

3 Select "Only update checked songs."

To set iPod to update only selected playlists:

1 In iTunes, select iPod in the Source list and click the Options button.

2 Select "Automatically update selected playlists only."

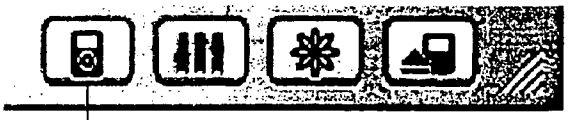
Transferring Songs and Playlists to iPod Manually

You can set iPod to transfer songs manually, so you can transfer individual songs and playlists. This is especially useful if you want to use iPod with more than one computer.

When iPod is set to transfer songs manually, iTunes won't update it automatically when you connect it to your computer.

To set iPod to transfer songs manually:

1 In iTunes, select iPod in the Source list and click the Options button.



Options button

2 Select "Manually manage songs and playlists."

To transfer a song or playlist to iPod manually:

- In iTunes, drag a song or playlist to iPod in the Source list.

Deleting Songs and Playlists From iPod Manually

If you have set iPod to transfer songs manually (see above), you can delete songs and playlists from iPod individually. Songs deleted from iPod manually are not deleted from the iTunes library.

To delete a song or playlist from iPod:

1 Select iPod in the iTunes Source list.

2 Select a song or playlist and press the Delete key on the keyboard.

If you delete a playlist, the songs in the playlist remain on iPod.

Modifying Playlists on iPod Manually

If you have set iPod to transfer songs manually (see above), you can create new playlists on iPod, and add songs to or delete songs from playlists already on iPod.

To create a new playlist on iPod:

1 Select iPod in the iTunes Source list and click the Add (+) button.

2 Drag songs to the new playlist.

To modify a playlist on iPod:

- Drag a song to a playlist on iPod to add the song. Select a song in a playlist and press the Delete key on your keyboard to delete the song.

Listening to Spoken Word Audio

You can purchase and download spoken word audiobooks from the iTunes Music Store (available in some countries only) or from audible.com and listen to them on your iPod.

You can use iTunes to transfer audiobooks to your iPod the same way you transfer songs.

If you stop listening to an audiobook on iPod and go back to it later, the audiobook begins playing from where you left off.

Unless you're playing songs from within playlists, iPod skips audiobooks when set to shuffle.

Setting the Reading Speed

You can play audiobooks at speeds faster or slower than normal.

To set the playing speed of an audiobook:

- Select Settings > Audiobooks and select a speed.

Setting the reading speed only affects audiobooks purchased from the iTunes Music Store or audible.com.

Seeing How Many Songs and Photos Are on iPod

To see how many songs and photos are stored on iPod, how much disk space is left, and other information, select Settings > About in the iPod main menu.

Transferring and Viewing Digital Photos

You can import digital photos from a digital camera to your computer, then transfer them and view them on iPod. You can connect iPod to a television and view photos as a slideshow with music.

If you have the optional iPod Camera Connector, you can transfer photos directly from most USB digital cameras or USB photo card readers to iPod. If you have an iPod–compatible photo card reader, you can transfer photos using that.

Transferring Photos from a Camera to Your Computer

You can import photos from a digital camera or a photo card reader.

To import photos to a Mac using iPhoto:

1 Connect the camera or photo card reader to your computer. Open iPhoto if it doesn't open automatically.

2 Click Import.

Images from the camera are imported into iPhoto.

You can import other digital images into iPhoto, such as images you download from the web. For more information about importing and working with photos and other images, open iPhoto and choose Help > iPhoto Help.

iPhoto is available for purchase as part of the iLife suite of applications at www.apple.com/ilife. iPhoto may already be installed on your Mac, in the Applications folder.

To import photos to a Mac using Image Capture:

If you don't have iPhoto, you can import photos using Image Capture.

1 Connect the camera or photo card reader to your computer.

2 Open Image Capture (inside the Applications folder) if it doesn't open automatically.

3 To choose specific items to transfer, click Download Some. Or to transfer all items, click Download All.

To import photos to a Windows PC:

- Follow the instructions that came with your digital camera or photo application.

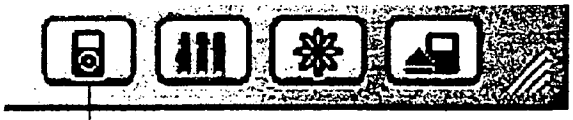
Transferring Photos From Your Computer to iPod

You can transfer photos from a folder on your hard disk. If you have a Mac and iPhoto 4.0.3 or later, you can transfer iPhoto albums automatically. If you have a Windows PC and Adobe Photoshop Album 1.0 or later, or Adobe Photoshop Elements 3.0 or later, you can transfer photo collections automatically.

The first time you transfer photos to iPod may take some time (possibly over an hour) depending upon how many photos are in your photo library.

To transfer photos from a Mac to iPod using iPhoto:

1 Open iTunes and select iPod in the iTunes Source list. Then click the Options button.



Options button

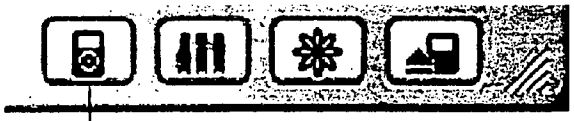
2 Click Photos and select "Synchronize photos from." Then choose iPhoto from the pop-up menu.

3 If you want to import all of your photos, select "Copy all photos." If you want to import photos only from certain iPhoto albums, select "Copy selected albums only" and select the albums or collections you want.

Each time you connect iPod to your computer, photos are transferred automatically.

To transfer photos from a Windows PC to iPod using Photoshop Album or Photoshop Elements:

1 Open iTunes and select iPod in the iTunes Source list. Then click the Options button.



Options button

2 Click Photos and select "Synchronize photos from." Then choose Photoshop Album or Photoshop Elements from the pop-up menu.

3 If you want to import all of your photos, select "Copy all photos." If you only want to import photos from certain Photoshop Album or Photoshop Elements collections, select "Copy selected albums only" and select the albums or collections you want.

Note: Some versions of Photoshop Album and Photoshop Elements don't support collections. You can still use them to transfer all your photos.

Each time you connect iPod to your computer, photos are transferred automatically.

To transfer photos from a folder on your hard disk to iPod:

1 Drag the images you want into a folder on your computer.

If you want images to appear in separate photo albums on iPod, create folders inside the main image folder, and drag images into the new folders.

2 Open iTunes and select iPod in the iTunes Source list. Then click the Options button.

Options button

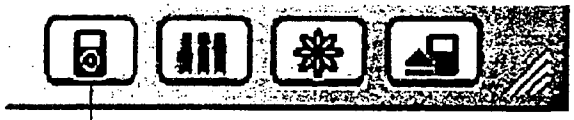
3 Click Photos and select "Synchronize photos from."

4 Choose "Choose Folder" from the pop-up menu and select your image folder.

To transfer full-resolution image files to iPod:

When you transfer photos to iPod, iTunes optimizes the photos for viewing. Full-resolution image files aren't transferred by default. Transferring full-resolution image files is useful if you want to store your images or move them from one computer to another, but is not necessary to view the images at full quality on iPod.

1 Open iTunes and select iPod in the iTunes Source list. Then click the Options button.



Options button

2 Click Photos and select "Include full-resolution photos."

iTunes copies the full-resolution versions of the photos to the Photos folder on your iPod.

Transferring Photos Directly From a Camera or Photo Card Reader to iPod

Using the optional iPod Camera Connector or an iPod–compatible photo card reader (available for purchase at www.apple.com/ipodstore) and a standard digital camera, you can store and view photos on iPod, then delete them from the camera or photo card and take more pictures. Then later you can transfer the photos from iPod to your computer using a standard digital photo application (such as iPhoto, on a Macintosh).

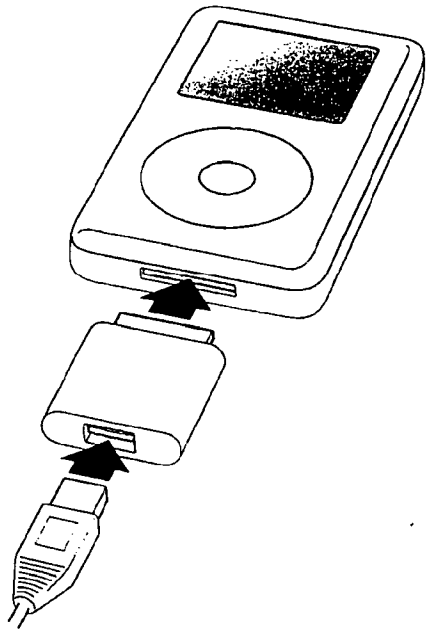
To see which cameras are compatible with the iPod Camera Connector, go to www.apple.com/support/ipod/photos.

Note: You can't view slideshows on a television using photos transferred directly from a camera or photo card reader. To view the photos in a slideshow on a television, you must transfer them to your computer, then import them back to iPod using iTunes.

To import photos from a USB digital camera or photo card reader to iPod:

1 Turn on iPod and attach the optional iPod Camera Connector.

2 Turn on your camera (or card reader) and connect it to iPod using the USB cable that came with your camera.



3 On iPod, select Import.

To store photos from an iPod-compatible photo card reader on iPod:

1 Insert a photo card into the photo card reader and connect the photo card reader to the Dock connector port on iPod.

2 Select Import.

Photos are listed on iPod by roll number.

Note: Some digital photo storage devices may work differently. Consult the instructions that came with the device.

To view imported photos on iPod:

1 Select Photos > Photo Import and select the roll number.

The type of media, number of photos, and size of the roll are displayed.

2 Select Browse. Photos may take a moment to appear. Select any photo to view it full screen.

Note: The Photo Import menu item doesn't appear unless you transfer photos directly from a camera or photo card reader.

To erase photos from a camera or photo card:

1 Import photos from the camera or card (see above).

2 Select Erase Card. All photos are deleted from the camera or card.

For more information about using an iPod–compatible photo card reader, see the instructions that came with the reader.

Transferring Photos from iPod to a Computer

If you transfer full-resolution photos from your computer to iPod (see page 35) they're stored in a Photos folder on iPod. If you transfer photos directly from a camera or photo card reader to iPod (see page 36), they are stored in a DCIM folder on iPod. You can connect iPod to a computer and transfer these photos to a computer. iPod must be enabled for disk use (see page 48).

To transfer from iPod to a computer:

1 Connect iPod to the other computer.

2 Drag image files from the Photos folder or DCIM folder on iPod to the desktop or to a photo editing application on the computer.

Note: You can also use a photo editing application, such as iPhoto, to import photos stored in the DCIM folder.

Viewing Photos

You can view photos on iPod manually or as a slideshow. If you have the optional iPod AV Cable, you can connect iPod to a television and view photos as a slideshow with music.

To view photos on iPod:

1 On iPod, select Photos > Photo Library. Or select Photos and choose a photo album to see only the photos in the album. Photos may take a moment to appear.

2 Highlight the photo you want and press the Select button to view a full-screen version.

From any photo-viewing screen, use the Click Wheel to scroll through photos. Use the Next/Fast-forward and Previous/Rewind buttons to skip to the next or previous screen of photos.

Viewing Slideshows

You can view a slideshow, with music and transitions if you choose, on iPod. If you have the optional iPod AV Cable, you can view the slideshow on a television.

To set slideshow settings:

- Select Photos > Slideshow Settings, then follow the instructions below:
  - To set slideshows to display on iPod, set TV Out to Ask or Off.
  - To set slideshows to display on television, set TV Out to Ask or On.

    If you set TV Out to Ask, iPod gives you the option of showing slideshows on television or on iPod every time you start a slideshow.
  - To set the length of time each slide is displayed before advancing, select Time Per Slide and choose a time.
  - To set the music that plays during slideshows, select Music and choose a playlist. If you're using iPhoto, you can choose From iPhoto to copy the iPhoto music setting. Only the songs that you have transferred to iPod play.
  - To set slides to repeat, set Repeat to On.
  - To set slides to display in random order, set Shuffle Photos to On.
  - To set slides to display with transitions, select Transitions and choose a transition type.

- To set slides to show on PAL or NTSC televisions, set TV Signal to PAL or NTSC.

  Note: PAL and NTSC refer to television broadcast standards. Your television may use either of these, depending on the region where it was purchased. If you aren't sure which your television uses, check the documentation that came with your television.

To view a slideshow on iPod:

- Select any photo, album, or roll and press Play. Or select any full-screen photo and press the Select button. To pause the music and the slideshow, press the Play/Pause button.

  If you selected a playlist in Photos > Slideshow Settings > Music, the playlist plays automatically when you start the slideshow. The photos advance automatically according to settings in the Slideshow Settings menu. To skip to the next or previous photo manually, press the Next/Fast-forward or Previous/Rewind button.

To connect iPod to a television:

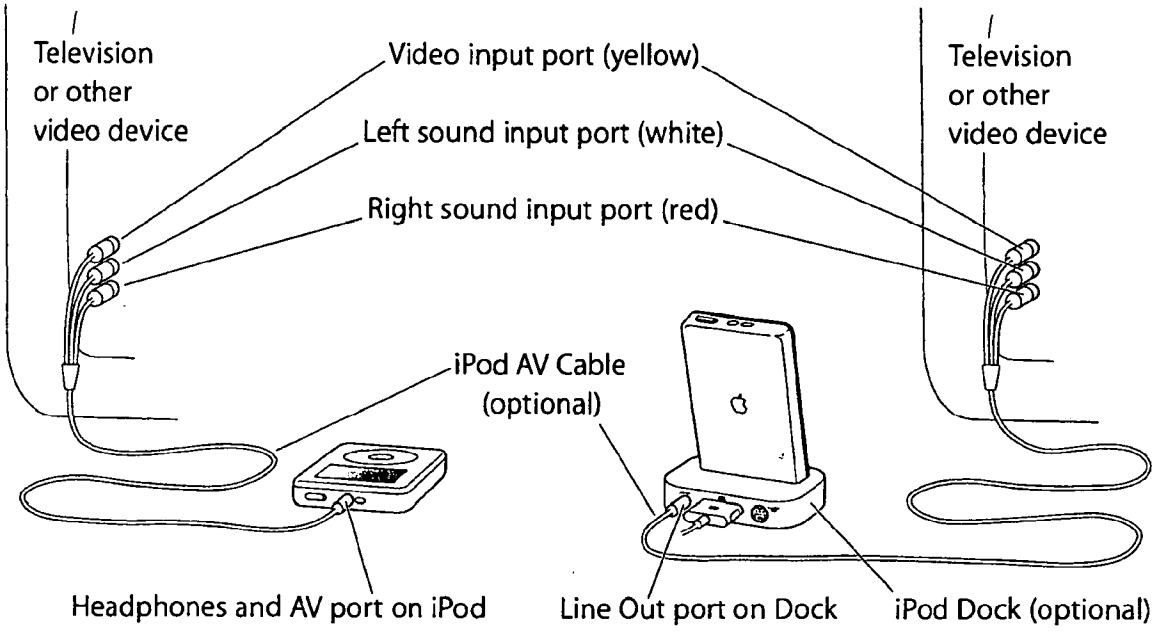
Your television must have RCA video and audio ports, or an S-video port.

1 Connect the optional iPod AV Cable to the Headphones port on iPod.

  You can also connect the iPod AV Cable to the Line Out port on the iPod Dock and put iPod in the Dock. You must use an iPod Dock for iPod with color display. Other iPod Docks won't work.

  Note: Use the iPod AV Cable made specifically for iPod. Other similar RCA-type cables won't work. You can purchase the iPod AV Cable at www.apple.com/ipodstore.

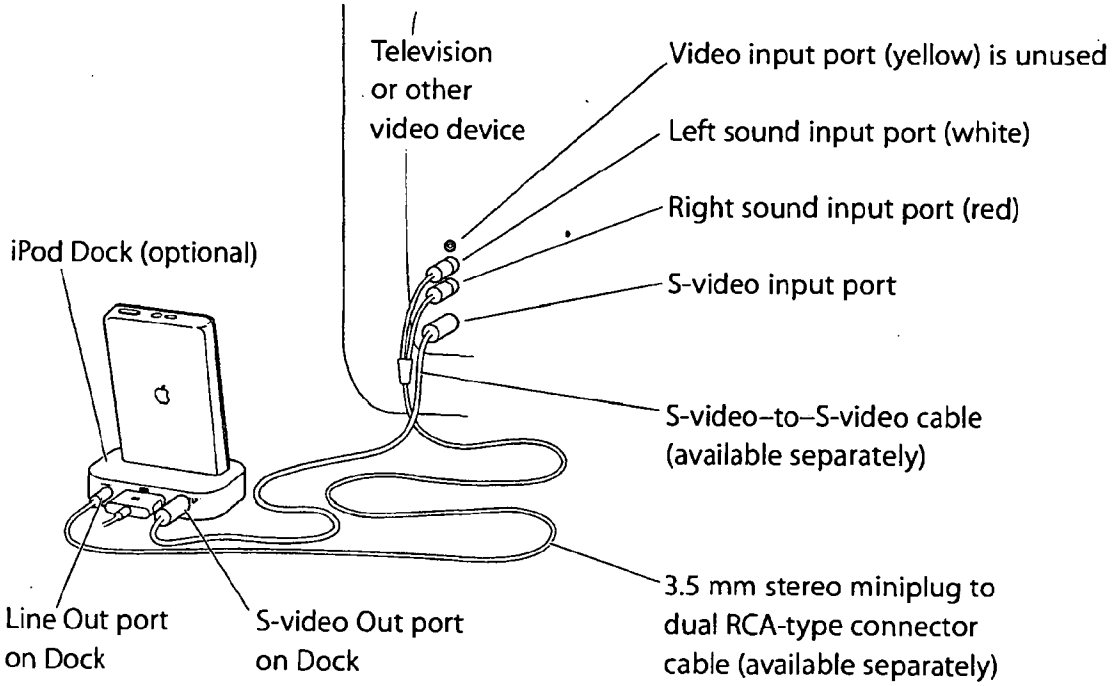
2 Connect the video and audio connectors to the ports on your television, as shown.



Connecting iPod using S-video:

For increased visual clarity, you can also connect iPod to a television, video receiver, or other device that has an S-video port using an S-video cable and the iPod Dock. You can purchase audio and S-video cables at www.apple.com/ipodstore.

To hear music with the slideshow, you must connect an audio cable to the Line Out port on the iPod Dock and to an audio input port on the television or receiver.



To view a slideshow on a television:

1 Connect iPod to a television as shown above.

2 Turn on your television and set it to display from the input ports to which your iPod is connected. See the documentation that came with your television for more information.

3 On iPod, select any photo or album and press Play. Or select any full-screen photo and press the Select button. To pause the music and the slideshow, press the Play/Pause button.

If you selected a playlist in Photos > Slideshow Settings > Music, the playlist plays automatically when you start the slideshow. The photos display on your television and advance automatically according to settings in the Slideshow Settings menu. To skip to the next or previous photo manually, press the Next/Fast-forward or Previous/Rewind button.

Adjusting iPod Settings

You can change settings directly on iPod in the Settings menu.

Setting iPod to Shuffle Songs

You can set iPod to play songs or albums in random order.

To shuffle and begin playing all your songs:

- Select Shuffle Songs from the iPod main menu.

iPod begins playing songs from your entire music library in random order, skipping audiobooks.

To set iPod to shuffle songs or albums every time you play a song:

1 Select Settings from the iPod main menu.

2 Set Shuffle to Songs or to Albums.

When you set iPod to shuffle songs by selecting Settings > Shuffle, iPod shuffles songs within the list (album or playlist, for example) from which the songs are playing.

When you set iPod to shuffle albums, it plays all the songs on an album in order, then randomly selects another album in the list and plays through it in order.

Setting iPod to Repeat Songs

You can set iPod to repeat a song over and over, or to repeat a sequence of songs. iPod repeats songs within the list from which the songs are playing.

To set iPod to repeat songs:

- Select Settings from the iPod main menu.
  - *To repeat all songs in the list,* set Repeat to All.
  - *To repeat one song over and over,* set Repeat to One.

Setting the Click Wheel Sound

When you scroll through menu items, you can hear a clicking sound through the iPod internal speaker to let you know the Click Wheel is working. You can set the Click Wheel sound to play through the headphones instead, or you can turn it off.

To set how iPod plays the Click Wheel sound:

- Select Settings from the iPod main menu.
  - *To set the Click Wheel sound to play through the headphones,* set Clicker to Headphones.
  - *To turn off the Click Wheel sound,* set Clicker to Off.

- *To set the Click Wheel sound to play through the iPod internal speaker,* set Clicker to Speaker.
- *To set the Click Wheel sound to play through both the iPod internal speaker and the headphones,* set Clicker to Both.

Setting Songs to Play at the Same Relative Volume Level

iTunes can automatically adjust the volume of songs, so they play at the same relative volume level. You can set iPod to use the iTunes volume settings.

To set iTunes to adjust all songs to play at the same relative sound level:

1 In iTunes, choose iTunes > Preferences if you are using a Mac, or choose Edit > Preferences if you are using a Windows PC.

2 Click Effects and select Sound Check.

To set iPod to use the iTunes volume settings:

- Select Settings > Sound Check.

If you have not activated Sound Check in iTunes, setting it on iPod has no effect.

Using the Equalizer

You can use equalizer presets to change iPod sound to suit a particular music genre or style. For example, to make rock music sound better, set the equalizer to Rock.

- Select Settings > EQ and select an equalizer preset.

If you have assigned an equalizer preset to a song in iTunes and the iPod equalizer is set to Off, then the song plays using the iTunes setting. See iTunes and Music Store Help for more information.

Setting the Backlight Timer

You can set the backlight to turn on for a certain amount of time when you press a button or use the Click Wheel.

- Select Settings > Backlight Timer and select the time you want.

Even if you don't set the backlight timer, you can turn on the backlight at any time by pressing and holding the Menu button on iPod or selecting Backlight from the main menu. After a few seconds, the backlight turns off.

Adding or Removing Items From the Main Menu

You can add often-used items to the iPod main menu. For example, you can add a "Songs" item to the main menu, so you don't have to select Music before you select Songs.

To add or remove items from the main menu:

- Select Settings > Main Menu.

Setting and Viewing the Date and Time

To set the date and time:

- Select Settings > Date & Time.

To view the date and time:

- Select Extras > Clock.

To set iPod to display the time in the title bar:

- Select Settings > Date & Time.

If you set iPod to display the time in the title bar, you can see the time from any iPod menu screen.

Setting the Language

iPod can be set to use different languages.

- Select Settings > Language and select a language.

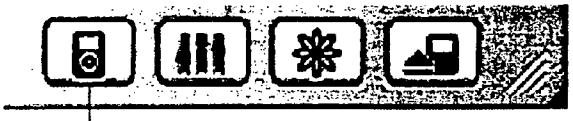
Using the Extra Features of Your iPod

Using iPod as an External Hard Disk

You can use iPod as a hard disk, to store and transfer data files.

To enable iPod as a hard disk:

1 In iTunes, select iPod in the Source list and click the Options button.



Options button

2 Click General and select "Enable disk use."

When you use iPod as a hard disk, the iPod disk icon appears on the desktop on the Mac, or as the next available drive letter in Windows Explorer on a Windows PC.

Note: Clicking Music and selecting "Manually manage songs and playlists" in the Options window also enables iPod to be used as a hard disk.

Note: To transfer music files to iPod, you must use iTunes. Songs transferred via iTunes do not appear on iPod in the Macintosh Finder or Windows Explorer. Likewise, if you copy music files to iPod in the Macintosh Finder or Windows Explorer, you won't be able to play them on iPod.

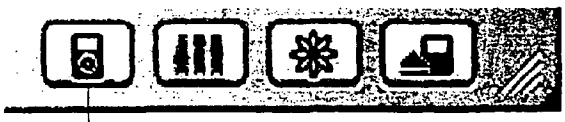
Preventing iTunes From Opening Automatically

If you use iPod primarily as a hard disk, you may want to keep iTunes from opening automatically when you connect iPod to your computer.

To prevent iTunes from opening automatically when you connect iPod to your computer:

1 In iTunes, select iPod in the Source list and click the Options button.

2 Click General and deselect "Open iTunes when attached."



Options button

Setting the Sleep Timer

You can set iPod to turn off automatically after playing music or a slideshow for a specific period of time.

- Select Extras > Clock > Sleep Timer and select the time you want.

When you set the sleep timer, a clock icon and the number of minutes left until iPod turns off appear in the Now Playing screen on iPod.

Setting the Alarm

You can use iPod as an alarm clock.

To set an alarm:

1 Select Extras > Clock > Alarm Clock.

2 Set Alarm to On.

3 Select a sound.

If you select Beep, the alarm will be audible through the internal speaker. If you select a playlist, you'll need to connect iPod to speakers or headphones to hear the alarm.

Importing Addresses, Phone Numbers, Calendar Events, and To-Do Lists

Your iPod can store contacts, calendar events, and to-do lists, for viewing on the go.

If you are using a Mac and iSync, it's as easy as clicking a button.

Synchronizing information using iSync requires iSync 1.1 or later, and iCal 1.0.1 or later.

To import all information using a Mac and iSync:

1 Connect iPod to your computer.

2 Open iSync and choose Devices > Add Device. You only need to do this step the first time you use iSync with your iPod.

3 Select iPod and click Sync Now.

iSync transfers information from iCal and Mac OS X Address Book to your iPod.

The next time you want to sync iPod, you can simply open iSync and click Sync Now. You can also choose to have iPod sync automatically when you connect it.

Note: iSync transfers information from your computer to iPod. You can't use iSync to transfer information from your iPod to your computer.

If you are using Windows, or you don't want to import using iSync, you can transfer information to iPod manually. iPod must be enabled as a hard disk (see "Using iPod as an External Hard Disk" on page 48).

To import contact information manually:

1 Connect iPod and open your favorite email or contacts application. Importing contacts works with Palm Desktop, Microsoft Outlook, Microsoft Entourage, and Eudora, among others.

2 Drag contacts from the application's address book to the iPod Contacts folder.

In some cases you may need to export contacts, then drag the exported file or files to the iPod Contacts folder. See the documentation for your email or contacts application.

To import appointments and other calendar events manually:

1 Export calendar events from any calendar application that uses the standard iCalendar format (filenames end in .ics) or vCal format (filenames end in .vcs).

2 Drag the files to the Calendars folder on iPod.

Note: You can only transfer to-do lists to iPod using iSync and iCal.

To view contacts on iPod:

- Select Extras > Contacts.

To view calendar events:

- Select Extras > Calendar.

To view to-do lists:

- Select Extras > Calendar > To Do.

Storing and Reading Notes and Other Information

You can store and read text notes on iPod. iPod must be enabled as a hard disk (see page 48).

1 Save a document in any word-processing application as a text (.txt) file.

2 Place the file in the Notes folder on iPod.

To view notes:

- Select Extras > Notes.

Recording Voice Memos

You can record voice memos using an optional iPod-compatible microphone (available for purchase at www.apple.com/ipodstore). You can store voice memos on your iPod and transfer them to your computer.

To record a voice memo:

1 Connect a microphone to the Headphones port on your iPod and select Record to begin recording.

2 Hold the microphone a few inches from your mouth and speak. To pause recording, select Pause.

3 When you're finished recording, select Stop and Save. Your recording is saved and listed by date and time recorded.

To play a recording:

- Select Extras > Voice Memos and select the recording.

Note: The Voice Memos menu item doesn't appear until you connect a microphone.

To transfer voice memos to your computer:

Voice memos are saved in a Recordings folder on iPod in the WAV file format. If you enable iPod for disk use, you can drag voice memos from the folder to copy them.

If iPod is set to transfer songs automatically (see page 28) and you record voice memos, the voice memos are automatically transferred to a playlist in iTunes when you connect iPod. You see the new Voice Memos playlist in the iTunes Source list.

Playing Games

iPod has a number of games.

To play a game:

- Select Extras > Games and select a game.

Charging the iPod Battery

iPod has an internal, non–user–replaceable battery. If iPod isn't used for a while, the battery may need to be charged.

The iPod battery is 80-percent charged in about three hours, and fully charged in about five hours. If you charge iPod while transferring files, playing music or viewing a slideshow, it may take longer.

You can charge the iPod battery in two ways:

- Connect iPod to your computer.
- Use the iPod USB Power Adapter.

To charge the battery using your computer:

- Connect iPod to a high-power USB 2.0 port on your computer. The computer must be turned on and not in sleep mode (some models of Macintosh can charge iPod while in sleep mode).

Important: While songs, photos, or files are transferred using USB 2.0, the iPod battery loses charge. Transferring songs or files when iPod isn't sufficiently charged can cause incomplete transfer, loss of the information being transferred, and may require a restore (see page 66). It's best to charge iPod using the iPod Power Adapter before transferring songs or files.

If the battery icon in the upper-right corner of the iPod screen shows a lightning bolt, the battery is charging. If it shows a plug, the battery is fully charged.

If you don't see the lightning bolt or the plug, iPod may not be connected to a high-power USB 2.0 port. Try another USB port on your computer.

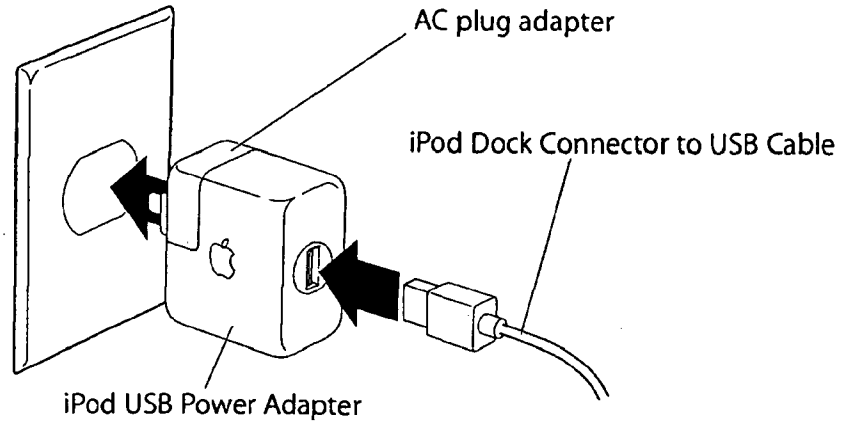
If you can't charge using a USB port on your computer, you can charge the battery using the iPod USB Power Adapter.

To charge the battery using the iPod Power Adapter:

1 Connect the AC plug adapter to the power adapter (they may already be connected).

2 Connect the iPod Dock Connector to USB 2.0 Cable to the power adapter, and plug the other end of the cable in to iPod.

3 Plug the power adapter in to a working electrical outlet.



Warning Make sure the power adapter is fully assembled before plugging it in to an electrical outlet.

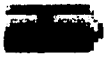
Battery States

When iPod is not connected to a power source, a battery icon in the top-right corner of the iPod screen shows about how much charge is left.

 Battery less than 20% charged

 Battery about halfway charged

If iPod is connected to a power source, the battery icon changes to show that the battery is charging or fully charged.

 Battery charging

 Battery fully charged

You can disconnect and use iPod before it is fully charged.

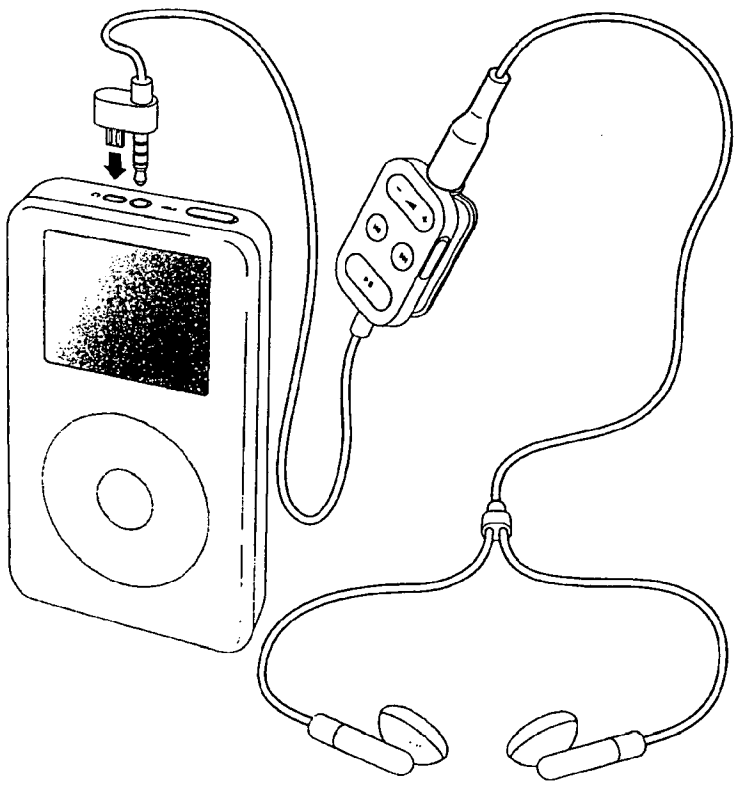
Note: Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Battery life and number of charge cycles vary by use and settings. For more information, go to www.apple.com/batteries.

iPod Accessories

iPod comes with some accessories, and many other accessories are available at www.apple.com/ipodstore.

iPod Remote (Available Separately)

To use the iPod Remote, connect it to the iPod Remote port, then connect the Apple Earphones (or another set of headphones) to the remote. Use the buttons on the remote just as you would use the iPod buttons.



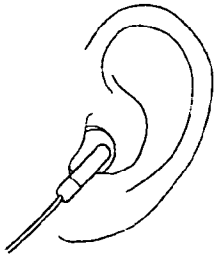
Use the remote's Hold switch to disable the remote's buttons. The iPod Hold switch and the iPod Remote Hold switch do not affect one another.

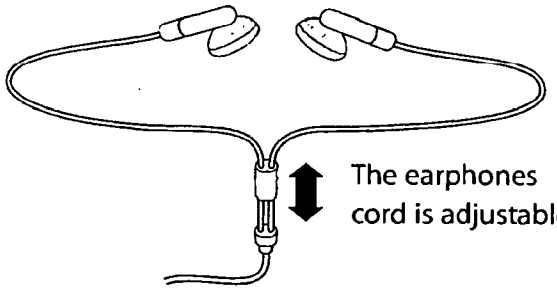
Apple Earphones

iPod comes with a pair of high-quality earbud headphones with two pairs of earphone covers. If you like, you can place the earphone covers over the earphones.

To use the earbud headphones:

- Plug the earphones in to the Headphones port, then place the earbud in your ear as shown.





The earphones cord is adjustable.

Earphone covers

Warning Permanent hearing loss may occur if earbuds or headphones are used at high volume. You can adapt over time to a higher volume of sound, which may sound normal but can be damaging to your hearing. Set your iPod volume to a safe level before that happens. If you experience ringing in your ears, reduce the volume or discontinue use of your iPod.

Available Accessories

To purchase iPod accessories, go to www.apple.com/ipodstore.

Available accessories include:

- iPod Dock (for iPod with color display)
- iPod Camera Connector
- iPod In-Ear Headphones
- iPod Dock Connector to FireWire Cable
- iPod AV Cable
- iPod Remote + Earphones
- iPod Power Adapter
- iPod Carrying Cases
- World Travel Adapter Kit
- Third-party accessories such as speakers, headsets, microphones, photo card readers, backup batteries, car stereo adapters, power adapters, and more

Tips and Troubleshooting

Most problems with iPod can be solved quickly by following the advice in this chapter.

Resetting iPod

Most problems with iPod can be solved by resetting it.

To reset iPod:

1 Connect iPod to a power outlet using the iPod Power Adapter.

2 Toggle the Hold switch on and off (set it to Hold, then turn it off again).

3 Press and hold the Select and Menu buttons for at least 6 seconds, until the Apple logo appears.

If Your iPod Won't Turn On or Respond

- Make sure the Hold switch is off.
- If you're using the optional iPod Remote, make sure the remote's Hold switch is off.
- If that doesn't work, connect iPod to the iPod Power Adapter and connect the adapter to a working electrical outlet. Your iPod battery may need to be recharged.
- If that doesn't work, your iPod may need to be reset (see above).
- If that doesn't work, you may need to restore iPod software. See "iPod Software Update and Restore" on page 66.

If You Want to Disconnect iPod, but the Screen Says "Do not disconnect"

- If iPod is transferring music, wait for the transfer to complete.
- Select iPod in the iTunes Source list and click the Eject button.
- If iPod disappears from the iTunes Source list, but you still see the "Do not disconnect" message on the iPod screen, go ahead and disconnect iPod.
- If iPod doesn't disappear from the iTunes Source list, drag the iPod icon from the desktop to the Trash (if you're using a Mac) or click the Safely Remove Hardware icon in the system tray and select your iPod (if you're using a Windows PC). If you still see the "Do not disconnect" message, restart your computer and eject iPod again.

If Your iPod Isn't Playing Music

- Make sure the Hold switch is off.
- If you're using the optional iPod Remote, make sure the remote's Hold switch is off.
- Make sure the headphones connector is pushed in all the way.
- Make sure the volume is adjusted properly.
- If that doesn't work, push the Play/Pause button. Your iPod may be paused.
- Make sure you are using iTunes 4.7 (included on the iPod CD) or later. Songs purchased from the iTunes Music Store using earlier versions of iTunes won't play on iPod until you upgrade iTunes and transfer the songs.
- If you're using the iPod Dock, be sure the iPod is seated firmly in the Dock and make sure all cables are connected properly.
- If you are using the Dock Line Out port, make sure your external speakers or stereo are turned on and working properly.

If You Connect iPod to Your Computer and Nothing Happens

- Make sure you have installed the software from the iPod CD.
- Make sure you have the required computer and software. See "What You Need to Get Started" on page 5.
- Your iPod may need to be reset (see page 60).
- Check the cable connections. Unplug the cable at both ends and make sure no foreign objects are in the USB or FireWire ports. Then plug the cable back in securely. Be sure the connectors on the cables are oriented correctly. They can only be inserted one way.
- If you're connecting iPod to a portable or laptop computer using the iPod Dock Connector to USB 2.0 Cable, connect the computer to a power outlet before connecting iPod.
- If that doesn't work, restart your computer.
- If that doesn't work, you may need to restore iPod software. See "iPod Software Update and Restore" on page 66.

If You See a Folder With an Exclamation Point on the iPod Display

- iPod may need to be reset (see page 60).
- If that doesn't work, your iPod battery may need to be recharged. Connect iPod to the iPod Power Adapter and connect the adapter to a working electrical outlet. If you still see the folder, reset iPod again.

- If that doesn't work, you may need to update or restore iPod with the latest software. Be sure you have installed the software from the iPod CD, or go to www.apple.com/ipod to get the latest software. Then follow the instructions on page 67 to update or restore the iPod software.

If Songs or Data Transfer More Slowly Over USB 2.0

- If you transfer a large amount of songs or data using USB 2.0 and the iPod battery is low, iPod will go into power-saving mode. Transfer speeds will slow down considerably. This is normal.
- If you want to transfer at higher speeds, you can stop the transfer, eject the iPod, and connect it to a power outlet using the iPod Power Adapter. Let iPod charge for about an hour, then connect it to your computer again to transfer music.

If You Connect iPod to a USB Port and It Doesn't Work Correctly

- You must use a USB 2.0 port or a FireWire port to connect iPod. USB 1.1 is not supported and is significantly slower than FireWire and USB 2.0. If your Windows PC doesn't have a FireWire port or USB 2.0 port, you can purchase and install a Windows-certified USB 2.0 card and install it. For more information, go to www.apple.com/ipod. If you're using a Mac or a Windows PC that doesn't have a high-power USB 2.0 port but has a 6-pin FireWire port, you can connect iPod to a FireWire port using the optional iPod Dock Connector to FireWire Cable, available at www.apple.com/ipodstore.
- To charge the battery, you must connect iPod to a high-power USB 2.0 port on your computer. Connecting iPod to a USB port on your keyboard will not charge the battery.

- If your iPod is exceptionally low on power and you connect it to a USB 2.0 port, it may charge for up to 30 minutes before you can use it. Leave iPod connected until it charges sufficiently.
- If you're connecting iPod to a portable or laptop computer using the iPod Dock Connector to USB 2.0 Cable, connect the computer to a power outlet before connecting iPod.

If You Accidentally Set iPod to Use a Language You Don't Understand

You can reset the language.

1 Push Menu repeatedly until the main menu appears.

2 Select the fourth menu item (Settings).

3 Select the last menu item (Reset All Settings).

4 Select the second menu item (Reset) and select a language.

Other iPod settings, such as song repeat, are also reset.

Note: If you added or removed items from the iPod main menu (see page 47), the Settings menu may be in a different place.

If You Can't Transfer Photos Directly From Your Camera

- Be sure you have the iPod Camera Connector (available at www.apple.com/ipodstore) and a USB digital camera.
- If your camera didn't come with a USB cable, you'll need to purchase one. See the camera manufacturer's website to find compatible cables.

- If photos aren't transferring, be sure your camera is turned on and set to the correct mode for importing photos. See the instructions provided with your camera. Also be sure the cable is connected firmly to your camera and to the camera connector.

If You Can't See Photos on Your Television

- If you transferred photos directly from a camera or card reader to iPod, you can't see them in a slideshow on a TV. You must transfer photos from your camera to your computer, then transfer them to iPod using iTunes.
- Be sure your television is set to display images from the correct input source (see the documentation that came with your television for more information).
- Be sure all cables are connected correctly (see page 41).
- If you're using the iPod AV Cable, be sure the yellow end is connected to the video port on your television.

  Note: Use RCA-type cables made specifically for iPod. Other similar cables won't work.
- On iPod, go to Photos > Slideshow Settings and set TV Out to On, then try again.
- If that doesn't work, on iPod, go to Photos > Slideshow Settings and set TV Signal to PAL or NTSC, depending on which type of television you have. Try both settings.

If Your iPod Remote Isn't Working

- Make sure the remote's Hold switch is off.
- Make sure the remote is plugged firmly in to iPod, and that the headphones are plugged firmly in to the remote.

The iPod Remote can be purchased at www.apple.com/ipodstore.

If You Want to Use Your iPod With a Mac and a Windows PC

If you are using your iPod with a Mac and you want to use it with a Windows PC (or vice versa), you must restore the iPod software for use with the other computer using iPod Software Update (see "iPod Software Update and Restore" below). Restoring the iPod software erases all data from iPod, including all songs.

You cannot switch from using iPod with a Mac to using it with a Windows PC (or vice versa) without erasing all data on iPod.

iPod Software Update and Restore

Apple periodically updates iPod software to improve performance or add features. It is recommended that you update your iPod to use the latest software.

You can choose either to update or to restore the iPod software.

- *If you choose to update,* the software is updated, but your settings and songs are not affected.
- *If you choose to restore,* all data is erased from your iPod, including songs, files, contacts, photos, calendar information, and any other data. All iPod settings are restored to their original state.

To update or restore iPod with the latest software:

1 Go to www.apple.com/support/ipod and download the latest iPod Update. The update has the latest software for all models of iPod.

2 Double-click the software install file and follow the onscreen instructions to install the iPod Update.

3 Connect iPod to your computer and open iTunes. The iPod Updater application opens.

If you're using a Windows PC and the iPod Updater application doesn't open automatically, you can find the updater by choosing Start > All Programs > iPod.

4 Follow the onscreen instructions to update or restore iPod software.

If you use the iPod Updater application and it doesn't see that iPod is connected to your computer, reset iPod (see page 60).

If you want to restore iPod software and you don't have an Internet connection, you can use the iPod Updater application that was installed on your computer when you installed the software from the iPod CD.

To restore iPod software using the iPod Updater application that came on your iPod CD:

- *If you have a Mac,* you can find the iPod Updater application in Applications/Utilities/iPod Software Updater.
- *If you have a Windows PC,* you can find the iPod Updater application by choosing Start > All Programs > iPod.

Learning More, Service, and Support

There is more information about using iPod in onscreen help and on the web.

Onscreen Help

- To learn more about using iTunes, open iTunes and choose Help > iTunes and Music Store Help.
- To learn more about using iPhoto (on Mac OS X) to import, edit, and manage photos and other images, open iPhoto and choose Help > iPhoto Help.
- To learn more about using iSync (on Mac OS X), open iSync and choose Help > iSync Help.
- To learn more about using iCal (on Mac OS X), open iCal and choose Help > iCal Help.

Online Resources

For the latest information on iPod, go to www.apple.com/ipodphoto.

For iPod service and support information, a variety of forums with product-specific information and feedback, and the latest Apple software downloads, go to www.apple.com/support/ipod.

To register iPod (if you didn't do it when you installed software from the iPod CD), go to www.apple.com/register.

For an online iTunes tutorial (available in some areas only), go to www.apple.com/support/itunes.

Obtaining Warranty Service

If the product appears to be damaged or does not function properly, please follow the advice in this booklet, the onscreen help, and the online resources.

If the unit still does not function, go to www.apple.com/support for instructions on how to obtain warranty service.

Finding the Serial Number of Your iPod

The serial number is printed on the back of your iPod. You can also find it by selecting Settings > About.

Safety and Cleaning

Read on to learn about using iPod safely and cleaning iPod.

Important Safety Instructions

When setting up and using your iPod, remember the following:

- Read all the installation instructions carefully before you plug your iPod USB Power Adapter in to a power outlet.
- Keep these instructions handy for reference by you and others.
- Follow all instructions and warnings dealing with your iPod.

Warning Electrical equipment may be hazardous if misused. Operation of this product, or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical product and do not permit them to handle any cables.

Avoid Hearing Damage

Warning Permanent hearing loss may occur if earbuds or headphones are used at high volume. You can adapt over time to a higher volume of sound, which may sound normal but can be damaging to your hearing. Set your iPod volume to a safe level before that happens. If you experience ringing in your ears, reduce the volume or discontinue use of your iPod.

Do Not Use Headphones While Driving

Important: Use of headphones while operating a vehicle is not recommended and is illegal in some areas. Be careful and attentive while driving. Stop listening to your iPod if you find it disruptive or distracting while operating any type of vehicle or performing any other activity that requires your full attention.

Connectors and Ports

Never force a connector into a port. If the connector and port do not join with reasonable ease, they probably don't match. Make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.

Using the Power Adapter

- Use only the power adapter that came with your iPod. Adapters for other electronic devices may look similar, but they may damage your iPod.
- The only way to shut off power to your power adapter completely is to disconnect it from the power source.
- Always leave space around your power adapter. Do not use this equipment in a location where airflow around the power adapter is confined, such as a bookcase.

- When connecting or disconnecting your power adapter, always hold the power adapter by its sides. Keep fingers away from the metal part of the plug.
- Before connecting the USB cable to the power adapter, make sure there are no foreign objects inside the power adapter's USB port.
- The power adapter for your iPod is a high-voltage component and should not be opened for any reason, even when the iPod is off. If the power adapter needs service, see "Learning More, Service, and Support" on page 68.
- Never force a connector into the power adapter USB port. If the connector and port do not join with reasonable ease, they probably don't match. Make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.

About Operating and Storage Temperatures

- Operate your iPod in a place where the temperature is always between 0° and 35° C (32° to 95° F).
- Store your iPod in a place where the temperature is always between –20° and 45° C (–4° to 113° F). Don't leave iPod in your car, since temperatures in parked cars can exceed this range.
- iPod play time may temporarily shorten in low-temperature conditions.
- When you're using your iPod or charging the battery, it is normal for the bottom of the case to get warm. The bottom of the iPod case functions as a cooling surface that transfers heat from inside the unit to the cooler air outside.

Avoid Wet Locations

Warning To reduce the chance of shock or injury, do not use your iPod in or near water or wet locations.

- Keep your iPod and power adapter away from sources of liquids, such as drinks, washbasins, bathtubs, shower stalls, and so on.
- Protect your iPod and the power adapter from direct sunlight and rain or other moisture.
- Take care not to spill any food or liquid on iPod or its power adapter. If you do, unplug iPod before cleaning up the spill.

In case of a spill, you may have to send your equipment to Apple for service. See "Learning More, Service, and Support" on page 68.

Do Not Make Repairs Yourself

Warning Do not attempt to open your iPod or power adapter, disassemble it, or remove the battery. You run the risk of electric shock and voiding the limited warranty. No user-serviceable parts are inside.

For service, see "Learning More, Service, and Support" on page 68.

Cleaning

Follow these general rules when cleaning the outside of your iPod and its components:

- Make sure your iPod is unplugged.
- Use a damp, soft, lint-free cloth. Avoid getting moisture in openings.
- Don't use aerosol sprays, solvents, alcohol, or abrasives.

About Handling

Your iPod may be damaged by improper storage or handling. Be careful not to drop your iPod when playing or transporting the device.

Communications Regulation Information

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. See instructions if interference to radio or television reception is suspected.

Radio and Television Interference

This computer equipment generates, uses, and can radiate radio-frequency energy. If it is not installed and used properly—that is, in strict accordance with Apple's instructions—it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

You can determine whether your computer system is causing interference by turning it off. If the interference stops, it was probably caused by the computer or one of the peripheral devices.

If your computer system does cause interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer in to an outlet that is on a different circuit from the television or radio. (That is, make certain the computer and the television or radio are on circuits controlled by different circuit breakers or fuses.)

If necessary, consult an Apple-authorized service provider or Apple. See the service and support information that came with your Apple product. Or, consult an experienced radio/television technician for additional suggestions.

Important: Changes or modifications to this product not authorized by Apple Computer, Inc. could void the EMC compliance and negate your authority to operate the product.

This product was tested for EMC compliance under conditions that included the use of Apple peripheral devices and Apple shielded cables and connectors between system components. It is important that you use Apple peripheral devices and shielded cables and connectors between system components to reduce the possibility of causing interference to radios, television sets, and other electronic devices. You can obtain Apple peripheral devices and the proper shielded cables and connectors through an Apple Authorized Reseller. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance. Responsible party (contact for FCC matters only): Apple Computer, Inc. Product Compliance, 1 Infinite Loop M/S 26-A, Cupertino, CA 95014-2084, 408-974-2000.

Industry Canada Statement

This Class B device meets all requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

VCCI Class B Statement

情報処理装置等電波障害自主規制について

この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の基準に基づくクラス B 情報技術装置です。この装置は家庭環境で使用されることを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取扱をしてください。

European Community

Complies with European Directives 72/23/EEC and 89/336/EEC.

CE

Battery

Your iPod contains a battery. Dispose of iPod according to your local environmental laws and guidelines.

Taiwan:

廢電池請回收

Nederlands: Gebruikte batterijen kunnen worden ingeleverd bij de chemokar of in een speciale batterijcontainer voor klein chemisch afval (kca) worden gedeponeerd.

Apple and the Environment

At Apple, we recognize our responsibility to minimize the environmental impacts of our operations and products.

For more information, go to www.apple.com/environment/summary.html.

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

019-0354

EXHIBIT P

UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.
Before the Honorable Paul J. Luckern

In the Matter of	
CERTAIN PORTABLE DIGITAL MEDIA PLAYERS	Investigation No. 337-TA-573

RESPONSE OF APPLE COMPUTER, INC. TO THE COMPLAINT OF CREATIVE LABS, INC. AND CREATIVE TECHNOLOGY LTD.

Dated: July 6, 2006

Respectfully submitted,

V. James Adduci II
Maureen F. Browne
ADDUCI, MASTRIANI & SCHAUMBERG, L.L.P.
1200 Seventeenth Street, N.W.
Washington, DC 20036
Telephone: (202) 467-6300
Facsimile (202) 466-2006

Robert G. Krupka
Marc H. Cohen
KIRKLAND & ELLIS LLP
777 South Figueroa Street
Los Angeles, California 90017
Telephone: (213) 430-6340
Facsimile (213) 680-8500

Gregory S. Arovas
KIRKLAND & ELLIS LLP
153 East 53rd Street
New York, New York 10022
Telephone: (949) 737-2900
Facsimile (212) 4446-4900

James B. Coughlan
KIRKLAND & ELLIS LLP
200 East Randolph Street
Chicago, Illinois 60601
Telephone (312) 861-2000
Facsimile (312) 861-2200

Counsel for Respondent Apple Computer, Inc.

Pursuant to Commission Rule of Practice 210.13 (19 C.F.R. § 210.13), Respondent Apple Computer, Inc. ("Apple" or "Respondent") hereby responds to the Complaint under Section 337 of the Tariff Act of 1930, filed by Creative Labs, Inc. and Creative Technology Ltd. (collectively "Creative" or "Complainants") on May 15, 2006, pursuant to which an investigation was instituted by the Commission on June 14, 2006 (79 Fed. Reg. 34930, June 14, 2006).

Except as specifically admitted herein, Apple denies all allegations of the Complaint. Most importantly, Apple denies that it has engaged in acts of unfair competition or violated Section 337 by importing, selling for importation, and/or selling within the United States after importation any products that infringe, directly, contributorily, and/or by inducement, any valid and enforceable claim of United States Patent No. 6,928,433 entitled "Automatic Hierarchical Categorization of Music by Metadata" ("the File Hierarchy Patent" or "the '433 patent").

ADMISSIONS AND DENIALS OF CREATIVE'S SPECIFIC ALLEGATIONS

I. INTRODUCTION

1. Apple admits that Creative has requested that the United States International Trade Commission (the "ITC") commence an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337. Apple denies each and every allegation in paragraph 1 to the extent that it alleges, directly or by implication, that any acts of Apple constitute infringement of the File Hierarchy Patent.

2. Apple admits that it manufactures, imports, and sells the products accused of infringement. Further responding to paragraph 2, Apple denies each and every allegation to the extent that it alleges, directly or by implication, that any acts of Apple or its customers constitute infringement of the File Hierarchy Patent.

3. Apple admits that Exhibit 1 to the Complaint purports to be a certified copy of the File Hierarchy Patent.

4. Apple admits that Exhibit 2 to the Complaint purports to be copies of assignments for the File Hierarchy Patent. Apple is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in paragraph 4, and therefore denies them.

5. Apple is without sufficient knowledge or information to form a belief as to the allegations contained in paragraph 5, and therefore denies them.

6. In response to paragraph 6, Apple admits that Creative seeks relief from the ITC in the form of a limited exclusion order concerning the importation into the United States of Apple products which Creative alleges violate the File Hierarchy Patent. Apple also admits that Creative seeks from the ITC a cease and desist order prohibiting the "importation, sale after importation, marketing, advertising, demonstrating, warehousing inventory for distribution, offering for sale, selling, distributing, licensing, or use" of certain Apple products that Creative alleges infringe the File Hierarchy Patent. As to the balance of the allegations related to Apple contained therein, Apple denies each and every allegation, and specifically denies that it has infringed any valid and enforceable claim of the File Hierarchy Patent.

II. COMPLAINANT

7. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 7, and therefore denies them.

III. PROPOSED RESPONDENT

8. Apple denies each and every allegation contained in paragraph 8, except it admits that it is a corporation formed under the laws of California, and that its principal place of business is located at 1 Infinite Loop, Cupertino, CA 95014.

IV. THE TECHNOLOGY AND PRODUCTS AT ISSUE

9. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 9, and therefore denies same. Further answering, assuming that "conveniently organiz[ing] and access[ing] the ever growing number of songs stored on these devices in view of their small display screens and limited controls ... presented a significant and pressing challenge," that challenge had been met and addressed by Apple and third parties before Creative.

10. In response to paragraph 10, Apple specifically denies that (1) "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," (2) "a team of Creative's engineers in Scotts Valley, California invented a user-friendly interface that simplified navigation on portable digital media players" and (3) "[t]his 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." Apple is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations of paragraph 10, and therefore denies them.

11. In response to paragraph 11, Apple specifically denies that the '433 patent "set the standard for this new industry of portable digital players." Apple is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 11, and therefore denies the same.

12. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 12, and therefore denies them.

13. In response to paragraph 13, Apple admits that certain Apple products were compatible with Creative products in 2001. Apple specifically denies that, "[i]n 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" and that "Mr. Jobs indicated that Apple wanted a smaller version of the NOMAD jukebox digital music player." Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 13, and therefore denies them.

14. Apple admits that a meeting took place at some time between Creative and Apple representatives including Steve Jobs. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 14, and therefore denies them.

15. Apple denies each and every allegation contained in paragraph 15 including any allegations concerning Creative's state of mind, except that Apple admits that a meeting took place at some time between Creative and Apple representatives including Steve Jobs.

16. Apple admits that it announced the introduction of its first iPod® on October 23, 2001. Apple admits that its press release contains the words as quoted in paragraph 16. Apple denies the characterization of its press release as set forth in the last sentence of paragraph 16.

17. Apple admits (1) that it sells the iPod® and iPod® nano; (2) that it has retail stores in the United States; (3) that Exhibit 3 to the Complaint is a copy of Apple's 2005 Form 10-K; and (4) that Exhibit 4 to the Complaint purports to be a claim chart but specifically denies the allegations contained therein. Apple specifically denies the remaining allegations of paragraph 17.

18. Apple admits that Creative has asserted that the accused products are those specifically identified in paragraph 18 and that Apple products may be viewed on its website,

which may be found at www.apple.com/ipod. Apple is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in paragraph 18, and therefore denies them.

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

A. Overview and Ownership of the Asserted Patent

19. Apple admits that Exhibit 2 attached to the Complaint appears to be a copy of assignments for the File Hierarchy Patent and other patents/patent applications. Apple is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in paragraph 19, and therefore denies them.

20. Apple admits that Appendix A to the Complaint purports to be the prosecution history of the File Hierarchy Patent. Apple further admits that Appendix B purports to contain the references mentioned in the File Hierarchy Patent and/or its prosecution history.

B. The '433 Patent

1. Identification of the '433 Patent and Asserted Claims

21. In response to paragraph 21, Apple admits that the File Hierarchy Patent is entitled "Automatic Hierarchical Categorization of Music Metadata" and was issued on August 9, 2005. As to the balance of the allegations contained therein, Apple is without sufficient knowledge or information to form a belief as to the truth thereof, and therefore denies them.

22. Apple admits that the File Hierarchy Patent has one (1) independent claim and fifteen (15) dependent claims.

2. Non-Technical Description of '433 Patent

23. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 23, and therefore denies them.

24. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 24, and therefore denies them.

25. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 25, and therefore denies them.

C. **Foreign Counterparts to the Asserted Patent**

26. In response to paragraph 26, Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations, and therefore denies them.

D. **Licenses**

27. In response to paragraph 27, Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations, and therefore denies them.

VI. UNLAWFUL AND UNFAIR ACTS OF RESPONDENT-- PATENT INFRINGEMENT

28. Apple denies each and every allegation contained in paragraph 28, and specifically denies that it has infringed any valid and enforceable claim of the File Hierarchy Patent.

29. Apple admits that Exhibit 4 to the Complaint purports to be a claim chart but specifically denies the allegations contained therein or the application of Exhibit 4 to any of Apple's products.

A. **Direct Infringement**

30. In response to paragraph 30, Apple denies the allegations contained therein.

B. **Contributory Infringement**

31. In response to paragraph 31, Apple denies the allegations contained therein.

32. In response to paragraph 32, Apple denies the allegations contained therein.

C. **Inducement of Infringement**

33. Apple specifically denies the allegations contained in paragraph 33.

34. Apple admits that Exhibit 5 to the Complaint purports to be a version of an iPod® User Manual and that Exhibit 6 to the Complaint purports to be a version of an iPod® nano User Manual. Apple specifically denies the remainder of the allegations contained in paragraph 34.

35. Apple specifically denies the allegations contained in paragraph 35.

VII. SPECIFIC INSTANCE OF UNFAIR IMPORTATION AND SALE

36. Apple admits that it imports and sells within the United States after importation the iPod® and iPod® nano. Further responding to paragraph 36, Apple specifically denies that it imports, sells for importation into the United States, and/or sells within the United States after importation, any products, including but not limited to the iPod® and iPod® nano, that infringe any valid and enforceable claim of the File Hierarchy Patent.

37. Apple admits that Exhibit 3 purports to be a copy of Apple's December 1, 2005, 10-K filing. Apple further admits that the December 1, 2005 10-K filing states: "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." Apple admits that Exhibits 5 and 6, respectively, purport to be copies of versions of iPod® and iPod® nano user manuals. Apple admits that information about its products may be found at www.apple.com. Apple is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in paragraph 37, and therefore denies them.

VIII. HARMONIZED TARIFF SCHEDULE ITEM NUMBERS

38. Apple admits that Apple's accused products are imported under section 8519 (inclusive of subsections) of the United States Harmonized Tariff Schedule. Apple specifically denies the remaining allegations contained in paragraph 38.

IX. RELATED LITIGATION

39. Apple admits that Creative filed an action alleging infringement of the File Hierarchy Patent in United States District Court. Pursuant to 35 U.S.C. § 1659, Apple and Creative have stipulated to a stay of the District Court action. Apple is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in paragraph 39, and therefore denies them.

X. THE DOMESTIC INDUSTRY

40. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 40, and therefore denies them.

A. United States Investment in Plant And Equipment, Labor and Capital

41. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in paragraph 41, and therefore denies them.

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

42. Apple admits that Exhibit 9 to the Complaint is entitled "Non-Exclusive List of Creative Products That Practice One o[r] [sic] More of the Asserted Claims." Apple admits that Exhibit 10 to the Complaint purports to be a claim chart. Apple is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in Exhibits 9 and 10 or in the remaining allegations contained in paragraph 42, and therefore denies them.

XI. RELIEF REQUESTED

43. In its Complaint, Creative requests certain relief from the ITC. Apple does not believe that any response to this prayer for relief is required. If a response is required, however, Apple specifically denies that it currently infringes or has ever infringed any valid claim of the File Hierarchy Patent and further denies that Creative is entitled to any relief from the ITC

whether or not requested. Apple further denies each and every factual allegation in this prayer for relief, including subparagraphs thereof.

RESPONSE TO THE NOTICE OF INVESTIGATION

Pursuant to Commission Rule of Practice and Procedure 210.13 (19 C.F.R. § 210.13), Apple hereby responds to the Notice of Investigation ("Notice") issued by the ITC on June 17, 2006, and published in the Federal Register on June 14, 2006 (79 Fed. Reg. 34930, June 14, 2006).

Apple admits that the initial Complaint was filed by Creative on May 15, 2006. Apple also admits that the Complaint sets forth the allegations referenced in the first paragraph of the Summary section, and that Creative has requested the institution of an investigation and the issuance of a limited permanent exclusion order and permanent cease and desist orders as referenced in the second paragraph of the Summary section.

Apple denies that there has been any violation of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, by reason of any importation into the United States, the sale for importation or sale within the United States after importation of any article allegedly infringing any valid claim of the File Hierarchy Patent. Subject to further investigation, Apple further contends that the claims of the File Hierarchy patent are invalid and unenforceable and therefore cannot support any remedy for alleged infringement. Apple is without knowledge or information sufficient to form a belief as to the truth of the allegation that a domestic industry exists with respect to the File Hierarchy Patent, and on that ground denies each and every such allegation. Apple specifically denies that any Apple product practices any claim under the File Hierarchy Patent. Apple denies that Creative is entitled to any relief in this investigation, including, but not limited to, any exclusion order or cease and desist order.

ADDITIONAL INFORMATION REQUIRED UNDER RULE 210.13(b)

By providing the following information, Apple intends only to supply data required by 19 C.F.R. § 210.13(b). Apple specifically denies that any of the information or data supplied below relates to or supports any allegation of infringement against Apple or any violation of 19 U.S.C. § 1337.

Pursuant to Rule 210.13(b), Apple provides the following additional information:

1. The quantity and value of Apple's products accused of infringement to the United States in calendar year 2005 is 14.043 million units costing $2.906 billion.

2. The Harmonized Tariff Schedule item number for the Apple products accused of infringement is 8519 and subsections thereof.

3. Apple's capacity to manufacture the products accused of infringement in calendar year 2005 is provided in Confidential Exhibit 1 to this response. In calendar year 2005, purchasers in the United States accounted for a substantial percentage of the products accused of infringement that Apple sold worldwide.

AFFIRMATIVE DEFENSES

The ITC instituted the present investigation on June 14, 2006, and Apple served its First Sets of Request for Production and Interrogatories on Creative on June 16, 2006. Creative has not yet responded to Apple's requests for discovery, and, after an opportunity to conduct reasonable discovery, Apple expects to further develop (1) invalidity defenses pursuant to 35 U.S.C. §§ 102, 103 and 112 and (2) unenforceability defenses.

At a minimum, Apple's accused products do not infringe any asserted claim of the File Hierarchy Patent. Creative's representations and actions before the USPTO cast light upon the flaws in Creative's infringement theory, and Apple thus first summarizes the file history of the File Hierarchy Patent. In that light, the only reading of the claims that makes sense, viewed in

light of the specification of which they are a part and the proceedings before the USPTO, is that Creative's claims are limited to portable media players that organize media in a hierarchical file structure. Apple's accused products, however, organize and store media in a flat list structure. For reasons discussed below, Apple's non-infringing method, which was disclosed in prior art Creative unequivocally disclaimed, is more efficient than Creative's alleged invention.

The Prosecution History of the File Hierarchy Patent

On January 5, 2001, Creative filed U.S. Patent Application No. 09/755,723 ("the '723 application"), entitled "Automatic Hierarchical Categorization Of Music By Metadata," naming Ron Goodman and Howard Egan as inventors. (Ex. 1.) On the same day, Creative also filed U.S. Patent Application No. 09/755,629 ("the '629 application"), entitled "System For Selecting And Playing Songs In A Playback Device With A Limited User Interface," naming Ron Goodman, Howard Egan, David Bristow and Maria Ayon as inventors. (Ex. 2.) As the titles of the two applications specify, the '629 application was directed at navigation of media through the user interface, the alleged invention that Creative hopes to convince the ITC is the subject matter of the File Hierarchy Patent. On the other hand, the '723 application was directed at a method of storing media files according to a hierarchical file structure.

The '629 application

During prosecution of the '629 application, Creative pursued claims that are nearly identical to those now asserted against Apple. (Ex. 2, '629 application, at 11-14; Ex. 2, 12/26/01 Amendment, at 2-6.) Repeatedly unconvinced that navigating media on the basis of categories such as genre, artist and album was inventive, the examiner rejected all '629 application claims as anticipated by or rendered obvious by U.S. Patent Nos. 5,616,876 ("Cluts"), 5,969, 283 ("Looney"), 5,918,303 ("Yamaura") and 6,062,868 ("Toriumi"). (Ex. 2, 9/24/01 Office Action, at 3-4; Ex. 2, 2/9/02 Office Action, at 3-4.) With respect to Cluts, Looney and Yamaura, the

examiner found that "each patent discloses the grouping of songs into categories such as album, artist, style and title. The categories overlap and are displayed." (Ex. 2, 2/9/02 Office Action, at 4.) Unable to overcome the prior art, on September 19, 2002, Creative abandoned claims directed at its alleged user interface invention. (Ex. 2, 9/19/02 Notice of Abandonment.)

The '723 application

The prosecution of the '723 application proceeded concurrently with the prosecution of the '629 application. During prosecution, the examiner — different from the examiner of the '629 application — did not initially believe that the use of a hierarchical tree in the software of a media player to organize and store data was an invention. (Ex. 1; 1/15/03 Office Action, at 2-7.) More specifically, the examiner found that U.S. Patent No. 5,670,730 ("Grewe"), media player prior art, which disclosed storing music data and identifying metadata in a flat list, anticipated Creative's alleged file hierarchy invention.[1] (*Id.*)

To distinguish Grewe, Creative unequivocally argued to the USPTO that "the current invention provides a hierarchical definition file that has a tree structure, including category names that name the branch under which tracks are listed. For each track, each branch in which the track belongs is determined, and the track is filed in the appropriate location in the branch." (Ex. 1, 5/20/03 Amendment and Response to Office Action, at 7.) Despite Creative's argument, the examiner finally rejected Creative's application claims. (Ex. 1, 7/29/03 Office Action, at 2-8.) Creative then filed on November 3, 2003 a Notice of Appeal of the final rejection to the Board of Patent Appeals and Interferences. (Ex. 1, 11/3/03 Notice of Appeal.)

[1] As discussed in Exhibit 5, Apple's accused products also store data according to a flat list.

Instead of presenting its argument to the Board of Patent Appeals and Interferences, Creative then filed a Request for Continued Examination on February 3, 2004. (Ex. 1, 2/3/04 Request for Continued Examination.) In its Request, Creative first amended the pending applications claims in an attempt to overcome Grewe, and second added two new claims directed at a "method of displaying media information on a display screen." (*Id.*, at 6-7.)

On March 29, 2004, the examiner issued an Office Action indicating that Creative had to elect whether to pursue either the claims it had amended in the Request for Continued Examination or its two new claims. (Ex. 1, 3/29/04 Office Action, at 2-3.) On May 4, 2004, Creative in response (1) cancelled all pending claims including the two new claims it had added; (2) filed thirteen new claims; and (3) amended the specification of the '723 application to include substantially all of the written description of the '629 application. (Ex. 1, 5/4/04 Amendment and Response to Restriction Requirement.) On June 9, 2004, the USPTO issued a Notice of Allowance for the thirteen new claims Creative had filed. (Ex. 1.)

On July 27, 2004, Creative filed an "Amendment After Notice of Allowance, pursuant to 37 C.F.R. 1.312." (Ex. 1.) 37 C.F.R. § 1.312 provides: "No amendment may be made as a matter of right in any application after the mailing of the notice of allowance. Any amendment filed pursuant to this section must be filed before or with the payment of the issue fee, and may be entered on the recommendation of the primary examiner, approved by the Director, without withdrawing the application from issue." The Manual of Patent Examining Procedure interprets section 1.312 to mean: "Amendments other than those which merely embody the correction of formal matters without changing the scope of the claims require approval by the supervisory patent examiner." (Ex. 3, Manual of Patent Examining Procedure § 714.16 (emphasis added).)

Amended independent claim, which corresponds with claim 1 of the File Hierarchy Patent recited in pertinent part:

> 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 ~~organized~~ according to a ~~file~~ hierarchy, the ~~file~~ hierarchy having a plurality of categories, subcategories and items respectively in a first, second and third level of the hierarchy, the method comprising[.]

(Ex. 1, 7/27/04 Amendment After Notice of Allowance, at 2 (underlining reflecting new language and strikethrough reflecting deleted language from the original.) On February 8, 2005, the examiner entered the requested amendment without receiving approval by the supervisory patent examiner, noting that the proposed amendment was "directed to matters of form not affecting the scope of the invention." (Ex. 1, 2/8/05 Response to Rule 312 Communication.) The File Hierarchy Patent then issued on August 9, 2005.

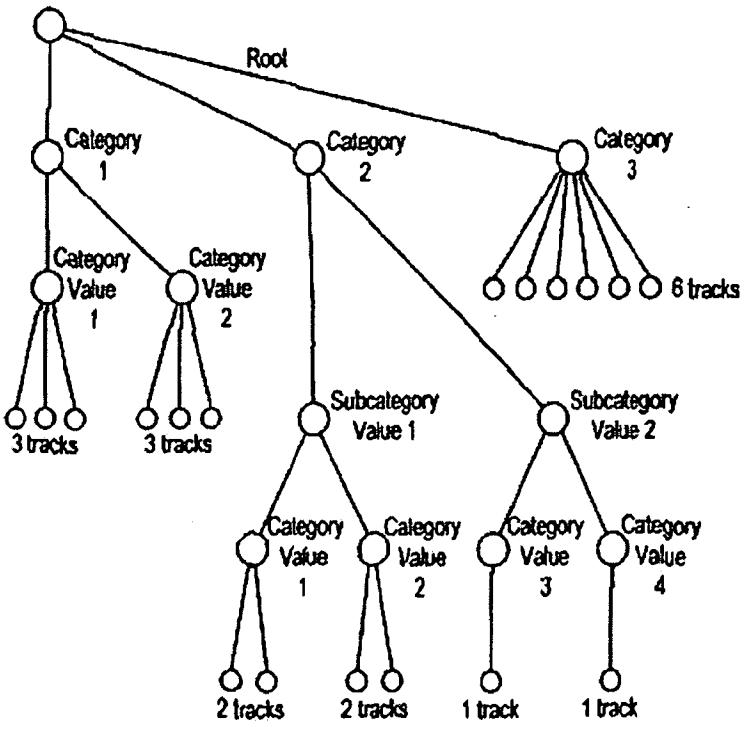
FIRST AFFIRMATIVE DEFENSE
(Non-Infringement)

Apple has not infringed any asserted claims of the File Hierarchy Patent because its accused products do not organize a plurality of tracks according to a file hierarchy, the hierarchy having a plurality of categories, subcategories, and items respectively in a first, second, and third level of the hierarchy, as required by independent claim 1 of the File Hierarchy Patent.

1. Apple's Accused Products Do Not Use A Hierarchy To Organize Media Files

The problem that the alleged inventors of the File Hierarchy Patent sought to solve was how to organize a relatively large amount of data in the memory of a media player. The solution the alleged inventors chose was to create a tree structure in the software of the media player that organized and stored the data and associated metadata. (Ex. 4, at col. 2:64-3:16.) As the name suggests, the tree had a root node, branches and leaf nodes. The root node — in logical terms the top of the tree — represented the highest level category for organizational purposes. (Ex. 4, at

col. 5:23-56.) In the case of music, the highest level might be music genre. (*Id.*) Branches belonging to the root would connect to leaf nodes for a subcategory such as artists. (*Id.*) That leaf node also could have branches leading to another leaf node for a subcategory such as albums. (*Id.*) The tree can shrink or grow depending upon the specificity of the organizational scheme. Figure 1 of the File Hierarchy Patent, reproduced immediately below, illustrates the hierarchical file structure that Creative allegedly invented for use in the software of a portable media player.



In the File Hierarchy Patent, upon downloading of a media file, the software running on the media player would interpret metadata information associated with the media ("such as title, genre, artist name, type, etc.") to determine in what location(s) to file the metadata. (Ex. 4, at col. 6:6-15.) In addition to the metadata, a copy of the media file would be placed in every applicable node of the tree. An analogy to the File Hierarchy Patent's alleged invention is filing

cabinets at the ITC used to store pleadings in categories such as (1) matter type; (2) case; (3) party; and (4) pleading type. After a pleading was filed, each pleading would need to be filed/stored at least four times. Each cabinet would also contain additional information specifying its contents. The ITC would then be well organized, but the file cabinets would take up substantial space. Likewise in Creative's portable media player, the hierarchical file structure consumes a substantial amount of memory.

Apple's accused products, however, do not use a hierarchical file structure for organizing media. Rather, the iPod product software simply stores data in arbitrary files one item of data after another in no logical order. With the iPod, whenever a user wants to play a particular song, the processor of the iPod looks to a separate flat file database of metadata to locate that song. Applying the preceding analogy, once a pleading was received by the ITC, a single copy of the pleading would be placed in whatever cabinet was available, and the ITC would have a single growing list of each piece of paper received at the ITC to enable future location of the pleading. In comparison with Creative's alleged invention, Apple's chosen method of organizing data consumes substantially less memory.

2. The Intrinsic Record Dictates That Apple's Products Do Not Literally Infringe The File Hierarchy Patent

The claims, specification and prosecution history of the File Hierarchy Patent reveal that Apple does not infringe. Independent claim 1 of the File Hierarchy Patent recites:

> A method 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.

(Ex. 4, File Hierarchy Patent, at col. 11:39-57 (emphasis added).)

To reach a proper construction of the claims, it is appropriate that the ITC read the claims in view of the written description. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (*en banc*). The specification makes it clear that File Hierarchy Patent is directed at organizing media files in a hierarchical tree:

- "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." (Ex. 4, at Abstract.)
- "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." (Ex. 4, at col. 2:64-67.)
- "[U]sers are able to see the tracks on their player in some organized fashion other than as a single list of tracks .... [I]n one embodiment tracks are sorted utilizing a tree structure having branches labeled according to types of metadata associated with the tracks." (Ex. 4, col. 3:57-62.)
- "FIG. 1 depicts a hypothetical organization hierarchy. The tree shows how tracks might be listed (as leaves in the tree) after having been organized." (Ex. 4, at col. 5:23-25.)
- "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." (Ex. 4, at col. 6:38-40.)

Any claim construction adopted by the ITC must thus appropriately take into account what Creative told the public that it had allegedly invented in its specification — a particular hierarchical file structure for organizing and storing data in a portable media player.

The prosecution history of the File Hierarchy Patent likewise supports an ITC finding that Apple does not infringe. As discussed above, the original claims were repeatedly rejected in light of Grewe, prior art that organized media similar to how Apple organizes media in its accused products. Creative responded by repeatedly and unequivocally arguing:

> In Grewe, the tracks are not sorted according to category names that are provided in a branch but rather in sequential blocks of memory locations. There is no hierarchical relationship between category field 40 or the artist field 42 with a particular track and any hierarchy in Grewe.

(*See* Ex. 1, 1/29/04 Amendment, at 9 (emphasis in original); *see also* Ex. 1, 5/15/03 Amendment, at 6-7.) Creative's clear and unmistakable disclaimer during prosecution should preclude its attempt to recapture a flat list organizational structure.[2] *See Omega Engineering Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003).

Moreover, as originally allowed, independent claim 1 read, *inter alia*, "the plurality of tracks ***organized*** according to a ***file*** hierarchy, the ***file*** hierarchy having a plurality of categories, subcategories, and items respectively." (Ex. 1, at 5/4/2004 Amendment (emphasized text subsequently amended or deleted).) For reasons discussed above, the word "accessed" must not be a substantive change from the word "organized" with respect to the claimed **file** hierarchy, and, if so, Apple does not infringe. A non-infringement chart is attached as Exhibit 5.[3]

---

[2] Creative's arguments regarding Grewe preclude any assertion that Apple has infringed under the doctrine of equivalents. Creative does not mention the doctrine of equivalents in its Complaint.

[3] Creative has asserted that Apple has contributorily infringed the File Hierarchy Patent. Even if Creative could persuade the ITC that Apple's accused products sometimes infringe the File Hierarchy Patent, it remains Creative's burden to prove that there are no substantial non infringing uses of Apple's products. 35 U.S.C. § 271(c). Aside from playing music, Apple's products are regularly used as portable hard drives to, for example, transport electronic files from one location to another. Creative thus cannot sustain a contributory infringement claim.

SECOND DEFENSE
(Invalidity)

Subject to further investigation, upon information and belief, all asserted claims of the File Hierarchy Patent are invalid. After conducting discovery, Apple at least intends to prove that (1) each and every asserted claim of the File Hierarchy Patent is anticipated by one or more prior art references pursuant to 35 U.S.C. § 102; (2) to the extent that there exist any arguable differences between the asserted claims of the File Hierarchy Patent and the prior art, all such differences would have been obvious to one of ordinary skill in the art pursuant to 35 U.S.C. § 103; and (3) the asserted claims of the File Hierarchy Patent are not supported by adequate written description or an enabling disclosure pursuant to 35 U.S.C. § 112.

THIRD AFFIRMATIVE DEFENSE
(Unenforceability)

Subject to further investigation, all asserted claims of the File Hierarchy Patent are unenforceable.

FOURTH DEFENSE
(Public Interest)

The exclusion order and the cease and desist order requested by Creative would not further the public interest but would adversely affect the public welfare, competitive conditions and the U.S. consumer.

REQUEST FOR RELIEF

WHEREFORE, Apple respectfully requests that the ITC:

1. Deny all relief requested by Complainant Creative;

2. Find that Apple has not infringed any asserted claims of any of the Creative patents;

3. Find that no violation of Section 337 of the Tariff Act of 1930, as amended, exists by reason of the importation, sale for importation, or sale after importation in the United States of any Apple product;

4. Find that Apple has not infringed the File Hierarchy Patent;

5. Find that the File Hierarchy Patent is invalid pursuant to 35 U.S.C. § 102;

6. Find that the File Hierarchy Patent is invalid pursuant to 35 U.S.C. § 103;

7. Find that the File Hierarchy Patent is invalid pursuant to 35 U.S.C. § 112;

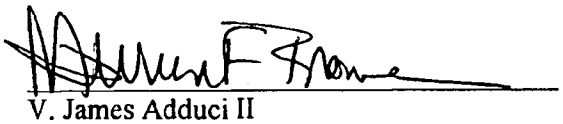
8. Find that the File Hierarchy Patent is unenforceable;

9. Issue an Order terminating the instant investigation with prejudice; and

10. Award Apple such other and further relief as the Commission deems appropriate.

Dated: July 6, 2006

Respectfully submitted,



V. James Adduci II
Maureen F. Browne
ADDUCI, MASTRIANI &
SCHAUMBERG, L.L.P.
1200 Seventeenth Street, N.W.
Washington, DC 20036
Telephone: (202) 467-6300
Facsimile (202) 466-2006

Robert G. Krupka
Marc H. Cohen
KIRKLAND & ELLIS LLP
777 South Figueroa Street
Los Angeles, California 90017
Telephone: (213) 430-6340
Facsimile (213) 680-8500

Gregory S. Arovas
KIRKLAND & ELLIS LLP
153 East 53rd Street
New York, New York 10022
Telephone: (949) 737-2900
Facsimile (212) 4446-4900

James B. Coughlan
KIRKLAND & ELLIS LLP
200 East Randolph Street
Chicago, Illinois 60601
Telephone (312) 861-2000
Facsimile (312) 861-2200

Counsel for Respondent Apple Computer, Inc.

AP701006.doc

VERIFICATION OF RESPONSE TO THE COMPLAINT AND NOTICE OF INVESTIGATION, INCLUDING AFFIRMATIVE DEFENSES

I, Richard J. Lutton, Jr., declare, in accordance with 19 C.F.R. §§ 210.4 and 210.13, under penalty of perjury under the laws of the United States of America, that the following statements are true:

1. I am the Director of Patents, of Apple Computer, Inc., and am duly authorized to sign this Response on behalf of Apple Computer, Inc.;

2. I have read the foregoing Response;

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

4. The foregoing Response 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.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this 6 th day of July, 2006.

Richard J. Lutton, Jr.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **RESPONSE OF APPLE COMPUTER, INC. TO THE COMPLAINT OF CREATIVE LABS, INC. AND CREATIVE TECHNOLOGY LTD.(PUBLIC)** was served as indicated, to the parties listed below, this 6th day of July 2006:

The Honorable Marilyn R. Abbott
SECRETARY
U.S. INTERNATIONAL TRADE COMMISSION
500 E Street, S.W., Room 112A
Washington, DC 20436
(VIA HAND DELIVERY – Original + 6 copies)

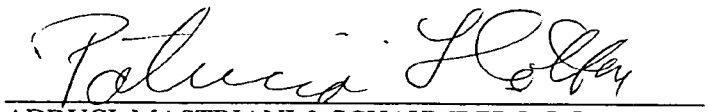
The Honorable Paul J. Luckern
ADMINISTRATIVE LAW JUDGE
U.S. INTERNATIONAL TRADE COMMISSION
500 E Street, S.W., Room 317
Washington, DC 20436
(VIA HAND DELIVERY – 2 copies)

Erin D.E. Joffre, Esq.
INVESTIGATIVE ATTORNEY
OFFICE OF UNFAIR IMPORT INVESTIGATIONS
U.S. INTERNATIONAL TRADE COMMISSION
500 E Street, S.W., Room 401
Washington, D.C. 20436
(VIA HAND DELIVERY)

ON BEHALF OF COMPLAINANTS CREATIVE LABS, INC. AND CREATIVE TECHNOLOGY LTD.

Mark G. Davis
John R. Fuisz
Stephen K. Shahida
MCDERMOTT WILL & EMERY LLP
600 Thirteenth Street, N.W.
Washington, DC 20005
(VIA ELECTRONIC MAIL AND HAND DELIVERY)

Terrence P. McMahon
Lucy H. Koh
Catherine Shiang
MCDERMOTT WILL & EMERY LLP
3150 Porter Drive
Palo Alto, California 94304-1212
(VIA ELECTRONIC MAIL)



ADDUCI, MASTRIANI & SCHAUMBERG, L.L.P.
1200 Seventeenth Street, N.W., Fifth Floor
Washington, D.C. 20036

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J-841 U.S. PTO 09/755723 01/05/01

Class	Subclass
707	4

ISSUE CLASSIFICATION

[redacted]

PATENT NUMBER
6928433
6928433

U.S. UTILITY Patent Application

O.I.P.E. SCANNED ___ Q.A. ___	PATENT DATE AUG 9 2005

APPLICATION NO.	CONT/PRIOR	CLASS	SUBCLASS	ART UNIT	EXAMINER
09/755723		~~715~~ 707	~~104.1~~ 4	~~2165~~ 2171	Medjahic Rones

APPLICANTS: Ron Goodman, Howard Egan

~~2175~~ 2164

TITLE: Automatic hierarchical categorization of music by metadata

PTO-2040 12/99

ISSUING CLASSIFICATION

ORIGINAL		CROSS REFERENCE(S)						
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					
707	4	707	3	102				
INTERNATIONAL CLASSIFICATION		386	46					
G06F 17/30								

☐ Continued on Issue Slip Inside File Jacket

7/16/05 Formal Drawings (12 shts) set 14 11/19/04

TERMINAL DISCLAIMER	DRAWINGS			CLAIMS ALLOWED	
☐	Sheets Drwg.	Figs. Drwg.	Print Fig.	Total Claims	Print Claim for O.G.
	6	8	8	~~13~~ 16	1

☐ The term of this patent subsequent to ______ (date) has been disclaimed.

(Assistant Examiner) (Date)

NOTICE OF ALLOWANCE MAILED: 6/9/04

☐ The term of this patent shall not extend beyond the expiration date of U.S Patent. No. ______

Charles Rones
CHARLES RONES
PRIMARY EXAMINER 6-8-04
(Primary Examiner) (Date)

ISSUE FEE

Amount Due	Date Paid DG
$1330	8/12/04

☐ The terminal ___ months of this patent have been disclaimed.

A. White 6/27/01
(Legal Instruments Examiner) (Date)

ISSUE BATCH NUMBER

WARNING:
The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 181 and 368. Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.

Form PTO-436A (Rev. 6/99)

FILED WITH: ☐ DISK (CRF) ☐ FICHE ☐ CD-ROM
(Attached in pocket on right inside flap)

ISSUE FEE IN FILE

EXHIBIT 1

PATENT APPLICATION

09755723

Jc841 U.S. PTO
09/755723
01/05/01

FEB 02 0194

INITIALS ______

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3. dec., fees, drawings	4-23-01	44.	
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17. Restriction	3/30/04	58.	
18. Amdt. D	5/4/04	59.	
19. IDS	5/4/04	60.	
20. Allowance	6/9/04	61.	
21. Revoc / P.o.A.	7-12-04	62.	
22. Notice of Revoc / Accept	8-16-04	63.	
23. Change of Inventorship	7/9/04	64.	
24. Amdt. E (Rule 312) N.E.	7/27/04	65.	
25. Response to Rule 312	2/8/05	66.	
26. Supp. Notice of Allowability	3-3-05	67.	
27. Letter	11-16-04	68.	
28. Ltr re- replacement dwg	11/16/04	69.	
29. Ltr forward dwg	11/19/04	70.	
30.		71.	
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41.		82.	

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[redacted]

SEARCHED

Class	Sub.	Date	Exmr.
84	609 601 602 611-614	01/08/03	
707	104.1 3 4 102		
386	46	7-24-03	CAR
707 ↓ 386	3 4 102 46	6-8-04	CAR

INTERFERENCE SEARCHED

Class	Sub.	Date	Exmr.
707 ↓ 386	3 4 102 46	6-8-04	CAR

SEARCH NOTES
(INCLUDING SEARCH STRATEGY)

	Date	Exmr.
SEARCHED EAST (USPAT; US-PG PUB EPO; JPO; DERWENT ; IBM_TDB) SEARCH NOTES ATTACHED	01/03/03	
East	7-24-03	CAR
East	6-8-04	CAR

(RIGHT OUTSIDE)

ISSU[illegible]APLE AREA (for additional cross re[illegible]es)

POSITION	INITIALS	ID NO.	DATE
FEE DETERMINATION			
O.I.P.E. CLASSIFIER			
FORMALITY REVIEW		1027	02/28/01
RESPONSE FORMALITY REVIEW		907	6-5-01

INDEX OF CLAIMS

✓	Rejected	N	Non-elected
=	Allowed	I	Interference
—	(Through numeral)... Canceled	A	Appeal
÷	Restricted	O	Objected

Claim		Date
Final	Original	
	1	01/14/03
	2	✓
	3	✓
	4	✓
1	5	✓
	6	✓
	7	✓
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	10	✓
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If more than 150 claims or 10 actions staple additional sheet here

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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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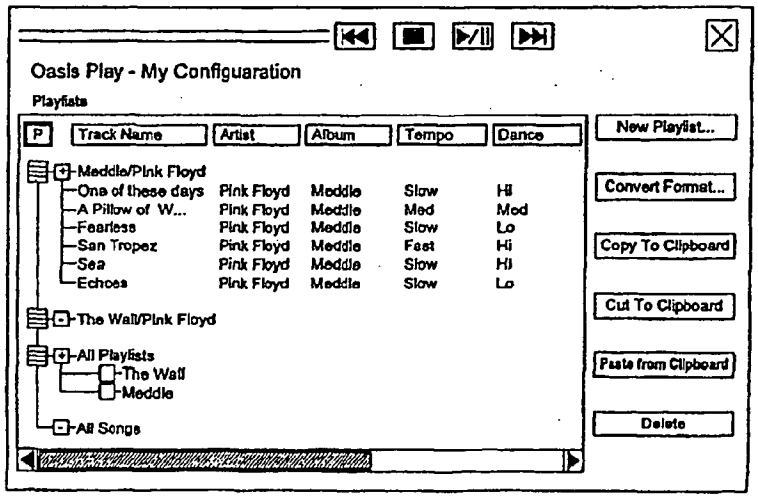
* cited by examiner

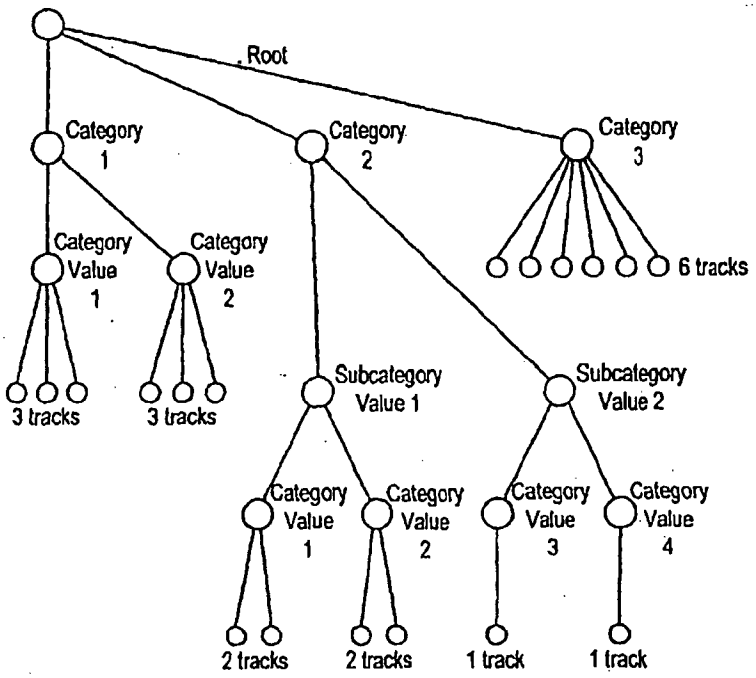
Primary Examiner—Charles Rones
(74) Attorney, Agent, or Firm—Russell N. Swerdon; Creative Technology LTD

(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.

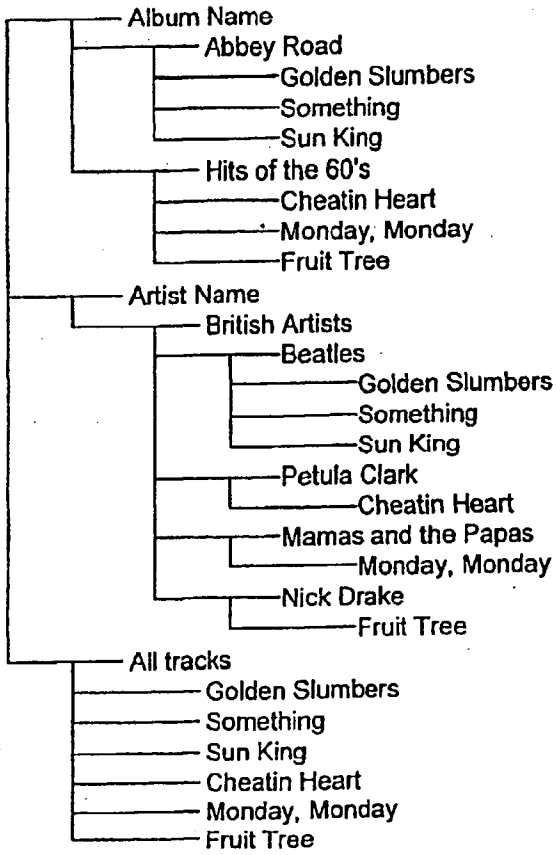


FIG. 3.

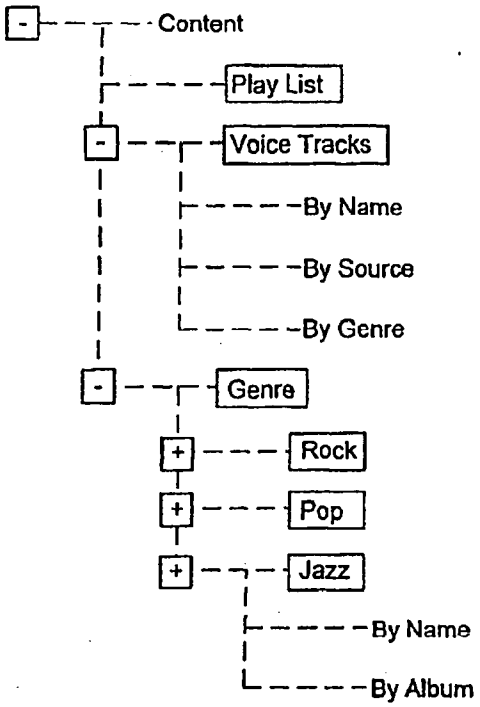


FIG. 4.

file data	album	name	genre	type

FIG. 5.

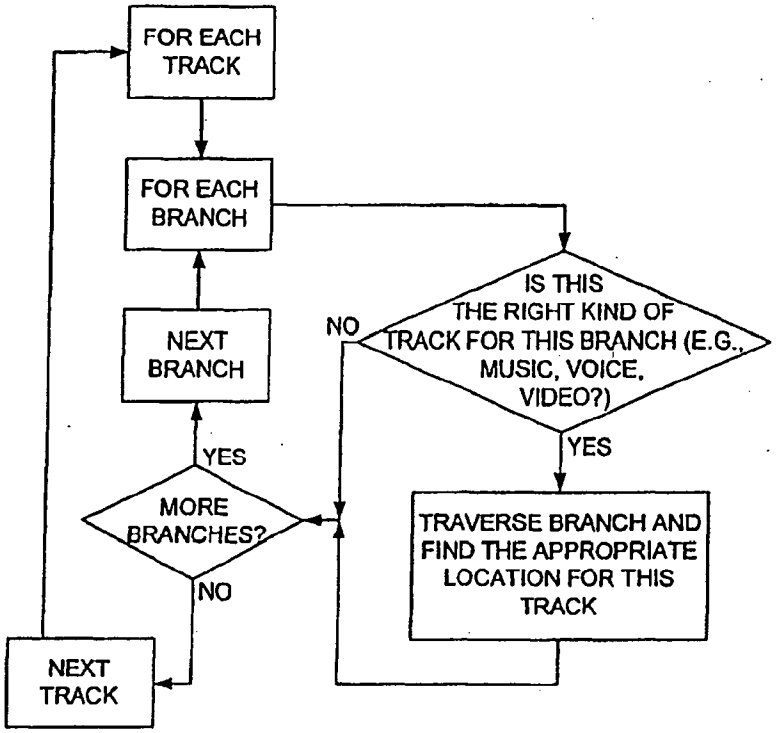

FOR EACH TRACK
FOR EACH BRANCH
IS THIS THE RIGHT KIND OF TRACK FOR THIS BRANCH (E.G., MUSIC, VOICE, VIDEO?)
NO
YES
NEXT BRANCH
YES
MORE BRANCHES?
NO
TRAVERSE BRANCH AND FIND THE APPROPRIATE LOCATION FOR THIS TRACK
NEXT TRACK

FIG. 6.

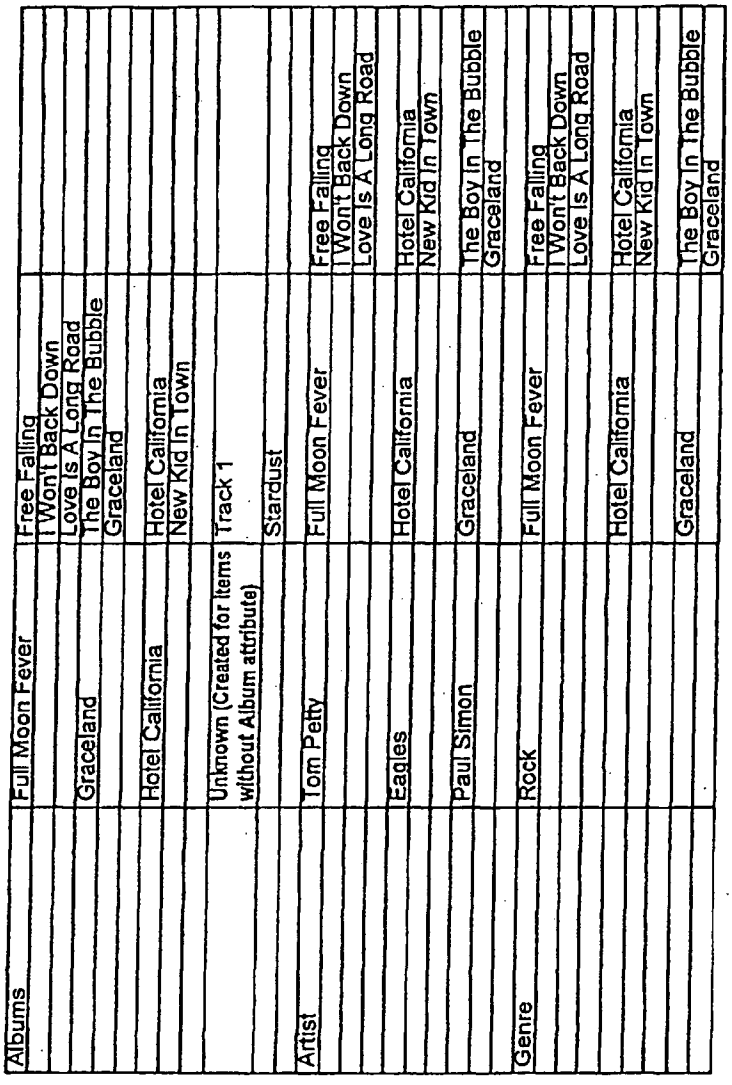

Albums
Full Moon Fever
Graceland
Hotel California
Unknown (Created for items without Album attribute)
Artist
Tom Petty
Eagles
Paul Simon
Genre
Rock
Free Falling
I Won't Back Down
Love Is A Long Road
The Boy In The Bubble
Graceland
Hotel California
New Kid In Town
Track 1
Stardust
Full Moon Fever
Hotel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

FIG. 7.

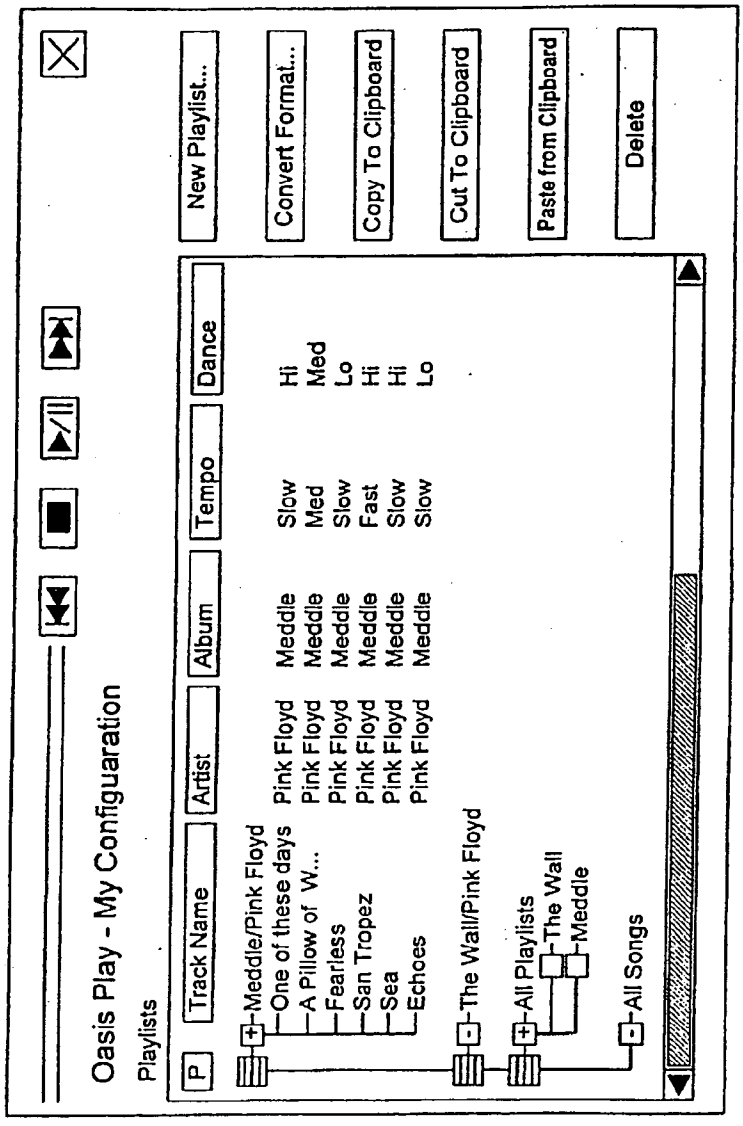

Oasis Play - My Configuaration
Playlists
P
Track Name
Artist
Album
Tempo
Dance
Meddle/Pink Floyd
One of these days Pink Floyd Meddle Slow Hi
A Pillow of W... Pink Floyd Meddle Med Med
Fearless Pink Floyd Meddle Slow Lo
San Tropez Pink Floyd Meddle Fast Hi
Sea Pink Floyd Meddle Slow Hi
Echoes Pink Floyd Meddle Slow Lo
The Wall/Pink Floyd
All Playlists
The Wall
Meddle
All Songs
New Playlist...
Convert Format...
Copy To Clipboard
Cut To Clipboard
Paste from Clipboard
Delete

FIG. 8.

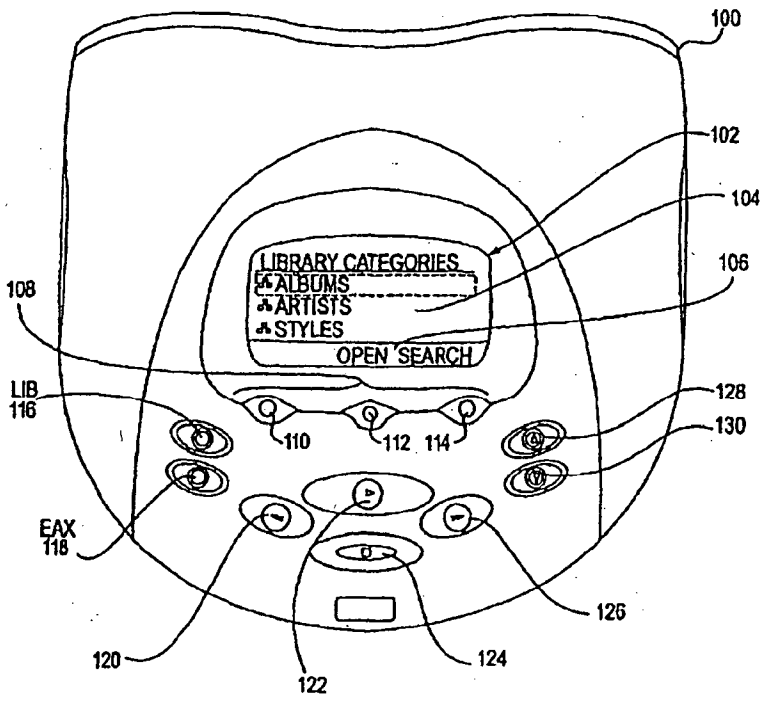

100
102
104
106
108
LIBRARY CATEGORIES
ALBUMS
ARTISTS
STYLES
OPEN SEARCH
LIB
116
110
112
114
128
130
EAX
118
120
122
124
126

FIG. 9

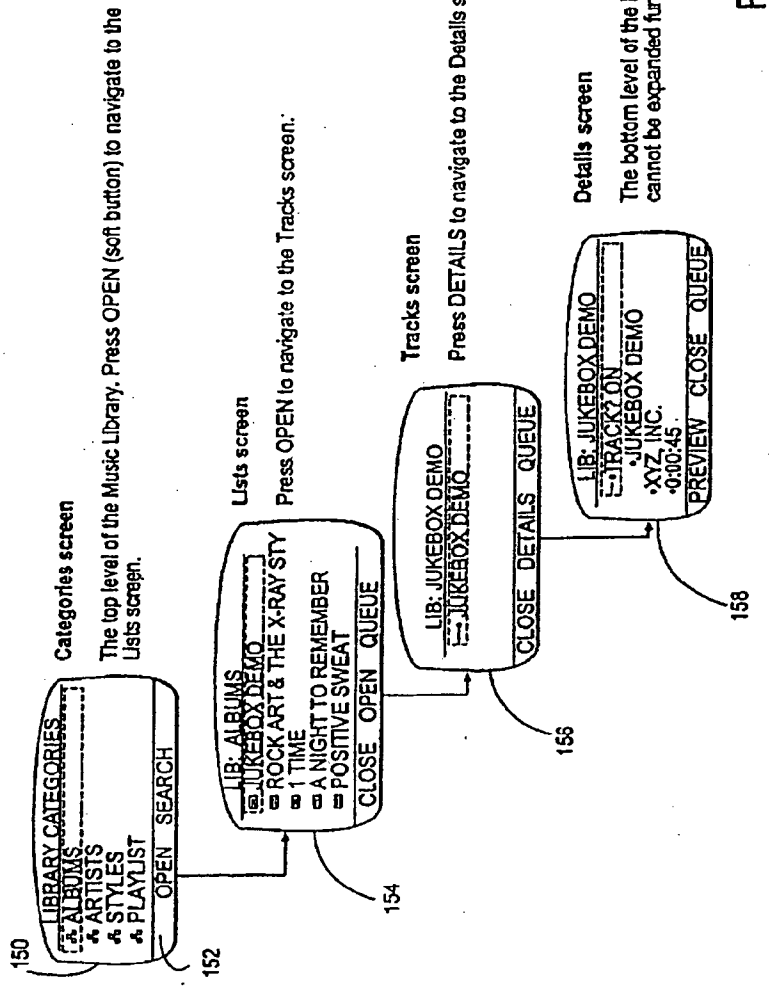

Categories screen
The top level of the Music Library. Press OPEN (soft button) to navigate to the Lists screen.
LIBRARY CATEGORIES
ALBUMS
ARTISTS
STYLES
PLAYLIST
OPEN SEARCH
150
152
Lists screen
Press OPEN to navigate to the Tracks screen.
LIB: ALBUMS
JUKEBOX DEMO
ROCK ART & THE X-RAY STY
1 TIME
A NIGHT 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
TRACK1.ON
JUKEBOX DEMO
XYZ, INC.
0:00:45
PREVIEW CLOSE QUEUE
158

FIG. 10

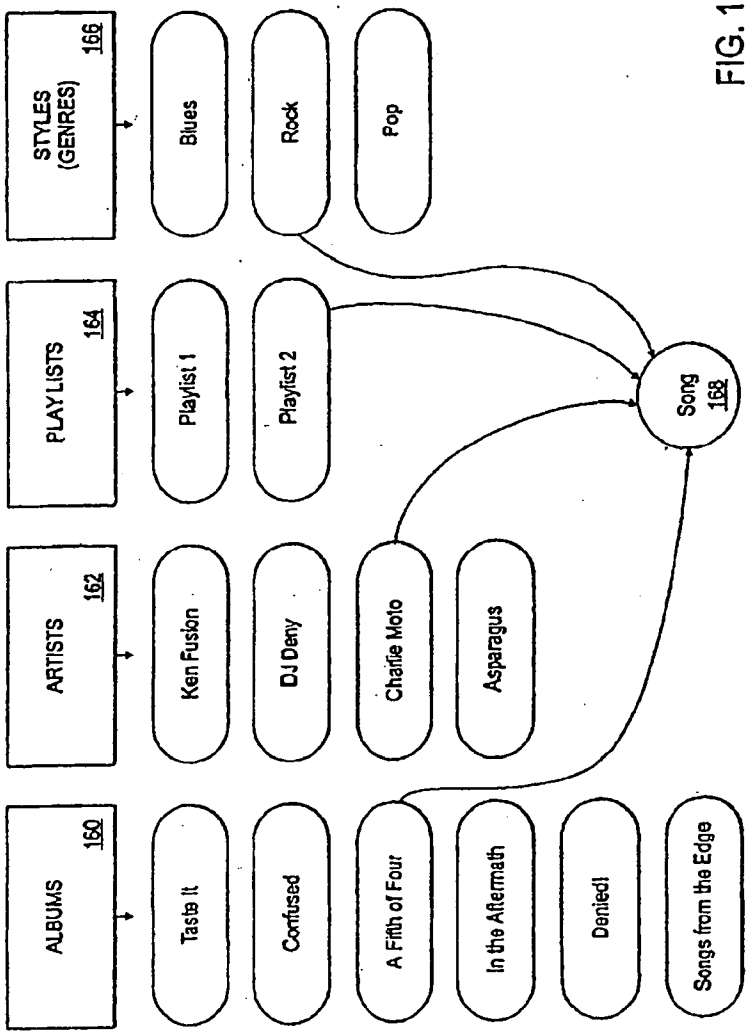

STYLES (GENRES) 166
Blues
Rock
Pop
PLAYLISTS 164
Playlist 1
Playlist 2
ARTISTS 162
Ken Fusion
DJ Deny
Charlie Moto
Asparagus
ALBUMS 160
Taste It
Confused
A Fifth of Four
In the Aftermath
Denied!
Songs from the Edge
Song 168

FIG. 11

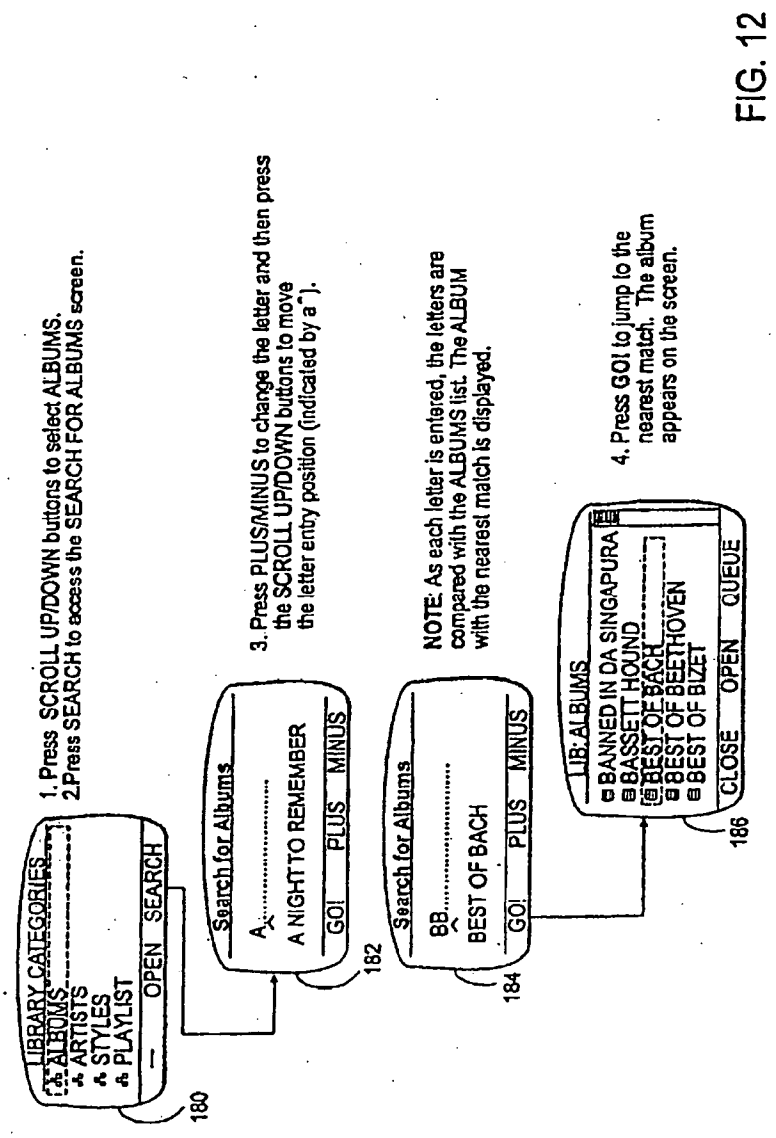

1. Press SCROLL UP/DOWN buttons to select ALBUMS.
2.Press SEARCH to access the SEARCH FOR ALBUMS screen.
LIBRARY CATEGORIES
ALBUMS
ARTISTS
STYLES
PLAYLIST
OPEN SEARCH
180
Search for Albums
A
A NIGHT TO REMEMBER
GO! PLUS MINUS
182
3. Press PLUS/MINUS to change the letter and then press the SCROLL UP/DOWN 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

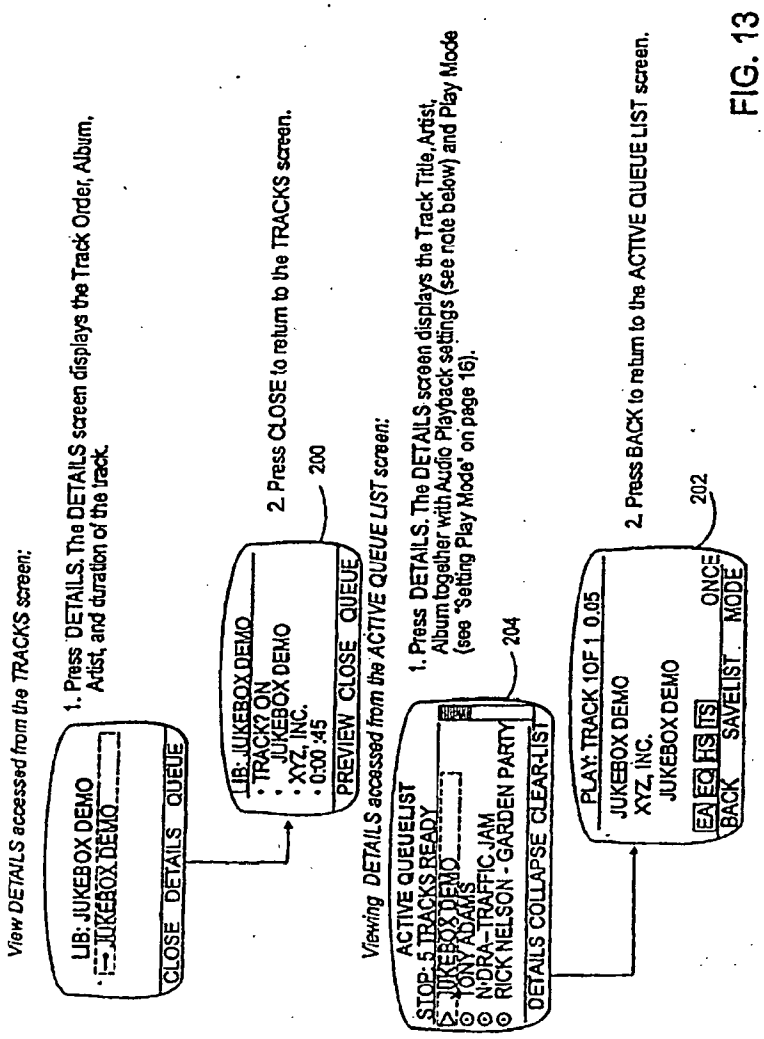

View DETAILS accessed from the TRACKS screen:
1. Press 'DETAILS. The DETAILS screen displays the Track Order, Album, Artist, and duration of the track.
LIB: JUKEBOX DEMO
JUKEBOX DEMO
CLOSE DETAILS QUEUE
2. Press CLOSE to return to the TRACKS screen.
200
LIB: JUKEBOX DEMO
: TRACK? ON
: JUKEBOX DEMO
: XYZ, INC.
: 0:00 :45
PREVIEW CLOSE QUEUE
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).
204
ACTIVE QUEUELIST
STOP: 5 TRACKS READY
JUKEBOX DEMO
TONY ADAMS
NORA–TRAFFIC JAM
RICK NELSON - GARDEN PARTY
DETAILS COLLAPSE CLEAR-LIST
2. Press BACK to return to the ACTIVE QUEUE LIST screen.
202
PLAY: TRACK 10F 1 0.05
JUKEBOX DEMO
XYZ, INC.
JUKEBOX DEMO
EA EQ HS TS ONCE
BACK SAVELIST MODE

FIG. 13

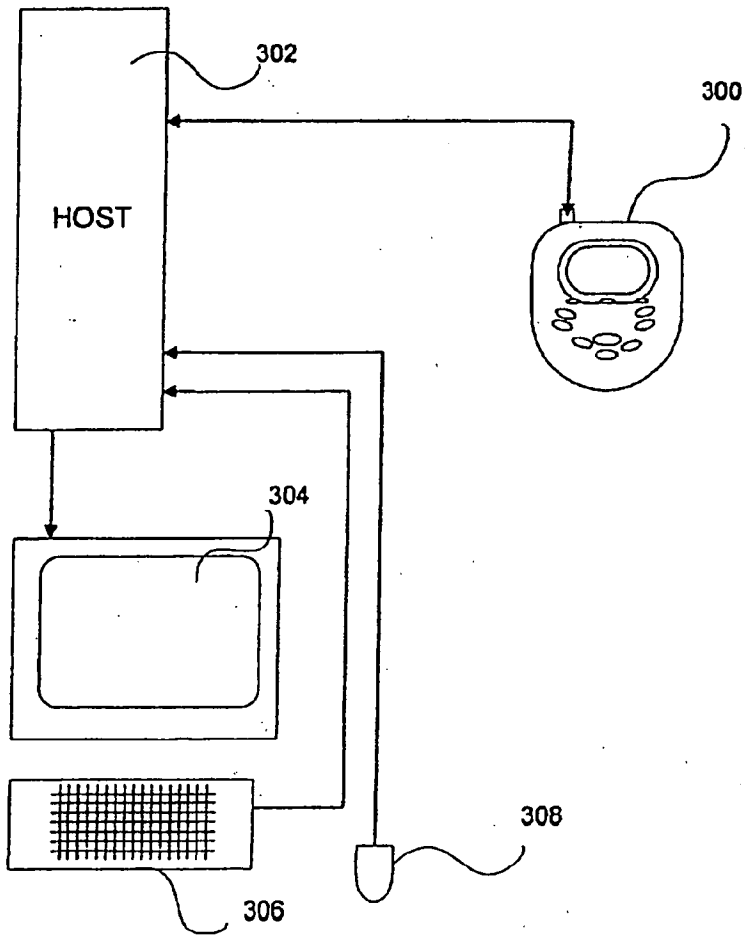


FIG. 14

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='P',
    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," (Atty. 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 attributes 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 automated 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 1-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 1

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

01/10/2001 EEKUBAY1 00000001 201430 09755723

01 FC:101 710.00 CH
02 FC:102 160.00 CH

PTO-1556
(5/87)

*U.S. GPO: 1998-459-062/10144

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICANTS
Ron Goodman, Santa Cruz, CA;
Howard N. Egan, Capitola, CA;

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** FOREIGN APPLICATIONS ********** NONE

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ADDRESS
20350

TITLE
Automatic hierarchical categorization of music by metadata

FILING FEE RECEIVED	FEES: Authority has been given in Paper	
1000	No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

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Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

PATENT APPLICATION

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

Inventor:

RON GOODMAN, a citizen of the United States,
226 Jeter Street
Santa Cruz, CA 95060

HOWARD N. EGAN, a citizen of the United States,
219 Elinor Street
Capitola, CA 95010

Assignee:

CREATIVE TECHNOLOGY LTD.
31 International Business Park
Creative Resource
Singapore 609921
Republic of Singapore

Entity: Large

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: 415-576-0200

PATENT
Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

ABSTRACT OF THE DISCLOSURE

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.

SF 1174925 v2

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PATENT
Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

CROSS-REFERENCES TO RELATED APPLICATIONS

INSA1

~~This application is related to Application No. __/___,___, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Atty. Docket No. 17002-020800), and Application No. __/___,___, entitled "Audioplayback Device with Power Savings Storage Access Mode," (Atty. Docket No. 17002-022400), all filed January 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. 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.

SUMMARY OF THE INVENTION

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.

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 Figure 1 is shown in Figure 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			

Required Attributes

Attribute Name	Value(s)	Remarks
TITLE	ASCII string	Required By Jukebox
CODEC	"MP3", "WMA", "WAV"	Required By Jukebox
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.

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, performed by a processor in a portable digital music player, for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track, said method comprising the acts of:

reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata;

for each track, iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track.

2. The method of claim 1, where said act of searching further comprises the acts of:

utilizing track type information to file only tracks of a specified type under a particular branch.

3. The method of claim 1 further comprising the acts of:

for each branch, utilizing category structure information to file tracks in a specified attribute order.

4. The method of claim 1, where said portable digital music player includes a display screen and a user interface for interacting with the display, further comprising the acts of:

displaying the categories and subcategories on the display in a hierarchical order;

displaying all names of tracks associated with a category or sub-category when a user utilizes the interface to select a category or sub-category;

utilizing the pointer to access and play a track when a user selects a track name through the user interface. and

utilizing the pointer to access and play a collection of tracks within a category or subcategory when a user selects a category or subcategory through the user interface.

5. A method, implemented by a processor in a portable digital music player, for associating metadata with audio tracks comprising the acts of:

opening a formatted file for each track comprising a file data portion and a file attributes portion, with the file attributes portion including a plurality of fields corresponding to category types and file types;

storing an unmodified audio track in the file data portion of the formatted file; and

storing category type and file type information about the unmodified track in corresponding fields.

SUB B2

6. A method, performed by a processor in a portable digital music player, for filing audio tracks, stored on a computer readable media, under categories in an in-memory tree structure, with each audio track having metadata associated therewith including category name data for naming, said method comprising the acts of:

upon startup or when a track is added or changed, searching the metadata of each track; and

for each track, automatically filing the track by category name under each selected category to form a hierarchical track filing scheme.

7. The method of claim 6 further comprising the act of:

selecting the categories to be the Album including the track, the title of the track, and the name of the artist that recorded the track.

8. The method of claim 6, where said portable digital music player includes a display screen and a user interface for interacting with the display, further comprising the acts of:

displaying the categories on the display in a hierarchical order;

displaying all names of tracks associated with a category when a user utilizes the interface to select a category ;

accessing and playing a track when a user selects a track name through the user interface. and

accessing and playing a collection of tracks within a category when a user selects a category through the user interface.

9. A computer program product comprising:

a computer readable medium having program code embodied therein for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track, said program code comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata;

program code, executed by a processor, for each track, for iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track.

10. A computer program product comprising:

a computer readable medium for having program code embodied therein for filing audio tracks, stored on a computer readable media, under categories in an in-memory tree structure, with each audio track having metadata associated therewith including category name data for naming, said program code comprising:

program code, executed by a processor, upon startup or when a track is added or changed, for searching the metadata of each track; and

program code, executed by a processor, for each track, for automatically filing the track by category name under each selected category to form a hierarchical track filing scheme.

Add C17

ADD D17

Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA** the specification of which ____ is attached hereto or ____ was filed on _____ as Application No. _____ and was amended on _____ (if applicable).

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56. I claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

I claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application No.	Date of Filing	Status
unknown	January 5, 2001	pending
unknown	January 5, 2001	pending

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Charles E. Krueger, Reg. No. 30,077
Paul C. Haughey, Reg. No. 31,836
Charles J. Kulas, Reg. No. 35,809
Daniel D. Tagliaferri, Reg. No. 43,178

Send Correspondence to:	Direct Telephone Calls to: (Name, Reg. No., Telephone No.)
Charles E. Krueger TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8th Floor San Francisco, California 94111-3834	Name: Charles E. Krueger Reg. No.: 30,077 Telephone: 415-576-0200

Full Name of Inventor 1:	Last Name: GOODMAN	First Name: RON	Middle Name or Initial:	
Residence & Citizenship:	City: Santa Cruz	State/Foreign Country: California	Country of Citizenship: United States	
Post Office Address:	Post Office Address: 226 Jeter Street	City: Santa Cruz	State/Country: California	Postal Code: 95060

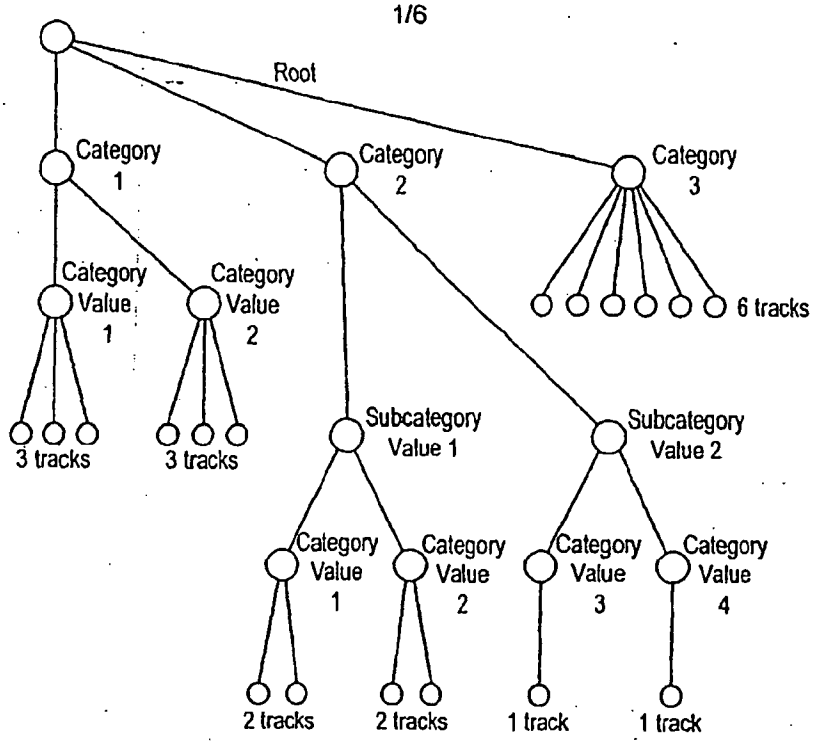
Full Name of Inventor 2:	Last Name: EGAN	First Name: HOWARD	Middle Name or Initial: N.	
Residence & Citizenship:	City: Capitola	State/Foreign Country: California	Country of Citizenship: United States	
Post Office Address:	Post Office Address: 219 Elinor Street	City: Capitola	State/Country: California	Postal Code: 95010

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 1	Signature of Inventor 2
RON GOODMAN	HOWARD N. EGAN
Date	Date

SF 1175410 v1

PRINT OF DRAWINGS
AS ORIGINALLY FILED



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.

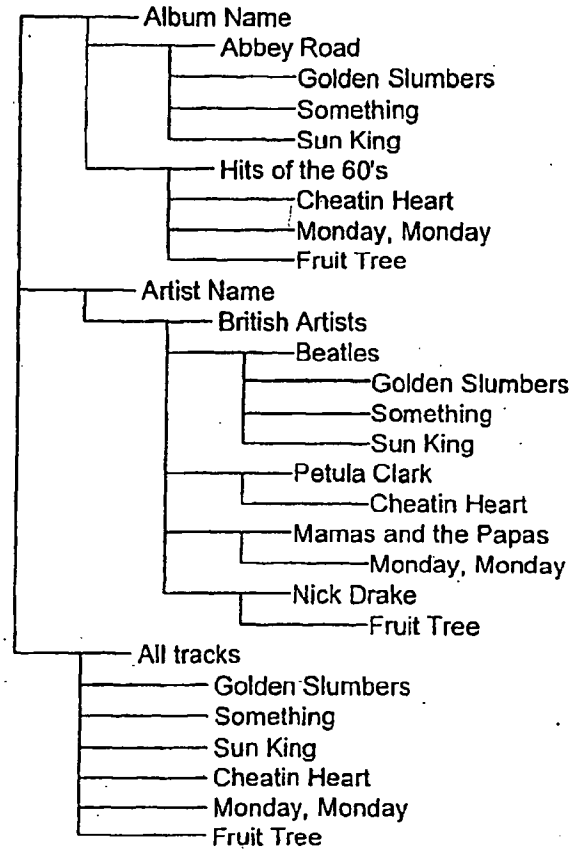


FIG. 3.

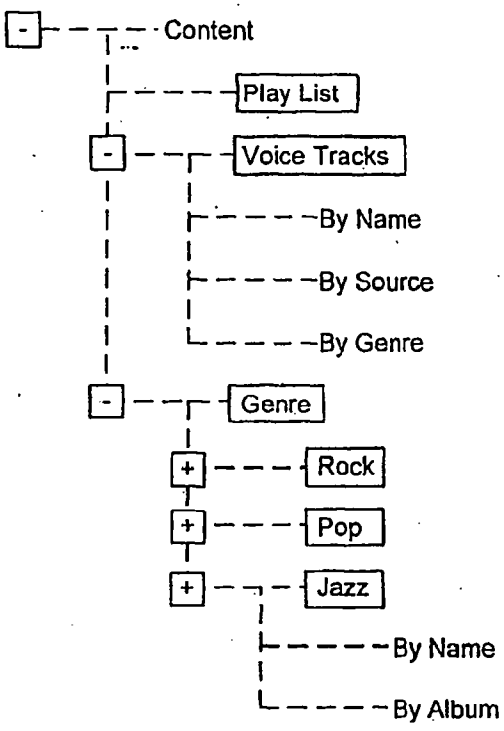


FIG. 4.

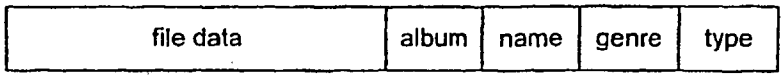


FIG. 5.

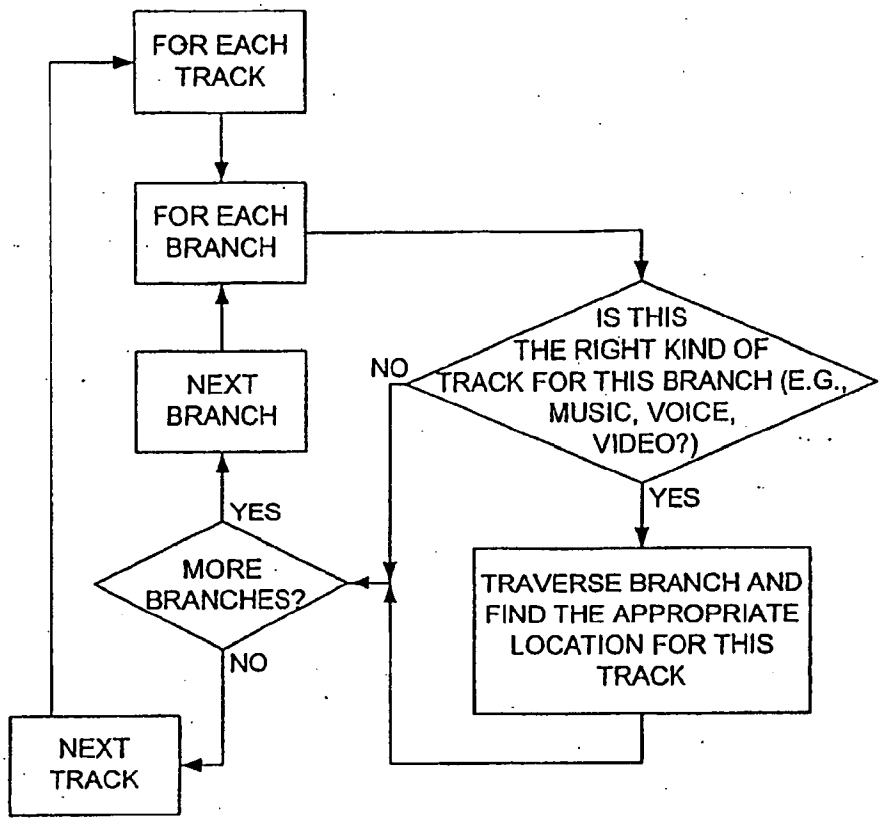


FIG. 6.

PRINT OF DRAWINGS
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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
	Eagles	Hotel California
		New Kid In Town
	Paul Simon	Graceland
Genre	Rock	Full Moon Fever
		Hotel California
		New Kid In Town
		Graceland

FIG. 7.

PRINT OF DRAWINGS
AS ORIGINALLY FILED

6/6

FIG. 8.

Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

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

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

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

NOTARY PUBLIC

My Commission Expires: 4/2/2001

Dated: 3-22-2001

HOWARD N. EGAN

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

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.

WITNESS my hand and official seal.

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

NOTARY PUBLIC

My Commission Expires: 4/2/2001

Please type a plus sign (+) inside this box → [+] 01/08/01

PTO/SB/05 (11-00)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No.	17002-022500
First Inventor	Ron Goodman
Title	Automatic Hierarchical Categorization of Music by Metadata
Express Mail Label No.	EL769991701US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning design patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17) *(Submit an original and a duplicate for fee processing)*
2. ☐ Applicant claims small entity status. See 37 CFR 1.27.
3. ☒ Specification [Total Pages 14]
   (preferred arrangement set forth below)
   - Descriptive title of the Invention
   - Cross References to Related Applications
   - Statement Regarding Fed sponsored R & D
   - Reference to sequence listing, a table, or a computer program listing appendix
   - Background of the Invention
   - Brief Summary of the Invention
   - Brief Description of the Drawings *(if filed)*
   - Detailed Description
   - Claim(s)
   - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 7]
5. Oath or Declaration [Total Pages]
   a. ☐ Newly executed (original or copy)
   b. ☐ Copy from a prior application (37 CFR 1.63 (d)) *(for a continuation/divisional with Box 18 completed)*
      i. ☐ DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program *(Appendix)*
8. Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
   a. ☐ Computer Readable Form (CRF)
   b. Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ paper
   c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATIONS PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 C.F.R. §3.73(b) Statement ☐ Power of Attorney *(when there is an assignee)*
11. ☐ English Translation Document *(if applicable)*
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. ☐ Request and Certification under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☒ Other: Unsigned Declaration/Power of Attorney, Fee Transmittal Sheet

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: ____ / ____

Prior application information: Examiner ____ Group / Art Unit: ____

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

☒ Customer Number or Bar Code Label 20350 (Insert Customer No. or Attach bar code label here) or ☒ Correspondence address below

Name	Townsend and Townsend and Crew LLP				
Address	Two Embarcadero enter				
	Eighth Floor				
City	San Francisco	State	CA	Zip Code	94111-3834
Country	USA	Telephone	(415) 576-0200	Fax	(415) 576-0300

Name (Print/Type)	Charles E. Krueger	Registration No. (Attorney/Agent)	30,077
Signature		Date	1/5/01

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

PTO/SB/17 (11-00)
Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT ($) 870

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	RON GOODMAN
Examiner Name	
Group Art Unit	
Attorney Docket No.	17002-022500

09/755723 01/05/01

METHOD OF PAYMENT (check one)

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number: 20-1430

Deposit Account Name: Townsend and Townsend and Crew LLP

☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17

☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☐ Payment Enclosed:

☐ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	710	201	355	Utility filing fee	710
106	320	206	160	Design filing fee	
107	490	207	245	Plant filing fee	
108	710	208	355	Reissue filing fee	
114	160	214	75	Provisional filing fee	

SUBTOTAL (1) ($) 710

2. EXTRA CLAIM FEES

			Extra Claims		Fee from below		Fee Paid
Total Claims		- 20**	=	X		=	
Independent Claims	5	- 3**	= 2	X	80	=	160
Multiple Dependent				X		=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	80	202	40	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim, if not paid
109	80	209	40	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 160

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	390	216	195	Extension for reply within second month	
117	890	217	445	Extension for reply within third month	
118	1,390	218	695	Extension for reply within fourth month	
128	1,890	228	945	Extension for reply within fifth month	
119	310	219	155	Notice of Appeal	
120	310	220	155	Filing a brief in support of an appeal	
121	270	221	135	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive – unavoidable	
141	1,240	241	620	Petition to revive – unintentional	
142	1,240	242	620	Utility issue fee (or reissue)	
143	440	243	220	Design issue fee	
144	600	244	300	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))	
179	710	279	355	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) ($)

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Charles E. Krueger	Registration No. Attorney/Agent	30,077	Telephone	415-576-0200
Signature				Date	1/5/01

Exhibit 2

#2

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/755,723	01/05/2001	Ron Goodman	17002-022500

CONFIRMATION NO. 3728

20350
TOWNSEND AND TOWNSEND AND CREW
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

FORMALITIES LETTER

OC0000000005783175

Date Mailed: 02/21/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

- **The balance due by applicant is $ 130.**

The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Substitute drawings in compliance with 37 CFR 1.84 because:
  - drawing sheets do not have the appropriate margin(s) (see 37 CFR 1.84(g)). Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch);

A copy of this notice MUST be returned with the reply.

Customer Service Center
Initial Patent Examination Division (703) 308-1202
PART 3 - OFFICE COPY

Exhibit 3

#3

Attorney Docket No.: 17002-022500US
Client Reference No.: CT-1139

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA** the specification of which ____ is attached hereto or ____ was filed on _____ as Application No. _____ and was amended on _____ (if applicable).

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56. I claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

I claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application No.	Date of Filing	Status
unknown	January 5, 2001	pending
unknown	January 5, 2001	pending

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Charles E. Krueger, Reg. No. 30,077
Paul C. Haughey, Reg. No. 31,836
Charles J. Kulas, Reg. No. 35,809
Daniel D. Tagliaferri, Reg. No. 43,178

Send Correspondence to:	Direct Telephone Calls to: (Name, Reg. No., Telephone No.)
Charles E. Krueger TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8th Floor San Francisco, California 94111-3834	Name: Charles E. Krueger Reg. No.: 30,077 Telephone: 415-576-0200

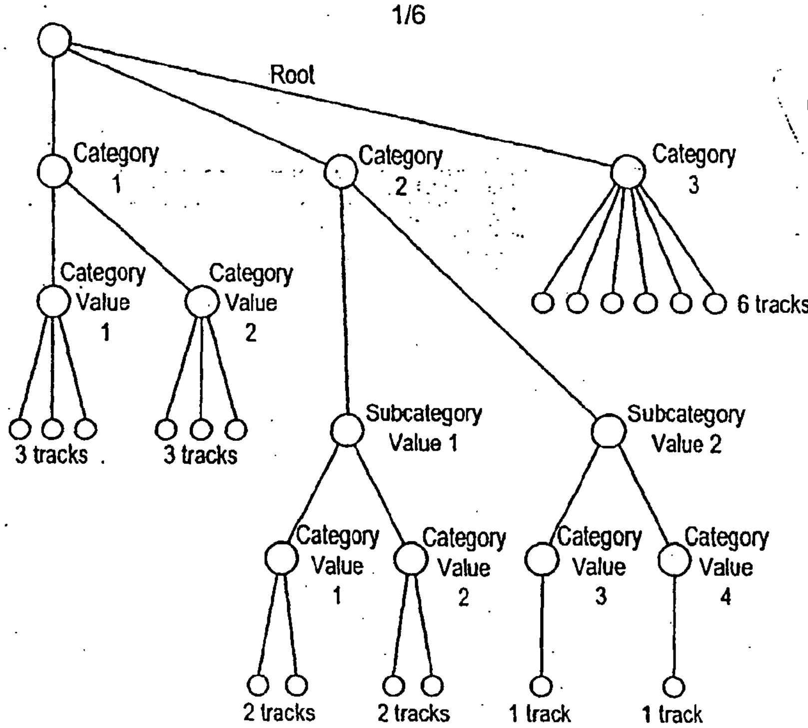
Full Name of Inventor 1:	Last Name: GOODMAN	First Name: RON	Middle Name or Initial:	
Residence & Citizenship:	City: Santa Cruz	State/Foreign Country: California	Country of Citizenship: United States	
Post Office Address:	Post Office Address: 226 Jeter Street	City: Santa Cruz	State/Country: California	Postal Code: 95060

Full Name of Inventor 2:	Last Name: EGAN	First Name: HOWARD	Middle Name or Initial: N.	
Residence & Citizenship:	City: Capitola	State/Foreign Country: California	Country of Citizenship: United States	
Post Office Address:	Post Office Address: 219 Elinor Street	City: Capitola	State/Country: California	Postal Code: 95010

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 1	Signature of Inventor 2
RON GOODMAN	HOWARD N. EGAN
Date 3/14/2001	Date 3-22-2001

SF 1175410 v1



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.

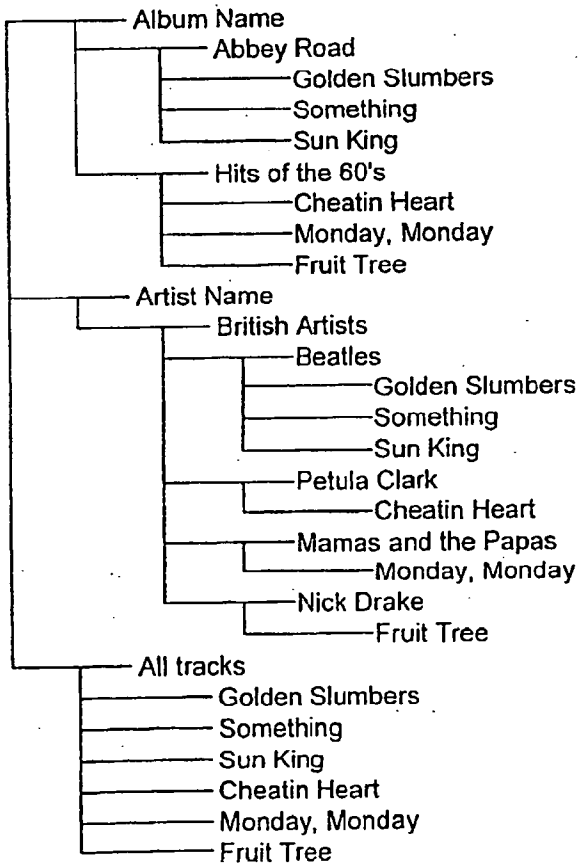


FIG. 3.

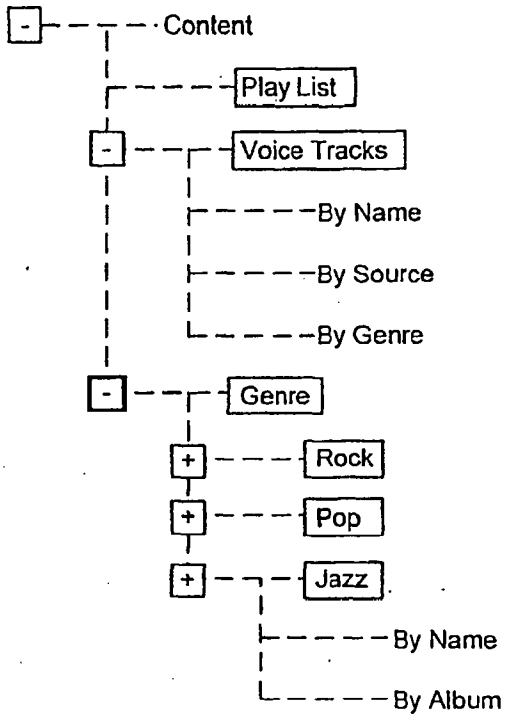


FIG. 4.

file data	album	name	genre	type

FIG. 5.

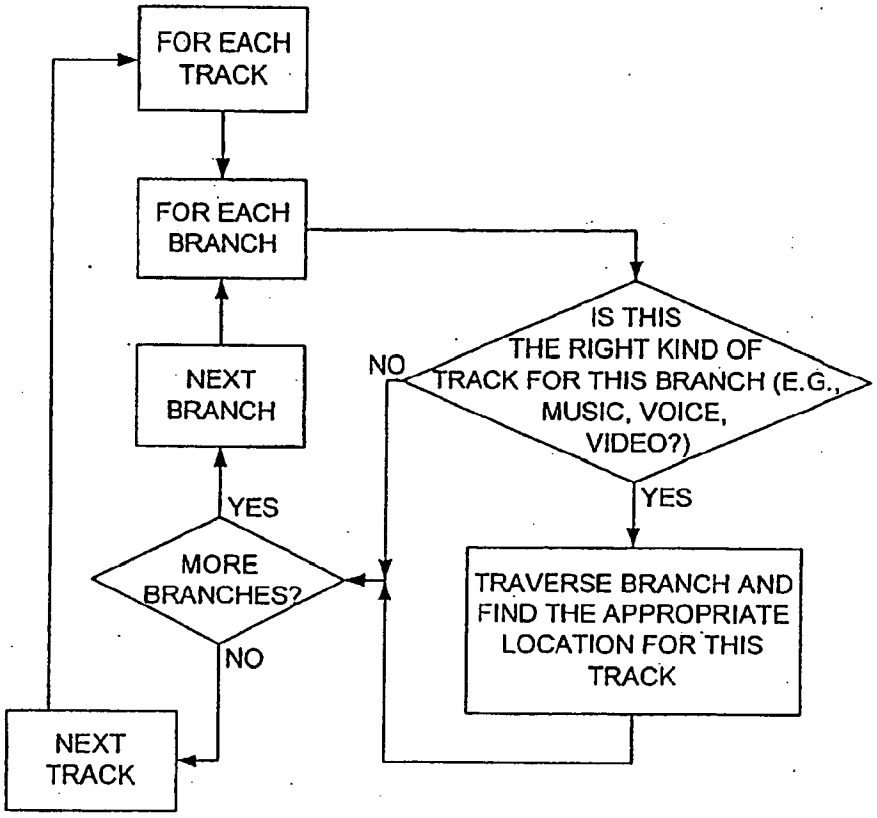

FOR EACH TRACK
FOR EACH BRANCH
IS THIS THE RIGHT KIND OF TRACK FOR THIS BRANCH (E.G., MUSIC, VOICE, VIDEO?)
NO
YES
NEXT BRANCH
MORE BRANCHES?
YES
NO
TRAVERSE BRANCH AND FIND THE APPROPRIATE LOCATION FOR THIS TRACK
NEXT TRACK

FIG. 6.

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.

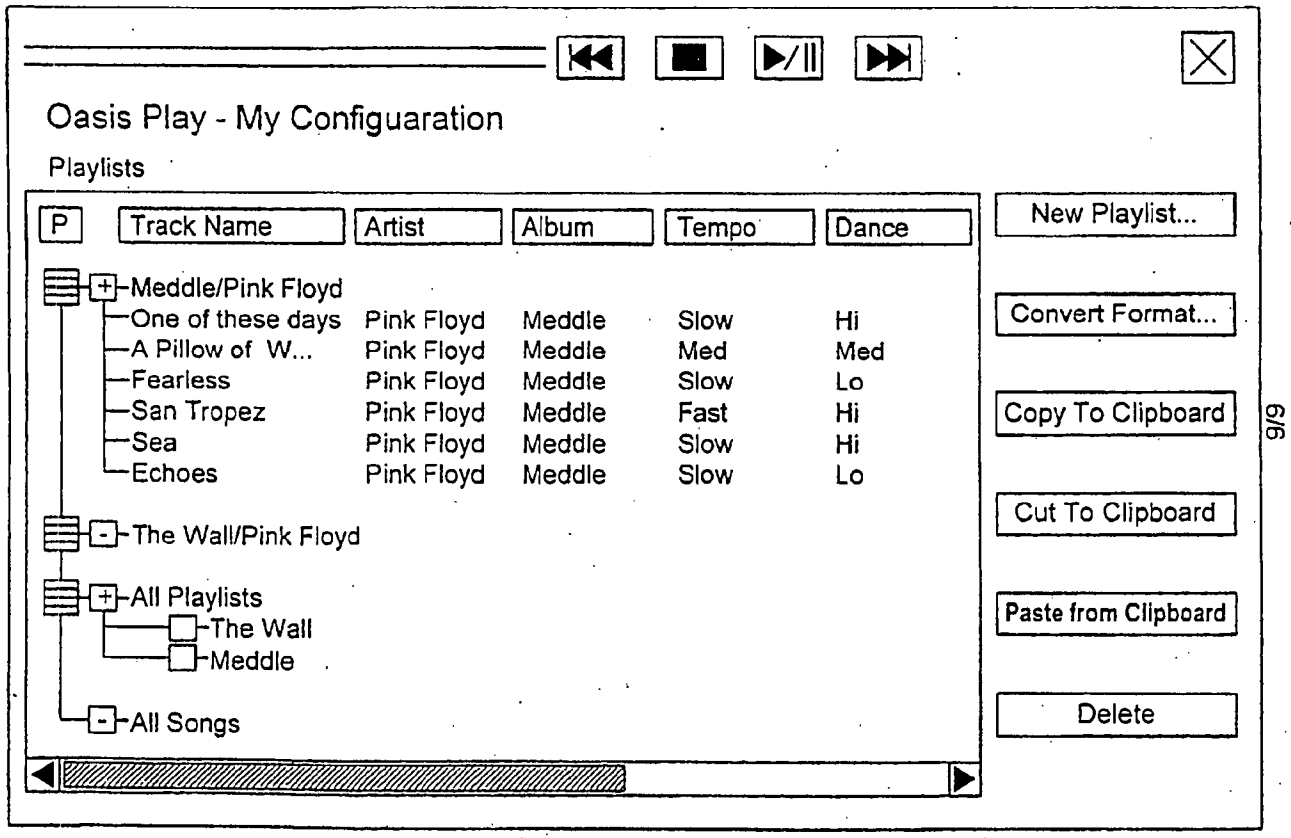


FIG. 8.

Please type a plus sign (+) inside this box → [+]

PTO/SB/21 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	09/755,723
Filing Date	January 5, 2001
First Named Inventor	GOODMAN, RON, et. al.
Group Art Unit	2185
Examiner Name	
Attorney Docket Number	017002022500

ENCLOSURES *(check all that apply)*

- [x] Fee Transmittal Form
  - [ ] Fee Attached
- [x] Amendment / Response
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [x] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [x] Assignment Papers *(for an Application)*
- [x] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition Routing Slip (PTO/SB/69) and Accompanying Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s)
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- [ ] Proprietary Information
- [ ] Status Letter
- [x] Other Enclosure(s) *(please identify below)*: Copy of PTO Notice, Recordation Cover Sheet, ADS

Remarks: The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm and Individual name	Townsend and Townsend and Crew LLP Charles E. Krueger Reg No. 30,077
Signature	
Date	4/17/01

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: 4-18-01

Typed or printed name	D. Bullock		
Signature		Date	4-18-01

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

SF 1210973 v1

PTO/SB/17 (09-00)
Approved for use through 10/31/2002. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

OIPE
APR 13 2001
PATENT & TRADEMARK OFFICE USPTO

FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT ($) 170

Complete If Known	
Application Number	09/755,723
Filing Date	January 5, 2001
First Named Inventor	GOODMAN, RON, et. al.
Examiner Name	
Group Art Unit	2185
Attorney Docket No.	017002022500

METHOD OF PAYMENT

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number: 20-1430

Deposit Account Name: Townsend and Townsend and Crew LLP

☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17

☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☐ Payment Enclosed:

☐ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Fee Code	Large Entity Fee ($)	Small Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	710	201	355	Utility filing fee	
106	320	206	160	Design filing fee	
107	490	207	245	Plant filing fee	
108	710	208	355	Reissue filing fee	
114	150	214	75	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES

			Extra Claims		Fee from below		Fee Paid
Total Claims		-20**		X		=	
Independent Claims		-3**		X		=	
Multiple Dependent				X		=	

Large Fee Code	Large Entity Fee ($)	Small Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	80	202	40	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim, if not paid
109	80	209	40	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Fee Code	Large Entity Fee ($)	Small Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
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127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
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112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
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140	110	240	55	Petition to revive – unavoidable	
141	1,240	241	620	Petition to revive – unintentional	
142	1,240	242	620	Utility issue fee (or reissue)	
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149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))	
179	710	279	355	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	
Other fee (specify)				assignment recordation fee	40

The Commissioner is authorized to charge any additional fees to the above noted Deposit Account.

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) ($) 170

SUBMITTED BY				Complete (if applicable)	
Name (Print/Type)	Charles E. Krueger	Registration No. (Attorney/Agent)	30,077	Telephone	415-576-0200
Signature				Date	4/17/01

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231. SF 1210958 v1

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/755,723	01/05/2001	Ron Goodman	17002-022500

CONFIRMATION NO. 3728

20350
TOWNSEND AND TOWNSEND AND CREW
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

FORMALITIES LETTER
OC000000005783175

Date Mailed: 02/21/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

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- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

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04/25/2001 UKOKO49 00000042 201430 09755723
01 FC:105 130.00 CH

A copy of this notice MUST be returned with the reply.

Frieke Geremew
Customer Service Center
Initial Patent Examination Division (703) 308-1202

PART 1 - ATTORNEY/APPLICANT COPY

Exhibit 4

#4

Please type a plus sign (+) inside this box. → +

PTO/SB/81 (10-00)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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MAY 18 2001 PATENT & TRADEMARK OFFICE

POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

Application Number	09/755,723
Filing Date	January 5, 2001
First Named Inventor	Ron Goodman
Group Art Unit	2185
Examiner Name	
Attorney Docket Number	017002-022500US

I hereby appoint:

☒ Practitioners at Customer Number 20350 → *Place Customer Number Bar Code Label here*

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☒ The above-mentioned Customer Number.

OR

☐ Firm or Individual Name			
Address			
Address			
City		State	ZIP
Country			
Telephone		Fax	

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MAY 22 2001
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I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.

Certificate under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name	Ng Keh Long
Signature	
Date	April 10, 2001

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any Comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

SF 1197815 v1

PTO/SB/96 (08-00)
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STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Creative Technology LTD.

Application No./Patent No.: 09/755,723 Filed/Issue Date: January 5, 2001

Entitled: Automatic Hierarchical Categorization of Music by Metadata

Creative Technology LTD., a Corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of an undivided part interest

In the patent application/patent identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel ____, Frame ____, or for which a copy thereof is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: ____ To: ____
The document was recorded in the United States Patent and Trademark Office at Reel ____, Frame ____, or for which a copy thereof is attached.

2. From: ____ To: ____
The document was recorded in the United States Patent and Trademark Office at Reel ____, Frame ____, or for which a copy thereof is attached.

3. From: ____ To: ____
The document was recorded in the United States Patent and Trademark Office at Reel ____, Frame ____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

RECEIVED
MAY 22 2001
Technology Center 2100

☐ Copies of assignments or other documents in the chain of title are attached.
NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.8]

The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of the assignee.

April 10, 2001
Date

Signature

Ng Keh Long
Typed or printed name

Chief Financial Officer
Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

SF 1197824 v1

2185

Please type a plus sign (+) inside this box → +

PTO/SB/21 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/755,723
Filing Date	January 5, 2001
First Named Inventor	GOODMAN, RON, et. al.
Group Art Unit	2185
Examiner Name	
Total Number of Pages in This Submission: 4	Attorney Docket Number: 017002022500

ENCLOSURES *(check all that apply)*

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☐ Amendment / Response
- ☐ After Final
- ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
- ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Assignment Papers *(for an Application)*
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition Routing Slip (PTO/SB/69) and Accompanying Petition
- ☐ Petition to Convert to a Provisional Application
- ☒ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s)
- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) *(please identify below):*
  Rule 3.73(b) Statement, copy of assignment

Remarks: The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm and Individual name	Townsend and Townsend and Crew LLP Charles E. Krueger — Reg No. 30,077
Signature	
Date	5/10/01

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: 5-14-01

Typed or printed name	D. Bullock		
Signature		Date	5-14-01

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v

Exhibit 5

#5

Inventor Information

Inventor One Given Name::	RON
Family Name::	GOODMAN
Name Suffix::	
Postal Address Line One::	226 Jeter Street
City::	Santa Cruz
State or Province::	CA
Postal or Zip Code::	95060
Citizenship Country::	US
Inventor Two Given Name::	HOWARD
Family Name::	EGAN
Name Suffix::	
Postal Address Line One::	219 Elinor Street
City::	Capitola
State or Province::	CA
Postal or Zip Code::	95010
Citizenship Country::	US

Correspondence Information

Correspondence Customer Number::	20350

Application Information

Title Line One::	AUTOMATIC HIERARCHICAL
Title Line Two::	CATEGORIZATION OF
Title Line Three::	MUSIC BY METADATA
Total Drawing Sheets::	6
Formal Drawings?::	Yes
Application Type::	Utility
Docket Number::	017002022500
Secrecy Order in Patent Appl.?::	No

Exhibit 6

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents Washington, D.C. 20231

On 4-18-01

TOWNSEND and TOWNSEND and CREW LLP

By: [signature]

PATENT
Attorney Docket No.: 017002-022500US
Client Reference No.: CT-1139

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

GOODMAN et al.

Application No.: 09/755,723

Filed: January 5, 2001

For: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

Art Unit: 2185

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-referenced application, please enter the following amendments and remarks.

IN THE SPECIFICATION:

Please substitute the following for the paragraph apearing on page 1 under the CROSS-REFERENCES TO RELATED APPLICATIONS heading. A marked up version of the paragraph is appended to this amendment.

~~This application is related to Application No. 09/755,629, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Atty. Docket No. 17002-020800); and Application No. 09/755,267, entitled "Audioplayback Device with Power Savings Storage Access Mode," (Atty. Docket No. 17002-022400); both filed January 5, 2001, the disclosures of which are incorporated herein by reference.~~

REMARKS

By this amendment information regarding related applications that was not available at the time of filing has been added. Entrance of the amendment is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

Charles E. Krueger
Reg. No. 30,077

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: (415) 576-0200
Fax: (415) 576-0300
CEK:deb
SF 1210990 v1

Marked Up Version of Amended Paragraph 09/755,723

This application is related to Application No. [__/___,___] 09/755,629, entitled "System for Selecting and Playing Songs in a Playback Device with a Limited User Interface," (Atty. Docket No. 17002-020800); and Application No. [__/___,___] 09/755,367, entitled "Audioplayback Device with Power Savings Storage Access Mode," (Atty. Docket No. 17002-022400), [all] both filed January 5, 2001, the disclosures of which are incorporated herein by reference.

Exhibit 7

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,723	01/05/2001	Ron Goodman	017002022500	3728

20350 7590 01/15/2003

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER	
PUNIT, PRAKASH C	
ART UNIT	PAPER NUMBER
2175	7

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.	Applicant(s)	
	09/755,723	GOODMAN ET AL.	
	Examiner	Art Unit	
	Prakash C Punit	2175	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is in response to application dated 01/05/2001. Claims 1-10 are pending in this office action.

Claim Objections

2. Claims 1-4 and 9 are objected to because of the following informalities:

In claim 1, line 9: the claim recitation "base" should be --based--. Appropriate correction is required.

QS 1/13/03 Claims 2-4 are ~~objects~~ objected to because claims 2-4 are dependent from objected independent claim 1.

In claim 9, line 12: the claim recitation "base" should be --based--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Grewe et al. (U. S. Patent No.5,670,730.)

As to claim 1, Grewe et al. teaches a method, performed by a processor in a portable digital music player, for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track (see Abstract, see Fig. 3, and see column 1, lines 6-21), said method comprising the acts of:

reading a definition file that defines an ordered hierarchical tree structure (see Fig. 2, see column 1, lines 47-49), with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata (see column 1, lines 49-67);

for each track, iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track (see Abstract, see Fig. 3, also see column 3, lines 45-49.)

As to claim 2, Grewe et al. teaches a method, where said act of searching further comprises the acts of:

utilizing track type information to file only tracks of a specified type under a particular branch (see Abstract, see column 3, lines 47-53.)

As to claim 3, Grewe et al. teaches a method further comprising the acts of:

for each branch, utilizing category structure information to file tracks in a specified attribute order (see column 4, lines 19-35.)

As to claim 4, Grewe et al. teaches a method, where said portable digital music player includes a display screen and a user interface for interacting with the display (see column 1, lines 13-21), further comprising the acts of:

displaying the categories and subcategories on the display in a hierarchical order (see column 2, lines 49-51, also see column 3, lines 38-44);

displaying all names of tracks associated with a category or sub-category when a user utilizes the interface to select a category or sub-category (see column 1 line 65 through column 2, line 3, also see column 3, lines 49-53);

utilizing the pointer to access and play a track when a user selects a track name through the user interface (see column 3, lines 53-57, also see column 3, lines 17-19) and

utilizing the pointer to access and play a collection of tracks within a category or subcategory when a user selects a category or subcategory through the user interface (see column 3, lines 55-57.)

As to claim 5, Grewe et al. teaches a method, implemented by a processor in a portable digital music player, for associating metadata with audio tracks (see Abstract) comprising the acts of:

opening a formatted file for each track comprising a file data portion and a file attributes portion, with the file attributes portion including a plurality of fields corresponding to category types and file types (see column 3, lines 45-49);

storing an unmodified audio track in the file data portion of the formatted file (see column 4, lines 19-21);

and

storing category type and file type information about the unmodified track in corresponding fields (see column 2, line 37 through column 3, line 28.)

As to claim 6, Grewe et al. teaches a method, performed by a processor in a portable digital music player, for filing audio tracks, stored on a computer readable media, under categories in an in memory tree structure, with each audio track having metadata associated therewith including category name data for naming (see Abstract, see column 1, lines 46-56), said method comprising the acts of:

upon startup or when a track is added or changed, searching the metadata of each track (see column 1, lines 58-65); and

for each track, automatically filing the track by category name under each selected category to form a hierarchical track filing scheme (see column 5, lines 34-54.)

As to claim 7, Grewe et al. teaches a method further comprising the act of:

selecting the categories to be the Album including the track, the title of the track, and the name of the artist that recorded the track (see column 3, lines 45-53.)

As to claim 8, Grewe et al. teaches a method, where said portable digital music player includes a display screen and a user interface for interacting with the display (see column 2, lines 49-51), further comprising the acts of:

displaying the categories on the display in a hierarchical order see column 2, lines 49-51, also see column 3, lines 38-44);

displaying all names of tracks associated with a category when a user utilizes the interface to select a category (see column 3, lines 49-53) ;

accessing and playing a track when a user selects a track name through the user interface (see column 3, lines 53-57, also see column 3, lines 17-19); and

accessing and playing a collection of tracks within a category when a user selects a category through the user interface ((see column 1 line 65 through column 2, line 3, also see column 3, lines 49-53.)

As to claim 9, Grewe et al. teaches a computer program product comprising:

a computer readable medium having program code embodied therein for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track (see Abstract), said program code comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be

sorted under the branch, and structure information defining how to file tracks based on associated metadata (see Abstract, see summary);

program code, executed by a processor, for each track, for iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track (see Fig. 3, see column 3, lines 45-49, also see column 4, lines 10-14.)

As to claim 10, Grewe et al. teaches a computer program product comprising:

a computer readable medium for having program code embodied therein for filing audio tracks, stored on a computer readable media, under categories in an in-memory tree structure,

with each audio track having metadata associated therewith including category name data for naming (see Abstract, see column 1, lines 46-56), said program code comprising:

program code, executed by a processor, upon startup or when a track is added or changed, for searching the metadata of each track (see column 1, lines 58-65); and

program code, executed by a processor, for each track, for automatically filing the track by category name under each selected category to form a hierarchical track filing scheme (see column 5, lines 34-54.)

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to method of organizing music in general:

U.S. Patent No. 5,670,730 to Grewe et al.

U.S. Patent No. 5,616,876 to Cluts.

U.S. Patent No. 5,918,303 to Yamaura et al.

U.S. Patent No. 5,969,283 to Looney et al.

U.S. Patent No. 5,062,868 to Toriumi.

U.S. Patent No. 5,248,946 to Dwek.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prakash Punit whose telephone number is (703) 305-5914. The examiner can normally be reached on Mondays – Fridays from 9:45 am to 6:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached on (703) 305-3830. The fax numbers of the group is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Prakash Punit
Patent Examiner
Art Unit 2175

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

January 10, 2003

Notice of References Cited	Application/Control No. 09/755,723	Applicant(s)/Patent Under Reexamination GOODMAN ET AL.	
	Examiner Prakash C Punit	Art Unit 2175	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5,670,730	09-1997	Grewe et al.	84/609
	B	US-5,616,876	04-1997	Cluts, Jonathan C.	84/609
	C	US-5,918,303	06-1999	Yamaura et al.	84/609
	D	US-5,969,283	10-1999	Looney et al.	84/609
	E	US-6,062,868	05-2000	Toriumi, Hiroshi	434/307A
	F	US-6,248,946	06-2001	Dwek, Norman Scott	84/608
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Exhibit 8

#8
5/27/03 AJ

Docket No.: 6407P212

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:
RON GOODMAN, ET AL.

Application No.: 09/755,723

Filed: January 5, 2001

For: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

Art Group: 2175

Examiner: Punit, Prakash C

PETITION FOR EXTENSION OF TIME PURSUANT TO 37 C.F.R. § 1.136(a)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F. R. § 1.136(a), Applicants for the above-identified application respectfully Petition the Commissioner for a one (1) month extension of time, extending the period for response to May 15, 2003, from the Office Action dated January 15, 2003. The petition filing fee of $110.00 and a Response to Office Action are attached.

If it should be determined that a longer extension of time is required to prevent this application from being abandoned, please charge any additional fees to Deposit Account No. 02-2666. A copy of the Fee Transmittal is enclosed for deposit account charging purposes.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Mark R. Vatuone

Mark R. Vatuone, Reg. No. 53,719

Date: 5/15/03

12400 Wilshire Blvd., 7th Floor
Los Angeles, California 90025
Telephone: (408) 947-8200

05/21/2003 HDAVDAH1 00000022 09755723
01 FC:1251 110.00 OP

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Sarah M. Montgomery 5/15/03
Date

Exhibit 9

#9B
5/21/03
A.V

Attorney's Docket No. 6407P212 Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re of Application of:

Ron Goodman et al.

Application No.: 09/755,723

Filing Date: January 5, 2001

For: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

Examiner: Punit, Prakash C.

Art Group: 2175

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on May 15, 2003
Date of Deposit

Sarah M. Montgomery
Name of Person Mailing Correspondence

Signature Date 5/15/03

Commissioner for Patents
Washington, D.C. 20231

AMENDMENT AND RESPONSE TO THE OFFICE ACTION

Sir:

In response to the Office Action of January 15, 2003 please enter the following amendments and consider the following remarks.

AMENDMENT

1. IN THE CLAIMS

Please cancel claim 5, without prejudice.

Please amend the claims as follows:

SUB C7

1. (Currently Amended) A method, performed by a processor in a ~~portable~~ digital ~~music~~ media player, for filing ~~audio~~ media tracks stored on a computer readable media, with each ~~audio~~ media track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track, said method comprising the acts of:

reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata;

for each track, ~~iteratively~~ determining, ~~base~~ based on metadata describing the track if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track.

B1

2. (Original) The method of claim 1, where said act of searching further comprises the acts of:

utilizing track type information to file only tracks of a specified type under a particular branch.

3. (Original) The method of claim 1 further comprising the acts of:

for each branch, utilizing category structure information to file tracks in a specified attribute order.

4. (Currently Amended) The method of claim 1, where said ~~portable~~ digital ~~music~~ media player includes a display ~~screen~~ and a user interface for interacting with the display, further comprising the acts of:

displaying the categories and subcategories on the display in a hierarchical order;

displaying all names of tracks associated with a category or sub-category when a user utilizes the interface to select a category or sub-category;

utilizing the pointer to access and play a track when a user selects a track name through the user interface; and

B1

utilizing the pointer to access and play a collection of tracks within a category or subcategory when a user selects a category or subcategory through the user interface.

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5. (Canceled)

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6. (Currently Amended) A method, performed by a processor in a ~~portable~~ digital ~~music~~ media player, for filing ~~audio~~ media tracks, stored on a computer readable media, under categories in an in memory tree structure, with each ~~audio~~ media track having metadata associated therewith including category name data for naming, said method comprising the acts of:

upon startup or when a track is added or changed, searching the metadata of each track; and

for each track, automatically filing the track by category name under each selected category to form a hierarchical track filing scheme.

B2

7. (Original) The method of claim 6 further comprising ~~the act of~~:

selecting the categories to be the Album including the track, the title of the track, and the name of the artist that recorded the track.

8. (Currently Amended) The method of claim 6, where said ~~portable~~ digital ~~music~~ media player includes a display ~~screen~~ and a user interface for interacting with the display, further comprising the acts of:

displaying the categories on the display in a hierarchical order;

displaying all names of tracks associated with a category when a user utilizes the interface to select a category ;

accessing and playing a track when a user selects a track name through the user interface; and

accessing and playing a collection of tracks within a category when a user selects a category through the user interface.

9. (Currently Amended) A computer program product comprising:

a computer readable medium having program code embodied therein for filing ~~audio~~ media tracks stored on a computer readable media, with each ~~audio~~ media track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track, said program code comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata;

B2

program code, executed by a processor, for each track, for ~~iteratively~~ determining, ~~base~~ based on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track.

10. (Currently Amended) A computer program product comprising:

a computer readable medium ~~for~~ having program code embodied therein for filing ~~audio~~ media tracks, stored on a computer readable media, under categories in an in-memory tree structure, with each ~~audio~~ media track having

metadata associated therewith including category name data for naming, said program code comprising:

program code, ~~execute~~ executed by a processor, upon startup or when a track is added or changed, for searching the metadata of each track; and

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program code, executed by a processor, for each track, for automatically filing the track by category name under each selected category to form a hierarchical track filing scheme.

REMARKS

Reconsideration of this application, as amended, is earnestly requested.

Claims 1, 4, 6 and 8 – 10 have been amended as shown above. Claim 5 has been cancelled without prejudice.

Claims 1-4 and 9 were objected to because of certain informalities. These informalities have been corrected as shown above, and it is submitted that the objections to these claims have been overcome.

Claims 1 - 10 stand rejected under 35 U.S.C. 102(b) as being anticipated by Grewe et al., U.S. Patent 5,670,730 (hereinafter referred to as "Grewe"). This rejection is respectfully traversed.

Grewe teaches a system in which music files are provided with individual headers 36 that include category, artist, and track address information (Fig. 3, col. 3 from ln. 45). The track address information is used to identify the start and/or end location of the file, so that the music player can locate and play the file.

A global header 22 and a table of contents 34 are maintained separate from the individual music files. The global header 22 includes general information about the selections on the chip and how they were encoded, for example the distributor of the music and the bit rate at which the tracks have been encoded. Track selections are listed as part of the table of contents by individual headers 36. (Col. 3 ln. 23, Fig. 3). That is, as can be seen from the description and in particular Figs. 3 and 4, the "table of contents" is nothing more than a sequential list of the individual headers, appended one after another to the table of contents. The table of contents does not appear to be hierarchical[1] at all.

[1] Based on Applicants' understanding, Grewe's use of the term "hierarchical" appears to refer only to the predefined format of the individual headers and/or the global header.

Although it is not clearly stated how this is accomplished, it is a goal of Grewe to permit selection of tracks by category or artist. From the description of Grewe's "table of contents", it appears that such selections can only be made by searching serially through the sequential list of headers in the "table of contents" to identify the individual tracks meeting the criteria. While this may be an acceptable solution for small numbers of tracks, this method is going to be cumbersome when large numbers of tracks are involved or when the database is updated frequently.

Unlike Grewe, the current invention provides a hierarchical definition file that has a tree structure, including category names that name the branch under which tracks are listed. For each track, each branch in which the track belongs is determined, and the track is filed in the appropriate location in the branch. These limitations, found in claims 1 and 10, are not taught or suggested by Grewe.

Similarly, Grewe does not teach or suggest the method of claim 4. While Grewe does mention that music can be selected using the information in the headers (col. 3 lns. 50 – 57), there is little disclosure as to how this is accomplished. Similarly, while Grewe does mention that information can be presented on a display, there is no mention of displaying categories, subcategories and tracks in an hierarchical order for selection as defined in claim 4. Grewe does not even appear to contemplate subcategories at all. In particular, Grewe does not teach or disclose any of the specific displaying or utilizing steps in claim 4.

Similarly, Grewe does not teach the limitations of claims 6 and 9. The filing system of Grewe merely appends each individual header to the last individual header in the "table of contents," which thus is merely an elementary list of track headers (See Figs. 3 and 4). Grewe does not teach automatically filing a track by category name under each selected category, to form a hierarchical track filing scheme, as claimed in claims 6 and 9.

As set forth in MPEP 2131, to anticipate a claim the reference must teach every element of the claim. Since, as discussed above, every element of independent claims 1, 6, 9 and 10 is not taught by Grewe, Applicants submit that these claims are not anticipated by Grewe and are thus allowable.

Further, it is submitted that claims 2 –4, 7 and 8 are allowable as being dependent on allowable base claims.

From at least the foregoing reasons, it is respectfully submitted that claims 1 - 4 and 6 –10 are allowable and allowance of the application is earnestly requested.

If there are any additional fees associated with this communication, please charge our Deposit Account No. 02-2666.

Respectfully submitted

BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

Date: May 15, 2003

Mark R. Vatuone
Reg. No. 53,719

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025
(408) 947-8200

2175

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application No.	09/755,723
Filing Date	January 5, 2001
First Named Inventor	Ron Goodman
Group Art Unit	2175
Examiner Name	Punit, Prakash C
Total Number of Pages in This Submission	11
Attorney Docket Number	6407P212

ENCLOSURES *(check all that apply)*

- ☒ Fee Transmittal Form
  - ☒ Fee Attached
- ☒ Amendment / Response
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☒ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
  - ☐ PTO/SB/08
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Basic Filing Fee
  - ☐ Declaration/POA
  - ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s)
- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) *(please identify below):*

Postcard.

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Mark R. Vatuone, Reg. No. 53,719 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	Mark R. Vatuone
Date	5/15/2003

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Typed or printed name	Sarah M. Montgomery		
Signature	Sarah M. Montgomery	Date	5/15/03

Based on PTO/SB/21 (09-03) as modified by Blakely, Sokoloff, Taylor & Zafman (wh) 05/07/2003.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT | ($) 110.00

Complete If Known	
Application Number	09/755,723
Filing Date	January 5, 2001
First Named Inventor	Ron Goodman
Examiner Name	Punit, Prakash C
Group/Art Unit	2175
Attorney Docket No.	6407P212

METHOD OF PAYMENT (check one)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account

Deposit Account Number: 02-2666

Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) required under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1001	750	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES

	Extra Claims		Fee from below		Fee Paid
Total Claims		- 20** =		X =	
Independent Claims		- 3 =		X =	
Multiple Dependent				=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple Dependent claim, if not paid
1204	84	2204	42	**Reissue independent claims over original patent
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($)

**or number previously paid, if greater; For Reissues, see below

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	110.00
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	1809	375	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	
Other fee (specify)					

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 110.00

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Mark R. Vatuone	Registration No. (Attorney/Agent)	53,719	Telephone	(408) 947-8200
Signature	Mark R. Vatuone			Date	5/15/03

Based on PTO/SB/17 (01-03) as modified by Blakely, Sokoloff, Taylor & Zafman (ver) 05/02/2003.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Exhibit 10

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,723	01/05/2001	Ron Goodman	017002022500	3728

20350 7590 07/29/2003

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER	
RONES, CHARLES	
ART UNIT	**PAPER NUMBER**
2175	10

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

PRC

Office Action Summary	Application No.	Applicant(s)	
	09/755,723	GOODMAN ET AL.	
	Examiner	Art Unit	
	Charles L. Rones	2175	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2003*.

2a)☒ This action is FINAL. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4)☐ Interview Summary (PTO-413) Paper No(s). _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other:

DETAILED ACTION

The amendment timely filed May 20, 2003. Claims 1-10 are pending in this office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Grewe et al. (U. S. Patent No. 5,670,730.)

As to claim 1, Grewe et al. teaches a method, performed by a processor in a portable digital music player, for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track (see Abstract, see Fig. 3, and see column 1, lines 6-21), said method comprising the acts of:

reading a definition file that defines an ordered hierarchical tree structure (see Fig. 2, see column 1, lines 47-49), with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of

tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata (see column 1, lines 49-67);

for each track, iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track (see Abstract, see Fig. 3, also see column 3, lines 45-49.)

As to claim 2, Grewe et al. teaches a method, where said act of searching further comprises the acts of:

utilizing track type information to file only tracks of a specified type under a particular branch (see Abstract, see column 3, lines 47-53.)

As to claim 3, Grewe et al. teaches a method further comprising the acts of:

for each branch, utilizing category structure information to file tracks in a specified attribute order (see column 4, lines 19-35.)

As to claim 4, Grewe et al. teaches a method, where said portable digital music player includes a display screen and a user interface for interacting with the display (see column 1, lines 13-21), further comprising the acts of:

displaying the categories and subcategories on the display in a hierarchical order (see column 2, lines 49-51, also see column 3, lines 38-44);

displaying all names of tracks associated with a category or sub-category when a user utilizes the interface to select a category or sub-category (see column 1 line 65 through column 2, line 3, also see column 3, lines 49-53);

utilizing the pointer to access and play a track when a user selects a track name through the user interface (see column 3, lines 53-57, also see column 3, lines 17-19) and

utilizing the pointer to access and play a collection of tracks within a category or subcategory when a user selects a category or subcategory through the user interface (see column 3, lines 55-57.)

As to claim 5, Grewe et al. teaches a method, implemented by a processor in a portable digital music player, for associating metadata with audio tracks (see Abstract) comprising the acts of:

opening a formatted file for each track comprising a file data portion and a file attributes portion, with the file attributes portion including a plurality of fields corresponding to category types and file types (see column 3, lines 45-49);

storing an unmodified audio track in the file data portion of the formatted file (see column 4, lines 19-21);

and

storing category type and file type information about the unmodified track in corresponding fields (see column 2, line 37 through column 3, line 28.)

As to claim 6, Grewe et al. teaches a method, performed by a processor in a portable digital music player, for filing audio tracks, stored on a computer readable media, under categories in an in memory tree structure, with each audio track having metadata associated therewith including category name data for naming (see Abstract, see column 1, lines 46-56), said method comprising the acts of:

upon startup or when a track is added or changed, searching the metadata of each track (see column 1, lines 58-65); and

for each track, automatically filing the track by category name under each selected category to form a hierarchical track filing scheme (see column 5, lines 34-54.)

As to claim 7, Grewe et al. teaches a method further comprising the act of:

selecting the categories to be the Album including the track, the title of the track, and the name of the artist that recorded the track (see column 3, lines 45-53.)

As to claim 8, Grewe et al. teaches a method, where said portable digital music player includes a display screen and a user interface for interacting with the display (see column 2, lines 49-51), further comprising the acts of:

displaying the categories on the display in a hierarchical order see column 2, lines 49-51, also see column 3, lines 38-44);

displaying all names of tracks associated with a category when a user utilizes the interface to select a category (see column 3, lines 49-53) ;

accessing and playing a track when a user selects a track name through the user interface (see column 3, lines 53-57, also see column 3, lines 17-19); and

accessing and playing a collection of tracks within a category when a user selects a category through the user interface ((see column 1 line 65 through column 2, line 3, also see column 3, lines 49-53.)

As to claim 9, Grewe et al. teaches a computer program product comprising:

a computer readable medium having program code embodied therein for filing audio tracks stored on a computer readable media, with each audio track having metadata associated therewith including category value data for naming attributes of the track and type data indicating the type of track (see Abstract), said program code comprising:

program code, executed by a processor, for reading a definition file that defines an ordered hierarchical tree structure, with the file including category names for naming the branch under which tracks are sorted, track type information specifying which type of tracks are to be sorted under the branch, and structure information defining how to file tracks based on associated metadata (see Abstract, see summary);

program code, executed by a processor, for each track, for iteratively determining, base on metadata describing the track, if the track belongs in the branch, and, for each branch in which the track belongs, traversing the branch to determine the appropriate location to file the track (see Fig. 3, see column 3, lines 45-49, also see column 4, lines 10-14.)

As to claim 10, Grewe et al. teaches a computer program product comprising:

a computer readable medium for having program code embodied therein for filing audio tracks, stored on a computer readable media, under categories in an in-memory tree structure,

with each audio track having metadata associated therewith including category name data for naming (see Abstract, see column 1, lines 46-56), said program code comprising:

program code, executed by a processor, upon startup or when a track is added or changed, for searching the metadata of each track (see column 1, lines 58-65); and

program code, executed by a processor, for each track, for automatically filing the track by category name under each selected category to form a hierarchical track filing scheme (see column 5, lines 34-54.)

Response to Arguments

Applicant's arguments filed May 20, 2003 have been fully considered but they are not persuasive.

Firstly, Applicant argues that Grewe does not disclose using a hierarchical definition file as stated in the claim.

In response, Examiner maintains that Grewe discloses such as stated above in the rejection of the claim wherein the hierarchical arrangement of headers and the table of contents are deemed to be hierarchical.

Secondly, Applicant argues that Grewe does not disclose display categories or subcategories and tracks in an hierarchical order for selection.

In response, Examiner maintains that Grewe discloses such wherein Grewe discloses that the information is displayable. See 2:36-54.

Lastly, Applicant argues that Grewe does not disclose automatically filing a track by category name under a selected category to form a hierarchical track filing scheme.

In response, Examiner maintains that Grewe discloses such wherein Grewe discloses that the headers are arranged hierarchically and that the headers contains a music filed to which the track of music belongs, such as jazz, classical, country, etc. which are deemed to be categories of music arranged hierarchically.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles L. Rones whose telephone number is (703-306-3030. The examiner can normally be reached on Mondays – Fridays from Monday-Thursday 8am-4pm pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached on (703-305-3830. The fax numbers of the group is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Charles Rones
Charles L. Rones
Primary Examiner
Art Unit 2175

Notice of References Cited	Application/Control No. 09/755,723	Applicant(s)/Patent Under Reexamination GOODMAN ET AL.	
	Examiner Charles L. Rones	Art Unit 2175	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-2003/0016940 A1	01-2003	Robbins, Gerald V.	386/46
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Exhibit 11

05/13/03 16:10 FAX ☑010 2175

OIPE JC139 MAY 2 0 2003 PATENT & TRADEMARK OFFICE

#11 8/11/03 A.W.

PTO/SB/82 (10-00)
Approved for use through 10/31/2002. OMB 0651-0035
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REVOCATION OF POWER OF ATTORNEY OR AUTHORIZATION OF AGENT		
	Application No.	09/755,723
	Filing Date	January 5, 2001
	First Named Inventor	Ron Goodman
	Group Art Unit	2175
	Examiner Name	Punit, Prakash C
	Attorney Docket Number	6407P212

I hereby revoke all previous powers of attorney or authorizations of agent given in the above-identified application:

☒ A Power of Attorney or Authorization of Agent is submitted herewith.

AND

☒ Please change the correspondence address for the above-identified application to:

☒ Customer Number 08791 → *08791*

OR

☐ Firm *or* Individual Name	BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP				
Address	12400 Wilshire Boulevard, Seventh Floor				
Address					
City	Los Angeles	*State*	California	*Zip Code*	90025
Country	U.S.A.	*Telephone*	(408) 947-8200	*Fax*	(408) 947-8280

I am the:

☐ Applicant.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under of 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

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MAY 2 2 2003
Technology Center 2100

SIGNATURE of Applicant or Assignee of Record	
Name	C. Hock Leow
Signature	[signature]
Date	5/13/03

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of ______ forms are submitted.

Docket No.: 6407P212

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

RON GOODMAN, ET AL.

Application No.: 09/755,723

Filed: January 5, 2001

For: **AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA**

Art Group: 2175

Examiner: Punit, Prakash C

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MAY 2 2 2003
Technology Center 2100

POWER OF ATTORNEY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant of the above-identified Application, hereby appoints the persons listed on Appendix A attached hereto (which is incorporated by reference and a part of this document), with full power of substitution and revocation, to prosecute this Application and to transact all business in the Patent and Trademark Office connected herewith.

Please direct all future communications concerning this Application to:

André L. Marais, Reg. No. 48,095
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
12400 Wilshire Boulevard, Seventh Floor
Los Angeles, CA 90025
(714) 557-3800

Creative Technology Ltd.

Date: 5/8/03

Appendix A

I hereby appoint with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith, BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP, a firm including: Ramin Aghevli, Reg. No. 43,482; William E. Alford, Reg. No. 37,764; Farzad E. Amini, Reg. No. 42,261; W. Thomas Babbitt, Reg. No. 39,591; Jordan M. Becker, Reg. No. 39,602; Michael A. Bernadicou, Reg. No. 35,934; Roger W. Blakely, Jr., Reg. No. 25,831; R. Alan Burnett, Reg. No. 46,149; Gregory D. Caldwell, Reg. No. 39,926; Cory G. Claassen, Reg. No. 50,295; Thomas M. Coester, Reg. No. 39,637; Mimi D. Dao, Reg. No. 45,628; Stephen M. De Klerk, Reg. No. 46,503; Daniel M. De Vos, Reg. No. 37,813; Sanjeet Dutta, Reg. No. 46,145; Tarek N. Fahmi, Reg. No. 41,402; Thomas S. Ferrill, Reg. No. 42,532; George L. Fountain, Reg. No. 36,374; Adam Furst, Reg. No. 51,710; Angelo J. Gaz, Reg. No. 45,907; Andre M. Gibbs, Reg. No. 47,593; James Y. Go, Reg. No. 40,621; Jeffery S. Hallesen, Reg. No. 48,765; James A. Henry, Reg. No. 41,064; William E. Hickman, Reg. No. 48,771; Wilmore F. Holbrow III, Reg. No. 41,845; Sheryl Sue Holloway, Reg. No. 37,850; George W Hoover II, Reg. No. 32,992; Eric S. Hyman, Reg. No. 30,139; Aslam A. Jaffery, Reg. No. 51,841; Walter T. Kim, Reg. No. 42,731; Eric T. King, Reg. No. 44,188; Steven Laut, Reg. No. 47,736; Suk S. Lee, Reg. No. 47,745; Gordon R. Lindeen III, Reg. No. 33,192; Jan C. Little, Reg. No. 41,181; Joseph Lutz, Reg. No. 43,765; Lawrence E. Lycke, Reg. No. 38,540; Michael J. Mallie, Reg. No. 36,591; Andre L. Marais, Reg. No. 48,095; Raul D. Martinez, Reg. No. 46,904; Paul A. Mendonsa, Reg. No. 42,879; Jonathan S. Miller, Reg. No. 48,534; Heather M. Molleur, Reg. No. 50,432; Richard A. Nakashima, Reg. No. 42,023; Thinh V. Nguyen, Reg. No. 42,034; Robert B. O'Rourke, Reg. No. 46,972; Daniel E. Ovanezian, Reg. No. 41,236; Philip A. Pedigo, Reg. No. 52,107; Marina G. Portnova, Reg. No. 48,750; Joseph A. Pugh, Reg. No. 52,137; James H. Salter, Reg. No. 35,668; William W. Schaal, Reg. No. 39,018; James C. Scheller, Reg. No. 31,195; Saina S. Shamilov, Reg. No. 48,266; Kevin G. Shao, Reg. No. 45,095; Stanley W. Sokoloff, Reg. No. 25,128; Judith A. Szapesi, Reg. No. 39,393; Edwin H. Taylor, Reg. No. 25,129; Lisa Tam, Reg. No. 52,291; John F. Travis, Reg. No. 43,203; Kerry D. Tweet, Reg. No. 45,959; Mark C. Van Ness, Reg. No. 39,865; Thomas A. Van Zandt, Reg. No. 43,219; Mark R. Vatuone, Reg. No. 53,719; Lester J. Vincent, Reg. No. 31,460; John P. Ward, Reg. No. 40,216; Mark L. Watson, Reg. No. 46,322; Thomas C. Webster, Reg. No. 46,154; Chui-Kiu Teresa Wong, Reg. No. 48,042; and Norman Zafman, Reg. No. 26,250, my patent attorneys, and Brent Vecchia, Reg. No. 48,011 and Lehus Wang, Reg. No. 48,023, my patent agents, with offices located at 12400 Wilshire Boulevard, 7th Floor, Los Angeles, California 90025, telephone (310) 207-3800; and James R. Thein, Reg. No. 31,710, my patent attorney; also appoint P. Francois de Villiers, Reg. No. 48,209 of Creative Labs Inc., a corporation having principal offices at 1901 McCarthy Boulevard, Milpitas, California 95035; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith. with full power of substitution and revocation; to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

Docket No. 6407P212

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Creative Technology Ltd

Application No./Patent No.: 09/755,723 Filing/Issue Date: 1/5/2001

Entitled: AUTOMATIC HIERARCHICAL CATEGORIZATION OF MUSIC BY METADATA

Creative Technology Ltd, a Limited Liability Corporation,
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

of Singapore,

states that it is:

1. ☒ the assignee of the entire right, title and interest; or
2. ☐ an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel 011788, Frame 0174, or for which a copy thereof is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: _____ To: _____
   The document was recorded in the Patent and Trademark Office at
   Reel 011788, Frame 0174, or for which a copy thereof is attached.
2. From: _____ To: _____
   The document was recorded in the Patent and Trademark Office at
   Reel _____, Frame _____, or for which a copy thereof is attached.
3. From: _____ To: _____
   The document was recorded in the Patent and Trademark Office at
   Reel _____, Frame _____, or for which a copy thereof is attached.
4. From: _____ To: _____
   The document was recorded in the Patent and Trademark Office at
   Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☐ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]

The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of assignee.

05/09/03
Date

Signature

André L. Marais, Reg. No. 48,095
Typed or printed name

Title

Exhibit 12

#12
11/13/03
AJ.

NOTICE OF APPEAL FROM THE EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES	Docket Number (Optional) 6407P212

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. 10/29/03

Signature Dawn Shaw

Typed or printed name Dawn Shaw

In re Application of
Ron Goodman, et al.

Application Number	Filed
09/755,723	01/05/2001

For
AUTOMATIC HIERARCHICAL CATEGORIZATION

Art Unit	Examiner
2175	Charles Rones

Applicant hereby appeals to the Board of Patent Appeals and Interferences from the last decision of the examiner.

The fee for this Notice of Appeal is (37 CFR 1.17(b)) $330.00

☐ Applicant claims small entity status under 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is:

☒ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☒ The Director has already been authorized to charge fees in this application to a Deposit Account. I have enclosed a duplicate copy of the fee transmittal.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 02-2666. I have enclosed a duplicate copy of the fee transmittal.

☐ A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is enclosed.

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Technology Center 2100

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2039.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.

☐ attorney or agent acting under 37 CFR 1.34(a). Registration number if acting under 37 CFR 1.34(a) _____

Signature

André L. Marais, Reg. No. 48,095
Typed or printed name

10/29/03
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

Based on PTO/SB/31 (09-03) as modified by Blakely, Sokoloff, Taylor & Zafman (ver) 02/11/2003. SEND TO: Mail Stop Appeal, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

11/05/2003 BABRAHA1 00000124 09755723
01 FC:1401 330.00 OP

AF/2175 2700

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application No.	09/755,723
Filing Date	January 5, 2001
First Named Inventor	Ron Goodman
Art Unit	2175
Examiner Name	Charlea Rones
Total Number of Pages in This Submission	4
Attorney Docket Number	6407P212

ENCLOSURES *(check all that apply)*

- ☒ Fee Transmittal Form
  - ☒ Fee Attached
- ☐ Amendment / Response
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
  - ☐ PTO/SB/08
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Basic Filing Fee
  - ☐ Declaration/POA
- ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s)
- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☒ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) *(please identify below)*:
  - Return Postcard

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	André L. Marais, Reg. No. 48,095 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	10/29/03

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Typed or printed name	Dawn Shaw		
Signature	Dawn Shaw	Date	10/29/03

Based on PTO/SB/21 (09-03) as modified by Blakely, Sokoloff, Taylor & Zafman (ver) 09/11/2003.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT ($) 330.00

Complete if Known	
Application Number	09/755,723
Filing Date	January 5, 2001
First Named Inventor	Ron Goodman
Examiner Name	Charles Rones
Group/Art Unit	2175
Attorney Docket No.	6407P212

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account

Deposit Account Number: 02-2666

Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) required under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES

	Extra Claims		Fee from below		Fee Paid
Total Claims	- 20** =	0	x 18.00	=	$0.00
Independent Claims	- 3* =	0	x 88.00	=	$0.00
Multiple Dependent				=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	88	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple Dependent claims, if not paid
1204	88	2204	43	**Reissue Independent claims over original patent
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 0.00

**or number previously paid, if greater; For Reissues, see below

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	1,010	2255	505	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	* 330.00
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	1809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 330.00

SUBMITTED BY

					Complete (if applicable)
Name (Print/Type)	André L. Marais	Registration No. (Attorney/Agent)	48,095	Telephone	(408) 947-8200
Signature				Date	10/29/03

Based on PTO/SB/17 (08-03) as modified by Blakely, Sokoloff, Taylor & Zafman (+4) 08/11/2003.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

12/2

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/755,723	01/05/2001	Ron Goodman	017002022500

CONFIRMATION NO. 3728

08791
BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

OC000000010623703

Date Mailed: 08/01/2003

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/20/2003.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

A. White

ANGELA S WHITE
2100 (703) 308-8264

OFFICE COPY

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/755,723	01/05/2001	Ron Goodman	017002022500

CONFIRMATION NO. 3728

OC000000010623641

20350
TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

Date Mailed: 08/01/2003

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/20/2003.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

ANGELA S WHITE
2100 (703) 308-8264

OFFICE COPY

Exhibit 13