



**LIQUID AUDIO**

# **Music on the Net**

A Topographic Tour of  
the Online Music World

*Produced by:*



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# P R E F A C E

From Latin chants to baroque music to the Charleston, music has been an uncanny reflection of contemporary society. While archaeologists have discovered musical instruments dating back almost 30,000 years, the earliest recorded reference comes from a Greek philosopher, Aristoxenes, who theorized about the essence of music three centuries before the birth of Christ.

How would Aristoxenes have reacted, if he were to stumble across the Rolling Stones' popular Web site for their 1994 Voodoo Lounge tour?

That site, one of the Web's first music destinations, attracted more than 100,000 visits (note "caller number 0135253" on the Voodoo Lounge home-page screen, captured circa Dec. 4, 1994, three weeks after their famous Nov. 18 "cybercast") in its first few weeks.

Since the Stones' debut, more than 32,000 music-related sites have appeared in cyberspace. The impact of Web music delivery is already rippling throughout the music industry. By some estimates, the Net will be responsible for as much as 15 percent of music sales by the year 2002. By that time, if current growth rates continue, more than 90,000 music Web sites will be peddling their wares direct to consumers throughout the world.

Need more evidence? Please, allow me to introduce myself, I'm a world of wealth and fame...



# F O L I O

## Legend

The *Topographic Tour* uses a "[linked](#)" convention to indicate a research source or company that is listed in the Resources section, starting on page 22.

**Acknowledgements.** The author thanks the following individuals who contributed to this report:

John Atkinson – Editor, Stereophile  
Nicholas Butterworth – President/Editor-in-Chief, SonicNet  
Wilson Chan – Harmony Central  
Tom Clynes – President, Festival Finder  
Jason Hirschhorn – President, Mischief New Media  
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When asked what year music delivery systems would be handling real-life transactions, the majority of contributors voted for 1997 or 1998.

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# THE INTERNET

## Market Dimensions

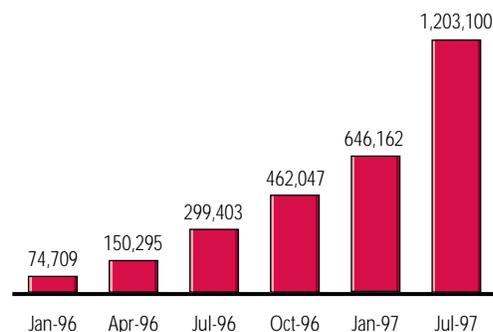
More than one million publicly-visible sites dot the World Wide Web today, according to Netcraft (see chart, right) – up from just 50 in January 1993, less than five years ago. This spectacular growth is matched by the 51-million plus North Americans who now roam the Internet according to [Nielsen Media Research](#).

**Media Migration.** Energized by the very broad range of content these one million-plus sites provide, it's not surprising that the Internet is quickly elbowing its ways to the front ranks of popular media.

The May 1997 GVU7 Web user survey reports that 35 percent of respondents say they use the Web instead of watching TV on a daily basis. A recent Nielsen survey found the same to be true among America Online households who watch 15 percent less television per week than the national average.

While the TV-watching is still considerably higher than Internet and online usage, the sheer speed at which the Web is making inroads is having a profound impact on other media. According to a [Young & Rubicam](#), San Francisco research report, the Internet will likely displace magazines as the fifth most popular medium by the year 2001 (see table, left).

Growth of Web Sites



Source: July 1997 Netcraft Ltd. (<http://www.netcraft.co.uk/Survey>)

**Market Forecast.** As content providers respond to the market's enthusiasm, the Web is fueled by a propitious cycle of increasing content driving ever more usage and vice versa.

According to [Jupiter Communications](#), 67 million households will be online worldwide by the year 2000 (see table, right), a veritable bonanza for cyberspace marketers. Online users tend to be better educated and better-off than other consumers, and can be efficiently reached via the Internet medium itself. As a result, an estimated \$267 million worth of Web advertising was placed in 1996 according to the Internet Advertising Bureau (<http://www.iab.net>). This is expected to soar to \$2.5 billion by 2000 says [Simba](#). By then, advertisers will

be able to reach as many as 340 million eyeballs (170 million Internet users) glued to Web tube estimates [International Data Corp.](#) (IDC).

If current growth rates continue, year 2000 surfers will have a choice of more than 4 million sites spanning the globe. The instantaneous, cross-cultural nature of the Internet will be an irresistible proving ground for all kinds of music. On any given day, at the beginning of the next decade, more than 80 million consumers will be cruising the Web, a ready target audience for the next big thing in music.

### U.S. Media Time Patterns

#### Top Five Media Ranked by Daily Usage

Medium	1996	2001
Television watching	3:76	3:68
Radio listening	3:15	3:31
Newspaper reading	0:54	0:52
Magazine reading	0:15	0:31
Internet usage (Web, e-mail)	0:15	0:31

Source: November 1996 Young & Rubicam, San Francisco

### Online Household Forecast

#### Worldwide Distribution by Region

Region	1996	2001
North America	15.4M	38.2M
Europe	3.7	16.5
Asia/Pacific Rim	3.4	10.0
Other	0.9	1.9
Total	22.5	66.6

Source: November 1996 Jupiter Communications

Source: 1997 Nielsen Media Research, IntelliQuest

1 million Internet users  
1988

23 million Internet users  
August 1995

35 million Internet users  
March 1996

51 million Internet users  
January 1997

170 million Internet users  
2000

# THE INTERNET

## Market Demographics

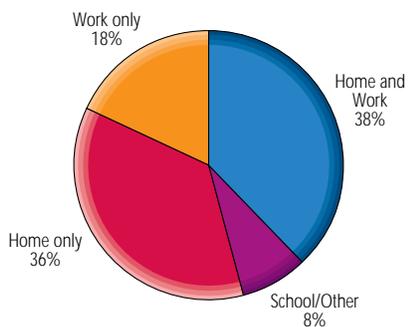
What makes the Web such an ideal medium for music is a very desirable demographic profile. [IntelliQuest](#) reports that of all age segments, the vital 25–34 year old group has grown the quickest and now represents 30 percent of the online population. The online gender gap is also shrinking rapidly with women now making up 42 percent of the online population according to both [Mediamark Research Inc.](#) (MRI) and [Nielsen Media Research](#) (see table, right).

In terms of education and household income, the Web demonstrates its upscale appeal. MRI reports that 34 percent of all Internet users have a household income of between \$75,000 and \$149,000, 124 percent above the national average. Eighty-six percent have either attended or graduated from college, or 81 percent above average.

**Usage Patterns.** [NPD](#) found that many users access the Internet from

Internet Demographics		
Age and Gender User Profile		
Sex	%	Index*
Men	58	122
Women	42	80
Age		
18-34	45	129
35-54	47	124
Source: Spring 1997 MediaMark Research. * 100 index is average.		

Where Users Access The Internet From

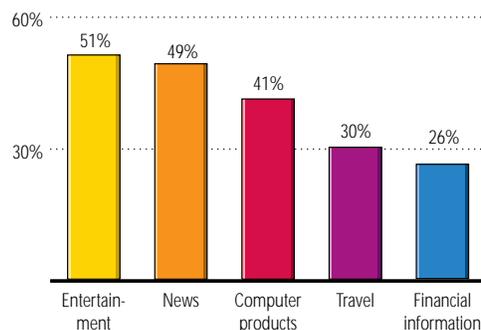


Source: April 1997 NPD Inc. (base: Web panel of 1,527 respondents)

home and office, followed by people who access it only from home (see chart, left). [FIND/SVP](#) reports that while mixed use is most common, more people overall use the Internet for personal purposes than for work (88 vs. 56 percent).

People are attracted to the Internet by its ability to entertain and inform, the leading applications of the Web. An [A.C. Nielsen](#) study reports that more than half of all Internet users cite entertainment as the leading reason for using the Internet

Top Reasons For Using The Internet



Source: 1996 A.C. Nielsen Worldwide Consumer Panel Services

(see chart, right).

**Electronic Commerce.** More important to the budding Web music distribution industry is the fact that 15 percent of Internet users have recently used the Web to purchase a product or service (according to both [IntelliQuest](#) and [Nielsen Media Research](#)).

There is no question that the Web will revolutionize the music business and create captivating new opportunities in distribution, listener marketing, music fan research and CD sales. Before that can happen, a few short-term obstacles must be overcome. For one, 79 percent still use 28.8-Kbps modems. But as technology has demonstrated over and over again, speed issues are merely a matter of time. The Web's instantaneous, interactive and global nature has already recast the music business, as the following pages will vividly show.

Nielsen Media Research reports that, among online buyers, 2% (or 148,500) bought music products the last time they shopped online.

# THE MUSIC BUSINESS

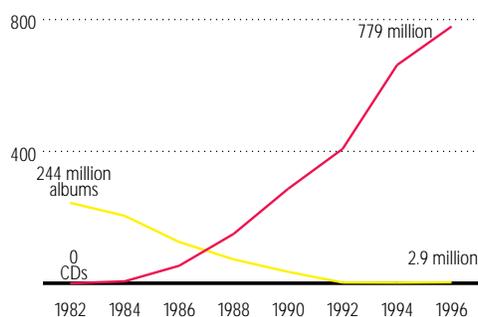
## Changing Standards

The appearance of the 10-inch 78, named after its rotational speed of 78 RPM, in 1901 marked a major turning point in modern music history. For the first time, music could be enjoyed, on demand, in the privacy of one's own home. But it wasn't until 1938 when Al Jolson recorded his first talkie, that modern music began its meteoric rise. Jolson's recording of *Swanee* vaulted the RCA Victrola into the imagination of the common American household.

**Long-playing Records.** A second milestone, was CBS Records' 1948 release of the first stereo-capable long-playing record (dubbed LP, 33 or "album"). That marked the beginning of the high-fidelity (Hi-Fi) era that lasted well into the sixties. In 1964, Philips of the Netherlands introduced the audio cassette, a format that together with the LP would dominate the music scene until the mid-eighties. Sales of record albums peaked in 1978 and began a gradual decline that accelerated once compact discs were introduced in the early 80s. Spurred by car stereo sales, the cassette became the delivery mechanism of choice by 1983 and sales peaked in 1988, with 473 million units shipped in the U.S.

**Compact Discs.** The most dramatic change in music delivery was the 1983 introduction of the compact disc (CD) player. Its digital recording technique, using 0

A Comparison of CD and Album Unit Sales Growth



Source: June 1997 RIAA

and 1 data bits, virtually eliminated the pesky quality-control problems of vinyl records, which were frequently plagued by annoying pops, clicks, hiss, and turntable wow and flutter.

While early compact disc protagonists, Philips and Sony, struggled at first due to a lack of software, it took the CD only five years to overtake album sales (see chart, left). In the mid 90s, album sales are making a very slight comeback, thanks mainly to "golden-ear" stereophiles who, to this day, consider the sound of CDs "too shrill." But the clearly discernable improvement offered by CDs set in motion a wholesale conversion of record collections, that energized the entire music business well into the 90s.

**Music Videos.** While MTV is often credited with pioneering music video, it was the USA Network that made the first video foray when it introduced *Night Flight*, a weekend program featuring music videos in June 1981. Two months later, Warner Amex Satellite Entertainment Company launched Music Television, or MTV, the world's first 24-hour music video channel.

MTV clearly patterned itself after Top-40 radio, applying the same nonlinear, "short take" format that attracts teenagers and young adults. Its on-air announcers, dubbed "VJs," (video jockeys), hyped elaborate contests and promotions and developed playlists that showed great ingenuity in the manipulation of audience mood. MTV soon was recognized as an effective way to promote record sales and as a powerful medium for exposing new artists, such new artists as Duran Duran, Cyndi Lauper, Madonna and Men At Work.

Source: 1997 ICONOCAST

Recording system shown  
1886

Bell Labs demos stereo  
1932

LP debuts  
1948

MTV launched  
1981

CD player unveiled  
1983

# THE MUSIC BUSINESS

## Music Market Growth

Growth of CD Sales and Other Recorded Music



Source: February 1996 RIAA

In 1996, the U.S. music business recorded \$12.5 billion in annual sales, up less than 2 percent over 1995's \$12.3 billion (see chart, left). According to the IFPI, the International Federation of the Phonographic Industry, the global music business was worth about \$40 billion in 1995. This suggests that the U.S., with a population of roughly 267 million, accounts for 30 percent of the world's total music volume.

In contrast, between 1986 and 1994, recording industry sales more than doubled, from \$4.6 billion to \$12.1 billion according to the Recording Industry Association of America (RIAA). This made the sudden leveling in 1995 seem all the more pronounced. Some industry watchers blame the decline on the waning popularity of alternative rock, which fueled a good deal of the industry's growth at the beginning of this decade. The answer, however, may be more complex. It's more likely that

sales are flat due to a combination of factors:

- 1 Conversion Complete** – The compact disc's 1983 appearance, fueled a CD replacement boom. Once consumers finished converting their LP collections to CD, growth declined.
- 2 Aging Boomers** – The 67 million baby boomers are reaching middle age. While this generation stubbornly clings to its Grateful Dead bootlegs and Calvin Klein jeans, the fact is that 64 percent of all music in the U.S. is purchased by people under age 35.
- 3 Lack of Innovation** – The all-time best-sellers list clearly shows the strong influence of aging baby boomers (see table, right), with seven out of 10 positions occupied by such 70s and 80s stalwarts as Michael Jackson, The Eagles, Fleetwood Mac, Led Zeppelin, Boston and Bruce Springsteen.
- 4 The Web** – The Internet has become an important pastime for the core music-buying demographic. This sudden phenomenon became extremely popular at the same time the music business began its decline. Coincidence? Perhaps, but there's no denying that the disposable income of the primary music-buying segment is under attack from this new diversion.

The RIAA provides additional evidence supporting these theories with a report that, while there were 14 percent more gold records (constituting sales of more than 500,000) awarded in 1996 than in 1995, platinum records (one million) were down 17 percent. And multi-platinum titles were down 20 percent.

An estimated 2,500 new CDs hit the shelves of America's more than 9,000 record outlets each month.

Chart Busters		
Top 10 All-Time Best-Selling Albums Ranked by Worldwide Sales		
Rank	Album/Artist	Sold (mill.)
1.	Thriller, Michael Jackson	24
2.	Their Greatest Hits, Eagles	24
3.	Rumours, Fleetwood Mac	17
4.	Untitled (IV), Led Zeppelin	16
5.	The Bodyguard, Whitney Houston...	16
6.	Boston, Boston	16
7.	Born in the U.S.A., Bruce Springsteen	15
8.	Cracked Rear View, Hootie & the...	15
9.	Jagged Little Pill, Alanis Morissette	15
10.	Hotel California, Eagles	14

Source: June 1997 RIAA



# THE MUSIC BUSINESS

## Traditional Distribution

The U.S. Department of Labor reports that 252,000 people are employed in the music industry. By comparison, an estimated 62 million amateurs practice music in the U.S. alone. Once a budding artist has convinced an A&R (artist and repertoire) executive or record producer to create a CD, the recording begins its long journey to the consumer.

The music distribution channel has grown considerably more complex since its inception in the 30s (see chart, below). The emergence of consumer electronics chains (Best Buys, Circuit City, etc.), discount clubs (Costco/Priceclub, etc.) and mass merchandisers (Target, Walmart, etc.) has added a unique buying system for each channel, typically managed by a chainstore buying service. At the top of the food chain are:

**Record Manufacturers.** Six major record labels, [Bertelsmann Music Group](#), [EMI-Capitol Music Group North America](#), [MCA Music Entertainment](#), [PolyGram Holding Inc.](#), [Sony Music](#)

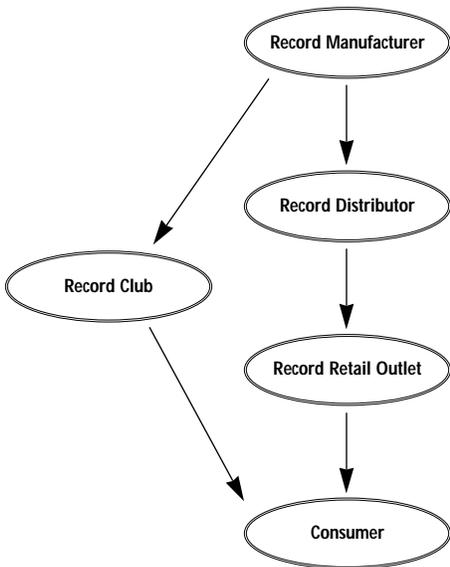
[Entertainment](#) and [Warner Music Group](#) control 85 percent of the market: Besides manufacturing plants, these major labels also own distribution companies. Labels work with independent record producers who are responsible for managing costs, talent and recordings.

**Record Distributors.** Next are record distributors, such as Valley Record Distributors, who work behind the scenes to fill music store shelves.

**Record Clubs.** Nearly 17 million Americans belong to a record club. These clubs generate \$1.5 billion worth of sales annually, 80 percent of which is directly related to music. According to a recent survey by Strategic Record Research, 3 percent of consumers buy their music exclusively from record clubs. Another 14 percent buy from record clubs and stores. After a seven-year growth streak, record clubs saw their sales share decline to 15 percent in 1996 from 17 percent in 1995, according to [RIAA](#) data. The two largest outfits are Columbia House (8.5 million members), jointly owned by Sony Music Entertainment and Warner Music Group and BMG Music Service (8 million members), owned by Bertelsmann.

**Record Retail Outlets.** "Active buyers" (those who have purchased at least three albums in the past six months) buy 45 percent of their recorded music from retailers, including Musicland, Tower Records, Virgin Records and Wherehouse. Flat music sales led Minneapolis-based Musicland Group to lose \$194 million, while Dallas-based Blockbuster Entertainment is quietly converting most of its CD outlets to video-rental stores.

 The Atlantic Group is the music industry's leading label with 11% unit market share in first quarter, according to SoundScan.



Source: 1997 RIAA

Record Store Share: 69%  
1988

Record Store Share: 70%  
1990

Record Store Share: 60%  
1992

Record Store Share: 53%  
1994

Record Store Share: 50%  
1996

## Public Performance Rights

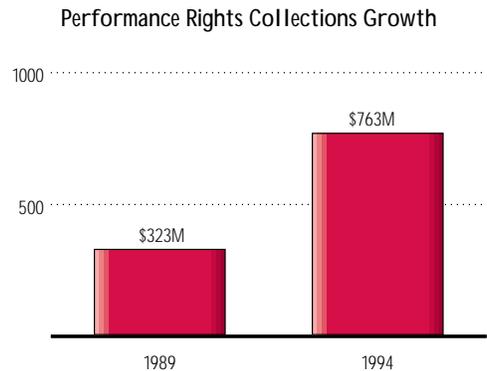
On February 26, 1941, the United States filed a suit against the American Society of Composers, Authors and Publishers ([ASCAP](#)). The complaint listed as cause of action Section 1 of the Act of Congress of July 2, 1890, entitled “An Act to Protect Trade and Commerce Against Unlawful Restraints and Monopolies,” more commonly known as the Sherman (antitrust) Act.

This legal maneuver demonstrated the importance of public performance payments, which are one of the largest revenue sources in the music industry. In 1994, ASCAP collected \$423 million in performance fees from broadcasters and other sources. Broadcast Music Inc. ([BMI](#)) was second with \$340 million that year. Both organizations collect royalties for publishers and songwriters by surveying and statistically sampling actual broadcasts to determine royalty payments. ASCAP signed a consent decree on March 14, 1950, admitting no wrongdoing, that established two types of royalty collections (in 1966, BMI agreed to a similar decree):

- 1 **Per Program** – This type of arrangement requires licensees to pay ASCAP a pre-determined fee for each song used.
- 2 **Blanket License** – Under this program, the licensee pays ASCAP a percentage of gross revenue.

**Organization Overview.** In addition to ASCAP and BMI, a third licensing organization, [SESAC](#), collects royalty fees in the U.S. A brief overview of each organization follows below:

- 1 **ASCAP** – Founded in 1914, ASCAP represents more than 40,000 composers and 18,000 publishers. ASCAP claims to have the oldest and largest repertoire, and adds about 100,000 new titles annually. ASCAP collects a \$50 fee from publishers and a \$10 fee from writers. In 1994, television licensing accounted for approximately 50 percent of ASCAP’s licensing revenues, radio 30 percent and other sources 20 percent.
- 2 **BMI** – Established in 1940 by the broadcast industry as a means of lessening ASCAP’s bargaining power, BMI is owned by more than 300 broadcasters. The organization boasts a membership of more than 56,000 publishers and 111,000 writers and has more than 2 million works registered. BMI charges publishers a one-time \$100 application fee while writers can join for free. BMI’s performance collections are made up of television (45 percent), radio (30 percent) and other sources (24 percent).
- 3 **SESAC** – This private organization, founded in 1930, represents about 1,000 active publishers and 1,900 writers. SESAC offers its members profit-sharing. SESAC derives 55 percent of its revenue from radio, 32 percent from television and 13 percent from miscellaneous sources.



Source: 1995 ASCAP, BMI company reports

U.S. radios in use: 0.4M  
1922

U.S. radios in use: 4.0M  
1925

U.S. radios in use: 51M  
1940

U.S. radios in use: 156M  
1960

U.S. radios in use: 489M  
1985

# ONLINE MUSIC MARKET

## Music Meets The Web

In short order, more than 32,000 Web sites devoted to music in one way or another have sprung up, making music one of the Web's most popular pastimes. A mind-boggling 24,517 artist sites alone compete vigorously to attract surfers with tour info, sweet, or acid, music sound clips and other artist minutiae.

Whether cyber citizens are interested in world music (97 sites), karaoke (18 sites) or girl bands (19 sites), there is a music site to fit their musical fancy.

It all started in Fall 1993, when a Santa Cruz, Calif.-based outfit, Internet Underground Music Archive, or [IUMA](#), created an FTP site where people from all over the world could download music files via the Internet.

To reduce audio files to a manageable size, IUMA compressed them with MPEG and made a free decoder available for downloading.

IUMA's lofty goal was to revolutionize the music business with digital delivery that circumvented traditional pressing plants, distribution networks, shipping and record stores. And because a listing on IUMA was free, content poured in from all over the world. Their music trailblazing landed IUMA on the pages of the *San Jose Mercury News* in November 1993 and even a gig on CNN.

The Mosaic browser allowed IUMA to spruce up its venue with graphics and quickly made the site one of the first destination points for music fans. Today, the seven-person company grosses nearly \$1 million annually and features more than 1,000 bands.



IUMA's positioning tag line sums it up nicely: "The Net's first, free hi-fi music archive."



Sony was one of the first Internet music destinations as seen here in 1995.



Based on the growth in Yahoo music listings, 31 music Web sites are added daily, or about 930 new Web sites each month.

IUMA debuts FTP site  
Fall 1993

SonicNet launches BBS  
June, 1994

First real-time cybercast: Sky Cries Mary  
Nov. 10 1994

Rolling Stones cybercast  
Nov. 18 1994

Tibetan Freedom Concert draws 89,500  
June, 1997

# ONLINE MUSIC MARKET

## Promoting Music on the Web

Yahoo's Entertainment/Music directory lists 32,365 music sites, up 644 percent from the 4,348 sites

listed in July 1995. The Yahoo directory divides music sites into 52 sub-categories, the largest of which, with 76 percent of all listings, is the artists category (see table, right).

The success of promotional music sites is best exemplified by N2K's experience with David Bowie. In September 1996, Bowie made his new single, *Telling Lies*, freely available on the Bowie site ([davidbowie.com](http://davidbowie.com)) for one week. During that period, a total of 450,000 copies were downloaded to people in 87 countries. A spectacular success story considering that many users opted to download a 16-bit CD-quality file that took 45 minutes with a 28.8-Kbps modem.

While it's beyond the scope of this report to provide a guide to the

Web's hottest artist sites, a few typical examples are shown below.

### Music on the Web? Yahoo!

#### Top 10 Music-Related Web Site Categories Listed on Yahoo!

Rank	Category	Sites
1.	Artists	24,517
2.	Genres	2,775
3.	Instruments	721
4.	Computer generated	609
5.	Composition	565
6.	Awards	493
7.	Events	437
8.	Vocal	408
9.	Education	276
10.	Organizations	150

Source: July 1997 Yahoo! (Base: 32,365 sites)



When alternative rock group Korn began promoting itself on the Internet, the group sold 152,000 CDs in its first two weeks.



This site shows the type of content that attracts fans ([countingcrows.com](http://countingcrows.com)).



David Bowie's Web success tells no lies ([davidbowie.com](http://davidbowie.com)).



Reba McEntire's cyber outpost elegantly demonstrates that the Web is not for grunge fans only ([reba.com](http://reba.com)).

# ONLINE MUSIC MARKET

## The New Press: Online "Zines"

According to Yahoo, there are some 312 online music magazines. These content sites can be divided into two categories:

- 1 **Consumer** – In December 1994, Michael Goldberg launched the Web's first rock-and-roll magazine, or "zine" in Net jargon, [Addicted To Noise](#). The site was recently purchased by Paradigm Music Entertainment Co. of New York, who also acquired [SonicNet](#) (sonicnet.com) in January 1997. Rolling Stone, the best-known rock publication, joined the fray last year, while another popular music magazine, SPIN, can be found on America Online.
- 2 **Business** – For the music trade there's Billboard Online ([billboard.com](#)) and Webnoize ([webnoize.com](#)).

Pageview Data		
Top 10 Music-Related Web Sites Ranked by Monthly Traffic		
Rank	Site	Traffic
1.	Firefly	14.0M
2.	DMN Media	11.8 (impr.)
3.	Ticketmaster Online	8.4
4.	Harmony Central	4.0
5.	iMusic	3.7
6.	Addicted to Noise/SonicNet	3.5
7.	The DJ	3.1
8.	CD Universe	2.0 (impr.)
9.	Music Boulevard	1.7
10.	CDNow	1.5 (visits)

Source: April 1997 Company Reports



For Web music business and technology coverage, Webnoize can't be beat ([webnoize.com](#)).

The counterculture's bible finally brought its innovative coverage of rock to the Web in October 1996 ([rollingstone.com](#)).

Paradigm positions Addicted to Noise as a "great music magazine delivered through online media" ([addict.com/atn](#)).

# ONLINE MUSIC MARKET

## Genre Sites and Music Guides

It usually follows that when someone likes a particular artist, that listener may also be interested in the entire music genre. With so many sites to choose from, finding similar music can be daunting. That's where genre sites and music guides step in:

- 1 **Genre Sites** – [N2K Entertainment Inc.](#) operates a string of sites that cater to a particular kind of taste, including Rocktopolis, Jazz Central Station and Classical Insights. The first music site, [IUMA](#), is also a genre site, and so is [SonicNet](#).
- 2 **Music Guides** – Another useful resource are music guides, such as the All Music Guide ([allmusic.com](#)) and the Ultimate Band List ([ubl.com](#)). These sites feature large amounts of searchable content including bands, record companies, radio stations, music stories, concert dates, record charts and magazines.



The 25-date Lollapalooza tour, which ended this past March, sold 10 percent of its concert tour tickets via the Internet.

Most Popular Sites		
Top 10 Most Popular Music Genres Ranked by Recorded Music Sales		
Rank	Format	1996 Share
1.	Rock	32.6%
2.	Country	14.7
3.	R&B	12.1
4.	Pop	9.3
5.	Rap	8.9
6.	Gospel	4.3
7.	Classical	3.4
8.	Jazz	3.3
9.	Oldies	0.8
10.	Soundtracks	0.8

Source: June 1997 RIAA



While classical music makes up only 3.4 percent of U.S. sales volume, its constituency has clout. N2K's Classical Insights (spelled either way) caters to aficionados looking for the divine Cecilia Bartoli ([classicalinsights.com](#)).



Whether they're into Paquito Rivera or Miles Davis, jazz fans can find it at N2K's Jazz Central Station ([jazzcentralstation.com](#)).



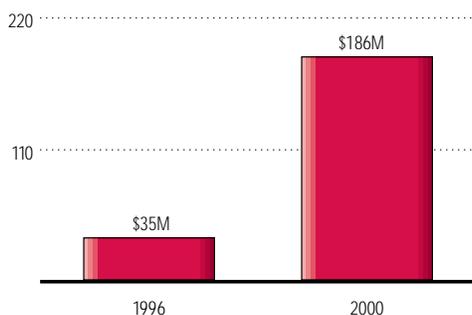
SonicNet describes itself as "the mothership of music."

# ONLINE MUSIC MARKET

## Selling Music On The Web

According to [SIMBA](#), electronic sales of music and entertainment products via the Internet, proprietary online services, CD-ROM, interactive television, kiosks and screen phones will

Music and Entertainment Products Sales Forecast



Source: 1997 Cowles/Simba Information

quintuple to \$186 million by 2000. (see chart, left). SIMBA believes that growth will be spurred by large retailers such as Blockbuster Entertainment, Tower Records and Virgin Records, who will soup up their Web marketing efforts in 1997.

Others, like [Jupiter Communications](#) and IFPI (International Federation of the Phonographic Industry), are more bullish. While Jupiter believes that 1996 online music purchases did not exceed \$25 million, or about two-tenths of 1 percent of the U.S. industry's total, online music sales could account for as much as 10 percent of the industry total, or about \$1.3 billion, by 2000. IFPI expects that within five years Internet music delivery could take away 15 percent of traditional record store business.

The timing is certainly right. Results from a recent [NARM-RIAA](#) survey suggest that music buyers are dissatisfied with today's shopping experience, finding music stores "sterile, often intimidating, confusing and inhospitable." These findings support an October 1996 NARM study that discovered that 40 percent of music consumers shop in a record store less than once per month; and nearly a third feel that "shopping for music is becoming less enjoyable."

**Online Music Stores.** [CDnow](#) began selling CDs on the Internet in August 1994. Now, several dozen music sites offer CD titles, the most prominent of which are:

- 1 **CDnow** – In 1996, CDnow Inc. hit \$6 million in sales on the Internet, triple 1995's revenue, with 18 percent operating margins.
- 2 **CD Universe** – [CD Universe](#) specializes in low prices and claims to have reached profitability in its eleventh month.
- 3 **Music Boulevard** – Owned by N2K, [Music Boulevard](#) operates transaction sites in English, French, German, Japanese and Spanish.



CDnow sells about 2,000 titles a day, or approximately the same volume as one or two of the largest Tower Records stores.



CDnow was started in Jason and Matthew Olim's home basement. According to Jupiter, CDnow is the leading Internet music store in terms of total revenue, accounting for 33 percent of Web-based music sales ([cdnow.com](#)).

**BUY MUSIC NOW**  
GET \$5 OFF & FREE SHIPPING



CLICK HERE



Thousands of  
CDs on **SALE**  
now!

Banner ads for Music Boulevard.

[WWW.MUSICBIVD.COM](http://WWW.MUSICBIVD.COM)

# ONLINE MUSIC MARKET

## Selling Music On The Web (cont'd)

- 4 **Musicspot** – According to a recent 10,000-household [PC-Meter](#) survey, CUC's [Musicspot](#) ranked among the top "Hot Storefronts."
- 5 **Tunes.com** – Berkeley, Calif.-based [Tunes.com](#), launched in November 1996, features 200,000 thirty-second music clips backed by a collaborative filter, which matches visitors' music interests to profiles created by people with similar tastes. The company, plans to have 1 million samples online by mid 1998, which will make it the largest music sampling source online.

**Record Clubs.** Armed with a formidable list of 16.5 million customers, the record clubs are shaping up to be the Web's most powerful retailers. According to a recent PC-Meter survey of 10,000 households, Columbia House ranks third and BMG fourteenth among the top Web storefronts (see table, right).

### Electronic Commerce

#### Top 10 Hot Web Storefronts Ranked By Net Reach

Rank	Site	Type
1.	Download.com	Software
2.	Shareware.com	Software
3.	Columbiahouse.com	Music
4.	Amazon.com	Books
5.	Surplusdirect.com	Hardware
6.	Hotfiles.com	Software
7.	Bluemountain.com	Software
8.	Jumbo.com	Software
9.	Freeride.com	Software
10.	CDnow.com	Music

Source: April 1997 PC-Meter



bmgmusic.com



columbiahouse.com

Both companies debuted Web sites in 1995 that initially provided members with an alternative to the printed catalogs mailed each six weeks. Now their sites are able to handle all club chores including administration, buying, status checking, etc. Judging from PC-Meter's data, the clubs are doing a commendable job of cyber-retailing.



One new player, Mass Music, aims to win over customers by specializing in accuracy and customer service. The online music store's search engine handles phonetic spelling and spelling errors. Another unique service: Mass Music can identify songs based on a few lyrics, usually within 15 minutes or so. The strategy appears to be paying off. The new cyber store reports that its sales conversion ratio is 30 percent.



tunes.com

# ONLINE MUSIC MARKET

## Digital Performance Rights

In April 1995, BMI and [On Ramp Inc.](#), an Internet content provider and marketing outfit, reached an agreement for a music performance license covering the transmission of BMI music content in On Ramp's Internet programming. In the announcement, BMI said it believed that the On Ramp agreement was the first to cover musical performing rights on the Internet and the first to recognize that online transmission of music constitutes a public performance under the U.S. Copyright Law.

The BMI agreement granted On Ramp a blanket license, which covered unlimited access to the more than three million compositions in BMI's repertoire at the time, encompassing the work of more than 160,000 songwriters, composers and music publishers. The license was said to cover a variety of planned uses, including browsing, listening and transmission to consumers in the home. BMI claims to have executed more than 50 such Internet licenses (no data is available for the other services).

These agreements may be ground-breaking with respect to cyberspace, but they are business as usual in terms of collection methodology.

The major performing rights organizations favor blanket licenses for Internet transmissions. The reason is simple: A reliable statistical surveying process of upward of 30,000 Internet music sites is well-nigh impossible.

While surveying may be difficult, the Internet promises to force a complete re-evaluation of public performance payments.

Technology is moving at lightning speed and, as later sections will show, it may be quite feasible in the near future to create a fairer metering system that measures actual usage and provides a more accurate gauge of royalty payments.

 The National Music Publisher's Assoc., and its licensing subsidiary, the Harry Fox Agency are mounting a legal campaign against Internet exchanges for tablatures, or "tabs," which are essentially song "blueprints" that use no notes, but graphically depict how the song should be played. In February 1997, the NMPA succeeded in shutting down Tab USA, a site hosted at Frostburg State University in western Maryland.



[Ticketmaster](#) now sells \$2.5 million worth of tickets online each month, or about 1.5 percent of its total annual revenue.



ascap.com

BMI's Web toolbox simplifies the process of music licensing (bmi.com).

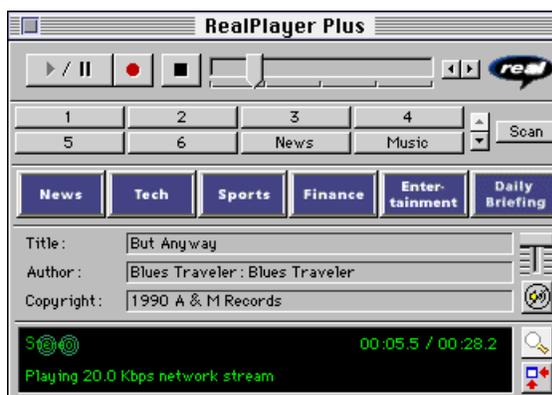
## Internet Music Delivery, Unplugged

There are two ways to deliver music via the Web:

- 1 **Streaming** – Akin to “broadcasting” on the Internet, streaming plays music in real-time. This technology is closely identified with [Progressive Networks](#) who introduced RealAudio, a server and player solution in 1995.
- 2 **Download** – Under this scheme, consumers download a music file for later playback. Unlike realtime play, downloading is not constrained by bandwidth, only available time, so files can be larger and audio fidelity greater.

Both systems rely in varying degrees on the following delivery mechanisms:

- 1 **Player** – To listen to streaming audio, or to play any digital file that resides on a hard disk, consumers need a player. The player deciphers delivered music files, which are compressed using a “codec (see below and player, right).”
- 2 **Plug-in** – To enable instant playback using a browser, a plug-in is usually required. Each codec requires a different plug-in, which can complicate listening to music on the Web.
- 3 **Server** – To enable the rapid delivery of music files, most delivery systems require a file server that is dedicated to serving audio files.
- 4 **Copy Prevention** – To discourage consumers from liberally copying music, music delivery systems must offer “digital watermarking,” a process that adds an inaudible “tag” to each file, to enable copy tracking.
- 5 **Codec** – Because music files can be large, file size is reduced by using a compression algorithm. Also called “codecs” (COder/DECOder), these algorithms can compress files by as much as 11 times, greatly reducing transmission time. The trade-off is that as files are made smaller, sound quality suffers. The table at right shows the impact compression can have on file transmission.



With an estimated 10 million users, Progressive Networks has the most popular audio and video players on the market today.



Los Angeles-based Intersect offers a new monitoring service, MusicReport, which is designed to search for and report on the use of audio and video on the Internet.

MusicReport uses a proprietary technology, dubbed Audio Video Scan (AVS), that searches the Internet for MPEG (motion picture experts group) Audio Layer 3 (MP3), RealAudio and other file formats commonly used to deliver audio and video.

According to Intersect, more the 2,600 sites are currently involved in the distribution of pirated audio CDs. Illegal music downloads occur deprive artists and publishers of royalties paid on sales of copyrighted materials.

Intersect provides customizable reports, which identify file source, Internet service provider, domain name, plus a list of audio and video files offered by the site for downloading.

### Compression Technology

#### How Compression and Modem Speeds Are Shortening Throughput

Compression	Year	Modem Speed	Time*
2X	1991	2.4	14 hrs.
11x	1997	28.8	13 min.
16x	2003	400.0	38 sec.

Source: July 1997 Liquid Audio. \* To transmit a high-quality, three-minute audio file.



Echoing Amazon.com, CDnow and N2K have both announced commission-style programs that reward sites for selling CDs.

RealAudio 1.0 introduced  
April 1995

RealAudio 2.0 introduced  
October 1995

Liquid Audio founded  
January 1996

RealPlayer 3.0 launched  
February 1997

Liquid Audio MusicServer debuts  
July 1997

# ONLINE MUSIC MARKET

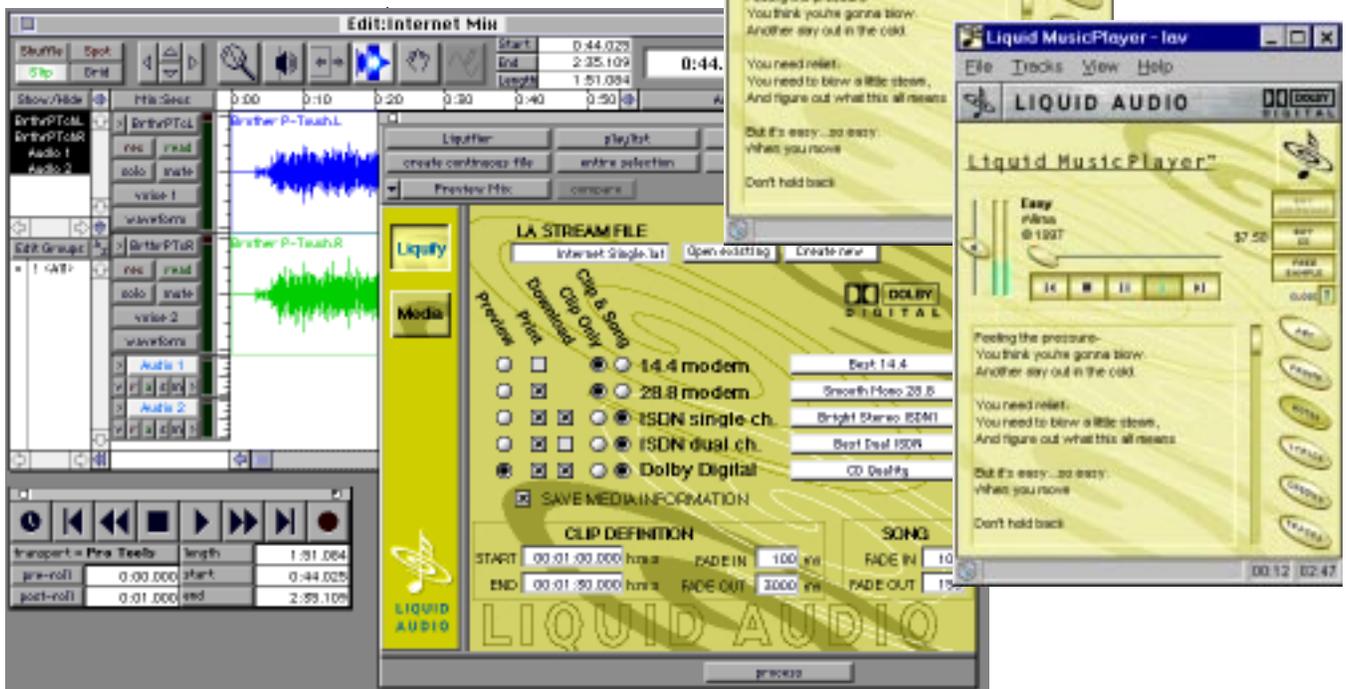
## Music Delivery Systems

Three companies offer music delivery systems:

- 1 **Cerberus** – U.K.-based [Cerebrus](#) sells music from its Digital Jukebox site and recently released Virtual Pressing Plant (VPP), a stand-alone client/server package for music delivery.
- 2 **Eurodat** – France-based [Eurodat](#) offers secure audio file transfer across the Internet and prevents unauthorized duplication via an anti-piracy mechanism that ensures that downloaded music can only be played from the server it was encoded on.
- 3 **Liquid Audio** – [Liquid Audio](#)'s end-to-end music delivery system includes an enhanced version of Dolby Laboratory's digital compression technology, digital watermarking, exceptional sound quality and royalty management. The software is also able to supply consumers with liner notes and cover graphics. With a 28.8-Kbps modem, Liquid Audio can transfer a CD-quality, three-minute song in approximately 12 minutes. In addition, the player is capable of streaming a low-bandwidth version for music previews. A commerce package serves copy-protected files, logs downloads and tracks royalty



According to the HotBot search engine, the total number of RealAudio files it could find on the Internet is 258,887.



Liquid Audio provides tools for all parts of the music-on-demand process. Liquifier, shown above, is a Macintosh- or Windows-based authoring tool that creates Internet music masters. The Liquid MusicPlayer, shown at right, allows consumers to preview and buy music on the Internet, and even delivers song lyrics and album cover art.

## Digital Watermarking

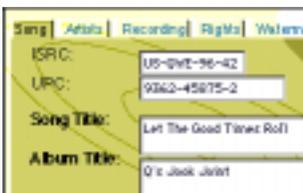
One major hurdle record companies face in using the Internet as a distribution medium is the ease with which copies can be made of digital originals. To counter outright piracy, a number of solutions have been proposed, foremost of which is "digital watermarking." This technology is now offered by such companies as [ARIS Technologies](#) (MusicCode), [Solana Technology Development Corp.](#) (Electronic DNA).

A digital watermark consists of an inaudible piece of binary data that is randomly imbedded in an audio file. This watermark can contain a host of copyright information including an International Standard Recording Code (ISRC), user ID, acquisition and other royalty tracking information. When a copy of an original file is made, the watermark readily identifies it as a copy and provides information about original purchaser. This serves to deter wholesale copying of digital music, although it cannot prevent casual copying for personal use. Because watermarks are virtually impossible to remove without corrupting the original file, the system is virtually foolproof.

[Liquid Audio](#), in concert with Solana Technology, have created a system that automatically adds digital watermarks to music purchased online (see illustrations, below). Liquid Audio's product suite provides all the tools needed for Internet music applications:

- ① **Liquifier Pro** – Liquifier is an Internet audio mastering tool that lets audio professionals edit, encode and publish Dolby Digital sound on the Internet.
- ② **Liquid MusicServer** – Internet sites use the Liquid MusicServer to store music prepared by Liquifier Pro and, in conjunction with a Web server, deliver music to consumers. It supports streaming (real-time delivery of music and associated media with no permanent storage for browsing) and download (music file transferred for permanent storage on a PC).
- ③ **Liquid MusicPlayer** – Consumers use the Liquid MusicPlayer to preview (stream) and purchase (download) music from a Liquid MusicServer. The freely downloadable software displays text, such as lyrics and liner notes, and associated artwork, as music is played. It also enables music purchasers to write music permanently to a CD-Recordable player.

①



Before music can be sold digitally, an Industry Standard Recording Code (ISRC), or "serial number," is added to the record master.

②



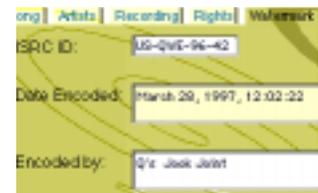
Liquid Audio software is used to prepare recordings for Internet distribution, which includes compression and optimization.

③



Internet consumers purchase music online via the Liquid MusicPlayer using either a credit card or e-money system, like CyberCash.

④



To discourage illegal copying, a watermark is added to music files, including a second ID tag with the buyer's name, as it is downloaded.

# ONLINE MUSIC MARKET

## The Future: Music on Demand

While downloading music can be accomplished fairly easily, what does the consumer do once music files have been received? There are two choices today, audio can be played back via the PC's sound system or, alternatively, music can be written to a CD-Recordable (CDR) disc in a standard audio format recognized by any consumer compact disc player.

The future for this music-on-demand market is virtually unlimited. The music retail channel is typified by "brick-and-mortar" outlets, which typically stock less than 30,000 CDs. A Virgin Megastore may carry as many as 100,000 titles. In cyberspace, [CDnow](#) offers 200,000 CDs. Still, labels have even larger back catalogs of out-of-print music that is simply unavailable.

Because retailers prefer to stock titles that will sell, music from independent record labels, obscure genres, International artists or older recordings stand little chance of being found in traditional music stores. Music on demand will radically change that scenario. By being able to choose from any artist at any time, and customize CDs to their hearts' content, consumers will undoubtedly spark a music industry renaissance.

The critical ingredient for making music on demand a reality, an affordable CDR, is just around the corner. The price of CDRs has dropped below the \$300 mark and blank media is selling in the \$2 to \$4 range. The other constraint, bandwidth, is also making giant strides in the right direction. A 56-Kbps modem standard will greatly enhance surfing speed. This will be followed by a



Low-cost CD recorders will unleash a musical torrent, by allowing consumers to create customized, high-quality music libraries on ordinary CDs that can be played on any home or car CD player.

considerably faster technology, DSL, which will transform plain old copper telephone wire into a true high-speed, information highway.

Market research firm [Jupiter Communications](#) believes that the Internet will dramatically change the music industry over the next decade by giving merchants the opportunity to serve micro-markets, while permitting an unprecedented degree of relationship-building between audience and artists. Over time, says Jupiter, the Internet will render as artificial the distinctions between performance,

broadcast and distribution. This will have dramatic implications for online sales of prerecorded music, causing it to soar from a minuscule amount today, to \$1.6 billion by 2002 predicts the market researcher.

What the music industry needs now is more informed marketers and better-educated consumers and that's what this *Topographic Tour* is all about.

Pleased to meet you. Won't you guess my game?



With more than 600,000 titles on eight floors, Tower Records, in Tokyo's Shibuya district, is the world's largest music store.



The table on page 21 shows that advances in codecs combined with faster modems will increase throughput some 1,326 times by 2003 compared to 1991. But even faster speeds are likely to be the norm by the millennium. According to the Gartner Group, 35 percent of all consumer Internet access by 2002 will occur at high speed, including ISDN (15 percent), cable modems (10 percent), xDSL (5 percent) and satellite (5 percent). This means that the 20 million consumers who will use a cable modem in 2002, will be able to download a CD-quality three-minute song in under 30 seconds. While even greater speeds are theoretically possible, it's very likely that richer music data files will largely offset gains achieved by the more sophisticated codecs of the near future.

# RESOURCES

## A

### Addicted To Noise

375 Alabama #480  
San Francisco, CA 94110  
415 551 9949  
415 551 9970 fax  
<http://www.addict.com/atn>



Michael Goldberg is the editor and publisher of Addicted To Noise. A former staff writer and editor at Rolling Stone for a decade, Michael was named "Music Journalist of the Year" in 1995 by a panel of judges for the Music Journalism Awards, and Newsweek included him in its "Net 50" of Internet visionaries for 1996.

### American Society of Authors, Composers and Publishers (Ascap)

One Lincoln Plaza  
New York, NY 10023  
212 621 6000  
212 724 9064 fax  
<http://www.ascap.com>

## B

### Billboard Online

1515 Broadway  
New York, NY 10036  
212 764 7300  
212 536 5358 fax  
<http://www.billboard.com>

### BMG Music Service

6550 E 30th Street

Indianapolis, IN 46219  
317 542 0414  
<http://www.bmgmusicservice.com>

### Broadcast Music Inc. (BMI)

320 West 57th Street  
New York, NY 10019  
212 586 2000  
212 582 5972 fax  
<http://www.bmi.com>

## C

### CD Universe

101 No. Plains Industrial Road  
Wallingford, CT 06492  
203 265 3440  
203 269 3930 fax  
<http://www.cduniverse.com>

### CDnow Inc.

Jenkins Court #300  
610 Old York Road  
Jenkintown, PA 19046  
215 517 7325  
215 572 7130 fax  
<http://www.cdnw.com>

### Cerebrus

Box 374  
78 Marylebone High Street  
London W1M 4AP  
UNITED KINGDOM  
+44 (0)171 636 1536  
+44 (0)171 637 3842 fax  
<http://www.cdj.co.uk>

### Columbia House Music Club

1400 N. Fruitridge Avenue  
Terre Haute, IN 47811-1130  
<http://www.columbiahouse.com>

## E

### EURODAT

BP 53 - 55 Rue Auguste Piccard  
01632 St Genis-Pouilly  
FRANCE



# RESOURCES

+33 (0)4 50 28 21 21  
+33 (0)4 50 28 20 03 fax  
<http://www.eurodat.com>

**F**

**Find/SVP**  
202 The Commons #608  
Ithaca, NY 14850  
607 275 9590  
607 275 9591 fax  
<http://etrg.findsvp.com>



This research report was authored by Michael Tchong, editor of the **ICONOCAST** Internet marketing mail list.

**I**

**ICONOCAST**  
650 Delancey Street #217  
San Francisco, CA 94107  
415 278 0411  
415 278 0410 fax  
<http://www.iconocast.com>

**IntelliQuest Inc.**  
1250 Capital Of Texas Highway So. #2-1  
Austin, TX 78741  
512 329 0808  
512 329 0888 fax  
<http://www.intelliquest.com>

**International Data Corp. (IDC)**  
5 Speen Street  
Framingham, MA 01701  
508 872 8200  
508 935 4015 fax  
<http://www.idcresearch.com>

**IUMA**  
303 Potrero Street #7A  
Santa Cruz, CA 95060  
408 426 4862  
408 426 5918 fax  
<http://www.iuma.com>

**J**

**Jupiter Communications LLC**  
627 Broadway

New York, NY 10012  
212 780 6060  
212 780 6075 fax  
<http://www.jup.com>

**L**

**Liquid Audio**  
2421 Broadway 2nd Fl.  
Redwood City, CA 94063  
415 562 0880  
415 562 0899 fax  
<http://www.liquidaudio.com>

## Music Industry & the Internet

Jupiter Communications' *Music Industry and the Internet*, released in June 1997, describes the forces driving the online music market. The report provides an overview of the consumer-oriented market for music-related content on the Internet, including profiles of key market players. Also included are marketing and promotional strategies, revenue and usage projections, copyright issues, royalties, key technologies and more.

Price: \$995.



Liquid Audio's site provides a glimpse of the future of music delivery.

**M**

**Mediamark Research Inc.**  
708 Third Avenue 8th Fl.  
New York, NY 10017  
212 599 0444  
212 682 6284 fax  
<http://www.mediamark.com>

**Musicspot**  
1300 East Ninth Street #1810  
Cleveland, OH 44114  
<http://www.musicspot.com>



A pop-up window promotes a live audio broadcast at the Musicspot Web site.

# RESOURCES

## N

### National Academy of Recording Arts & Sciences (NARAS)

157 West 57th Street #902  
New York, NY 10019  
212 245 5440  
212 489 0394 fax  
<http://www.grammy.com>

### NARM

9 Eves Drive #120  
Marlton, NJ 08053  
609 596 2221  
609 596 3268 fax  
<http://www.narm.com>

### National Association of Independent Record Distributors and Manufacturers

### (NAIRD)

P.O. Box 988  
Whitesburg, KY 41858  
606 633 0946  
606 633 1160 fax  
<http://www.naird.com>

### National Music Publishers' Assoc. (NMPA)/Harry Fox Agency Inc.

711 Third Avenue  
New York, NY 10017  
212 370 5330  
212 953 2384 fax  
<http://www.nmpa.org>

### Nielsen Media Research

299 Park Avenue  
New York, NY 10171-0074  
212 708 7500  
212 708 7552 fax  
<http://www.nielsenmedia.com>

### NPD Group Inc./PC-Meter

900 W. Shore Road  
Port Washington, NY 11050  
516 625 0700  
516 625 2347 fax  
<http://www.npd.com/pcmeter.htm>

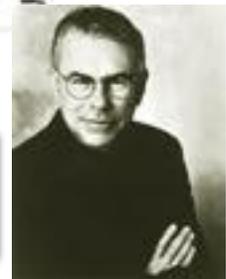
## N2K

### Entertainment

55 Broad Street  
10th Fl.  
New York, NY 10004  
212 378 5555  
212 742 1755 fax  
<http://www.n2k.com>



David Grusin,  
N2K's Vice  
Chairman.



Larry Rosen,  
N2K CEO.

## O

### On Ramp Inc.

11 W. 42nd Street 27th Fl.  
New York, NY 10036  
212 764 4747  
212 302 6024  
<http://www.metaverse.com>



# RESOURCES

## P

### Progressive Networks Corp.

1111 Third Avenue #2900  
Seattle, WA 98101  
206 674 2700  
206 674 2698 fax  
<http://www.real.com>

## R

### Recording Industry Association of America (RIAA)

1020 19th Street NW #200  
Washington, DC 20036  
202 775 0101  
202 775 7253 fax  
<http://www.riaa.com>

### Rolling Stone

1290 Avenue of the Americas 2nd Fl.  
New York, NY 10104  
212 484 1616  
212 767 8203 fax  
<http://www.rollingstone.com>

## S

### SESAC Inc.

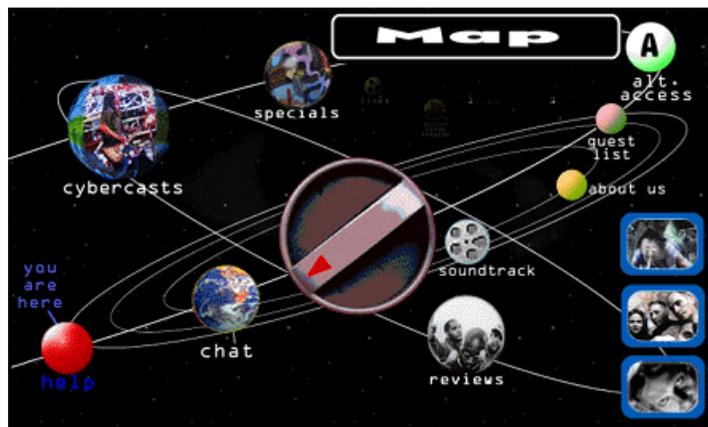
421 W. 54th Street  
New York, NY 10019  
212 586 3450

### Simba Information Inc.

11 Riverbend Drive So.  
Stamford, CT 06907  
203 834 0033  
203 834 1771 fax  
<http://www.simbanet.com>

### Solana Technology Development Corp.

777 So. Highway 101 #100  
Solana Beach, CA 92075  
619 259 2783  
619 793 9967 fax  
<http://www.solanatech.com>



### SonicNet

632 Broadway 2nd Fl.  
New York, NY 10012  
212 982 9811  
212 677 1519 fax  
<http://www.sonicnet.com>

### Spin Magazine

6 West 18th Street  
New York, NY 10011  
212 633 8200  
212 633 2666 fax  
Spin (America Online)

## T

### Ticketmaster Corp.

8800 Sunset Boulevard 7th Fl.  
Los Angeles, CA 90069  
310 360 6000  
310 358 9300 fax  
<http://www.ticketmaster.com>

### Tunes Network Inc.

1802 Fifth Street  
Berkeley, CA 94710  
510 704 1081  
510 649 4706 fax  
<http://www.tunes.com>

### Links to the Major Studios

Bertelsmann Music Group  
<http://www.bmg.com>  
EMI-Capitol Music Group N. A.  
<http://www.emirecords.com>  
MCA Music Entertainment  
<http://www.mcarecords.com>  
PolyGram Holding, Inc.  
<http://www.polygram.com>  
Sony Music Entertainment  
<http://www.music.sony.com>  
Walt Disney Records  
<http://www.disney.com/DisneyRecords/index.html>  
Warner Music Group  
<http://www.music.warnerbros.com>