

Surround Music Is a Hit – in the Cinema and in the Home

Prince and Beyoncé in performance together at the 46th Annual Grammy® Awards.

*Courtesy of the Recording Academy®.
Photograph by WireImage® 2004.*

International superstar, Prince, is the latest musician to see the potential of cinema to bring live music to a wider audience – and to help promote a new album release. The opening night of his *Musicology* tour was recently beamed live via satellite to packed houses in 83 cinemas across the United States. Adhering to the high production values for which the artist is renowned, the 'One Night Only' event from Regal CineMedia utilised high definition video and Dolby® Digital 5.1 surround sound to deliver superb presentations in all 83 screens at 43 cinema sites.

To ensure that the concert was presented just as the production team intended, Dolby provided surround sound mastering expertise at the Staples Center concert site in Los Angeles, plus private screening facilities in Burbank for record company executives to monitor the live feed. Dolby DMA8 Digital Media Adapters were used at

all the cinemas for decoding the Dolby Digital audio and for interfacing with the existing cinema sound systems.

Just a month earlier, Prince was part of another major 5.1 surround sound broadcast – but that time it was beamed direct into viewers' homes. He performed a duet with Beyoncé at the 46th Annual Grammy® Awards, which was being televised by CBS complete with Dolby Digital 5.1 surround sound for the second year running. "As a result of the teamwork of many extraordinary folks, this cutting-edge event set the standard for high-definition broadcasting in 5.1", said Hank Neuberger, Supervisor of Broadcast Audio for the show. "Dolby's technical support, as well as Dolby E technology, was invaluable throughout".

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Sweden Gets Ready for Dolby 5.1. *Read More Inside...*



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NEW TECHNOLOGY

Introducing Dolby Digital Plus

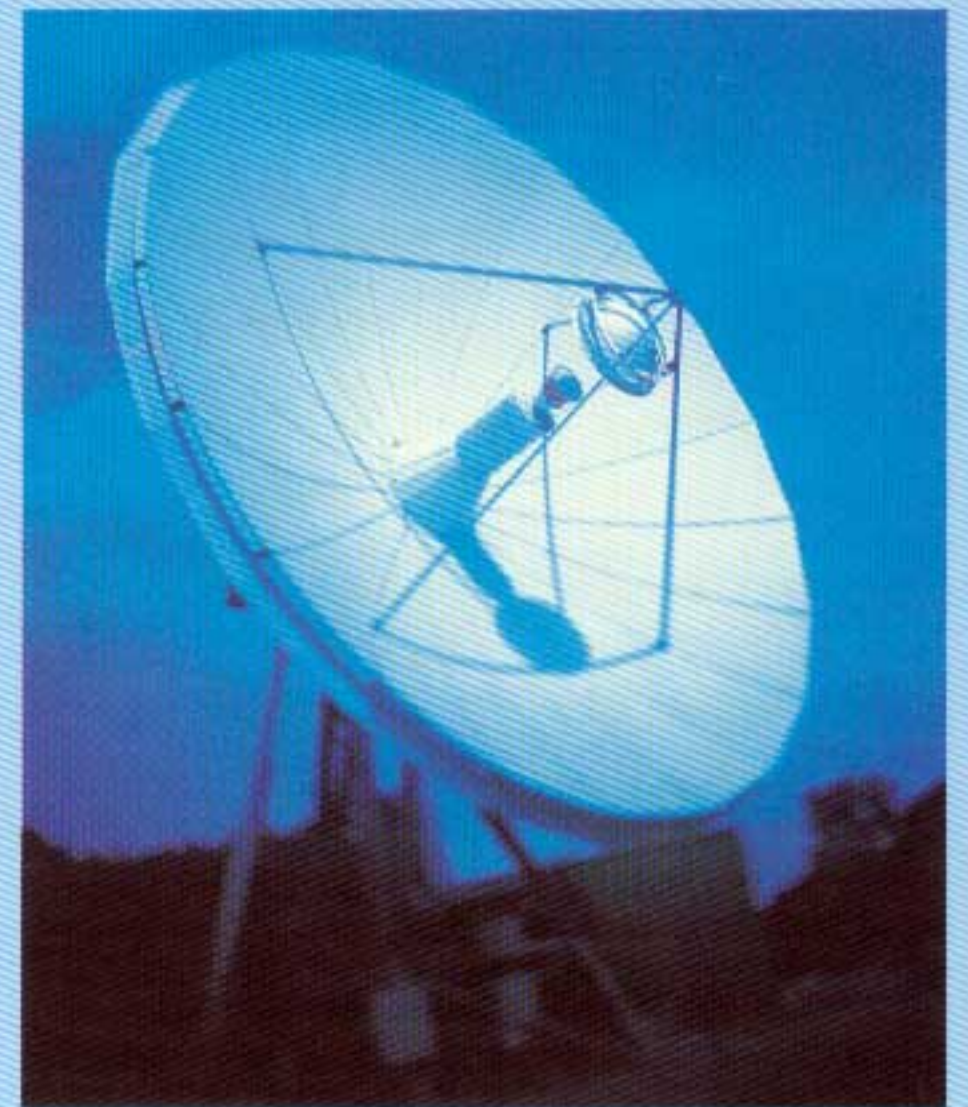
The broadcast industry is currently researching new video coding systems, such as H.264, that will allow broadcasters to deliver more channels or enhanced services in the available spectrum. In anticipation of this, Dolby is introducing Dolby[®] Digital Plus – an enhancement to Dolby Digital which expands the capability of the technology, whilst maintaining compatibility with over 37 million Dolby Digital 5.1 home cinema decoders already in use worldwide. Dolby Digital Plus

Dolby Digital Plus is a natural partner for next generation video coding systems

makes even more efficient use of bandwidth, matching the improved efficiency of the new video coding systems to help shrink the size of the overall programme package.

Advancements in the storage capabilities of optical and hard disk-based media, combined with the new coding efficiency, pave the way for new high-definition packaged media. Dolby Digital Plus is a natural fit for these new media, making it an excellent choice for broadcasters who want to match the quality and capability of these new delivery formats.

Dolby Digital continues to be the format of choice for the delivery of multichannel surround sound to consumers, with nearly half a billion products sold incorporating the technology. Dolby is equally committed to expanding the audience for the studios and broadcasters that deliver their programmes in Dolby Digital.



LIVE SPORTS

Champions League Football in Dolby Digital 5.1

German satellite broadcaster, Sat. 1, has been broadcasting live UEFA Champions League football matches in Dolby[®] Digital 5.1 throughout the competition and will be broadcasting the final on 26 May 2004 in surround sound too. The broadcaster is the latest in a high profile group of European channels to improve the audience experience using Dolby Digital 5.1 surround sound.

The first game, FC Bayern München v. Celtic, was broadcast live from the Munich Olympiastadion, and since then one game during each week of the competition has been broadcast with exciting multichannel audio. When Sat.1 broadcasts games in Dolby Digital, over 3.5 million viewers across Germany with suitable satellite set-top boxes can connect up their home theatre systems and enjoy enhanced, exciting, and more realistic top-class football with 5.1-channel sound. Fans at home can hear the crowd in the appropriate location cheering or singing as if they were seated in the stadium.

Since that first match, Sat.1 and BILD have been asking viewers to vote by phone for the German matches they would most like to enjoy with 5.1 sound. During the group stage alone, 190,000 votes were received. Although various channels across Europe – Sky in the UK and ProSieben in Germany for example – have been broadcasting films in Dolby Digital for several years now, it is only recently that live programming has become more common in surround sound. Apart from Sat.1, Austrian public broadcaster, ORF, and German satellite channel, Premiere, have both broadcast games from the Bundesliga, and Germany's ZDF has proved that surround sound is not limited to movies and sport with its popular entertainment show, *Wetten, dass..?*, which began transmission in surround sound in October 2003.

Dolby E

All of these broadcasters are using Dolby E – which compresses up to eight channels of full-range, discrete digital audio onto a standard AES pair – to transport the multichannel around the broadcast infrastructure. For live events such as sport or concerts, Dolby E can be used with regular distribution links to provide surround sound feeds to 5.1 broadcasters all around the world.



The Champions League is broadcast live in thrilling 5.1

BROADCAST NEWS

Sweden Gets Ready for Dolby 5.1 Broadcasts

Swedish public service broadcaster, Sveriges Television (SVT), has undertaken widespread transmission tests with Dolby® Digital 5.1 surround sound. It is thought that Dolby Digital sound would be a valuable added benefit to encourage analogue viewers to switch to SVT's digital television services. In addition to digital terrestrial services, the trials include digital satellite and cable feeds too. The trials are fully DVB compliant and can be received by conventional DVB set-top box receivers with Dolby Digital outputs.

"There is clear evidence that the audience in Sweden wants 5.1 surround sound", commented Jason Power, Market Development Manager for Dolby. "Dolby Digital can deliver a fantastic 5.1 broadcast experience and is practical for broadcasters to implement today".

Over the last five years, SVT has been a key innovator in 5.1 television production, and has gained experience in producing a variety of genres in surround sound, including light entertainment shows and TV dramas. The recent transmission trials have featured both live and pre-recorded programming, including the popular entertainment show, *Allsång på Skansen*, which was produced live in 5.1 at an outside



Allsång på Skansen live in 5.1

broadcast location in Stockholm. Prior to transmission, SVT is using Dolby E to carry 5.1 audio through an existing stereo distribution infrastructure.

Elsewhere in the world, the variety of Dolby Digital 5.1 programming continues to grow, with many broadcasters now producing major live shows in surround sound. Australian broadcaster, ABC, recently broadcast a historic performance from the band, Midnight Oil, complete with a thrilling 5.1 soundtrack, whilst in Germany, ZDF recently concluded another record breaking season of their entertainment show, *Wetten, dass?* – the first season to be produced live in Dolby Digital 5.1. The range of movies on offer is also growing, with broadcasters like Sky in the UK offering up to 175 movies a month in Dolby Digital.

PRODUCTS

Loudness Measurement Gets Even Easier



Dolby LM100 Broadcast Loudness Meter

The award-winning Dolby® LM100 Broadcast Loudness Meter brought users the ability to simply and accurately measure the subjective loudness levels of broadcast channels. Now, with the new LM100 remote software application to automate the collection of loudness data for analysis, the unit is even easier to use. The application will assist postproduction, television broadcast, cable systems, and satellite providers with advanced loudness measurement, logging features, and enhanced error reporting for both analogue and digital audio. Applications for the LM100 and remote software include network QC, postproduction, DVD authoring, broadcast on-air monitoring and logging, video-on-demand (VOD) encoding, and satellite turnaround facilities.

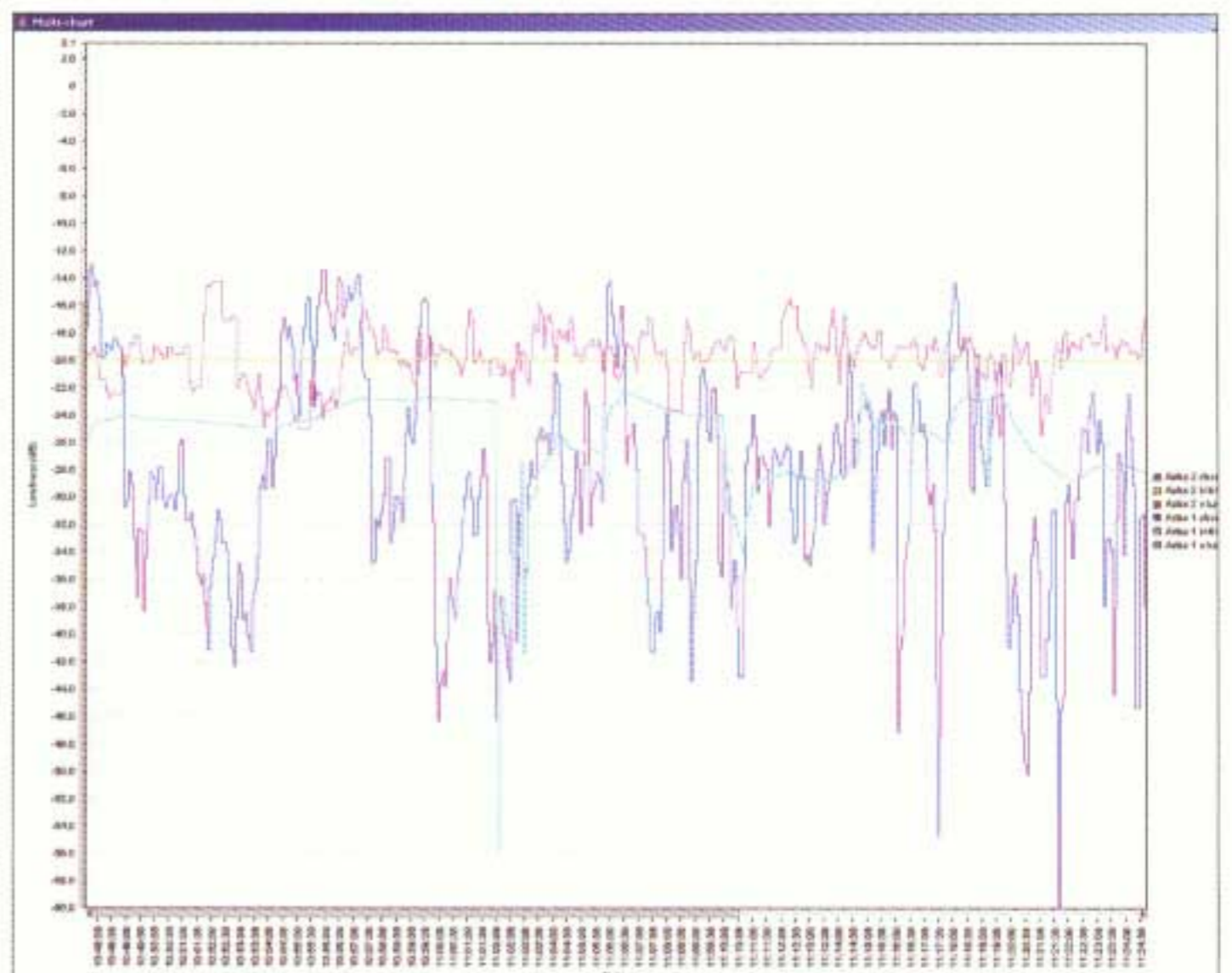
The software can continuously log short-and long-term speech loudness values in real time, while storing the loudness history data for later analysis. In addition, it includes an event log that allows the user to continuously monitor and log several different types of input status, alarm, and error conditions. These include loudness above threshold, loudness below threshold, and clipping (user definable); input loss; Dolby Digital cyclic redundancy code (CRC) errors; Dolby E CRC errors; and audio metadata.

The LM100 has already been purchased by many high profile customers, including ORF (Austria), SVT (Sweden), TF1 (France), BBC (UK), CBC, Movie Central (Canada), Showtime Networks, HBO, Viacom, Fox, Starz!, Time Warner Cable, DirecTV, Technicolor, Disney DVD, and Deluxe Global Media Services (USA).

The Dolby LM100 software remote application will be packaged with both the LM100-LTC and LM100-NTSC units starting from Summer 2004. The LM100-LTC unit is available through Dolby's dealer and distributor channels, with further information available at www.dolby.com/professional.



With the new remote software application for the LM100, variations in loudness can be logged simply and reliably



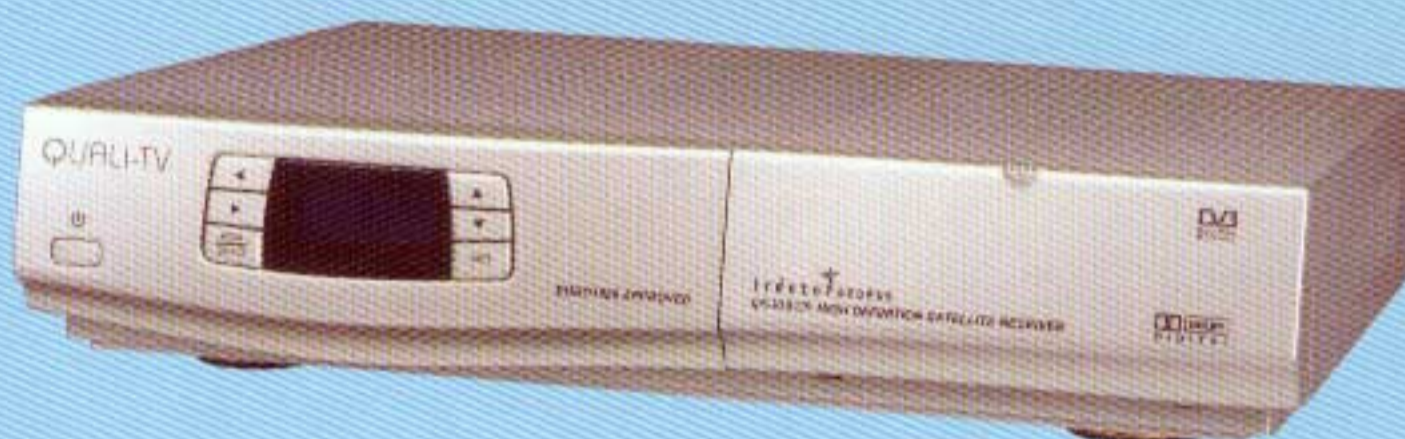
HD BROADCAST

Dolby Digital – The Sound of HD Broadcast

With high definition (HD) television services already on-air in the US, Japan, and Australia, and HD display sales gaining momentum, the inevitable question is being asked, "What is the future for HD in Europe?". This year, specialist broadcaster Euro1080 is taking a brave step by starting to transmit HD programmes to so-called *Event Cinemas* and direct to homes, whilst several other European broadcasters are rumoured to be undertaking HD tests.

What is clear is that 5.1 surround sound is a key part of the HD experience. As they start HD transmissions using the DVB system, many broadcasters are choosing to transmit a single Dolby® Digital audio stream for all their listeners, rather than simulcasting MPEG stereo too. With its unique metadata features, Dolby Digital is the only audio format that can provide great quality content to mono, stereo, and surround listeners from a single stream – there's no need to simulcast. The Dolby Digital stream can simply be downmixed in a home set-top box for stereo or mono listeners, or fed to a home cinema system for full 5.1 listening.

The latest HD set-top box available in Europe is the Quali-TV QS1080IR, now being distributed by Eurosat in the UK. DVB HD boxes are already available from companies such as DGTEC, Panasonic, Thomson, Toshiba, and Zinwell. All of these receivers have built-in Dolby Digital decoders to ensure that the full potential of the broadcast audio is realised.



HDTV receivers feature integral Dolby Digital stereo decoders

PC AUDIO

Dolby and Intel Bring Exhilarating Sound to PCs

Dolby Laboratories and Intel Corporation have joined forces to extend the consumer electronics sound and entertainment experience to PCs featuring Intel® High-Definition (HD) Audio. As part of the Dolby PC Entertainment Experience initiative, Dolby is launching a new Integrated Audio Codec Licensing programme and a PC Logo programme featuring world-class Dolby® surround sound technologies.

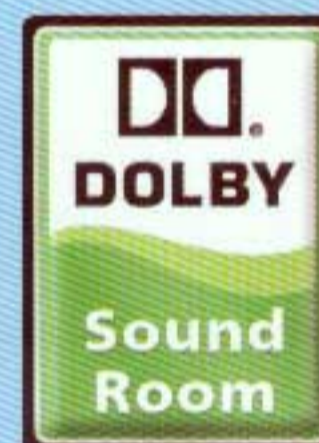
Intel HD Audio enables evolving usage models for today's PC audio architecture. With the introduction of this new initiative and licensing programme, Dolby is opening a whole new world of PC entertainment capabilities.

The PC continues to evolve into a digital entertainment platform offering music, movies, and games with uncompromised quality at home or on the road. With the Dolby PC Entertainment Experience initiative and Intel HD Audio, PC users will have the same access and control of Dolby premier technologies as they would with home theatre systems. Using HD audio codecs that include Dolby premier technologies, PC manufacturers will be able to offer PCs with integrated system-wide support for the following Dolby premier technologies: Dolby Headphone, Dolby Virtual Speaker, Dolby Digital Live, and Dolby Pro Logic® IIx. Consumers will have the ability to enjoy a richer and more engaging experience from any audio source in virtually any listening mode.

The Dolby PC Logo programme is designed to make it easy for users to choose a PC with Dolby technologies capable of meeting their specific entertainment needs.

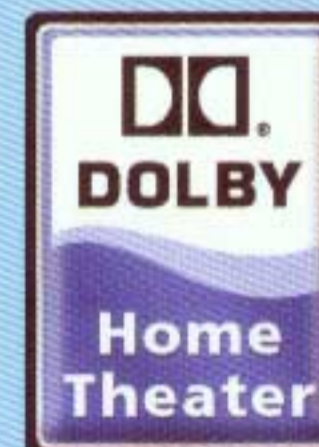
Dolby® Sound Room™

Users can enjoy a personal Dolby surround sound experience from the very best seat in the house without a complete 5.1-speaker system. Includes Dolby Digital, Dolby Headphone, Dolby Virtual Speaker, and Dolby Pro Logic II technologies.



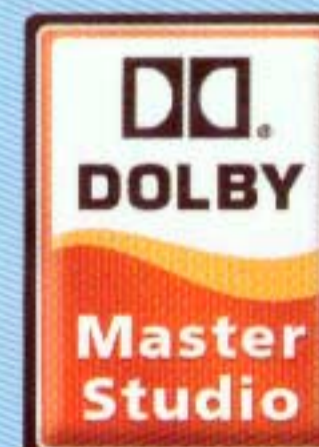
Dolby® Home Theatre™

Enjoy a true 5.1-speaker home theatre surround sound experience that places you, your family, and friends right in the middle of movie action. Dolby Home Theatre immerses you in music and gives you the power to create DVDs with Dolby Digital technology. Includes Dolby Digital, Dolby Headphone, Dolby Virtual Speaker, Dolby Pro Logic II, and Dolby Digital Stereo Creator.



Dolby® Master Studio™

The ultimate set of audio presentation capabilities designed to bring your entertainment to life and give you the power to author DVDs with Dolby Digital technology. Incorporates up to 7.1 channels of surround sound for the most natural and engrossing entertainment experiences possible – from DVD movies, music, games, or broadcast television. Users can create their own dramatic presentations and home videos on DVD with true-to-life Dolby Digital audio. Includes Dolby Digital, Dolby Digital Live, Dolby Headphone, Dolby Virtual Speaker, Dolby Pro Logic IIx, and Dolby Digital encoding.



Announcement of the programme at the Intel Developer Forum

MULTICHANNEL RADIO

5.1 Radio Takes Off in Germany

German public broadcaster, Bayerischer Rundfunk (BR), has begun broadcasting a fortnightly classical music show in Dolby® Digital 5.1 on its Bayern Klassik 4 station. BR, along with Westdeutscher Rundfunk (WDR), started broadcasting the world's first Dolby Digital radio service by transmitting 5.1 radio plays and concerts at the IFA consumer electronics exhibition in Berlin last year. Audience feedback from these broadcasts was so positive that production heads at BR decided to continue with the service.

"We received extremely enthusiastic comments on the test from hundreds of consumers", commented Martin Wöhr, Head of Studio Production and Operations at BR Radio. "For example, anyone who cannot afford to attend classical music concerts

regularly, but who loves the experience, can now replicate this in the comfort of their own home. It also helps radio to hold its own against other entertainment formats, such as television or DVDs.

"Surround sound was a logical next step for us, as everybody equipped to receive German digital TV channels in Dolby Digital is able to receive the enhanced radio services", continued Mr Wöhr.

Dolby Digital 5.1 sound helps to deliver quality radio content in a more vivid and dramatic fashion to the consumer. These broadcasts can be received for no extra charge by the estimated 3.5 million households who already have compatible DVB receivers for digital television.



The transmissions can be received between 2 a.m. and 4 a.m. on ARD Digital via the Astra 1H satellite by any listener with one of over 40 models of Dolby Digital-compatible DVB receiver. The service can be found on Transponder 17, 11.837 GHz, H, 27500, 3/4, and cable subscribers can access the service on ARD Digital. For more details on scheduling, please visit www.br-online.de/br-intern. Consumers can email the station with feedback on surroundsound@brnet.de.

MUSIC TECHNOLOGY

Surround Music Is a Hit

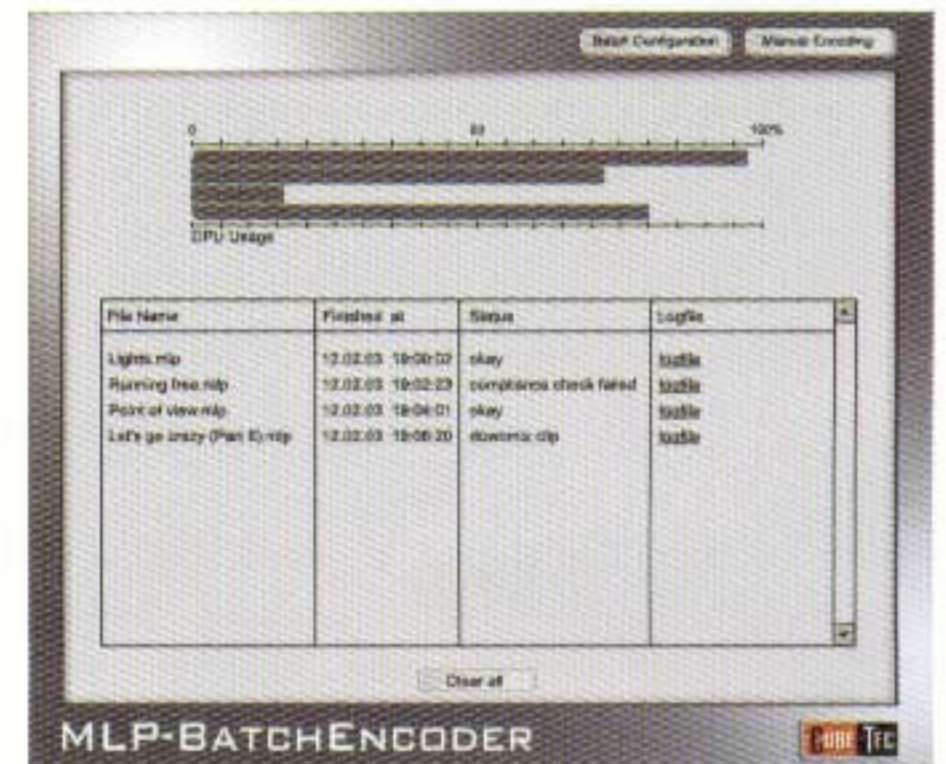
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Surround sound music is also proving popular on recorded media. In addition to the ever-growing number of DVD-Audio releases, fans can now choose from a vast number of music video and concert releases on conventional DVD-Video (DVD-V). Artists as varied as Robbie Williams, REM, and Barbra Streisand have recently launched live concert recordings on DVD-V complete with Dolby Digital 5.1 surround soundtracks. And because Dolby Digital offers thrilling surround sound at a realistic data rate, producers don't need to compromise on bonus features or picture quality either – there's enough capacity for all to be included on the same disc.

New Mastering Tools

New DVD-A mastering tools are being announced as part of the licensed MLP encoder programme. The new MLP-BatchEncoder from Cube-Tec speeds creation of stereo and surround MLP soundtracks by enabling automated file conversion as a background batch process. The MLP-BatchEncoder creates MLP files from a variety of PCM input sources including AIFF, BWF, and WAV, and supports comprehensive pre- and post encoding quality checks.

For more information on incorporating MLP technology in professional or consumer products, contact Dolby at info@dolby.co.uk

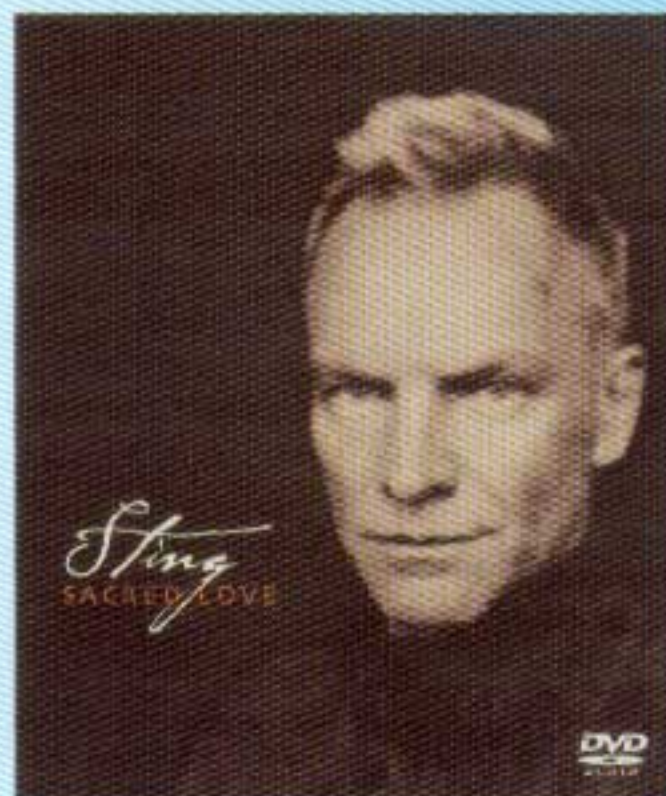


The new MLP BatchEncoder from Cube-Tec

New Releases on DVD-A



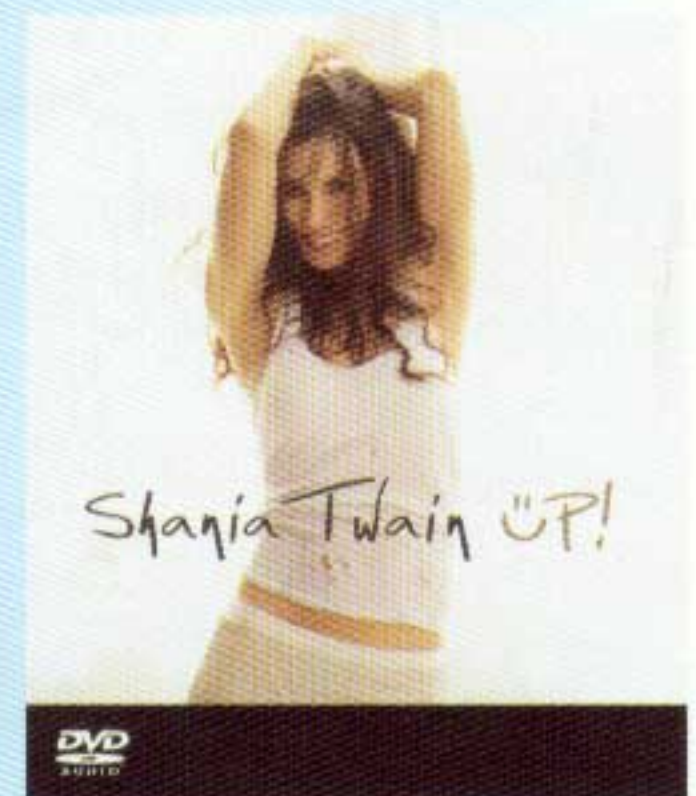
Andrea Bocelli *Verdi: Arias*



Sting *Sacred Love*



Diana Krall *The Look of Love*



Shania Twain *Up!*

UPDATE

Sound Bytes



Dolby has announced the development of a dedicated digital cinema presentation system including both image and sound components. Building on Dolby's unique experience as a pioneer in entertainment technologies and as the leading supplier of cinema audio equipment, the new solution will offer key advances in reliability, flexibility of operation, adaptability for the future, and system security.

All of the films nominated by the Academy of Motion Picture Arts and Sciences for 2003's top sound awards were released in Dolby® Digital. Additionally, four of the nominated films were released using Dolby Digital Surround EX™, which adds a rear surround channel especially applicable to exciting action and special effects films.

The number of Dolby Digital cinema screens worldwide has now reached 43,600. Of these, 9,500 are now capable of Dolby Digital Surround EX decoding. The number of films released with Dolby Digital encoded soundtracks has also exceeded 5,600.

The Dolby ScreenTalk™ subtitling system, launched in the UK in 2002, is now available in the US. The system is also capable of delivering audio description and screen advertising, enabling cinema owners to expand the movie experience for their audiences at an affordable cost.

Dolby Laboratories' Production Services Group continues to expand and provide added value to clients in a number of critical areas. For *Master and Commander: The Far Side of the World* (20th Century Fox), Dolby consultants sat with the director, Peter Weir, in the final colour timing sessions to ensure that release prints were kept consistent with Weir's final reference print.

The five best-selling games titles of 2003, and at least nine of the ten top-selling games by console, included Dolby Pro Logic® II or Dolby Digital 5.1 technology. These statistics, provided by Arcadia Investment Corp., offer proof that consumers are seeking the most realistic and thrilling gaming experience possible.

Two of the most highly anticipated films at this year's Sundance festival – *Riding Giants* and *November* – were encoded specially for Sundance digital cinema screenings using Dolby technologies. The films, which were presented in Dolby Digital 5.1, used the flagship Dolby CP650 cinema processor as well as the Dolby DMA8 Digital Media Adapter.

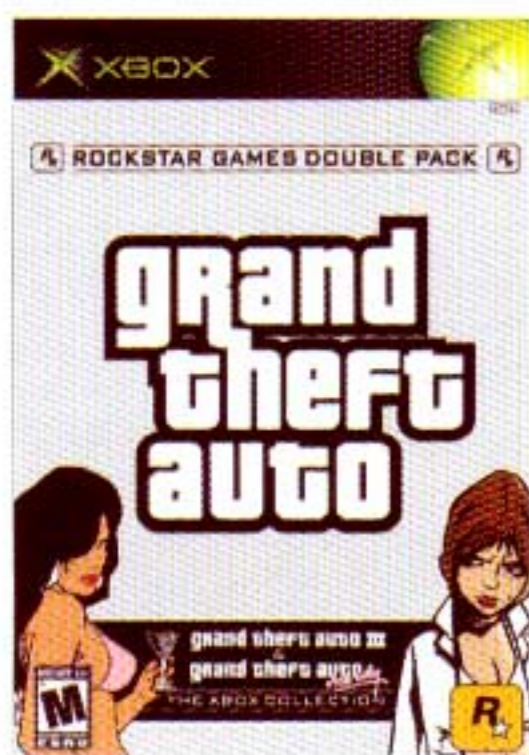
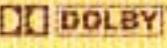
During CBS's Super Bowl XXXVIII broadcast on 1 February 2004, at least five commercials were presented in rich Dolby Pro Logic II technology, giving all television viewers a full surround sound experience.

In the US, an increasing number of stations are now broadcasting high-quality Dolby Digital 5.1 sound to their viewers to complement their HD programming. Recent addition are Bravo HD+, Cinemax HD, The Movie Channel HD, and Spice HD, all using Dolby Digital broadcasting equipment.

Subtitles and Audio Description

➔ **Available Here**

Contact Box Office for Show Times



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