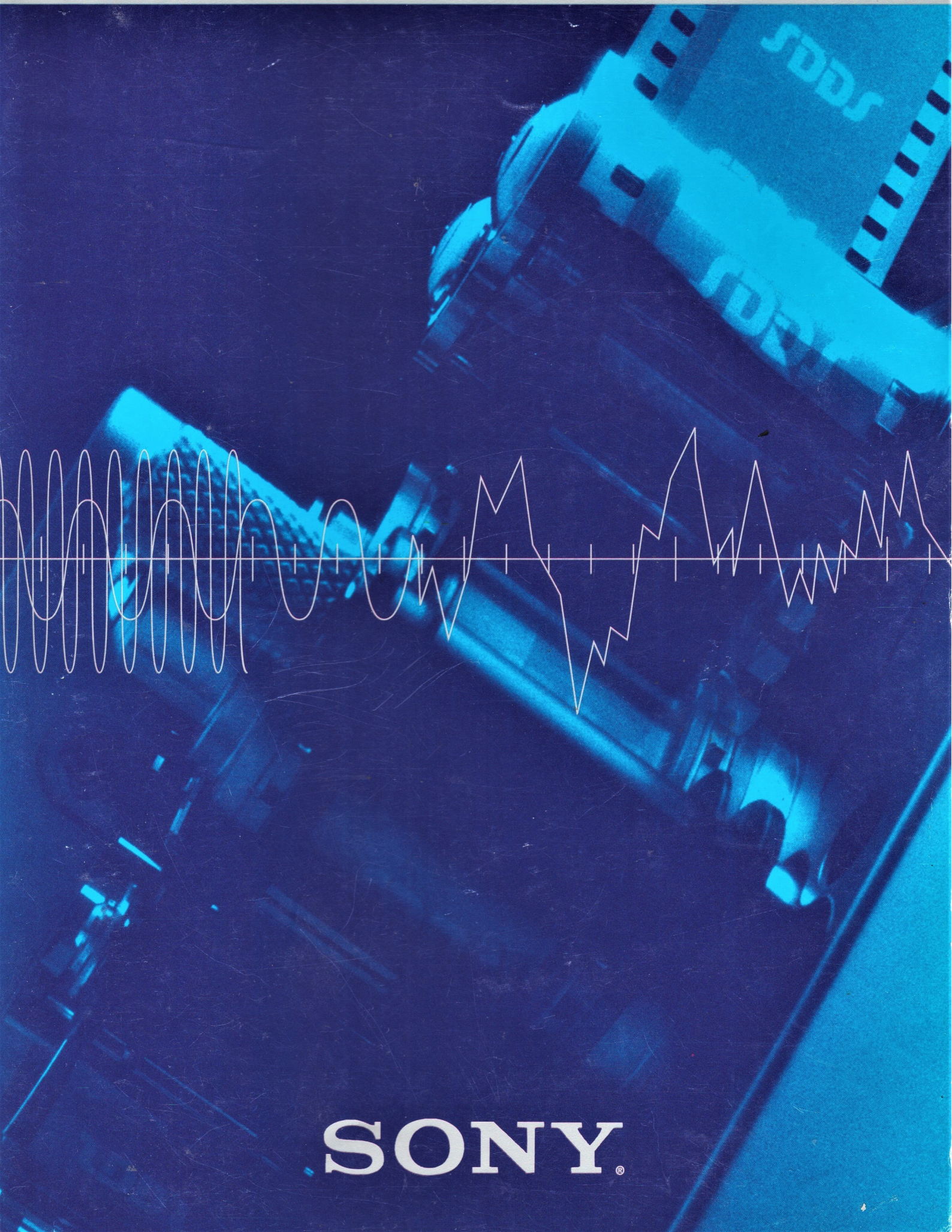


**SDDS** Sony Dynamic  
Digital Sound®



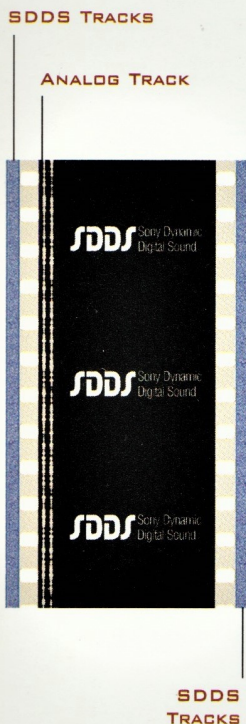
**SONY®**

## The Preferred Format

Sony Dynamic Digital Sound® (SDDS®) is  
the most advanced motion picture digital sound format,  
designed exclusively for the cinema. Sony applied decades of  
innovative experience in professional and home audio to deliver the  
best and highest quality sound presentation. SDDS was engineered  
to give filmmakers unlimited creative freedom and ultimately to  
preserve the integrity of the master soundtrack. With SDDS,  
today's moviegoers can now experience films  
as originally intended.

## System Basics

SDDS is a sound-on-film format, comprised of the SDDS soundtrack, optically printed on both edges of 35mm film and the SDDS playback hardware — a reader and processor.



### IN THE PROJECTION BOOTH

The SDDS reader is mounted on top of a 35mm film projector. As the film runs through the reader, red LEDs (light emitting diodes) illuminate the SDDS soundtrack. Special integrated circuits, CCDs (Charge Coupled Devices), read the SDDS data and convert the stream of dots on the film into digital data, which is then passed on to the SDDS cinema processor.

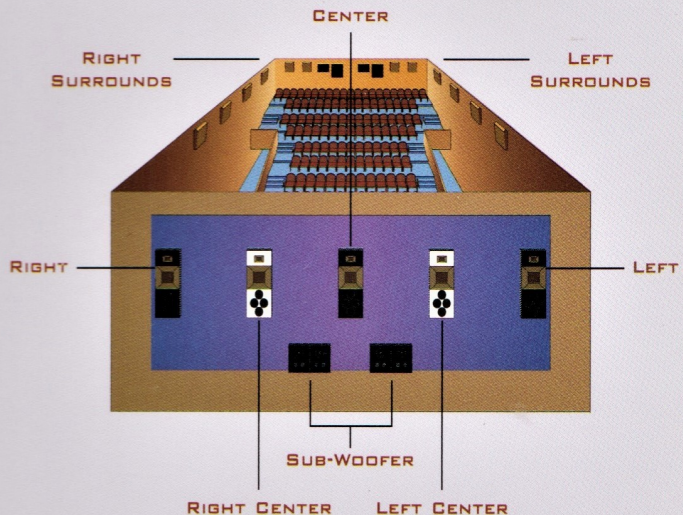
The processor, installed in the sound equipment rack, decodes the SDDS digital data using DSP (Digital Signal Processing). The processor delivers the soundtrack to the cinema's power amplifiers and on to the loudspeakers in the auditorium.

## Hear the Difference

### SONY QUALITY

Digital sound has changed the way people see movies. The clarity and vibrance of SDDS truly heightens the movie-going experience.

## Big Sound For The Big Screen



The days of narrow "shoe box" small screen multiplexes are over. Today, the emphasis is on making cinema-going an event and there is a trend towards building larger, wider screens to maximize the experience.

SDDS enables filmmakers and theatre owners to fill big auditoriums with six or eight channels of discrete digital sound through five screen loudspeakers, two stereo surround channels and a full-frequency sub-woofer channel.

The glory days of 70mm big sound have returned with SDDS. None of the latest home theatre environments can compete.

For the filmmaker, eight channels improves the clarity, complexity and overall impact of the soundtrack. Leading film directors and sound professionals seek to add depth to their soundtracks. They value the quality, creative options and flexibility that SDDS provides.

By encoding on both sides of the film, SDDS is the only system which has digital redundancy with error correction

technology to keep the soundtrack playing in digital through splices or film damage without analog interruptions.

## SDDS Cinema Processor System DFP-3000



### A New Approach

The DFP-3000 has been specially engineered to provide improved control, simplicity of use, ease of maintenance, as well as superb sound quality.

#### FRONT PANEL CONTROL

The front panel of the DFP-3000 processor unit features an alpha-numeric display that allows the user to access format and system status at the touch of a button. Eight preset switches below the panel allow the user to customize the selection of playback modes including SDDS, NR1 and NR2 (noise reduction analog) and Non-Sync.

#### TRAILER/FEATURE LEVEL CONTROL

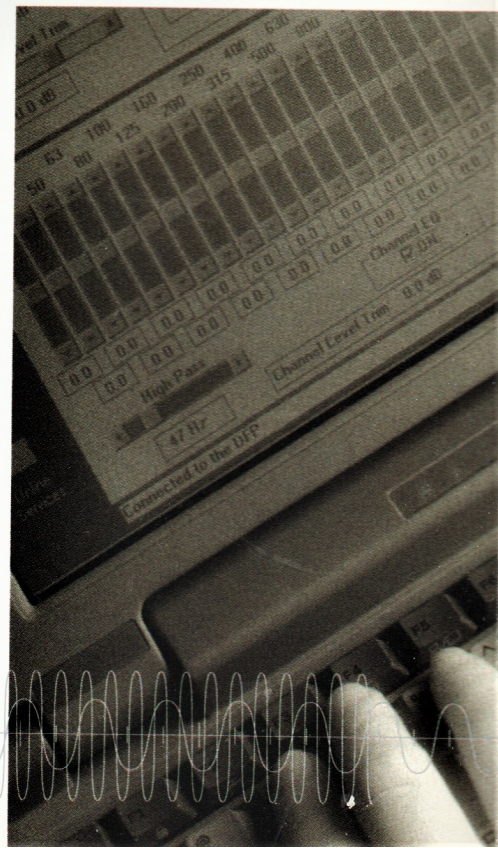
The DFP-3000 permits SDDS volume levels to be balanced between trailers and features. Theatre owners can program the unit to playback feature films in SDDS at the proper reference level while lowering the volume of loud trailers. Once a film or trailer has been played in SDDS at the desired level, the unit will remember this volume setting for future runs.

The title of the SDDS feature or trailer can appear on the front panel display. With an optional laptop computer, these settings can be accessed and transferred to other units in the complex to save time. The SDDS volume settings within memory can also be edited or deleted from the processor.

### The Core System

Evolving from the first generation SDDS playback system, the DFP-3000 Cinema Processor System is a cost effective, all-in-one, SDDS and analog solution, designed to be the fundamental component of today's cinema sound systems.

The DFP-3000 is ideal for both old and new theatre construction. It is the only system offering 8 channel B-chain equalization, providing customers with a simple upgrade to an 8 channel presentation, by adding two extra speakers and amplifiers. The processor contains all essential digital and auxiliary input cards. No additional cards are required. The rear panel holds auxiliary inputs to accommodate the analog output of other digital or auxiliary systems.



# Taking Motion Picture Sound to the Next Level

## TOTAL DIGITAL EQUALIZATION

The DFP-3000 system provides seven channels of 1/3 octave full digital EQ with THX® recommended 3 band parametric EQ for the sub-woofer channel.

## FULL-RANGE VOLUME CONTROL

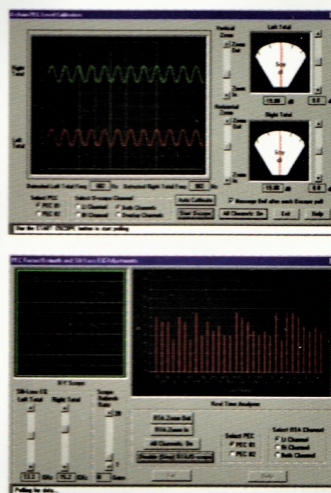
The volume control is full-range and allows the user to calibrate the level at 1/10dB increments.

## MONITORING

The DFP-3000 processor also features stereo headphone monitoring to allow users to check all channels and synchronize the soundtrack.

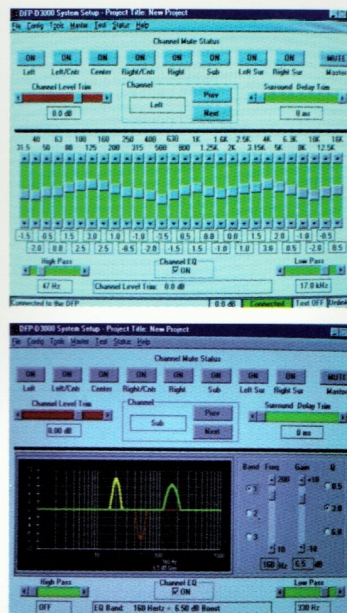
## Simple to Use

A sound system's performance relies heavily on simplicity of use and maintenance. For initial installation and tune-up checks, the DFP-3000 interfaces with a Microsoft® Windows laptop computer with specialized SDDS setup software. This enables theatre technicians to easily and accurately install, adjust and maintain the SDDS system.



Sample screen images of built-in Oscilloscope and RTA.

With the software's built in RTA and Oscilloscope, A-chain alignments can be done via laptop computer instead of with conventional maintenance equipment. The unit functions with the computer to automatically perform PEC input and slit loss EQ calibrations. The unit's on-board diagnostics can work with a microphone placed in the auditorium to verify operation of the



Software gives you control over graphic level controls with a special screen for sub-woofer parametric EQ.

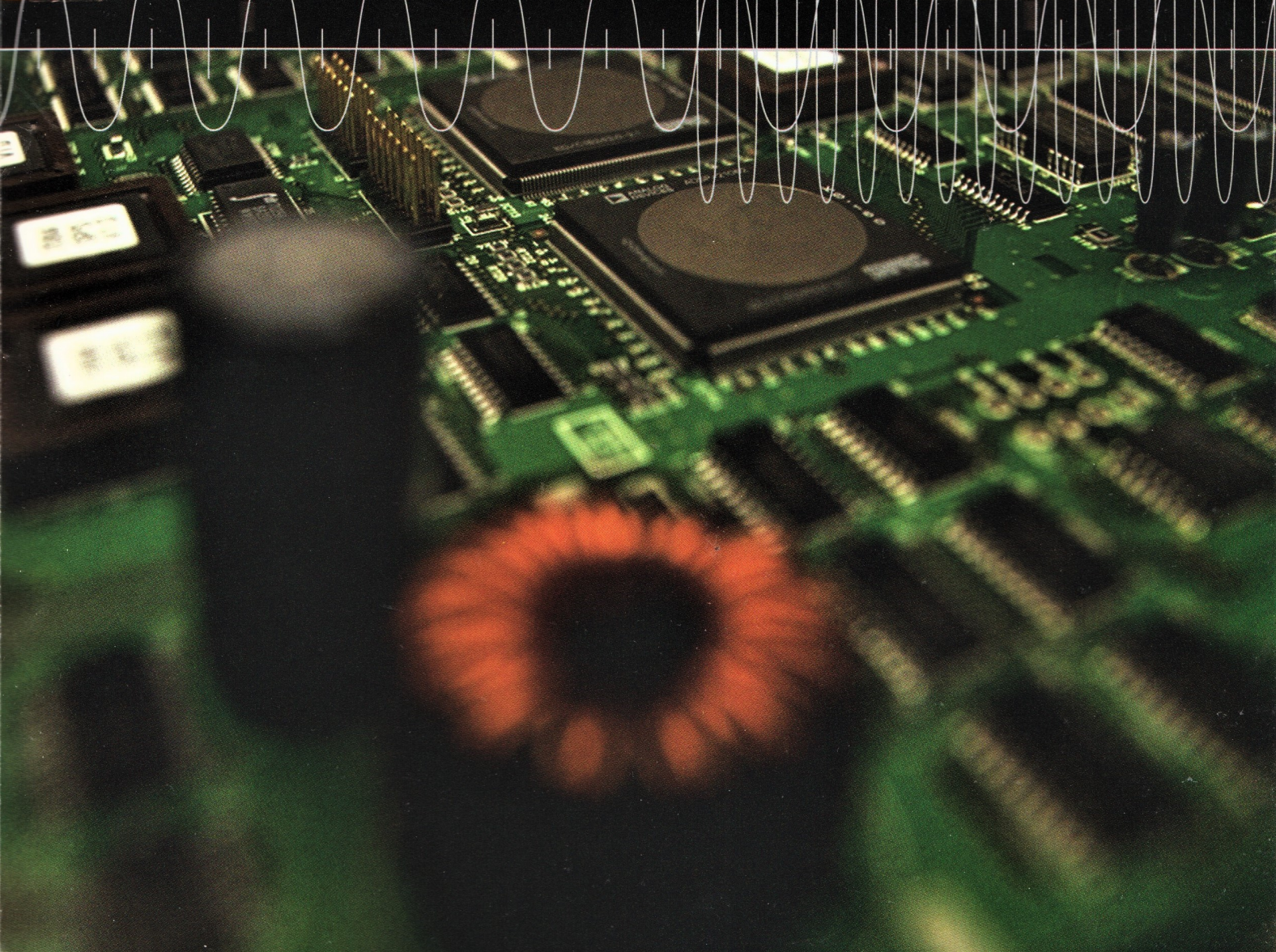
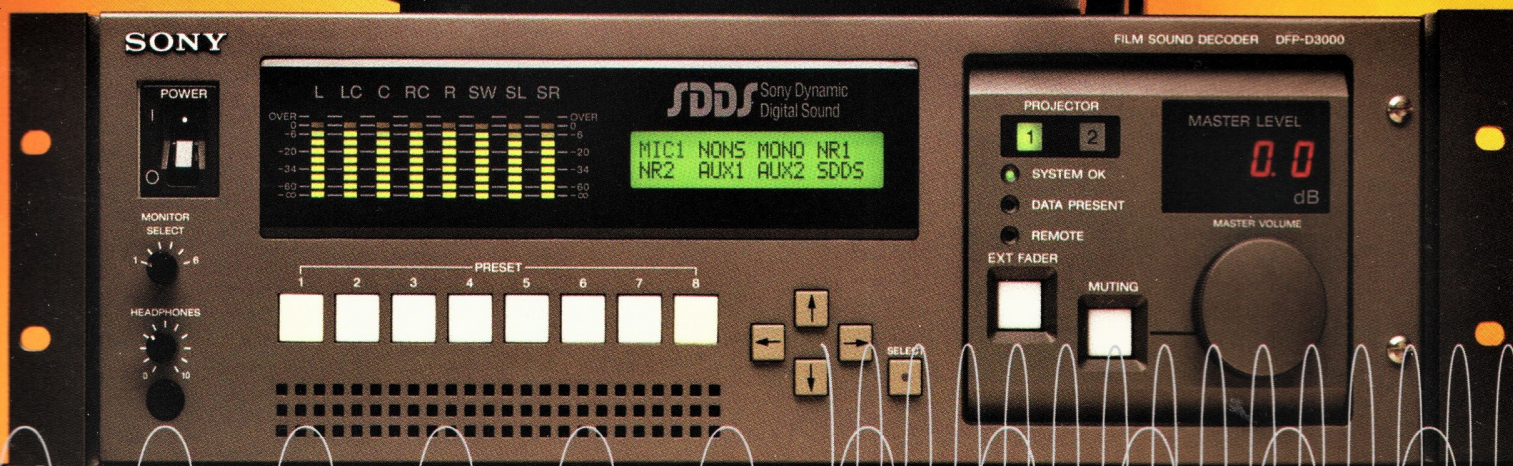
amplifiers and loudspeakers. For both A and B-chain self tests, test tolerances and control parameters are user definable.

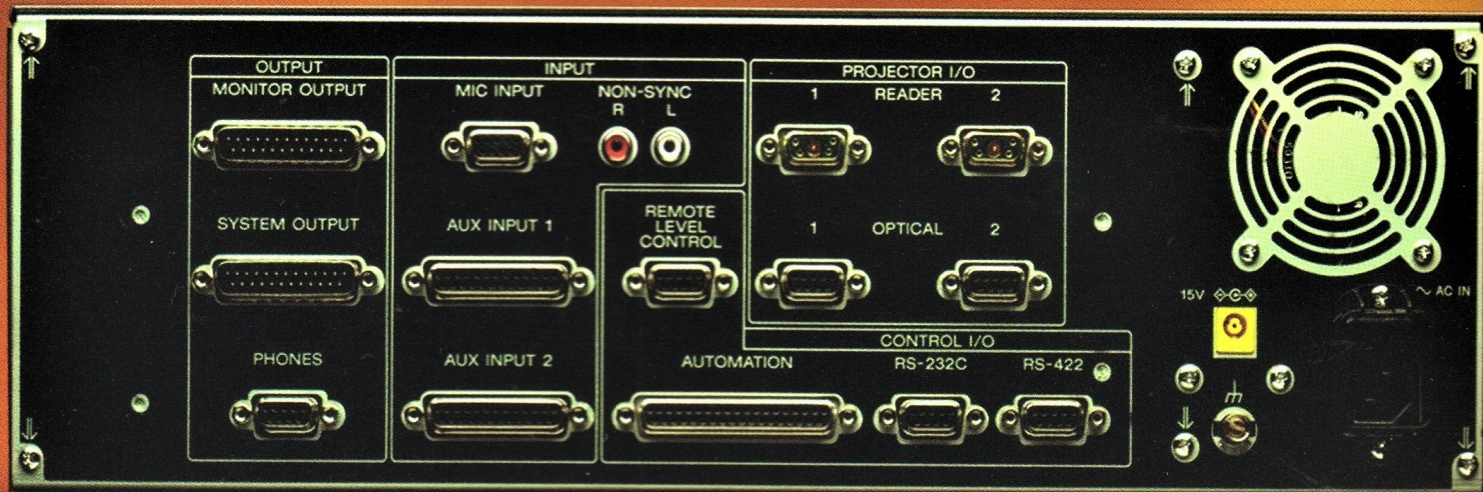
All SDDS software shares the same interfaces and has the same look and feel as previous DFP-2000 software versions. This reduces training time required if the operator is familiar with prior versions of SDDS software. The common software architecture and automated functions within the unit are ideal for the multiplex environment. To reduce setup time, the system operator can take the system preset configurations from one unit and transfer them to units in the other auditoriums. Basic system files are compatible between the DFP-2000 and the DFP-3000.

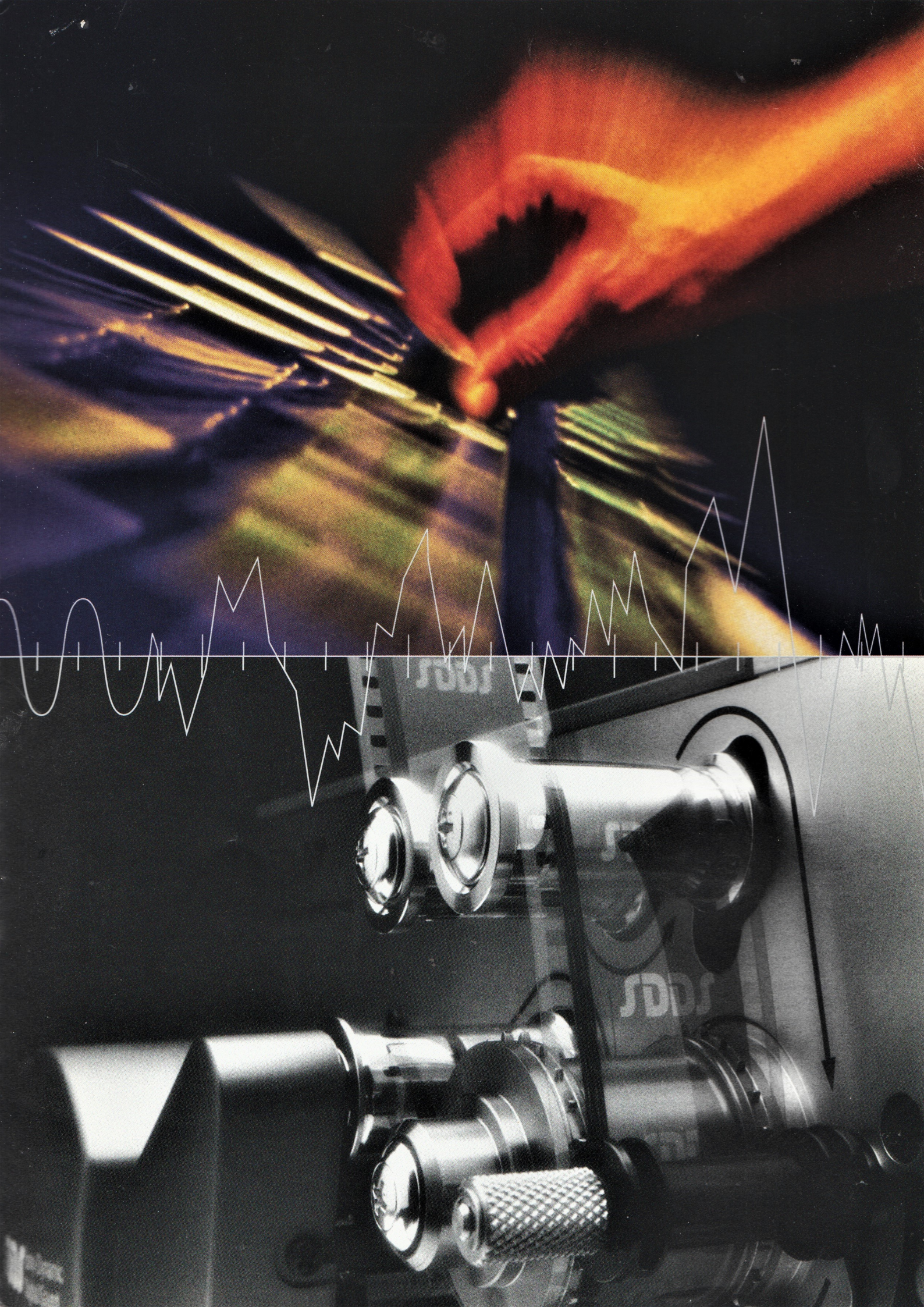
Innovative technology can help businesses grow and succeed.

With the DFP-3000, theatre owners are not simply buying a product, they are investing in their future.











## SPECIFICATIONS:

### DFP-3000 GENERAL SPECIFICATION

Power requirement	100 ~ 240V AC 50Hz/60Hz
Power consumption	1.1A
Operating temperature	5°C ~ 40°C (41° F ~ 104° F)
Operating humidity	10% ~ 90%
Storage temperature	-20°C ~ +60°C (-4° F ~ +140° F)
Dimension	482 x 147 x 375 (mm)
Weight	11kg
EIA rack mount space	3 units
Sampling frequency	44.1 kHz
Lock in time	1 sec max.
Sync drift rate	10Hz/sec max.
Sync drift	20 msec max.

### MAIN FEATURES

HPF	Cut off: 47/68/100/150/180/220Hz Slope -12dB/oct
LPF	Cut off: 8.2k/10k/12k/15k/17k Slope -12dB/oct
28 band Graphic EQ	
3 band SW parametric EQ	Q: 0.5/3/6 Boost: +/-10dB (0.5dB steps)
Surround ch delay	0-99ms
Slit loss adjustment	
16 mode SP matrix	
OSC (1kHz sine & Pink noise)	
8 mode Preset	
Theater mic routing switcher	
Fader automation	

### AUDIO CHARACTERISTICS

Frequency response	20Hz ~ 20kHz (+/-1dB)
Distortion	Less than 0.07% (at 1kHz nominal level)
Dynamic range	More than 90dB
Cross talk	Less than -80dB (at 1kHz)

### SERVICE TOOLS & ACCESSORIES

*DFP-3000 Series Service Manual
*SDDS Alignment Film
*Installation Test Film Kit
Operation Guide (1) for DFP-R3000
Reader Cable (1)
Reader Mount Kit (1)
*Optional Reader Mount Adapters
Operation Manual (1) for DFP-D3000
Power Cord
AC Adapter (for Backup Power)

### I/O CHARACTERISTICS

#### PROJECTOR I/O

Reader 1/2 connectors	SW1 connector (2)
Optical 1/2 connectors	D-sub 9 pin female (2)

#### INPUT

2 MIC INPUT connector	D-sub 9 pin female Reference level Mic: -50dBu (-60 ~ -20 dBu/1dB step)
(MIC 1 selectable to line input)	Reference level Line: -10dBu (-16/-10/+4dBu selectable) Impedance 1.2kΩ min. (Line: 10kΩ)
NON-SYNC connector	RCA stereo phono jack Impedance 10kΩ min. Reference level -10dBu

AUX INPUT 1/2 connectors	L, LC, C, RC, R, SW, SL, SR ch D-sub 25 pin female Reference level -8.2dBu Impedance 10kΩ min.
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#### OUTPUT

SYSTEM OUTPUT connector	D-sub 25 pin L, LC, C, RC, R, SW, SL, SR ch
MONITOR OUTPUT connector	D-sub 25 pin male Load Impedance 600Ω min. Reference level -10dBu (+4/-10/-16dBu selectable) (+24dBu max at 10kΩ balanced)
Hearing impaired	D-sub 9 pin female Sum of 7_chs (excluding SWch) Load Impedance 600Ω min. Reference level -10dBu Output level 100mW (at 32Ω)
HEADPHONES jack	

#### CONTROL I/O

REMOTE LEVEL CONTROL connector	D-sub 9 pin female Input voltage 0 ~ +10V
Automation I/O	D-sub 37 pin female
RS-232C	D-sub 9 pin female Transmission rate 19.2kbps
RS-422	D-sub 9 pin female

#### Backup Power

DC INPUT	Input voltage 15V DC @ 1A
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Specifications are preliminary (as of October, 1998) and subject to change.

\*Indicates optional accessories - Please inquire for availability.

SONY CINEMA PRODUCTS CORPORATION

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25 GOLDEN SQUARE LONDON, W1R 6LU, UNITED KINGDOM TEL: (44) 171 533 1475 FAX: (44) 171 533 1590

<http://www.sdds.com>

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