

Cinema Products Division

Optical Radiation Corporation



Special Edition

September 1991

CDS[®] SOUND WOWS AUDIENCES

As *Terminator 2* continues to explode at cinema boxoffices around the world — so are the grosses at those theatres featuring the film with CDS sound. The Cinema Digital Sound[™] system is the only digital audio-on-film format available in the world.

The crystal clear digital audio is being reproduced in theatres on both 35mm and 70mm release prints. The amazing action sequences and special visual effects, reinforced by the dynamics of CDS sound, is wowing audiences as never before.

According to *T2* producer, Stephanie Austin; "*Terminator 2* is the perfect film to showcase the Cinema Digital Sound audio system. CDS sound brings you the exact original sound elements and makes you really feel part of

the action." The unique digital sound mix took advantage of capabilities only available with the CDS format, including extra channels, extended range and remarkable clarity.

Responses from moviegoers rate CDS sound as "awesome," "intense," and with "great visceral impact."

The *T2* CDS soundtrack ranges from very loud to extremely quiet — for voices, music and

effects. With the unlimited capabilities of the Cinema Digital Sound system there is no need for a sound consultant to be present to protect a matrix or limit the sound dynamics.

With the Cinema Digital Sound

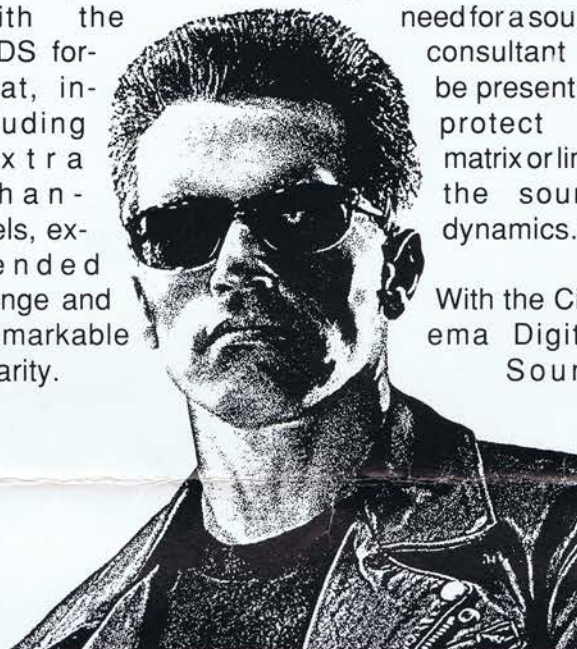
Cinemas showing *T2* with Cinema Digital Sound sound outdrew those showing *T2* in analog, in the same complex by as much as 120%, and an average of 68.8%.

With the availability of quality digital recordings at home, moviegoers expect that same pure sound on the films they see. With Cinema Digital Sound sound they are getting it.

Results from exit polls conducted during the opening three days of *T2* indicated CDS sound is attracting moviegoers' attention. Sixty-nine percent of the audience knew they were in a CDS-equipped theatre before the start of the film. The remaining 31% found out quickly

sound system, you can hear the difference all the way to the boxoffice. From opening day the enthusiasm for CDS sound has been reflected in higher grosses. And the preference becomes more dramatic each week.

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THE CDS[®] SYSTEM THUNDERS THROUGH EUROPE

Beginning in September '90 in Brussels (appropriately the international capital of the new Eurocommunity) at the state-of-the-art Kinopolis Cinemas, *Dick Tracy* launched the European premiere of the Cinema Digital Sound system. Seven theatres played the film in Brussels. The one CDS sound print drew 60% of all revenues in the market, more than all the analog houses combined. Additional theatres were quickly installed and European audiences started demanding digital prints.

In the case of Columbia's *Flatliners*, the film was completed and released in analog in North America prior to CDS formats introduction in Europe. However, European audiences were thrilled to see *Flatliners* in Belgium and Germany when the film was released featuring 35mm CDS sound. *Flatliners* became the first film released using 35mm Cinema Digital Sound soundtracks with the same 6 discrete channels as 70mm CDS prints.

From its' initial debut, through *Edward Scissorhands* and *The Doors*, CDS sound has met with enormous positive response from moviegoers throughout Europe. When *The Doors* opened in Paris in CDS sound, the Kinopanorama broke all house records and

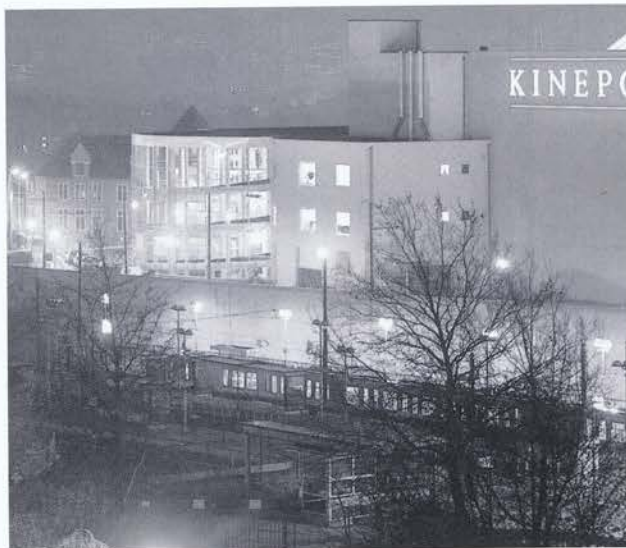
miere was followed by the opening of *The Doors* in 35mm CDS sound at both UCI and Warner Bros. International Theatres in Thurrock.

CDS sound was the talk of the Cannes Film Festival with digital presentations of the first all

rope discovered CDS sound. On June 11th, the French Federation of Cinema Exhibitors gathered in Annecy, France. Two nights of screenings became necessary to fulfill the demand to experience this phenomenal sound demonstration.

More than 400 exhibitors experienced "Sounds Like the Reel World" in Fiuggi, Italy, for a meeting of Professional Giroano di Cinema on June 18th.

On July 24th, *Final Approach* opened in Paris in five CDS-equipped locations. The grosses were second only to *Ninja Turtles*' Parisian debut. AAA President Phillippe Diaz said, "I'm absolutely thrilled at the huge response to CDS sound in Paris. The digital houses outgrossed the analog cinemas by at least a 2-to-1 margin." According to the French gross reporting service, the CDS-equipped theatres represented 31% of the cinemas with *Final Approach*. During the first week the CDS sound locations garnered 63% of the ticket



Decatron's Kinopolis Cinema

was the top grossing Parisian theatre out of 25 houses playing the film.

Members of the film community gathered in Essex at the UCI Thurrock Theatre for the UK premiere of the Cinema Digital Sound sound system. The pre-

digitally recorded and mixed film, *Final Approach*, from independent producer/director Eric Steven Stahl. French distributor AAA signed a distribution deal during the world renowned festival.

During June, exhibitor groups from around Eu-

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DIGI BITS

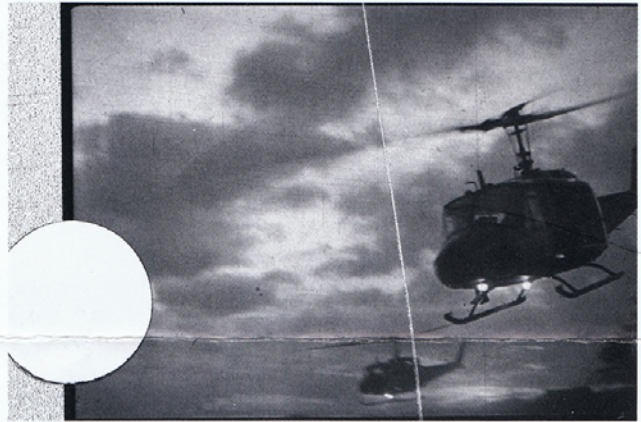
The hottest screenings in Hollywood these days are being held in Eastman Kodak's recently upgraded theatre. The 44-seat room has a state-of-the-art sound system from Apogee Sound and of course, the CDS system is the heart (and soul) of this fabulous room. "Everybody loves our screening room," says Jack Teahan, Eastman Kodak's district sales manager. "We're very proud of the quality of both image and sound achieved in our theatre. It's part of our commitment to being the best in sight and sound." Numerous screenings hosted by Kodak have featured CDS releases including *The Doors*, *Hudson Hawk* and *Terminator 2*. These client screenings have become popular social events for the creative community and their families.

Elsewhere, the Hollywood community is taking note of CDS with studio heads and stars having recently upgraded their home screening rooms with CDS equipment. We're big fans of two 'hitmeisters' in particu-

lar, and word has it they're blown away with their CDS systems. We'd love to share their names with you but as you know CDS is totally discreet.

We caught up with Vittorio Storaro at the Cannes Film Festival. During dinner on the Croisette, Vittorio, one of the original proponents of the CDS process said he was very impressed by the outstanding quality of our digital sound but the real icing on the CDS cake was the sound track never deteriorated. After pointing out these facts to star/director Warren Beatty and producer Barrie Osborne, *Dick Tracy* became the first release using the CDS system.

The most talked about event at the Cinema Digital Sound system presentation for SMPTE/AES members was the durability of the CDS system. During the presentation held at the Academy Theatre in May, hosted by Program Director Howard Flemming, a clip of *Apocalypse Now* was shown. The gate in the projector was pulled re-



Damaged CDS film from SMPTE/AES demonstration

vealing severe damage to the soundtrack and picture. Vertical and longitudinal scratches were everywhere. Numerous holes were punched into the CDS soundtrack. In short, the track was totally trashed.

Regardless of the holes and dirt on the track, the sound was perfect, thanks to the incredible error correction system designed by Kodak engineers at **Berkeley Research Group**.

"I was very impressed," said Milton Shefter, director of library resources, Paramount Pictures, "there were no dropouts or audible artifacts of any kind."

CDS engineers are currently stretching the digital envelope to determine how much damage the print can take before sound dropouts occur. One thing's for sure, the print will be discarded due to image damage long before the sound track suffers any loss in quality.

Speaking of great sound, we've been wowed on several occasions when attending the mixes for CDS releases at Skywalker Sound South. Both *The Doors* and *Hudson Hawk* were mixed and then transferred digitally for CDS release at the Skywalker Sound studio. *T2* was mixed on Stage 3 at Lucasfilm's

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THE ECONOMIC IMPACT OF CDS SOUND

Digital technology has come to the movies in the form of the Cinema Digital Sound sound system. Just as the public has turned in their analog record players for the superior technology of the compact disc, they are now ready to experience that same quality in their local theatres.

Edward Scissorhands

Beginning with *Edward Scissorhands*, the first domestic 35mm CDS release, local theatres are now capable of reproducing 6-channels of flawless digital sound.

Recognizing a need to measure the boxoffice impact of CDS sound - we began tracking comparable theatres in similar markets. Grosses, before, during, and after, the release of *Edward Scissorhands*, were monitored. Theatres presenting the film with a Cinema Digital Sound system showed dramatic improvements at the boxoffice. The 70mm CDS prints showed a 56% increase

over the magnetic. Only one 35mm CDS print was used during the run, with a 135% increase.

The Doors

Oliver Stone's *The Doors* provided a second opportunity to com-

pare boxoffice figures—on 35mm. An interesting note, the 35mm CDS print outdrew a 70mm magnetic print in one market.

Terminator 2: Judgment Day

Terminator 2 offered the first opportunity for a

direct boxoffice comparison. Twenty-three Cinema Digital Sound prints, in both 35mm and 70mm were released in the United States. Twenty-two theatre complexes in 11 markets played the prints. In addition to the digital prints, these same locations had 18 analog 72 prints. Comparing theatres within the same complex, with the same seating capacities, the CDS prints showed an average improved gross during the first week of 42%, 60.5% the second week and 68.8% during the third week. What is significant is there was a marked difference even during the first week of a blockbuster film. More importantly, in subsequent weeks, when audiences had a choice, they chose the Cinema Digital Sound system. In one location, *Terminator 2* was playing on two screens in the same complex, one 35mm CDS print, one 70mm magnetic. With similar seating capacities, the 35mm CDS print ran 8% higher during week one, 15% in week two, and 35% during the third week.

With a high-resolution film print, augmented with multi-channel digital audio there is simply no comparison to its ability to create an environment where the audience can temporarily suspend reality and participate in the fantasy.



pare boxoffice figures— in five markets, Los Angeles, New York, San Francisco, Dallas, and San Diego. Comparisons indicated a 42% increase at the boxoffice. Excluding New York, that figure soared to 88.6%. *The Doors* was the first CDS film to be released only

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as audiences broke into spontaneous applause when the CDS sound logo appeared on the screen.

Having just begun the second year of digital sound-on-film history — never before has there been a motion picture audio technology advance that has been so rapidly accepted as CDS sound. Beginning with *Dick Tracy*, in June 1990, seven films have been released in the Cinema Digital Sound sound format. From the introductory status, to today, with highly reliable equipment in the field — several generations of progress have taken place in a single year.

A new advanced negative writer came on-line

for the film *Hudson Hawk*, writing perfect negatives. Technicolor Lab made perfect CDS prints, and the *Hudson Hawk* CDS prints played flawlessly. A year ago back-up prints sat in theatre booths as insurance in the CDS-equipped *Dick Tracy* locations. With *Hudson Hawk* and *Terminator 2*, confidence in the performance of the CDS soundtracks made such 35mm back-ups unnecessary.

CDS sound is not a gimmick to reduce noise in film soundtracks. Cinema Digital Sound sound is a revolutionary method of delivering the original sound mix to the audience, with complete power, range and clarity. A

CDS soundtrack is not just a dub, it is a perfect clone of the master. CDS sound is so new and so true that the motion picture industry is still finding ways to use it and words to describe it. The public describes their amusement, amazement and regard for something dramatically better at the movies -- very directly. Their message is quite clear:

"Incredible sound"

"The sound made my spine tingle"

"I want to hear it again and again"

"It was clear. Often I cannot hear everything at the movies"

"Great. I'll be back!"

"Crisp, clear and precise"

An astonishing 42% of the audience said that they would *go out of their way* in the future to see films released with the Cinema Digital Sound system at CDS-equipped theatres.

The sounds of reality come from the world around us -- crashing waves, the rustle of leaves, the crack of lightning. The human ear has a tremendous sound range and ability to locate a sound source. Now with Cinema Digital Sound sound moviegoers can, for the first time, experience that reality in a simple darkroom -- the theatre.

SHOWSCAN 3-D

ORC recently delivered the latest in a series of new program developments to Showscan Corporation: Showscan 3-D.

Destined for Expo '92 in Seville, Spain, this is a first for the Showscan 60-frame per second process. The system will be displayed in the Environmental Pavil-

ion. The Instituto Nacional De Industria has chosen "Concert of the Earth," as the title to be presented. The film addresses how industry has effected the environment.

The 16 minute film utilizes a loop cabinet for transfer and a sophisticated electronic interlock to control the two

projectors. The system's electronics synchronize the projectors within five milliseconds during ramp-up, operation and ramp-down.

The electronics are being computer controlled by an ORC PG-2000 Series Automation, designed to reset the film start to an exact location to prevent cumula-

tive errors from occurring during daily operation. The 60-foot screen will be illuminated by two ORC DV-7000 Consoles, all controlled by the Automation.

Developments for the future continue at ORC.



***Terminator 2* digital transfer at Skywalker**

Skywalker Ranch in San Rafael under the direction of mixers Gary Summers and Gary Rydstrom, director

James Cameron and post production supervisor Pam Easley.

The CDS sound nega-

tive was recorded on a Sony 3348 digital tape machine from the original stem mix, thus making the soundtracks on

the several dozen digital prints exact clones of the master. CDS' Jeff Levison, noted the transfer was effortless for everyone involved, and completed in one day. The sound negative was then encoded.

CDS prints were the most demanded for cast and crew screenings, industry screenings at the DGA and the Academy, not to mention pre-openings such as the radio promotional screening (or should we say party), hosted by KLOS' Mark and Brian (love those guys!) at Pacific's Cinerama Dome. The Dome sounds "totally awesome" said one *T2er* who attended.

CDS THUNDERS CONTINUED FROM PAGE 2,

sales. That figure increased to 65% during week two.

The cream of London's show biz community turned out for the CDS sound presentation at the British Academy's Theatre in Piccadilly. Several hundred members of BAFTA attended the CDS demonstration

film "Sounds Like The Reel World" followed by Tri-Star's *Hudson Hawk*, the sixth film to be released in CDS sound in Europe. Currently, there are 20 CDS-equipped theatres in Europe including Ghent, Brussels, London, Paris, Copenhagen and Geneva. *Terminator 2* opened in

Europe in August and, as expected, is establishing new attendance records at the CDS-equipped houses. CDS sound installations go global later this year with additional theatres being targeted in Australia and Japan. Look for more details in our next newsletter.

CDS sound is not the only ORC product taking Europe by storm. Thirty-eight screens at three sites in Germany will feature complete ORC systems - including Century projectors, Optimax consoles, Saturn platters, and PG-2000 series automations.

