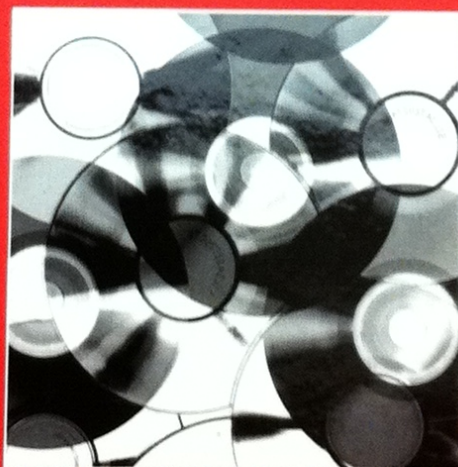


CONTINUUM ENCYCLOPEDIA OF
POPULAR MUSIC
OF THE WORLD



VOLUME II
PERFORMANCE AND PRODUCTION

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POPULAR MUSIC
OF THE WORLD

VOLUME II:
PERFORMANCE AND PRODUCTION

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- tury, ed. Philip Hayward. London: John Libbey & Co., 175-96.
- Loy, Gareth. 1985. 'Musicians Make a Standard: The MIDI Phenomenon.' *Computer Music Journal* 9(4): 8-26.
- Rothstein, Joseph. 1992. *MIDI: A Comprehensive Introduction*. Madison, WI: A-R Editions.
- Théberge, Paul. 1997. *Any Sound You Can Imagine: Making Music/Consuming Technology*. Hanover, NH: University Press of New England/Wesleyan University Press.

PAUL THÉBERGE

Mixing Desk (Mixing Console)

A mixing desk (also referred to as a mixing console or board) is an electronic device used to amplify, combine and modify a variety of inputs – including microphones, musical instruments and prerecorded sounds – and route them to an external device, such as a tape recorder or public-address system. Since the 1950s, mixing desks have become a central component in multitrack recording, broadcasting and live performance, and their design characteristics have become increasingly complex. It is not unusual for a modern, professional recording console to handle as many as 48 simultaneous inputs and 24 outputs, and contain individual subsections devoted to equalization, effects routing (for the addition of reverb and other signal processing) and monitoring.

Bibliography

- Alten, Stanley R. 1994. *Audio in Media*. 4th ed. Belmont, CA: Wadsworth.
- Eargle, John. 1980. *Sound Recording*. 2nd ed. New York: Van Nostrand Reinhold.

PAUL THÉBERGE

Monitor

The term 'monitor' is used most often to refer to loudspeaker systems used in live performance and in studio recording. In performance, musicians use stage monitors so that they can hear themselves; the loudspeakers, and the mix fed to them, are entirely separate from the speaker systems heard by the audience. In the recording studio, specialized loudspeakers are used to evaluate sound quality and musical balances. A mixing console usually has a monitor section used to isolate sounds, to add effects to them without altering the recording itself, and to feed them back to the performers playing overdubs. 'To monitor' is to listen over speakers or headphones for the purpose of evaluation or overdubbing.

Bibliography

- Alten, Stanley R. 1994. *Audio in Media*. 4th ed. Belmont, CA: Wadsworth.
- Davis, Gary, and Jones, Ralph. 1989. *The Sound Reinforce-*

- ment Handbook*. 2nd ed. Milwaukee, WI: Hal Leonard.
- Eargle, John. 1980. *Sound Recording*. 2nd ed. New York: Van Nostrand Reinhold.

PAUL THÉBERGE

MP3

The convergence of digital media for music storage and manipulation with the Internet's rise to popularity in the late 1990s created a fertile ground for the digital distribution of music via the Internet. MP3 became the most popular among several competing formats (Real, Liquid Audio and Ogg Vorbis are among the competitors) for the digital storage and delivery of music.

Introduced in 1992, MP3, short for MPEG Layer III (itself an abbreviation for Moving Picture Experts Group I Audio Layer III), is a means of encoding and decoding audio in digital format. It allows for extreme compression of audio files with little or no perceptible loss in audio quality. The development of MP3 meant that songs of three to four minutes' duration could be compressed to data files of 4 megabytes or less and still retain near CD-quality sound. Consequently, with increased bandwidth and transfer rates for Internet connections, the time required to download a song, or even an entire album, became reasonable for many Internet users.

The development of MP3 in conjunction with the Internet's rise in popularity quickly gained the attention of the music industry when it became clear that individuals could easily engage in copying audio CDs in MP3 format and sharing them with friends or strangers online. Many freeware, shareware and commercial MP3 players and 'rippers' (programs that encode CD audio to MP3 format) have become available on the Internet. Although not difficult to use, most require at least some knowledge of computer audio systems. Portable MP3 players began to be marketed in 1998, but were not easy to connect to most computers. In general, MP3, in its earliest incarnation, was a format used mainly by college students, computer enthusiasts and their friends.

Although methods for conducting secure electronic commerce were quickly developed in the late 1990s, the music industry was slow to adopt e-commerce and ceded some turf to e-tailers like *cdnow.com* and *Amazon.com*. The industry initially focused instead on piracy of digital music, and under the leadership of the Recording Industry Association of America (RIAA) quickly reacted to the potential threat from unauthorized downloading and uploading of copyrighted music. In 1998, the RIAA formed a committee, the Secure Digital Music Initiative (SDMI), composed of computer hardware and software makers and consumer electronics companies, aimed at creating a means of disabling unauthorized MP3 copying. The difficulty SDMI has continued to face, however,

is akin to that faced by the computer software industry in general. Most copy protection schemes are quickly bypassed by hackers and as quickly made publicly available.

By 1999, however, the major record companies had slowly begun to embrace MP3 through such Web sites as Universal Music Group's 'The Farm Club' and Time Warner's 'Entertainment.' By 2001, music industry-backed initiatives PressPlay and MusicNet had been introduced. However, at the beginning of the twenty-first century, it remained to be seen whether there would be a significant commercial market for downloadable music. 'Peer-to-peer' file-sharing networks continued to proliferate, although the most popular one, Napster, languished after a court-ordered shutdown, and many music fans grew increasingly accustomed to free music downloads. Yet, with apparent disregard for their own market, the major labels persisted in focusing on creating copy protection mechanisms, fighting file-sharing in court and lobbying the US Congress for changes in copyright law. It was clear that the music industry would need to adapt to technology as it had never needed to do before. The industry seemed bent on a slow evolution while the revolution was being downloaded at ever-increasing speed.

Bibliography

- Alderman, John. 2001. *Sonic Boom: Napster, MP3 and the New Pioneers of Music*. Cambridge, MA: Perseus Publishing.
- Fraunhofer Institut Integrierte Schaltungen. 1998–2001. *MPEG Audio Layer-3*. <http://www.iis.fhg.de/amm/tech-inf/layer3/index.html>
- Garofalo, Reebee. 1999. 'From Music Publishing to MP3: Music and Industry in the Twentieth Century.' *American Music* 17(3): 318–53.
- Haring, Bruce. 2000. *Beyond the Charts: MP3 and the Digital Music Revolution*. Los Angeles: OTC Press.
- Hayward, Philip. 1995. 'Enterprise on the New Frontier: Music, Industry and the Internet.' *Convergence* 1(1): 29–44.
- Holmes, Tamara E. 2000. *The ABCs of MP3*. <http://www.usatoday.com/life/cyber/ccarch/cctam011.htm>
- Jones, Steve. 2000. 'Music and the Internet.' *Popular Music* 19(2): 217–30.
- Laing, Dave. 1997. 'Rock Anxieties and New Music Networks.' In *Back to Reality?: Social Experience and Cultural Studies*, ed. Angela McRobbie. Manchester: Manchester University Press, 116–32.
- Lipton, Beth. 1999. *View from the Eye of the Net Music Storm*. <http://news.com.com/2009-1082-221683.html>
- Legacy=cnet
- Lovering, John. 1998. 'The Global Music Industry: Con-

traditions in the Commodification of the Sublime.' In *The Place of Music*, ed. Andrew Leyshon, David Matless and George Revill. New York: Guilford Press, 31–56.

MP3 Rocks the Web: A Month-By-Month Wired News Collection. 2002. <http://www.wired.com/news/mp3/>

Neuenfeldt, Karl. 1997. 'The Sounds of Microsoft: The Cultural Production of Music on CD-ROMs.' *Convergence* 3(4): 54–71.

Ridgley, Mitch. 1999–2000. *The History of MP3 and How Did It All Begin*. http://www.mp3-mac.com/Pages/History_of_MP3.html

Robertson, Michael, and Simpson, Ron. 1999. *The Official MP3.com Guide to MP3*. San Diego, CA: MP3.com.

Taylor, Chris. 2000. 'How to Bring MP3s to the Masses.' *Time* (26 June): 47.

Varanini, Giancarlo. 2000. *MP3: You Can't Stop the Music ...* <http://zdnet.com.com/2100-11-502234.html?legacy=zdn>

STEVE JONES

Multimedia

'Multimedia' is a term associated with computer-based software that integrates audio and visual data to create a semi-virtual world within which a particular theme or subject is explored. The multimedia product emerged in the early 1990s and proliferated from then on as a result of a number of factors: the development of sufficiently fast processors for home computers; the modification and enhancement of CD players to allow fast transfer of data using SCSI (small computer systems interface); the introduction of video and audio 'capture' cards, allowing sound and image to be imported and stored digitally; and the development of multimedia authoring programs, such as Apple's Hypercard and Macromedia's Director software. Multimedia authoring software allows imported audio and visual data to be integrated with text and graphics, with increasing use of 3-D objects and landscape rotation. Media objects (music, video, graphics, text) are nested within an electronic 'storyboard' to create a multimedia program. All possibilities are predetermined within the program, but navigation is usually nonlinear. Users may visit windows (scenes) within the program, and can then browse through or bypass the media objects located there. They may revisit scenes either by retracing their steps through the matrix or by linking through the use of an index or of navigation buttons.

The multimedia product in the form of CD-ROM encompasses a wide range of subject matter, from astronomy to gardening. Specifically music-oriented multimedia account for only a very small proportion of what is available, although audio, whether in the form of