

Music and Digital Audio Solutions

Computers and Music! Why?

After All, Mozart Didn't Have a Computer!

- Expand your music knowledge
- Extend your capabilities with MIDI
- Experience conducting, directing, and more
- Experiment with new sounds
- Exchange files with other musicians
- Excite audiences with live performances



A Creative Legacy...



Chick
Corea
Jazz Legend
Macintosh

Macintosh

The Professional's Choice

- Aerosmith • Danny Elfman • George Michael • Nick Rhodes
- Al Di Meola • Dave Stewart • Gloria Estefan • Nine Inch Nails
- Amy Grant • David Bowie • Graham Nash • Paul McCartney
- B.B. King • David Crosby • Hans Zimmer • Quincy Jones
- Beastie Boys • David Mash • Herbie Hancock • Rolling Stones
- Billy Cobham • Donald Fagen • Jan Hammer • Rush
- Branford Marsalis • Dust Brothers • Keith Emerson • Sarah McLachlan
- Carlos Santana • Dwight Yoakam • Kenny G • Seal
- Celine Dion • Eric Clapton • Madonna • Sheryl Crow
- Chick Corea • Faith No More • Mariah Carey • Spice Girls
- Clint Black • Garbage • Michael Jackson • Sting
- Coolio • Gary Burton • Michael Kamen • Thomas Dolby
- Counting Crows • George Martin • Michael McDonald • U2

The Integrated Solution

Macintosh: From Inspiration to Publication

- Composition and notation
- Collaboration
- Recording
- Mastering and production
- PowerPC G3 performance

Apple in Music

The Only Integrated Solution

- Mac OS 8.6 – Built to rock
- QuickTime 4 Pro – MIDI and digital audio
- PowerPC G3 – Options from student to pro
- Software – World-class applications
- Mastering and delivery – CD and DVD
- Beyond music – Theater lighting, video...

Mac OS
8.6

QuickTime 4 Pro

Apple Music Technologies



QuickTime 4 Pro

- Integrated MIDI and audio support
- Roland Sound Canvas and GS format extensions
- Native MP3 file support
- QDesign 2.0 Music Codec
- Cross-platform authoring and playback

What Is MIDI?

- Musical Instrument Digital Interface
- Serial Protocol (31,250 bps)
- Controls:
 - Note on, note off
 - Key pressure (Aftertouch)
 - Control change
 - Program change
 - Pitch bend
 - System exclusive



QuickTime 4 Pro

Import and Play Standard MIDI Files



New Age

[J-Cycle.mid](#) (64K)

Jazz

[2nd Time.mid](#)
(20K)

Classical

[Brandenburg.mid](#)
(120K)

QuickTime 4 Pro

Native MP3 File Support

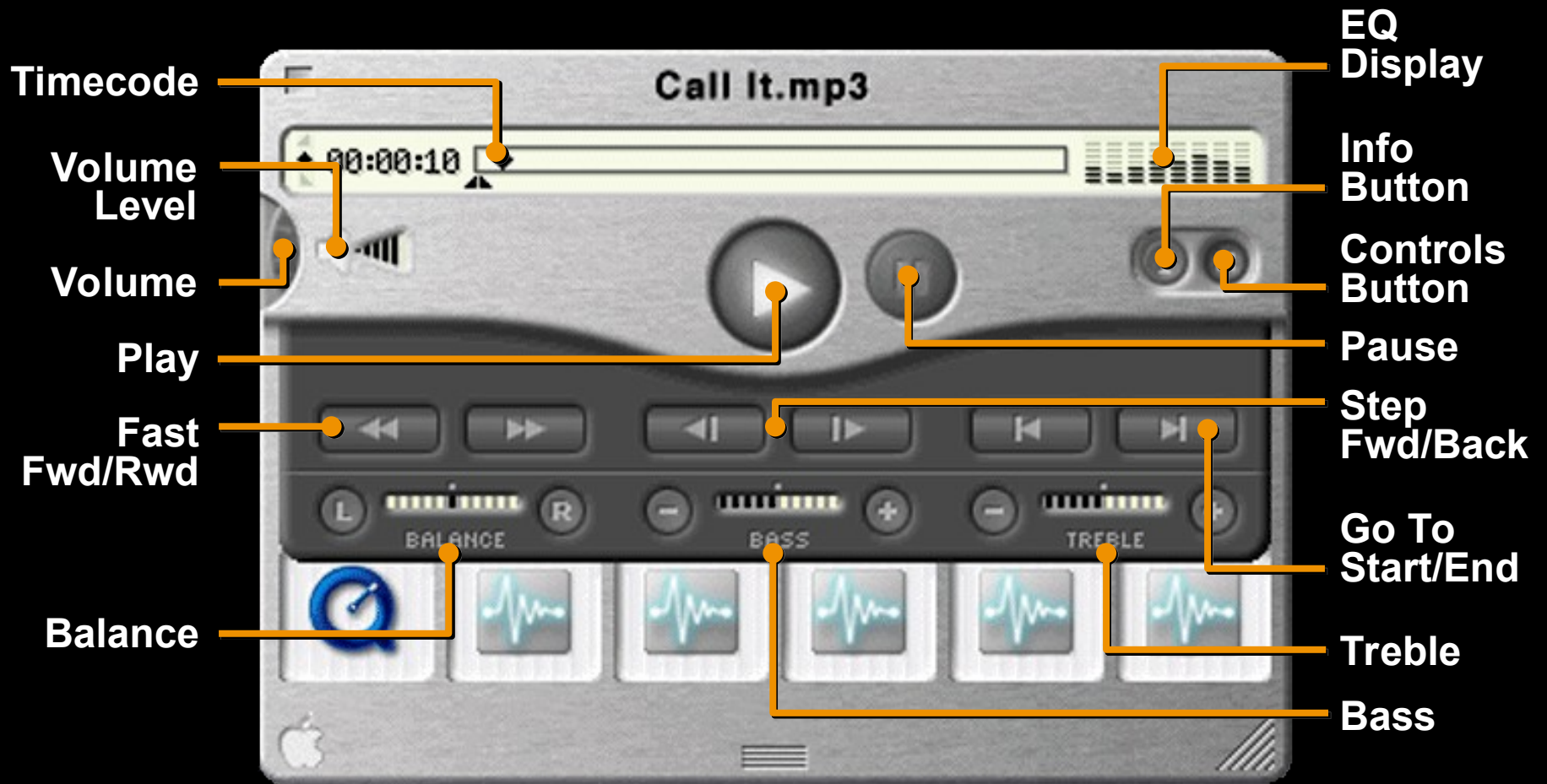
- New QuickTime Player
- Many encode choices
 - AudioCatalyst 2.0
 - Media Cleaner Pro 4.0
 - SoundJam
 - Peak 2.0



QuickTime

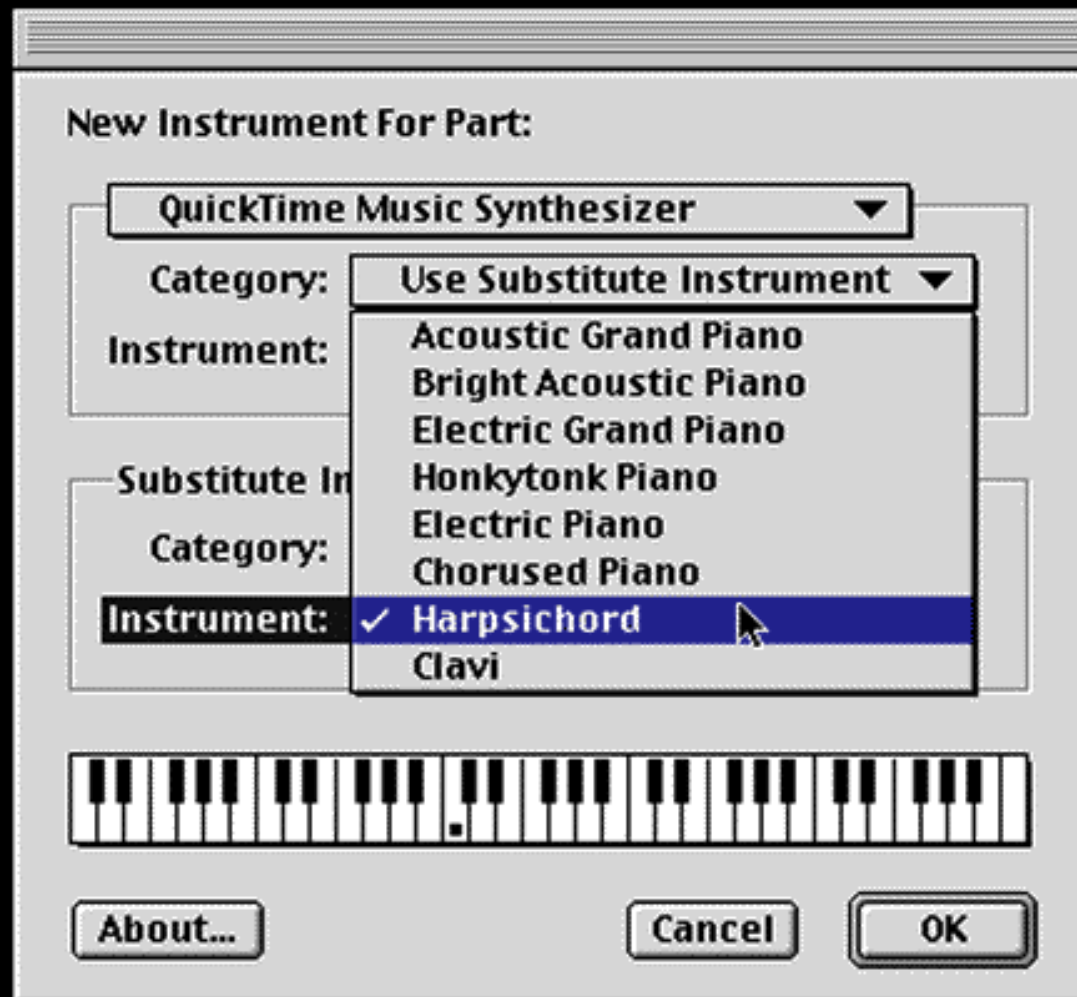
QuickTime 4 Pro

New QuickTime Player



QuickTime 4 Pro

Roland Sound Canvas and GS Extensions



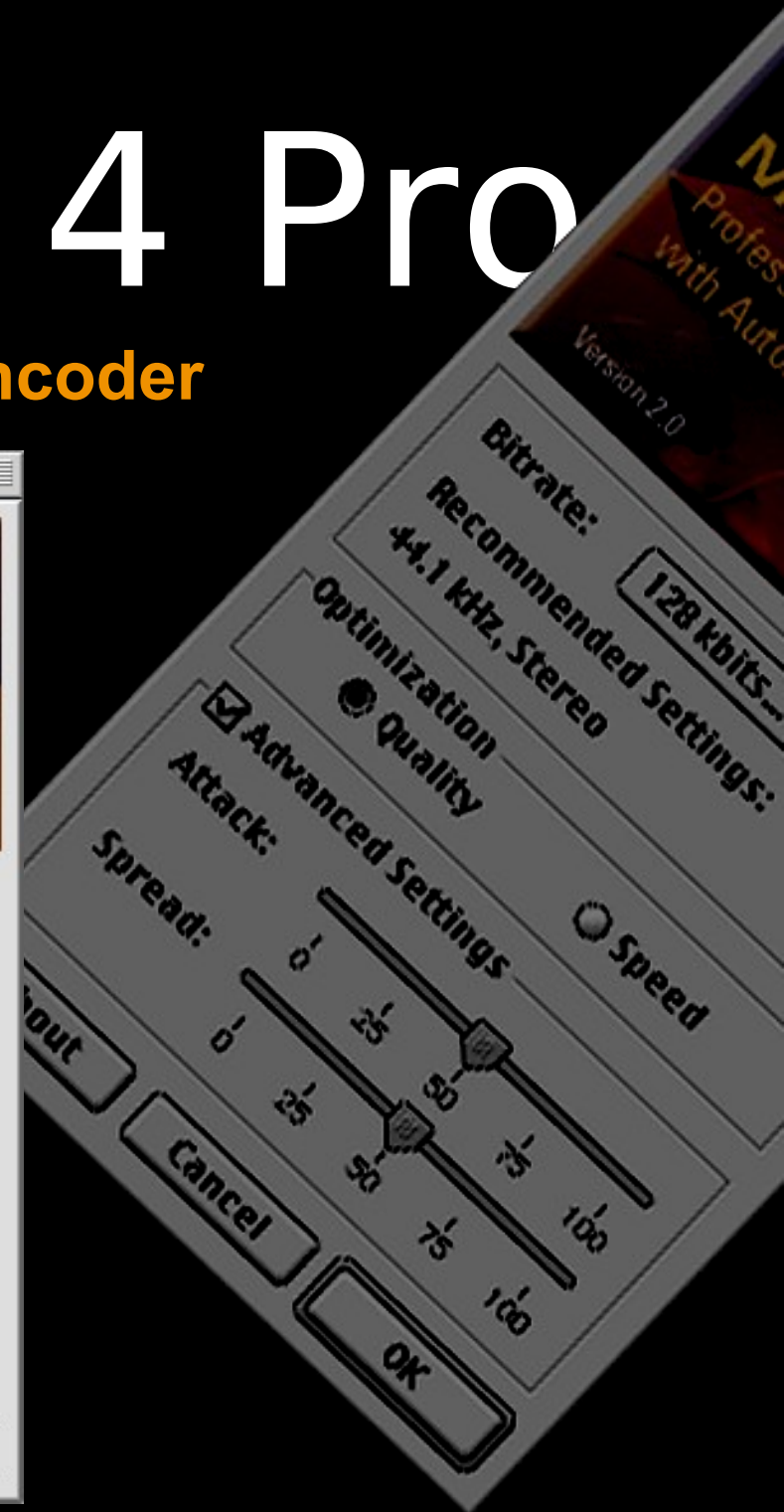
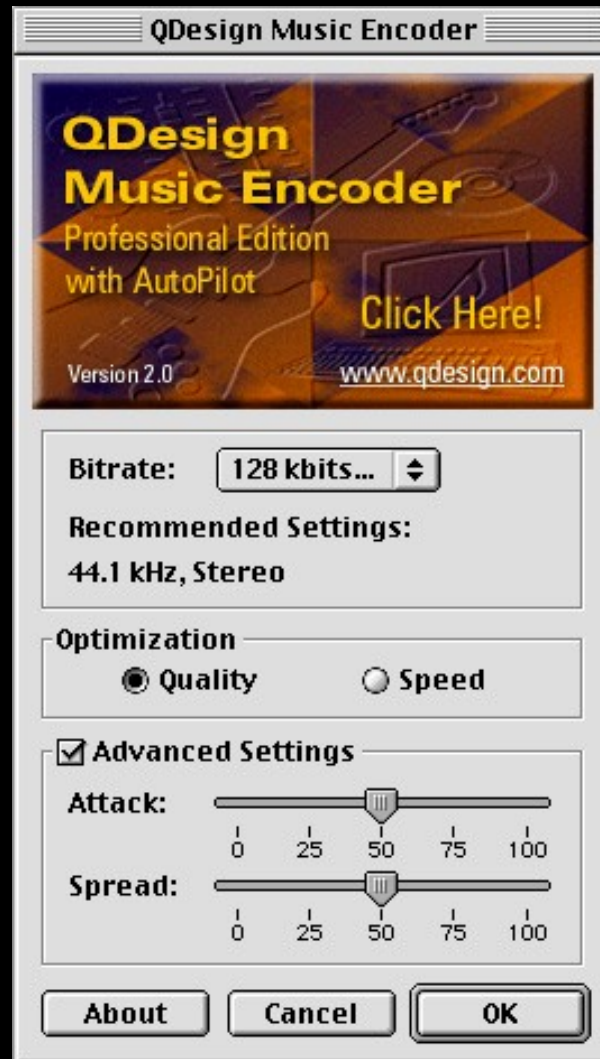
QuickTime 4 Pro

Support for Other Software Instruments



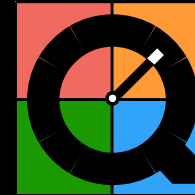
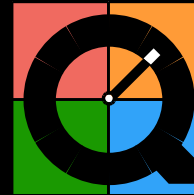
QuickTime 4 Pro

Digital Audio – QDesign 2 Music Encoder



QuickTime 4 Pro

Digital Audio – QDesign Music Samples



Sample Rate (kHz)	44.1	22.05	22.05
Length (sec)	120	120	120
Channel	2	1	1
Data	16-bit	16-bit	16-bit
Compression	none	IMA	QDesign Music
Data Size	20.1MB	1.3MB	466.6K
Date Rate	172.2 Kbps	11.4 Kbps	3.9 Kbps

Wessin' It by Sal Soghoian—used by permission

QuickTime 4 Pro

Compatible File Formats

MP3	IMA	Sound Designer
GSM	aLaw, AU	Wave
G.728	General MIDI	ADPCM
G.723	Karaoke	AIFF

Getting Started

Hardware Setup



Wind
Controller
USB MIDI
Interface



Keyboard
Controller

PowerPC

G3

Performan

ce

iMac

The Music Creation Workstation

- PowerPC G3 processors
- Internet ready
- Built-in USB and 16-bit audio
- Accelerated MIDI with USB
- 10/100BASE-T Ethernet



PowerBook G3

The Senior Road Warrior

Series

- PowerPC G3 processors
- Built-in USB and 16-bit audio input/output
- Latest I/O technology; FireWire CardBus option
- DVD-ROM option



Power Macintosh

Professional Production Powerhouse

G3

- PowerPC G3 processors
- Built-in FireWire, USB, and 16-bit audio
- Accelerated MIDI with USB
- DVD-ROM option



World-Class
Software
Titles

Extensive Titles

World-Class Software, Many Titles Mac Only

- Musical instruction
- Software-based instruments
- Composition and scoring
- Digital recording and editing
- Sound design
- Live performance



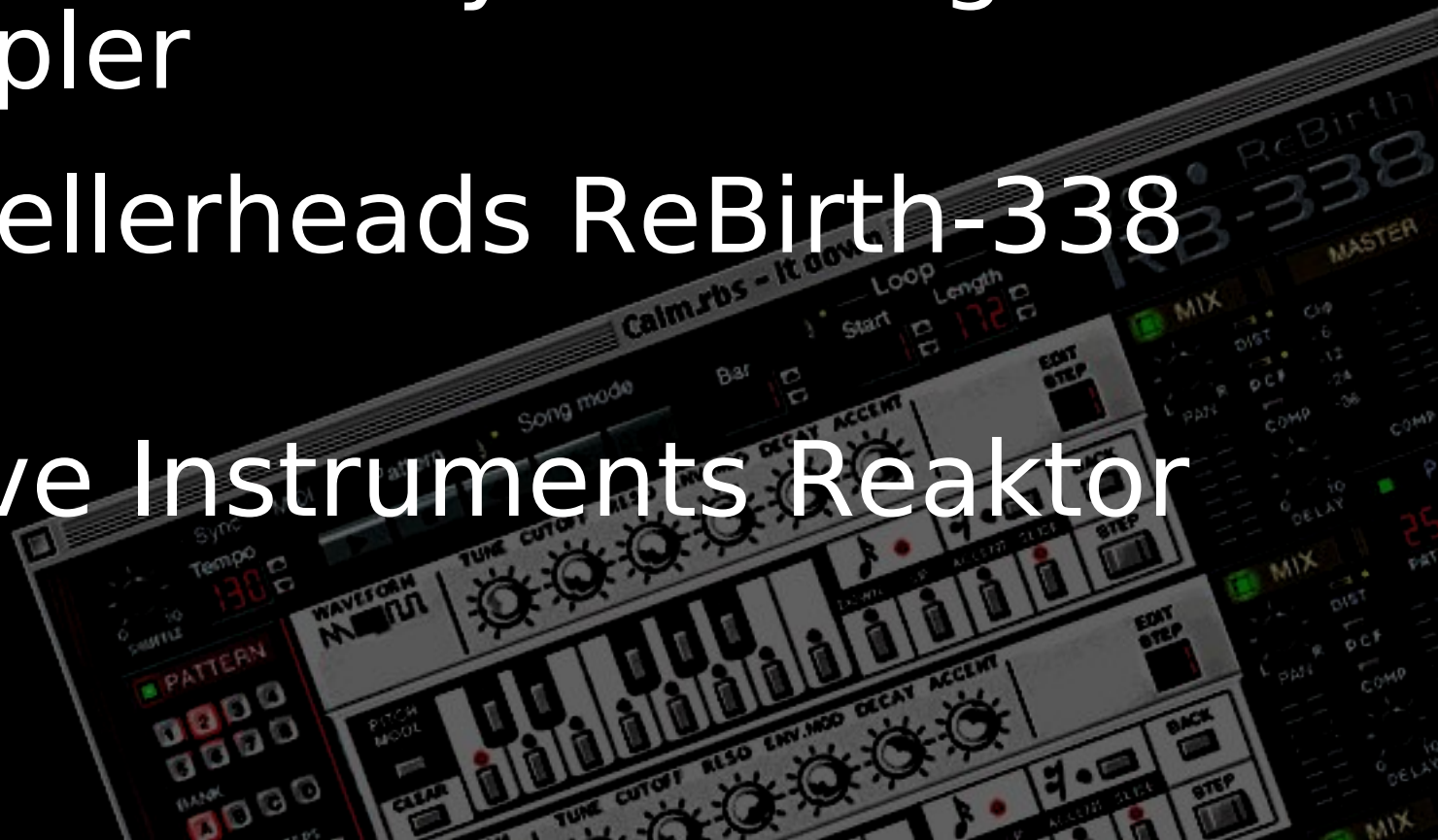
Musical Instruction

- Learn to play your favorite instrument through CD-based interactive instruction
- Accompaniment
 - Play while a virtual band accompanies you



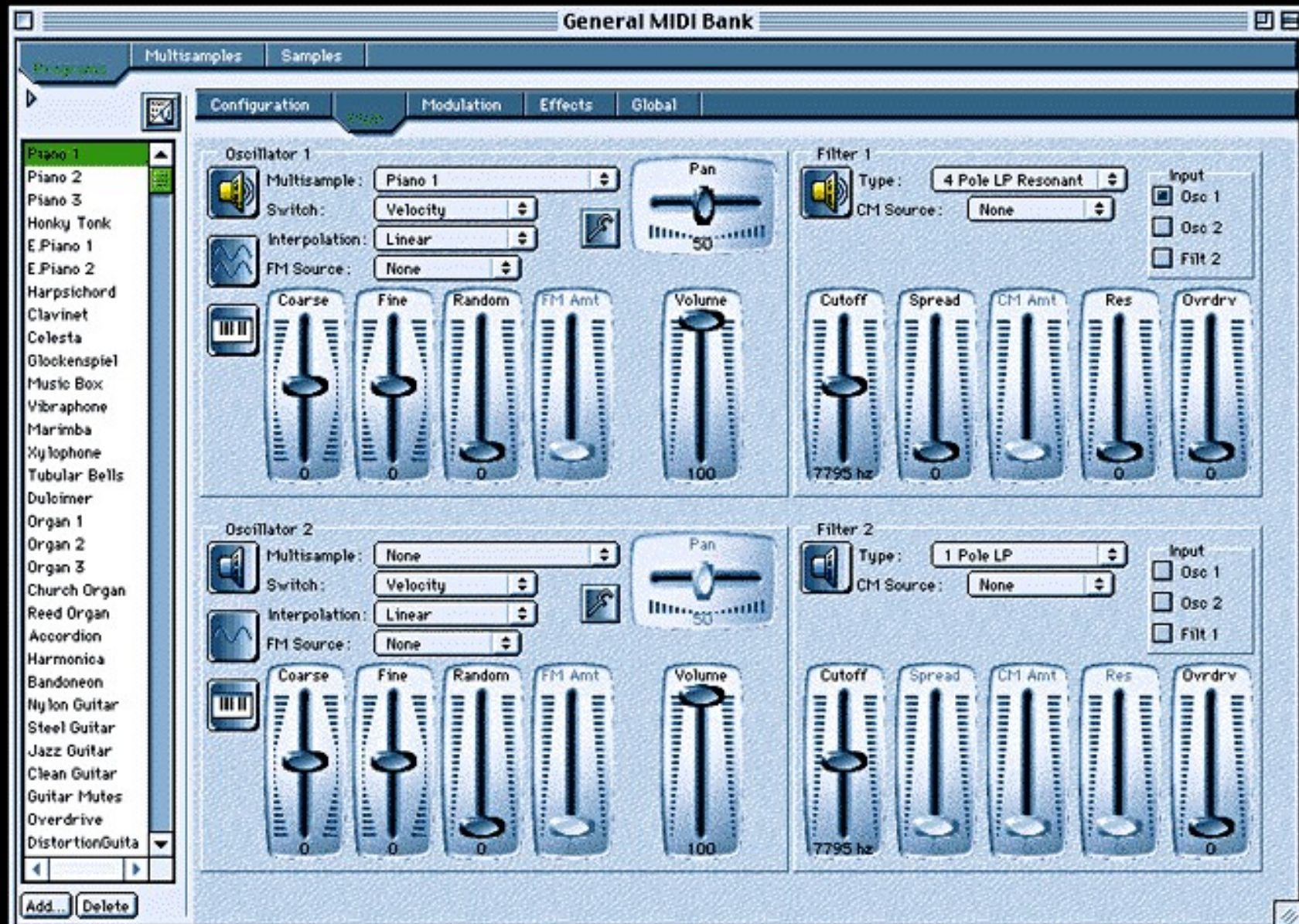
Software-based Instruments

- Bitheadz Unity DS-1 Digital Sampler
- Propellerheads ReBirth-338 2.0
- Native Instruments Reaktor



Software-based Instruments

Unity DS-1 Digital Sampler



Software-based Instruments

ReBirth-338 2.0



Software-based Instruments

Reaktor

The screenshot displays the Reaktor software interface, which is used for creating software-based instruments. The interface is divided into several panels and a central signal flow diagram.

Top Menu and Status: The top bar includes a menu (File, Edit, Insert, Settings, System, Window, Help), a power button, a sample rate of 15.1, and a MIDI channel of 1.

Instrument Panels:

- Hihat - Panel:** Controls for D (24.5), B (0.52), R (36.5), F-Env (2700), Cutoff (108.5), and Reson (0.33).
- Agogo - Panel:** Controls for D (20.5), B (0.73), R (32), Pitch A (25), and Pitch B (20).
- Synare - Panel:** Controls for Duymm (34), Freq (130), and N-Dec (27.5).
- Para Boost - Panel:** Controls for Mid Frq (33), Q (0.22), and Boost (1.9).

Ensemble - Panel: A central panel for managing the ensemble, featuring sliders for BDrum (-4), Synare (-0.5), Agogo (-4), Hihat (-6), and Main (-11), along with a Tune knob (0). A list on the right includes SimpleDrum, Para Boost, Synare, Agogo, and Hihat.

Signal Flow Diagram: The bottom section shows a signal flow diagram. It includes a Mixer 4 block with four inputs (Lv1, Lv2, Lv3, Lv4) and one output. The inputs are connected to the outputs of the Hihat, Agogo, Synare, and BDrum panels. The outputs of the SimpleDrum and Para Boost panels are also connected to the inputs of the Mixer 4. The Mixer 4 output is connected to a Tuning block (Tun) and a Main block, which then connect to the L and R channels of an Audio Out block.

Composition and Scoring

- Mark of the Unicorn
FreeStyle
- Coda Finale 98
- Cakewalk Overture 2



Composition and Scoring

FreeStyle

The screenshot displays the FreeStyle software interface. The main window, titled "Brandenburg.mid 2", shows a musical score for "Brandenburg". The score is written in 3/4 time and features a complex, rhythmic melody. The score is displayed in a two-staff format (treble and bass clefs) and is divided into measures, with some measures containing triplets. The score is titled "Brandenburg" and is displayed in a large, clear font. The interface includes a menu bar (File, Edit, Region, Record Song, Setup, Windows, Text, Help) and a control palette on the left. The control palette contains various playback controls, including a record target selection, a tempo setting of 60.00, and a section list for "Brandenburg.mid". The section list shows tracks 0 through 7, each with a "Rec Player", "Take", and "Play" button. The score is displayed on a white background with a blue border. The status bar at the bottom indicates "Page 1" and "100%".

Digital Recording and Editing

- Digital Design and Tools
- Arboretum Harmony
- Wide array of powerful plug-ins



Digital Recording and Editing

Digidesign Pro Tools

The screenshot displays the Pro Tools software interface for a session titled "Edit:Demo Session". The interface includes a menu bar (File, Edit, Effect, Options, Setups, Display, Region List, Help), a toolbar with various editing tools, and a central workspace showing three tracks: Drums, Bass, and Gtrs. Each track contains a waveform and is divided into 4-bar segments. A transport control window is visible at the bottom, showing a table of time markers.

transport = Pro Tools	1	6	
play start	0 : 00.000	2	7
record start	0 : 00.000	3	8
record length	:	4	9
record end	:	5	10
play end	:	:	:

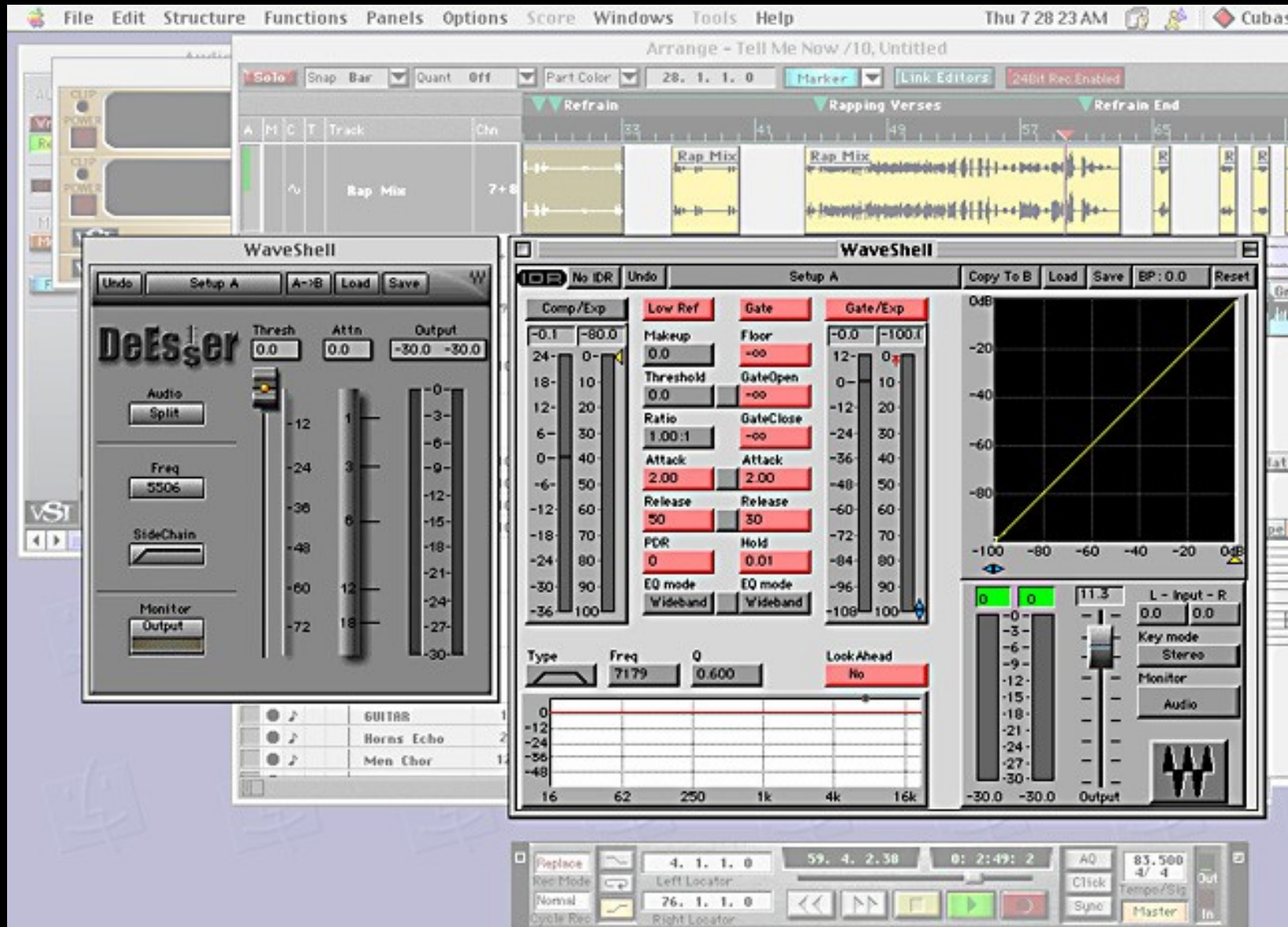
Digital Recording and Editing

Arboretum Harmony



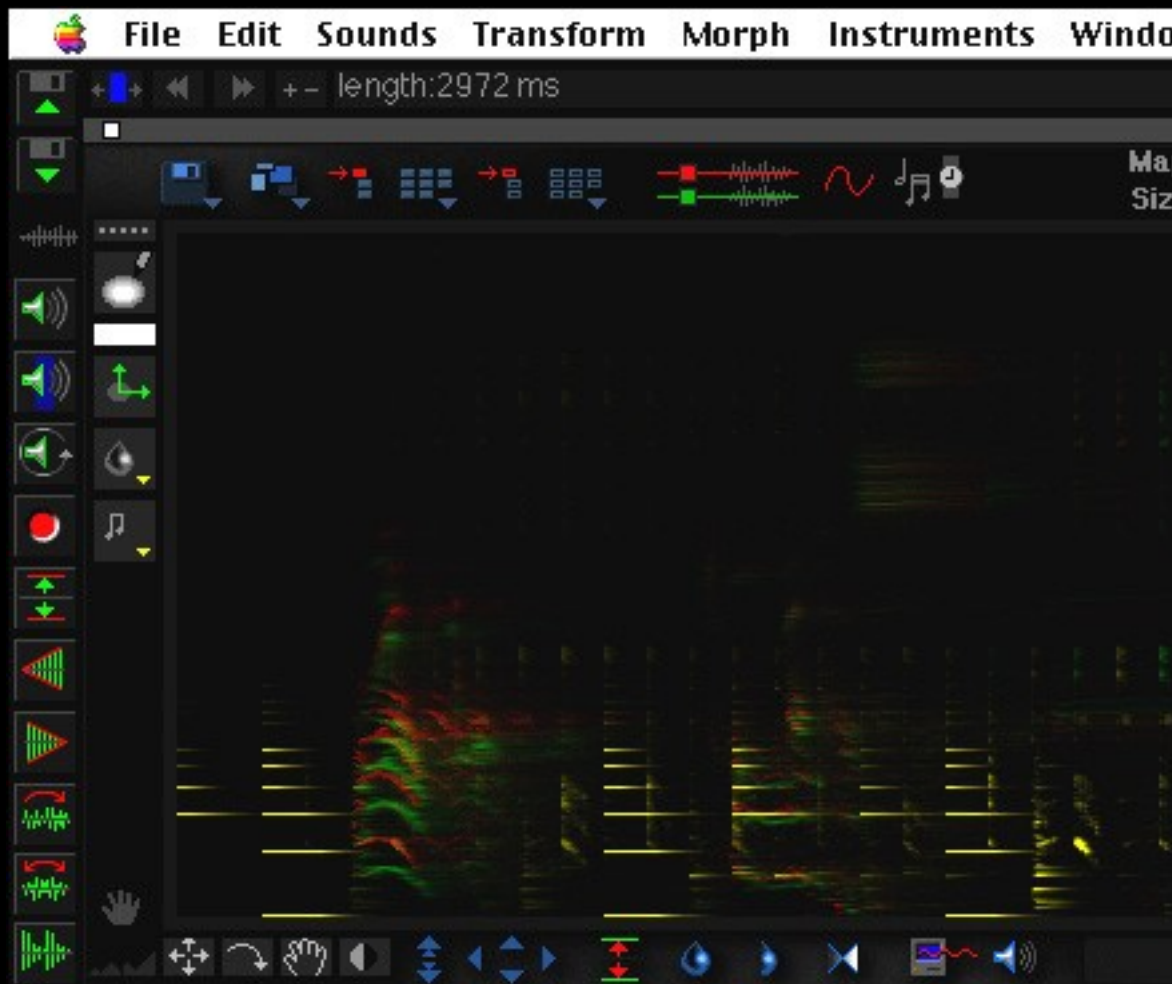
Digital Recording and Editing

Waves Plug-ins



Sound Design

MetaSynth



Live Performance



- Steinberg Cubase VST/24
- Mark of the Unicorn Performer
- Logic Audio

Live Performance

Cubase VST/24

CUBASE
VST/24
MUSIC RECORDING AND EDITING SYSTEM

40



Mastering and Delivery

Mastering and Delivery

- CD mastering
 - Adaptec Toast and Jam
- DVD
 - Sonic DVD Creator from Sonic Solutions
- QuickTime on the web
 - Audio (MP3, QDesign 2, RTP Streaming)
 - MIDI (QuickTime Instruments)



Beyond Music

Beyond Music

LanBox LC — DMX Lighting Control

The screenshot displays the LanBox LC software interface, which is used for DMX lighting control. The main window is titled "Stage: v1.3 Demo Stage" and features a control panel with 16 channels (01-16) and various fixture controls including DMX channels, Pro400 fixtures, and Trackspots. A "Control" panel on the right shows sequencer and editor settings, including a current scene of 3276 and a transition time of 3.0 seconds. A "Cast: v1.3 Demo Stage" window at the bottom provides a detailed list of fixtures and their configurations.

Label	Type	Lanbox	Channel	Status
9...16	8 pack	LanBox-LCII-1	9 16	
Left Back	Pro400	LanBox-LCII-1	33 39	
Right Back	Pro400	LanBox-LCII-1	40 46	
Scan Left	Trackspot	LanBox-LCII-1	47 53	
Scan Right	Trackspot	LanBox-LCII-1	54 60	

Beyond Music

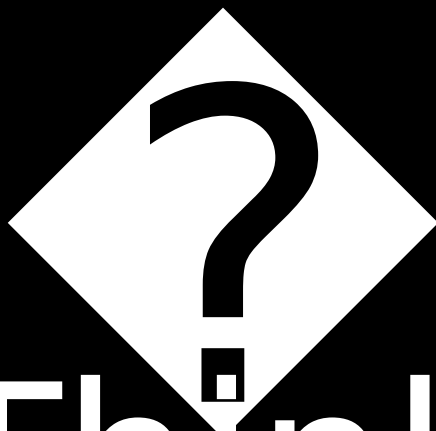
Video Control: X<>Pose Visual Sampler



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Think
different.

Q&A